Naval Facilities Engineering Systems Command Hawaii

Initial Release Response Report, Fire Suppression Drain Line Red Hill Bulk Fuel Storage Facility

JBPHH, O‘ahu, Hawai‘i

DOH Facility ID No. 9-102271
DOH HEER Incident Release Case No. 20211120-2330

March 7, 2022

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Executive Summary

This Initial Release Response Report was prepared for Naval Facilities Engineering Systems Command (NAVFAC) Hawaii by AECOM for the Red Hill Bulk Fuel Storage Facility (Facility) in accordance with the State of Hawai‘i Department of Health (DOH) Technical Guidance Manual (TGM). As required by Hawai‘i Administrative Rules (HAR) 11-280.1-65.2, Release Response Reporting, this report presents all release response actions taken pursuant to HAR 11-280.1 during the first 90 days following the confirmation of the release at issue.

On May 6, 2021, a pressure surge damaged the Jet Propellant Fuel JP-5 pipeline near Red Hill tanks 18 and 20. Fuel was released to the tunnel floor, and approximately 1,580 gallons of the released fuel were recovered immediately following the event; the remaining majority was pumped from the fire suppression retention system into the fire suppression recovery line. The fuel remained contained in the fire suppression recovery line until it was damaged on November 20, 2021. The fuel released from the November 20, 2021 incident traveled on the concrete tunnel floor toward Adit 3 and collected in a groundwater sump near Adit 3. The majority of fuel was recovered from the sump; another amount of fuel entered the soil near U.S. Navy Well 2254-01 (the Red Hill well) and into the Joint Base Pearl Harbor-Hickam (JBPHH) Water Distribution System. The Red Hill well was isolated from the JBPHH Water Distribution System on November 28, 2021.

Initial site characterization of the release area has been completed but additional characterization and monitoring continue. Initial site characterization included:

- Groundwater and product sampling
- Adit 3 subslab soil vapor observations and organic vapor measurements
- Free product gauging, groundwater headspace, and purge water natural chemistry parameters
- Drinking water observations

Results from this report indicate:

- Jet fuel (JP-5) from the damaged Fire Suppression Line was released in Adit 3 tunnel including:
  - The Adit 3 sump
  - The Adit 3 sump drain holding tank, leach tank, and surrounding subsurface soil
  - The water development tunnel associated with U.S. Navy Well 2254-01 (the Red Hill well)
  - The JBPHH Water Distribution System

Future efforts include additional site characterization, continued groundwater sampling, and removal actions, as appropriate.

Impacts and mitigation efforts associated with the JBPHH Water Distribution System are being addressed under different regulatory guidance, and are not addressed in this release response reporting requirement.

On November 23, 2021, Admiral Paparo, Commander, U.S. Pacific Fleet, directed an independent investigation of the spill event and ordered the investigating officer to determine any connection between the November 20, 2021 event and the spill that occurred on May 6, 2021. Based on the results of this investigation, the data presented in this report are subject to change.

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Acronyms and Abbreviations

°C	degree Celsius
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
2-2-MEE	2-(2-methoxyethoxy)-ethanol
AOC	Administrative Order on Consent
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
BWS	Honolulu Board of Water Supply
CF&T	contaminant fate and transport
COC	chain of custody
DoD	United States Department of Defense
DOH	State of Hawai‘i Department of Health
DQI	data quality indicator
EAL	environmental action level
ELAP	Environmental Laboratory Accreditation Program
Energy	Energy Laboratories
EPA	United States Environmental Protection Agency
ER	electrical resistivity
F-24	NATO-grade F-24 jet fuel
F-76	marine diesel fuel
ft	foot/feet
GPR	ground-penetrating radar
GWPP	Groundwater Protection Plan
H_2SO_4	sulfuric acid
HAR	Hawai‘i Administrative Rules
HCl	hydrochloric acid
HDPE	high-density polyethylene
HEER	Hazard Evaluation and Emergency Response
IP	induced polarization
JBPHH	Joint Base Pearl Harbor-Hickam
JP-5	Jet Fuel Propellant Number 5
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LNAPL	light nonaqueous-phase liquid
LOQ	limit of quantitation
mg/kg	milligrams per kilogram
mL	milliliter
MS	matrix spike
MSD	matrix spike duplicate

msl	mean sea level
$NaHSO_4$	sodium hydrogen sulfate
NATO	North Atlantic Treaty Organization
NAVFAC	Naval Facilities Engineering Systems Command
NAVSUP FLC	Naval Supply Systems Command Fleet Logistics Center
Navy	United States Department of the Navy
NOI	Notice of Interest
PAH	polynuclear aromatic hydrocarbon
PFAS	per- and polyfluoroalkyl substances
PID	photoionization detector
ppmv	parts per million by volume
PVC	polyvinyl chloride
QC	quality control
QSM	Quality Systems Manual
RHS	Red Hill Shaft
RHSF	Red Hill Bulk Fuel Storage Facility
RI	remedial investigation
RPD	relative percent difference
SGC	silica gel cleanup
SHC	saturated hydrocarbon
SIM	selected ion monitoring
SSRBL	Site-Specific Risk-Based Level
SVMP	soil vapor monitoring point
SVOC	semivolatile organic compound
TGM	Technical Guidance Manual
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons – diesel range organics
TPH-g	total petroleum hydrocarbons – gasoline range organics
TPH-o	total petroleum hydrocarbons – residual range organics (i.e., TPH-oil)
U.S.	United States
UIC	Underground Injection Control
USGS	United States Geological Survey
UST	underground storage tank
VOC	volatile organic compound

1.0 Introduction and Purpose

As required by Hawai‘i Administrative Rules (HAR) 11-280.1-65.2, this Initial Release Response Report presents the following information:

1) All response actions taken pursuant to this subchapter during the first ninety-day period (first quarter); and
2) A plan for future release response actions to be taken.

This report includes:

- Groundwater and product sampling
- Adit 3 subslab soil vapor observations and organic vapor measurements
- Free product gauging, groundwater headspace, and purge water natural chemistry parameters
- Drinking water observations

Results from this report indicate: Jet Fuel Propellant JP-5 was released from the damaged Fire Suppression Line in Adit 3 tunnel including:

- The Adit 3 sump
- The Adit 3 sump drain holding tank, leach tank, and surrounding subsurface soil
- The water development tunnel associated with the U.S. Navy Well 2254-01 (Red Hill well)
- The Joint Base Pearl Harbor-Hickam (JBPHH) Water Distribution System

Impacts and mitigation efforts associated with the JBPHH Water Distribution System are being addressed under different regulatory guidance, and are not addressed in this release response reporting requirement.

On November 23, 2021, Admiral Paparo, Commander, US Pacific Fleet, directed an independent investigation of the spill event and ordered the investigating officer to determine any connection between the November 20, 2021 event and the spill that occurred on May 6, 2021. Based on the results of this investigation, the data presented in this report are subject to change.

1.1 Statement of Purpose

Release response actions were performed to address a fuel release that occurred from the fire suppression drain line in the Red Hill Bulk Fuel Storage Facility (“Facility”) tunnel on November 20, 2021.

The Hawai‘i Department of Health (DOH) issued a Notice of Interest (NOI) letter (Case No. 20211120-2330) on November 24, 2021 (DOH 2020).

1.2 Previous Reports

The following documents were previously submitted to DOH:

- Response to Notice of Interest in a Release or Threatened Release of Hazardous Substance, dated December 3, 2021
- Confirmed Release Notification for Fire Suppression Drain Line, dated December 3, 2021
- Initial Abatement Measures and Site Assessment Report, dated December 11, 2021
- Initial Site Characterization Report, dated January 7, 2022
- Free Product Removal Report, dated January 7, 2022
- Technical Memorandum, Analysis of Samples from Sump (11/24/2021), Adit 3 (11/24/2021) and Red Hill Shaft Water Gallery (12/2/2021), January 13, 2022 e-mail
- Preliminary Site Characterization Plan, January 12, 2022 email
- Technical Memorandum, Holding Tank and Leach Tank Site Characterization, January 29, 2022 email

2.0 Background

On November 20, 2021, a release of JP-5 occurred in the Adit 3 tunnel of the Facility. JP-5 was released from an overhead 14-inch polyvinyl chloride (PVC) fire suppression recovery pipe at a location approximately 400 feet (ft) east of the Adit 3 Red Hill Well Water Pumping Station and approximately 200 ft east of the upper Pearl Harbor tunnel. The location of the release point was in close proximity to the underlying U.S. Navy Well 2254-01 (Red Hill well) water development tunnel that extends greater than 1,200 ft northeast of the Water Pumping Station at an elevation of approximately 0–20 ft above mean sea level (msl) (see Figure 1).

Released fuel flowed along the tunnel floor westward past the Pearl Harbor tunnel and the Red Hill Water Pumping Station, which directly overlay the water development tunnel. Fuel accumulated in a groundwater sump, approximately 750 ft west of the release point. The released JP-5 was recovered from the groundwater sump, piping, and any residual in the fire suppression recovery pipe.

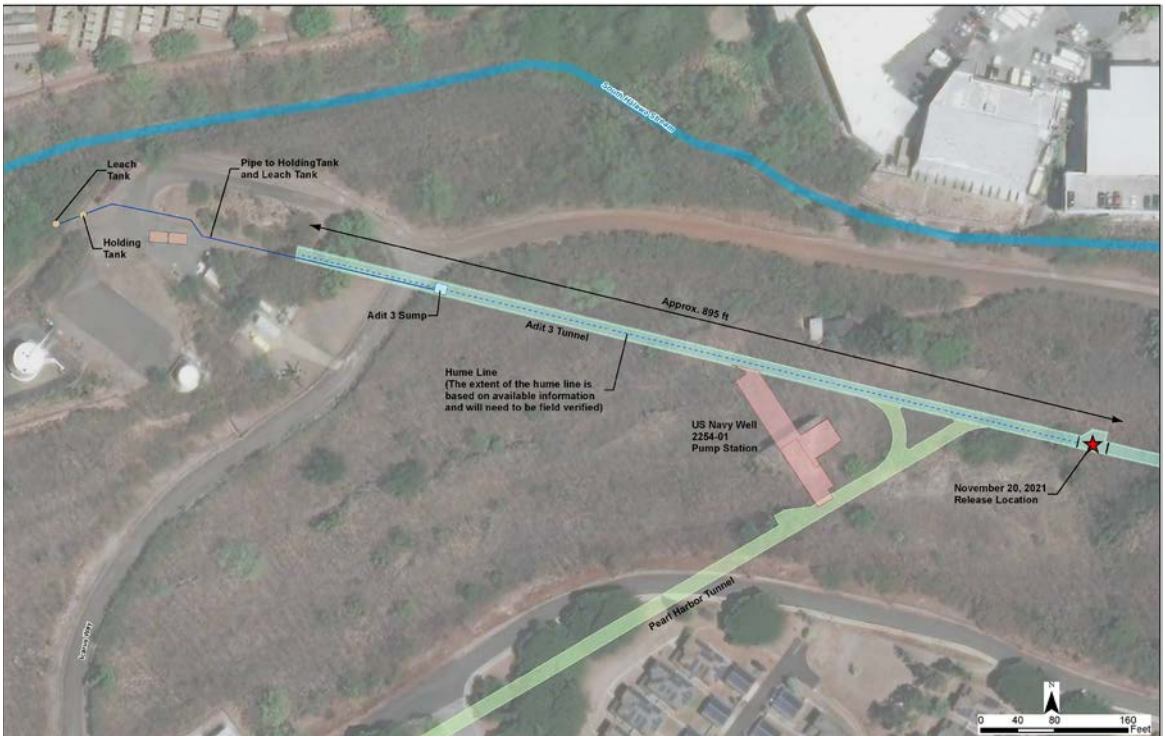


Figure 1: Adit 3 and Pearl Harbor Tunnel Layout Map

Fuel contamination impacted areas in the tunnel east and west of the Water Pumping Station:

- East of the Water Pumping Station, fuel was observed in the Navy Well 2254-01 water development tunnel.
- West of the Water Pumping Station, fuel had the potential to migrate within the groundwater sump drainage system. The fuel was then transferred via a sump pump to the groundwater sump drain holding tank and connected groundwater sump drain leach tank located northwest of the Water Pumping Station adjacent to South Hālawa Stream.

Upon the first indications that there was a fuel-like odor in drinking water in homes served by the Red Hill source, the Navy Well 2254-01 was shut off and isolated from the drinking water distribution system on November 28, 2021.

2.1 Site Description

The 144-acre underground fuel storage Facility is located in south-central O‘ahu approximately 2–3 miles east of Pearl Harbor, within the Red Hill ridge that divides South Hālawa Valley from Moanalua Valley on the southwest flank of O‘ahu’s Ko‘olau mountain range (Figure 2). The Facility’s twenty fuel storage tanks store and supply fuel for military operations in Hawai‘i and throughout the Pacific. The tank bottoms are situated approximately 100–130 ft above an underlying basal aquifer that is a major municipal and military drinking water source.

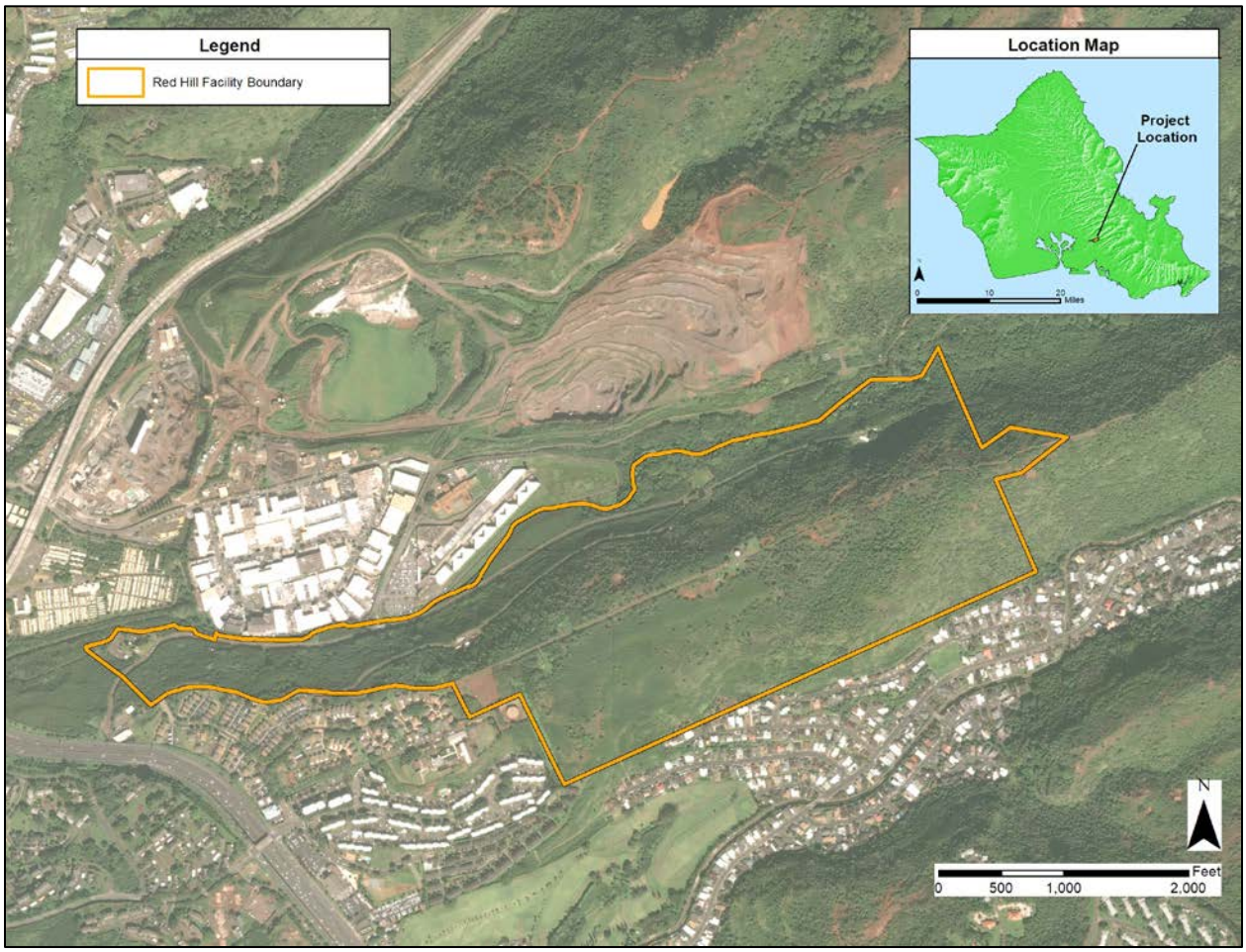


Figure 2: Site Location Map

2.1.1 Climate

Climatological conditions in the area of the Facility consist of warm to moderate temperatures and low to moderate rainfall. The average annual precipitation is approximately 40 inches, which occurs mainly between November and April (Giambelluca, Nullet, and Schroeder 1986). Average temperatures range from the low 60s to high 80s (degrees Fahrenheit) (Juvik and Juvik 1998).

2.1.2 Soils/Geology

The Facility is located within the Koʻolau Volcanic series. The Koʻolau formation at Red Hill consists of the basaltic lava flows that erupted from a fissure line approaching 30 miles in length and trending in a northwest rift zone (Wentworth and Macdonald 1953). Pāhoehoe and aʻā lava flows are present in the Koʻolau formation. The valleys on either side of Red Hill ridge were formed as a result of fluvial erosion and are filled with sedimentary deposits (alluvium and colluvium), also known as valley fill, underlain by residual (weathered basalt), also known as saprolite. Saprolite zones in Hawaiʻi are typically around 75 ft thick but can be 300 ft thick or

greater beneath the valley floors or in areas of high precipitation (Hunt Jr. 1996; Macdonald, Abbott, and Peterson 1983) The results of a recently conducted seismic survey in North and South Hālawa Valleys, Red Hill, and Moanalua Valley (DON 2018a) found that valley fill and saprolite extend much deeper in the valleys surrounding Red Hill, particularly in the center of the valleys and below the streambeds.

Soils in the vicinity of the Facility are mapped as Helemano-Wahiawā association consisting of well-drained, moderately fine-textured and fine-textured soils (USDA SCS 1972). The surfaces of the basaltic flows have been weathered to form reddish-brown clayey silt, which is the basis for the local name "Red Hill." These soils typically range from nearly level to moderately-sloping and occur in broad areas dissected by very steep gulches. They formed in material weathered from basalt to a depth of approximately 10 ft below ground surface. Along the slopes, the basaltic bedrock is covered with approximately 10–30 ft of Koʻolau residuum. These soils were derived from weathering of the underlying basalt bedrock or were deposited as alluvium/colluvium. The younger alluvium/colluvium deposits were derived from fractured basalts and tuff. Beneath the surficial soils, alternating layers of clay and basalts are encountered at depth. The northwestern slope of Red Hill is generally barren of soil and consists of outcropping basalt lava flows to the valley floor.

2.1.3 Surface Water

Surface water features in the general vicinity of the tank farm include South Hālawa Stream (an ephemeral stream approximately 600–800 ft to the north), North Hālawa Stream (approximately 4,000–4,500 ft to the northwest), and Moanalua Stream (approximately 1,700–2,000 ft to the south). Potential recharge (run-on and operational water use) from the Hālawa Quarry north of the tank farm area may also impact groundwater flow in this area. In Hālawa Valley, stream flow may contribute water to perched groundwater within alluvial material (valley fill) but is generally isolated from the underlying basal aquifer. Most precipitation percolates to the basal aquifer and does not maintain base flows in the streams (Izuka 1992). Groundwater that flows beneath the Facility does not intercept surface water inland of the ocean shoreline (DON 2007). Both South Hālawa Stream and Moanalua Stream (to the north and south of Red Hill ridge, respectively) are located approximately 170 ft or more above the basal water table adjacent to the tanks. The bottoms of the Facility's fuel storage tanks are located at least 50 ft below the bottom of these streams.

2.1.4 Groundwater

In the vicinity of Red Hill, the basal aquifer water table lies between 15 and 20 ft above mean sea level (msl), and regionally groundwater flows toward Pearl Harbor (mauka to makai), although potential exists for variability in localized flow directions depending on geologic formations and other factors.

The Facility is located at the administrative boundary between the Waimalu Aquifer System of the Pearl Harbor Aquifer Sector and the Moanalua Aquifer System of the Honolulu Aquifer Sector.

The underlying aquifer is classified as a basal, unconfined, flank-type aquifer and is currently used as a drinking water source.

The Facility is located upgradient of the Hawaii State Underground Injection Control (UIC) Line, which separates potable groundwater from non-potable groundwater. The nearest drinking water supply well is Navy Supply Well 2254-01 (also known as Red Hill Shaft [RHS]), located within the Facility's lower access tunnel. Navy Supply Well 2254-01 is located approximately 2,600 ft topographically downgradient of the nearest fuel storage tanks and provides potable water to the JBPHH Water Distribution System, which serves approximately 65,200 military customers. Naval Facilities Engineering Systems Command (NAVFAC) Hawaii, Utilities Management Division operates Navy Supply Well 2254-01 and its associated water development tunnel. The nearest Honolulu Board of Water Supply (BWS) public drinking water supply well (BWS Hālawa Shaft Well 2354-01) is located hydraulically cross-gradient of the Facility approximately 4,400 ft to the northwest and pumps water from the basal aquifer.

2.2 Historical Land Use

Prior to construction of the tank farm, the surface of Red Hill supported cane and pineapple agriculture. Navy archive images show that the Red Hill ground surface was exposed and modified during construction of the tank farm beginning in 1940. A 1952 aerial photograph shows unmaintained land on the ridge of Red Hill and agriculture on the lower reaches of Red Hill north of the Moanalua Golf Course (DON 2019).

2.3 Current Land Use

The Facility is located on land zoned by the City and County of Honolulu as a mix of F-1 Federal and Military and P-1 Restricted Preservation districts. All major structures at the Facility are located underground. Populated areas closest to the Facility are ʻAiea to the west and Honolulu to the south and east. Honolulu is heavily urbanized and densely populated.

Preservation land is located east and northeast of the Facility boundary. To the southeast are residential single-family homes in Moanalua Valley; a high cliff face with a 100–200 ft elevation difference exists between the Facility and this residential area. Southwest of the tank farm area on the lower southwest flank of Red Hill are the public Red Hill Elementary School and residential apartments, and further west is U.S. Coast Guard Housing on F-1 Military land. North of the western segment of the Facility boundary in South Hālawa Valley is the State Animal Quarantine Station, private businesses in Hālawa Industrial Park, and the State-operated Hālawa Correctional Facility. To the north of the Correctional Facility at the lower reaches of an inter-valley ridge that forms the north wall of South Hālawa Valley is the open-pit Hālawa Quarry operated by the Hawaiian Cement Company.

As shown on Figure 2, the H-201 Moanalua Freeway transits approximately 350–700 ft beyond the Facility's southwest boundary and intersects with the H-1 and H-3 Freeways at the Hālawa

Interchange, approximately 1,800 ft west of the Facility. The H-3 Freeway transits northeast from the interchange through North Hālawa Valley and on to O‘ahu’s windward side.

2.4 Conceptual Site Model

The following description is sourced from the Red Hill Conceptual Site Model report (DON 2019).

2.4.1 Facility Construction and Operations

The Facility’s twenty bulk fuel underground storage tanks (USTs) were field-constructed of steel-lined concrete in the early 1940s. They are connected to a fuel pumping station at Pearl Harbor via a tunnel system. The Facility is operated by Naval Supply Systems Command (NAVSUP) Fleet Logistics Center (FLC) Pearl Harbor (formerly Fleet and Industrial Supply Center).

Each UST has a capacity of approximately 12.5 million gallons. The fourteen active USTs currently contain either JP-5, North Atlantic Treaty Organization (NATO)-grade F-24 jet fuel (F-24), or Marine Diesel Fuel (F-76).

2.4.2 Subsurface Conditions

The Facility tanks are surrounded by rock in the vadose (i.e., unsaturated) zone, which consists primarily of basalt flows in complex, alternating layers. These heterogeneous layers vary from extremely high to extremely low permeability, with a corresponding varying ability to transmit and hold light nonaqueous-phase liquid (LNAPL), also referred to as free product in this report, depending on the layer’s rock type and micro-pore structure (i.e., high ability in high-permeability a‘ā and thin pāhoehoe flows; low ability in massive a‘ā and massive pāhoehoe flows; limited transmissivity but high holding capacity in a‘ā clinker zones). Geologic and water saturation characteristics in the rock surrounding the tanks could cause LNAPL to spread as it moves through the rock. As LNAPL moves through the larger pore spaces, some of it could be trapped in poorly connected fractures and blocked by nearby low-permeability regions or by surface tension and capillary forces of moisture, especially water held in the smaller pores.

Hawaiian volcanic rocks vary in porosity and permeability depending on the emplacement process, lava type, genesis, flow thickness, flow rate, extent, cooling rate, and weathering. Permeability is typically highest in the relatively thick, unweathered rubbly a‘ā clinker zones and intensely fractured zones or lava tubes of pāhoehoe flows. Permeability is much lower in the interior portions of massive flows, weathered interflows, intrusive rocks (dikes and sills), ash beds, and weathered rocks (saprolite) and soil horizons, which can impede both vertical flow and horizontal flow across valleys. Generally, the bulk vertical permeability of the basalt is orders of magnitude lower than the bulk horizontal permeability. Horizontal permeability is higher in the direction that the lava flowed.

Groundwater flow and solute transport are controlled by both the hydraulic conditions (e.g., gradients) and the physical properties of the hydrogeologic units, including hydraulic conductivity, effective porosity, specific yield, specific storage, anisotropy, and dispersivity.

Fresh groundwater inflow originates as deep infiltration of precipitation and seepage from surface water features. According to the United States Geological Survey (USGS), estimates of recharge for O‘ahu for recent conditions (2010 land cover and 1978–2007 rainfall) differ from predevelopment recharge values by only a few percent (Izuka et al. 2018). Spatial distribution of recharge mimics the orographic rainfall pattern—recharge is highest on windward slopes and mountain peaks below the top of the tradewind inversion.

Groundwater outflow includes withdrawals from wells and natural groundwater discharge to springs, streams, wetlands, and submarine seeps. Data collected by the USGS for groundwater levels, saltwater/freshwater interface, spring flow, and stream base-flow indicate an overall reduction in aquifer storage for most areas where groundwater has been extracted; this has caused groundwater levels to decline (Izuka et al. 2018).

Regional groundwater levels decrease from areas of recharge (mauka) to areas of discharge (makai). Locally, water level gradients are extremely low and are influenced by geologic conditions as well as by variability in local pumping stresses from water development shafts and wells.

2.4.3 Exposure Model

Potentially contaminated media are tunnel air; unconsolidated materials, volcanic rock, and soil/rock vapor surrounding the tanks and tunnel; groundwater beneath the Facility with the potential to migrate offsite; and offsite surface water where groundwater may discharge. Human receptors that may contact onsite or offsite Facility-impacted media are Facility occupational workers, construction workers, visitors, and offsite residents. Among the potentially complete exposure pathways identified, the primary one is offsite residents using tap water sourced from Navy Supply Well 2254-01. These receptors could be exposed to constituents in tap water via direct ingestion and dermal contact, and via inhalation while showering and bathing. Animals and vegetation may also be exposed to tap water as pets or from irrigation. Exposure by ecological receptors is considered incomplete or insignificant (DON 2019).

2.5 Previous Facility Investigations

Previous environmental investigations, prior to the November 20, 2021 incident, at the Facility are summarized in Table 2-1, and divided into two categories: those preceding the 2015 Administrative Order on Consent (AOC), and those proceeding the AOC.

Table 2-1: Summary of Previous Red Hill Environmental Investigations

Investigation Report	Summary
Pre-AOC Investigations	
Remedial Investigation [RI] *Phase I and II, Red Hill Oily Waste Disposal Facility* (DON 1996; 2000)	A two-phase RI was initiated in the early 1990s at the Red Hill Oily Waste Disposal Facility. No contaminants were detected in the basal aquifer beneath the site, and DOH issued a concurrence letter for a No Further Action determination in 2005 (DOH 2005).
Facility Site Characterization and Investigation (DON 1999, 2002)	A two-phase investigation initiated in 1998 evaluated the presence of petroleum constituents at the Facility. DOH requested the Navy to conduct quarterly groundwater monitoring, conduct a Tier 3 risk assessment, and develop a contingency plan.
Quarterly Groundwater Monitoring Reports (DON 2005 to present)	Sampling and analysis of Red Hill network groundwater monitoring wells was initiated in 2005 and incorporated into the Red Hill Groundwater Protection Plan (GWPP) (DON 2008a; 2014b); results are reported to DOH.
Technical Report (DON 2007)	An environmental investigation and risk assessment initiated in 2004 included installation of soil vapor monitoring points (SVMPs) in angle borings under the active fuel storage tanks, three additional groundwater monitoring wells in the lower access tunnel, a three-dimensional groundwater model, and a Tier 3 human health risk assessment.
Tank 17 Removal Action Report (DON 2008b)	A limited removal action and site characterization investigation was conducted in June 2008; the report's Environmental Hazard Analysis determined that the release posed no further significant environmental hazards.
Type 1 Letter Report (DON 2010)	A 2010 investigation re-evaluated the DON (2007) groundwater model assumptions and results and the Tier 3 risk assessment results.
Monthly Soil Vapor Monitoring Reports (DON 2014a through present)	Soil vapor PID measurements are collected monthly under the Facility's fuel storage tanks with SVMPs in accordance with the Red Hill GWPP (DON 2008a; 2014b); results are reported to DOH.
AOC-Related Investigations *(EPA Region 9 and DOH 2015)*	
Tank 5 Quarterly Release Response Reports (DON 2014a to present	In response to the 2014 fuel release from Tank 5, Navy reports release response actions undertaken in the last 90 days to the DOH.
Seismic Profiling to Map Hydrostratigraphy in the Red Hill Area (DON 2018a)	Presented results and evaluation of nine seismic profiling transects conducted at Red Hill and in North and South Hālawa Valleys and Moanalua Valley to improve understanding of subsurface conditions that affect groundwater flow and CF&T.
Groundwater Protection and Evaluation Considerations for the Red Hill Bulk Fuel Storage Facility (DON 2018c)	Presented an interim environmental analysis of data and an initial analysis of potential environmental risks; interim results of the groundwater flow model; and an evaluation of hypothetical release scenarios.

Investigation Report	Summary
Conceptual Site Model (DON 2018b; 2019)	Established a basis for evaluating contaminant transport pathways and potential for exposure of human receptors to potentially impacted drinking water.
Groundwater Flow Model Report (DON 2020a)	Refined the previous groundwater flow model to improve understanding of the direction and rate of groundwater flow within the aquifers around the Facility.
Investigation and Remediation of Releases Report (DON 2020b)	Documented the response to the January 2014 Tank 5 release and evaluated potential remedial alternatives for that release and any potential future release.
Evaluation of Chromatograms for Understanding TPH Detections in Monitoring Wells (DON 2020c)	Provided an evaluation of TPH detections in monitoring wells to determine whether those detections are indicative of potential fuel impacts from the Facility.
Quarterly Release Response Reports, Pipeline Breach in Tunnel (DON 2021; 2022b)	Documented the results of release response efforts for the May 6, 2021 Tunnel Pipeline Breach release.

3.0 Summary of Investigation History

On December 2, 2021, tubing connected to a PID was lowered into the Red Hill shaft resulting in a maximum reading of 110 parts per million by volume (ppmv). A bailer sample was collected and indicated a sheen with fuel bubbles floating on the surface. This was the first indication of fuel in the Navy Well 2254-01 water development tunnel.

On or about December 10, 2021, Navy divers entered the water development tunnel and swam approximately 300 ft east of the Water Pumping Station. The divers reported observing fuel dripping into the water tunnel. Skimmers and floating absorbent booms were used to remove the LNAPL fuel from the surface of the water development tunnel and to prevent it from floating into the production well chamber.

On December 17, 2021, a buried groundwater holding tank and connected leach tank were identified at the northwest perimeter of the Facility, adjacent to South Hālawa Stream. The purpose of these tanks is to discharge storm water collected from the sump pump located at the entrance of Adit 3. Both cylindrical tanks are 8 ft tall and 7 ft in diameter. Upon inspection of the holding tank, a fuel/water mixture was identified. The leach tank was empty and completely dry; however, noticeable petroleum odors were noted.

The Navy provided a Preliminary Site Characterization Plan (DON 2022a) to DOH and the United States Environmental Protection Agency (EPA) for review on January 8, 2022. DOH and EPA provided comments, and the revised plan was provided on January 12, 2022. DOH concurred with the revised version on January 24, 2022.

Sampling of the holding tank and leach tank was conducted from January 11 through 13, 2022. Sampling is described in Section 5.0.

In addition, the Preliminary Site Characterization Plan presented the first phases of a comprehensive site characterization focused on developing remedial alternatives to mitigate impacts of the November 20, 2021 Adit 3 JP-5 release, which include the following initial in-tunnel activities:

- Geophysical characterization of shallow and deep subsurface features: ground-penetrating radar (GPR) will be used to clear the subsurface for utilities prior to ground disturbance activities. GPR and surface electrical resistivity (ER)/induced polarization (IP) will be used to locate the drainage system, identify subsurface fractures (which may facilitate LNAPL downward migration and inform the location of the deeper soil vapor locations), and potentially identify pooled LNAPL in the vadose zone.
- Additional surface SVMP installation (installed on January 11, 2022) and sampling as described above.
- Near-surface subslab assessments in hotspots identified by geophysics and SVMP results. This includes:
  - Two to three 2 ft × 2 ft concrete squares will be cut within the middle of the Hume pipe drainage system in close proximity to the point of release at the end of the SVMP locations within Adit 3, near the groundwater sump, and the Adit 1 tunnel hot spot (near Adit 1 tunnel and Adit 3 tunnel intersection). The purpose of this effort is to have a better understanding of the Hume pipe drainage system and observe the presence of LNAPL pooling and/or seeping into the subsurface. Surface soils (0.0–0.5 ft below surface) will be visually documented (e.g., level of soil staining), and a multi-increment sample will be collected for total volatile organic compound (VOC) field screening using a PID.
  - Shallow, intermediate, and deep subsurface SVMPs: three shallow subsurface SVMPs and one intermediate and one deep nested SVMP will be installed during this phase of the characterization in hotspot areas identified by earlier data gathering, including multi-frequency GPR, ER/IP, subslab SVMP results, and near-surface assessment cutouts.

4.0 Summary of Data Quality Objectives

DOH's technical perspective and regulatory guidance on the characterization of petroleum-impacted soil and groundwater are described in Section 6 (Soil, Soil Vapor and Groundwater Action Levels for TPH) of the DOH document "Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater" (DOH 2017) as follows:

- Petroleum is a complex mixture that degrades into potentially toxic metabolites.
- Non-specific aliphatic and aromatic compounds and related degradation compounds compose the overwhelming majority of the mass collectively referred to as total petroleum hydrocarbons (TPH) (refer to Volume 1, Section 2.6.1).

- Risk to human health and the environment posed by petroleum releases is evaluated in terms of both TPH and individual "indicator" compounds such as benzene, toluene, ethylbenzene, and xylenes (BTEX) as well as naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene and other targeted polyaromatic *[i.e., polynuclear]* hydrocarbons (PAHs). The latter compose only a small percentage of the total mass in fuels and in vapors but can pose a significant risk due to their higher toxicity.
- Concentrations of individually targeted compounds such as BTEX and PAHs should be subtracted from the reported concentration of TPH. This includes soil, vapor, and water samples but is most important for the latter, since dissolved-phase hydrocarbons are anticipated to be dominated by more soluble aromatics. This can only be reliably done, however, if the same analytical method is used for both TPH and individual compounds.
- For risk evaluation, samples should also be evaluated for additives known or suspected to have been pre-blended into the fuel stored in the Red Hill tanks, as well as cleaning agents that might have been used to clean the tunnel after the initial May 2021 release. Additives, including anti-oxidants, biocides, and fuel system ice inhibitors, are normally pre-blended into stored jet fuel or added during fueling of a plane.

Appendix A, Section 4.1.6 (LNAPL Plume Delineation) of the DOH guidance (DOH 2017) identifies soil borings as parts of the LNAPL characterization process, including the following delineation methods for soil:

- If the depth of the source of a release is known, then the approximate upper extent of that release can be inferred.
- Headspace measurements for volatile organics will typically show an increase in concentration within the LNAPL zones. Plotting these on a simple chart of depth against concentration will typically show the inferred bulk LNAPL zone (mobile or residual).
- Visual and olfactory comments are typically logged as well, giving another indication of the presence of LNAPL.
- Soil samples are often collected and analyzed chemically, which will give another set of clear LNAPL indications. In general, TPH analytic results (for the appropriate fuel carbon range) greater than 250 mg/kg are indicative of residual LNAPL (because soil has a limited sorbance capacity).

Target petroleum-related analytes identified in the above guidance are listed in Table 4-1, and relevant DOH Environmental Action Levels (EALs) are listed in Table 4-2.

Table 4-1: Target Analytes for Middle-Distillate Contaminated Media

Petroleum Product	Media	Recommended Target Analytes
Middle Distillates: diesel, kerosene, Stoddard solvents, heating fuels, jet fuels, etc.	Soil	TPH, BTEX, naphthalene, and methylnaphthalenes (1- and 2-)
	Soil Vapor	TPH, BTEX, naphthalene, and methane
	Groundwater	TPH, BTEX, naphthalene, and methylnaphthalenes (1- and 2-)

Source: (DOH 2017 Vol. 2, Table 6-1)

Table 4-2: DOH Environmental Action Levels

Analytical Method	Analyte	Environmental Action Levels (EALs)		
		Soil (mg/kg) [a]	Groundwater (µg/L) [b]	Soil Vapor (µg/m^3) [c]
SW-8260	TPH-g	100 / 450 / 700	500 / 300	4.9×10^6
	Benzene	500 / 1.2 / 0.3	170 / 5	6,300
	Toluene	500 / 820 / 0.78	40 / 1,000	1.8×10^7
	Ethylbenzene	480 / 62 / 0.9	30 / 700	2×10^5
	Xylenes	260 / 130 / 1.4	20 / 10,000	3.5×10^5
SW-8270	Naphthalene	500 / 28 / 3.1	21 / 17	1.1×10^4
	1-Methylnaphthalene	500 / 170 / 0.89	10 / 27	9.8×10^5
	2-Methylnaphthalene	500 / 39 / 1.9	10 / 24	5.6×10^4
SW-8015	TPH-d	500 / 220 / 940	500 / 400	2.2×10^6

Notes:

Source: (DOH 2017) Hawai‘i Department of Health Environmental Action Level Surfer (Fall 2017)

TPH-d TPH-diesel range organics

TPH-g TPH-gasoline range organics

[a] Soil EALs = (Gross Contamination) / (Direct Exposure) / (Leaching to Groundwater) in milligrams per kilogram (mg/kg)

[b] Groundwater EALs = (Odor Taste Threshold) / (Drinking Water Toxicity) in micrograms per liter (µg/L)

[c] Soil Vapor EALs = (Commercial/Industrial Shallow Soil Vapor Action Levels) (Table C) in micrograms per cubic meter (µg/m^3)

5.0 Field Activities

In response to the November 20, 2021 release, the Navy took appropriate response actions to investigate and mitigate the release.

Upon the first indications that there was a fuel-like odor in drinking water in homes served by the Red Hill source, the Navy Well 2254-01 was isolated from the distribution system on November 28, 2021.

On approximately December 10, 2021, Navy divers entered the water development tunnel and swam approximately 300 ft east of the Water Pumping Station. Skimmers and floating absorbent booms were used to remove the LNAPL fuel from the surface of the water development tunnel and to prevent it from floating into the production well chamber.

5.1 Emergency Groundwater and Product Sampling and Analysis

Groundwater and/or product samples were collected and analyzed from the groundwater sump, RHS Water Gallery, and fire suppression system to characterize and quantitate the extent and magnitude of fuel impacts from the November 20, 2021 release.

5.1.1 Red Hill Bulk Fuel Storage Facility (RHSF) Groundwater Sump by Adit 3

On November 24, 2021, free product was observed in the Facility's groundwater sump by Adit 3. In response to a request by DOH, a product sample was collected and screened by the Navy Fuels Lab. In an attempt to further characterize the product, additional samples were collected on November 24, 2021 and analyzed by ALPHA Analytical laboratory for the following constituents:

- Saturated hydrocarbon (SHC) and fingerprinting analysis, with breakdown of carbon ranges
- Paraffins, isoparaffins, aromatics, naphthenes, and olefins

Groundwater samples that were also collected on November 24, 2021 from the Facility's groundwater sump by Adit 3 were submitted to ALPHA Analytical laboratory for analysis of the following constituents:

- SHC and fingerprinting analysis, with breakdown of carbon ranges with and without silica gel cleanup (SGC)
- Semivolatile organic compounds (SVOCs) with and without tentative identified compounds.

Additional product samples were also submitted to Energy Laboratories for a carbon scan. Groundwater samples were submitted for TPH-g/-d/-o (residual range organics), SVOCs, and VOCs Full List.

5.1.2 Red Hill Shaft Water Gallery 2254-01

- On December 2, 2021, groundwater samples from the RHS Water Gallery 2254-01 were collected and submitted to ALPHA Analytical laboratory for the following analyses: SHC and fingerprinting analysis, with breakdown of carbon ranges
- Paraffins, isoparaffins, aromatics, naphthenes, and olefins

5.1.3 Fire Suppression Drain Line

DOH requested testing of the water/fuel mixture in the fire suppression collection tank; however, none of the fuel/water mixture reached the recovery tank. Instead, the water/fuel mixture remaining in the fire suppression drain line was sampled on January 6, 2022 and submitted to ALPHA Analytical laboratory for analysis of the following constituents:

- SHC and fingerprinting analysis, with breakdown of carbon ranges
- Paraffins, isoparaffins, aromatics, naphthenes, and olefins

Additional product samples were also submitted to Energy Laboratories for a carbon scan. Groundwater samples were also tested for TPH-g/-d/-o, SVOCs, and VOCs Full List.

5.2 Emergency Subslab Soil Vapor Probe Installation and Monitoring

Between December 15 and 17, 2021, soil vapor monitoring points (SVMPs) were installed into the petroleum-impacted segments of the Adit 3 and Pearl Harbor tunnel floors. Penetrations were drilled though the concrete floor, and SVMPs were installed in the upper 6 inches below the slab to sample subslab vapor. None of the SVMPS were installed below the slab. Results from hand-held organic vapor detectors (PIDs) that sampled these SVMPs since December 17, 2021 indicated elevated petroleum vapors under the concrete tunnel floors. Organic vapor maxima, or hotspots, were noted directly over the water development tunnel in the vicinity of the release area, and at just below the merge of the Adit 3 tunnel and the Pearl Harbor tunnel. Organic vapors were also elevated at SVMP locations throughout the lower portion of the Adit 3 tunnel, with the highest PID readings surrounding the groundwater sump. On January 11, 2022, five more SVMPs were installed within the Adit 3 and Pearl Harbor tunnels:

- Two SVMPs were installed approximately 425 and 450 ft east of the Navy Well 2254-01 Pump Station to evaluate potential petroleum hydrocarbon migration east of the release site.
- Three SVMPs were installed approximately 250, 275, and 300 ft south of the Adit 3 tunnel merge with the Pearl Harbor tunnel to evaluate potential petroleum hydrocarbon migration south of the expected Hume pipe drainage system.
- A total of 52 SVMPs have been part of the network sampled weekly since January 12, 2022, although some SVMPs have provided insufficient vapor to analyze with the PID, likely due to soil moisture and/or stiff clays.

Currently, SVMPs in the Adit 3 and Pearl Harbor tunnels in proximity to the November 20, 2021 release are scheduled for:

- Weekly sampling with handheld real-time readout PID detector at all subslab SVMPs.

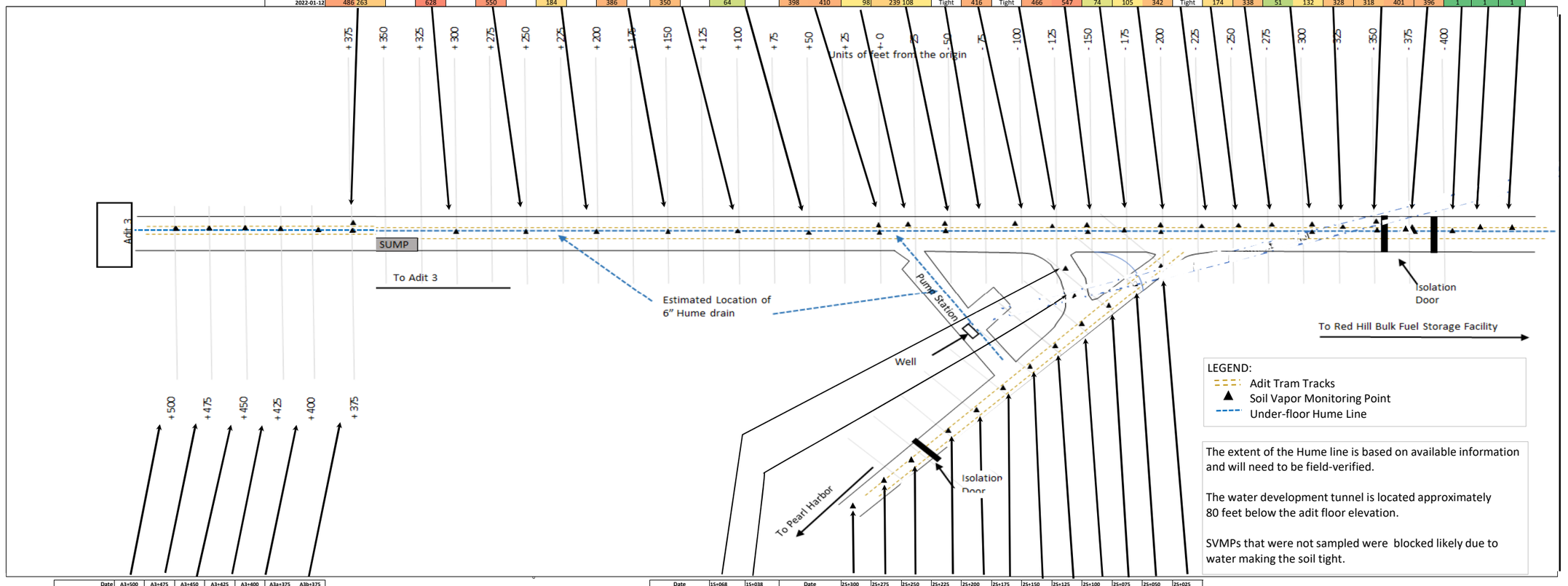
- Monthly sampling of selected SVMPs that represent focused hotspots and transport pathways for laboratory analysis for TO-3 (total VOCs); TO-15 (BTEX and naphthalene) and ASTM-1946 (oxygen, carbon dioxide, and methane).

Figure 3 depicts the location of each SVMP and the organic vapors measured between December 17, 2021 and January 14, 2022.

5.3 Free Product Gauging and Groundwater Monitoring Well Headspace Measurements

Free product gauging and groundwater monitoring well headspace PID measurements were collected weekly at groundwater monitoring wells monitored for the NOI. At the request of DOH, the method was changed to using a clear bailer during the May 6, 2021 groundwater monitoring, to collect a sample from the water surface in the monitoring well and photographing the water in the bailer to demonstrate any evidence of free product. A summary of monitoring well headspace and free product gauging measurements is included in Appendix B.1.

Date	A3a+375	A3b+375	A3+300	A3+250	A3+200	A3+150	A3+100	A3+050	A3a+000	A3b+000	A3-025	A3a-050	A3b-050	A3-075	A3-100	A3-125	A3a-150	A3b-150	A3-175	A3a-200	A3b-200	A3-225	A3-250	A3-275	A3a-300	A3b-300	A3-325	A3a-350	A3b-350	A3-375	A3-400	A3-425	A3-450
2021-12-17	120	92	67	101	55	43	39	40	24	33	28	24	35	36	44	29	83	95	69	56	51	13	27	36	56	51	47	36	47	288	2.3	NA	NA
2021-12-20	350	269	235	178	88	96	67	85	65	79	57	54	69	NT	65	32	92	108	42	57	69	7	38	58	43	75	142	275	246	290	15	NA	NA
2021-12-21	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	71	78	15	66	68	66	76	72	76	87	181	17	NA	NA
2021-12-22	115	114	55	106	51	62	62	37	45	60	42	56	45	12	92	16	69	85	36	36	45	7	30	50	23	35	49	41	49	96	18	NA	NA
2021-12-23	405	408	106	350	192	233	205	138	215	203	151	258	101	9.3	302	9	257	321	112	73	157	4	102	121	85	120	163	228	196	407	24	NA	NA
2021-12-24	201	244	120	281	282	131	462	101	448	471	105	423	208	NT	407	NT	475	490	71	116	374	NT	97	408	197	73	139	409	155	450	17	NA	NA
2021-12-27	239	281	NT	240	79	160	141	99	180	181	106	160	118	NT	264	NT	265	157	66	49	53	NT	36	52	24	36	38	58	26	443	14	NA	NA
2021-12-29	196	193	Wet	Wet	76	117	103	45	101	110	65	97	83	NT	203	NT	180	181	53	37	85	Wet	52	68	28	14.2	86	125	81	128	2	NA	NA
2021-12-30	109	157	Wet	Wet	74	109	85	45	87	87	47	86	73	Wet	142	Wet	155	153	52	46	82	Wet	56	62	41	54	73	66	88	82	2	NA	NA
2021-12-31	785	673	Wet	Wet	175	341	278	65	342	387	111	227	110	Wet	679	Wet	617	682	114	146	403	Wet	228	308	80	135	377	365	408	444	14	NA	NA
2022-01-06	560	474	Wet	614	238	426	415	95	497	544	133	118	139	Tight	618	Wet	527	627	358	158	422	Wet	196	370	74	167	399	342	381	410	8	NA	NA
2022-01-12	486	263	628	550	184	386	350	64	398	410	98	239	108	Tight	416	Tight	466	547	74	105	342	Tight	174	338	51	132	328	318	401	396	1	1	1



Date	A3+500	A3+475	A3+450	A3+425	A3+400	A3a+375	A3b+375
2021-12-17	33	4	3	20	55	120	92
2021-12-20	96	56	54	86	244	350	269
2021-12-21	NT	NT	NT	NT	NT	NT	NT
2021-12-22	56	41	43	50	64	115	114
2021-12-23	193	145	160	178	215	405	408
2021-12-24	122	76	82	96	101	201	244
2021-12-27	NT	90	113	159	134	239	281
2021-12-29	Wet	39	44	48	81	196	193
2021-12-30	Wet	43	47	55	63	109	157
2021-12-31	Wet	38	45	62	85	785	673
2022-01-06	Wet	45	53	70	97	560	474
2022-01-12	107	38	45	57	72	486	263

Date	15+068	15+038
12-17-21	33	13
12-20-21	21	16
12-21-21	NT	NT
12-22-21	28	20
12-23-21	92	81
12-24-21	76	58
12-27-21	43	42
12-29-21	Wet	27
12-30-21	58	68
12-31-21	95	65
01-06-22	92	65
01-12-22	19	17

Date	25+300	25+275	25+250	25+225	25+200	25+175	25+150	25+125	25+100	25+075	25+050	25+025
2021-12-17	NA	NA	NA	33	20	40	79	69	49	89	90	59
2021-12-20	NA	NA	NA	37	39	82	84	83	473	525	135	110
2021-12-21	NA	NA	NA	42	40	68	43	86	189	238	86	94
2021-12-22	NA	NA	NA	25	28	35	38	38	83	81	65	39
2021-12-23	NA	NA	NA	82	87	133	132	142	241	252	192	205
2021-12-24	NA	NA	NA	39	76	127	133	57	260	577	269	42
2021-12-27	NA	NA	NA	6	35	66	70	67	128	158	68	39
2021-12-29	NA	NA	NA	23	29	23	29	16	146	143	151	119
2021-12-30	NA	NA	NA	40	36	36	33	32	138	144	137	103
2021-12-31	NA	NA	NA	58	45	120	99	39	485	577	536	402
2022-01-06	NA	NA	NA	70	50	112	103	39	521	607	531	488
2022-01-12	12	12	15	34	41	94	102	84	435	490	400	376

Scale
ppmv
525
450
376
301
226
152
77
2.3

Figure 3. Soil Vapor Monitoring Point Results
December 17, 2021 Through January 12, 2022
November 20, 2021 Initial Release Response Report

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5.4 Groundwater Sampling and Analysis

The following locations were sampled weekly as part of the release response for the November 20, 2021 release from the fire suppression drain line:

- Groundwater monitoring wells within the lower access tunnel:
  - RHMW03, located next to Tank 14
  - RHMW02, located next to Tank 6
  - RHMW01R, located immediately southwest of Tank 1
  - RHMW05, located southwest of the tank farm and closest tunnel monitoring well to Navy Well 2254-01
- RHS Water Gallery 2254-01, located approximately 2,600 ft topographically downgradient of the fuel storage tanks and provides potable water to the JBPHH Water Distribution System.
- Select groundwater monitoring wells external to the tunnel:
  - RHMW04, located within the Facility boundary east of the tank farm in a location believed to be hydraulically upgradient from the tanks
  - RHMW06, RHMW08, RHMW11-05, RHMW13-05, RHMW14-03, RHMW15-05 and RHMW16, located within the Facility boundary northeast and northwest of the tank farm in locations along the Facility's northern border
  - RHMW09 and RHMW19, located within the Facility boundary southwest and southeast of the tank farm in locations along the Facility's southern border
  - OWDFMW01, OWDFMW04A, OWDFMW05A, OWDFMW07A, OWDFMW08A, located within the Facility boundary west of the tank farm and Navy Well 2254-01 along the Facility's western border
  - RHMW12A, located outside the Facility boundary north of the tank farm on the grounds of the Hālawa Correctional Facility

Groundwater samples were analyzed by Energy Laboratories for the following compounds: TPH-g/d/o, full suite SVOCs and VOCs, total organic carbon (TOC), methane, lead scavengers (1-dibromomethane and 1-2 dichloroethane), and a one-time analysis for per- and polyfluoroalkyl substances (PFAS) at RHMW2254-01. If TPH-d/o was detected, the sample was extracted and analyzed for SGC to quantify the amount of non-polar hydrocarbons compared to total (polar and non-polar) components in those carbon ranges. As described in the DOH Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan (TGM) (DOH 2021)), SGC can help evaluate whether TPH is related to fresh petroleum or other sources and can also be used to better understand the amount of natural degradation that is taking place at each well.

In addition, 2-(2- methoxyethoxy)-ethanol, a de-icing additive to JP-5, was analyzed for in the Adit 3 sump and RHMW2254-01 samples collected on December 21, 2021. The Adit 3 sump is being sampled weekly per DOH request.

DOH requested that wells with sampling zones that intersect the water table be sampled with a bailer for the NOI sampling effort and this was done. However, several well sampling zones are confined and must be sampled with a pump at the sampling zone. These are:

- OWDFMW01, OWDFMW04A, OWDFMW05A, OWDFMW07A, OWDFMW8A, RHMW12A, RHMW16 are sampled with a low-flow pump.
- RHMW11-05, RHMW13-05, and RHMW15-05 are Westbay wells and sampled according to their Standard Operating Procedures (SOPs).
- RHMW2254-01 was sampled with a low-flow pump and with a bailer.

A summary of groundwater monitoring results will be included in the next Quarterly Release Response Report.

5.5 Drinking Water Sampling

Daily drinking water sampling included extensive activities associated with addressing fuel that entered the JBPHH Water Distribution System, including discovery sampling, delineation of impact sampling, distribution line flushing sampling, and final compliance sampling. These activities and results are being provided in separate reports through coordination with DOH and EPA in the Interagency Drinking Water System Team.

Drinking water sampling associated with the Navy Well 2254-01 was discontinued after the pumps were shut down on November 28, 2021 and will not be conducted until further notice and coordination with the DOH Safe Drinking Water Branch.

5.6 Holding Tank and Leach Tank Sampling

Between January 11 and 13, 2022, 35 primary subsurface soil samples and 3 duplicate soil samples were collected and analyzed by an Environmental Laboratory Accreditation Program (ELAP)-certified laboratory (Eurofins-Tacoma, located in Seattle, Washington) from 21 soil borings adjacent to the groundwater holding tank and leach tank. Soil cores from each boring were screened for organic vapors every foot below 6 ft below ground surface (bgs). Results of the investigation and initial recommendations for an additional data gap site characterization will be presented in the next Quarterly Release Response Report.

6.0 Sample Control Procedures

Prior to sampling, the field team inspected all supplies and consumables to ensure that they were acceptable for use. Sampling and sample handling procedures were designed to ensure that

samples were consistently collected, labeled, preserved, and transported in a manner that maintained their integrity for their intended purposes.

6.1 Sample Containers and Preservation

Soil vapor laboratory samples were collected into Summa canisters in the Upper Tank Farm as part of the May 6, 2021 NOI requirement, but none were collected for the November 20, 2021 release in the Adit 3 tunnel.

Groundwater and drinking water samples for chemical analyses in support of NOI requirements were placed in the sample containers listed in Table 6-1, and soil samples (unconsolidated material) were placed in the sample containers listed in Table 6-2; the samples were preserved as indicated and analyzed within the required holding times. The containers, preservatives, and holding times are specified in the respective U.S. Environmental Protection Agency (EPA) SW-846 methods.

Table 6-1: Groundwater and Drinking Water Sample Containers, Preservatives, and Holding Times

SW-846 Parameter	Number/Type of Containers per Sample	Preservative	Holding Time
VOCs			
VOCs, Benzene, Toluene, Ethylbenzene, Total Xylenes	2 × 40-mL vials, Teflon-lined septum caps	No headspace, cool to ≤6°C and adjust to pH <2 with H_2SO_4, HCl, or solid $NaHSO_4$	Maximum holding time is 7 days if pH >2 or 14 days if pH <2.
TPH			
TPH-g	2 × 40-mL vials, Teflon-lined septum caps	No headspace, cool to ≤6°C and adjust to pH <2 with HCl	Maximum holding time is 7 days if pH >2 or 14 days if pH <2.
TPH-d, TPH-o (without and with silica gel cleanup)	2 × 1-L amber glass, Teflon-lined lid	Cool to ≤6°C and adjust to pH <2 with HCl	14 days/40 days [a]
SVOCs, PAHs			
SVOCs, 1-Methylnaphthalene, 2-Methylnaphthalene, Naphthalene	2 × 1-L amber glass, Teflon-lined lid	Cool to ≤6°C	7 days/40 days [a]
Fuel Additives			
2-(2-methoxyethoxy)-Ethanol (2-2-MEE)	2 × 1-L amber glass, Teflon-lined lid	Cool to ≤6°C	7 days/40 days [a]

SW-846 Parameter	Number/Type of Containers per Sample	Preservative	Holding Time
Lead Scavengers			
1,2-dibromoethane (EDB)	2 × 40-mL vials, Teflon-lined septum caps	No headspace, cool to ≤6°C	7 days
1,2-dichloroethane (DCA)	2 × 40-mL vials, Teflon-lined septum caps	No headspace, cool to ≤6°C and adjust to pH <2 with H2SO4, HCl, or solid NaHSO4	Maximum holding time is 7 days if pH >2 or 14 days if pH <2.
Natural Attenuation Parameters (NAPs)			
Methane	2 × 40-mL vials, Teflon-lined septum caps	No headspace, cool to ≤6°C and adjust to pH <2 with HCl	Maximum holding time is 7 days if pH >2 or 14 days if pH <2.
Total Organic Carbon (TOC)			
TOC	3 × 40-mL amber volatile organic analyte (VOA) vials, Teflon-lined lid	Cool to ≤6°C and adjust to pH <2 with H_2SO_4	28 days
Per- and Polyfluoroalkyl Substances (PFAS)			
PFAS	2 × 500 mL + 2 × 60-mL high-density polyethylene (HDPE) containers	Cool to ≤ -20 ºC and protected from the light / Cool to 0 - 6 ºC and protected from the light	90 days / 28 days

Notes:

°C degree Celsius
H_2SO_4 sulfuric acid
HCl hydrochloric acid
L liter
mL milliliter
$NaHSO_4$ sodium hydrogen sulfate

[a] x days/y days = x days from sample collection to extraction/y days for analysis of extracts following extraction.

Table 6-2: Soil Sample Containers (Unconsolidated Material), Preservatives, and Holding Times

Parameter	Number/Type of Containers per Sample	Preservative	Holding Time
TPH-g, VOCs			
TPH-g, Benzene, Toluene, Ethylbenzene, Total Xylenes	2 × 10 mL water-preserved with magnetic stir bar; 1 × 5-mL methanol-preserved; Teflon-lined septum caps	Cool to 4 ± 2°C or frozen at -7°C	Samples shipped at 4 ± 2°C must be received by laboratory within 48 hrs. and frozen upon receipt; Samples frozen must be analyzed within 14 days.
TPH			
TPH-d, TPH-o (without and with silica gel cleanup)	1 × 8-oz glass jar, Teflon-lined lid	Cool to 4 ± 2°C or frozen at -7°C	14 days/40 days [a]
PAHs			
1-Methylnaphthalene, 2-Methylnaphthalene, Naphthalene	1 × 8-oz glass jar, Teflon-lined lid	Cool to 4 ± 2°C or frozen at -7°C	14 days/40 days [a]

Notes:

mL milliliter

oz ounce

°C degree Celsius

[a] x days/y days = x days from sample collection to extraction/y days for analysis of extracts following extraction.

6.2 Chain of Custody

Chain-of-custody (COC) documentation was maintained for samples during all phases of sample collection, transport, and receipt and internal transfer within the laboratory.

6.3 Laboratory Analytical Methods

Soil vapor samples were analyzed for organic vapors using hand-held real-time PIDs which provide semi-quantitative data that for the organic vapors. These data were collected using standard operating procedures to ensure reproducible and comparable data sets.

Groundwater samples were analyzed for VOCs, BTEX, and DCA by EPA Method 8260; TPH-g, TPH-d and TPH-o by EPA Method 3520/8015; TPH with SGC by EPA Method 3630/8015; SVOCs by EPA Method 8270C; PAHs 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene by EPA Method 8270 Selected Ion Monitoring (SIM); 2-2-MEE by EPA Method

8270D Modified; EDB by EPA Method 8011; Methane by EPA Method 8015 Modified; TOC by EPA Method 9060A, and PFAS by EPA Draft Method 1633.

Soil samples for site characterization were analyzed for BTEX and TPH-g by EPA Method 8260; PAHs 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene by EPA Method 8270; TPH-d and TPH-o by EPA Method 3510/8015; and TPH with SGC by EPA Method 3630/8015.

6.4 Laboratory Sample Preservation Procedures

Laboratory samples for groundwater, and drinking water were preserved as described in Section 6.1.

7.0 Field Observations during Sampling

Field observations made during sampling activities are described below.

7.1 Emergency Groundwater and Product Sampling Observations

RHMW2254-01 was sampled weekly between November 20, 2021 and January 14, 2022. Beginning on December 8, 2021, RHMW2254-01 was sampled with both a bailer and dedicated low-flow bladder pump.

- An oily sheen was observed on December 8, 2021, December 15, 2021, and January 10, 2022.
- A headspace organic vapor reading (110 ppmv) measured 30 ft above the water development tunnel water surface was recorded on December 8, 2021.
- A headspace organic vapor reading (78.4 ppmv) measured 50 ft above the water development tunnel water surface was recorded on December 15, 2021.
- Ambient background organic vapor readings varied between 0.0 ppmv and 0.6 ppmv over the sampling period.
- Floating particulates were observed on two occasions.
- Ambient PID measurements are included in the summary of monitoring well headspace and free product gauging measurements presented in Appendix B.1.

Fuel product was collected from the fire suppression drain line on January 6, 2022:

- After the line was opened during sampling, downwind organic vapor readings spiked at 36.1 ppmv indicating the presence of organic vapors.

Adit 3 sump samples were collected during five sampling events from December 15, 2021 through January 14, 2022:

- Headspace VOC readings were recorded as 52.7 ppmv, 39.8 ppmv, and 7.4 ppmv on 12/15/21, 1/3/22, and 1/11/22, respectively.
- There were no noted observations of color, odor, or sheen.

7.2 Emergency Subslab Soil Vapor Probe Installation and Monitoring Observations

Forty-seven subslab SVMPs were installed in the Adit 3 and Pearl Harbor tunnels between December 15 and 17, 2021. Soil vapor samples were collected and measured using real-time organic vapor analyzers (handheld PIDs).

- In general, organic vapors were measured using a ppbRAE, and oxygen and carbon dioxide were measured using a MultiRAE.
- PID readings were collected on December 17, 20, 21, 22, 23, 24, 27, 29, 30, and 31, 2021; on January 6, 12, 19, and 26, 2022; and on February 2 and 9, 2022.
- Between December 17 and 21, 2021, samples were measured with a PID calibrated using 10 ppmv isobutylene. It was noted that maximum PID readings were greater than 100 ppmv; therefore, a decision was made to calibrate the PID using 100 ppmv isobutylene for samples measured from December 22, 2021 through February 9, 2022.
- On December 21, 2021, the ppbRAE lamp was contaminated during sampling, as indicated by elevated ambient readings. Only 20 SVMPs were considered valid and reported.
- On December 22, 2021, the MultiRae PID was used to measure SVMPs due to a contaminated lamp on the ppbRAE. It was noted that readings were significantly lower than the previous ppbRAE readings. This is likely due to the built-in moisture corrections in the ppbRAE. The ppbRAE was thereafter chosen as the detector that would be used for comparability.
- Significant rain was observed between December 27, 2021 and January 5, 2022, resulting in significant groundwater passing under the tunnel floor subslab and being pumped from the Adit 3 sump for removal/disposal. Observations during and after these rainy events included the following:
  - Soil vapor could not be collected from A3+250, A3+300, A3+500.
  - Soil vapor could not be collected from IS+68 on December 29, 2021.
  - Following these rain events, the points of soil vapor maxima migrated from the release area and the Adit 3 groundwater sump area to other areas including:
    - A zone between A3-100 and A3+100

- A zone between 2S-25 and 2S-100
- A zone between A3-100 and A3-300

7.3 Free Product Gauging and Groundwater Monitoring Well Headspace Measurement Observations

Between November 20, 2021 and January 14, 2022, free product, ambient air, and organic vapor headspace were measured in monitoring wells and at RHMW2254-01. The results are presented in Appendix B.1. The following observations were made:

- No free product was observed in any groundwater monitoring wells during any monitoring event, regardless of the method used (either oil/water interface probe or bailer). RHMW12A, RHMW16, OWDFMW01, OWDFMW04A, OWDFMW05A, OWDFMW07A, and OWDFMW08A have submerged well screens. RHMW11, RHMW13, RHMW14, RHMW15 are closed systems with sampling ports below the water level surface. Therefore, free product will likely not be present in the samples from these wells. However, observations of the samples were made in the field to verify the absence of free product.
- Most headspace readings were less than 10 ppmv, with the following exceptions:
  - Headspace readings were measured in tunnel monitoring wells at concentrations up to 422.3 ppmv primarily occurring on December 27, 2021 and January 3, 2022. On January 10, 2022, readings in all these wells were 0 ppmv.
  - Headspace readings from RHMW2254-01 were measured on December 8 and 15, 2021 at concentrations up to 110.1 ppmv. All other readings were 0.6 ppmv or less.
  - For wells outside the tunnel, headspace readings were mostly 1 ppmv or less in all wells with the exception of sporadic measurements in RHMW08, RHMW12A, RHMW13, OWDFMW05A, OWDFMW07A, and OWDFMW08A. Only two measurements (one in RHMW13 at 10.9 ppmv and one in OWDFMW08A at 19.8 ppmv) exceeded 10 ppmv.

7.4 Groundwater Sampling Observations

Prior to collecting groundwater samples, monitoring well headspace organic vapor measurements and free product gauging were conducted as described in Section 7.3. Groundwater chemistry from purge parameters is included in Appendix B.1.

- No free product or sheen was observed in any of the monitoring wells during any sampling event, consistent with previous observations.
- Color, odor and sediment were observed occasionally at wells during the sampling events, most often with bailed wells located inside the tunnel (RHMW02, RHMW03, and RHMW05).

- Trace amounts of sediment were noted on two occasions at RHMW04 and RHMW08, with each well having one instance of the bailer hitting the bottom of the well.
- Organic odor was noted twice during sampling of RHMW08 during one sampling event at OWDFMW01.

7.5 Drinking Water Sampling Observations

Pre- and post-chlorination drinking water samples were collected at the Navy Well 2254-01 chlorination system on November 10, November 17, and November 24, 2021.

- No sheen or color was recorded during the pre or post chlorination sampling events.
- Ambient organic vapor readings during pre-chlorination sample events were 0.0 ppmv on November 10, 2021; 0.1 ppmv on November 17, 2021; and 0.6 ppmv on November 24, 2021.
- No odor was recorded during the post chlorination sampling events

7.6 Holding Tank and Leach Tank Sampling Observations

A single groundwater sample was collected on January 26, 2022 from the perched water well OWDFMW06B, located approximately 20 ft north-northeast of the holding tank. The following observations were made:

- No sheen or oil was observed in the sampling bailer.
- Headspace organic vapor reading collected from the well casing was 158.7 ppmv using a miniRAE.
- Depth to water below top of casing was 29.06 ft.

8.0 Data Quality

Field and laboratory quality control (QC) measures are described below. When applicable, corrective actions were implemented when control limits for field or laboratory QC measurements were not met.

8.1 Laboratory Quality Control

Laboratory QC samples for groundwater samples, and product samples are described below.

8.1.1 Soil Vapor Samples

Soil vapor sample results presented in this report were analyzed in the field using hand-held PIDs.

8.1.2 Groundwater and Drinking Water Samples

Laboratory QC samples included method blanks, LCSs/LCSDs, matrix spikes/matrix spike duplicates (MSs/MSDs), and duplicates as described in the U.S. Department of Defense (DoD)

Quality Systems Manual (QSM) Version 5.3 (DoD and DOE 2019) and the AOC Red Hill Sampling and Analysis Plan Addendum 01 (DON 2017).

8.2 Field Quality Control

Field QC samples for groundwater including trip blanks and equipment rinsates were collected according to the procedures described in NAVFAC Pacific Environmental Restoration Program Project Procedure III-B, *Field QC Samples* (Water, Soil) (DON 2015). Field QC samples are listed in Table 8-1.

Table 8-1: Measurement Performance Criteria – Field QC Samples

QC Sample	Analytical Group [a]	Frequency [b]	DQI	Measurement Performance Criteria
Field duplicate	VOCs, TPH-g, TPH-d, TPH-o, PAHs, SVOCs	10% of primary samples collected per matrix per analytical method	Field sampling precision	RPD ≤50% water [c]
Trip blank	VOCs, TPH-g, methane, lead scavengers	At minimum, one per cooler containing VOCs, TPH-g, Methane, lead scavengers samples	Contamination during sample transport	≤1/2 of LOQ
Field blank	VOCs, TPH-g, TPH-d, TPH-o, PAHs, SVOCs	Once per source of decontamination water per sampling event	Adequacy of the decontamination water quality or potential for contamination due to field conditions	≤1/2 of LOQ
Equipment rinsate	VOCs, TPH-g, TPH-d, TPH-o, PAHs, SVOCs	5% of primary samples collected per matrix per analytical method	Adequacy of the decontamination process	≤1/2 of LOQ

Notes:

% percent
DQI data quality indicator
LOQ limit of quantitation
RPD relative percent difference

[a] Refer to Section 6.3 for the list of analytes within analytical groups.

[b] Per Project Procedures Manual Procedure III-B, Field QC Samples (DON 2015); refer to Procedure III-B Section 5 for a summary of QC samples by project location, matrix, and analytical group.

[c] Per Project Procedures Manual Section II, *Data Validation Procedures* (DON 2015).

[d] One equipment blank was collected from the bailer used to sample RHMW03 to demonstrate equipment cleanliness. As all monitoring locations have dedicated bladder pumps and dedicated bailers, no reusable sampling equipment is used, thus no additional equipment blank was collected.

8.3 Data Quality Assessment

The Data Quality Assessment will be provided in the comprehensive NOI Quarterly Release Response Report, which will incorporate groundwater sampling data for the May 6, 2021 Pipeline Breach in the Tunnel, as well as groundwater sampling data for the November 20, 2021 release from the fire suppression drain line.

9.0 Analytical Results

Information on field measurements and analytical results for the various samples described in Section 5.0 are provided in the following sections.

9.1 Emergency Groundwater and Product Sampling Analytical Results

Emergency groundwater and product sampling was conducted for forensic analysis at the Adit 3 sump and RHMW2254-01. Results of the forensics analysis are described below.

9.1.1 Forensics and Data Evaluation

A forensics investigation and data evaluation were conducted to assess the distribution of LNAPL that was released from an overhead 14-inch PVC pipe located by the Adit 3 Water Pumping Station. These data were evaluated and presented in a Technical Memorandum, which is included as Appendix A.

Historical data from the January 2014 release from Tank 5 indicated that RHMW02 groundwater samples were all consistent with chromatograms for biodegraded kerosene-type fuels (e.g., JP-5 and JP-8). Petroleum fuels are composed primarily of hydrocarbons (nonpolar) that have distinctive chromatographic profiles. The majority of the fuel is not water soluble, and the chromatographic profiles are useful in distinguishing LNAPL from biodegraded material that is polar and indicating ongoing biodegradation.

Data collected from the RHSF groundwater sump by Adit 3, RHS Water Gallery 2254-01, and the fire suppression system suggest that:

- The magnitudes of the C9–C44 carbon range concentrations in the water samples from the RHSF groundwater sump by Adit 3 (ERH1968) and RHS Water Gallery 2254-01 (ERH2051) were consistent with the presence of LNAPL or free product.
- The composition of the product samples from the RHSF groundwater sump by Adit 3 and the fire suppression system, along with the groundwater samples from the groundwater sump by Adit 3 and the RHS Water Gallery 2254-01, were consistent with the hydrocarbon signature of JP-5.

Further information is detailed in the Appendix A Technical Memorandum.

Additionally, the chromatographic profile of the Simple Green cleaning solution that was reported to have been used during cleanup of the tunnel following the November 20, 2021 release was detected within the TPH range, although the chromatographic profile would be different from fuel. Since Simple Green is water-soluble and biodegradable, metabolites would be produced that are measured as TPH.

9.2 Emergency Subslab Soil Vapor Monitoring Results

Figure 3 provides the results of soil vapor monitoring from subslab SVMPs installed into the floors of the Adit 3 and Pearl Harbor tunnels. The origin for the Adit 3 tunnel (A3) is at the eastern edge of the Water Pumping Station doorway. Coordinates are in feet and are positive (+) to the east and negative (-) to the west. The origin for the Pearl Harbor Tunnel (S2) is at the Adit 3 merge centerline, and coordinates are positive (+) to the south.

The results indicate that:

- Elevated organic vapor concentrations were observed in the subslab throughout the Adit 3 tunnel (SVMP array A3) from the release area west to the Adit 3 portal.
- Organic vapor concentrations declined over a short distance to the east of the release area as observed at SVMPs A3-400, A3-425, and A3-450.
- Local soil vapor maxima were located in segments of the Adit 3 (A3) and Pearl Harbor tunnels (S2) that overlie the water development tunnel, including:
  - In the Adit 3 tunnel vicinity of the release area between A3-300 to A3-375
  - In the upper Pearl Harbor tunnel, just south of the merge, between S2+50 and S2+100
- Other local maxima occurred in the Adit 3 tunnel:
  - Between the Pearl Harbor tunnel merge and the Water Pumping Station, between A3+100 and A3+150
  - In the vicinity of the groundwater sump where fuel accumulated during the release, between A3-400 and A3-275

9.3 Free Product Gauging and Groundwater Monitoring Well Headspace Measurements

No free product was detected in the groundwater monitoring wells or RHS Water Gallery 2254-01. Free product gauging and groundwater monitoring well headspace measurements taken through January 14, 2022 are presented in Appendix B.1.

9.4 Groundwater and Product Analytical Results

Analytical results provided in this report include Level IV data packages as of January 14, 2022, which are included as Appendix B.2.

9.5 Drinking Water Analytical Results

Drinking water analytical results will be provided in subsequent quarterly release response reports after validation is completed.

9.6 Holding Tank and Leach Tank Sampling Analytical Results

Soil and groundwater analytical results will be provided in subsequent quarterly release response reports after validation is completed.

10.0 Summary of Results and Extent and Magnitude of Contamination

This section summarizes the results presented in Section 9.0 and provides historical context for evaluating the impacts of the November 20, 2021 release.

10.1 Soil Vapor

Figure 3 presents the soil vapor data associated with the November 20, 2021 release. Soil vapor results in the first 900 ft of the Adit 3 tunnel and northernmost 300-ft extent of the Pearl Harbor tunnel indicates elevated organic vapor measurements (ranging from less than 1 to 785 ppmv). Local soil vapor maxima are located in segments of the Adit 3 (A3) and Pearl Harbor tunnels (S2) that overlie the water development tunnel, including:

- In the Adit 3 tunnel, in the vicinity of the release area, between A3-300 and A3-375
- In the upper Pearl Harbor tunnel, just south of the merge, between S2+50 and S2+100

Other local maxima were measured in the Adit 3 tunnel:

- Between the Pearl Harbor tunnel merge and the Water Pumping Station, between A3+100 and A3+150
- In the vicinity of the groundwater sump where fuel accumulated during the release, between A3-400 and A3-275

10.2 Groundwater

Data collected from the RHSF groundwater sump by Adit 3, RHS Water Gallery 2254-01, and the fire suppression system suggest that:

- The magnitudes of the C9–C44 carbon range concentrations in the water samples from the RHSF groundwater sump by Adit 3 (ERH1968) and RHS Water Gallery (ERH2051) are consistent with the presence of LNAPL or free product.
- The composition of the product samples from the RHSF groundwater sump by Adit 3 and the fire suppression system, along with the groundwater samples from Adit 3 and RHS Water Gallery 2254-01, are consistent with the hydrocarbon signature of JP-5.

- Simple Green that was reported to have been used during cleanup of the tunnel following the November 20, 2021 release was detected within the TPH range, although the chromatographic profile would be different from fuel. Since Simple Green is water-soluble and biodegradable, metabolites would be produced that are measured as TPH.

Further information is detailed in the Technical Memorandum, presented in Appendix A.

10.3 Drinking Water

Release response drinking water sample results, including evaluation of extent and magnitude of drinking water impacts, will be included in future release response reports.

10.4 Holding Tanks and Leach Tank Subsurface Soil and Groundwater

Release response subsurface soil and groundwater sample results, including evaluation of extent and magnitude of subsurface soil impacts, will be included in future release response reports.

11.0 Conclusions and Recommendations

On November 20, 2021, a 14-inch fire suppression drain line valve was broken in the Adit 3 tunnel. Fuel was released, flowed westward down the Adit 3 tunnel floor past the Pearl Harbor tunnel merge and Navy Well 2254-01 pump room, and ponded in a low spot in the Adit 3 tunnel, which is the location of the Adit 3 groundwater sump.

On December 2, 2021, water from the water development tunnel was sampled with a bailer, and a thin lens of LNAPL was observed in the bailer. An additional sample was collected from fuel within the groundwater sump that was attributed to the release. Both LNAPL samples were analyzed by specialized petroleum fingerprinting methods, and the results were evaluated by a petroleum forensic chemist with the following observations:

- Both samples were unweathered.
- Both samples represented similar JP- 5 fuel, likely from the same source.

Fifty-two SVMPs were installed in the impacted tunnel floors during two events: December 15 through 17, 2021 and January 11, 2022.

Between December 17, 2021 and January 14, 2022, 12 SVMP sampling events were conducted using hand-held PIDs, which identified elevated organic vapors in the first 900 ft of the Adit 3 tunnel floor, and the northernmost 200 ft of the Pearl Harbor tunnel floor, with maxima in areas of the tunnel that directly overlie the water development tunnel, as well as adjacent to the Water Pumping Station and adjacent to the Adit 3 groundwater sump.

A Preliminary Site Characterization Plan was developed and finalized on January 12, 2022 (DON 2022a). The following release response actions for the vadose zone were outlined in the Plan and will be performed:

1) Conducting a subsurface soil sampling investigation of the groundwater holding tank and leach tank area of concern.
2) Conducting additional characterization of the Adit 3 tunnel.
3) Developing additional mitigation actions based on the results of the preliminary studies.

The next Quarterly Release Response Report will include information on release response actions for both the pipeline breach in the tunnel of May 6, 2021 and the release from the fire suppression drain line of November 20, 2021, since the DOH-approved groundwater sampling plan addresses both releases.

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Appendix A – Technical Memorandum

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GSI ENVIRONMENTAL

MEMORANDUM

TO: Jeff Johnson, P.G.; Jeff Hart, P.G., P.M.P; and Frank Cioffi, P.E., Esq.- AECOM

FROM: Ileana Rhodes, PhD; GSI Environmental Inc.

RE: Updated Analysis of Samples from Sump (11/24/2021), Adit 3 (11/24/2021) and Red Hill Shaft Water Gallery (12/2/2021) to Include Analysis of Product from AFFF Drain Line (1/6/2022)

This memorandum summarizes analytical results from Alpha Analytical for the following samples:

Client ID	Laboratory ID	Sample Date	Date Received	Sample Matrix	Sample Location	Analyses Performed
ERH1967	L2165245-01 L2166503-01*	11/24/2021	11/29/2021	Oil	Sump	SHC (EPA 8015) PIANO (EPA 8260)
ERH1968	L2165245-02	11/24/2021	11/29/2021	Water	Sump at Adit 3	SHC (EPA 8015) EPA 8270 Scan w/ TICs
ERH1968 Silica Gel Cleanup (SGC)	L2165245-03	11/24/2021	11/29/2021	Water	Sump at Adit 3	SHC (EPA 8015) EPA 8270 Scan w/ TICs
ERH2051	L2166503-02	12/02/2021	12/04/2021	Water	Red Hill Shaft (RHS) Water Gallery	SHC (EPA 8015) PIANO (EPA 8260)
ERH2371	L2200971-01	1/06/2022	1/10/2022	Oil	AFFF Drain Line	SHC (EPA 8015) PIANO (EPA 8260)

Note: * ERH1967 was analyzed twice by Alpha Analytical for SCH (EPA 8015)
SHC = Saturated Hydrocarbon; TICs = Tentatively Identified Compounds
PIANO = Paraffins, Isoparaffins, Aromatics, Naphthenes, and Olefins

Key observations of the analytical results are summarized below.

The magnitudes of the C9-C44 concentrations in the water samples from Adit 3 sump (ERH1968) and RHS water gallery (ERH2051) are consistent with the presence of non-aqueous phase liquid (NAPL) or free product. The solubility of jet/kerosene type fuels is typically reported as ~5 mg/L in water. As a result, concentrations for detected compounds in the C9 to C44 carbon range above this solubility threshold are a clear indicator of the presence of non-dissolved fuel in the water samples. For the Adit 3 water sample, the concentration of the C9 to C44 range was 1,260 mg/L before SGC (1,090 mg/L after SGC). The RHS water gallery sample had a concentration of 17 mg/L.

The composition of the product samples from sump and AFFF drain line and water samples from Adit 3 and RHS Water Gallery are consistent with the hydrocarbon signature of JP-5. As shown in Figure 1, the chromatograms for the product samples (ERH1967, ERH2371) and water samples (ERH1968, ERH2051)

closely match a typical chromatogram of JP-5. Likewise, the relative hydrocarbon distribution of the products and the water samples are similar indicating the JP-5 in the water samples is related to the product in the sump and AFFF drain line with minor exceptions due to weathering (Figures 2, 3 and 4).

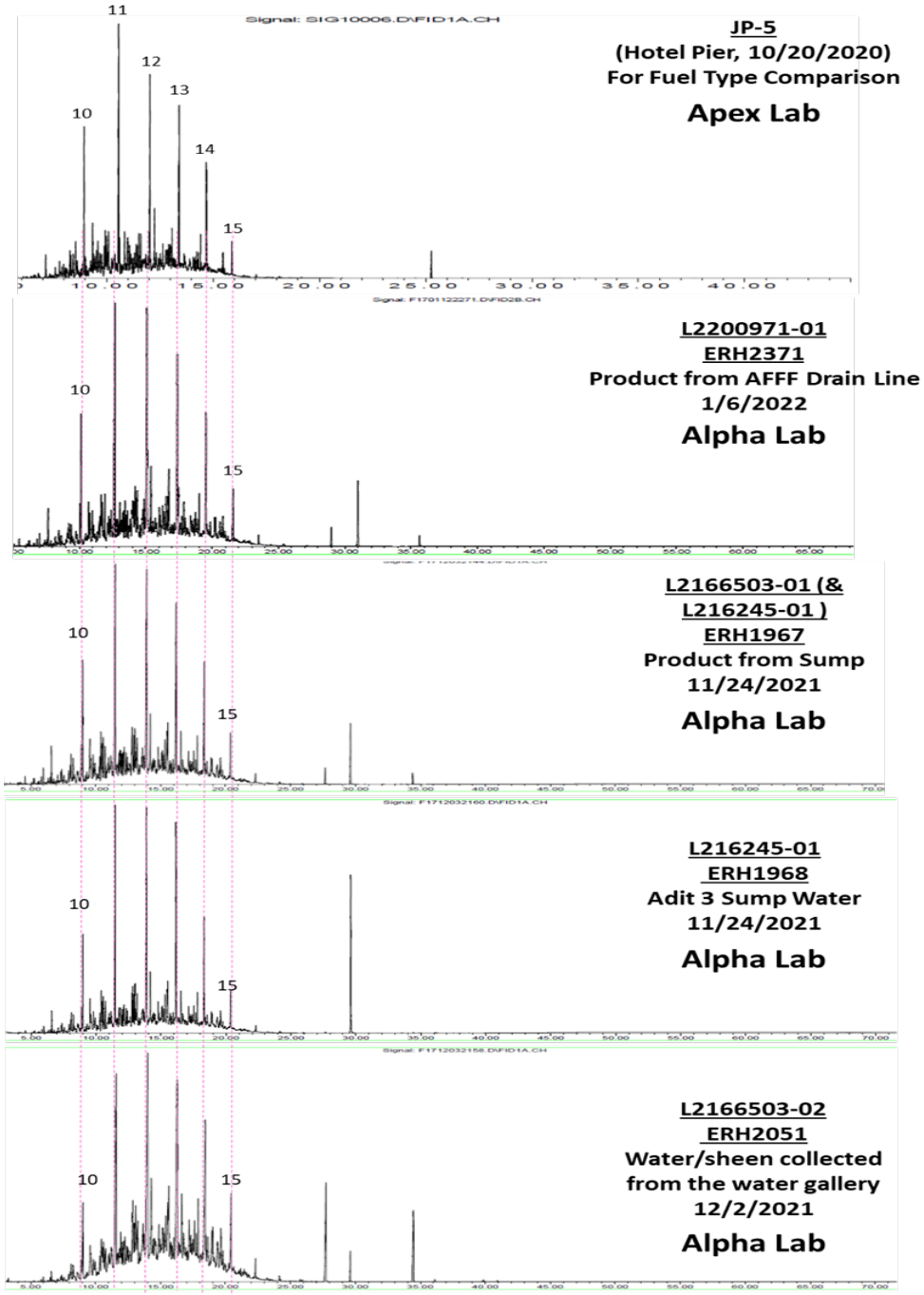

Figure 1. Chromatograms of JP-5 (reference), product samples (ERH1967, ERH2371), and water samples (ERH1968, ERH2051).

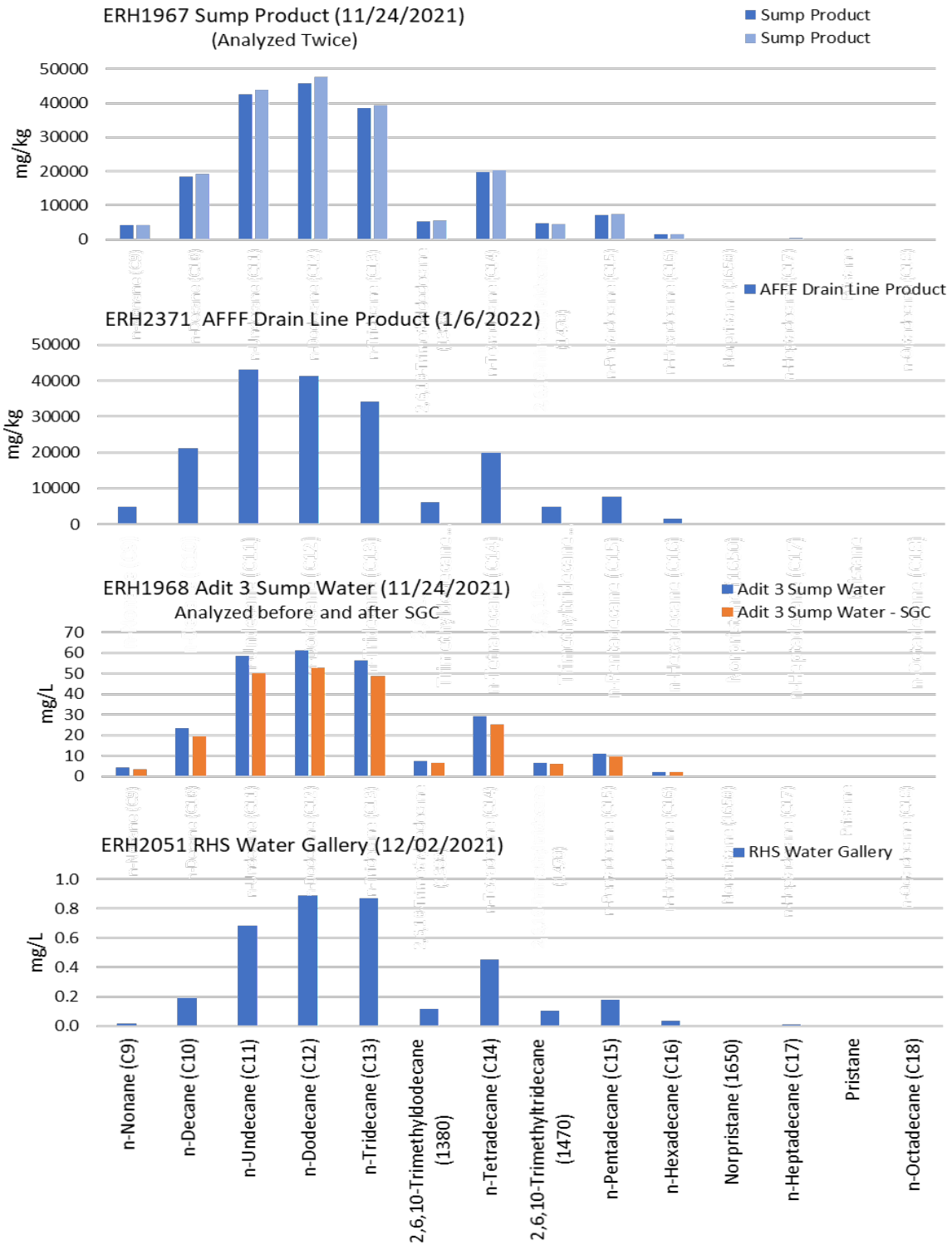

Figure 2. Hydrocarbon concentration profiles (C9-C18) for the product samples from sump, AFFF drain line and the water samples from Adit 3 and RHS water gallery.

Table 1 summarizes the ratios of diagnostic indicator compounds (source, biodegradation, and evaporation) for the product samples (ERH1967, ERH2173) and the water samples (ERH1968, ERH2051). These ratios are supporting information to assess the relationship between the product sample (ERH1967) and water samples (ERH1968, ERH2051):

- "Source" type indicators are ratios of compounds that are recalcitrant to biodegradtion, typically highly branched alkanes like 2,6,10-trimethyldodecane (i-1380), 2,6,10-trimethyltridecane (i-1470) and 2,6,10-trimethylpentadecane (Norpristane). Note that "source" in this context refers to the relationship between the product and water samples and makes no inference to the actual source or origin of product in the sump.
- Biodegradation indicators are ratios of relatively easier to biodegrade compounds like n-alkanes (under aerobic conditions) to more recalcitrant highly branched alkanes of similar boiling point and water solubility.
- Evaporation can be indicated by a ratio of a lighter hydrocarbon and a heavier hydrocarbon. The ratio of nC10 to i-1470 is useful to illustrate loss by evaporation. These two compounds have boiling points that differ by 110°C.

Table 1. Ratios of Diagnostic Indicator Compounds

Indicator Type	Ratios of Diagnostic Indicator Compounds	Sump Product (ERH1967)	Sump Product (ERH1967)	AFFF Drain Line Product (ERH2371)	Adit 3 Sump Water (ERH1968)	Adit 3 Sump Water (ERH1968)	RHS Water Gallery (ERH2051)
Evaporation	nC10/i-1470	3.9	4.3	4.4	3.5	3.3	1.8
Biodegradation	nC13/i-1380	7.3	7.0	5.6	7.4	7.5	7.6
	nC14/i-1470	4.2	4.5	4.1	4.4	4.3	4.4
Source	i-1380/i-1470	1.1	1.3	1.3	1.2	1.1	1.1
	i-1470/Nopristane	24.4	22.2	23.5	23.9	24.5	20.8

Note: ERH1967 was analyzed twice by Alpha Analytical

Figures 3 and 4 illustrate the ratios of diagnostic indicator compounds as radar plots. It is evident that the site samples are similar in composition, such that the Adit 3 sump water (ERH1968) and RHS water gallery (ERH2051) are related to products from the sump product (ERH1967) and the AFFF drain line (ERH2173). One difference is that the RHS water gallery sample (ERH2051) has lost some of the more volatile hydrocarbons with respect to the products and the water in Adit 3 sump. This is expected as sheens have a high surface area and facilitate evaporation of lower molecular weight compounds. The AFFF drain line sample shows some potential biodegradation as indicated by a lower ratio of n-tridecane to 2,6,10-trimethyldodecane (i-1380) with respect to the other samples. The AFFF drain line sample has been in a different environment than the other samples and could be exposed to different microorganisms, electron acceptors and available oxygen. Different environments can result in differences in biodegradation mechanism with individual n-alkanes degrading at different rates.

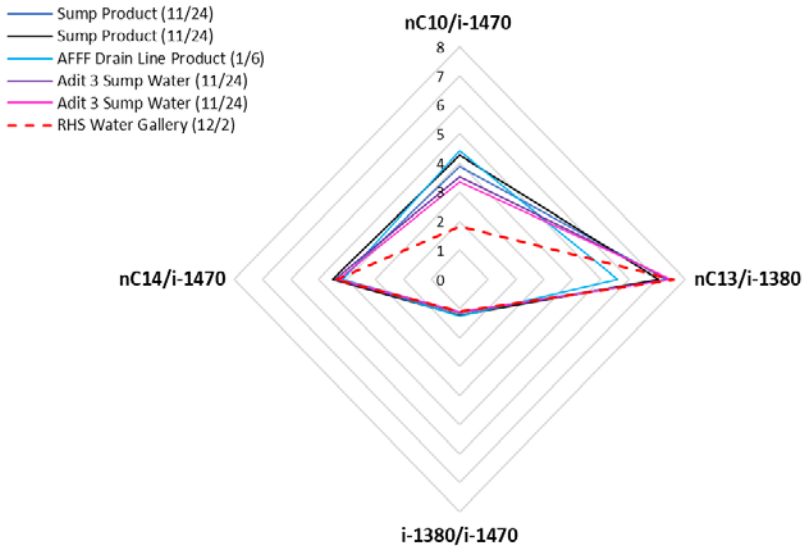

Figure 3. Radar plot of the ratios of diagnostic compounds (*linear scale*) for the product samples (ERH1967, ERH2173), Adit 3 sump water (ERH1968), and RHS Water Gallery (ERH2051). Note: One of the source ratio (i-1480/Norpristane) is excluded for clarity. It is included in Figure 4 with log scale. Loss of voltiles is evident in the RHS sample.

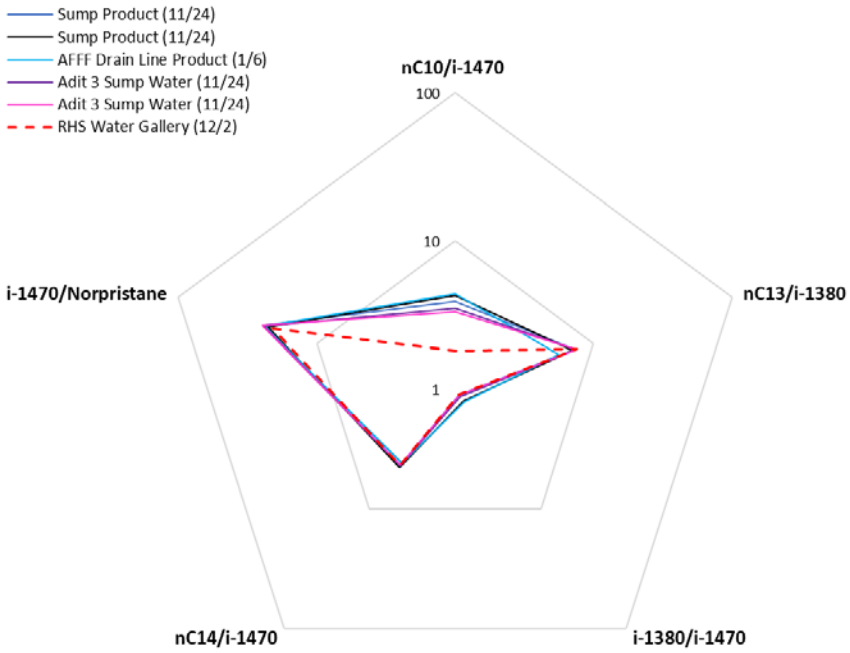

Figure 4. Radar plot of the ratios of diagnostic compounds (*log scale*) for the product samples (ERH1967, ERH2183), Adit 3 sump water (ERH1968), and RHS Water Gallery (ERH2051).

In summary,

- The chromatographic fingerprints and concentrations in the water samples (Adit 3 sump and RHS water gallery) are consistent with the presence of non-aqueous phase liquid (NAPL) or free product.
- Product and water samples are consistent with JP-5 and they are related.

Appendix B – Groundwater Data

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Appendix B.1 – Summary of Free Product Gauging, Monitoring Well Headspace Measurements, and Groundwater Purge Parameters through January 10, 2022

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Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Monitoring Well Headspace and Fuel Product Gauging
DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

	RHMW01R							RHMW02							RHMW03							RHMW04							RHMW05							RHMW06							RHMW08						
WEEK	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS
			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)
11/21/2021	11/24	1003	0.0	0.0	84.29	No	NA	11/24	1108	0.0	0.0	87.15	No	NA	11/24	1210	0.0	0.0	103.37	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	11/24	0855	0.0	0.0	83.93	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/28/2021	12/1	1035	0.2	0.0	83.83	No	NA	12/1	1202	0.0	0.0	86.75	No	NA	12/1	1312	0.0	0.0	103.02	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/1	0934	0.0	0.0	83.41	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/1	1510	0.0	0.0	292.91	No	NA
12/5/2021	12/8	1052	0.1	0.3	83.45	No	NA	12/8	1212	0.0	0.2	86.41	No	NA	12/8	1317	0.0	8.1	102.66	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/8	0922	0.5	2.2	83.02	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/8	1545	0.0	0.0	292.52	No	NA
12/13/2021	12/15	1300	0.0	0.1	83.28	No	NA	12/15	1408	0.0	0.0	86.19	No	NA	12/15	1532	0.0	0.0	102.43	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/15	1120	0.0	0.0	82.86	No	NA	12/13	1245	0.0	0.0	241.03	No	NA	12/16	0805	0.0	0.0	292.38	No	NA
12/20/2021	12/20	1103	0.0	0.0	83.20	No	NA	12/20	1218	0.0	0.0	86.12	No	NA	12/20	1352	0.0	16.1	102.35	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/20	0915	0.0	0.0	82.86	No	NA	12/21	1550	0.0	0.0	240.72	No	NA	12/23	0830	0.0	0.0	292.34	No	NA
12/27/2021	12/27	1123	0.2	9.8	83.18	No	NA	12/27	1330	0.0	31.8[a]	86.08	No	NA	12/27	1536	0.3	422.3[a]	102.31	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/27	0904	0.2	1.7	82.76	No	NA	12/28	0755	0.0	0.6	240.93	No	NA	12/28	1200	0.0	5.1	292.01	No	NA
1/3/2022	1/3	1135	0.0	287.7	82.99	No	NA	1/3	1255	0.0	74.1	85.87	No	NA	1/3	1420	0.0	322.9	102.10	No	NA	1/4	0955	0.0	0.0	293.51	No	NA	1/3	0912	0.0	105.7	82.56	No	NA	1/4	0745	0.0	0.0	240.39	No	NA	1/4	1010	0.0	0.0	292.00	No	NA
1/10/2022	1/10	1135	0.0	0.0	82.86	No	NA	1/10	1337	0.0	0.0	85.76	No	NA	1/10	1511	0.0	0.0	102.01	No	NA	1/14	0915	0.0	0.0	293.42	No	NA	1/10	0850	0.0	0.0	82.42	No	NA	1/11	0815	0.0	0.0	240.43	No	NA	1/11	1135	0.0	1.0	291.76	No	NA

DTW = Depth-to-water
ft = feet
ft btoc = feet below top of casing
ppmv = parts-per-million, volume
NA = Not applicable
NM = No measurement taken, due to equipment installed in well.
NC - Not collected
NC1 - Not required in DOH Notice of Interest Letter of 24 Nov 21.
NC2 = PID was not functioning properly and no reading was obtained
NC-WL = Not collected while water level study underway in conjunction with the start up of Red Hill Shaft
*Note: Well screen is submerged and does not span the water's surface, therefore any free product is not captured or will be observed.
Wells with submerged screens will have a one-time bailer sample collected to verfiy no free product at the waters surface.
[1] - One-time bailer sample collected at OWDFMW01 on 1 Dec 21. No fuel product observed.
[2]- One-time bailer samples collected at RHMW12A and RHMW16 on 22 Dec 21. No fuel product observed.
Subsequent samples collected will be observed for free product during collection and will be noted.
**Note: Westbay is a closed system and the sample port is not located at the water's surface, therefore any free product is not captured or will be observed.
Headspace is measured from Westbay wells for almost all cannister pulls. The highest reading measured for each sample is shown in this spreadsheet.
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	RHMW09							RHMW11**							RHMW12A*							RHMW13**							RHMW14**							RHMW15**							RHMW16*						
WEEK	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS
			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)
11/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/2	0915	0.0	1.1	NA	No	NA	NC1	NC1	NC1	NC1	NC1	NC1
12/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/9	0930	0.0	0.0	NA	No	NA	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	12/16	1305	0.0	0.0	377.52	No	NA	12/16	1049	0.0	0.0	NA	No	NA	12/14	1415	0.1	0.1	220.48	No	NA	12/15	0915	0.0	0.0	NA	No	NA	12/13	1035	0.0	0.0	NA	No	NA	12/14	0855	0.0	0.0	NA	No	NA	12/14	0930	0.1	0.1	202.28	No	NA
12/20/2021	12/24	0830	0.0	0.0	377.29	No	NA	12/23	0926	0.0	0.0	NA	No	NA	12/22	1245	0.0	0.0	220.31	No[2]	NA	12/22	0852	0.0	10.9	NA	No	NA	12/20	0850	0.6	0.6	NA	No	NA	12/21	0909	0.0	0.0	NA	No	NA	12/22	0909	NC2	NC2	201.54	No[2]	NA
12/27/2021	1/1	0950	0.1	0.0	377.18	No	NA	12/30	1037	0.0	0.0	NA	No	NA	12/27	1305	0.1	0.0	220.29	No	NA	12/29	0952	0.0	0.0	NA	No	NA	12/27	1005	0.0	0.0	NA	No	NA	12/28	0900	0.0	0.0	NA	No	NA	12/29	0745	0.0	0.6	201.54	No	NA
1/3/2022	1/7	1110	0.0	0.0	377.06	No	NA	1/6	0913	0.0	0.0	NA	No	NA	1/5	1115	0.0	0.0	219.54	No	NA	1/5	0859	0.0	0.0	NA	No	NA	1/3	0818	0.0	0.0	NA	No	NA	1/4	0830	0.0	0.0	NA	No	NA	1/5	0800	0.0	0.0	201.22	No	NA
1/10/2022	1/12	1317	0.0	0.0	377.05	No	NA	1/13	0834	0.0	0.0	NA	No	NA	1/12	1222	0.0	4.1	219.93	No	NA	1/12	0858	0.0	0.0	NA	No	NA	1/10	1005	0.0	0.0	NA	No	NA	1/11	0850	0.0	0.0	NA	No	NA	1/12	0820	0.0	0.0	201.16	No	NA

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NC2 = PID was not functioning properly and no reading was obtained NC2 = PID was not functioning properly and no reading was obtained
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Wells with submerged screens will have a one-time bailer sample collected to verfiy no free product at the waters surface.
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	RHMW19							OWDFMW01*							RHMW2254-01							OWDFMW04A							OWDFMW05A							OWDFMW07A							OWDFMW08A						
WEEK	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS	DATE	TIME	AMBIENT	HEADSPACE	DTW	PRODUCT?	THICKNESS
			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)			(ppmv)	(ppmv)	(ft btoc)	(Yes/No)	(ft)
NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	11/24	0938	0.6	0.6	NA	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/1	1140	0.1	0.1	120.44	No[1]	NA	12/1	08:53	0.6	0.5	NA	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/8	1305	0.2	0.1	120.05	No	NA	12/8	1003	0.0	110.1	NA	Yes	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/13	0820	0.0	0.0	119.98	No	NA	12/15	0815	0.0	78.4	NA	Yes	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/21	1130	0.0	0.0	119.76	No	NA	12/21	0810	0.4	0.4	NA	No	NA	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	12/27	1400	0.0	0.0	119.75	No	NA	12/27	0900	0.0	0.0	NA	No	NA	12/30	0849	13.1	0.0	148.55	No	NA	12/31	0915	0.0	0.0	100.29	No	NA	12/31	1340	0.0	0.0	101.19	No	NA	12/30	1450	6.2	19.8	115.31	No	NA
1/3/2022	1/7	1420	0.1	0.3	426.07	No	NA	1/4	1240	0.0	0.0	119.52	No	NA	1/3	0820	0.4	0.4	NA	No	NA	1/6	1240	0.0	0.0	148.23	No	NA	1/6	0835	0.0	2.1	100.06	No	NA	1/6	1130	0.0	2.0	100.83	No	NA	1/6	0845	0.0	0.0	115.16	No	NA
1/10/2022	1/12	0910	0.0	0.0	426.09	No	NA	1/11	0740	0.0	0.0	119.45	No	NA	1/10	0930	0.2	0.2	NA	No	NA	1/13	1130	0.0	0.0	148.23	No	NA	1/13	0805	0.0	0.0	100.02	No	NA	1/13	1120	1.7	1.5	100.89	No	NA	1/13	0830	0.0	0.0	115.13	No	NA

DTW = Depth-to-water
ft = feet
ft btoc = feet below top of casing
ppmv = parts-per-million, volume
NA = Not applicable
NM = No measurement taken, due to equipment installed in well.
NC - Not collected
NC1 - Not required in DOH Notice of Interest Letter of 24 Nov 21.
NC2 = PID was not functioning properly and no reading was obtained
NC - WL = Not collected while water level study underway in conjunction with the start up of Red Hill Shaft
*Note: Well screen is submerged and does not span the water's surface, therefore any free product is not captured or will be observed.
Wells with submerged screens will have a one-time bailer sample collected to verfiy no free product at the waters surface.
[1] - One-time bailer sample collected at OWDFMW01 on 1 Dec 21. No fuel product observed.
[2]- One-time bailer samples collected at RHMW12A and RHMW16 on 22 Dec 21. No fuel product observed.
Subsequent samples collected will be observed for free product during collection and will be noted.
**Note: Westbay is a closed system and the sample port is not located at the water's surface, therefore any free product is not captured or will be observed.
Headspace is measured from Westbay wells for almost all cannister pulls. The highest reading measured for each sample is shown in this spreadsheet.
Samples collected from Westbay wells will be observed for free product during collection and will be noted.
Note a: Intial reading recorded; however, subsequent follow up reading was <10ppm

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Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW01R								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	5/12/2021	229.17	7.07	0.35	0.63	0.22	23.73	50.3	0.2
5/17/2021	5/19/2021	231.58	7.08	0.36	0.53	0.13	23.60	34.1	0.2
5/24/2021	5/24/2021	215.60	7.08	0.33	0.56	0.26	23.56	54.6	0.2
5/24/2021	5/26/2021	225.24	7.11	0.35	0.60	0.10	23.84	41.2	0.2
5/24/2021	5/28/2021	227.81	7.04	0.35	0.48	0.17	23.47	28.0	0.2
5/31/2021	5/31/2021	222.53	7.12	0.34	0.64	0.19	23.69	23.0	0.2
5/31/2021	6/2/2021	221.63	7.31	0.34	3.28	0.26	24.79	84.5	0.2
5/31/2021	6/4/2021	211.23	7.63	0.33	3.37	0.68	24.37	143.7	0.2
6/7/2021	6/7/2021	210.49	7.39	0.32	3.87	0.79	24.37	159.4	0.2
6/7/2021	6/9/2021	230.57	7.59	0.35	3.19	0.44	24.69	138.9	0.2
6/7/2021	6/11/2021	211.23	7.63	0.33	3.37	0.68	24.37	143.7	0.2
6/14/2021	6/17/2021	239.63	7.62	0.34	3.07	2.51	24.29	79.2	0.2
6/21/2021	6/24/2021	215.46	6.57	0.33	4.13	1.10	24.50	55.8	0.2
6/28/2021	6/30/2021	210.89	7.24	0.32	0.54	0.42	23.53	-15.5	0.2
7/5/2021	7/8/2021	241.63	6.55	0.38	8.42	1.72	25.77	150.5	0.2
7/12/2021	7/15/2021	254.72	6.61	0.39	3.42	1.10	25.87	100.1	0.2
7/19/2021	7/22/2021	260.50	7.69	0.40	2.66	0.62	25.30	99.2	0.2
7/26/2021	7/29/2021	218.87	6.86	0.34	3.40	2.12	25.09	101.2	0.2
8/2/2021	8/5/2021	263.63	7.61	0.41	2.86	1.58	23.83	64.0	0.2
8/9/2021	8/12/2021	229.79	7.28	0.35	3.14	0.32	24.49	28.4	0.2
8/16/2021	8/19/2021	267.06	7.63	0.41	3.24	4.05	24.28	65.5	0.2
8/23/2021	8/26/2021	221.20	7.17	0.34	3.06	0.18	24.43	75.7	0.2
8/30/2021	9/1/2021	284.74	7.39	0.44	3.32	1.45	24.35	33.1	0.2
9/6/2021	9/8/2021	257.57	7.54	0.40	4.02	0.20	24.28	4.0	0.2
9/13/2021	9/15/2021	244.48	6.67	0.38	3.23	0.25	24.77	18.5	0.2
9/20/2021	9/22/2021	226.63	7.35	0.35	3.86	0.12	24.85	105.4	0.2
9/27/2021	9/29/2021	278.61	6.56	0.43	3.16	1.01	24.14	56.1	0.2
10/4/2021	10/6/2021	292.52	7.26	0.45	5.70	3.97	24.72	-24.2	0.2
10/11/2021	10/13/2021	276.12	7.62	0.42	3.45	NM	23.65	54.2	0.2
10/18/2021	10/20/2021	280.92	7.11	0.43	3.13	0.41	23.96	60.6	0.2
10/25/2021	10/27/2021	285.76	7.32	0.44	3.60	0.68	23.62	51.1	0.2
11/1/2021	11/3/2021	268.42	7.33	0.41	4.15	0.68	24.40	62.4	0.2
11/8/2021	11/10/2021	273.28	7.26	0.43	3.97	1.13	29.51	58.2	0.2
11/15/2021	11/17/2021	250.34	7.44	0.39	3.43	0.62	23.39	23.4	0.2
11/22/2021	11/24/2021	257.55	7.45	0.40	3.34	0.27	23.23	-13.6	0.2
11/29/2021	12/1/2021	218.34	7.32	0.34	2.92	0.85	23.37	-11.1	0.2
12/6/2021	12/8/2021	214.11	7.57	0.33	3.37	1.37	23.28	11.3	0.2
12/13/2021	12/15/2021	210.43	7.16	0.32	2.83	0.12	23.36	-15.9	0.2
12/20/2021	12/20/2021	207.73	7.20	0.32	3.54	0.33	22.34	-28.4	0.2
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/27/2021	213.65	7.05	0.33	2.76	2.02	21.61	-16.5	0.2
1/3/2022	1/3/2022	208.81	7.40	0.32	3.22	0.18	20.8	-21.1	0.2
1/10/2022	1/10/2022	206.69	6.90	0.32	3.28	2.16	23.38	59.4	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW02								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	5/13/2021	318.43	6.62	0.49	0.64	0.38	23.69	1.4	0.2
5/17/2021	5/20/2021	334.76	6.56	0.51	0.45	0.41	23.90	12.9	0.3
5/24/2021	5/24/2021	318.25	6.59	0.49	0.41	0.35	23.97	1.3	0.2
5/24/2021	5/26/2021	330.01	6.62	0.51	0.41	0.30	23.99	-0.4	0.2
5/24/2021	5/28/2021	328.43	6.60	0.51	0.43	0.22	23.96	-1.2	0.2
5/31/2021	5/31/2021	323.17	6.67	0.50	0.38	0.16	28.96	-12.0	0.2
5/31/2021	6/2/2021	292.40	6.99	0.45	3.45	1.24	24.41	30.7	0.2
5/31/2021	6/4/2021	295.75	6.98	0.46	3.02	0.81	24.05	-9.1	0.2
6/7/2021	6/7/2021	295.66	6.83	0.45	2.91	1.13	24.23	-5.9	0.2
6/7/2021	6/9/2021	313.63	6.88	0.48	2.86	0.59	24.26	-9.4	0.2
6/7/2021	6/11/2021	328.78	6.91	0.51	8.85	1.86	24.19	-45.1	0.2
6/14/2021	6/17/2021	271.37	7.08	0.45	2.82	1.71	24.24	-10.6	0.2
6/21/2021	6/24/2021	306.12	6.82	0.47	3.44	2.75	24.53	2.2	0.2
6/28/2021	6/30/2021	318.11	6.74	0.49	0.38	0.64	23.77	-7.9	0.2
7/5/2021	7/8/2021	361.55	6.68	0.56	3.06	94.20	24.50	85.0	0.2
7/12/2021	7/15/2021	306.79	6.72	0.47	4.72	1.20	25.13	28.7	0.2
7/19/2021	7/22/2021	336.41	6.95	0.52	3.38	0.32	24.43	27.9	0.3
7/26/2021	7/29/2021	336.59	6.95	0.52	3.21	7.47	24.55	41.0	0.3
8/2/2021	8/5/2021	336.97	7.05	0.52	3.08	0.72	24.24	26.4	0.3
8/9/2021	8/12/2021	309.63	6.97	0.48	3.37	0.78	24.60	11.9	0.2
8/16/2021	8/19/2021	337.40	6.87	0.52	2.73	0.88	24.55	-3.2	0.3
8/23/2021	8/26/2021	308.56	7.11	0.47	3.01	0.88	24.71	22.8	0.2
8/30/2021	9/1/2021	346.16	6.73	0.53	2.95	1.37	24.45	-3.4	0.3
9/6/2021	9/8/2021	310.08	6.90	0.48	2.62	2.66	24.53	-10.8	0.2
9/13/2021	9/15/2021	324.26	6.72	0.50	2.79	1.01	24.38	-5.1	0.2
9/20/2021	9/22/2021	308.97	6.98	0.48	2.94	3.32	24.60	51.9	0.2
9/27/2021	9/29/2021	298.98	6.82	0.46	2.17	5.06	24.50	-2.4	0.2
10/4/2021	10/6/2021	317.31	6.71	0.49	2.89	2.92	24.58	-14.7	0.2
10/11/2021	10/13/2021	332.25	6.62	0.51	3.12	4.80	24.64	3.4	0.2
10/18/2021	10/20/2021	315.87	6.73	0.49	3.27	1.11	24.61	8.7	0.2
10/25/2021	10/27/2021	308.07	6.67	0.47	3.86	1.06	23.77	37.3	0.2
11/1/2021	11/3/2021	321.50	6.89	0.50	3.31	0.51	24.85	18.2	0.2
11/8/2021	11/10/2021	332.45	6.78	0.51	3.12	2.72	24.22	16.3	0.2
11/15/2021	11/17/2021	287.61	6.83	0.44	2.69	1.78	24.00	-0.8	0.2
11/22/2021	11/24/2021	282.98	6.82	0.44	3.02	0.38	23.88	18.7	0.2
11/29/2021	12/1/2021	295.86	6.85	0.46	3.48	0.99	24.20	-10.7	0.2
12/6/2021	12/8/2021	294.21	6.85	0.45	4.33	1.57	23.51	13.4	0.2
12/13/2021	12/15/2021	287.15	6.74	0.44	2.70	1.34	23.59	1.1	0.2
12/20/2021	12/20/2021	278.63	6.79	0.43	3.14	1.48	22.82	-9.1	0.2
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/27/2021	282.17	6.63	0.43	2.83	1.05	22.32	-15.6	0.2
1/3/2022	1/3/2022	279.10	6.93	0.43	3.11	0.85	20.97	-27.9	0.2
1/10/2022	1/10/2022	262.97	6.90	0.40	3.17	0.93	23.78	28.4	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW03								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	5/13/2021	507.71	6.61	0.78	1.53	0.53	26.71	38.1	0.4
5/17/2021	5/20/2021	513.51	6.82	0.79	1.26	12.20	26.84	111.0	0.4
5/24/2021	5/25/2021	488.85	7.09	0.75	1.34	1.28	26.55	186.3	0.4
5/24/2021	5/26/2021	504.25	6.82	0.78	1.35	1.31	26.37	170.8	0.4
5/24/2021	5/28/2021	512.66	6.84	0.79	1.60	0.47	26.32	168.5	0.4
5/31/2021	5/31/2021	507.02	6.90	0.78	1.44	11.51	26.32	154.4	0.4
5/31/2021	6/2/2021	487.16	6.92	0.73	3.96	0.86	25.73	157.2	0.4
5/31/2021	6/4/2021	488.87	7.00	0.75	1.86	5.80	25.61	141.4	0.4
6/7/2021	6/7/2021	490.05	7.11	0.75	3.34	8.64	24.95	228.2	0.4
6/7/2021	6/9/2021	490.32	6.97	0.75	2.42	6.59	25.32	72.9	0.4
6/7/2021	6/11/2021	489.13	6.96	0.75	2.89	147.00	25.37	88.2	0.4
6/14/2021	6/17/2021	481.98	6.91	0.74	3.05	1.84	25.31	67.6	0.4
6/21/2021	6/24/2021	499.90	6.92	0.77	2.77	4.51	25.73	0.5	0.4
6/28/2021	6/30/2021	497.36	6.97	0.76	1.15	0.50	26.54	15.3	0.4
7/5/2021	7/8/2021	482.73	6.95	0.74	3.07	4.04	25.73	135.5	0.4
7/12/2021	7/15/2021	486.81	6.81	0.75	3.33	2.48	25.77	35.2	0.4
7/19/2021	7/22/2021	496.23	6.99	0.76	3.68	1.13	25.56	45.4	0.4
7/26/2021	7/29/2021	493.73	7.01	0.76	3.85	13.59	25.76	74.2	0.4
8/2/2021	8/5/2021	492.70	6.99	0.76	8.28	5.67	25.59	-22.4	0.4
8/9/2021	8/12/2021	502.27	6.94	0.77	3.09	5.31	26.05	-13.0	0.4
8/16/2021	8/19/2021	502.19	6.94	0.77	2.80	28.60	25.87	19.4	0.4
8/23/2021	8/26/2021	499.34	0.72	0.77	2.16	0.15	25.62	7.2	0.4
8/30/2021	9/1/2021	515.97	6.85	0.79	2.10	6.97	25.06	-54.0	0.4
9/6/2021	9/8/2021	499.56	6.88	0.77	2.53	4.83	25.86	54.3	0.4
9/13/2021	9/15/2021	515.60	6.79	0.79	2.74	10.00	25.64	-58.2	0.4
9/20/2021	9/22/2021	495.04	6.73	0.76	2.47	10.73	25.65	10.6	0.4
9/27/2021	9/29/2021	502.66	6.57	0.77	2.51	11.70	25.71	-47.7	0.4
10/4/2021	10/6/2021	510.33	6.82	0.79	2.38	13.06	25.90	-40.5	0.4
10/11/2021	10/13/2021	491.65	6.02	0.76	3.23	2.25	25.77	112.4	0.4
10/18/2021	10/20/2021	502.67	6.63	0.77	2.72	1.69	25.66	60.7	0.4
10/25/2021	10/27/2021	506.58	6.84	0.78	2.84	3.06	24.90	65.3	0.4
11/1/2021	11/3/2021	501.84	6.84	0.77	3.32	0.36	25.58	137.5	0.4
11/8/2021	11/10/2021	509.81	6.86	0.78	4.48	1.13	26.29	111.0	0.4
11/15/2021	11/17/2021	476.74	6.83	0.73	2.57	2.63	25.33	-13.7	0.4
11/22/2021	11/24/2021	479.86	6.93	0.74	4.10	0.22	25.08	62.4	0.4
11/29/2021	12/1/2021	510.09	6.85	0.78	3.00	1.47	24.87	19.5	0.4
12/6/2021	12/8/2021	488.54	6.79	0.75	3.05	1.43	24.87	93.0	0.4
12/13/2021	12/15/2021	508.38	6.81	0.78	2.81	0.84	24.74	54.0	0.4
12/20/2021	12/20/2021	503.41	6.88	0.78	2.48	0.95	23.21	-46.3	0.4
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/27/2021	513.45	6.69	0.79	2.31	1.04	22.63	53.9	0.4
1/3/2022	1/3/2022	494.37	6.95	0.76	3.29	2.66	22.36	26.0	0.4
1/10/2022	1/10/2022	500.92	6.76	0.77	2.70	1.52	24.93	25.9	0.4

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW04								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	10/1/2021	281.54	7.29	0.43	8.67	1.60	23.18	198.0	0.2
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
1/3/2022	1/4/2022	233.90	6.28	0.36	9.55	0.05	19.23	182.2	0.2
1/10/2022	1/14/2022	251.27	7.41	0.39	9.61	0.79	17.19	106.6	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW05								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	9/29/2021	349.04	6.87	0.54	7.98	60.20	24.33	174.2	0.3
10/4/2021	10/6/2021	375.49	7.56	0.58	8.40	7.30	24.77	161.5	0.3
10/11/2021	10/13/2021	285.67	7.91	0.44	9.40	5.74	23.83	153.7	0.2
10/18/2021	10/20/2021	270.89	6.75	0.45	8.54	0.79	23.87	165.1	0.2
10/25/2021	10/27/2021	283.22	7.25	0.44	8.41	5.70	23.62	147.2	0.2
11/1/2021	11/3/2021	276.87	7.14	0.43	8.29	1.16	24.33	186.1	0.2
11/8/2021	11/10/2021	410.48	7.56	0.63	8.34	1.27	24.42	180.2	0.3
11/15/2021	11/17/2021	292.55	7.32	0.45	7.83	16.24	23.57	145.0	0.2
11/22/2021	11/24/2021	308.75	7.58	0.48	8.29	1.89	23.36	133.4	0.2
11/29/2021	12/1/2021	458.63	7.48	0.71	8.45	1.43	23.57	112.2	0.3
12/6/2021	12/8/2021	385.22	7.88	0.59	8.70	4.78	23.13	147.6	0.3
12/13/2021	12/15/2021	381.54	7.73	0.58	7.74	0.24	24.56	132.2	0.3
12/20/2021	12/20/2021	381.25	7.43	0.59	8.74	0.28	22.76	110.2	0.3
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/27/2021	434.54	7.32	0.67	8.70	12.50	21.85	127.1	0.3
1/3/2022	1/3/2022	381.59	7.83	0.59	8.53	0.39	21.07	127.4	0.3
1/10/2022	1/10/2022	475.53	7.13	0.73	9.12	143.00	23.22	76.0	0.4

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW06								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	10/1/2021	1113.92	7.25	1.72	8.19	1.64	25.40	217.0	0.9
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	12/13/2021	833.60	7.66	1.28	8.25	0.11	23.90	124.6	0.6
12/20/2021	12/21/2021	857.24	7.51	1.32	7.37	0.30	21.04	104.4	0.7
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/28/2021	862.35	7.06	1.33	7.45	0.12	20.77	145.5	0.7
1/3/2022	1/4/2022	826.31	7.31	1.27	7.35	0.28	21.90	101.6	0.6
1/10/2022	1/11/2022	835.91	7.83	1.29	7.69	0.75	21.73	134.8	0.6

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW08								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	9/30/2021	513.88	8.03	0.79	8.16	1.43	26.46	210.5	0.4
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	12/1/2021	466.14	8.07	0.72	6.62	0.62	24.99	44.4	0.4
12/6/2021	12/8/2021	450.45	7.65	0.69	5.66	0.96	22.63	99.1	0.3
12/13/2021	12/16/2021	460.91	7.10	0.71	3.81	2.34	21.37	140.2	0.3
12/20/2021	12/23/2021	464.96	8.23	0.72	3.92	4.83	27.96	185.3	0.4
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/28/2021	458.10	7.73	0.71	5.64	0.15	21.95	52.9	0.7
1/3/2022	1/4/2022	467.30	7.58	0.72	3.00	0.38	21.99	74.6	0.4
1/10/2022	1/11/2022	463.94	7.75	0.71	5.05	1.30	24.32	135.5	0.4

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW09								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	9/30/2021	244.07	7.89	0.38	8.24	1.62	26.86	155.6	0.2
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	12/16/2021	216.08	7.53	0.33	9.34	2.44	22.02	54.4	0.2
12/20/2021	12/24/2021	223.54	7.07	0.35	7.85	4.03	21.86	104.1	0.2
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	1/1/2022	223.64	6.91	0.34	8.73	2.26	20.31	115.7	0.2
1/3/2022	1/7/2022	217.49	7.78	0.34	8.75	0.95	21.11	79.0	0.2
1/10/2022	1/12/2022	215.34	7.75	0.33	9.26	1.05	19.55	80.9	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW11 - Zone 5								
WEEK	**DATE**	**TDS**	**pH**	**Sp. Cond.**	**D.O.**	**Turbidity**	**Temp**	**ORP**	**SAL**
		(ppm)		**(mS/cm)**	**(mg/L)**	**(NTU)**	**(oC)**	**(Mv)**	**(psu)**
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	12/16/2021	281.68	6.75	0.43	0.23	0.23	23.77	44.4	0.2
12/20/2021	12/23/2021	279.80	7.94	0.43	1.45	0.17	24.29	-12.8	0.2
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/30/2021	272.91	8.11	0.42	0.27	0.08	22.86	61.4	0.2
1/3/2022	1/6/2022	268.32	8.06	0.41	0.44	0.14	23.01	-32.4	0.2
1/10/2022	1/13/2022	253.68	7.70	0.39	0.54	0.18	27.56	99.1	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW12A								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	10/4/2021	2510.08	11.97	3.86	7.92	0.39	27.73	117.1	2.1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	12/14/2021	242.26	8.80	0.37	5.31	4.71	22.93	50.3	0.2
12/20/2021	12/22/2021	245.02	8.80	0.38	4.29	2.95	22.54	43.0	0.2
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/29/2021	242.18	8.76	0.37	5.53	7.03	22.16	57.3	0.2
1/3/2022	1/5/2022	241.17	8.90	0.38	4.51	0.89	20.82	50.9	0.2
1/10/2022	1/12/2022	264.48	8.47	0.41	2.70	0.49	25.21	323.7	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW13 - Zone 5								
WEEK	**DATE**	**TDS**	**pH**	**Sp. Cond.**	**D.O.**	**Turbidity**	**Temp**	**ORP**	**SAL**
		(ppm)		**(mS/cm)**	**(mg/L)**	**(NTU)**	**(oC)**	**(Mv)**	**(psu)**
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	12/15/2021	266.50	7.83	0.41	0.32	1.41	22.07	132.5	0.2
12/20/2021	12/22/2021	244.97	8.28	0.38	0.20	0.55	24.18	142.1	0.2
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/29/2021	239.61	8.09	0.37	0.39	0.40	23.01	182.4	0.2
1/3/2022	1/5/2022	239.92	8.28	0.37	0.82	1.25	24.76	266.0	0.2
1/10/2022	1/12/2022	241.68	8.14	0.37	0.76	1.19	24.50	115.0	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW14 - Zone 3								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	12/13/2021	184.38	7.95	0.28	1.62	1.31	26.79	48.4	0.1
12/20/2021	12/20/2021	189.89	7.33	0.29	2.23	1.11	26.02	193.0	0.1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/27/2021	184.52	7.96	0.28	1.70	0.12	26.22	119.2	0.1
1/3/2022	1/3/2022	188.96	7.95	0.29	1.70	2.77	23.42	61.5	0.1
1/10/2022	1/10/2022	174.26	8.05	0.27	1.59	0.40	25.85	147.8	0.1

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW15 - Zone 5								
WEEK	**DATE**	**TDS**	**pH**	**Sp. Cond.**	**D.O.**	**Turbidity**	**Temp**	**ORP**	**SAL**
		(ppm)		**(mS/cm)**	**(mg/L)**	**(NTU)**	**(oC)**	**(Mv)**	**(psu)**
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	12/2/2021	193.00	7.42	0.30	1.59	0.04	29.75	124.3	0.1
12/6/2021	12/9/2021	198.14	8.04	0.31	1.22	0.31	24.62	134.1	0.1
12/13/2021	12/14/2021	201.56	7.83	0.31	2.31	0.51	23.45	109.2	0.1
12/20/2021	12/21/2021	201.69	7.64	0.31	1.61	0.29	20.22	50.5	0.1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/28/2021	203.71	7.98	0.31	0.74	0.25	22.51	162.4	0.2
1/3/2022	1/4/2022	241.76	8.10	0.37	2.30	2.65	23.04	206.2	0.2
1/10/2022	1/11/2022	237.69	7.80	0.37	0.80	1.16	19.68	65.9	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW16								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	10/1/2021	296.92	7.68	0.46	5.60	3.20	27.94	160.0	0.2
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	12/22/2021	285.85	8.05	0.44	8.14	1.80	21.47	53.2	0.2
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/29/2021	283.18	7.84	0.44	8.48	3.91	21.56	66.8	0.2
1/3/2022	1/5/2022	283.54	8.03	0.44	8.24	2.45	20.68	57.0	0.2
1/10/2022	1/12/2022	285.52	8.02	0.44	7.87	0.32	24.27	430.2	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW19								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	9/30/2021	209.76	7.15	0.32	9.46	0.76	24.02	176.7	0.2
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
1/3/2022	1/7/2022	182.51	7.84	0.28	9.75	0.50	22.90	58.9	0.1
1/10/2022	1/12/2022	181.29	7.63	0.28	9.07	4.01	20.06	103.0	0.1

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	OWDFMW01								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	10/1/2021	2517.32	11.56	3.87	7.71	1.05	27.74	137.8	2.1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	12/1/2021	2987.69	8.18	4.60	5.39	2.71	25.76	261.6	2.5
12/6/2021	12/8/2021	3027.85	8.21	4.66	5.98	8.33	25.30	161.7	2.5
12/13/2021	12/13/2021	3012.87	8.26	4.63	5.86	3.08	24.68	166.7	2.5
12/20/2021	12/21/2021	2994.76	7.91	4.61	5.07	1.41	24.75	92.8	2.5
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/27/2021	3012.78	8.06	4.64	6.59	5.95	25.00	81.4	2.5
1/3/2022	1/4/2022	2985.58	7.61	4.60	5.71	0.18	21.92	52.7	2.5
1/10/2022	1/11/2022	2941.57	8.11	4.53	5.58	1.27	24.45	156.9	2.4

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	RHMW2254-01								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	10/6/2021	415.09	7.52	0.64	8.14	0.00	21.33	71.4	0.3
10/11/2021	10/13/2021	417.78	7.61	0.64	8.64	0.03	21.85	164.7	0.3
10/18/2021	10/20/2021	429.27	7.46	0.66	8.63	0.07	21.25	102.8	0.3
10/25/2021	10/26/2021	425.03	7.55	0.65	8.63	0.05	21.13	96.3	0.3
11/1/2021	11/3/2021	413.91	7.82	0.64	8.07	0.18	21.87	184.8	0.3
11/8/2021	11/10/2021	422.24	6.98	0.65	8.66	0.01	21.74	163.1	0.3
11/15/2021	11/17/2021	415.59	7.80	0.64	8.71	0.00	21.46	373.5	0.3
11/22/2021	11/24/2021	416.77	7.73	0.64	8.21	0.00	20.97	67.2	0.3
11/29/2021	12/1/2021	402.73	7.27	0.62	8.40	0.00	21.90	209.7	0.3
12/6/2021	12/8/2021	391.73	7.69	0.60	7.31	NM	23.39	116.3	0.3
12/13/2021	12/15/2021	362.34	7.34	0.56	3.52	0.38	20.96	56.2	0.3
12/20/2021	12/20/2021	388.64	7.49	0.60	1.97	1.80	23.77	197.7	0.3
12/20/2021	12/21/2021	348.68	7.16	0.52	2.39	0.13	21.72	138.1	0.3
12/27/2021	12/27/2021	349.39	7.25	0.54	1.53	0.22	21.83	51.3	0.3
1/3/2022	1/3/2021	302.76	7.28	0.46	1.58	0.00	22.43	262.2	0.2
1/10/2022	1/10/2022	348.29	7.19	0.53	1.02	NM	18.81	47.6	0.3

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	OWDFMW04A								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/30/2021	584.21	8.77	0.90	3.87	0.50	21.34	48.5	0.4
1/3/2022	1/6/2022	588.13	8.86	0.91	1.01	0.01	24.51	139.9	0.5
1/10/2022	1/13/2022	572.58	8.73	0.88	1.48	0.34	24.22	186.7	0.4

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	OWDFMW05A								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/31/2021	477.00	7.97	0.73	0.62	0.58	22.18	43.5	0.4
1/3/2022	1/6/2022	485.69	7.61	0.75	0.59	0.47	24.70	81.1	0.4
1/10/2022	1/13/2022	476.15	7.93	0.73	0.43	0.31	20.66	31.0	0.4

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	OWDFMW07A								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/31/2021	277.09	7.15	8.43	3.82	6.51	21.46	58.6	0.2
1/3/2022	1/6/2022	274.56	6.84	0.42	3.93	8.05	25.59	254.8	0.2
1/10/2022	1/13/2022	270.54	7.00	0.42	4.24	8.58	20.59	68.8	0.2

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 (6 May 2021 Event)
Notice of Interest 20211120-2330 (20 Nov 2021 Event)
Groundwater Parameters

	OWDFMW08A								
WEEK	DATE	TDS	pH	Sp. Cond.	D.O.	Turbidity	Temp	ORP	SAL
		(ppm)		(mS/cm)	(mg/L)	(NTU)	(oC)	(Mv)	(psu)
5/10/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
5/17/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
5/24/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
5/31/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
6/7/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
6/14/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
6/21/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
6/28/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
7/5/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
7/12/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
7/19/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	--
7/26/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/2/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/9/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/16/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/23/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
8/30/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
9/27/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/4/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/11/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/18/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
10/25/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/1/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/8/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/15/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/22/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
11/29/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/6/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/13/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/20/2021	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1	NC1
12/27/2021	12/30/2021	683.79	7.67	1.05	2.12	NM	23.82	69.1	0.5
1/3/2022	1/6/2022	684.05	7.60	1.06	2.52	0.01	24.62	99.2	0.5
1/10/2022	1/13/2022	661.18	7.69	1.02	3.49	4.94	24.97	220.1	0.5

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Appendix B.2 – Groundwater and Product Analytical Results through January 10, 2022

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Lab Number: L2165245

Client: GSI Environmental Inc.

ATTN: Ileana Rhodes

Project Name:

Project Number:

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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Sample Delivery Group Information

Sample Delivery Group Summary

Alpha Job Number : L2165245

Account Name : GSI Environmental Inc.
Project Number :
Project Name :

Received : 29-NOV-2021
Reviewer : Dylan Snook

Delivery Information

Samples Delivered By : Express Ship
FedEx (286636747006)

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	1.6	
B	Absent/	Ice	0.9	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between sample labels & COC?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NA**

Comments

L2165245-02D Do not use, preserved with sulfirc acid

LIMS Chain of Custody

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Dec 10 2021, 07:29 pm

Login Number: L2165245
Account: GSI GSI Environmental Inc.
Received: 29NOV21 Due Date: 20DEC21

Sample #	Client ID	Mat	PR	Collected
L2165245-01	ERH1967	6	S0	24NOV21 00:00

possibly be JP-5 include manual sum of c10 to c24 and c25 to c40 in the narrative SHC - include DRO and ORO - include PHI narration - include SHC quant report - report list made A2-DPKG-FULL Package Due Date: 12/20/21

A2-DPKG-FULL,A2-SHC,TS100

L2165245-02	ERH1968	1	S0	24NOV21 14:15

include manual sum of c10 to c24 and c25 to c40 in the narrative Silica gel clean and run the cleaned extract as -03 SHC and TPH DRO/ORO no clean up - report list made - include PHI narration - include SHC quant report Run the TPH and SHC extracts fullscan and report library search Prep - transfer an extra aliquot of the TPH and the SHC extracts of -02 for MS fullscan analyses Package Due Date: 12/20/21

A2-SHC,A2-SILICA_CLEANUP,ARCHIVE,SPECFEE

L2165245-03	ERH1968 - SGC	1	S0	24NOV21 14:15

include manual sum of c10 to c24 and c25 to c40 in the narrative analyze the silica cleaned extract of -02 as -03 - include PHI narration - include SHC quant report SHC and TPH DRO/ORO silica gel clean up of -02 - report list made Run the silica cleaned extracts fullscan and report library search Prep - transfer an extra aliquot of the TPH and the SHC extracts of -03 for MS fullscan analyses Package Due Date: 12/20/21

A2-SHC,SPECFEE

Logged By: Dylan Snook

Container Tracking

ALPHA ANALYTICAL LABORATORIES
Container Tracking Report

Container ID	Type	Status	Transaction Date	From Response	From Location	From Operator	To Response	To Location	To Operator
L2165245-01A	Vial-A	INTACT	06-DEC-21	A2-CUSTODY-REFRIDGE	A2-ORGANIC PREP	Brian Anderson	A2-CUSTODY-REFRIG-E1-S1	A2-CUSTODY-REFRIG-E1-S1	Brian Anderson
L2165245-01A	Vial-A	INTACT	06-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIG-E1-S2	Brian Anderson	A2-ORGANIC PREP	A2-ORGANIC PREP	Brian Anderson
L2165245-01A	Vial-A	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sam Oldrid	A2-CUSTODY-REFRIG-E1-S2	A2-CUSTODY-REFRIG-E1-S2	Sam Oldrid
L2165245-01A	Vial-A-20	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2165245-01B	Vial-A	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sam Oldrid	A2-CUSTODY-REFRIG-E1-S2	A2-CUSTODY-REFRIG-E1-S2	Sam Oldrid
L2165245-01B	Vial-A-20	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2165245-01C	Vial-A	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sam Oldrid	A2-CUSTODY-REFRIG-E1-S2	A2-CUSTODY-REFRIG-E1-S2	Sam Oldrid
L2165245-01C	Vial-A-20	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2165245-01D	Vial-A	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sam Oldrid	A2-CUSTODY-REFRIG-E1-S2	A2-CUSTODY-REFRIG-E1-S2	Sam Oldrid
L2165245-01D	Vial-A-20	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2165245-01E	Vial-A	INTACT	03-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIG-E1-S2	Sam Oldrid	A2-CUSTODY-RELOG	A2-CUSTODY-RELOG	Sam Oldrid
L2165245-01E	Vial-A-20	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sam Oldrid	A2-CUSTODY-REFRIG-E1-S2	A2-CUSTODY-REFRIG-E1-S2	Sam Oldrid
L2165245-01E	Vial-A-20	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2165245-02A	Amber-A1	EMPTY	01-DEC-21	A2-CUSTODY-REFRIDGE	A2-ORGANIC PREP	Brian Anderson	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Brian Anderson
L2165245-02A	Amber-A1	INTACT	01-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIG-F1-S2	Brian Anderson	A2-ORGANIC PREP	A2-ORGANIC PREP	Brian Anderson
L2165245-02A	Amber-A1	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-REFRIG-F1-S2	A2-CUSTODY-REFRIG-F1-S2	Kim L. Bailey
L2165245-02A	Amber-A1	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2165245-02B	Amber-A1	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-REFRIG-F1-S2	A2-CUSTODY-REFRIG-F1-S2	Kim L. Bailey
L2165245-02B	Amber-A1	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2165245-02C	Amber-A1	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-REFRIG-F1-S2	A2-CUSTODY-REFRIG-F1-S2	Kim L. Bailey
L2165245-02C	Amber-A1	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2165245-02D	Amber-A1	INTACT	30-NOV-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Kim L. Bailey	A2-CUSTODY-REFRIG-F1-S2	A2-CUSTODY-REFRIG-F1-S2	Kim L. Bailey
Comments: Do not use, preserved with sulfirc acid									
L2165245-02D	Amber-A1	INTACT	30-NOV-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil

Chain of Custody

CoC ID: 202111-26 MATRL

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 11/29/21

ALPHA Job #: L2165245

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Ileana Rhodes GSI Environmental Inc.

Address: 2211 Norfolk Suite 1000

Houston, TX 77098-5669

Phone: 281-703-5669

Fax:

Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:

Project Location:

Project #:

Project Manager: Susan O'Neil

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C-10 to 24, C-24 to 40.
Include carbon marker and sample surrogate for TPH-d/o and w/SGC.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☒ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	EPA 8270D - Full Scan w/TICs	PHI w/ Qualitative Narrative	EPA 8015D(M) SHC+SGC	Sample Specific Comments	TOTAL # BOTTLES
	ERH1967	11/24/21	N/A	Product	Client	☒	☐	☒	☒		0
165245-03	ERH1968	11/24/21	1415	GW	DM, JK	☒	☒	☒	☒		4
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		

MM 11/26/21

Container Type	V/A	A	V/A	V/A	-	-	-	-	-	-	-	-	
Preservative	A/D	A	A/D	A/D	-	-	-	-	-	-	-	-	

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Yim	11/26/21 1200	Fedex	
Fedex			11/29/21 1010

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

COC ID: 202111-27 NJ-FSS

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/29/21

ALPHA Job #: L2165245

Client Information

Client: Ileana Rhodes GSI Environmental Inc.
Address: 2211 Norfolk Suite 1000
Houston, TX 77098-5669
Phone: 281-703-5669
Fax:
Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:
Project Location:
Project #:
Project Manager: Susan O'Neil
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

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ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☒ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	EPA 8270D - Full Scan w/TICs	PHI w/ Qualitative Narrative	EPA 8015D(M) SHC+SGC	Sample Specific Comments	TOTAL # BOTTLES
L2165245-01	ERH1967	11/24/21	N/A	Product	Client	☒	☐	☒	☒		5
	ERH1968	11/24/21	1415	GW	DM, JK	☒	☒	☒	☒		0
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		

Container Type	V/A	A	V/A	V/A	-	-	-	-	-	-	-	-			
Preservative	A/D	A	A/D	A/D	-	-	-	-	-	-	-	-			

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Yim Fedex	11/26/21 1200	Fedex	11/29/21 1010

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ORIGIN ID:HNLA (808) 349-4738
MATTHEW YIM
AECOM
1001 BISHOP ST STE 1600

HONOLULU, HI 96813
UNITED STATES US

SHIP DATE: 26NOV21
ACTWGT: 11.05 LB
CAD: 6994242/SSFE2220
DIMS: 13x10x9 IN

BILL THIRD PARTY

Part # 156297-435 RRDW2 EXP 09/22

TO **ATTN: SUSAN O'NEIL**
ALPHA ANALYTICAL
320 FORBES BLVD

MANSFIELD MA 02048
(508) 822-9300 REF:
INV:
PO: DEPT:

FedEx
Express

E

2 of 2
MPS# 0263 **2866 3674 7017**
Mstr# 2866 3674 7006 0201

SE PYMA

MON - 29 NOV 11:30A
PRIORITY OVERNIGHT
DSR
02048
MA-US **BOS**

B-1.6 Ice
9849 Seal
Intact

Site Name: CV18F0126, RHSF, Alpha, Product
Sample Identification No.: ERH1967

Date: 11/24/21 Time: 12:15
Analyses: EPA 8015D(M)-SHC
Collected By: DM, AM, JK
Preservative: None Container: 5 x 40 mL VOA

Sample Identification No.: ERH1968

Date: 11/24/21 Time: 14:15
Analyses: EPA 8270D Full Scan w/ TICs
Collected By: DM, AM, JK
Preservative: None Container: 2 x 1L amber

Site Name: CV18F0126, RHSF, Alpha, Water sample

Sample Identification No.: ERH1968

Date: 11/24/21 Time: 14:15
Analyses: EPA 8270D Full Scan w/ TICs
Collected By: DM, AM, JK
Preservative: None Container: 2 x 1L amber

Site Name: CV18F0126, RHSF, Alpha, Water sample

Sample Identification No.: ERH1968

Date: 11/24/21 Time: 14:15
Analyses: SVOCs (full list) by 8270
Collected By: DM, AM, JK
Preservative: None Container: 2 x 1L amber

Site Name: CV18F0126, RHSF, [redacted], Water sample

CONTAINER # 007257

E

Sample ID: ERH1968

Date Collected: 11/24/21

Time Collected: 1415

☐ Filtered ☐ Non-Filtered

SULFURIC ACID (H_2SO_4) PRESERVED

ELI is required to provide preservative traceability; if preservatives supplied with this bottle order were NOT used, attach your preservative information with the CoC.

BO# 158221

158221



ORIGIN ID:HNLA (808) 349-4738
MATTHEW YIM
AECOM
1001 BISHOP ST STE 1600

HONOLULU, HI 96813
UNITED STATES US

SHIP DATE: 26NOV21
ACTWGT: 57.20 LB
CAD: 6994242/SSFE2220
DIMS: 24x14x13 IN

BILL THIRD PARTY

Part # 156297-435 FRDW2 EXP 09/22

TO **ATTN: SUSAN O'NEIL**
ALPHA ANALYTICAL
320 FORBES BLVD

MANSFIELD MA 02048

(508) 822-9300 REF: 60571032.02.20.01
INV: DEPT:
PO:

FedEx Express

E

1 of 2

TRK# 0201 **2866 3674 7006**

MASTER

SE PYMA

MON - 29 NOV 11:30A
PRIORITY OVERNIGHT
DSR
02048
MA-US **BOS**

A-0.9

9849

Ice
Seal
Intact

Organics

Saturated Hydrocarbon Analysis

Initial Calibration

Response Factor Report FID17

Method Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Method File : HC17052021F_DRO.M
Title : FID Forensics
Last Update : Thu May 27 16:04:30 2021
Response Via : Initial Calibration

Calibration Files
1 =F1705202112.D 10 =F1705202114.D 50 =F1705202116.D 100 =F1705202118.D 200 =F1705202120.D
500 =F1705202122.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.919	0.879	0.879	0.852	0.792		0.864	5.42
3)	t	n-Nonane (C9)	1.068	0.920	0.915	0.880	0.829		0.922	9.67
4)	t	n-Decane (C10)	1.011	0.959	0.958	0.923	0.870		0.944	5.53
5)	t	n-Undecane (C11)	0.934	0.945	0.951	0.917	0.867		0.923	3.64
6)	t	n-Dodecane (C12)	0.921	0.950	0.956	0.924	0.875		0.925	3.47
7)	t	n-Tridecane (...	0.936	0.949	0.954	0.924	0.875		0.928	3.39
8)	t	1380	0.984	0.973	0.977	0.947	0.898		0.956	3.70
9)	t	n-Tetradecane...	0.984	0.973	0.977	0.947	0.898		0.956	3.70
10)	t	1470	0.975	0.976	0.980	0.951	0.902		0.957	3.40
11)	t	n-Pentadecane...	0.975	0.976	0.980	0.951	0.902		0.957	3.40
12)	t	n-Hexadecane ...	1.001	0.968	0.971	0.943	0.893		0.955	4.21
13)	t	1650	0.951	0.975	0.981	0.953	0.911		0.954	2.87
14)	t	n-Heptadecane...	0.951	0.975	0.981	0.953	0.911		0.954	2.87
15)	t	Pristane	1.054	1.003	1.003	0.973	0.915		0.990	5.13
16)	t	n-Octadecane ...	0.999	0.985	0.989	0.962	0.915		0.970	3.45
17)	t	Phytane	0.941	0.925	0.923	0.894	0.854		0.908	3.79
18)	t	n-Nonadecane ...	1.000	0.988	0.994	0.966	0.918		0.973	3.44
19)	s	ortho-terphenyl	1.120	1.096	1.100	1.069	1.025	1.093	1.084	3.03
20)	t	n-Eicosane (C20)	1.009	0.993	0.999	0.971	0.922		0.979	3.53
21)	t	n-Heneicosane...	1.009	0.996	1.002	0.976	0.926		0.982	3.43
22)	t	n-Docosane (C22)	1.019	0.997	1.001	0.975	0.925		0.983	3.68
23)	t	n-Tricosane (...	1.025	0.998	1.001	0.977	0.926		0.985	3.79
24)	s	d50-Tetracosane	0.879	0.860	0.888	0.854	0.819	0.860	0.860	2.80
25)	t	n-Tetracosane...	1.025	0.990	0.998	0.976	0.923		0.982	3.84
26)	t	n-Pentacosane...	0.990	0.970	0.977	0.960	0.908		0.961	3.32
27)	t	n-Hexacosane ...	1.013	0.996	1.002	0.989	0.933		0.987	3.17
28)	t	n-Heptacosane...	1.023	0.995	1.001	0.992	0.934		0.989	3.34
29)	t	n-Octacosane ...	1.105	1.026	1.022	1.018	0.957		1.026	5.13
30)	t	n-Nonacosane ...	1.030	1.010	1.016	1.019	0.955		1.006	2.95
31)	t	n-Triacontane...	1.033	1.012	1.018	1.027	0.960		1.010	2.90

Response Factor Report FID17

Method Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Method File : HC17052021F_DRO.M
Title : FID Forensics
Last Update : Thu May 27 16:04:30 2021
Response Via : Initial Calibration

Calibration Files
1 =F1705202112.D 10 =F1705202114.D 50 =F1705202116.D 100 =F1705202118.D 200 =F1705202120.D
500 =F1705202122.D

	Compound	1	10	50	100	200	500	Avg	%RSD
32) t	n-Hentriacont...	1.005	0.975	0.981	0.996	0.927		0.977	3.10
33) t	n-Dotriaconta...	1.052	1.022	1.028	1.050	0.974		1.025	3.09
34) t	n-Tritriacont...	1.030	0.993	0.998	1.024	0.945		0.998	3.39
35) t	n-tetratriaco...	1.013	0.986	0.993	1.023	0.940		0.991	3.26
36) t	n-Pentatriaco...	0.951	0.919	0.927	0.958	0.875		0.926	3.55
37) t	n-Hexatriacon...	1.140	1.107	1.117	1.158	1.051		1.115	3.63
38) t	n-Heptatriaco...	1.023	1.004	1.018	1.056	0.953		1.011	3.71
39) t	n-Octatriacon...	1.032	1.019	1.030	1.069	0.960		1.022	3.88
40) t	n-Nonatriacon...	1.026	1.003	1.018	1.058	0.939		1.009	4.35
41) t	n-Tetracontan...	1.026	1.003	1.018	1.058	0.939		1.009	4.35
42) h	C9-C44 Total ...	1.010	0.986	0.991	0.983	0.920		0.978	3.49
43) h	C9-C40 Total ...	1.010	0.986	0.991	0.983	0.920		0.978	3.49
44) h	C10-C28 DRO	0.996	0.981	0.985	0.960	0.909		0.966	3.56
45) h	C28-C40 ORO	1.037	1.006	1.014	1.038	0.953		1.010	3.43
46) h	Total Resolve...	1.010	0.986	0.991	0.983	0.920		0.978	3.49

(#) = Out of Range

rfupdate

RSF Update Summary Report

Method Path.....: O:\Forensics\Data\FID17\2021\MAY\MAY20\
Method File.....: HC17052021F_DRO.M
Method Title.....: FID Forensics
Last Update.....: Thu May 27 15:39:11 2021

Generating Average Response Factor For: C9-C44 Total Petroleum Hydrocarbons

No	Compound	Level	Conc	Response
1	n-Nonane (C9)	1	1.00000	1171751.435
2	n-Decane (C10)	1	1.00000	1109845.697
3	n-Undecane (C11)	1	1.00000	1024381.455
4	n-Dodecane (C12)	1	1.00000	1010343.272
5	n-Tridecane (C13)	1	1.00000	1026803.234
6	n-Tetradecane (C14)	1	1.00000	1079621.954
7	n-Pentadecane (C15)	1	1.00000	1070039.053
8	n-Hexadecane (C16)	1	1.00000	1098101.248
9	n-Heptadecane (C17)	1	1.00000	1042971.331
10	Pristane	1	1.00000	1156625.936
11	n-Octadecane (C18)	1	1.00000	1096477.082
12	Phytane	1	1.00000	1032737.962
13	n-Nonadecane (C19)	1	1.00000	1096831.277
14	n-Eicosane (C20)	1	1.00000	1107447.315
15	n-Heneicosane (C21)	1	1.00000	1107526.004
16	n-Docosane (C22)	1	1.00000	1117658.493
17	n-Tricosane (C23)	1	1.00000	1124390.751
18	n-Tetracosane (C24)	1	1.00000	1124339.765
19	n-Pentacosane (C25)	1	1.00000	1086806.757
20	n-Hexacosane (C26)	1	1.00000	1111966.289
21	n-Heptacosane (C27)	1	1.00000	1122848.256
22	n-Octacosane (C28)	1	1.00000	1212558.746
23	n-Nonacosane (C29)	1	1.00000	1130473.888
24	n-Triacontane (C30)	1	1.00000	1133109.263
25	n-Hentriacontane (C31)	1	1.00000	1103004.874
26	n-Dotriacontane (C32)	1	1.00000	1154057.569
27	n-Tritriacontane (C33)	1	1.00000	1130391.444
28	n-tetratriacontane (C34)	1	1.00000	1110986.529
29	n-Pentatriacontane (C35)	1	1.00000	1043736.753
30	n-Hexatriacontane (C36)	1	1.00000	1250484.820
31	n-Heptatriacontane (C37)	1	1.00000	1122679.143
32	n-Octatriacontane (C38)	1	1.00000	1131929.425
33	n-Tetracontane (C40)	1	1.00000	1125356.431
Avg RSF For: C9-C44 Total Petroleum			1.00000	1108129.802
1	n-Nonane (C9)	2	10.00000	10684051.990
2	n-Decane (C10)	2	10.00000	11134164.186
3	n-Undecane (C11)	2	10.00000	10967330.535
4	n-Dodecane (C12)	2	10.00000	11028597.130
5	n-Tridecane (C13)	2	10.00000	11018399.725
6	n-Tetradecane (C14)	2	10.00000	11292200.447
7	n-Pentadecane (C15)	2	10.00000	11328599.670
8	n-Hexadecane (C16)	2	10.00000	11234298.968
9	n-Heptadecane (C17)	2	10.00000	11323333.321

		rfupdate	
10 Pristane	2	10.00000	11642848.950
11 n-Octadecane (C18)	2	10.00000	11434772.804
12 Phytane	2	10.00000	10743380.638
13 n-Nonadecane (C19)	2	10.00000	11473771.864
14 n-Eicosane (C20)	2	10.00000	11523057.761
15 n-Heneicosane (C21)	2	10.00000	11566081.768
16 n-Docosane (C22)	2	10.00000	11574332.153
17 n-Tricosane (C23)	2	10.00000	11587701.760
18 n-Tetracosane (C24)	2	10.00000	11494662.796
19 n-Pentacosane (C25)	2	10.00000	11265787.330
20 n-Hexacosane (C26)	2	10.00000	11556999.980
21 n-Heptacosane (C27)	2	10.00000	11548396.870
22 n-Octacosane (C28)	2	10.00000	11909847.149
23 n-Nonacosane (C29)	2	10.00000	11729452.101
24 n-Triacontane (C30)	2	10.00000	11742904.972
25 n-Hentriacontane (C31)	2	10.00000	11314814.828
26 n-Dotriacontane (C32)	2	10.00000	11865476.996
27 n-Tritriacontane (C33)	2	10.00000	11523465.994
28 n-tetratriacontane (C34)	2	10.00000	11451119.910
29 n-Pentatriacontane (C35)	2	10.00000	10662256.031
30 n-Hexatriacontane (C36)	2	10.00000	12851113.166
31 n-Heptatriacontane (C37)	2	10.00000	11656708.336
32 n-Octatriacontane (C38)	2	10.00000	11826731.842
33 n-Tetracontane (C40)	2	10.00000	11647803.772
Avg RSF For: C9-C44 Total Petroleum		10.00000	11442559.568

1 n-Nonane (C9)	3	50.00000	48771924.188
2 n-Decane (C10)	3	50.00000	51075440.058
3 n-Undecane (C11)	3	50.00000	50678911.624
4 n-Dodecane (C12)	3	50.00000	50957984.484
5 n-Tridecane (C13)	3	50.00000	50845025.599
6 n-Tetradecane (C14)	3	50.00000	52094598.732
7 n-Pentadecane (C15)	3	50.00000	52229145.720
8 n-Hexadecane (C16)	3	50.00000	51751351.206
9 n-Heptadecane (C17)	3	50.00000	52277861.662
10 Pristane	3	50.00000	53447131.621
11 n-Octadecane (C18)	3	50.00000	52735679.739
12 Phytane	3	50.00000	49215356.348
13 n-Nonadecane (C19)	3	50.00000	52976616.081
14 n-Eicosane (C20)	3	50.00000	53233893.536
15 n-Heneicosane (C21)	3	50.00000	53418500.860
16 n-Docosane (C22)	3	50.00000	53373024.950
17 n-Tricosane (C23)	3	50.00000	53358924.111
18 n-Tetracosane (C24)	3	50.00000	53197968.180
19 n-Pentacosane (C25)	3	50.00000	52079855.565
20 n-Hexacosane (C26)	3	50.00000	53440081.718
21 n-Heptacosane (C27)	3	50.00000	53387647.002
22 n-Octacosane (C28)	3	50.00000	54460527.094
23 n-Nonacosane (C29)	3	50.00000	54143436.222
24 n-Triacontane (C30)	3	50.00000	54272054.438
25 n-Hentriacontane (C31)	3	50.00000	52296053.650
26 n-Dotriacontane (C32)	3	50.00000	54818805.711
27 n-Tritriacontane (C33)	3	50.00000	53208653.286
28 n-tetratriacontane (C34)	3	50.00000	52932855.272
29 n-Pentatriacontane (C35)	3	50.00000	49392768.576
30 n-Hexatriacontane (C36)	3	50.00000	59548003.527
31 n-Heptatriacontane (C37)	3	50.00000	54257422.814
32 n-Octatriacontane (C38)	3	50.00000	54921095.872
33 n-Tetracontane (C40)	3	50.00000	54254862.067
Avg RSF For: C9-C44 Total Petroleum		50.00000	52819801.864

1	n-Nonane (C9)	4	100.00000	96616068.282
2	n-Decane (C10)	4	100.00000	101268677.390
3	n-Undecane (C11)	4	100.00000	100584077.070
4	n-Dodecane (C12)	4	100.00000	101404379.156
5	n-Tridecane (C13)	4	100.00000	101382803.662
6	n-Tetradecane (C14)	4	100.00000	103951622.041
7	n-Pentadecane (C15)	4	100.00000	104381724.683
8	n-Hexadecane (C16)	4	100.00000	103498290.798
9	n-Heptadecane (C17)	4	100.00000	104608997.866
10	Pristane	4	100.00000	106780008.973
11	n-Octadecane (C18)	4	100.00000	105576841.549
12	Phytane	4	100.00000	98121493.646
13	n-Nonadecane (C19)	4	100.00000	106027847.812
14	n-Eicosane (C20)	4	100.00000	106535091.341
15	n-Heneicosane (C21)	4	100.00000	107060131.819
16	n-Docosane (C22)	4	100.00000	107024075.650
17	n-Tricosane (C23)	4	100.00000	107222101.125
18	n-Tetracosane (C24)	4	100.00000	107072362.874
19	n-Pentacosane (C25)	4	100.00000	105388821.800
20	n-Hexacosane (C26)	4	100.00000	108489729.585
21	n-Heptacosane (C27)	4	100.00000	108907457.100
22	n-Octacosane (C28)	4	100.00000	111710930.880
23	n-Nonacosane (C29)	4	100.00000	111802404.469
24	n-Triacontane (C30)	4	100.00000	112736860.098
25	n-Hentriacontane (C31)	4	100.00000	109283275.930
26	n-Dotriacontane (C32)	4	100.00000	115267518.176
27	n-Tritriacontane (C33)	4	100.00000	112385731.740
28	n-tetratriacontane (C34)	4	100.00000	112321183.654
29	n-Pentatriacontane (C35)	4	100.00000	105135244.122
30	n-Hexatriacontane (C36)	4	100.00000	127058278.819
31	n-Heptatriacontane (C37)	4	100.00000	115889229.832
32	n-Octatriacontane (C38)	4	100.00000	117351710.870
33	n-Tetracontane (C40)	4	100.00000	116054901.150
Avg RSF For: C9-C44 Total Petroleum			100.00000	107845450.726

1	n-Nonane (C9)	5	200.00000	201433030.462
2	n-Decane (C10)	5	200.00000	211499703.473
3	n-Undecane (C11)	5	200.00000	210848119.612
4	n-Dodecane (C12)	5	200.00000	212672282.269
5	n-Tridecane (C13)	5	200.00000	212839738.378
6	n-Tetradecane (C14)	5	200.00000	218208937.692
7	n-Pentadecane (C15)	5	200.00000	219341701.982
8	n-Hexadecane (C16)	5	200.00000	217167665.547
9	n-Heptadecane (C17)	5	200.00000	221556768.031
10	Pristane	5	200.00000	222551620.557
11	n-Octadecane (C18)	5	200.00000	222568928.594
12	Phytane	5	200.00000	207645519.598
13	n-Nonadecane (C19)	5	200.00000	223138563.365
14	n-Eicosane (C20)	5	200.00000	224220195.049
15	n-Heneicosane (C21)	5	200.00000	225118581.418
16	n-Docosane (C22)	5	200.00000	224840261.386
17	n-Tricosane (C23)	5	200.00000	225071564.356
18	n-Tetracosane (C24)	5	200.00000	224349500.588
19	n-Pentacosane (C25)	5	200.00000	220635797.497
20	n-Hexacosane (C26)	5	200.00000	226867831.536
21	n-Heptacosane (C27)	5	200.00000	227180738.989
22	n-Octacosane (C28)	5	200.00000	232741442.061
23	n-Nonacosane (C29)	5	200.00000	232059129.360
24	n-Triacontane (C30)	5	200.00000	233302652.370

25	n-Hentriacontane (C31)	5	200.00000	225361978.013
26	n-Dotriacontane (C32)	5	200.00000	236707431.832
27	n-Tritriacontane (C33)	5	200.00000	229699743.795
28	n-tetratriacontane (C34)	5	200.00000	228455680.432
29	n-Pentatriacontane (C35)	5	200.00000	212723470.359
30	n-Hexatriacontane (C36)	5	200.00000	255619090.777
31	n-Heptatriacontane (C37)	5	200.00000	231704397.063
32	n-Octatriacontane (C38)	5	200.00000	233342360.344
33	n-Tetracontane (C40)	5	200.00000	228203729.372
Avg RSF For: C9-C44 Total Petroleum			200.00000	223626610.793

Generating Average Response Factor For: C10-C28 DRO

No	Compound	Level	Conc	Response
1	n-Decane (C10)	1	1.00000	1109845.697
2	n-Undecane (C11)	1	1.00000	1024381.455
3	n-Dodecane (C12)	1	1.00000	1010343.272
4	n-Tridecane (C13)	1	1.00000	1026803.234
5	n-Tetradecane (C14)	1	1.00000	1079621.954
6	n-Pentadecane (C15)	1	1.00000	1070039.053
7	n-Hexadecane (C16)	1	1.00000	1098101.248
8	n-Heptadecane (C17)	1	1.00000	1042971.331
9	n-Octadecane (C18)	1	1.00000	1096477.082
10	n-Nonadecane (C19)	1	1.00000	1096831.277
11	n-Eicosane (C20)	1	1.00000	1107447.315
12	n-Heneicosane (C21)	1	1.00000	1107526.004
13	n-Docosane (C22)	1	1.00000	1117658.493
14	n-Tricosane (C23)	1	1.00000	1124390.751
15	n-Tetracosane (C24)	1	1.00000	1124339.765
16	n-Pentacosane (C25)	1	1.00000	1086806.757
17	n-Hexacosane (C26)	1	1.00000	1111966.289
18	n-Heptacosane (C27)	1	1.00000	1122848.256
19	n-Octacosane (C28)	1	1.00000	1212558.746
Avg RSF For: C10-C28 DRO			1.00000	1093208.315
1	n-Decane (C10)	2	10.00000	11134164.186
2	n-Undecane (C11)	2	10.00000	10967330.535
3	n-Dodecane (C12)	2	10.00000	11028597.130
4	n-Tridecane (C13)	2	10.00000	11018399.725
5	n-Tetradecane (C14)	2	10.00000	11292200.447
6	n-Pentadecane (C15)	2	10.00000	11328599.670
7	n-Hexadecane (C16)	2	10.00000	11234298.968
8	n-Heptadecane (C17)	2	10.00000	11323333.321
9	n-Octadecane (C18)	2	10.00000	11434772.804
10	n-Nonadecane (C19)	2	10.00000	11473771.864
11	n-Eicosane (C20)	2	10.00000	11523057.761
12	n-Heneicosane (C21)	2	10.00000	11566081.768
13	n-Docosane (C22)	2	10.00000	11574332.153
14	n-Tricosane (C23)	2	10.00000	11587701.760
15	n-Tetracosane (C24)	2	10.00000	11494662.796
16	n-Pentacosane (C25)	2	10.00000	11265787.330
17	n-Hexacosane (C26)	2	10.00000	11556999.980
18	n-Heptacosane (C27)	2	10.00000	11548396.870
19	n-Octacosane (C28)	2	10.00000	11909847.149
Avg RSF For: C10-C28 DRO			10.00000	11382228.222

1	n-Decane (C10)	3	50.00000	51075440.058
2	n-Undecane (C11)	3	50.00000	50678911.624
3	n-Dodecane (C12)	3	50.00000	50957984.484
4	n-Tridecane (C13)	3	50.00000	50845025.599
5	n-Tetradecane (C14)	3	50.00000	52094598.732
6	n-Pentadecane (C15)	3	50.00000	52229145.720
7	n-Hexadecane (C16)	3	50.00000	51751351.206
8	n-Heptadecane (C17)	3	50.00000	52277861.662
9	n-Octadecane (C18)	3	50.00000	52735679.739
10	n-Nonadecane (C19)	3	50.00000	52976616.081
11	n-Eicosane (C20)	3	50.00000	53233893.536
12	n-Heneicosane (C21)	3	50.00000	53418500.860
13	n-Docosane (C22)	3	50.00000	53373024.950
14	n-Tricosane (C23)	3	50.00000	53358924.111
15	n-Tetracosane (C24)	3	50.00000	53197968.180
16	n-Pentacosane (C25)	3	50.00000	52079855.565
17	n-Hexacosane (C26)	3	50.00000	53440081.718
18	n-Heptacosane (C27)	3	50.00000	53387647.002
19	n-Octacosane (C28)	3	50.00000	54460527.094
Avg RSF For: C10-C28 DRO			50.00000	52503844.101

1	n-Decane (C10)	4	100.00000	101268677.390
2	n-Undecane (C11)	4	100.00000	100584077.070
3	n-Dodecane (C12)	4	100.00000	101404379.156
4	n-Tridecane (C13)	4	100.00000	101382803.662
5	n-Tetradecane (C14)	4	100.00000	103951622.041
6	n-Pentadecane (C15)	4	100.00000	104381724.683
7	n-Hexadecane (C16)	4	100.00000	103498290.798
8	n-Heptadecane (C17)	4	100.00000	104608997.866
9	n-Octadecane (C18)	4	100.00000	105576841.549
10	n-Nonadecane (C19)	4	100.00000	106027847.812
11	n-Eicosane (C20)	4	100.00000	106535091.341
12	n-Heneicosane (C21)	4	100.00000	107060131.819
13	n-Docosane (C22)	4	100.00000	107024075.650
14	n-Tricosane (C23)	4	100.00000	107222101.125
15	n-Tetracosane (C24)	4	100.00000	107072362.874
16	n-Pentacosane (C25)	4	100.00000	105388821.800
17	n-Hexacosane (C26)	4	100.00000	108489729.585
18	n-Heptacosane (C27)	4	100.00000	108907457.100
19	n-Octacosane (C28)	4	100.00000	111710930.880
Avg RSF For: C10-C28 DRO			100.00000	105373471.800

1	n-Decane (C10)	5	200.00000	211499703.473
2	n-Undecane (C11)	5	200.00000	210848119.612
3	n-Dodecane (C12)	5	200.00000	212672282.269
4	n-Tridecane (C13)	5	200.00000	212839738.378
5	n-Tetradecane (C14)	5	200.00000	218208937.692
6	n-Pentadecane (C15)	5	200.00000	219341701.982
7	n-Hexadecane (C16)	5	200.00000	217167665.547
8	n-Heptadecane (C17)	5	200.00000	221556768.031
9	n-Octadecane (C18)	5	200.00000	222568928.594
10	n-Nonadecane (C19)	5	200.00000	223138563.365
11	n-Eicosane (C20)	5	200.00000	224220195.049
12	n-Heneicosane (C21)	5	200.00000	225118581.418
13	n-Docosane (C22)	5	200.00000	224840261.386
14	n-Tricosane (C23)	5	200.00000	225071564.356
15	n-Tetracosane (C24)	5	200.00000	224349500.588

16	n-Pentacosane (C25)	5	200.00000	220635797.497
17	n-Hexacosane (C26)	5	200.00000	226867831.536
18	n-Heptacosane (C27)	5	200.00000	227180738.989
19	n-Octacosane (C28)	5	200.00000	232741442.061
Avg RSF For: C10-C28 DRO			200.00000	221098332.727

Generating Average Response Factor For: C28-C40 ORO

No	Compound	Level	Conc	Response
1	n-Octacosane (C28)	1	1.00000	1212558.746
2	n-Nonacosane (C29)	1	1.00000	1130473.888
3	n-Triacontane (C30)	1	1.00000	1133109.263
4	n-Hentriacontane (C31)	1	1.00000	1103004.874
5	n-Dotriacontane (C32)	1	1.00000	1154057.569
6	n-Tritriacontane (C33)	1	1.00000	1130391.444
7	n-tetratriacontane (C34)	1	1.00000	1110986.529
8	n-Pentatriacontane (C35)	1	1.00000	1043736.753
9	n-Hexatriacontane (C36)	1	1.00000	1250484.820
10	n-Heptatriacontane (C37)	1	1.00000	1122679.143
11	n-Octatriacontane (C38)	1	1.00000	1131929.425
12	n-Tetracontane (C40)	1	1.00000	1125356.431
Avg RSF For: C28-C40 ORO			1.00000	1137397.407
1	n-Octacosane (C28)	2	10.00000	11909847.149
2	n-Nonacosane (C29)	2	10.00000	11729452.101
3	n-Triacontane (C30)	2	10.00000	11742904.972
4	n-Hentriacontane (C31)	2	10.00000	11314814.828
5	n-Dotriacontane (C32)	2	10.00000	11865476.996
6	n-Tritriacontane (C33)	2	10.00000	11523465.994
7	n-tetratriacontane (C34)	2	10.00000	11451119.910
8	n-Pentatriacontane (C35)	2	10.00000	10662256.031
9	n-Hexatriacontane (C36)	2	10.00000	12851113.166
10	n-Heptatriacontane (C37)	2	10.00000	11656708.336
11	n-Octatriacontane (C38)	2	10.00000	11826731.842
12	n-Tetracontane (C40)	2	10.00000	11647803.772
Avg RSF For: C28-C40 ORO			10.00000	11681807.925
1	n-Octacosane (C28)	3	50.00000	54460527.094
2	n-Nonacosane (C29)	3	50.00000	54143436.222
3	n-Triacontane (C30)	3	50.00000	54272054.438
4	n-Hentriacontane (C31)	3	50.00000	52296053.650
5	n-Dotriacontane (C32)	3	50.00000	54818805.711
6	n-Tritriacontane (C33)	3	50.00000	53208653.286
7	n-tetratriacontane (C34)	3	50.00000	52932855.272
8	n-Pentatriacontane (C35)	3	50.00000	49392768.576
9	n-Hexatriacontane (C36)	3	50.00000	59548003.527
10	n-Heptatriacontane (C37)	3	50.00000	54257422.814
11	n-Octatriacontane (C38)	3	50.00000	54921095.872
12	n-Tetracontane (C40)	3	50.00000	54254862.067
Avg RSF For: C28-C40 ORO			50.00000	54042211.544
1	n-Octacosane (C28)	4	100.00000	111710930.880

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2	n-Nonacosane (C29)	4	100.00000	111802404.469
3	n-Triacontane (C30)	4	100.00000	112736860.098
4	n-Hentriacontane (C31)	4	100.00000	109283275.930
5	n-Dotriacontane (C32)	4	100.00000	115267518.176
6	n-Tritriacontane (C33)	4	100.00000	112385731.740
7	n-tetratriacontane (C34)	4	100.00000	112321183.654
8	n-Pentatriacontane (C35)	4	100.00000	105135244.122
9	n-Hexatriacontane (C36)	4	100.00000	127058278.819
10	n-Heptatriacontane (C37)	4	100.00000	115889229.832
11	n-Octatriacontane (C38)	4	100.00000	117351710.870
12	n-Tetracontane (C40)	4	100.00000	116054901.150
Avg RSF For: C28-C40 ORO			100.00000	113916439.145

1	n-Octacosane (C28)	5	200.00000	232741442.061
2	n-Nonacosane (C29)	5	200.00000	232059129.360
3	n-Triacontane (C30)	5	200.00000	233302652.370
4	n-Hentriacontane (C31)	5	200.00000	225361978.013
5	n-Dotriacontane (C32)	5	200.00000	236707431.832
6	n-Tritriacontane (C33)	5	200.00000	229699743.795
7	n-tetratriacontane (C34)	5	200.00000	228455680.432
8	n-Pentatriacontane (C35)	5	200.00000	212723470.359
9	n-Hexatriacontane (C36)	5	200.00000	255619090.777
10	n-Heptatriacontane (C37)	5	200.00000	231704397.063
11	n-Octatriacontane (C38)	5	200.00000	233342360.344
12	n-Tetracontane (C40)	5	200.00000	228203729.372
Avg RSF For: C28-C40 ORO			200.00000	231660092.148

Generating Reference Response Factors

No	Compound	No	Refrence Compound
8	1380	9	n-Tetradecane (C14)
10	1470	11	n-Pentadecane (C15)
13	1650	14	n-Heptadecane (C17)
40	n-Nonatriacontane (C39)	41	n-Tetracontane (C40)
43	C9-C40 Total Petroleum Hydrocarbons	42	C9-C44 Total Petroleum Hydrocarbons
46	Total Resolved Hydrocarbons	42	C9-C44 Total Petroleum Hydrocarbons

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Abacus Response Factor Update Macro Ver. 1.0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202112.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 8:50 pm
Operator : FID17:WR
Sample : I1705202101F
Misc : WG1505003,FRBD77,1ug/ml
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:16:34 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:11:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.313	54861668	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.267	1228518	1.018	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	2.04%#		
24) s	d50-Tetracosane	35.933	964897	0.990	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	1.98%#		
	Target Compounds					
2) t	n-Octane (C8)	5.598	1008599	1.046	ug/mL	M4
3) t	n-Nonane (C9)	7.806	1171751	1.167	ug/mL	M4
4) t	n-Decane (C10)	10.300	1109846	1.056	ug/mL	M4
5) t	n-Undecane (C11)	12.818	1024381	0.982	ug/mL	M4
6) t	n-Dodecane (C12)	15.248	1010343	0.963	ug/mL	M4
7) t	n-Tridecane (C13)	17.558	1026803	0.981	ug/mL	M4
9) t	n-Tetradecane (C14)	19.743	1079622	1.007	ug/mL	M4
11) t	n-Pentadecane (C15)	21.812	1070039	0.995	ug/mL	M4
12) t	n-Hexadecane (C16)	23.770	1098101	1.031	ug/mL	M4
14) t	n-Heptadecane (C17)	25.630	1042971	0.969	ug/mL	M4
15) t	Pristane	25.738	1156626	1.051	ug/mL	M4
16) t	n-Octadecane (C18)	27.398	1096477	1.010	ug/mL	M4
17) t	Phytane	27.561	1032738	1.019	ug/mL	M4
18) t	n-Nonadecane (C19)	29.085	1096831	1.006	ug/mL	M4
20) t	n-Eicosane (C20)	30.694	1107447	1.011	ug/mL	M4
21) t	n-Heneicosane (C21)	32.230	1107526	1.007	ug/mL	M4
22) t	n-Docosane (C22)	33.706	1117658	1.017	ug/mL	M4
23) t	n-Tricosane (C23)	35.121	1124391	1.024	ug/mL	M4
25) t	n-Tetracosane (C24)	36.480	1124340	1.027	ug/mL	M4
26) t	n-Pentacosane (C25)	37.786	1086807	1.014	ug/mL	M4
27) t	n-Hexacosane (C26)	39.044	1111966	1.011	ug/mL	M4
28) t	n-Heptacosane (C27)	40.258	1122848	1.022	ug/mL	M4
29) t	n-Octacosane (C28)	41.431	1212559	1.082	ug/mL	M4
30) t	n-Nonacosane (C29)	42.562	1130474	1.014	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202112.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 8:50 pm
Operator : FID17:WR
Sample : I1705202101F
Misc : WG1505003,FRBD77,1ug/ml
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:16:34 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:11:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

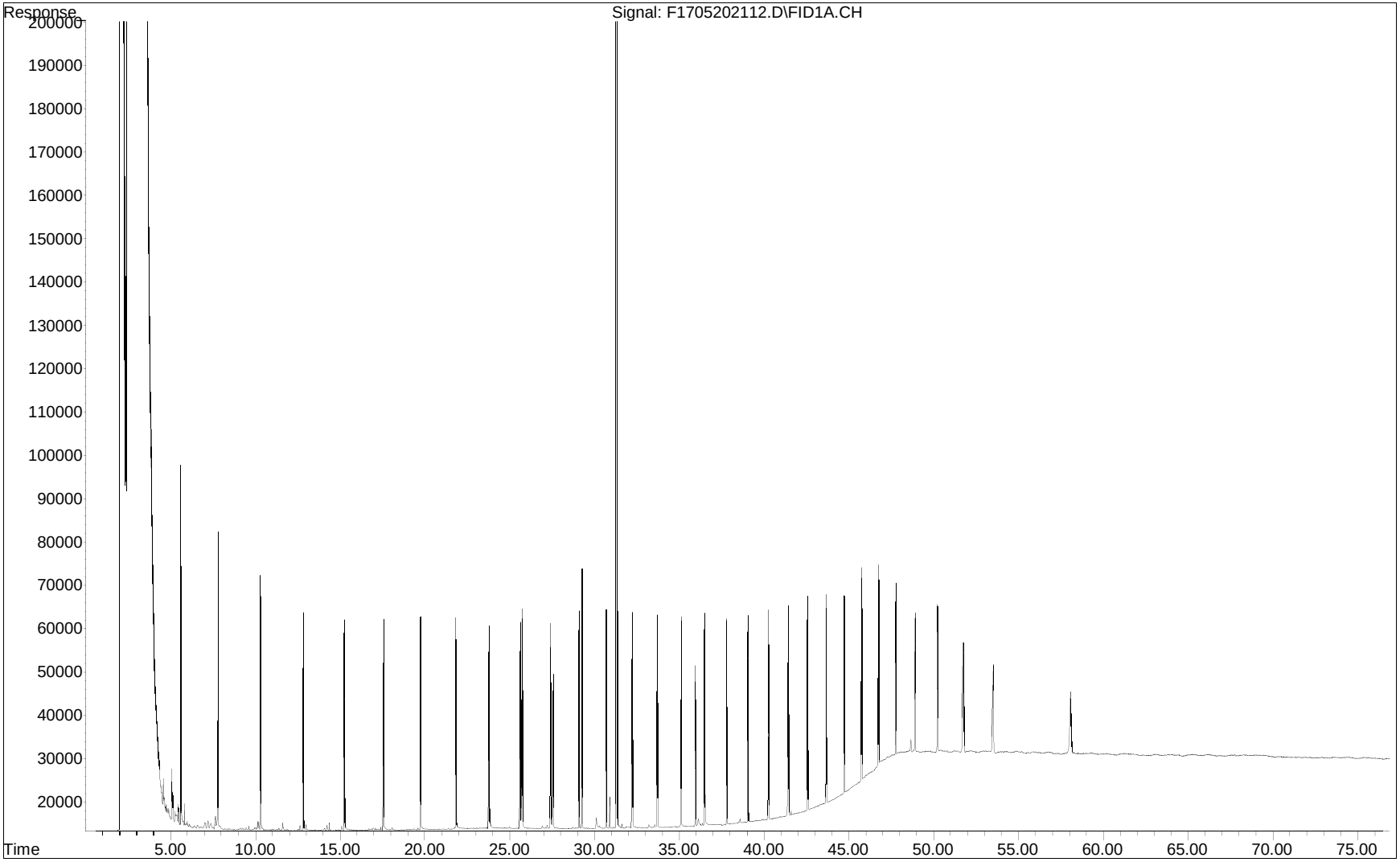
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.658	1133109	1.014 ug/mL M4
32) t	n-Hentriacontane (C31)	44.717	1103005	1.025 ug/mL M4
33) t	n-Dotriacontane (C32)	45.747	1154058	1.023 ug/mL M4
34) t	n-Tritriacontane (C33)	46.745	1130391	1.032 ug/mL M4
35) t	n-tetratriacontane (C34)	47.764	1110987	1.020 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.916	1043737	1.027 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.222	1250485	1.020 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.738	1122679	1.005 ug/mL M4
39) t	n-Octatriacontane (C38)	53.502	1131929	1.001 ug/mL M4
41) t	n-Tetracontane (C40)	58.050	1125356	1.008 ug/mL M4

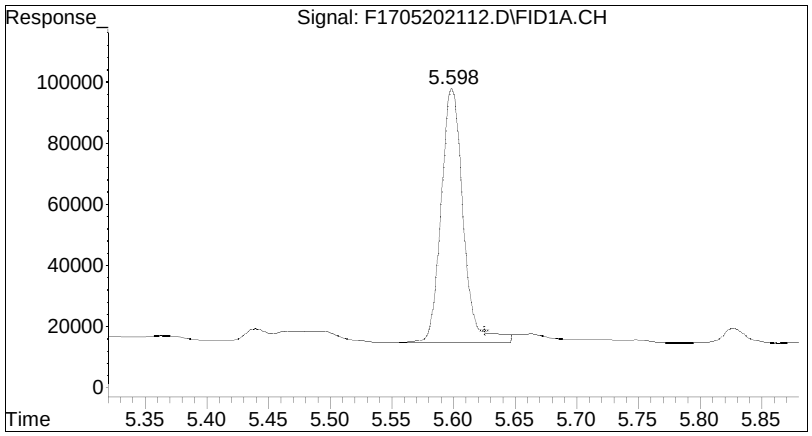
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

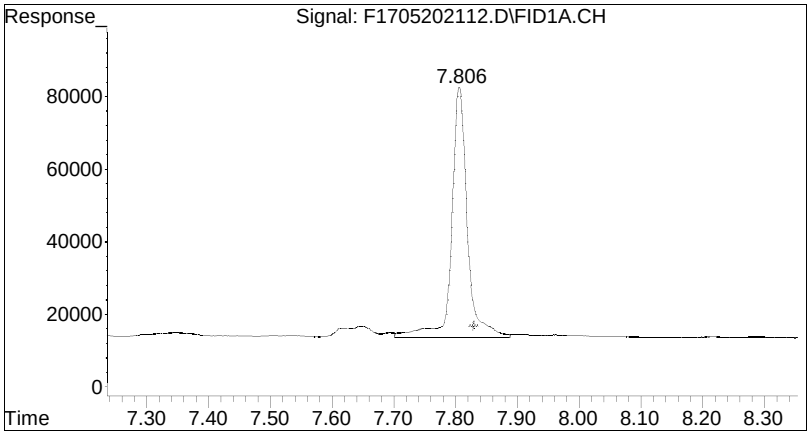
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202112.D
Operator : FID17:WR
Acquired : 20 May 2021 8:50 pm using AcqMethod FID17A.M
Sample Name: I1705202101F
Instrument: FID17
Misc Info : WG1505003,FRBD77,1ug/ml
Vial Number: 6
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M





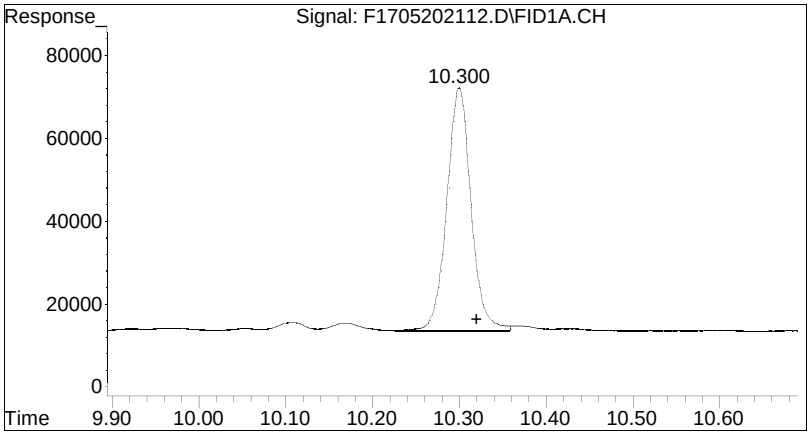
#2 n-Octane (C8)

R.T.:	5.598 min
Delta R.T.:	-0.027 min
Response:	1008599
Conc:	1.05 ug/mL M4



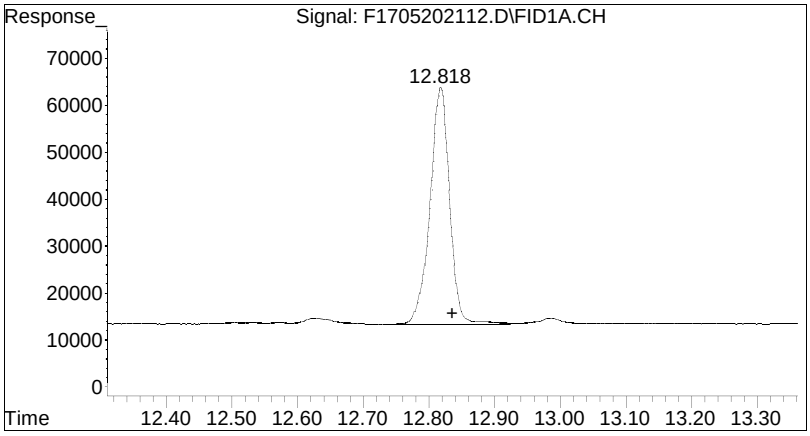
#3 n-Nonane (C9)

R.T.: 7.806 min
Delta R.T.: -0.024 min
Response: 1171751
Conc: 1.17 ug/mL M4



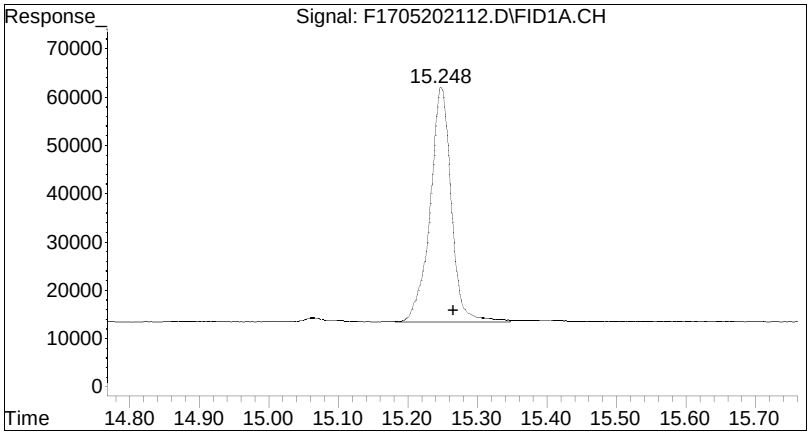
#4 n-Decane (C10)

R.T.:	10.300 min
Delta R.T.:	-0.020 min
Response:	1109846
Conc:	1.06 ug/mL M4



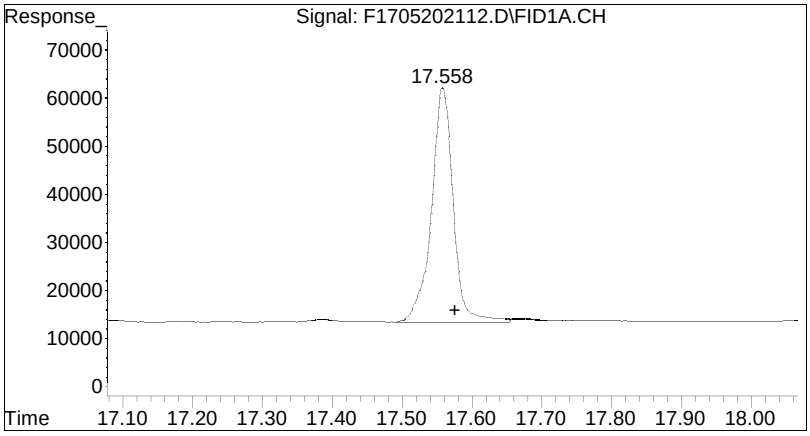
#5 n-Undecane (C11)

R.T.:	12.818 min
Delta R.T.:	-0.018 min
Response:	1024381
Conc:	0.98 ug/mL M4



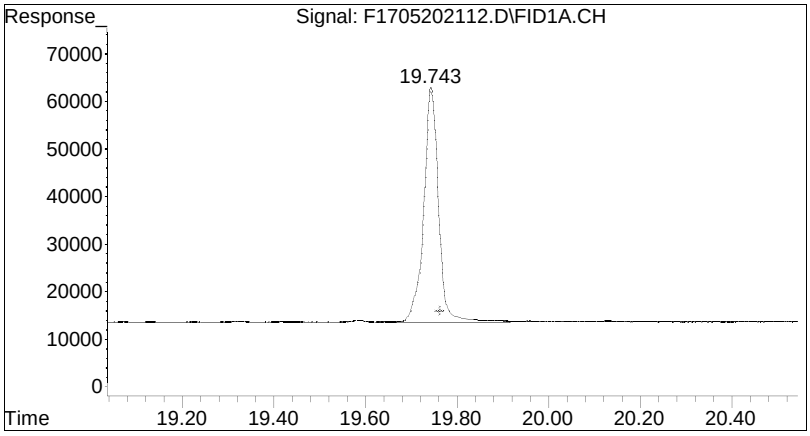
#6 n-Dodecane (C12)

R.T.:	15.248 min
Delta R.T.:	-0.018 min
Response:	1010343
Conc:	0.96 ug/mL M4



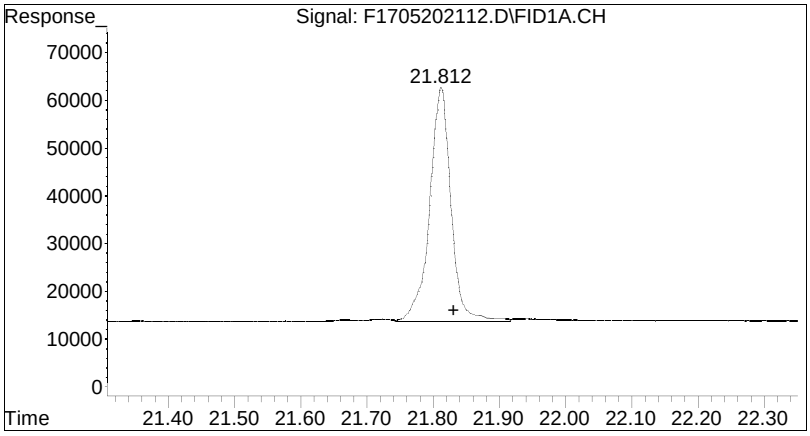
#7 n-Tridecane (C13)

R.T.:	17.558 min
Delta R.T.:	-0.018 min
Response:	1026803
Conc:	0.98 ug/mL M4



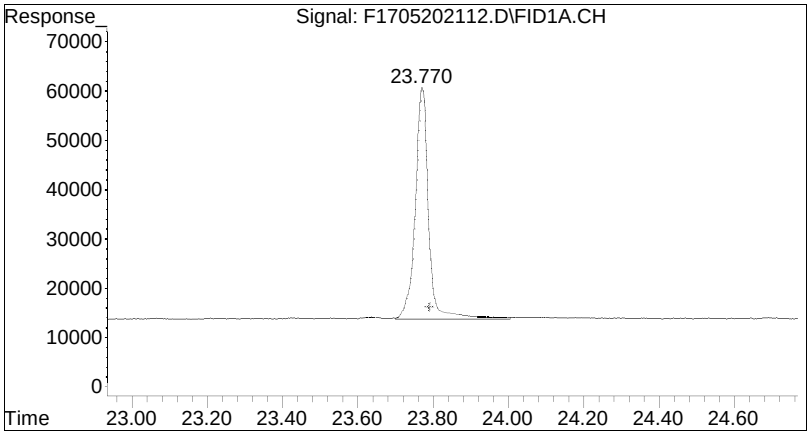
#9 n-Tetradecane (C14)

R.T.:	19.743 min
Delta R.T.:	-0.019 min
Response:	1079622
Conc:	1.01 ug/mL M4



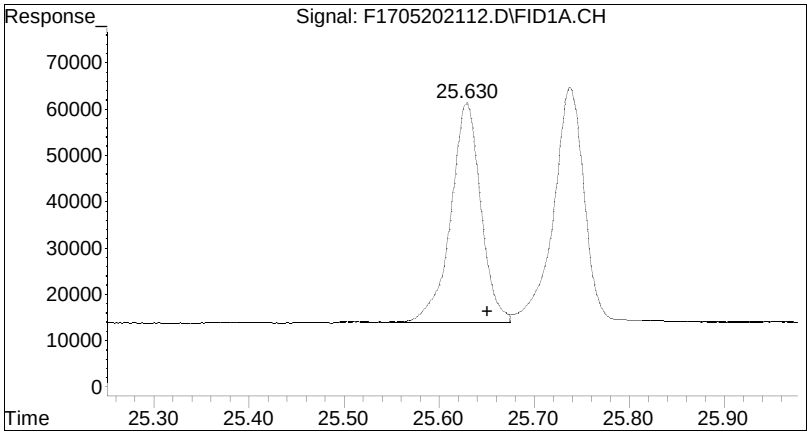
#11 n-Pentadecane (C15)

R.T.:	21.812 min
Delta R.T.:	-0.019 min
Response:	1070039
Conc:	1.00 ug/mL M4



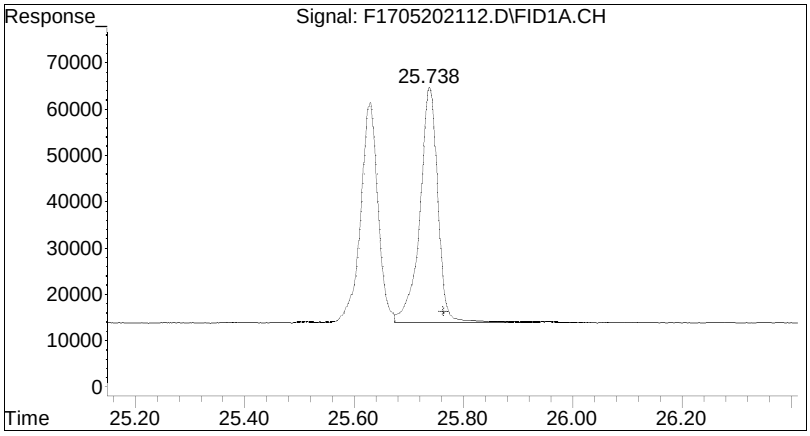
#12 n-Hexadecane (C16)

R.T.:	23.770 min
Delta R.T.:	-0.021 min
Response:	1098101
Conc:	1.03 ug/mL M4



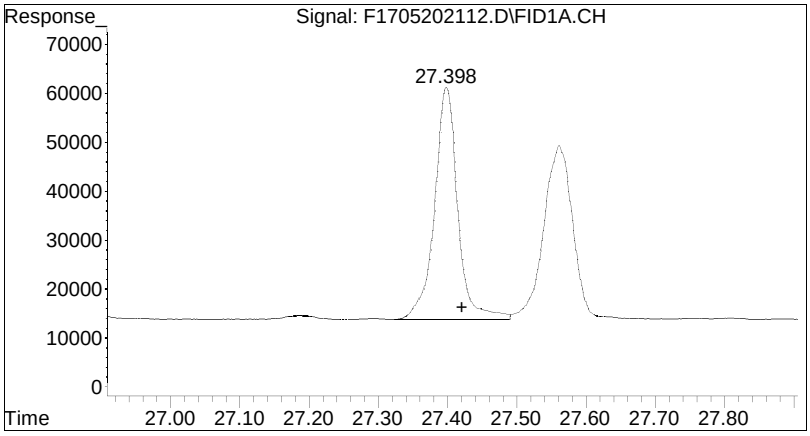
#14 n-Heptadecane (C17)

R.T.:	25.630 min
Delta R.T.:	-0.021 min
Response:	1042971
Conc:	0.97 ug/mL M4



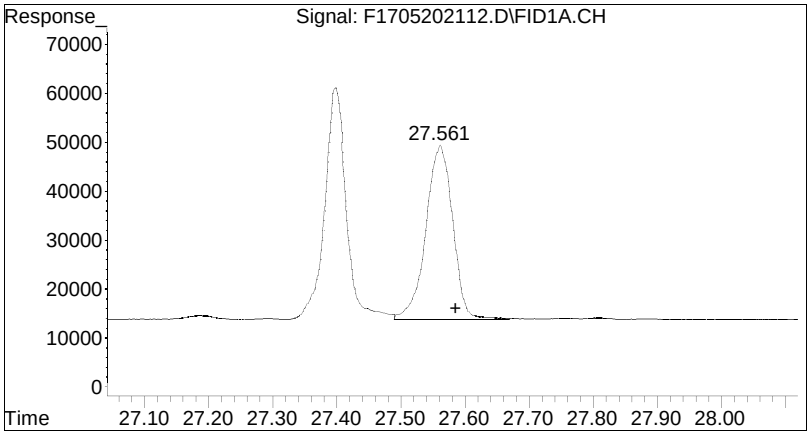
#15 Pristane

R.T.:	25.738 min
Delta R.T.:	-0.026 min
Response:	1156626
Conc:	1.05 ug/mL M4



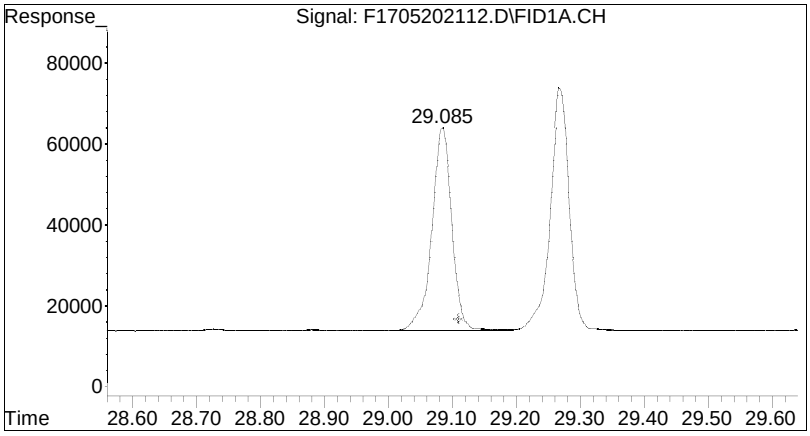
#16 n-Octadecane (C18)

R.T.:	27.398 min
Delta R.T.:	-0.023 min
Response:	1096477
Conc:	1.01 ug/mL M4



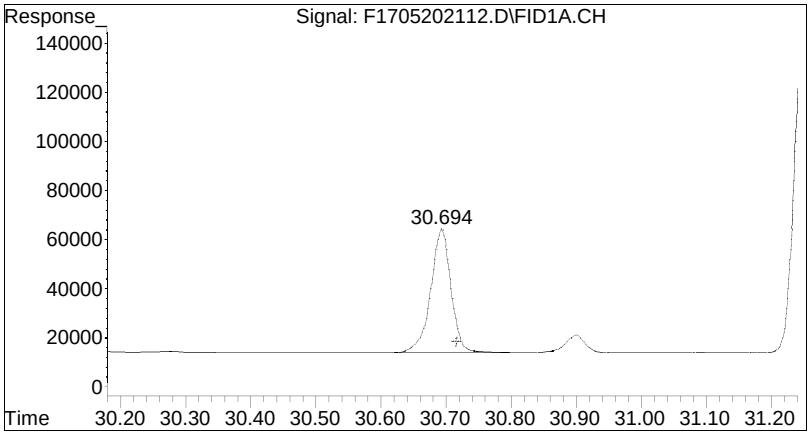
#17 Phytane

R.T.:	27.561 min
Delta R.T.:	-0.025 min
Response:	1032738
Conc:	1.02 ug/mL M4



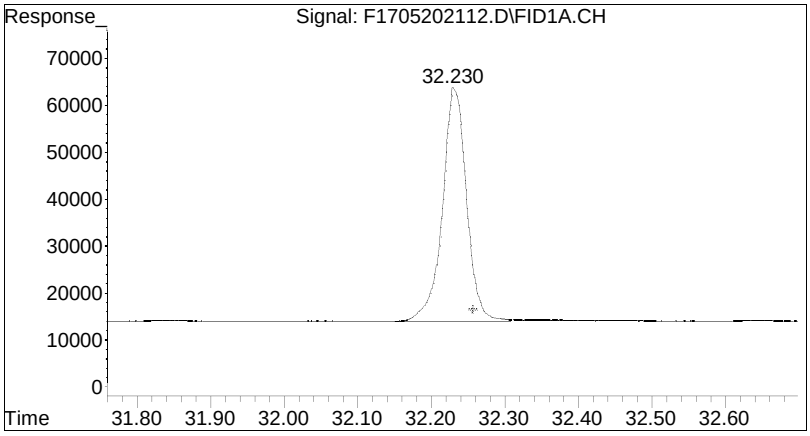
#18 n-Nonadecane (C19)

R.T.:	29.085 min
Delta R.T.:	-0.026 min
Response:	1096831
Conc:	1.01 ug/mL M4



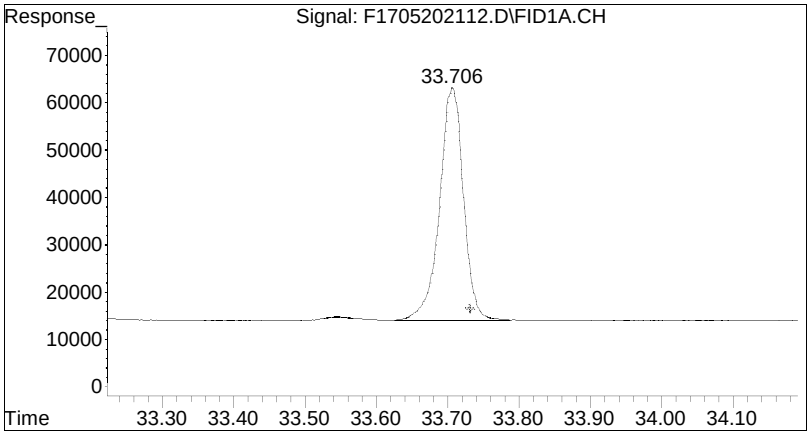
#20 n-Eicosane (C20)

R.T.:	30.694 min
Delta R.T.:	-0.023 min
Response:	1107447
Conc:	1.01 ug/mL M4



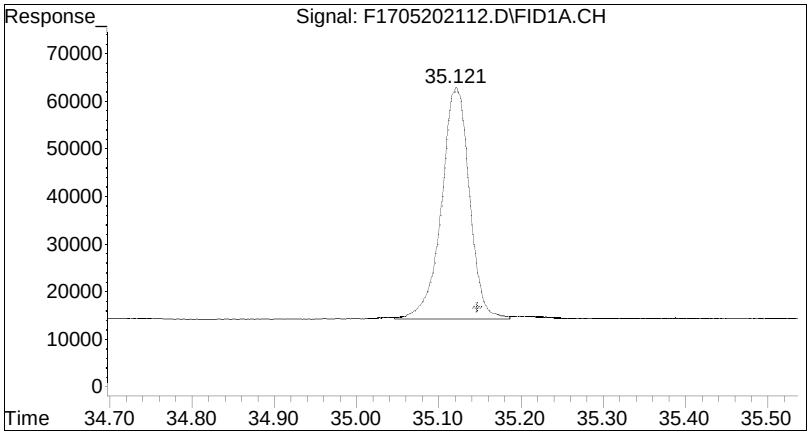
#21 n-Heneicosane (C21)

R.T.:	32.230 min
Delta R.T.:	-0.027 min
Response:	1107526
Conc:	1.01 ug/mL M4



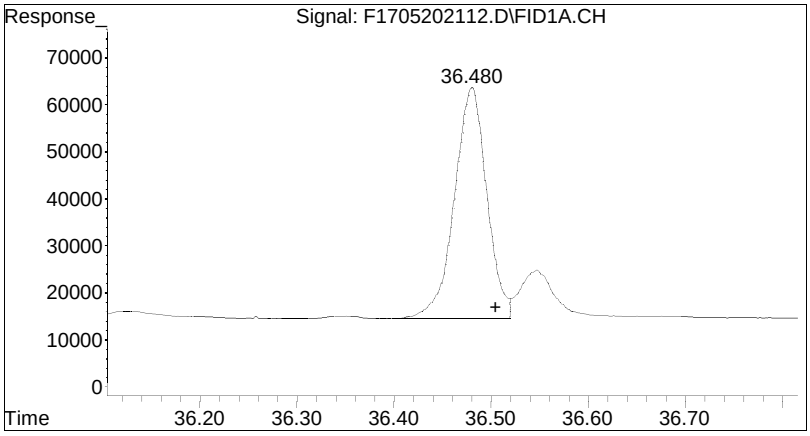
#22 n-Docosane (C22)

R.T.:	33.706 min
Delta R.T.:	-0.025 min
Response:	1117658
Conc:	1.02 ug/mL M4



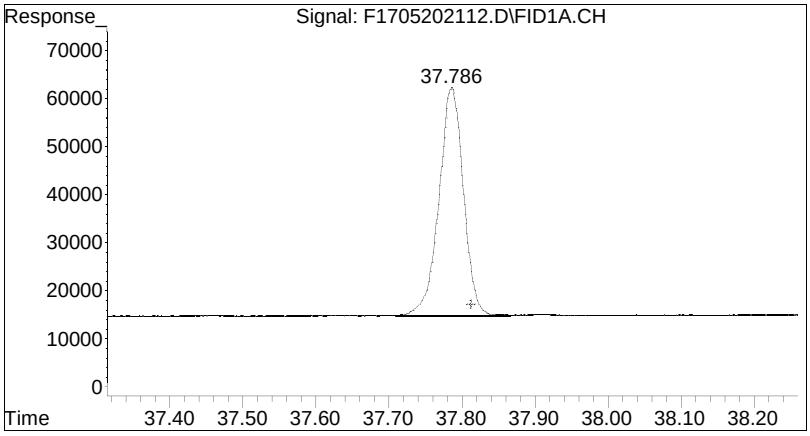
#23 n-Tricosane (C23)

R.T.:	35.121 min
Delta R.T.:	-0.026 min
Response:	1124391
Conc:	1.02 ug/mL M4



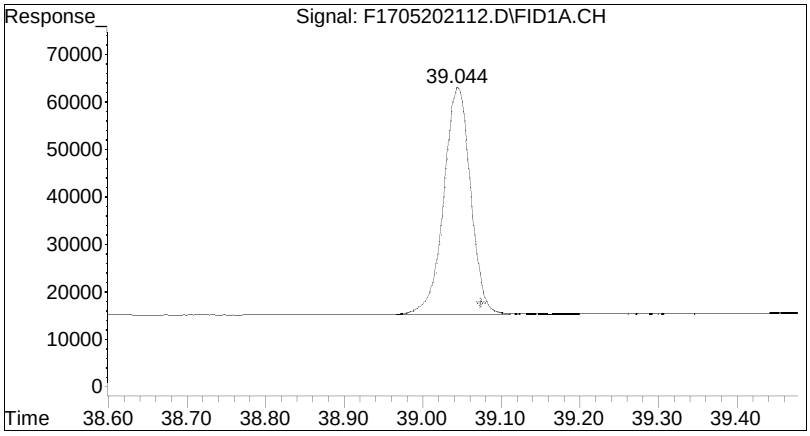
#25 n-Tetracosane (C24)

R.T.:	36.480 min
Delta R.T.:	-0.024 min
Response:	1124340
Conc:	1.03 ug/mL M4



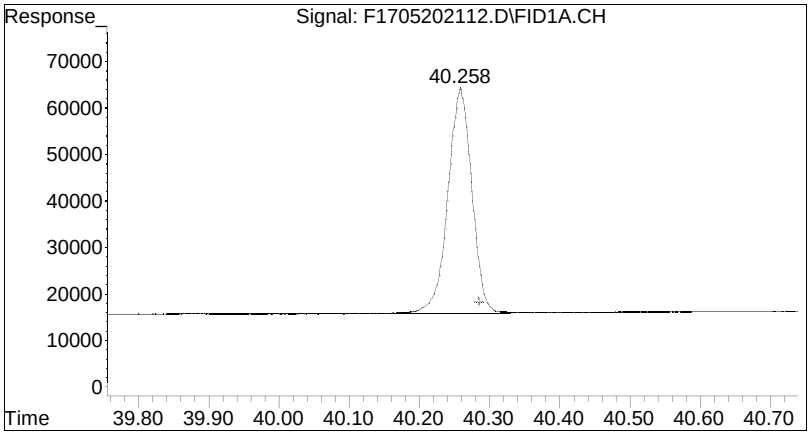
#26 n-Pentacosane (C25)

R.T.:	37.786 min
Delta R.T.:	-0.026 min
Response:	1086807
Conc:	1.01 ug/mL M4



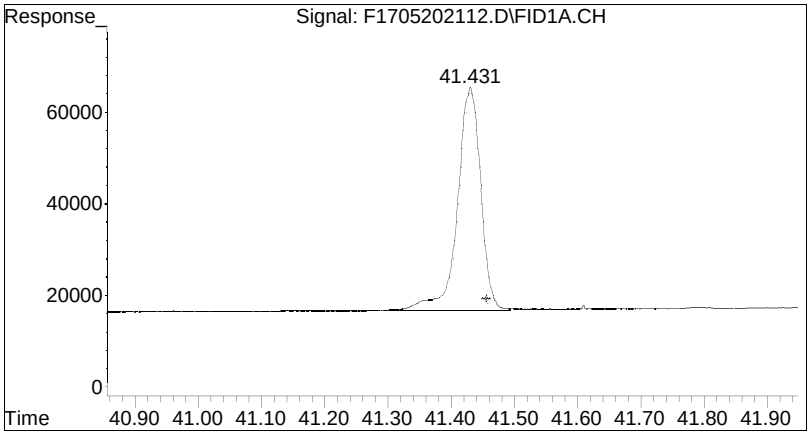
#27 n-Hexacosane (C26)

R.T.:	39.044 min
Delta R.T.:	-0.030 min
Response:	1111966
Conc:	1.01 ug/mL M4



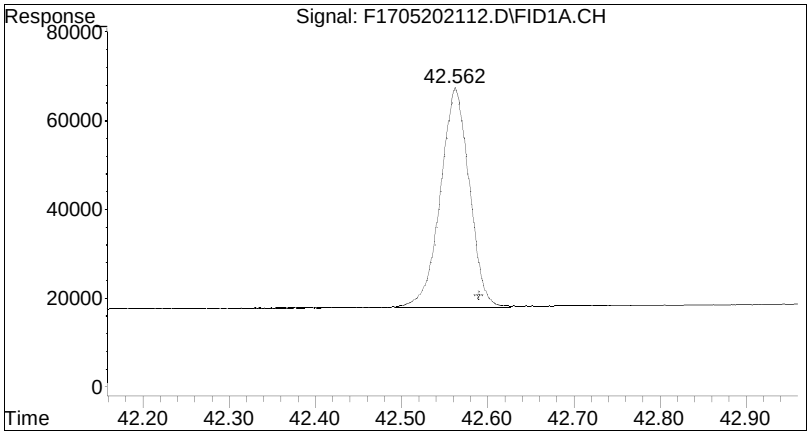
#28 n-Heptacosane (C27)

R.T.:	40.258 min
Delta R.T.:	-0.027 min
Response:	1122848
Conc:	1.02 ug/mL M4



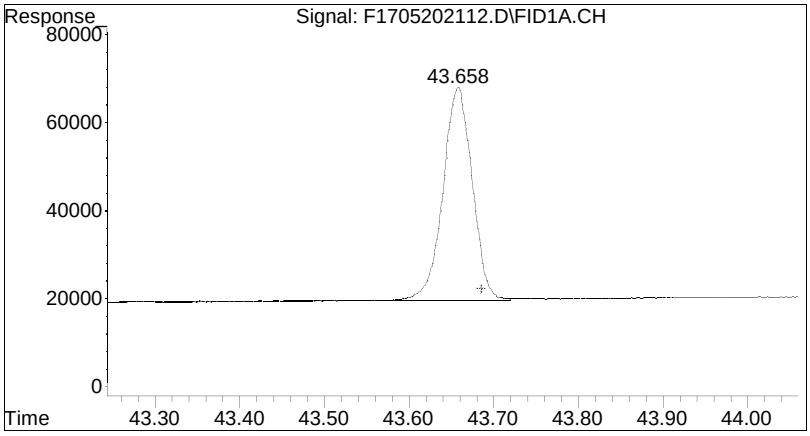
#29 n-Octacosane (C28)

R.T.:	41.431 min
Delta R.T.:	-0.025 min
Response:	1212559
Conc:	1.08 ug/mL M4



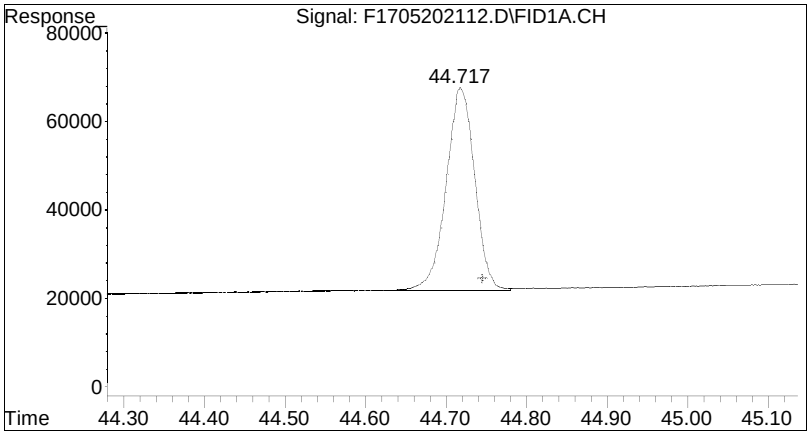
#30 n-Nonacosane (C29)

R.T.:	42.562 min
Delta R.T.:	-0.028 min
Response:	1130474
Conc:	1.01 ug/mL M4



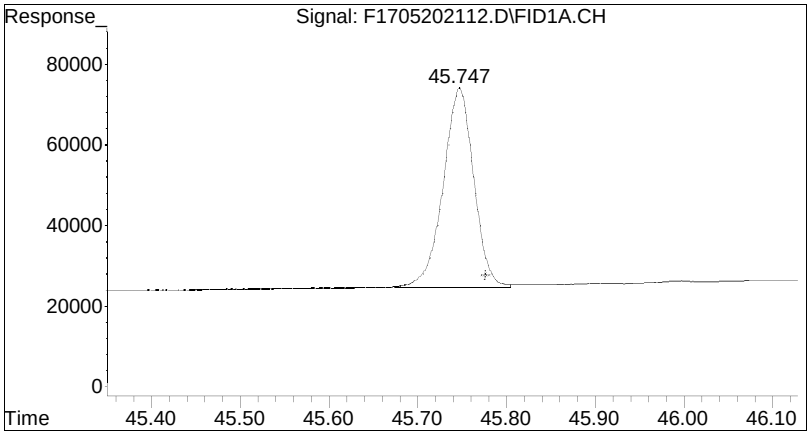
#31 n-Triacontane (C30)

R.T.:	43.658 min
Delta R.T.:	-0.027 min
Response:	1133109
Conc:	1.01 ug/mL M4



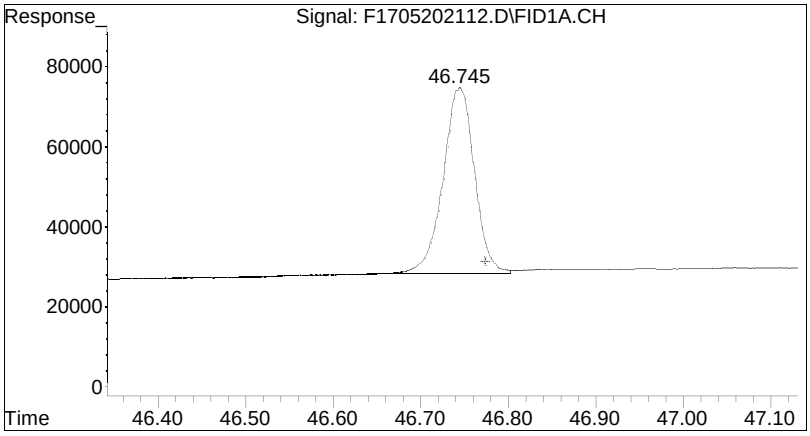
#32 n-Hentriacontane (C31)

R.T.:	44.717 min
Delta R.T.:	-0.028 min
Response:	1103005
Conc:	1.02 ug/mL M4



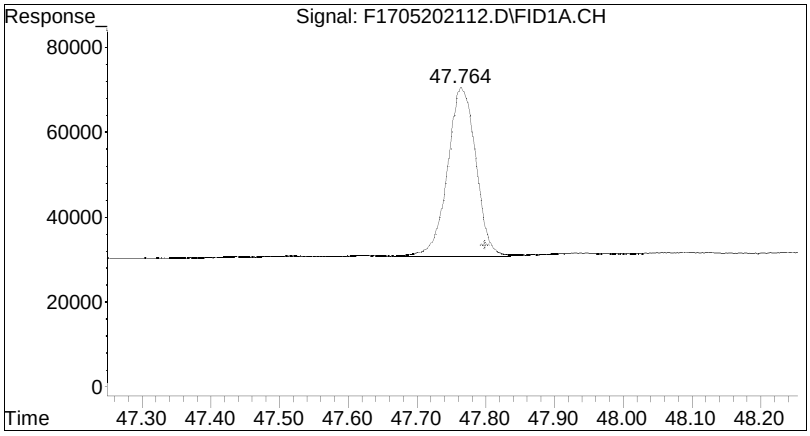
#33 n-Dotriacontane (C32)

R.T.:	45.747 min
Delta R.T.:	-0.029 min
Response:	1154058
Conc:	1.02 ug/mL M4



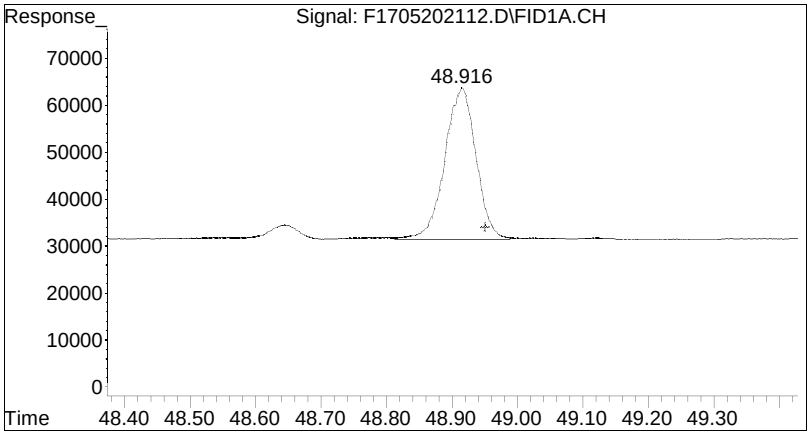
#34 n-Tritriacontane (C33)

R.T.:	46.745 min
Delta R.T.:	-0.029 min
Response:	1130391
Conc:	1.03 ug/mL M4



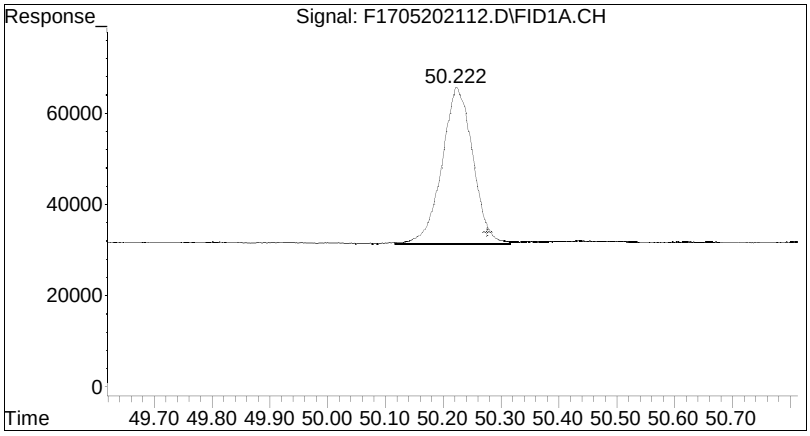
#35 n-tetratriacontane (C34)

R.T.:	47.764 min
Delta R.T.:	-0.035 min
Response:	1110987
Conc:	1.02 ug/mL M4



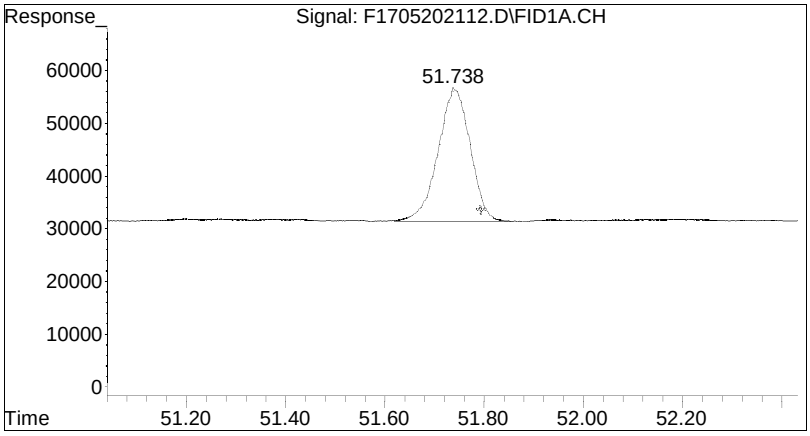
#36 n-Pentatriacontane (C35)

R.T.:	48.916 min
Delta R.T.:	-0.035 min
Response:	1043737
Conc:	1.03 ug/mL M4



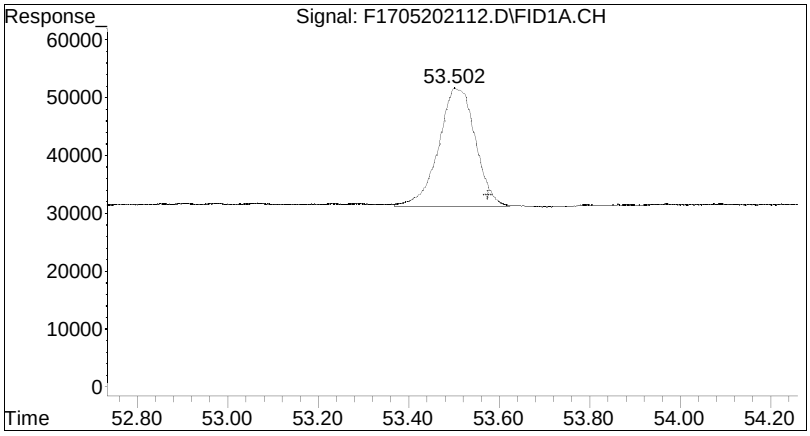
#37 n-Hexatriacontane (C36)

R.T.:	50.222 min
Delta R.T.:	-0.054 min
Response:	1250485
Conc:	1.02 ug/mL M4



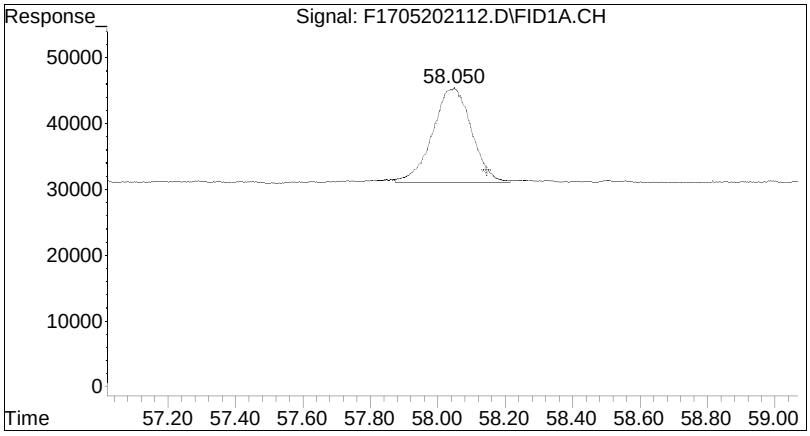
#38 n-Heptatriacontane (C37)

R.T.:	51.738 min
Delta R.T.:	-0.056 min
Response:	1122679
Conc:	1.01 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.:	53.502 min
Delta R.T.:	-0.073 min
Response:	1131929
Conc:	1.00 ug/mL M4



#41 n-Tetracontane (C40)

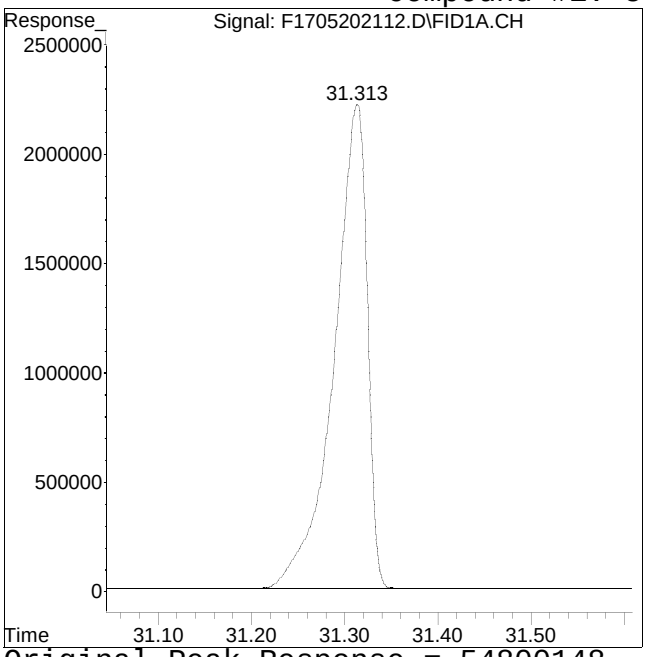
R.T.:	58.050 min
Delta R.T.:	-0.095 min
Response:	1125356
Conc:	1.01 ug/mL M4

Manual Integration/Negative Proof Report

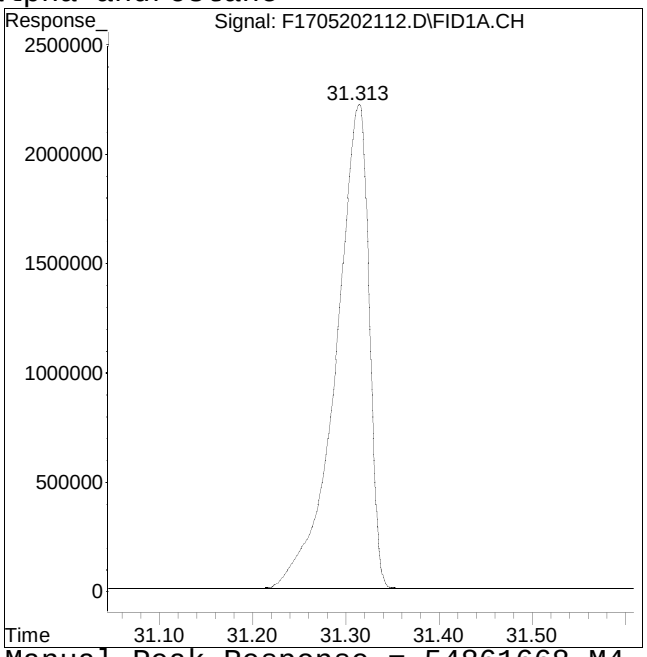
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 54800148



Manual Peak Response = 54861668 M4

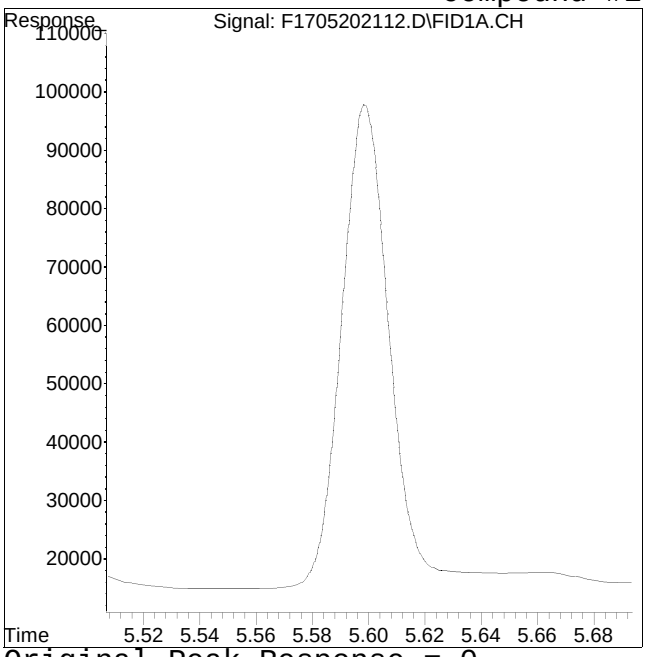
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

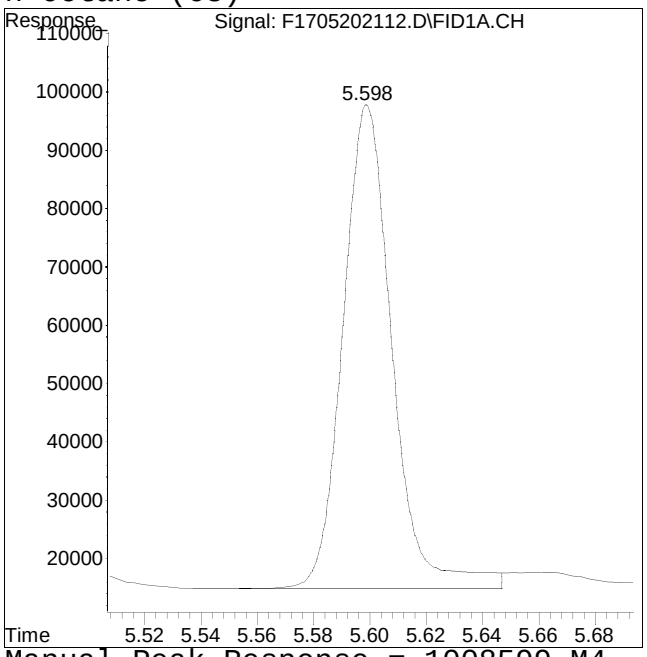
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #2: n-Octane (C8)



Original Peak Response = 0



Manual Peak Response = 1008599 M4

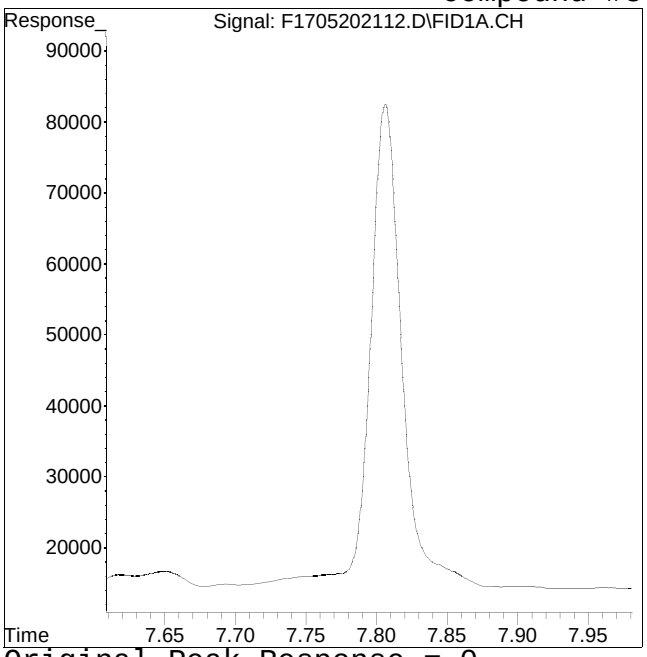
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

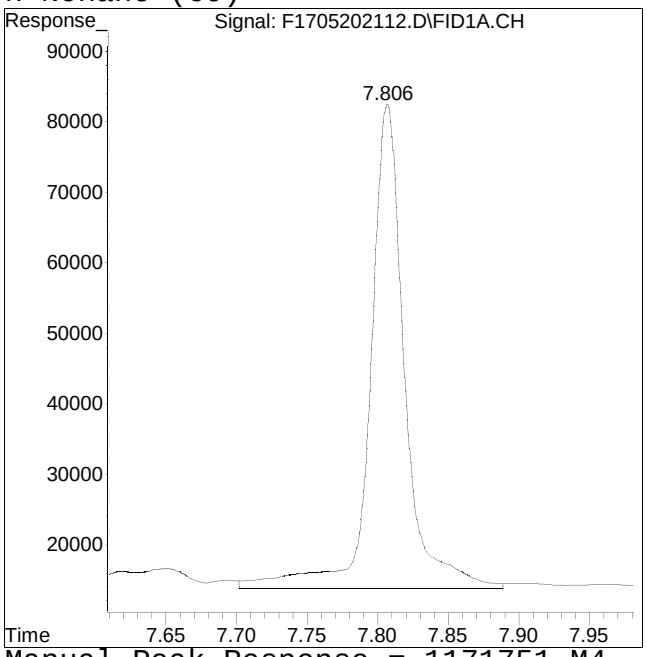
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 0



Manual Peak Response = 1171751 M4

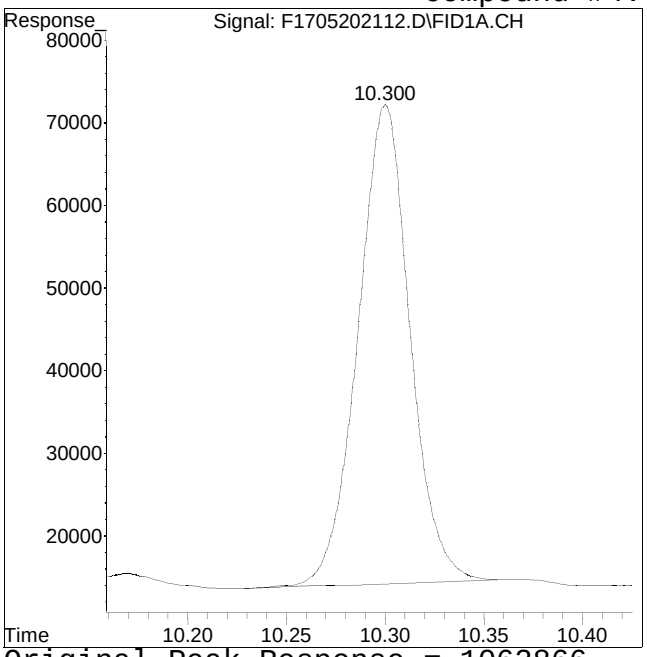
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

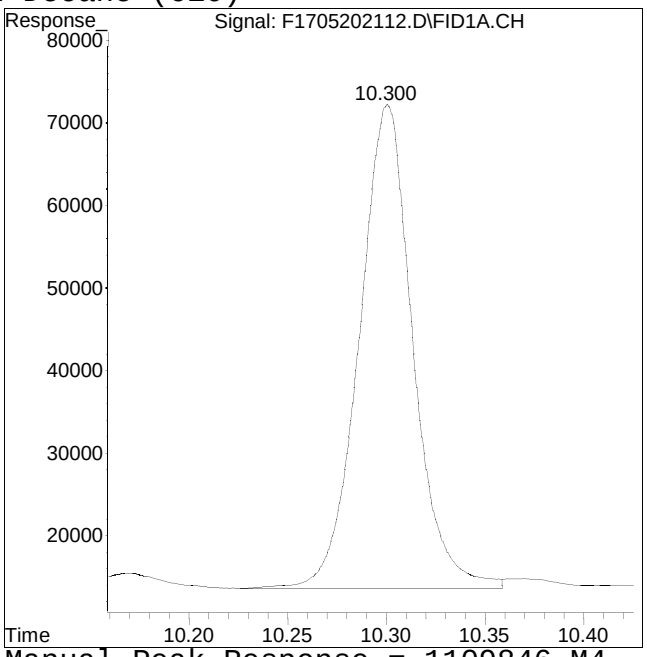
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #4: n-Decane (C10)



Original Peak Response = 1062866



Manual Peak Response = 1109846 M4

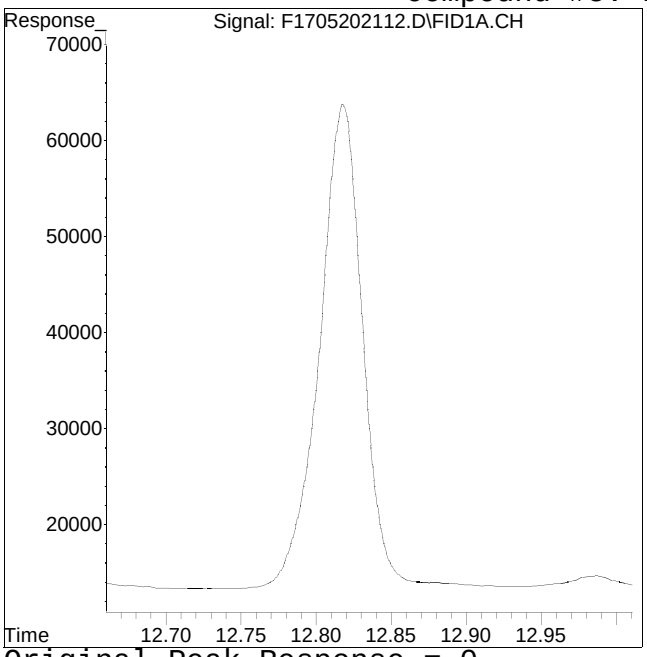
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

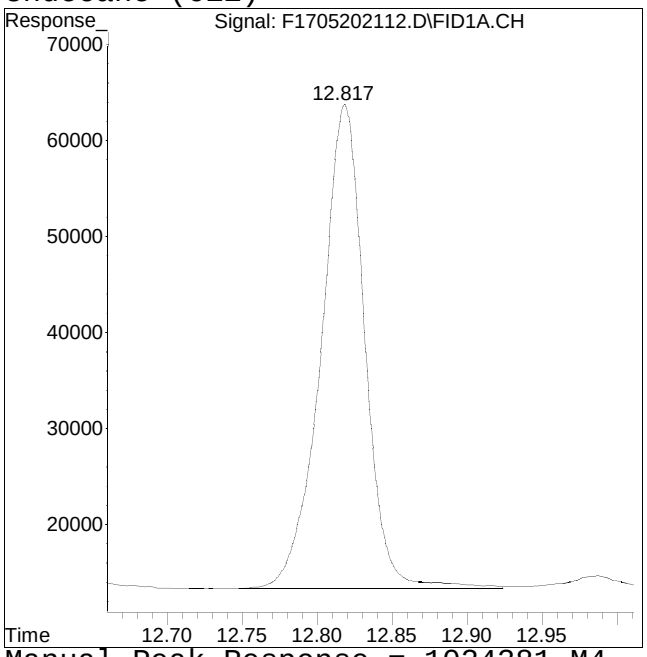
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 0



Manual Peak Response = 1024381 M4

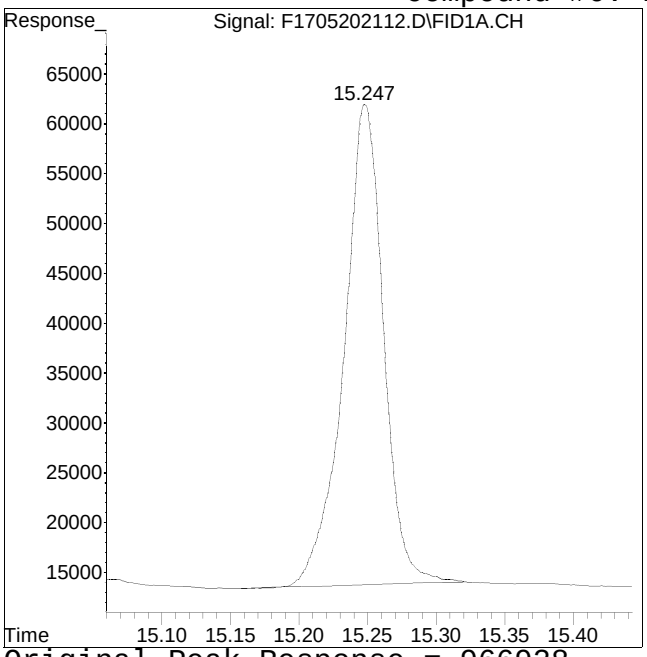
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

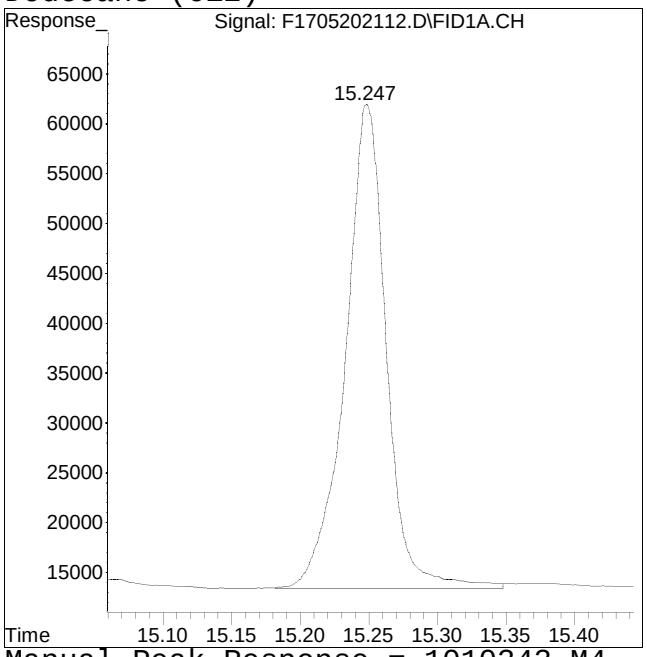
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 966928



Manual Peak Response = 1010343 M4

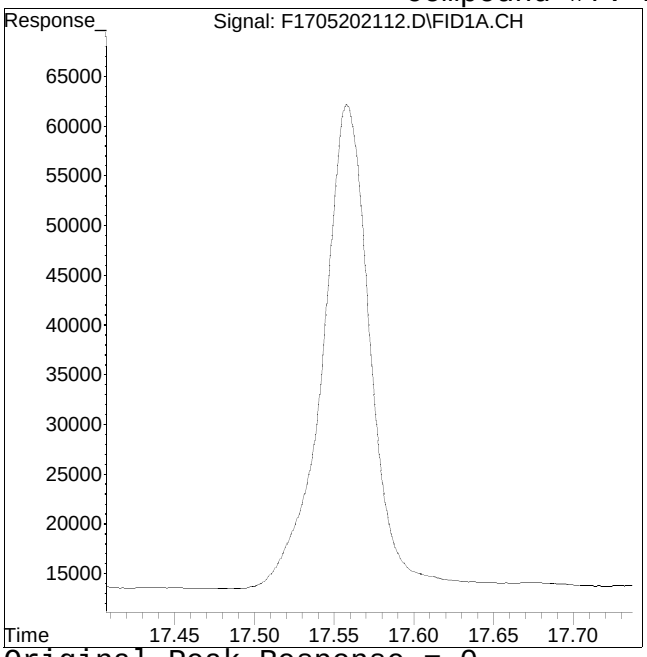
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

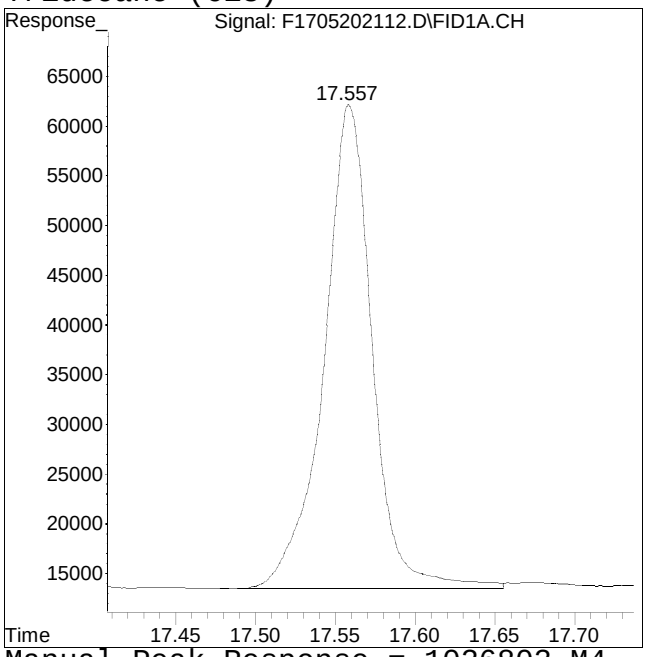
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 0



Manual Peak Response = 1026803 M4

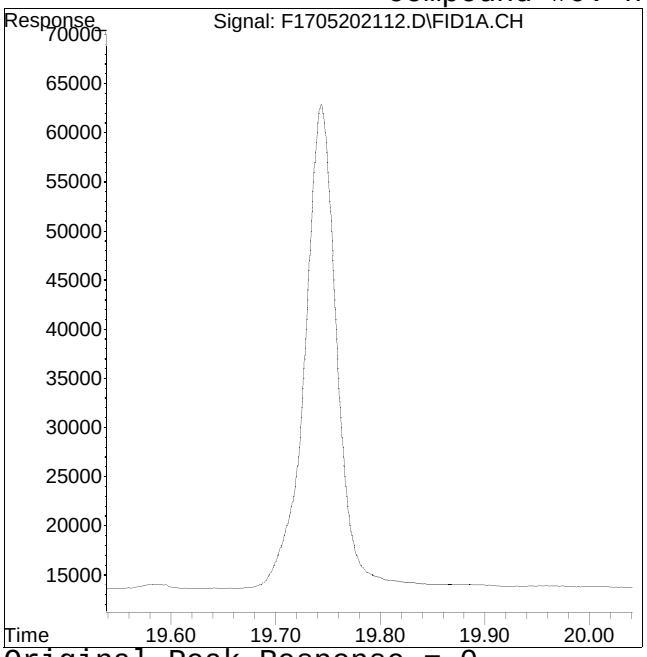
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

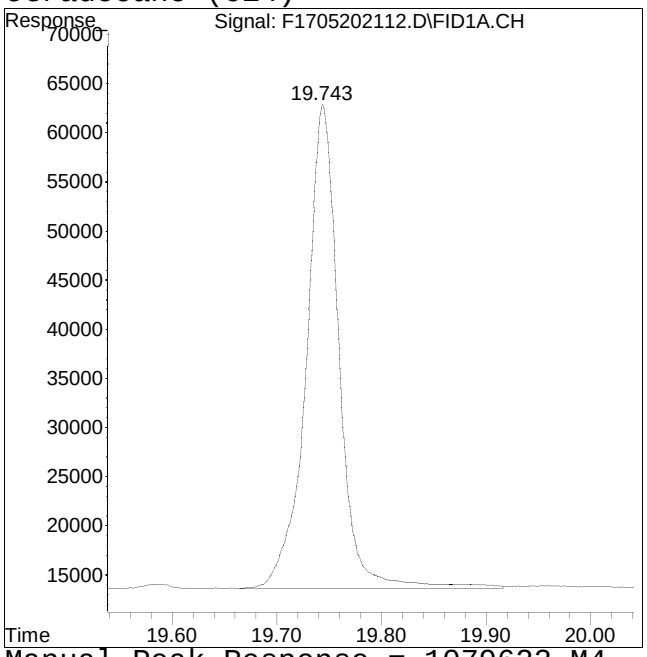
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 0



Manual Peak Response = 1079622 M4

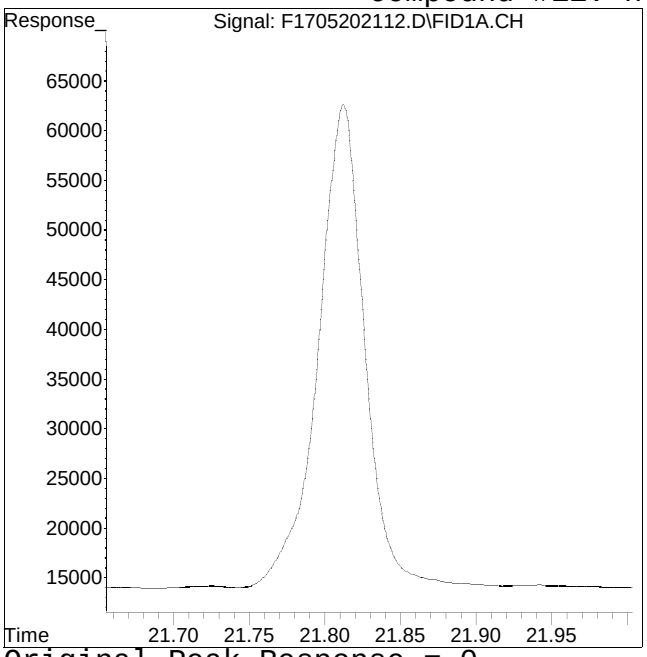
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

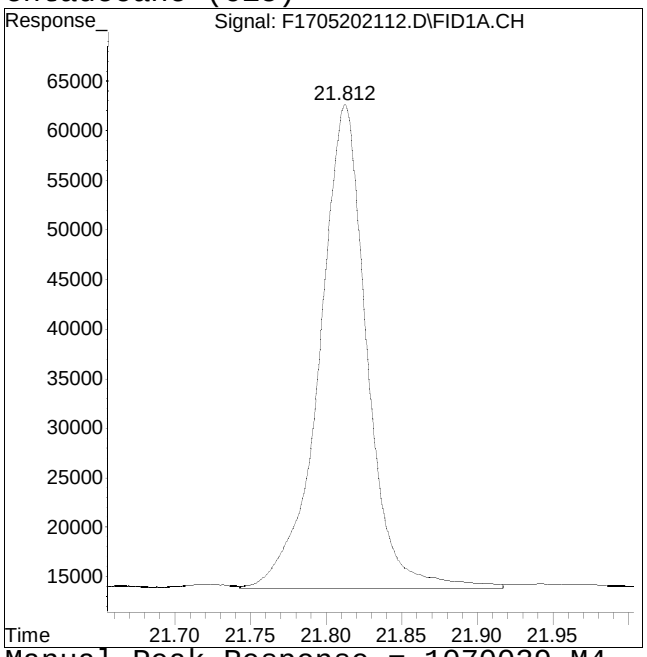
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 0



Manual Peak Response = 1070039 M4

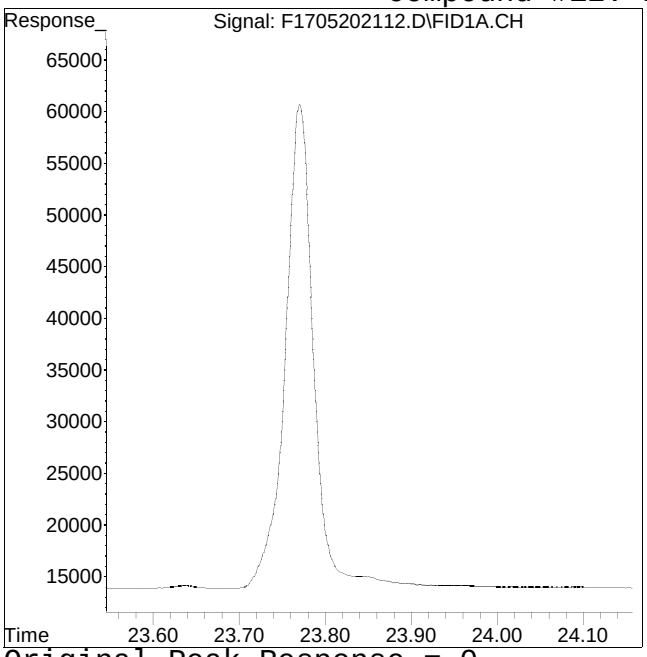
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

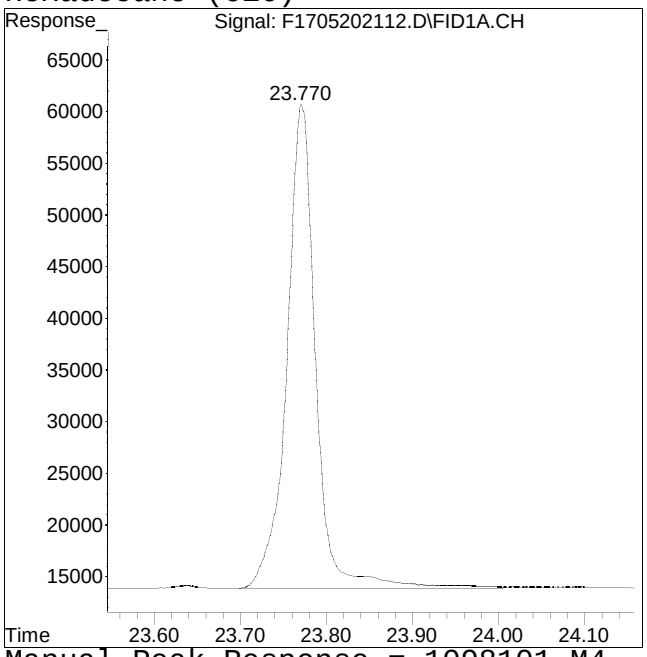
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 0



Manual Peak Response = 1098101 M4

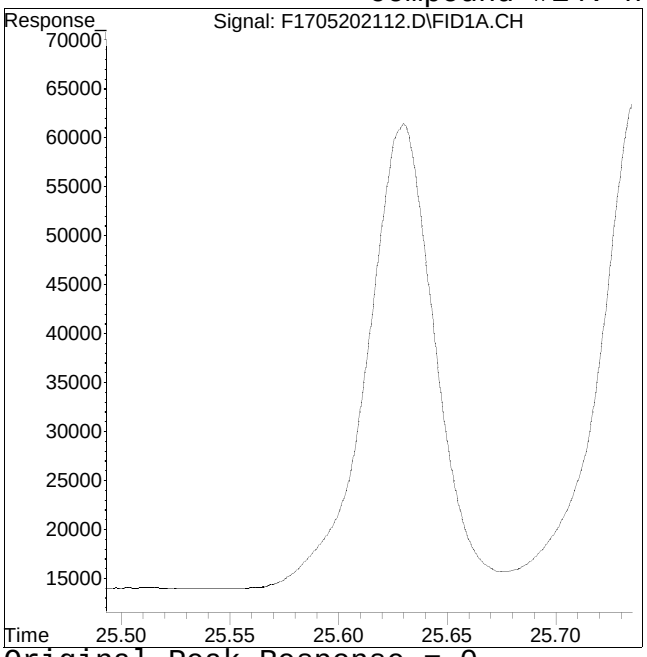
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

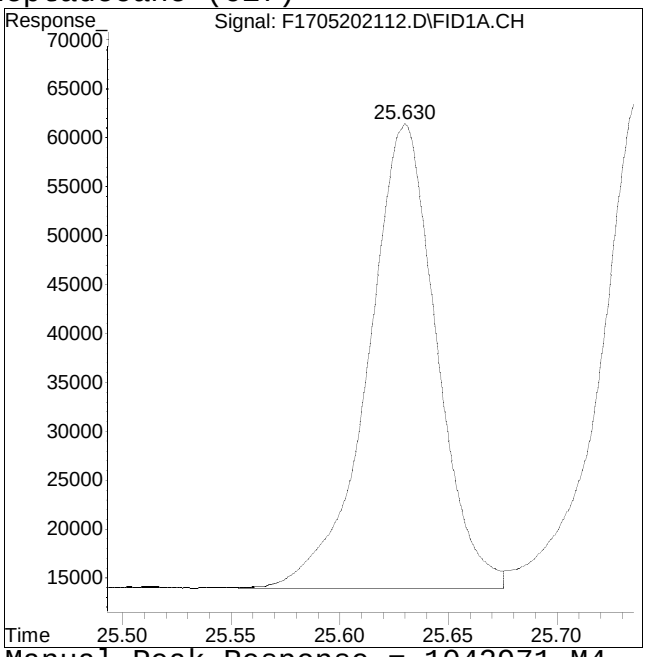
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 0



Manual Peak Response = 1042971 M4

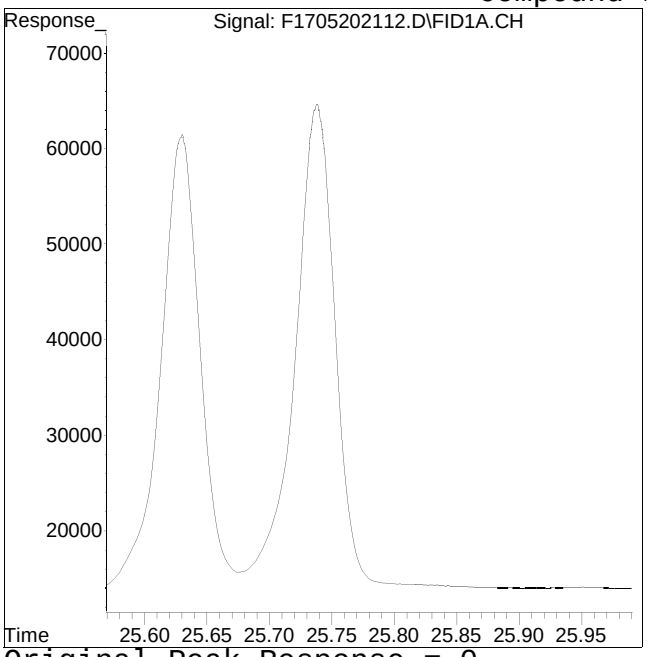
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

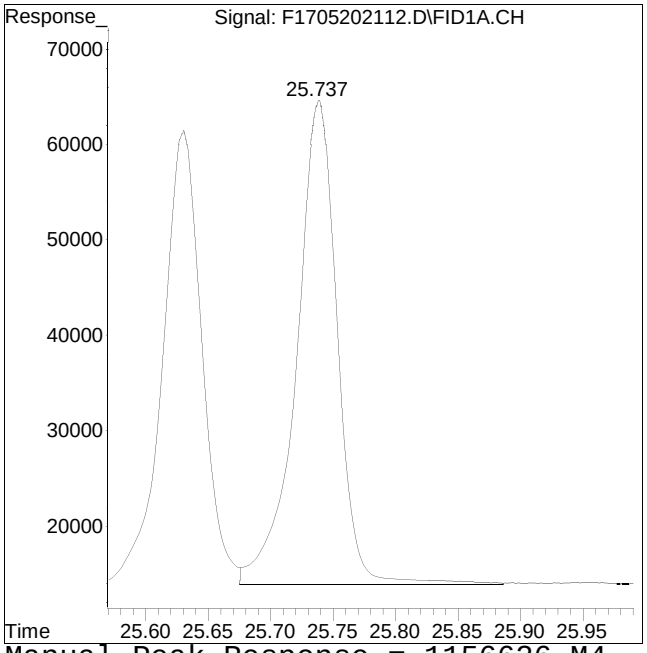
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #15: Pristane



Original Peak Response = 0



Manual Peak Response = 1156626 M4

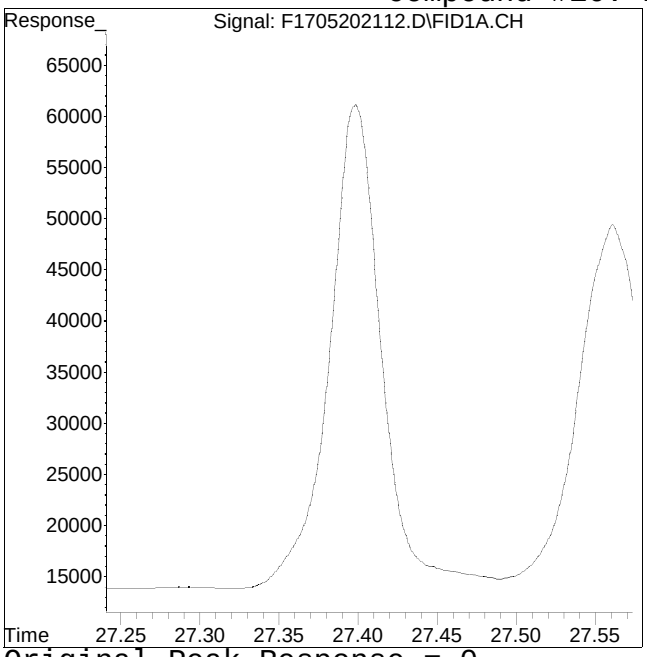
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

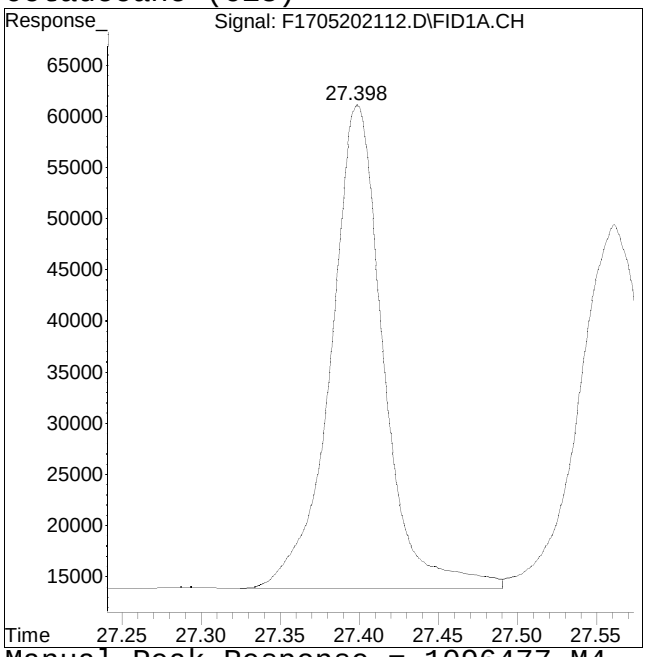
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 0



Manual Peak Response = 1096477 M4

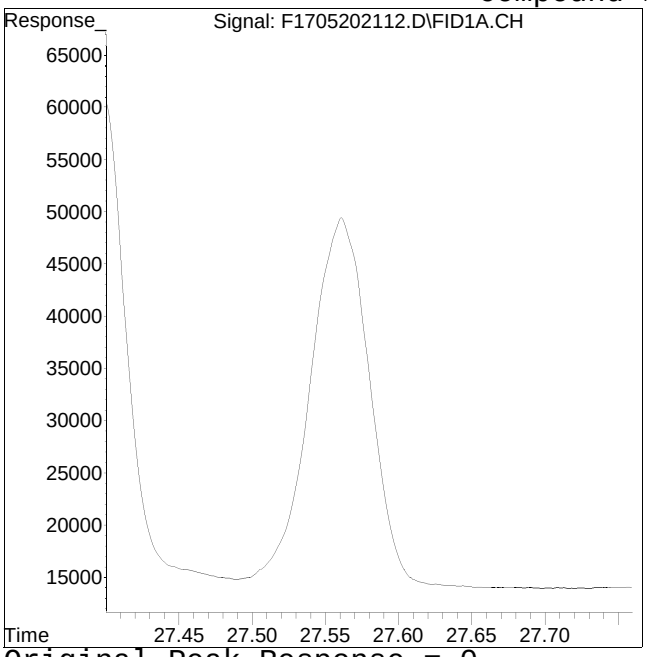
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

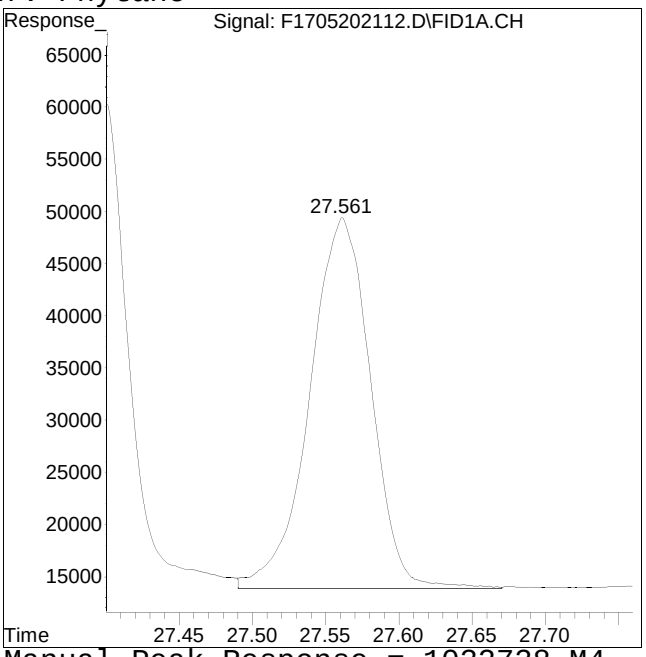
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #17: Phytane



Original Peak Response = 0



Manual Peak Response = 1032738 M4

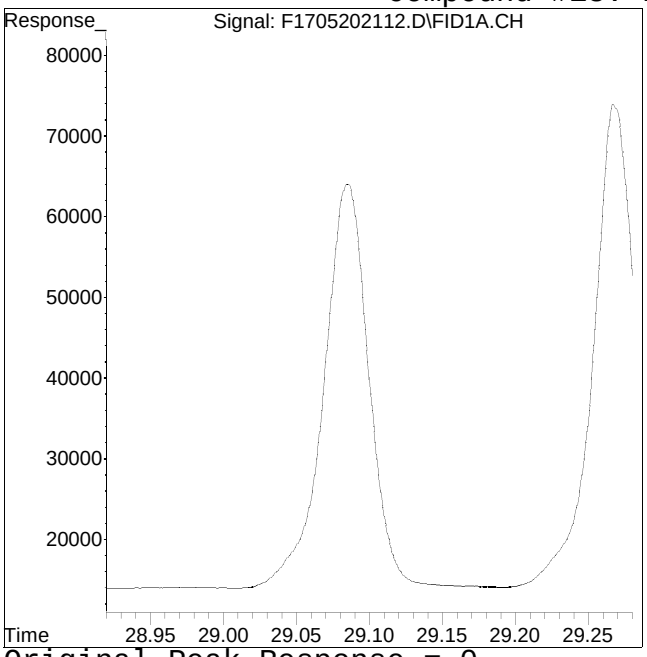
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

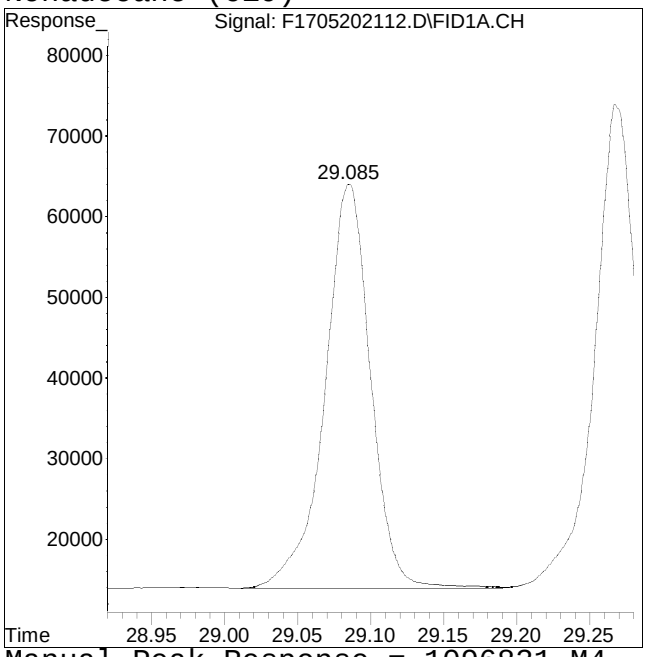
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 0



Manual Peak Response = 1096831 M4

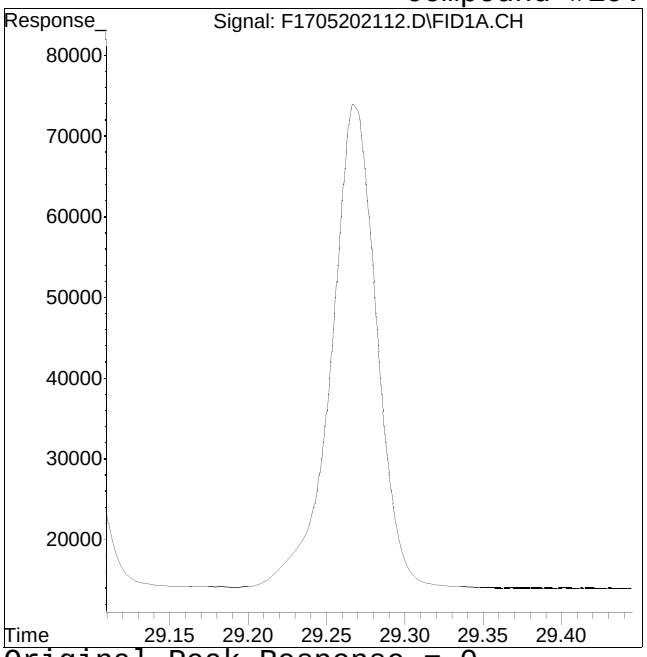
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

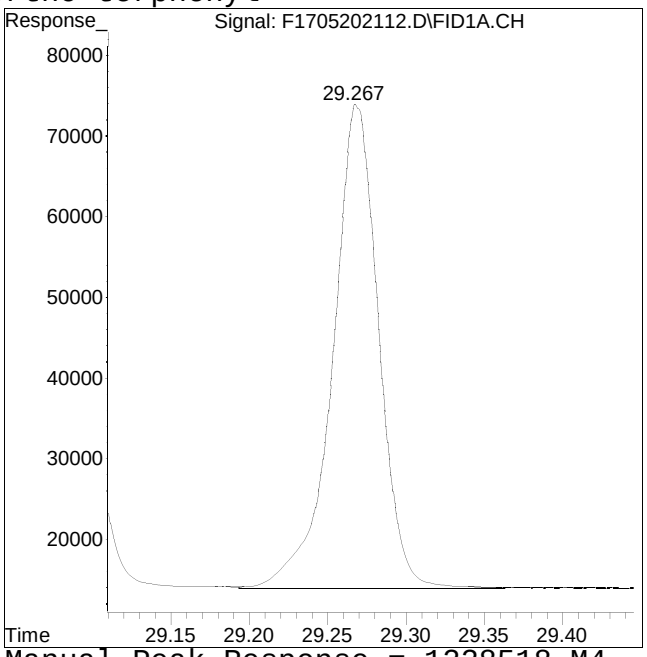
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #19: ortho-terphenyl



Original Peak Response = 0



Manual Peak Response = 1228518 M4

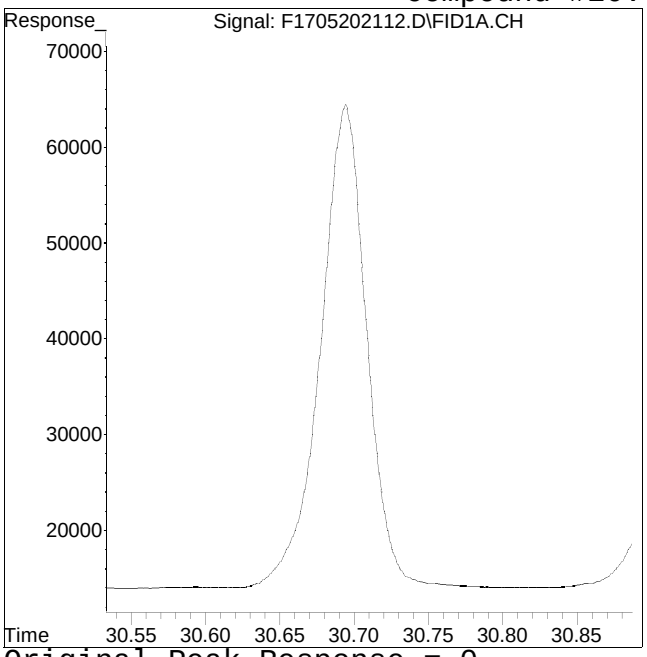
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

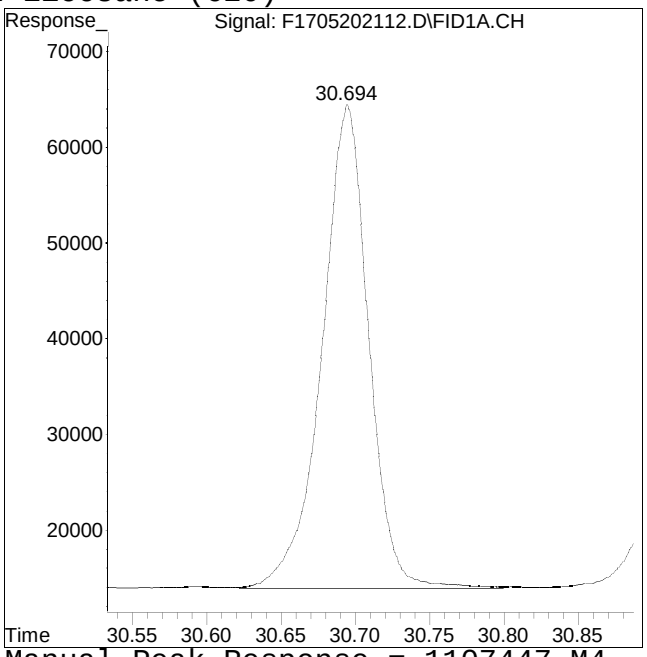
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 0



Manual Peak Response = 1107447 M4

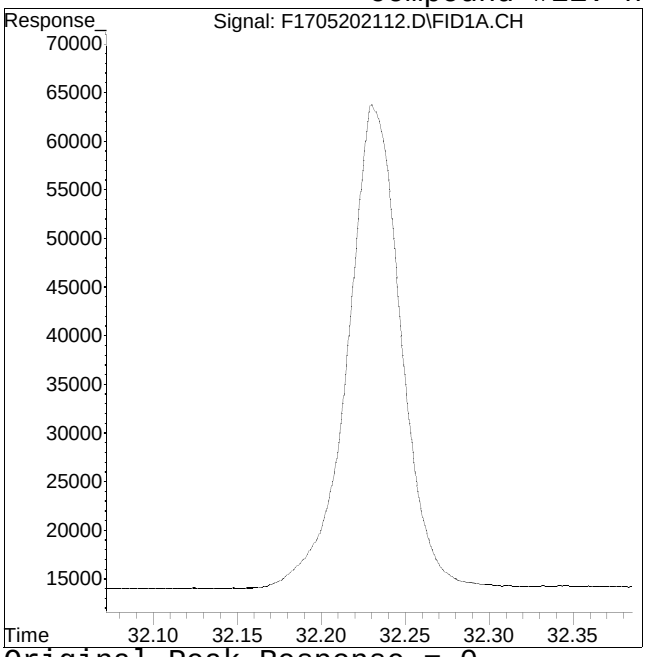
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

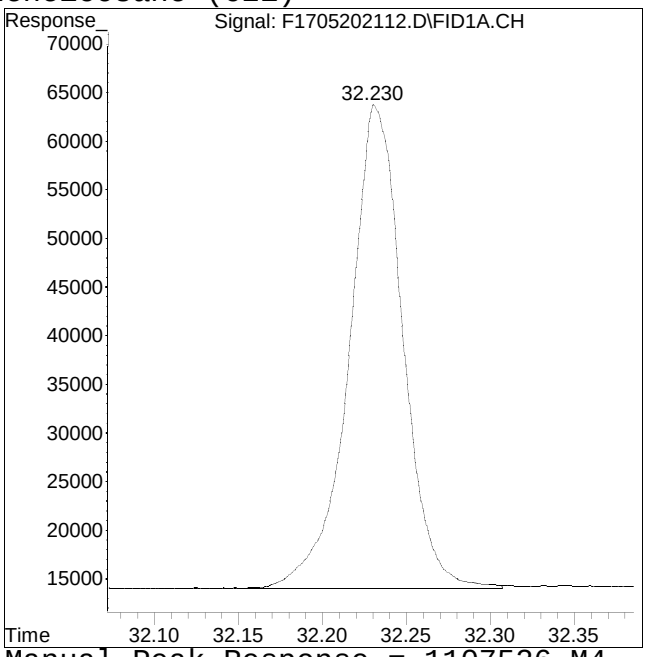
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 0



Manual Peak Response = 1107526 M4

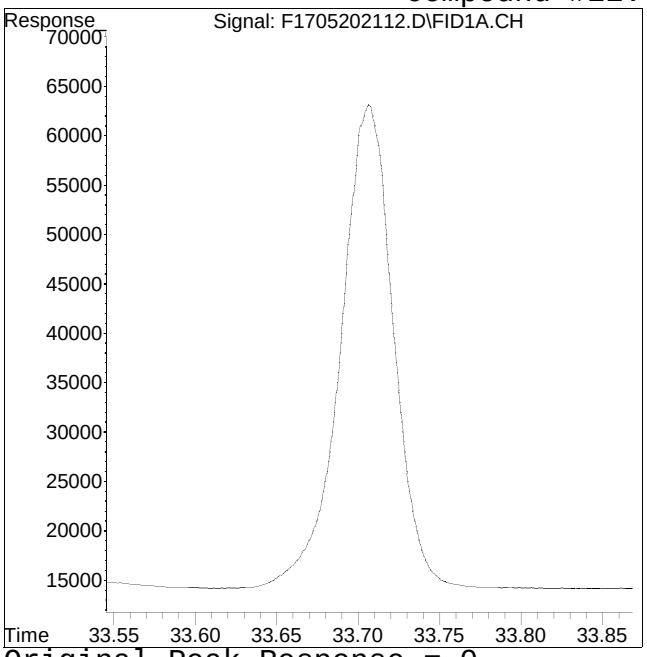
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

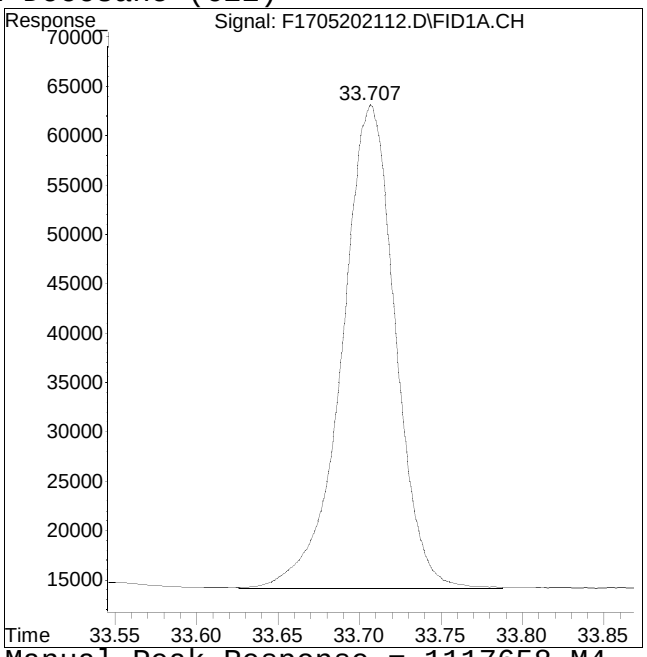
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 0



Manual Peak Response = 1117658 M4

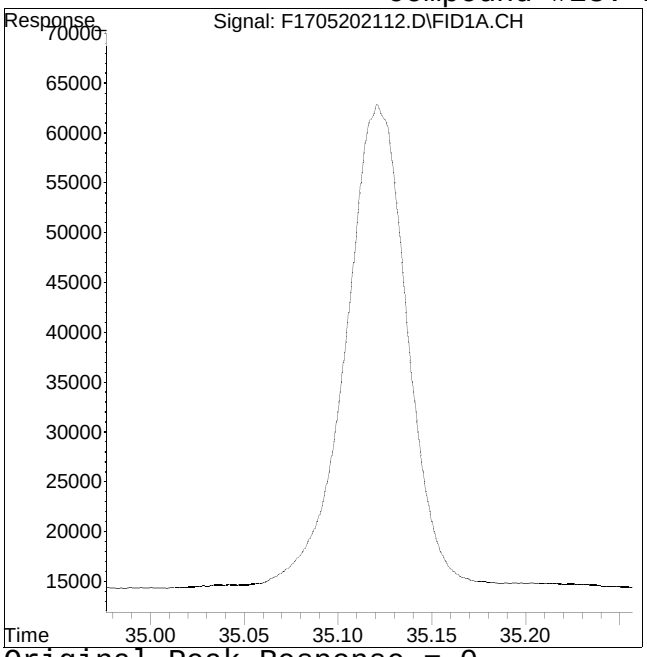
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

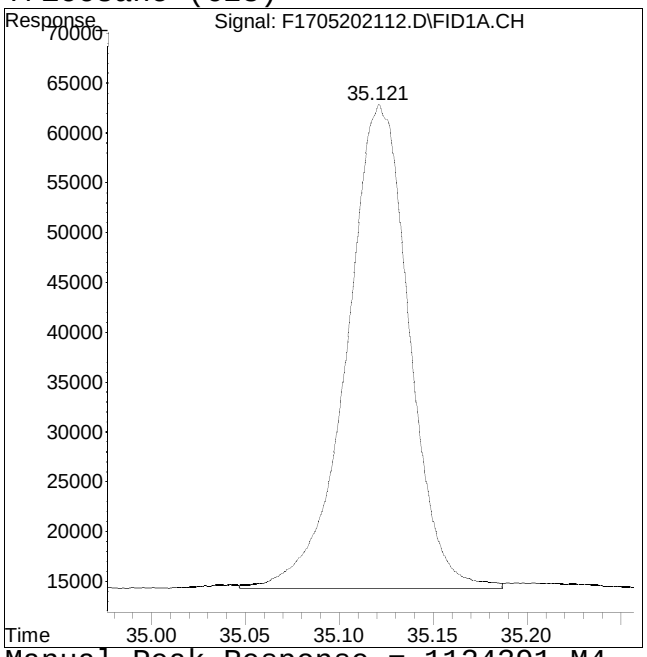
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 0



Manual Peak Response = 1124391 M4

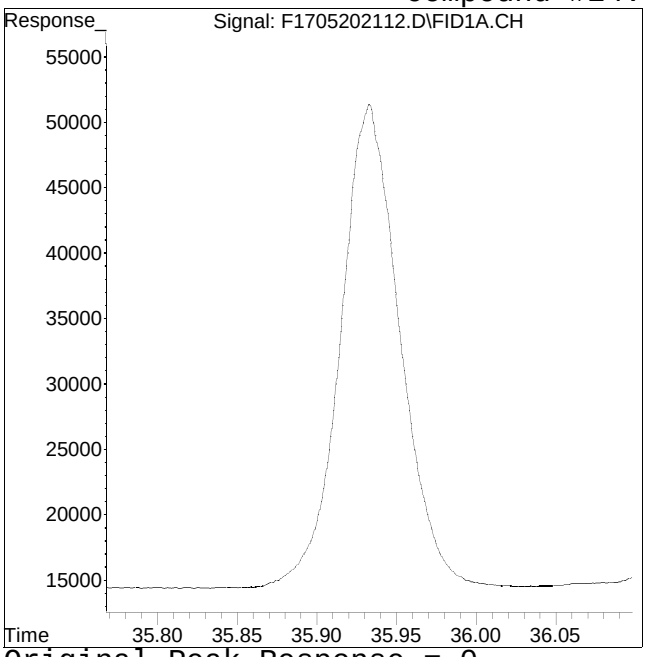
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

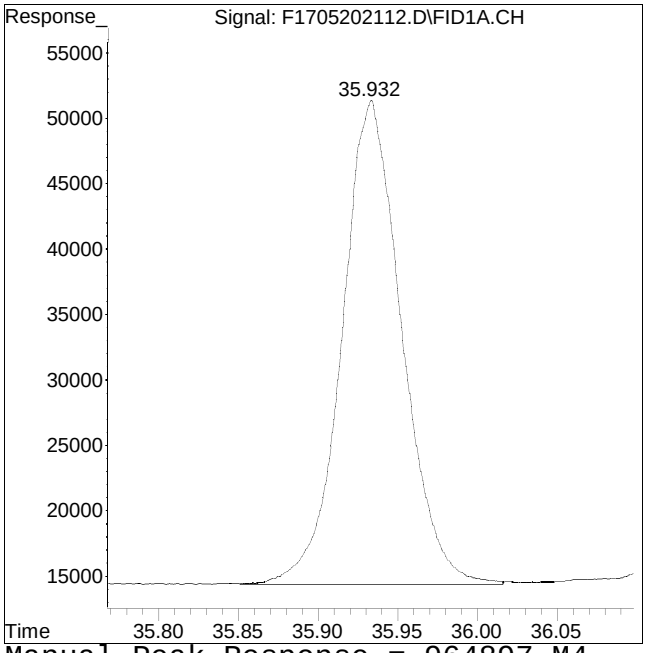
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #24: d50-Tetracosane



Original Peak Response = 0



Manual Peak Response = 964897 M4

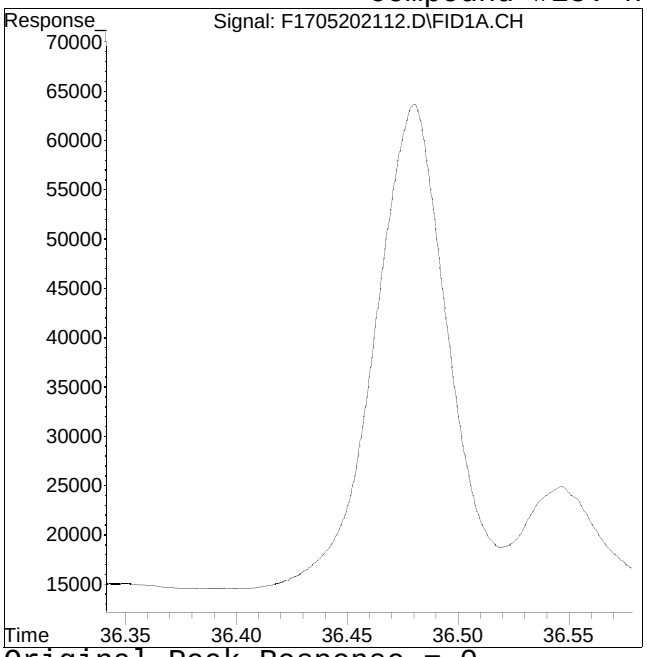
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

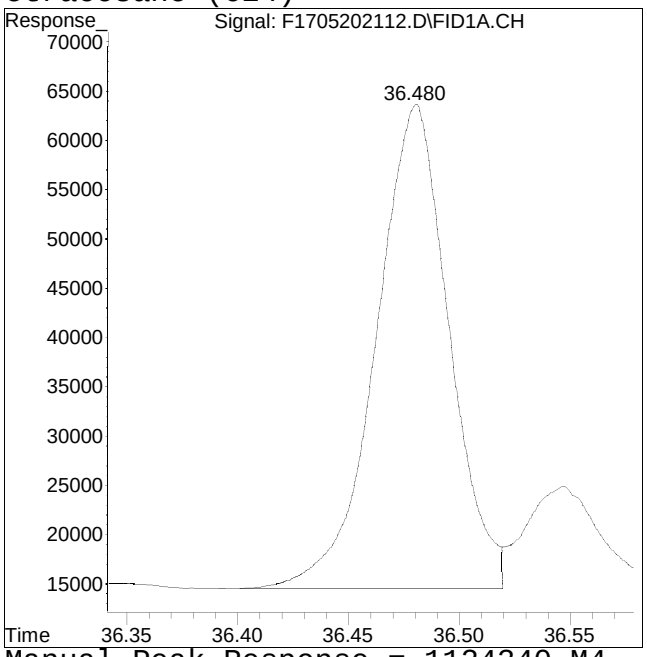
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 0



Manual Peak Response = 1124340 M4

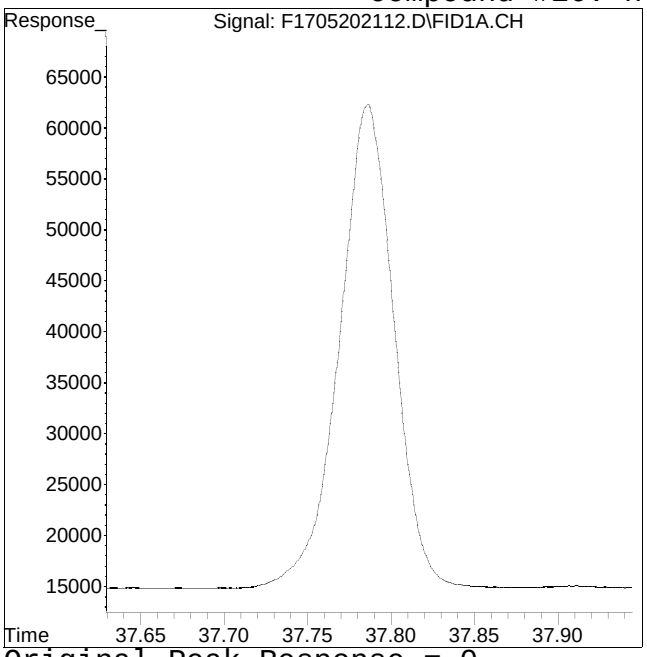
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

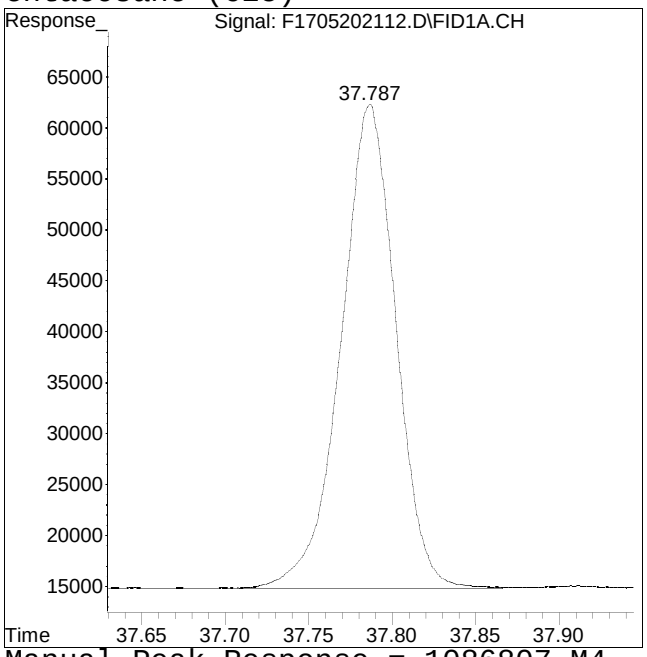
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 0



Manual Peak Response = 1086807 M4

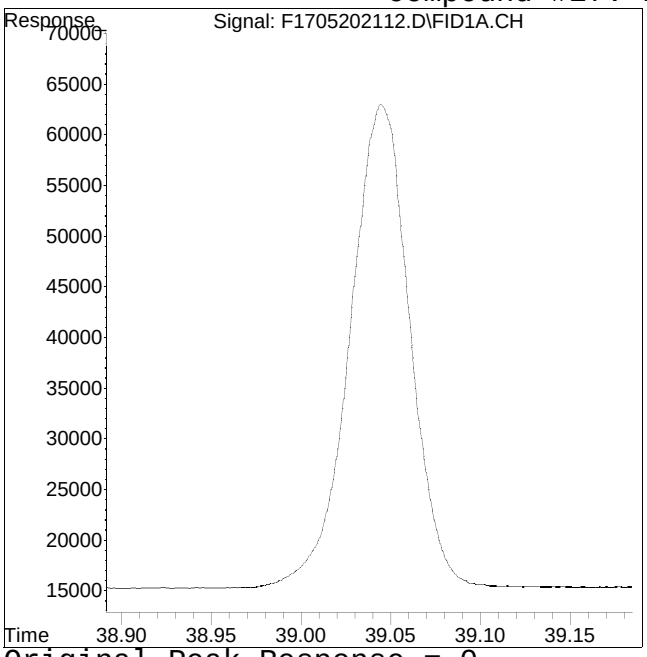
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

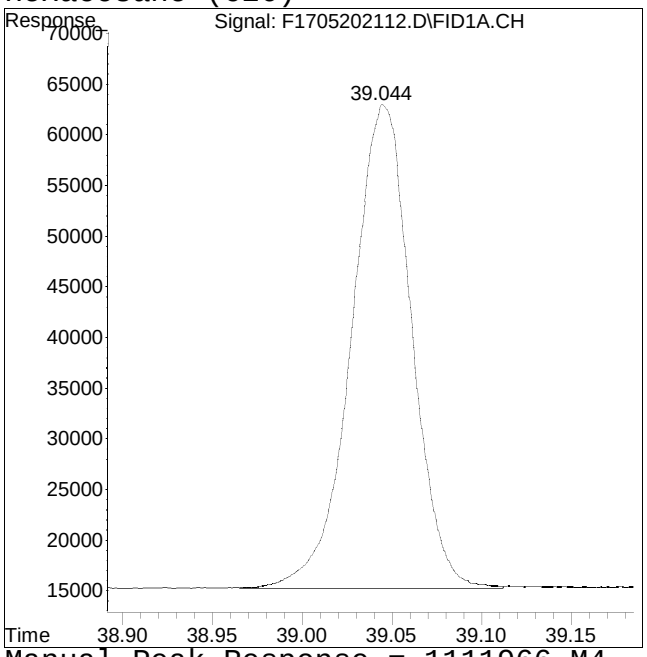
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 0



Manual Peak Response = 1111966 M4

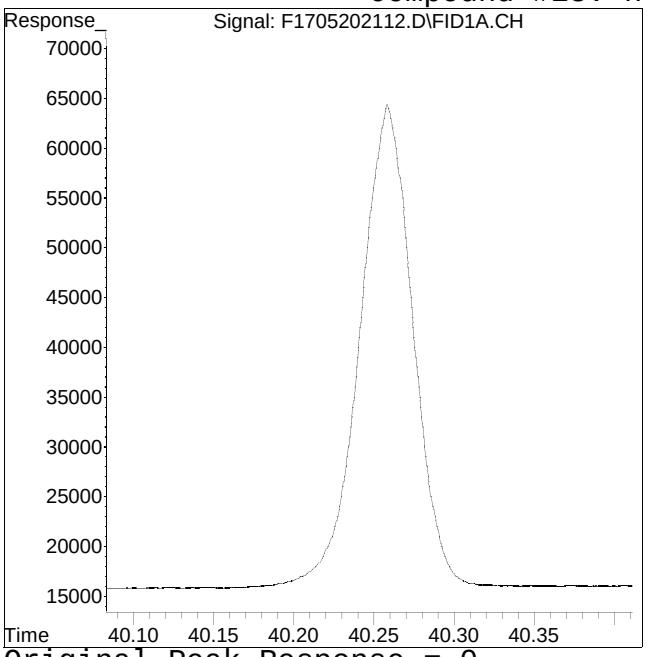
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

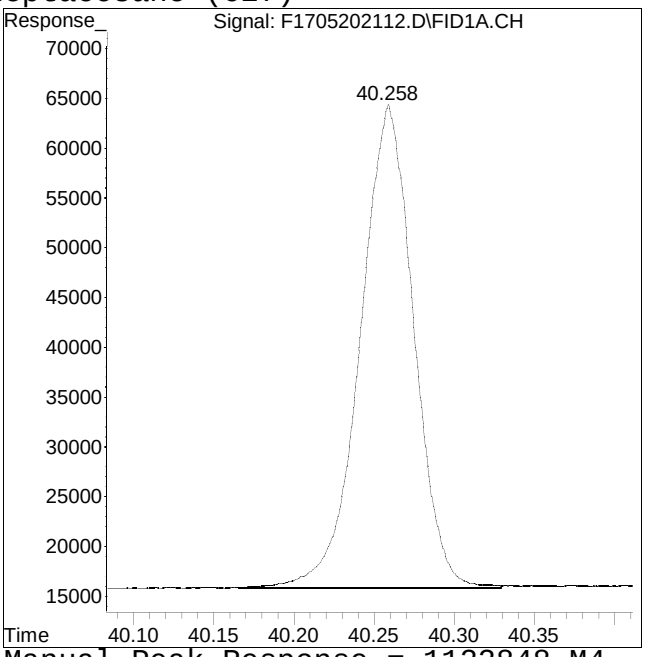
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 0



Manual Peak Response = 1122848 M4

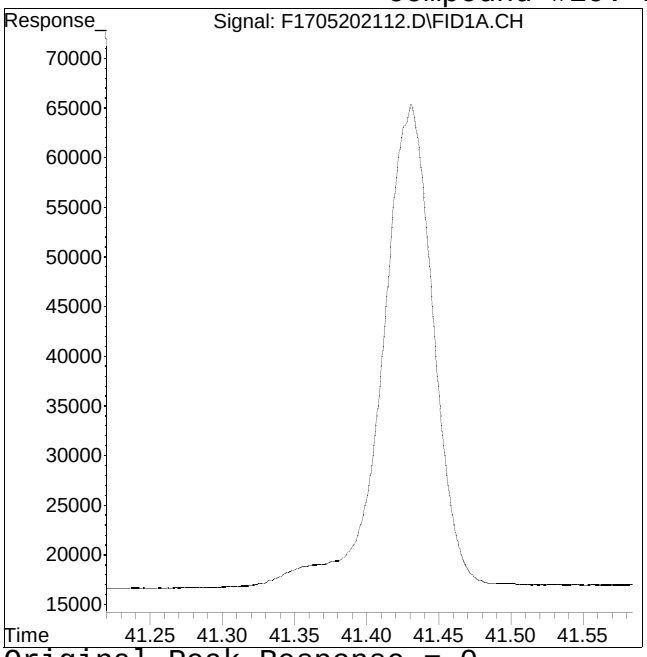
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

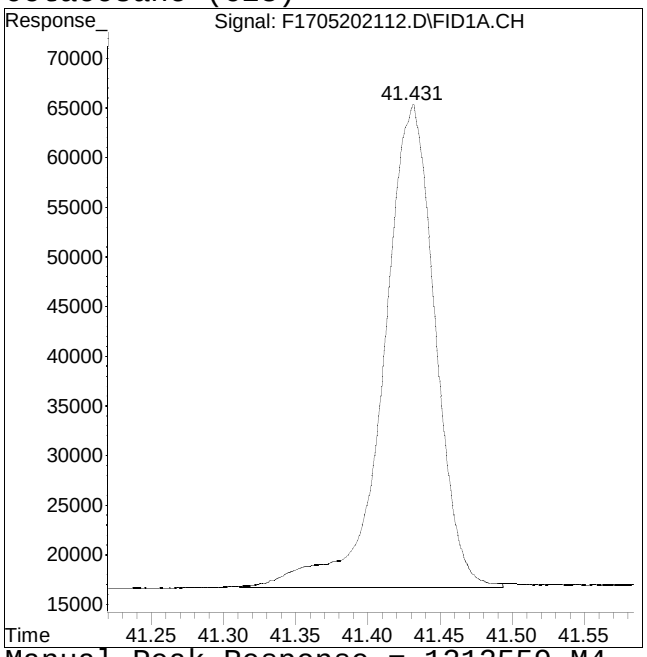
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 0



Manual Peak Response = 1212559 M4

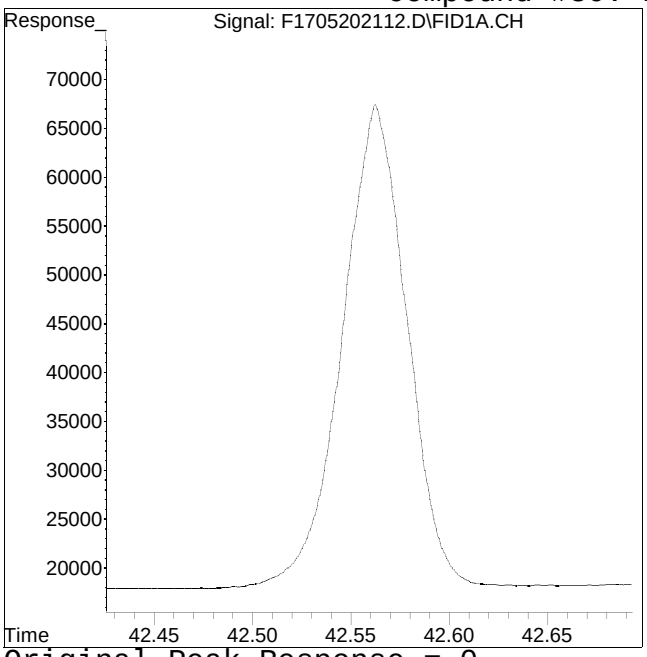
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

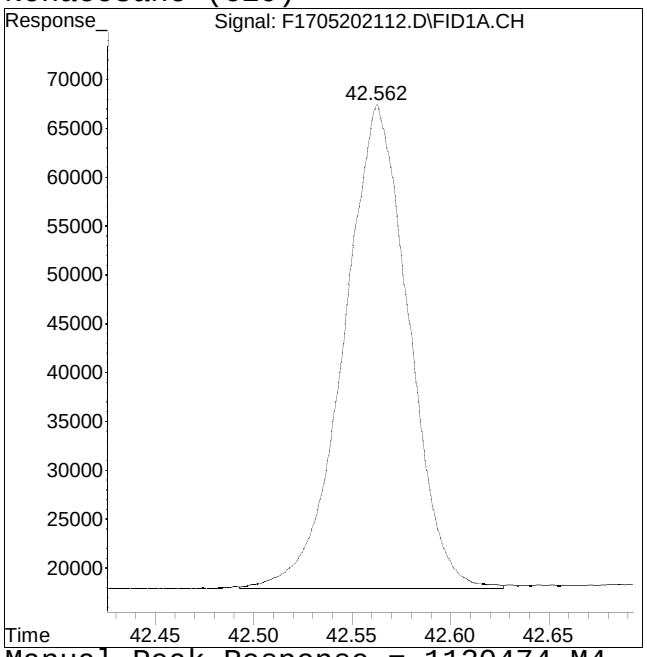
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 0



Manual Peak Response = 1130474 M4

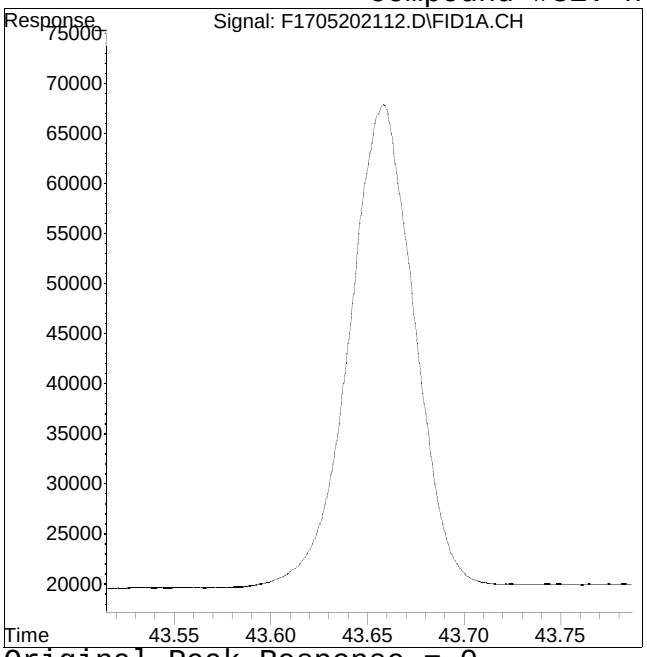
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

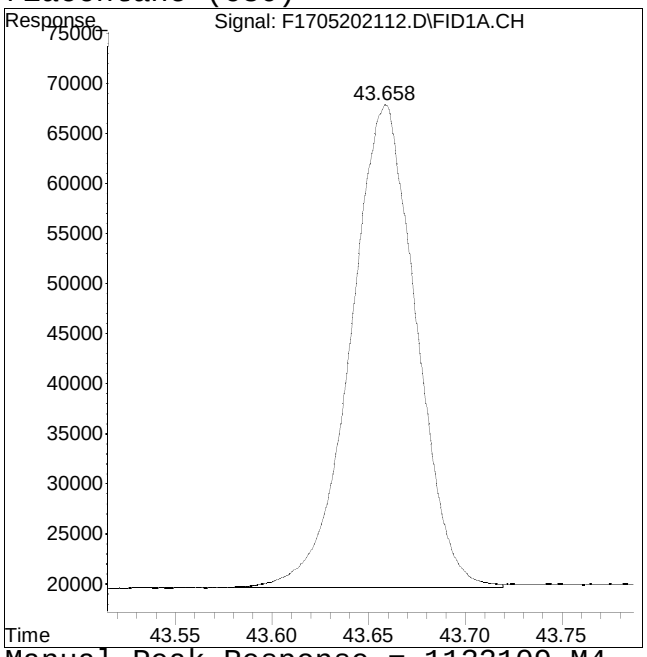
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 0



Manual Peak Response = 1133109 M4

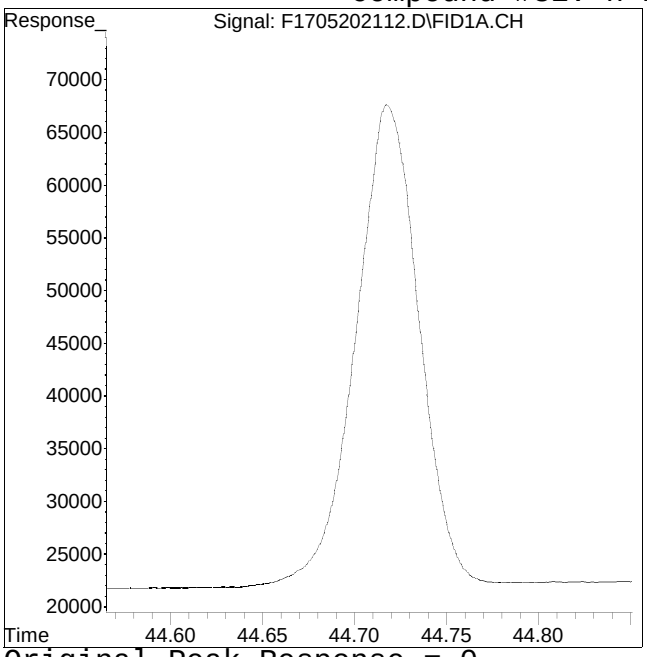
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

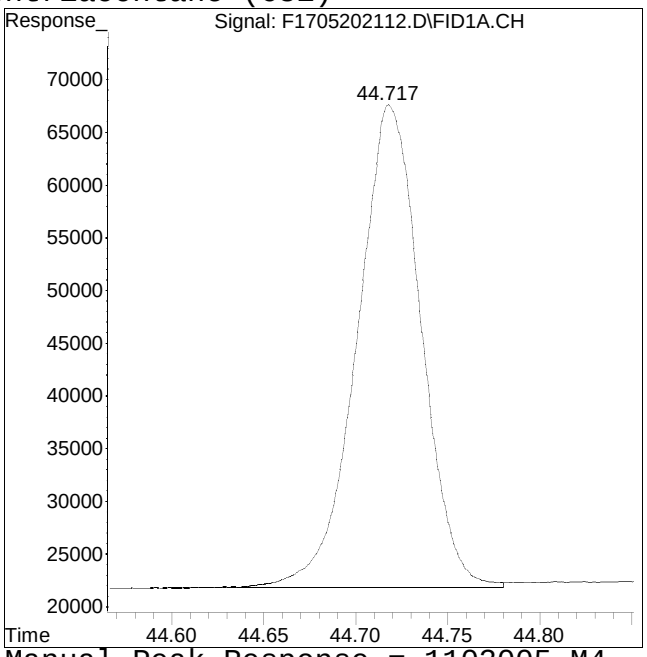
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 0



Manual Peak Response = 1103005 M4

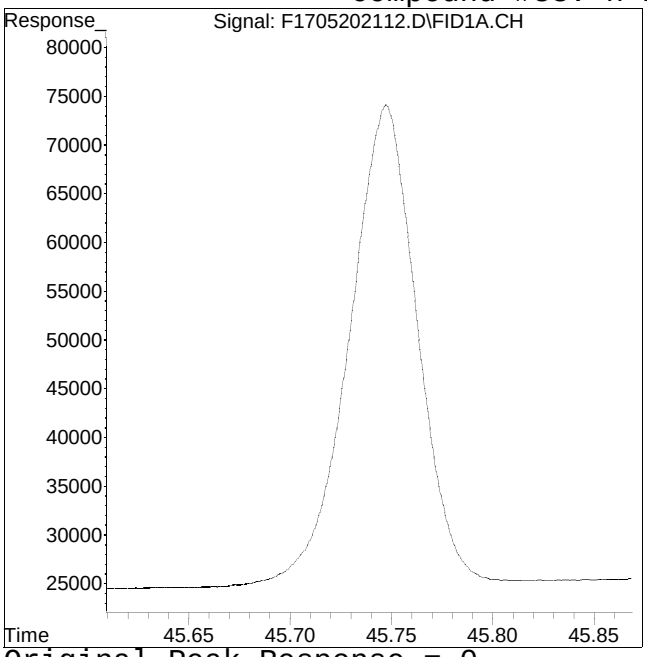
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

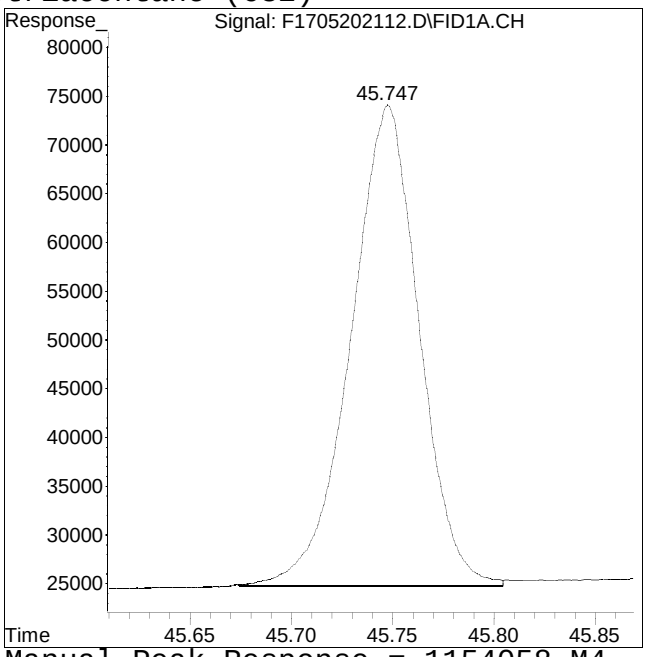
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 0



Manual Peak Response = 1154058 M4

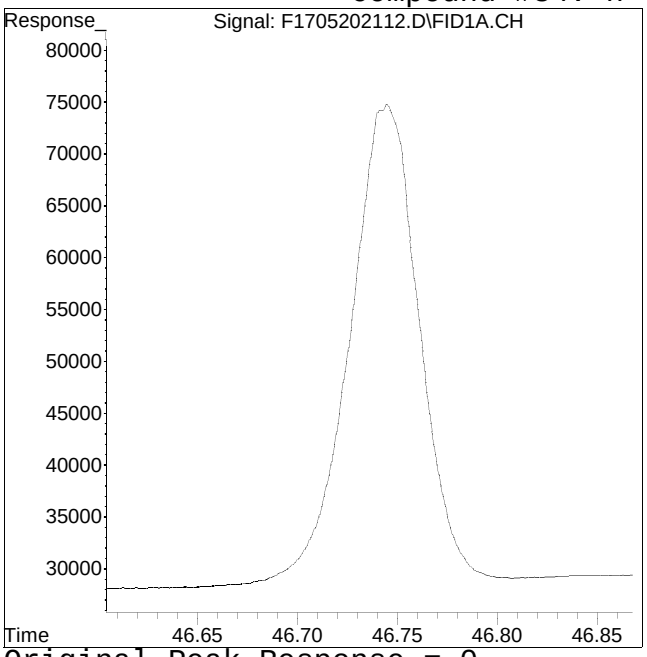
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

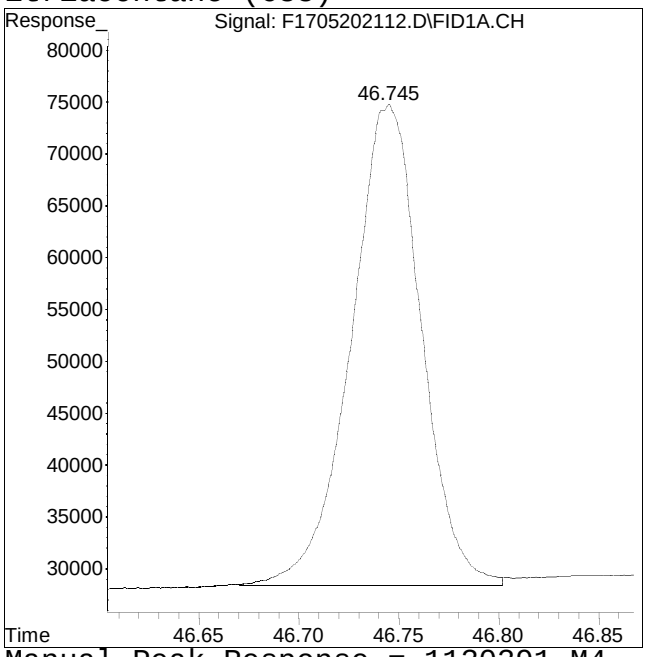
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 0



Manual Peak Response = 1130391 M4

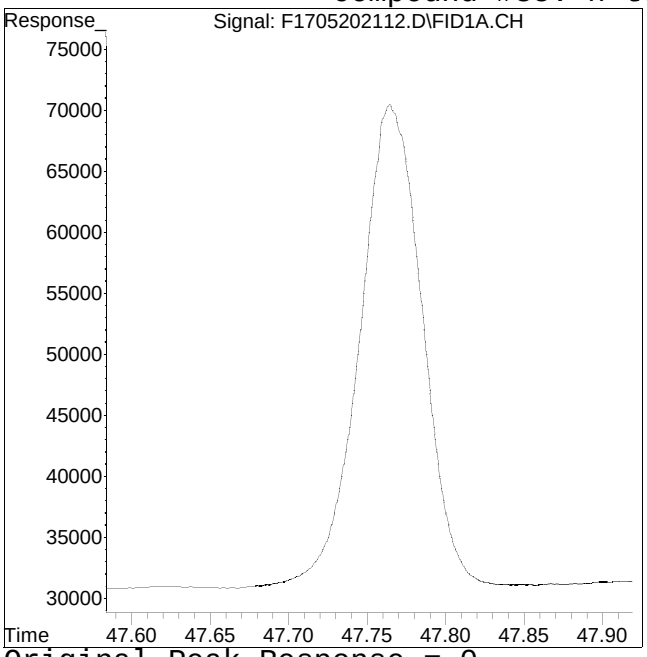
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

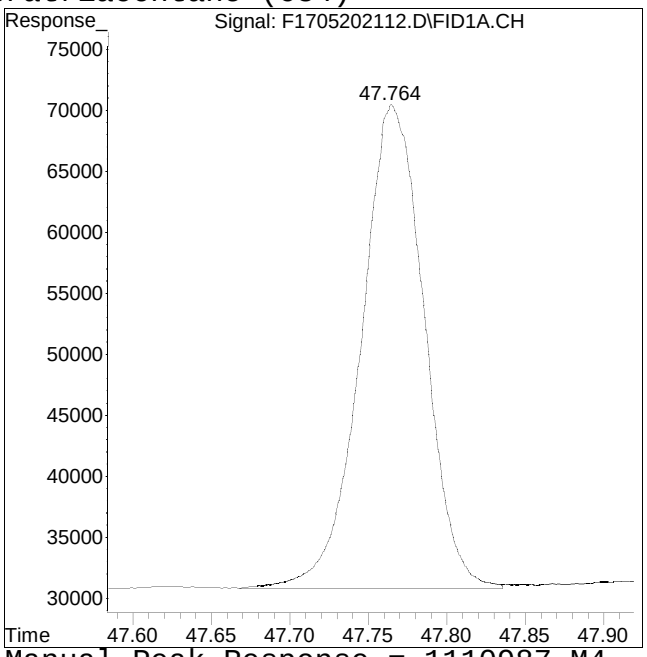
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 0



Manual Peak Response = 1110987 M4

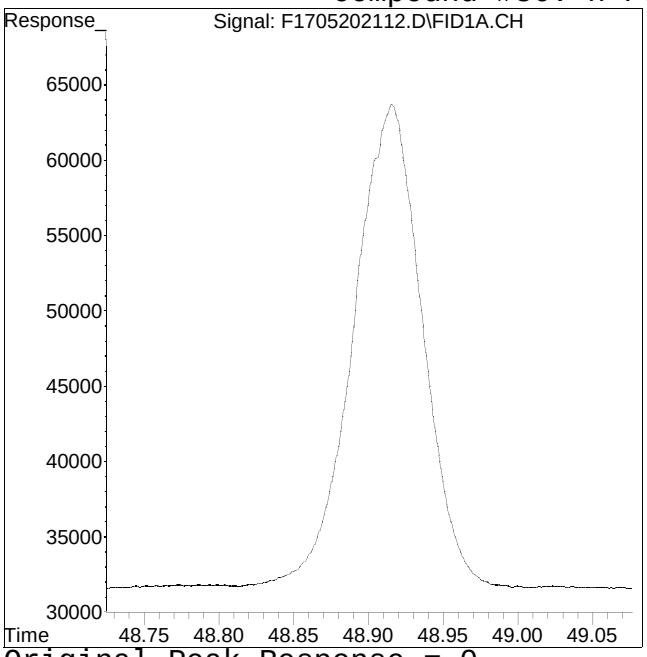
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

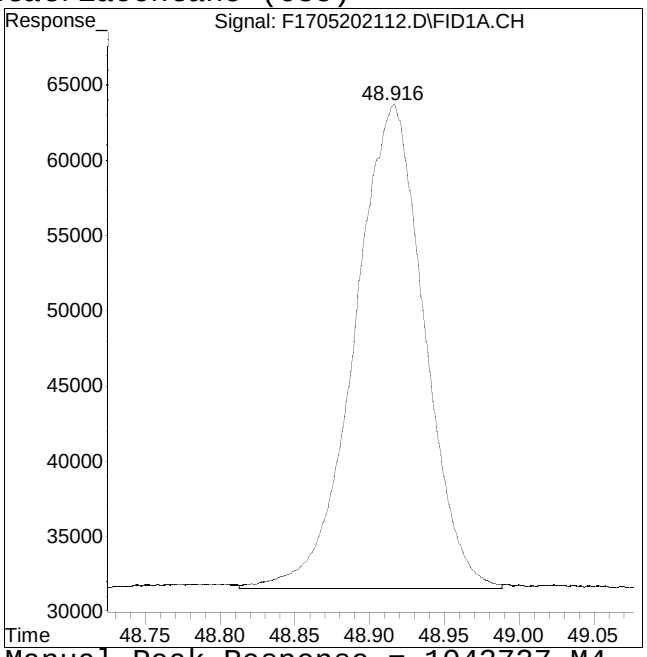
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 0



Manual Peak Response = 1043737 M4

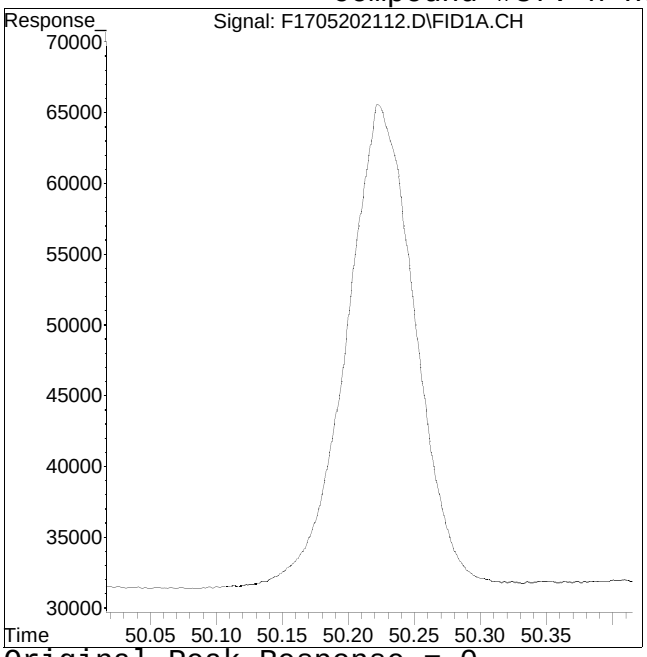
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

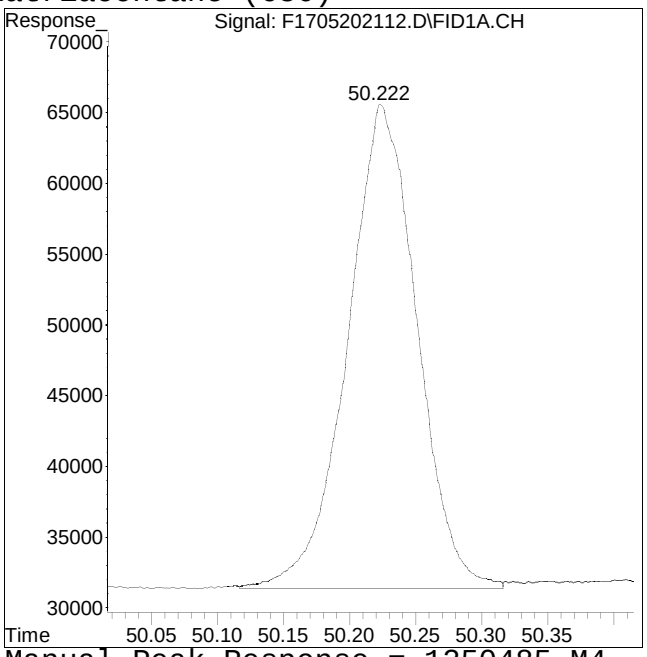
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 0



Manual Peak Response = 1250485 M4

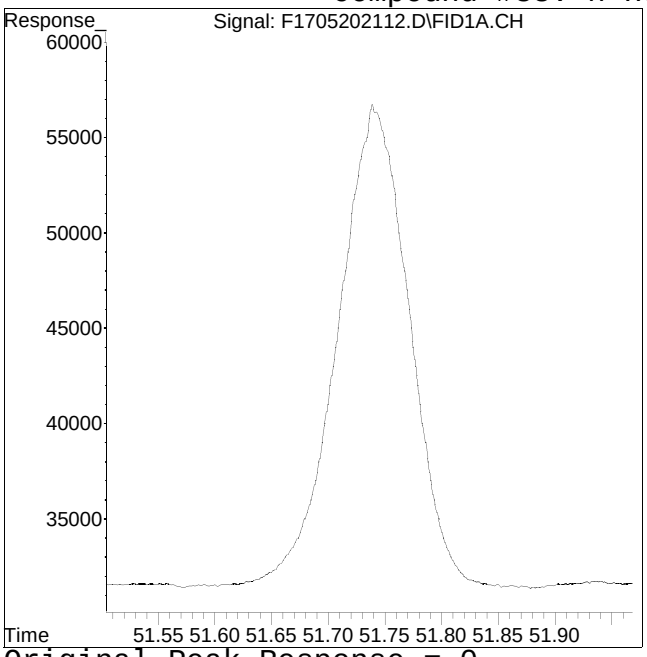
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

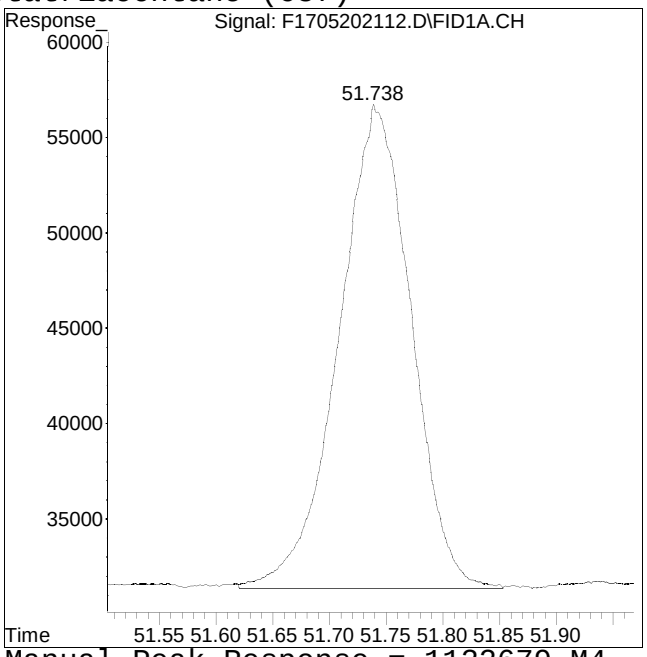
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 0



Manual Peak Response = 1122679 M4

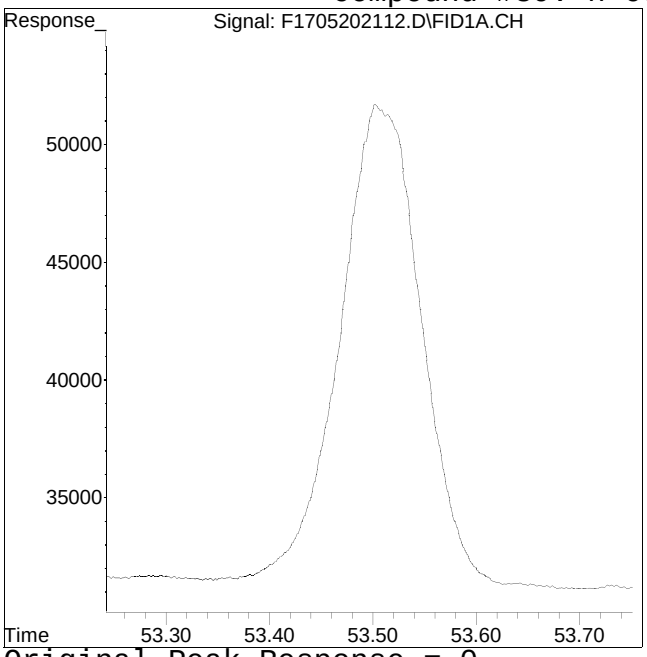
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

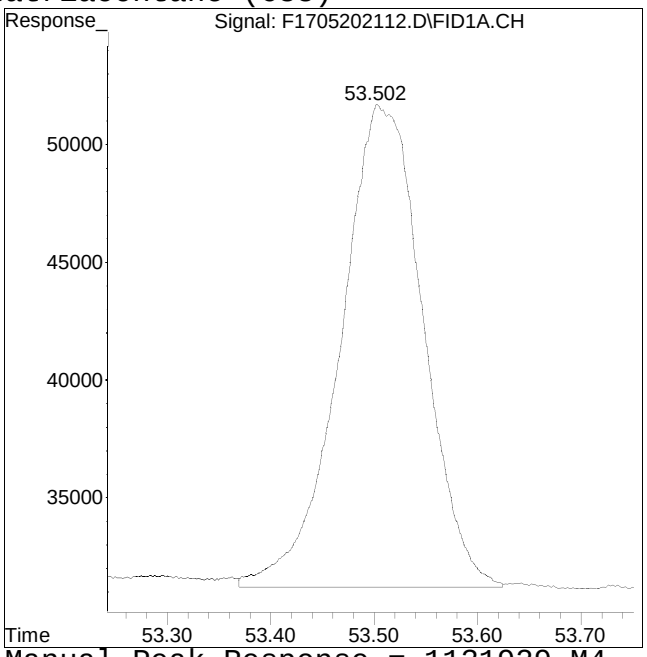
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 1131929 M4

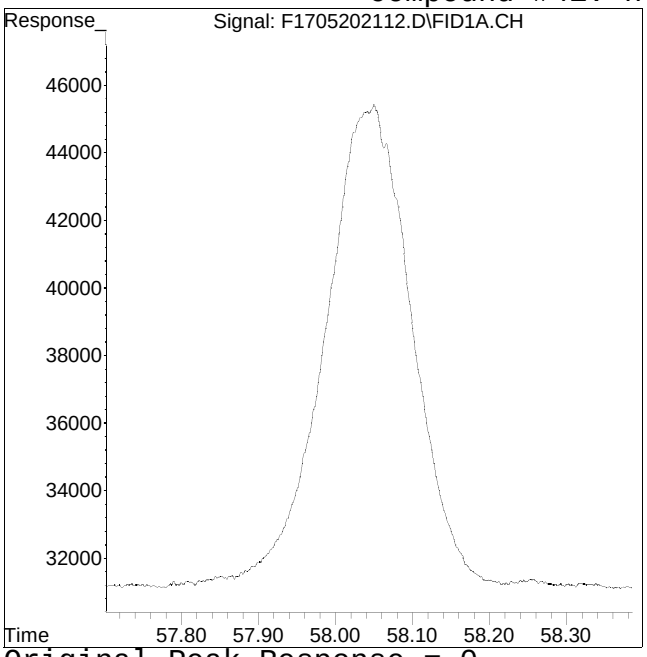
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

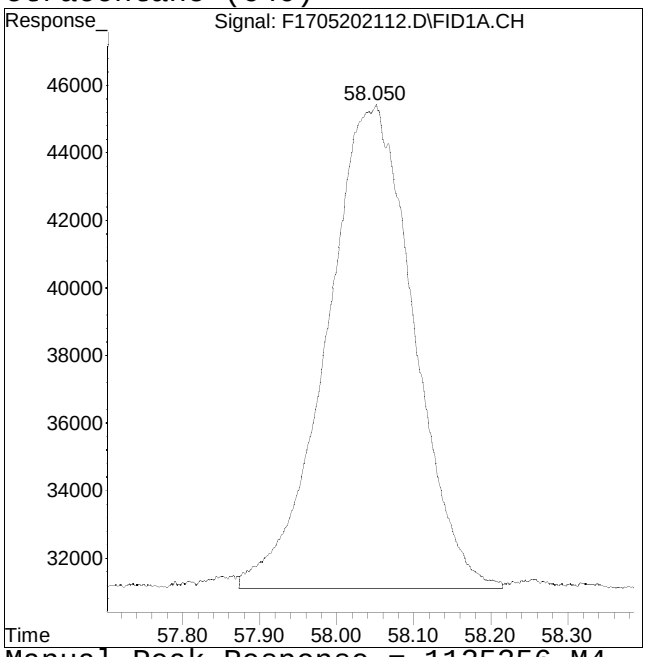
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 1125356 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202114.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 10:19 pm
Operator : FID17:WR
Sample : I1705202102F
Misc : WG1505003,FRBD78,10ug/ml
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:23:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:16:58 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.314	58041610	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.272	12718876	9.873 ug/mL M4
Spiked Amount 50.000 Range 50 - 130		Recovery = 19.75%#	
24) s d50-Tetracosane	35.936	9979171	9.728 ug/mL M4
Spiked Amount 50.000 Range 50 - 130		Recovery = 19.46%#	
Target Compounds			
2) t n-Octane (C8)	5.605	10204965	9.777 ug/mL M4
3) t n-Nonane (C9)	7.811	10684052	9.284 ug/mL M4
4) t n-Decane (C10)	10.304	11134164	9.740 ug/mL M4
5) t n-Undecane (C11)	12.820	10967331	10.028 ug/mL M4
6) t n-Dodecane (C12)	15.250	11028597	10.125 ug/mL M4
7) t n-Tridecane (C13)	17.560	11018400	10.046 ug/mL M4
9) t n-Tetradecane (C14)	19.746	11292200	9.920 ug/mL M4
11) t n-Pentadecane (C15)	21.814	11328600	9.984 ug/mL M4
12) t n-Hexadecane (C16)	23.772	11234299	9.817 ug/mL M4
14) t n-Heptadecane (C17)	25.631	11323333	10.102 ug/mL M4
15) t Pristane	25.740	11642849	9.753 ug/mL M4
16) t n-Octadecane (C18)	27.402	11434773	9.907 ug/mL M4
17) t Phytane	27.561	10743381	9.928 ug/mL M4
18) t n-Nonadecane (C19)	29.088	11473772	9.917 ug/mL M4
20) t n-Eicosane (C20)	30.695	11523058	9.887 ug/mL M4
21) t n-Heneicosane (C21)	32.232	11566082	9.907 ug/mL M4
22) t n-Docosane (C22)	33.707	11574332	9.873 ug/mL M4
23) t n-Tricosane (C23)	35.123	11587702	9.856 ug/mL M4
25) t n-Tetracosane (C24)	36.481	11494663	9.791 ug/mL M4
26) t n-Pentacosane (C25)	37.789	11265787	9.865 ug/mL M4
27) t n-Hexacosane (C26)	39.045	11557000	9.877 ug/mL M4
28) t n-Heptacosane (C27)	40.257	11548397	9.826 ug/mL M4
29) t n-Octacosane (C28)	41.435	11909847	9.648 ug/mL M4
30) t n-Nonacosane (C29)	42.564	11729452	9.877 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202114.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 10:19 pm
Operator : FID17:WR
Sample : I1705202102F
Misc : WG1505003,FRBD78,10ug/ml
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:23:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:16:58 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

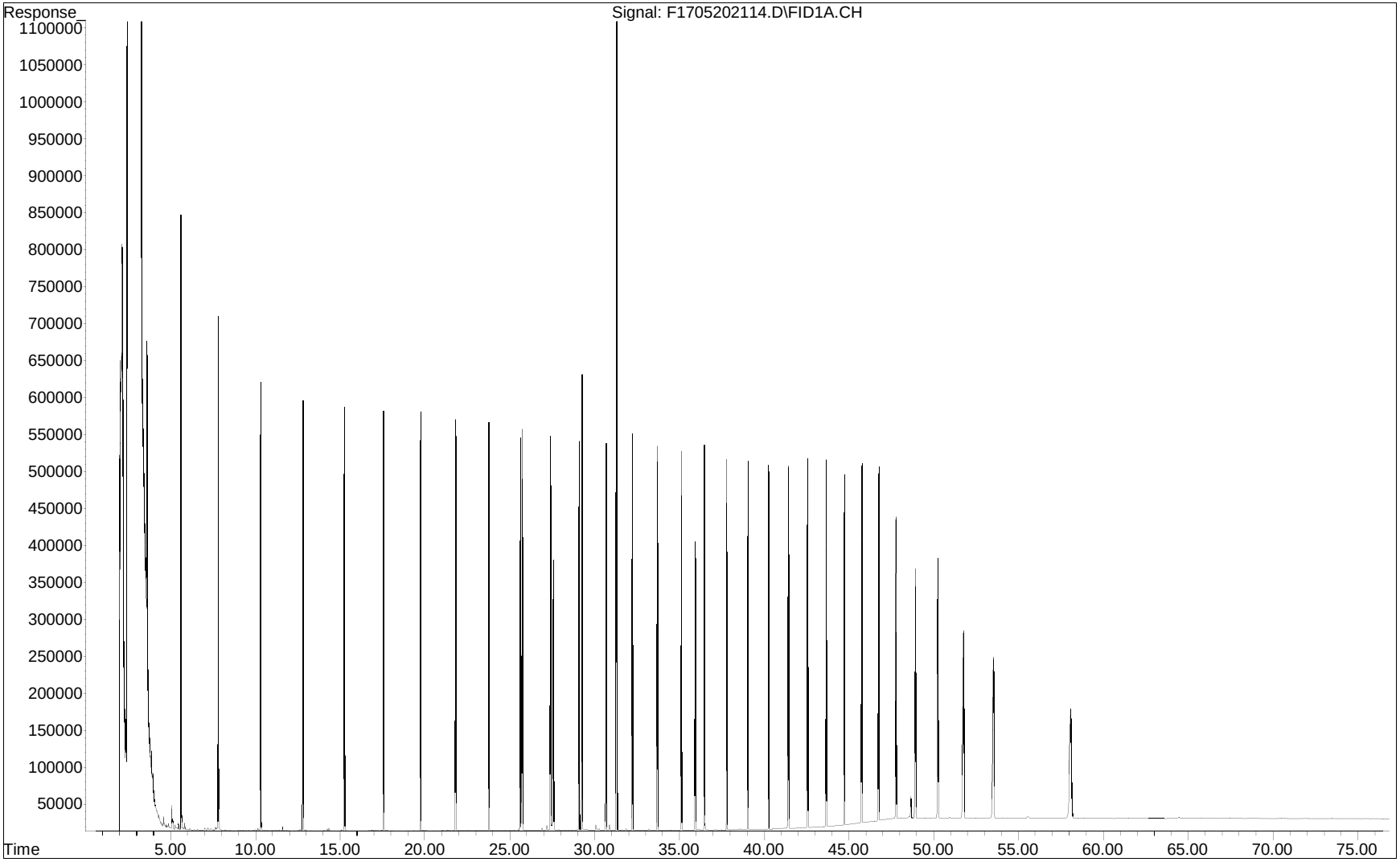
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.663	11742905	9.865 ug/mL M4
32) t	n-Hentriacontane (C31)	44.725	11314815	9.815 ug/mL M4
33) t	n-Dotriacontane (C32)	45.754	11865477	9.828 ug/mL M4
34) t	n-Tritriacontane (C33)	46.748	11523466	9.788 ug/mL M4
35) t	n-tetratriacontane (C34)	47.770	11451120	9.838 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.920	10662256	9.783 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.236	12851113	9.811 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.753	11656708	9.840 ug/mL M4
39) t	n-Octatriacontane (C38)	53.516	11826732	9.882 ug/mL M4
41) t	n-Tetracontane (C40)	58.060	11647804	9.821 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

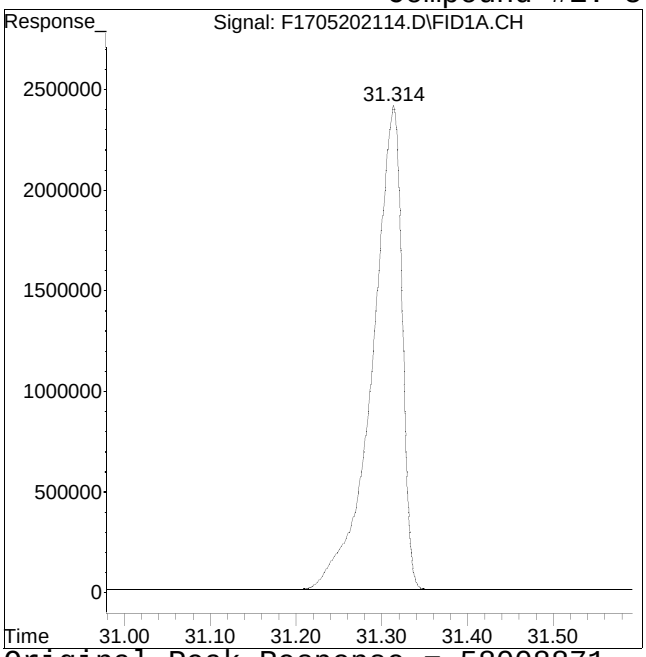
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202114.D
Operator : FID17:WR
Acquired : 20 May 2021 10:19 pm using AcqMethod FID17A.M
Sample Name: I1705202102F
Instrument: FID17
Misc Info : WG1505003,FRBD78,10ug/ml
Vial Number: 7
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

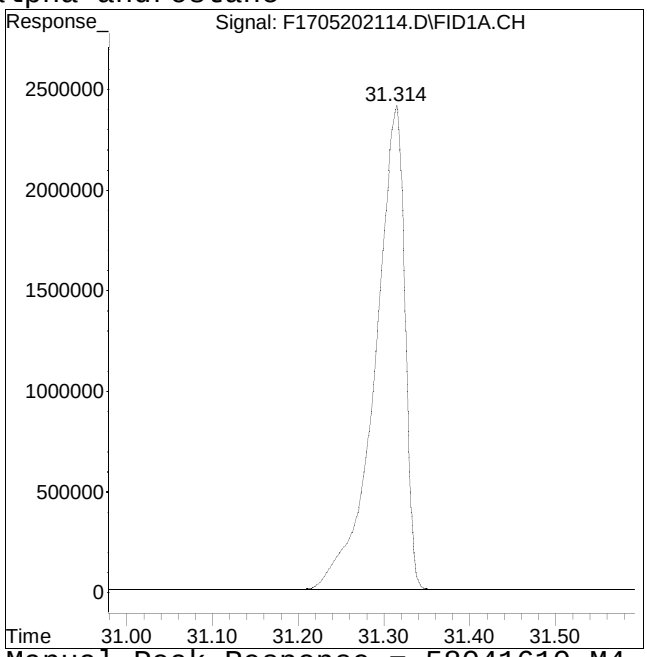


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17052021F_DRO.M
Data File : F1705202114.D Operator : FID17:WR
Date Inj'd : 5/20/2021 10:19 pm Instrument : FID17
Sample : I1705202102F Quant Date : 5/27/2021 3:17 pm

Compound #1: 5-alpha-androstane





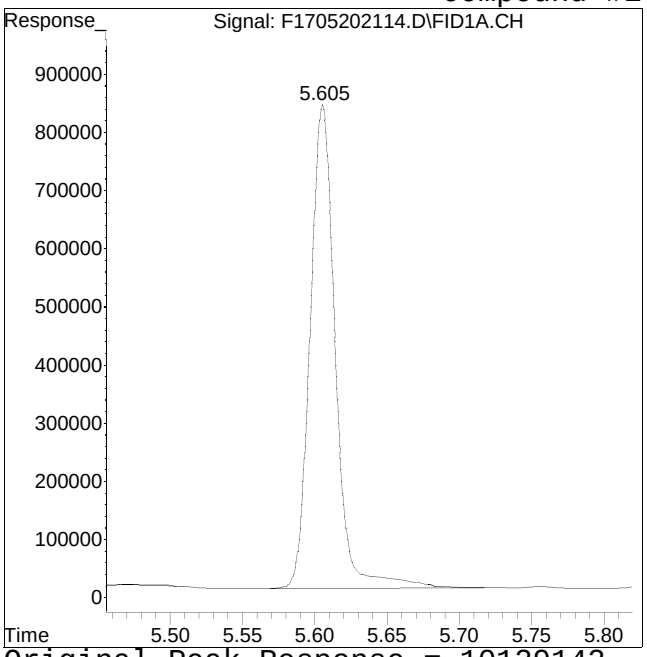
Original Peak Response = 58008871 Manual Peak Response = 58041610 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

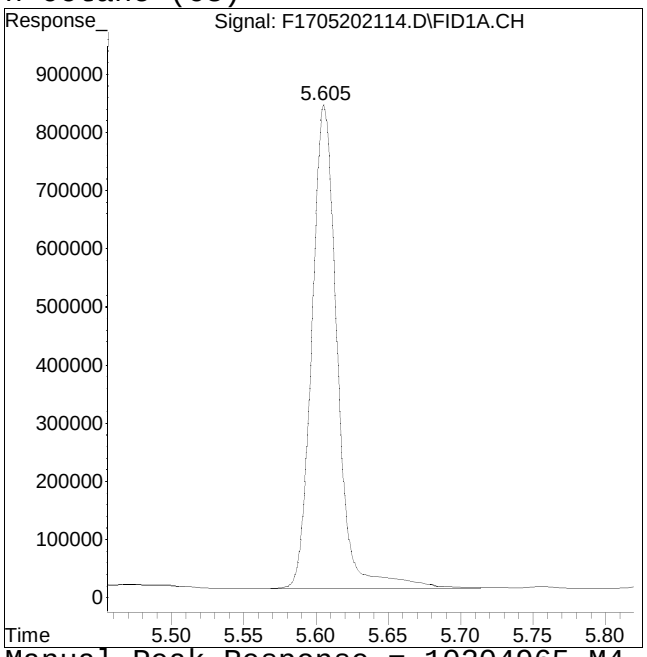
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #2: n-Octane (C8)



Original Peak Response = 10129142



Manual Peak Response = 10204965 M4

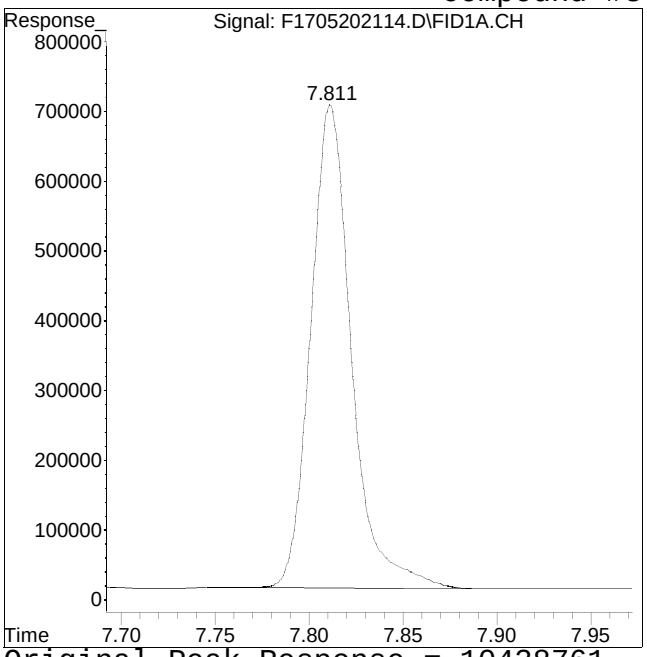
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

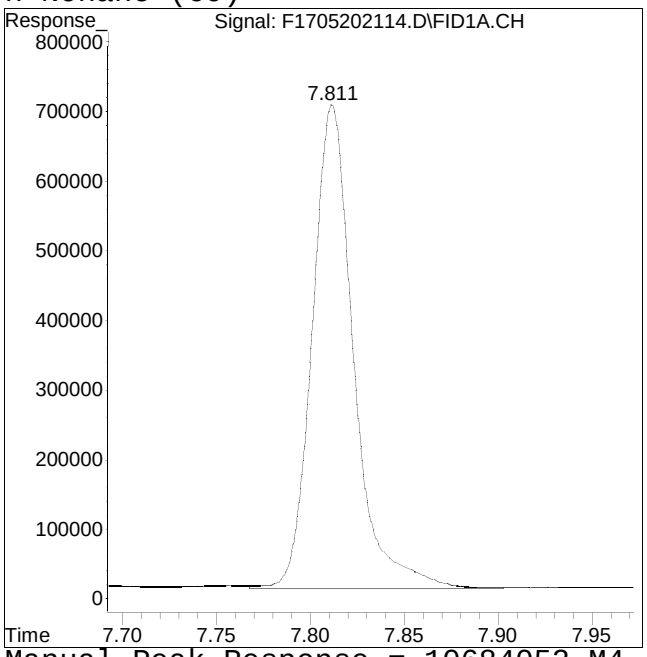
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 10438761



Manual Peak Response = 10684052 M4

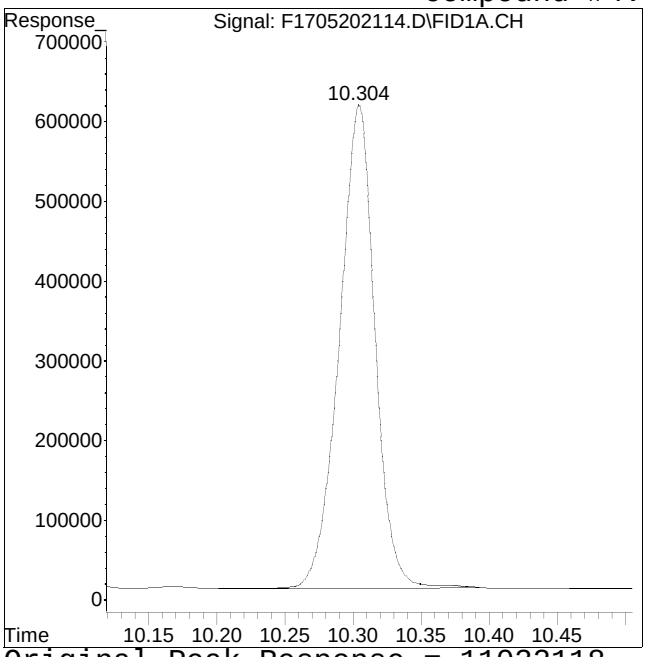
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

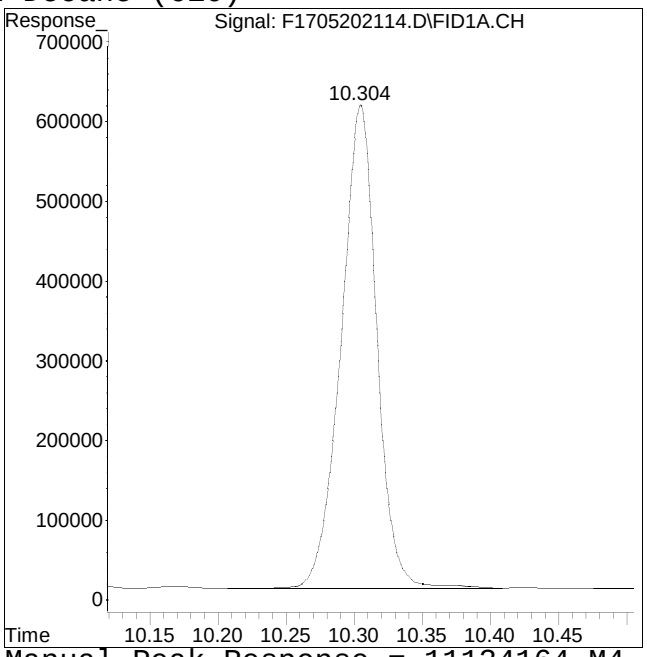
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #4: n-Decane (C10)



Original Peak Response = 11032118



Manual Peak Response = 11134164 M4

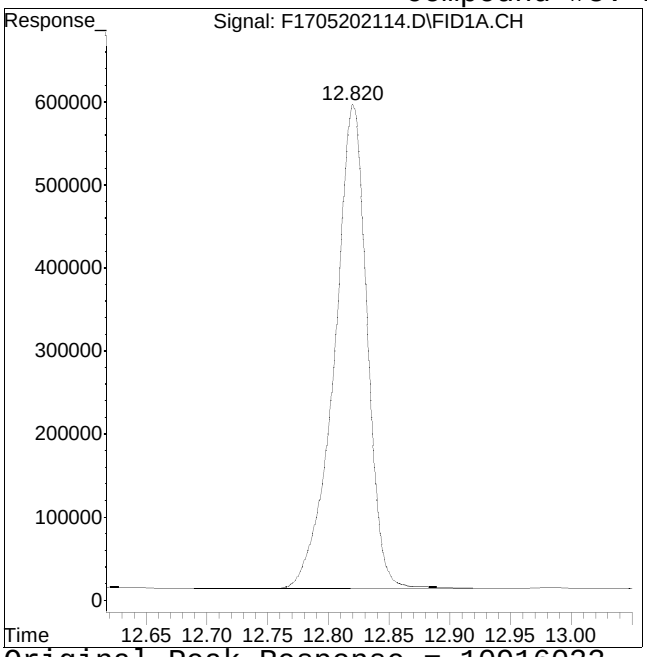
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

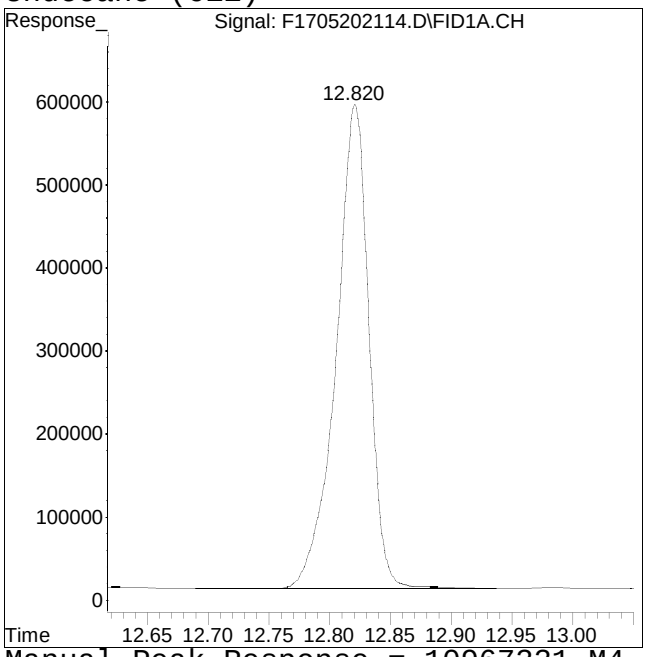
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 10916033



Manual Peak Response = 10967331 M4

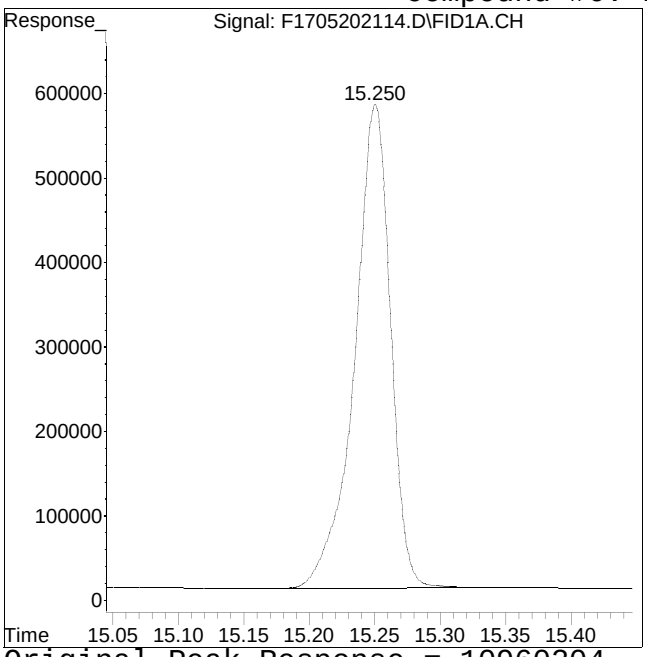
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

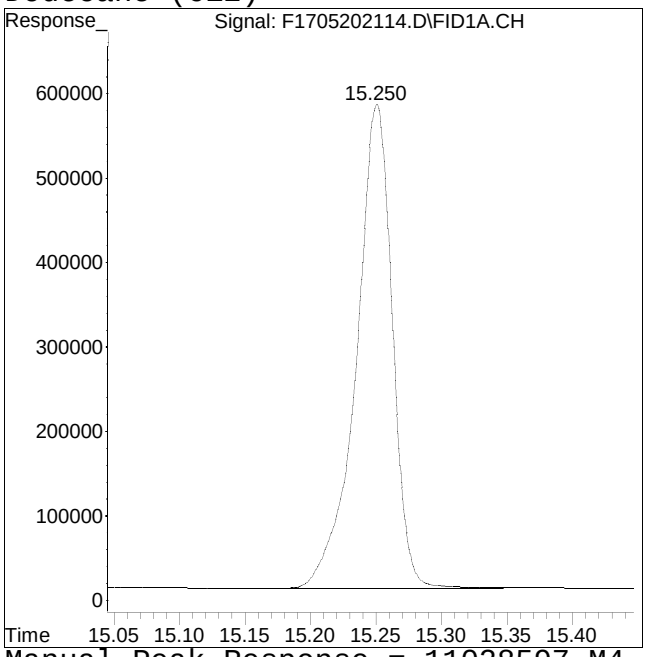
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 10960204



Manual Peak Response = 11028597 M4

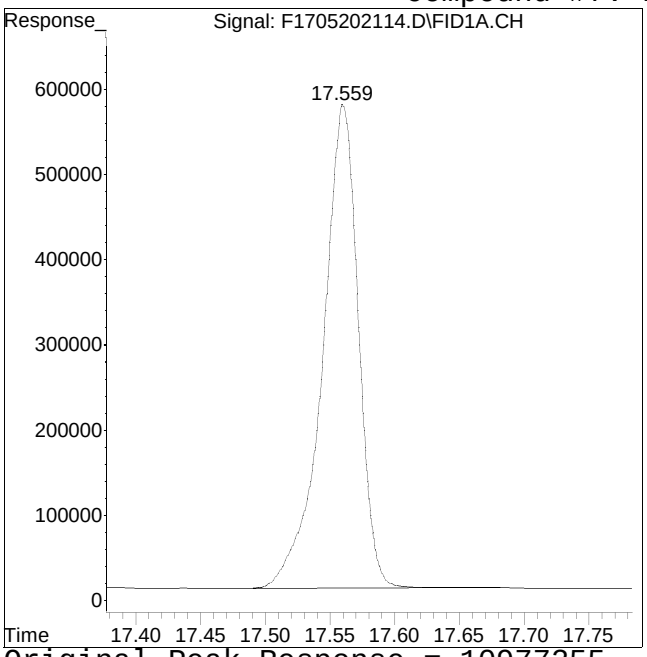
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

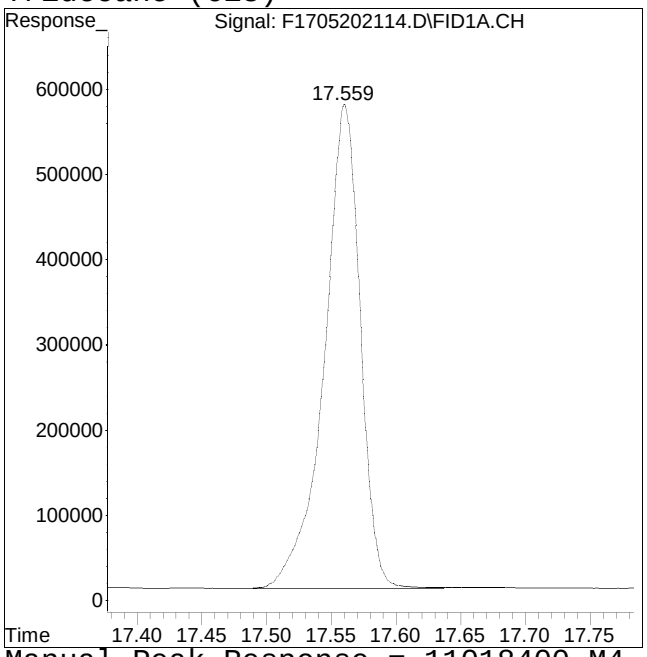
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 10977255



Manual Peak Response = 11018400 M4

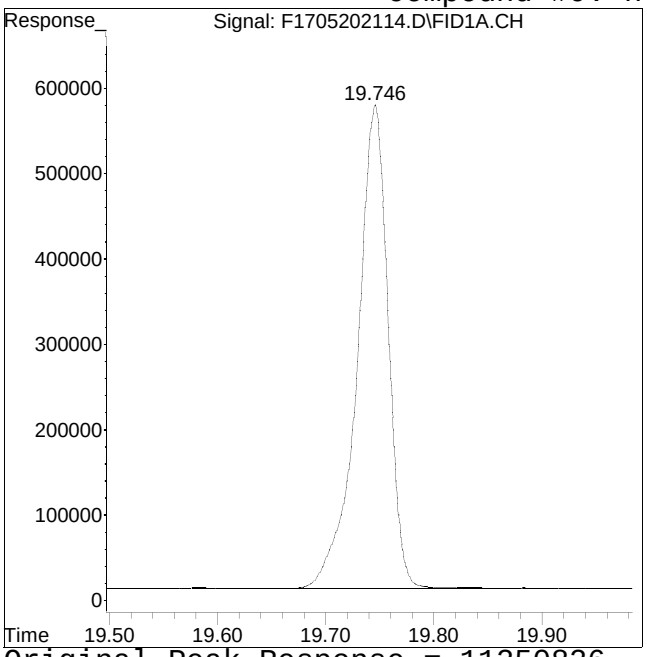
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

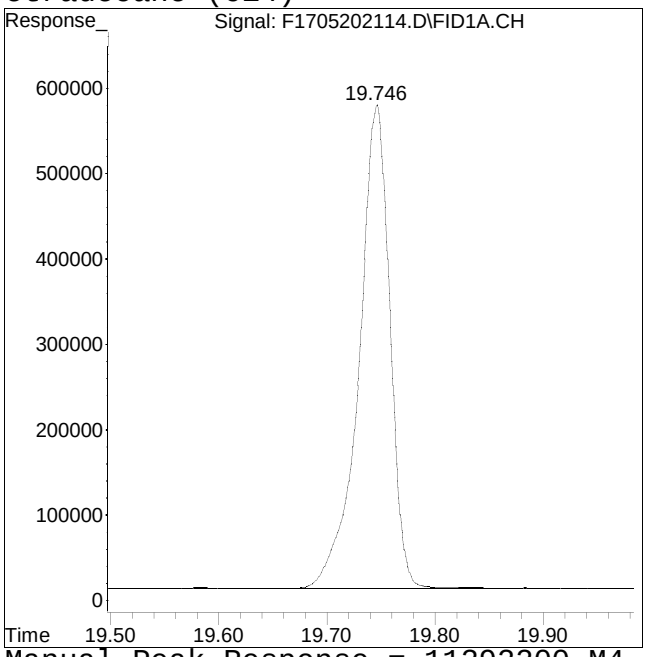
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 11250826



Manual Peak Response = 11292200 M4

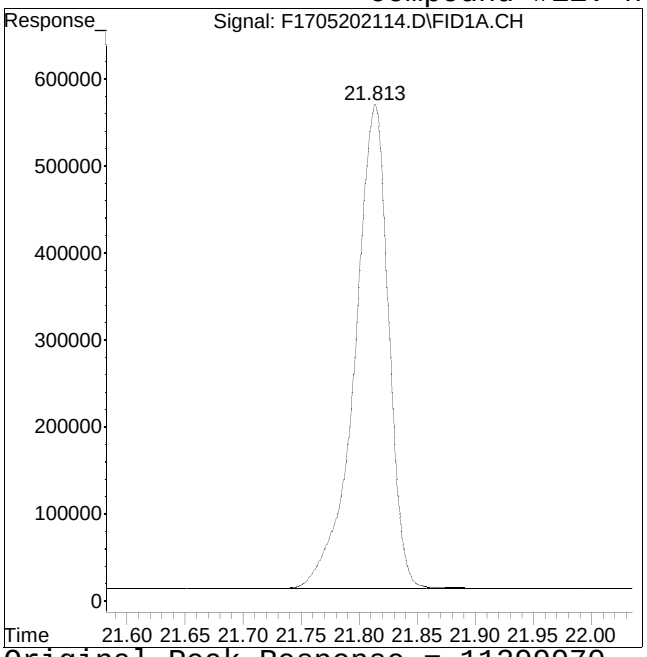
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

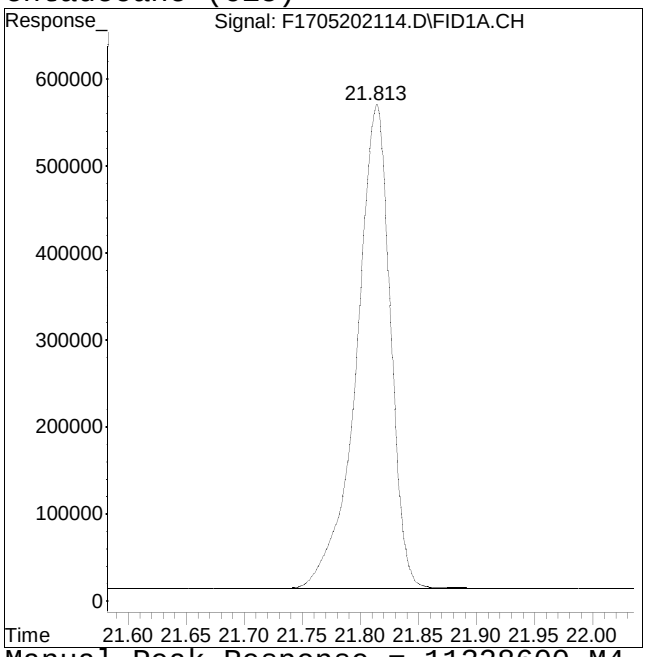
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 11299970



Manual Peak Response = 11328600 M4

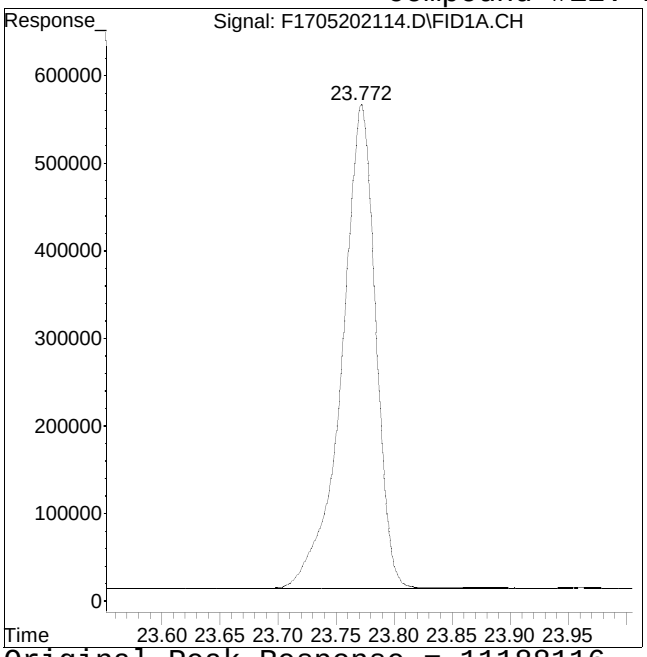
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

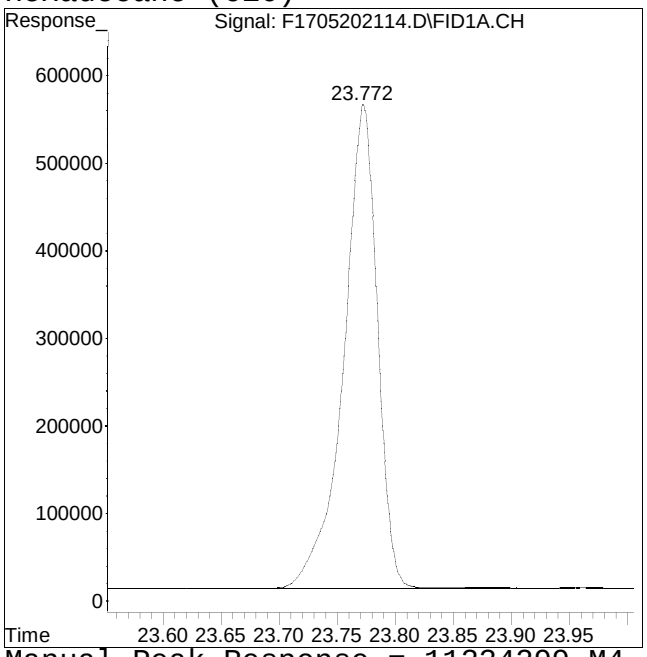
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 11188116



Manual Peak Response = 11234299 M4

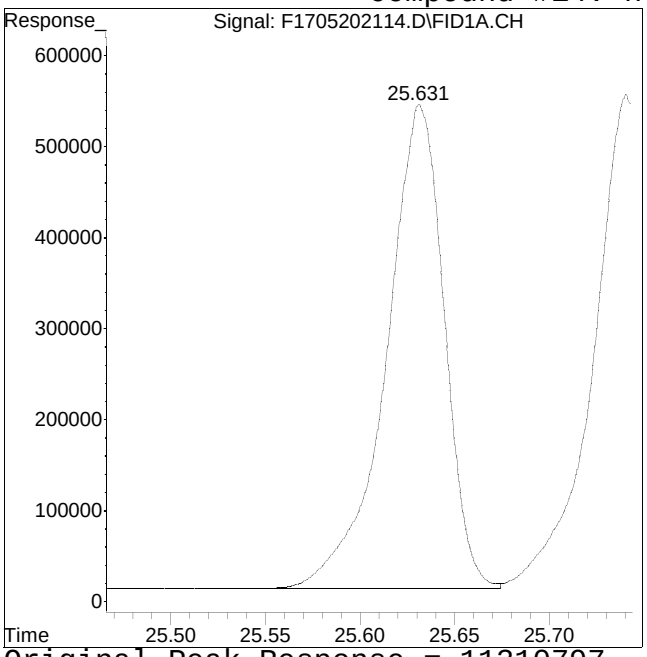
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

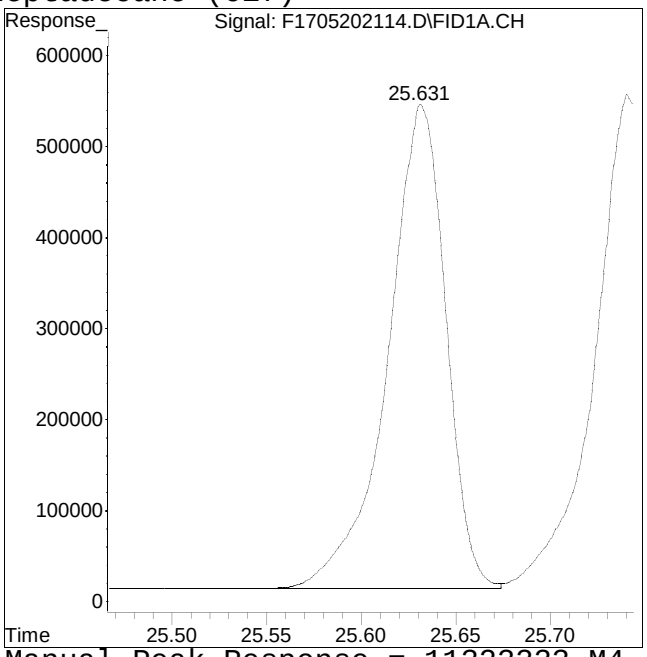
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 11310797



Manual Peak Response = 11323333 M4

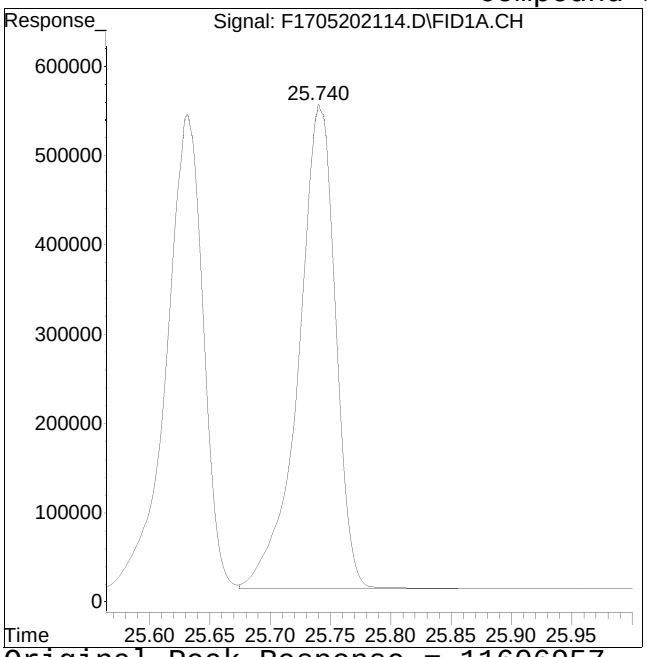
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

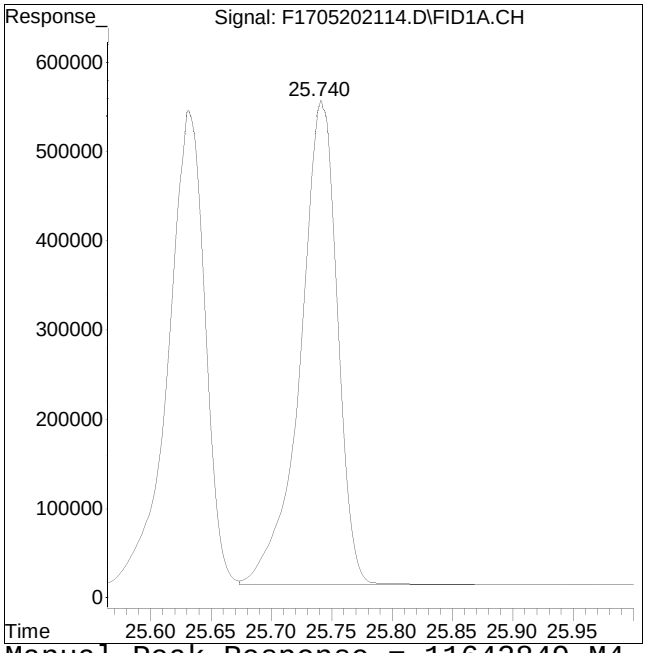
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #15: Pristane



Original Peak Response = 11606957



Manual Peak Response = 11642849 M4

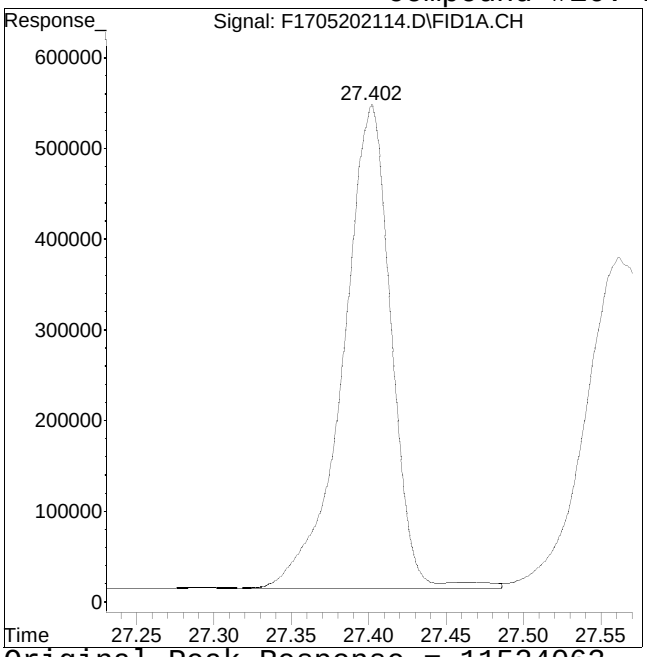
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

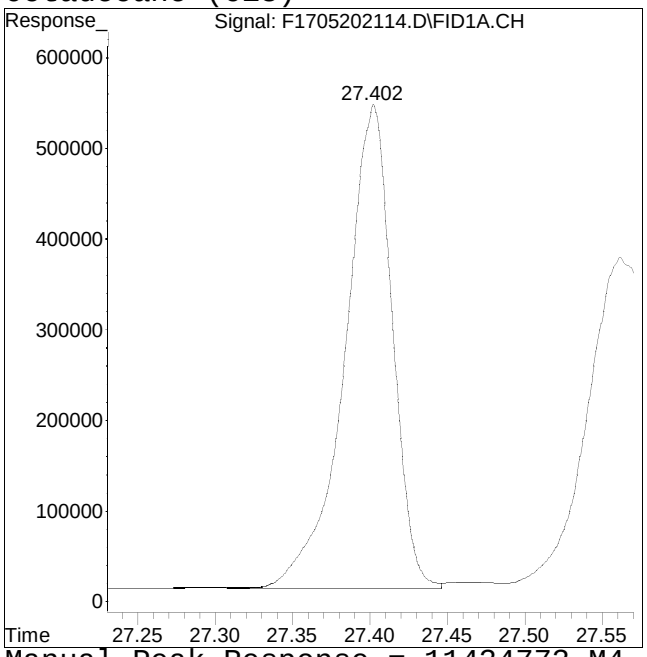
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 11524063



Manual Peak Response = 11434773 M4

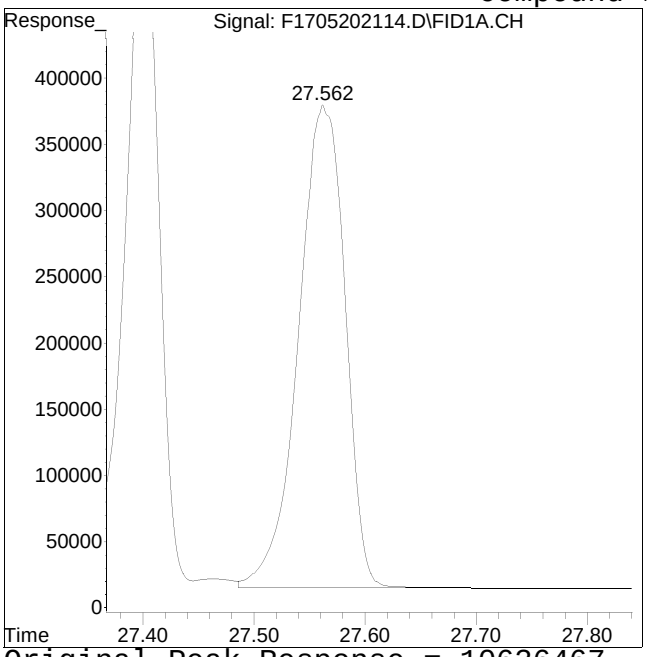
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

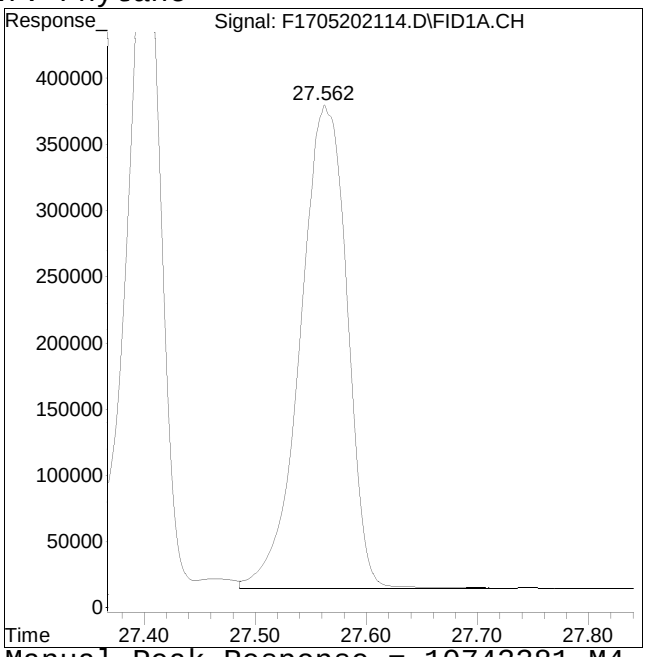
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #17: Phytane



Original Peak Response = 10636467



Manual Peak Response = 10743381 M4

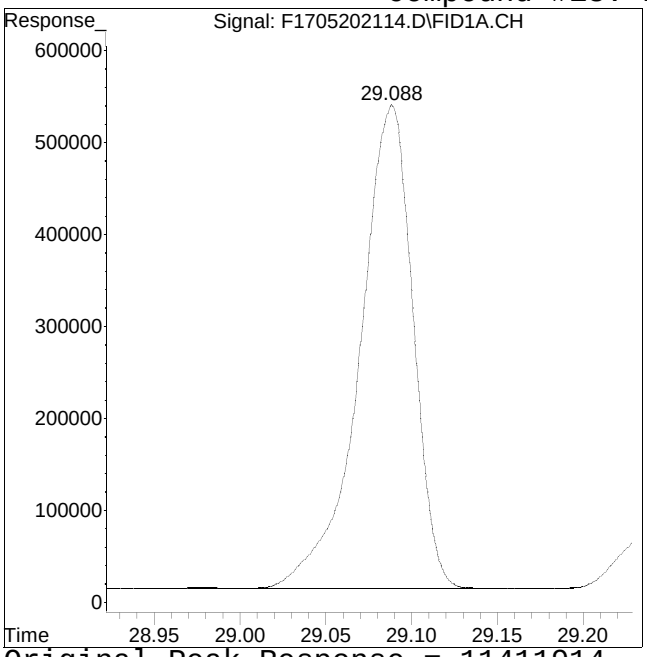
M4 = Poor automated baseline construction.

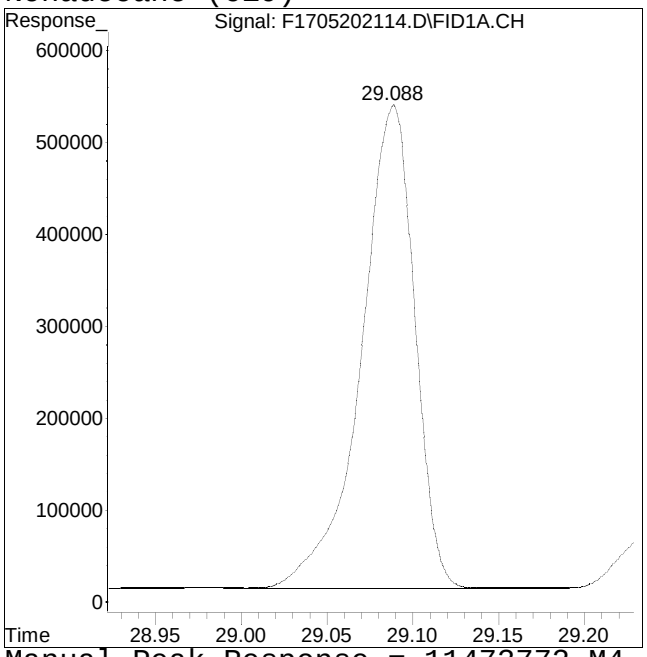
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #18: n-Nonadecane (C19)





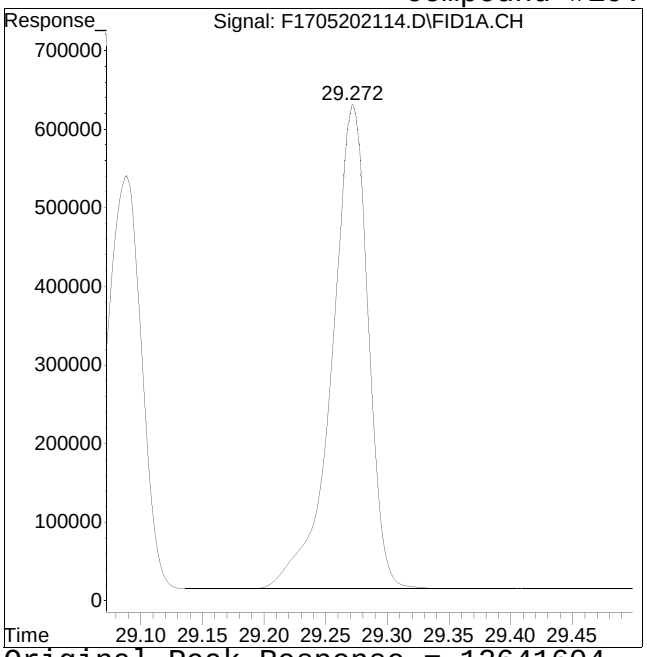
Original Peak Response = 11411914 Manual Peak Response = 11473772 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

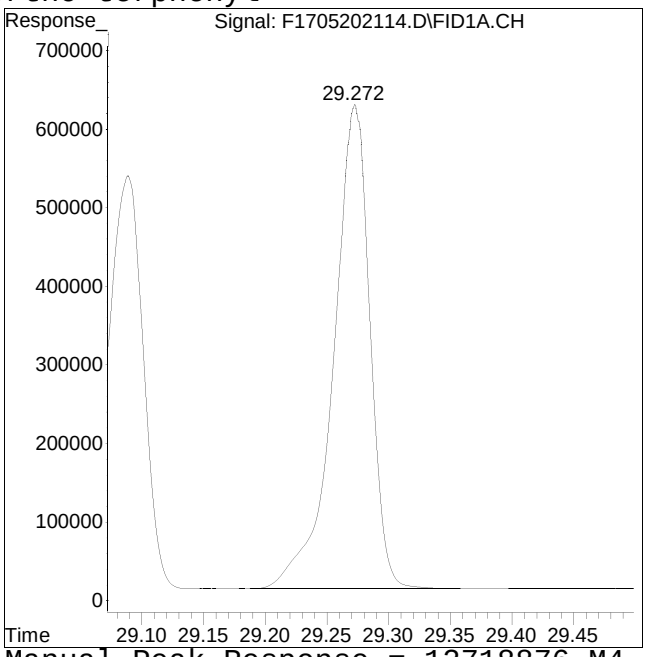
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #19: ortho-terphenyl



Original Peak Response = 12641604



Manual Peak Response = 12718876 M4

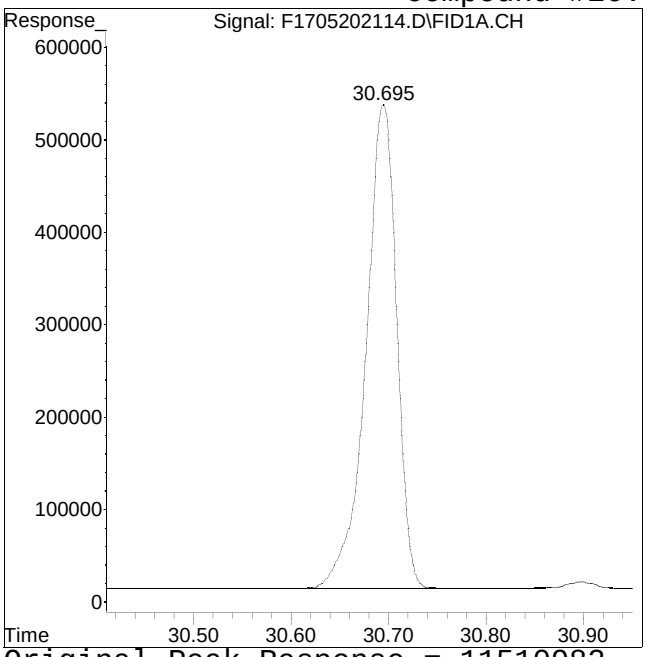
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

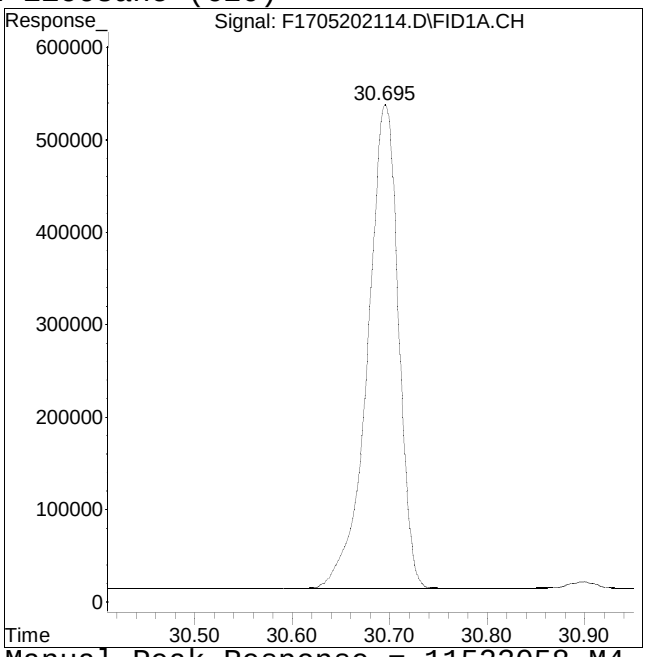
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 11510982



Manual Peak Response = 11523058 M4

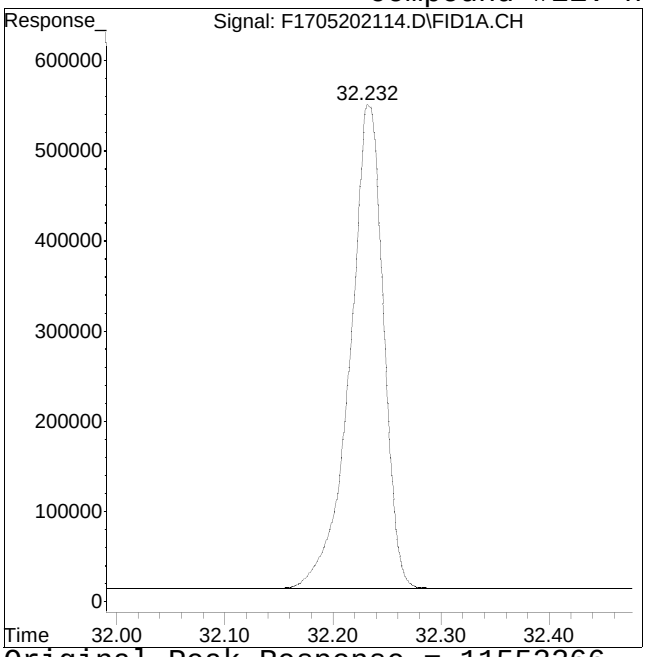
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

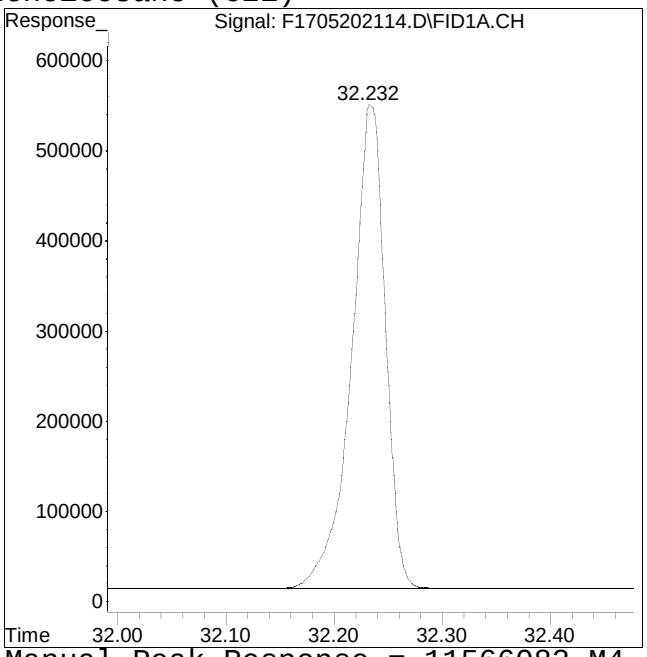
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 11553266



Manual Peak Response = 11566082 M4

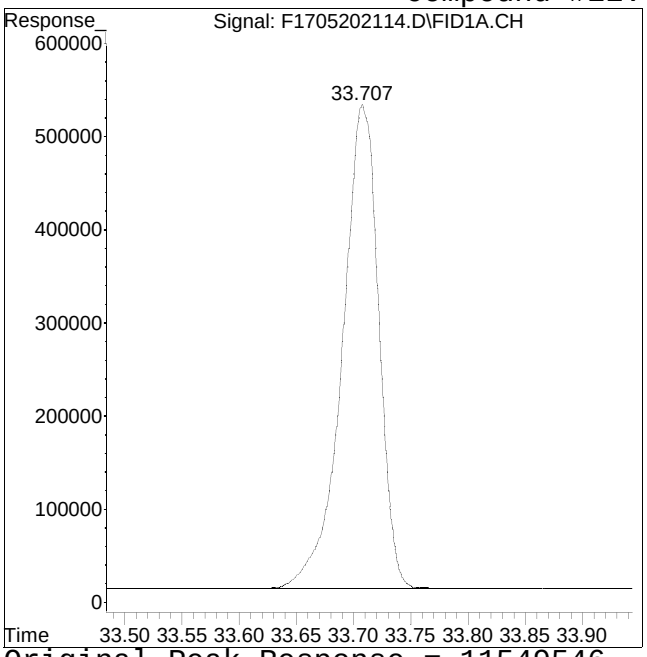
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

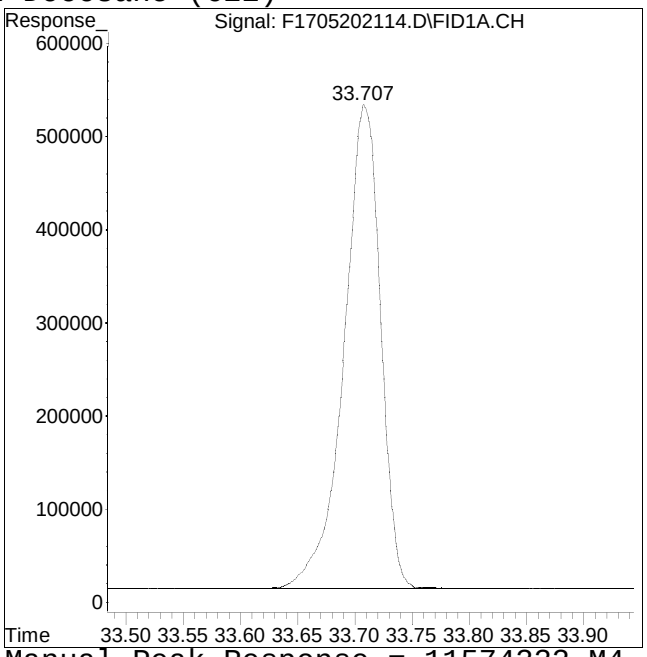
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 11549546



Manual Peak Response = 11574332 M4

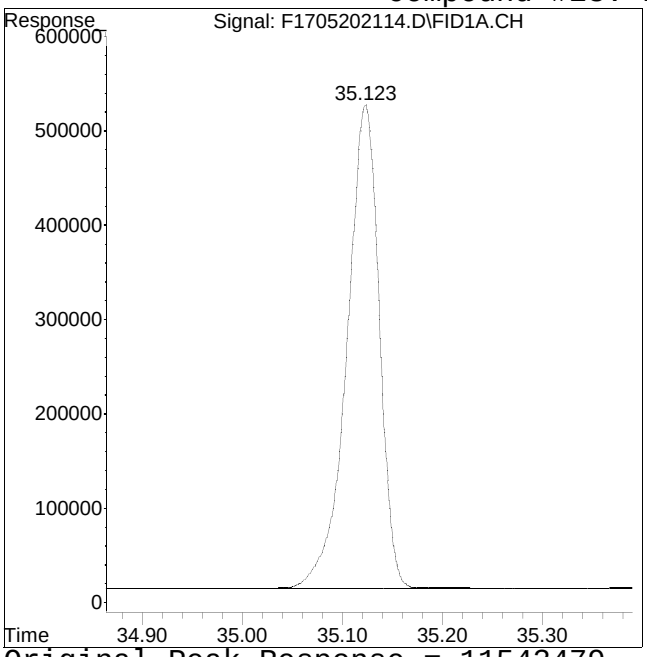
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

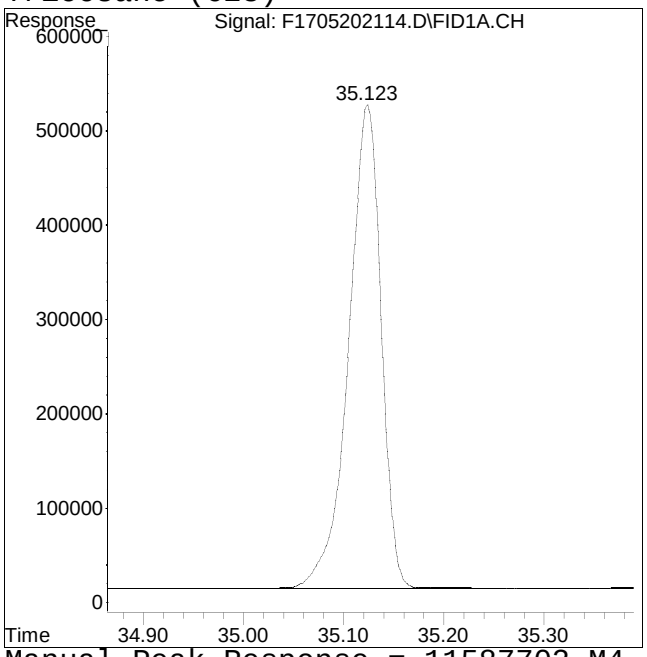
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 11543479



Manual Peak Response = 11587702 M4

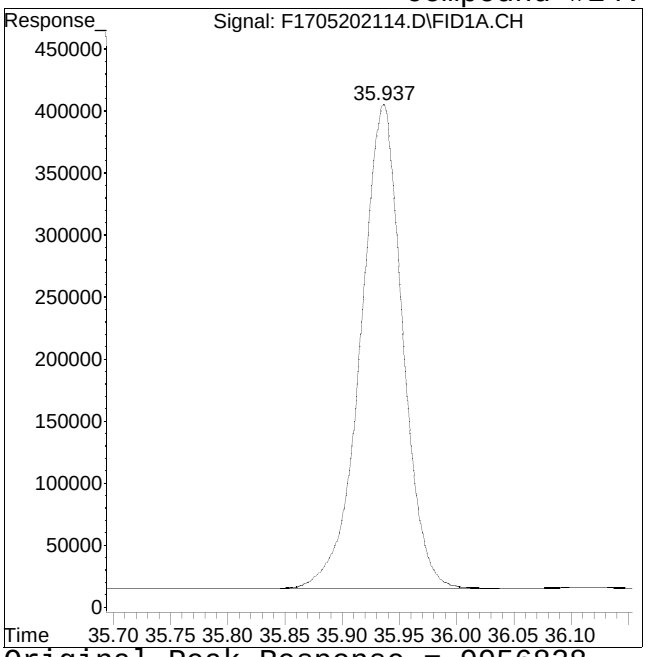
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

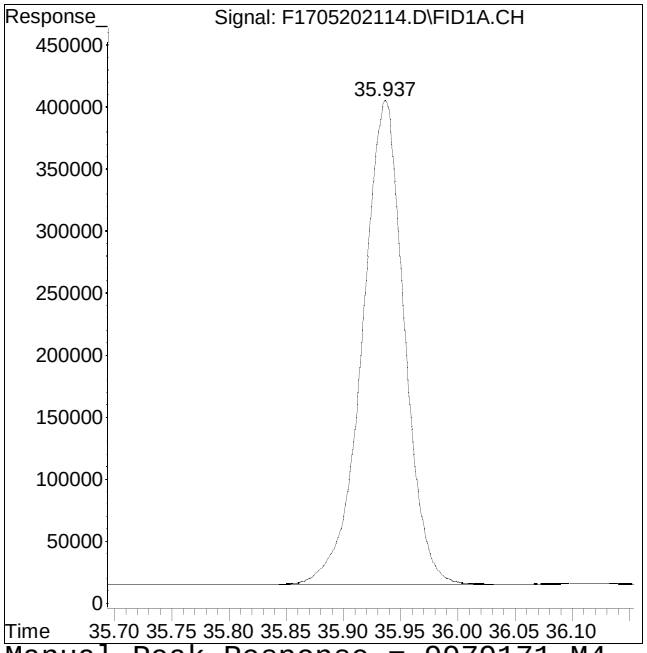
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #24: d50-Tetracosane



Original Peak Response = 9956828



Manual Peak Response = 9979171 M4

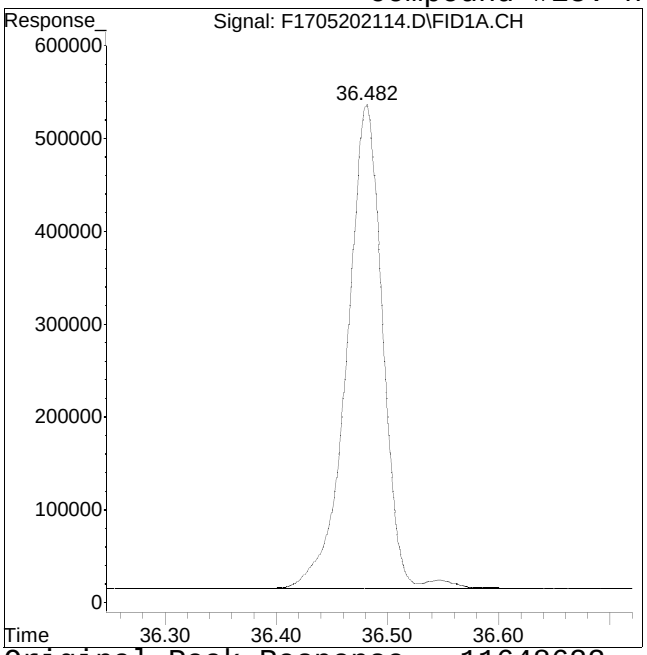
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

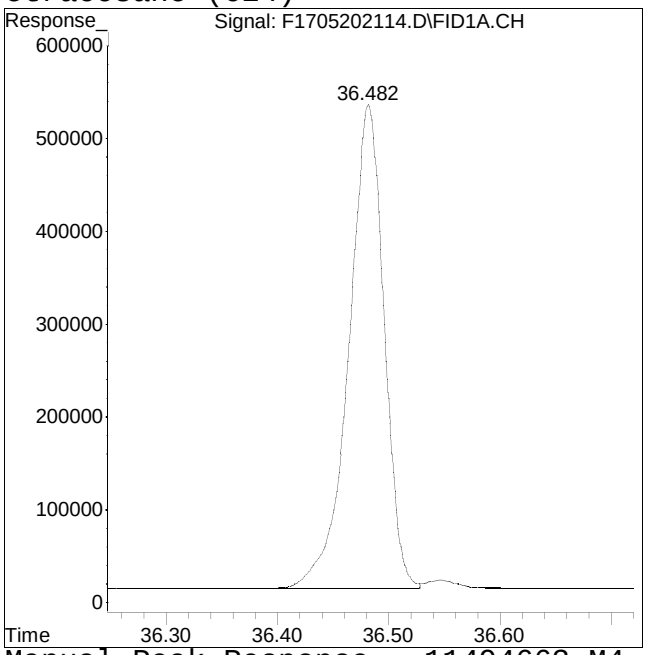
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 11648622



Manual Peak Response = 11494663 M4

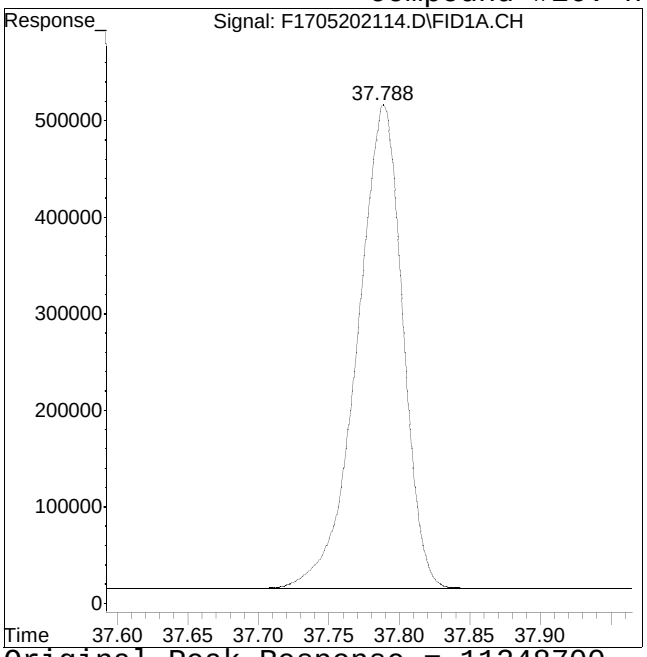
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

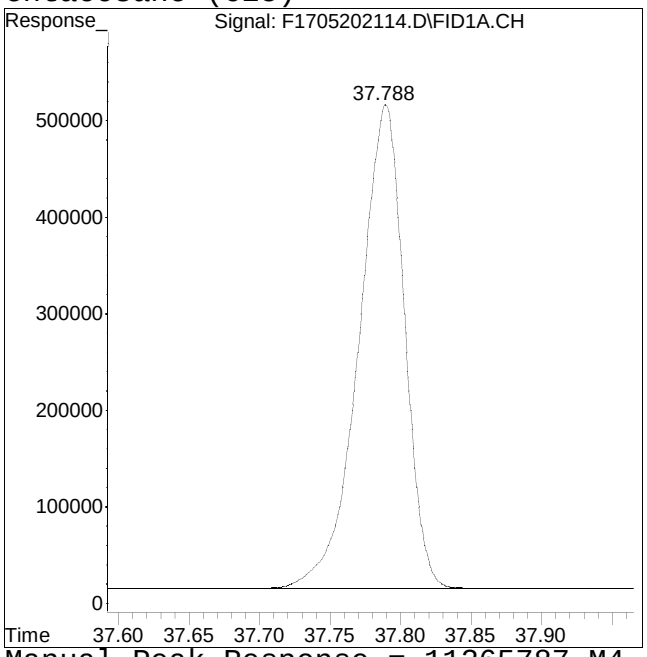
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 11248700



Manual Peak Response = 11265787 M4

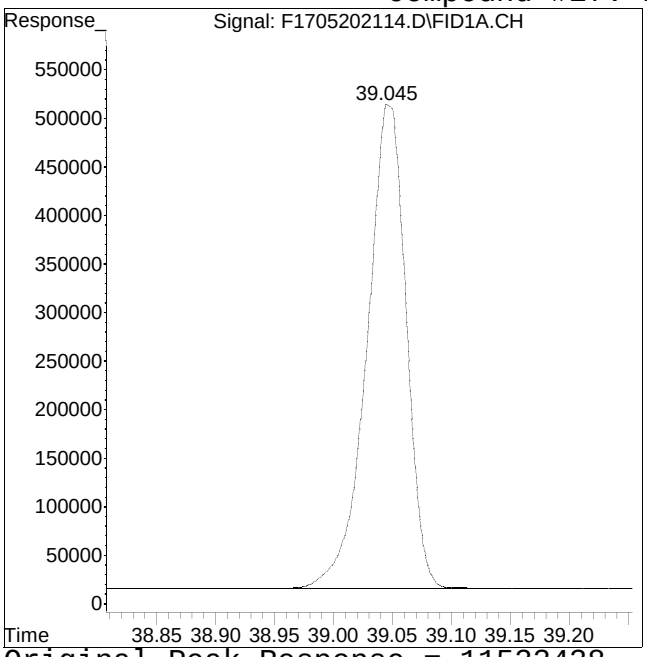
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

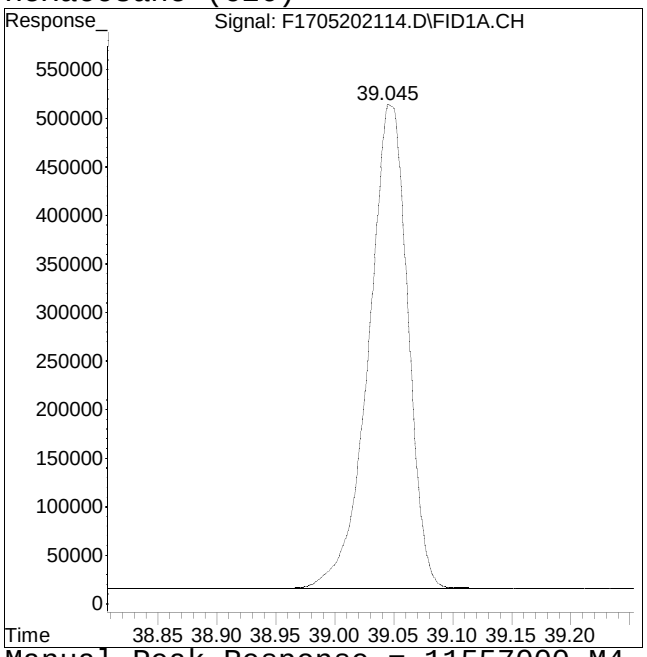
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 11533438



Manual Peak Response = 11557000 M4

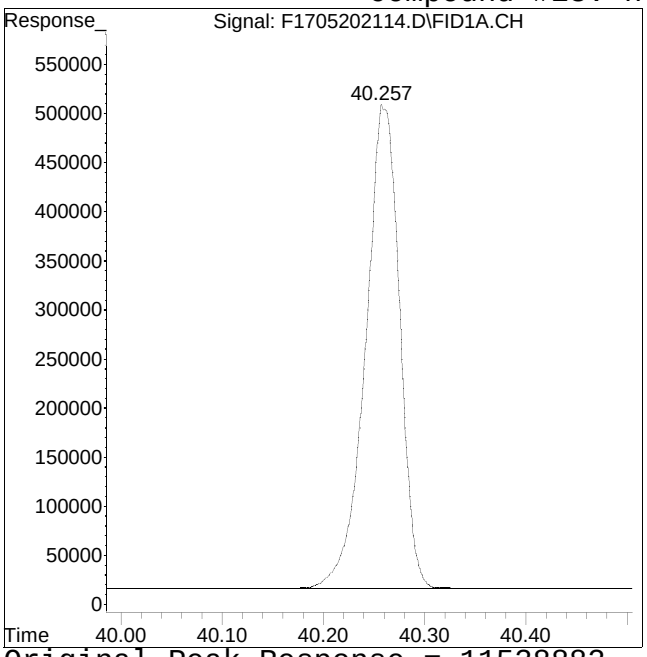
M4 = Poor automated baseline construction.

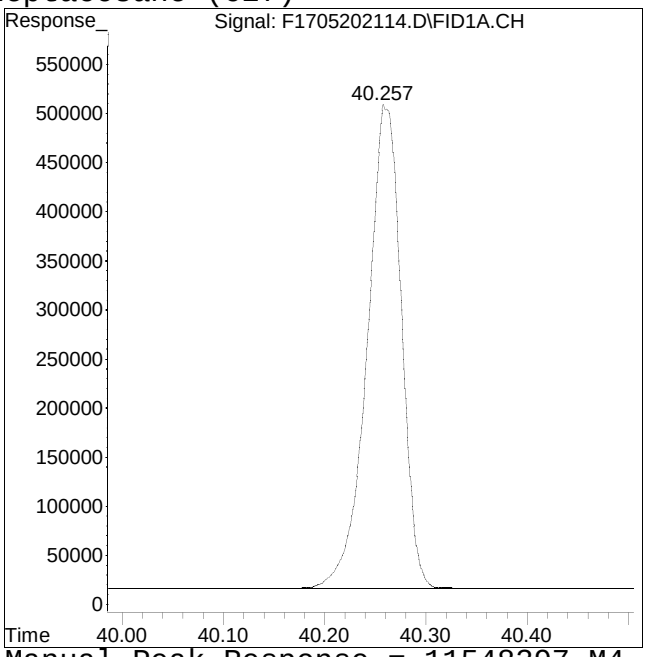
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #28: n-Heptacosane (C27)





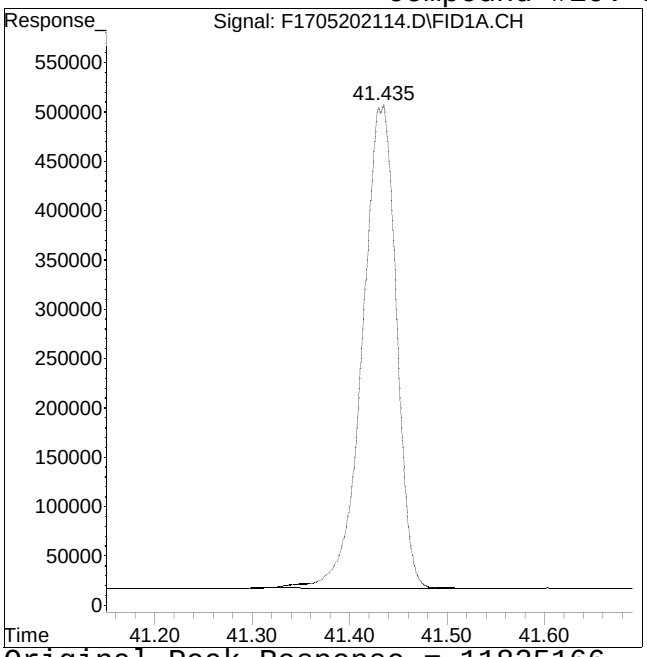
Original Peak Response = 11538882 Manual Peak Response = 11548397 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

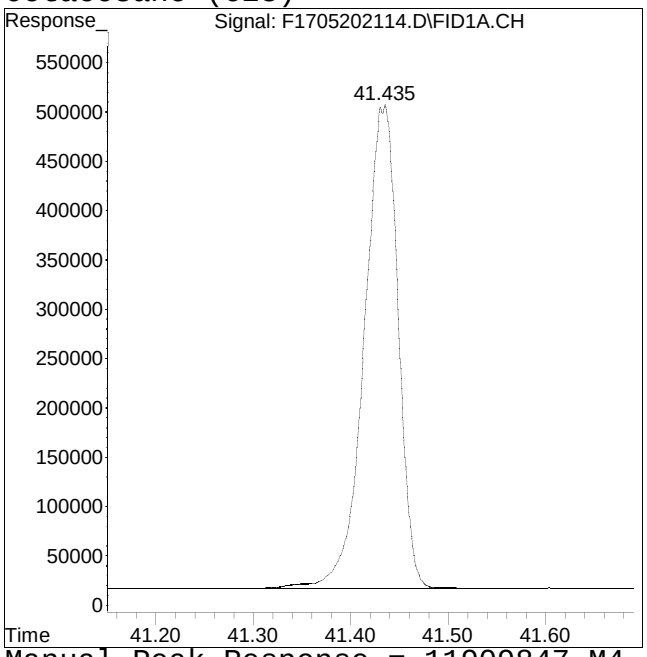
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 11825166



Manual Peak Response = 11909847 M4

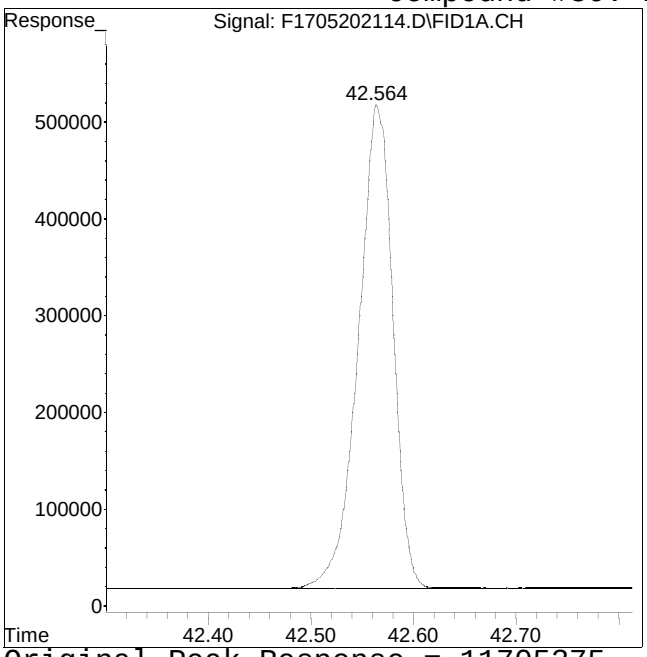
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

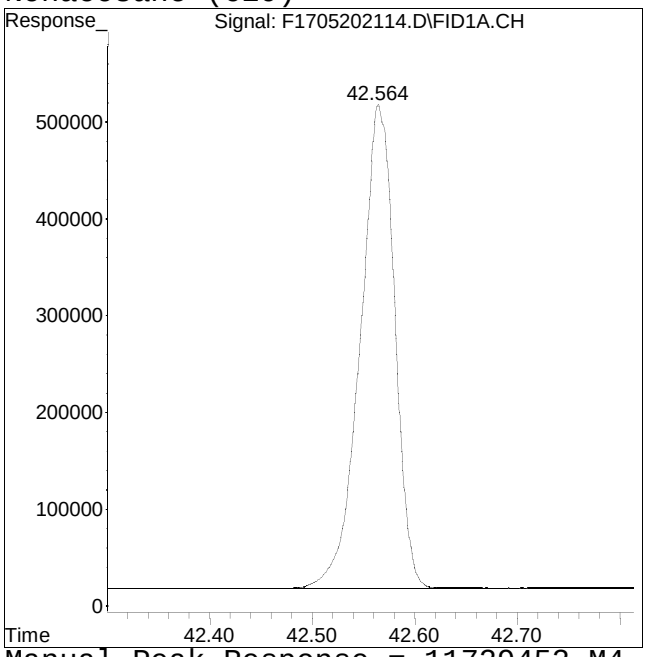
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 11705375



Manual Peak Response = 11729452 M4

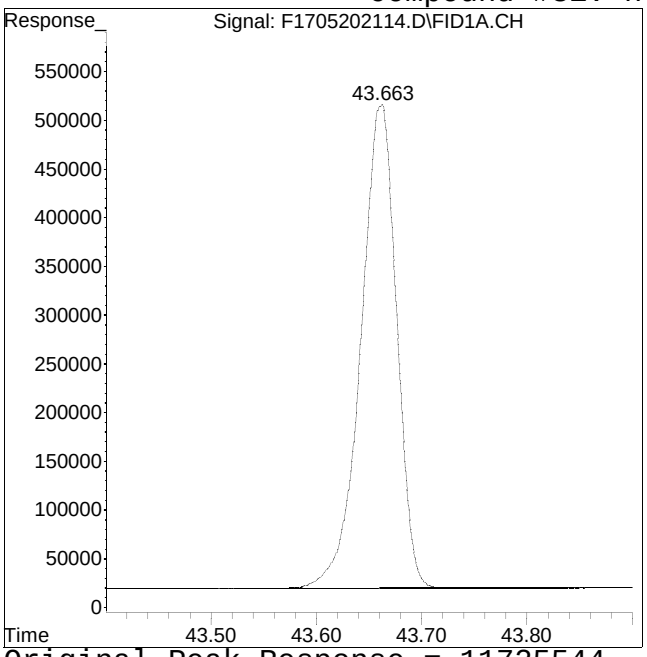
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

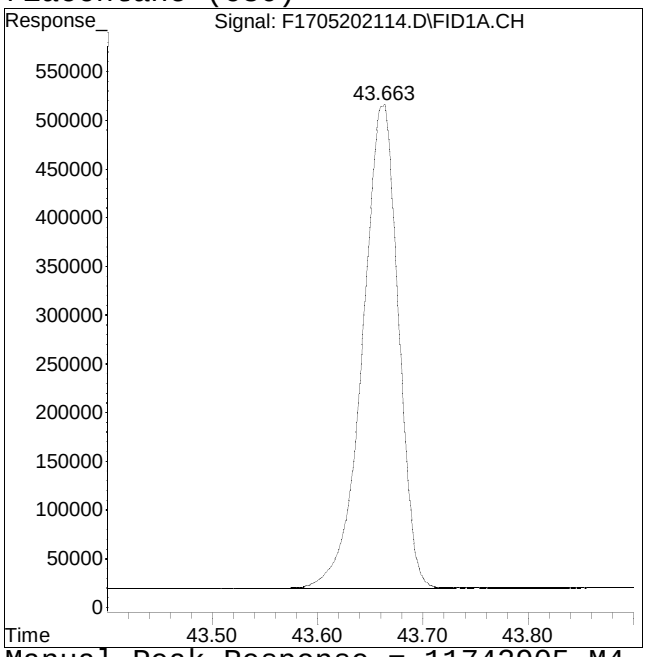
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 11725544



Manual Peak Response = 11742905 M4

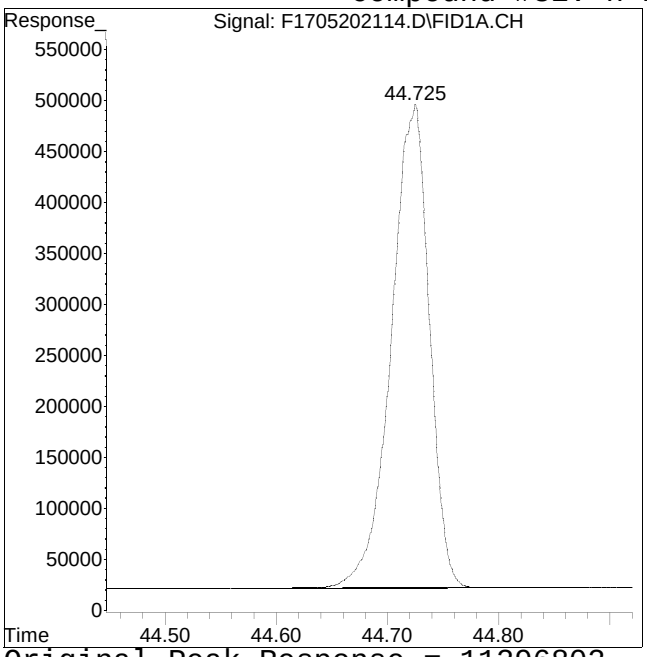
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

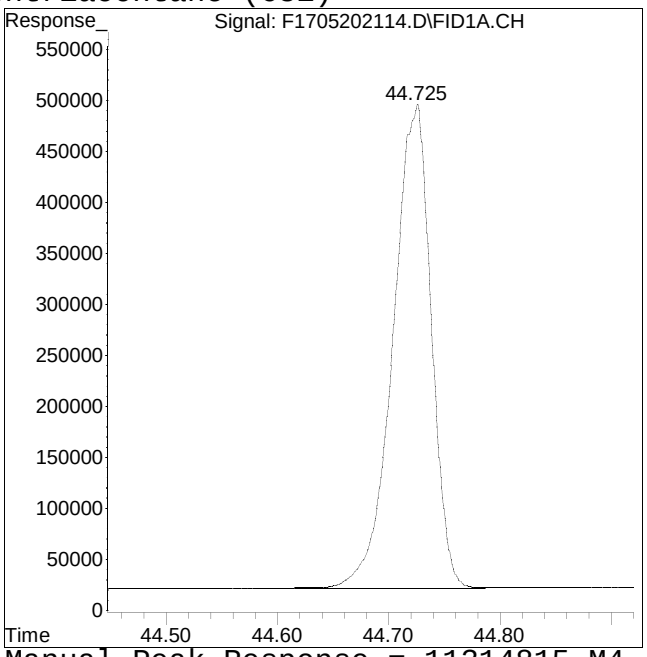
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 11296802



Manual Peak Response = 11314815 M4

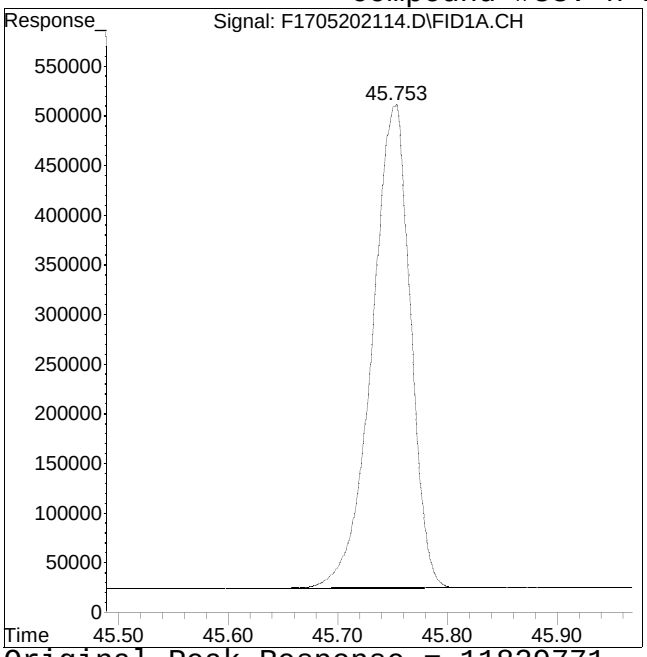
M4 = Poor automated baseline construction.

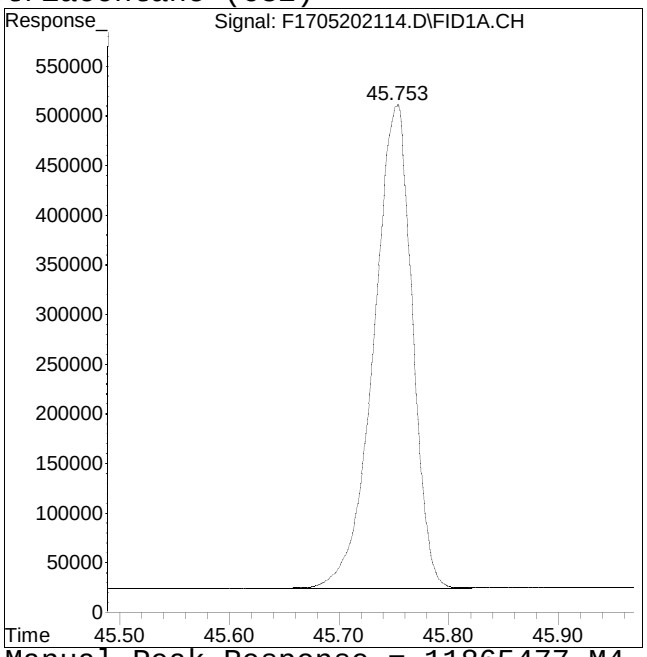
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #33: n-Dotriacontane (C32)





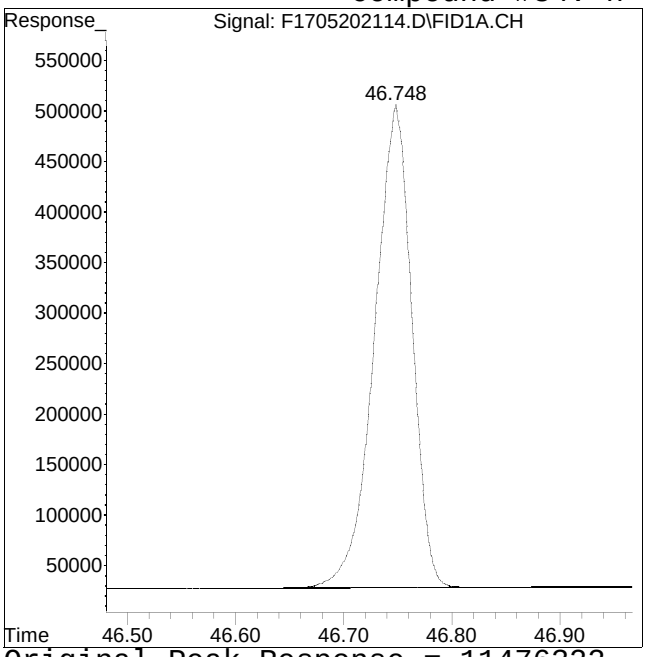
Original Peak Response = 11829771 Manual Peak Response = 11865477 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

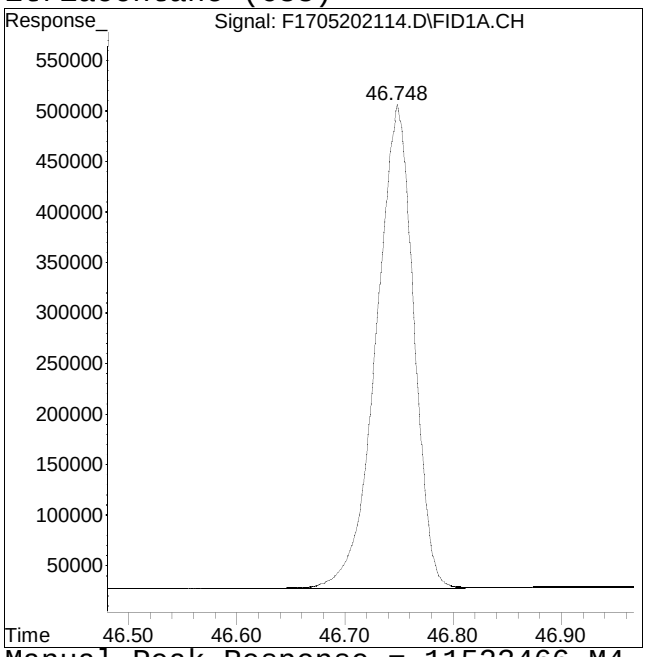
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 11476322



Manual Peak Response = 11523466 M4

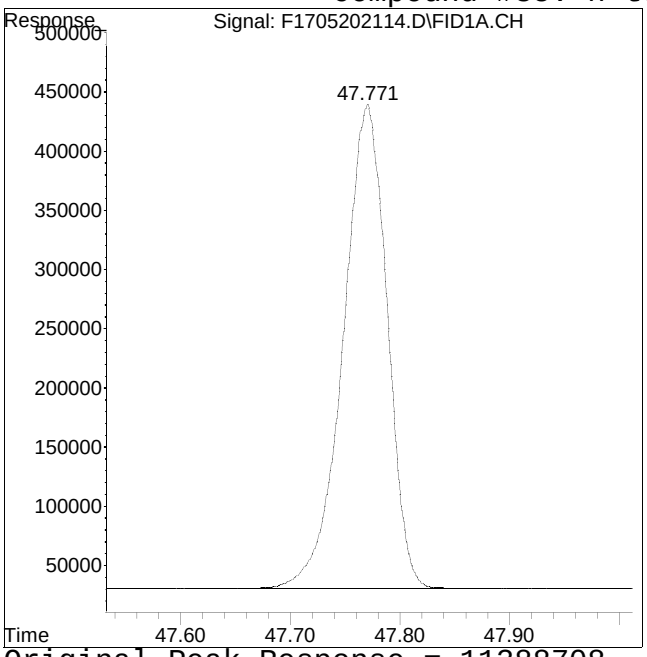
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

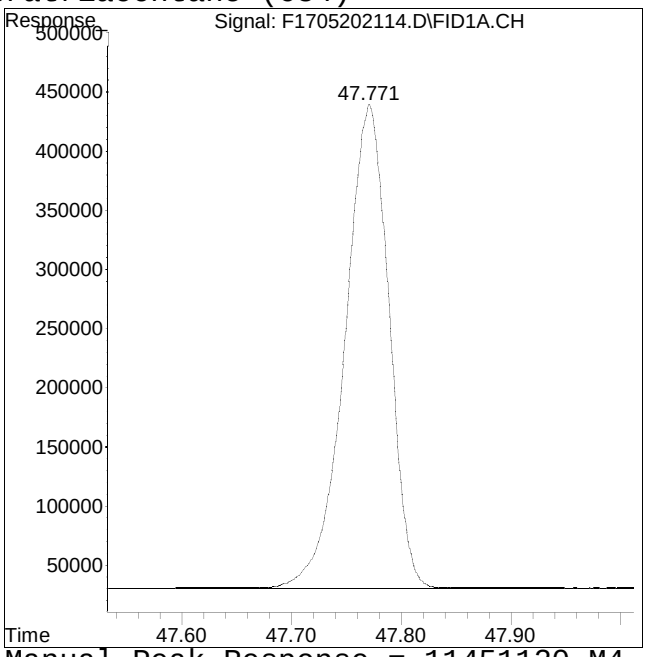
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 11388708



Manual Peak Response = 11451120 M4

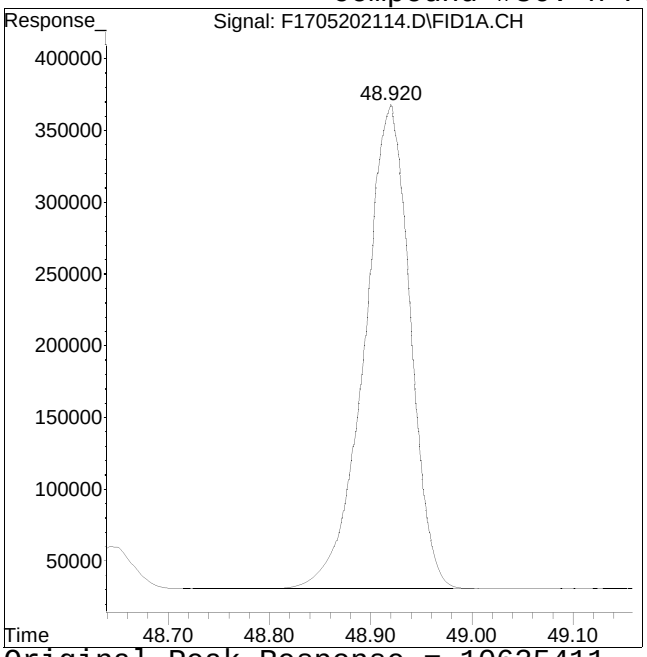
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

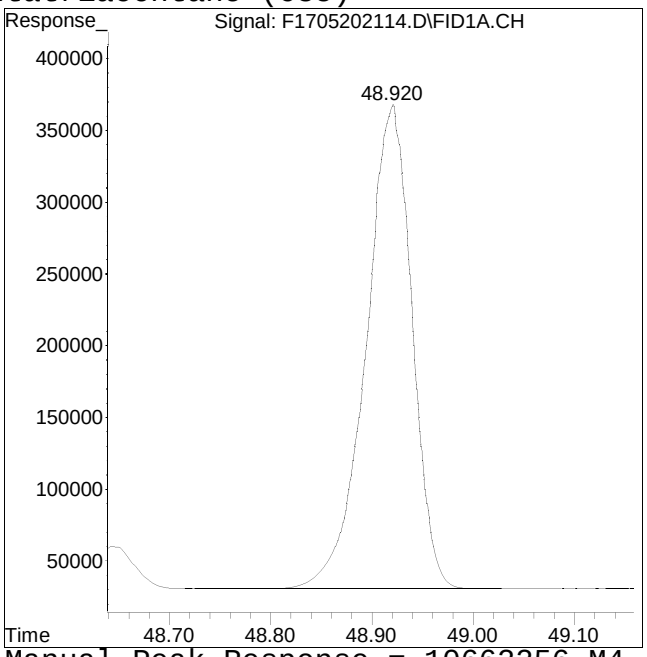
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 10635411



Manual Peak Response = 10662256 M4

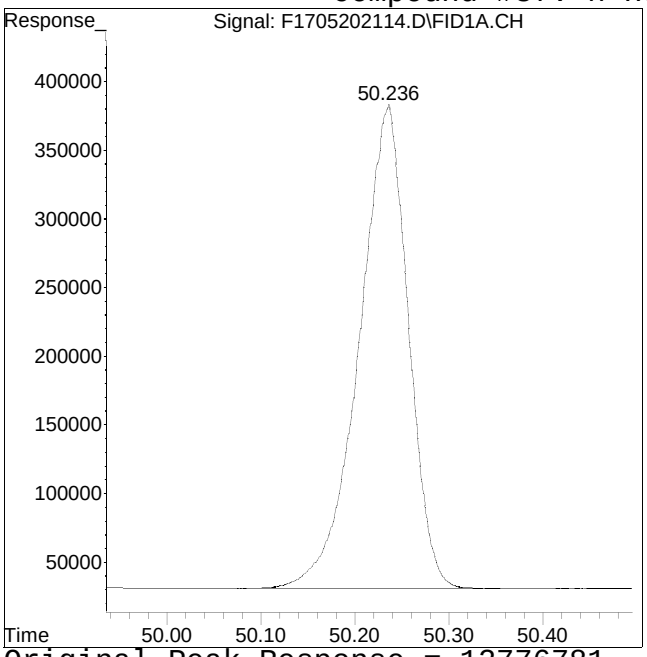
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

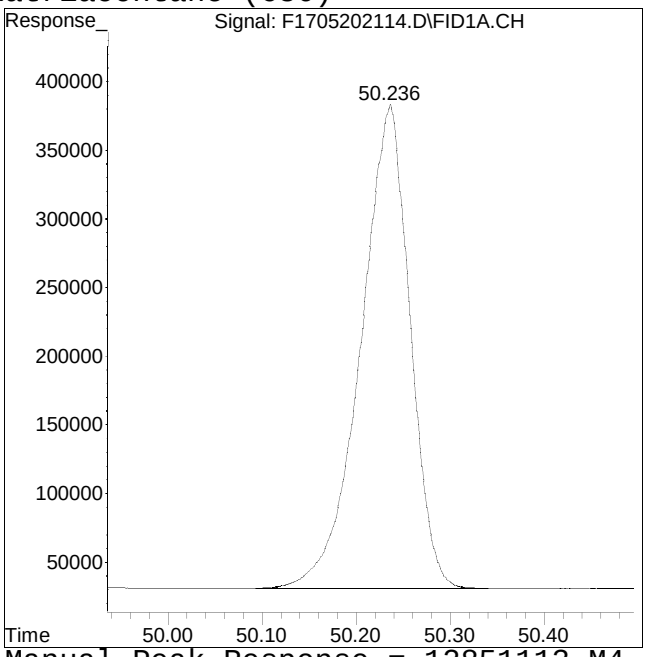
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 12776781



Manual Peak Response = 12851113 M4

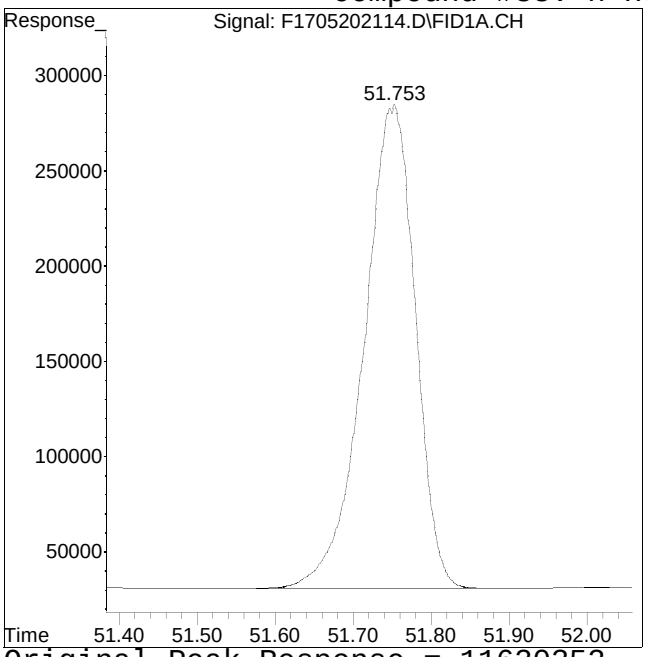
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

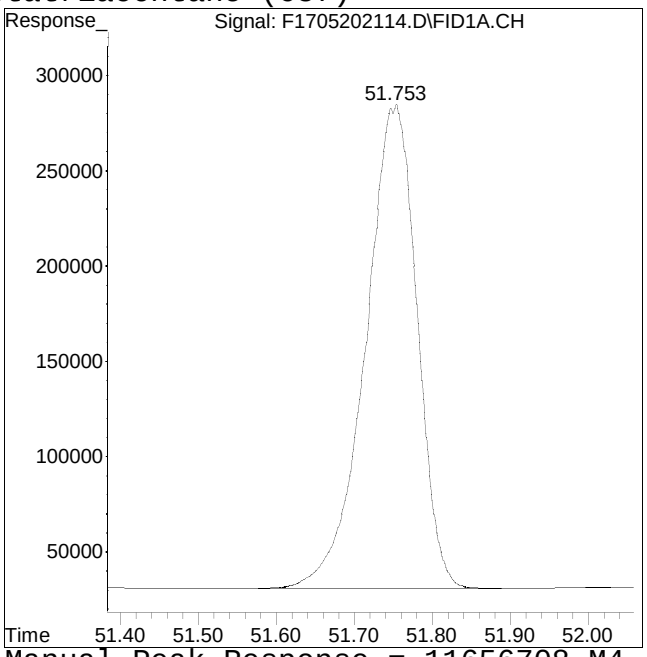
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 11630352



Manual Peak Response = 11656708 M4

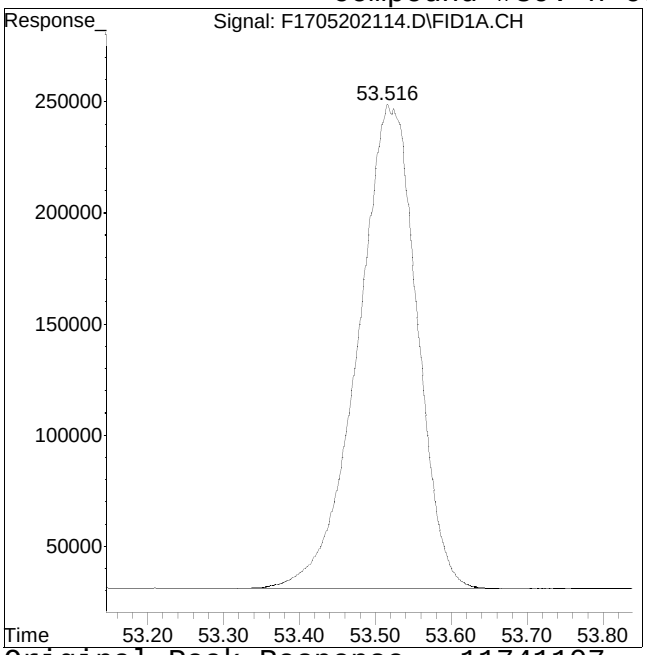
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

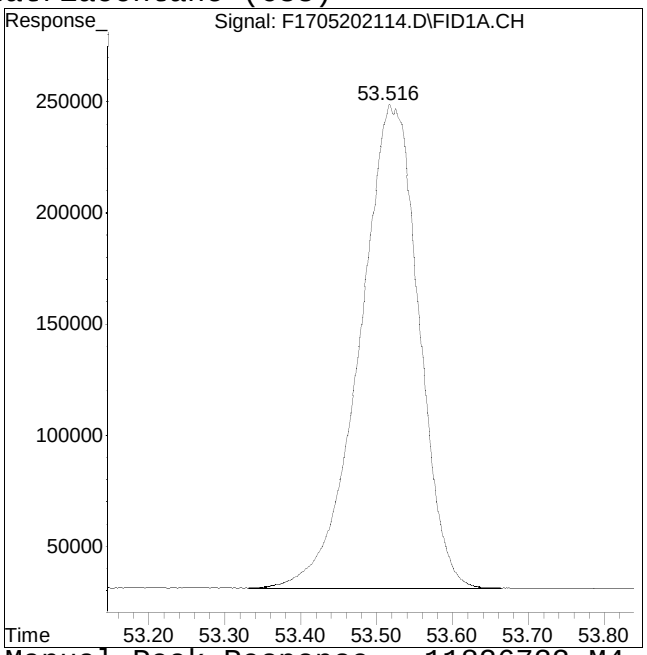
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 11741107



Manual Peak Response = 11826732 M4

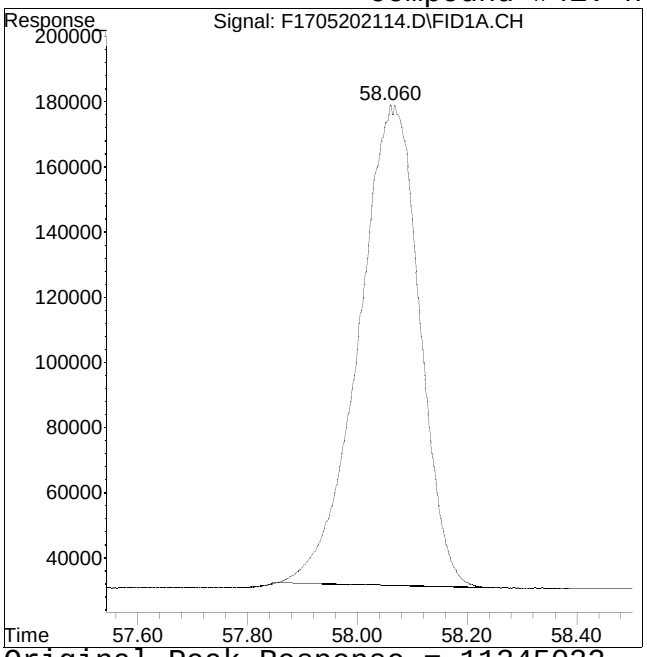
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

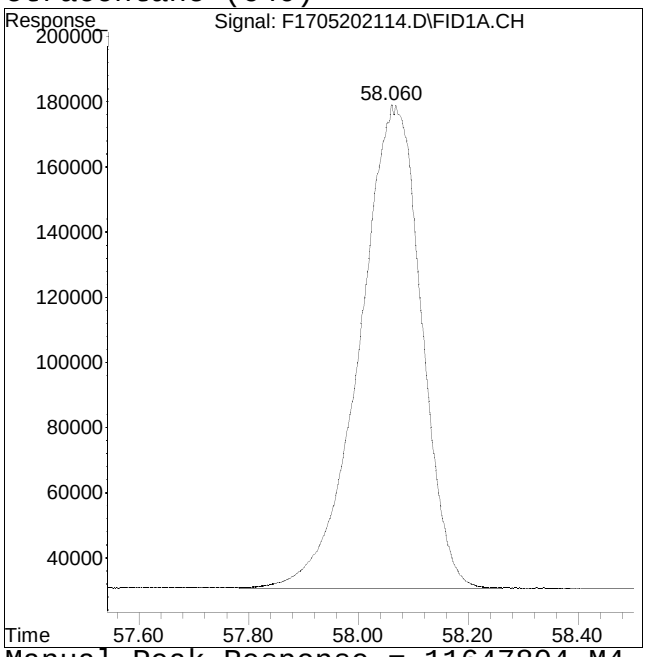
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 11345032



Manual Peak Response = 11647804 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202116.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 11:47 pm
Operator : FID17:WR
Sample : I1705202103F
Misc : WG1505003,FRBD73,50ug/ml
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 28 14:02:47 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.317	53308279	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.297	58635315	50.740 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 101.48%	
24) s d50-Tetracosane	35.958	47338480	51.632 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 103.26%	
Target Compounds			
2) t n-Octane (C8)	5.626	46862753	50.847 ug/mL M4
3) t n-Nonane (C9)	7.830	48771924	49.592 ug/mL M4
4) t n-Decane (C10)	10.320	51075440	50.732 ug/mL M4
5) t n-Undecane (C11)	12.836	50678912	51.523 ug/mL M4
6) t n-Dodecane (C12)	15.266	50957984	51.665 ug/mL M4
7) t n-Tridecane (C13)	17.576	50845026	51.411 ug/mL M4
9) t n-Tetradecane (C14)	19.763	52094599	51.124 ug/mL M4
11) t n-Pentadecane (C15)	21.832	52229146	51.197 ug/mL M4
12) t n-Hexadecane (C16)	23.790	51751351	50.819 ug/mL M4
14) t n-Heptadecane (C17)	25.651	52277862	51.385 ug/mL M4
15) t Pristane	25.764	53447132	50.656 ug/mL M4
16) t n-Octadecane (C18)	27.421	52735680	50.981 ug/mL M4
17) t Phytane	27.586	49215356	50.859 ug/mL M4
18) t n-Nonadecane (C19)	29.110	52976616	51.060 ug/mL M4
20) t n-Eicosane (C20)	30.718	53233894	51.016 ug/mL M4
21) t n-Heneicosane (C21)	32.257	53418501	51.029 ug/mL M4
22) t n-Docosane (C22)	33.732	53373025	50.906 ug/mL M4
23) t n-Tricosane (C23)	35.147	53358924	50.792 ug/mL M4
25) t n-Tetracosane (C24)	36.505	53197968	50.798 ug/mL M4
26) t n-Pentacosane (C25)	37.812	52079856	50.822 ug/mL M4
27) t n-Hexacosane (C26)	39.074	53440082	50.802 ug/mL M4
28) t n-Heptacosane (C27)	40.285	53387647	50.616 ug/mL M4
29) t n-Octacosane (C28)	41.456	54460527	49.806 ug/mL M4
30) t n-Nonacosane (C29)	42.590	54143436	50.484 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202116.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 11:47 pm
Operator : FID17:WR
Sample : I1705202103F
Misc : WG1505003,FRBD73,50ug/ml
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 28 14:02:47 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

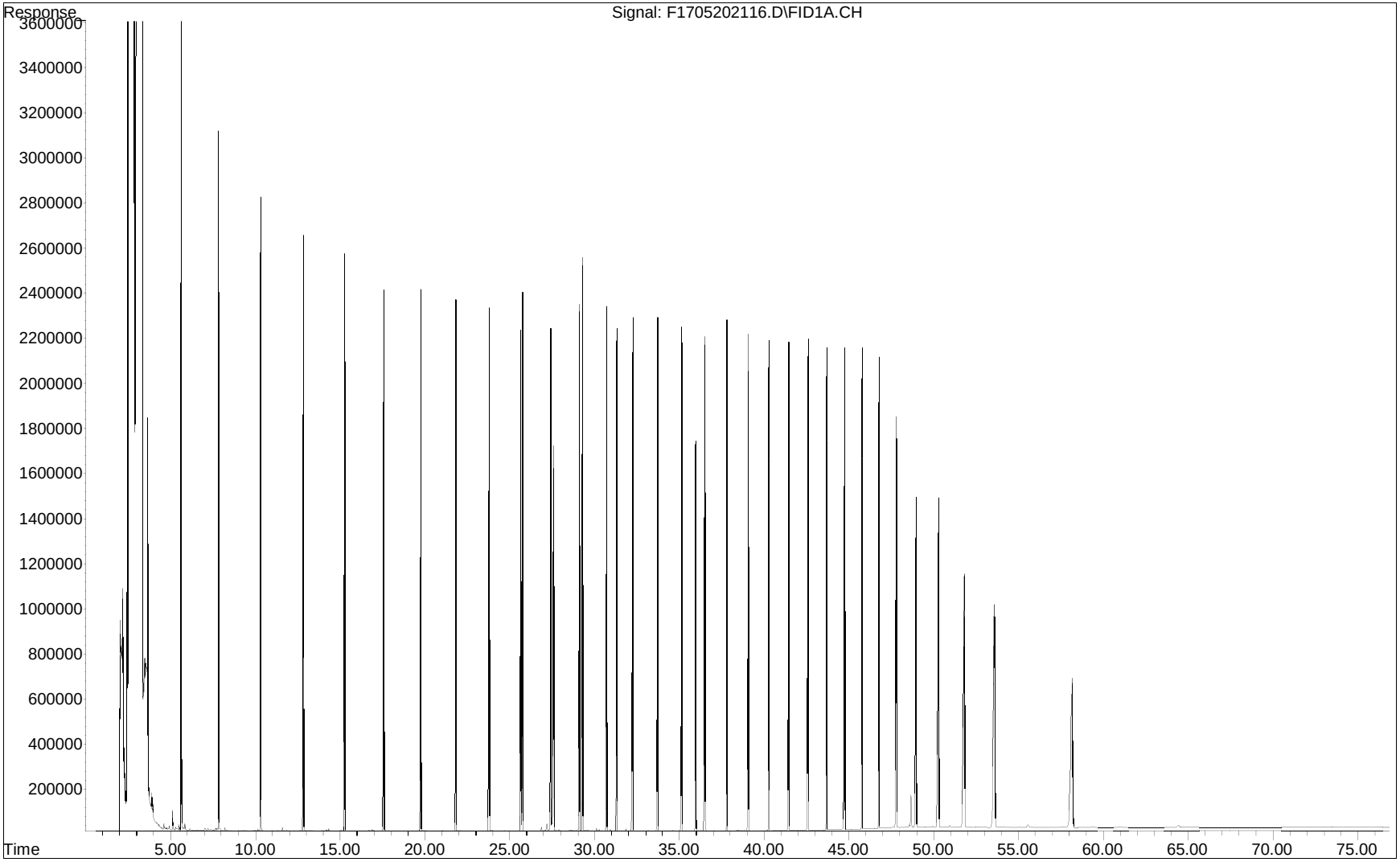
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.685	54272054	50.407 ug/mL M4
32) t	n-Hentriacontane (C31)	44.745	52296054	50.218 ug/mL M4
33) t	n-Dotriacontane (C32)	45.776	54818806	50.151 ug/mL M4
34) t	n-Tritriacontane (C33)	46.774	53208653	50.007 ug/mL M4
35) t	n-tetratriacontane (C34)	47.799	52932855	50.098 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.950	49392769	50.037 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.276	59548004	50.110 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.794	54257423	50.344 ug/mL M4
39) t	n-Octatriacontane (C38)	53.574	54921096	50.406 ug/mL M4
41) t	n-Tetracontane (C40)	58.145	54254862	50.454 ug/mL M4

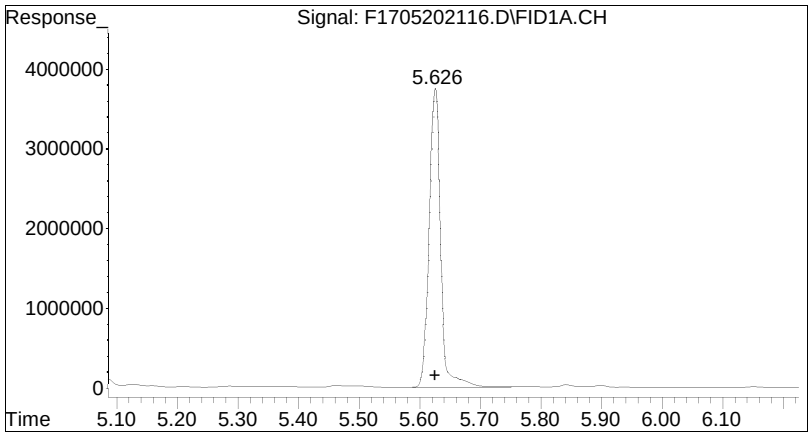
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

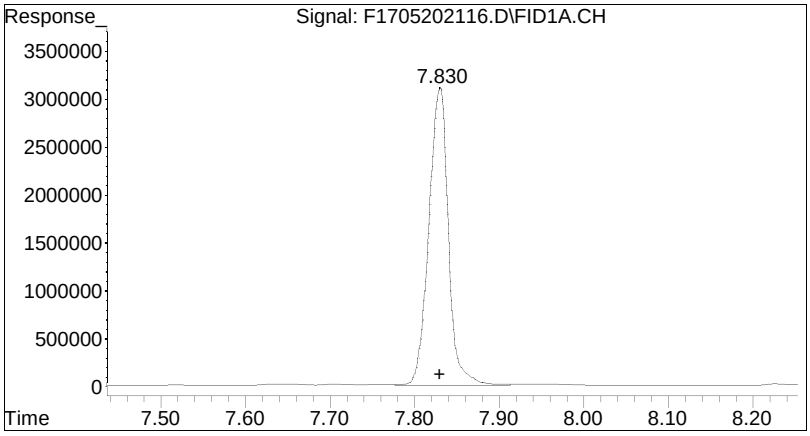
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202116.D
Operator : FID17:WR
Acquired : 20 May 2021 11:47 pm using AcqMethod FID17A.M
Sample Name: I1705202103F
Instrument: FID17
Misc Info : WG1505003,FRBD73,50ug/ml
Vial Number: 8
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M





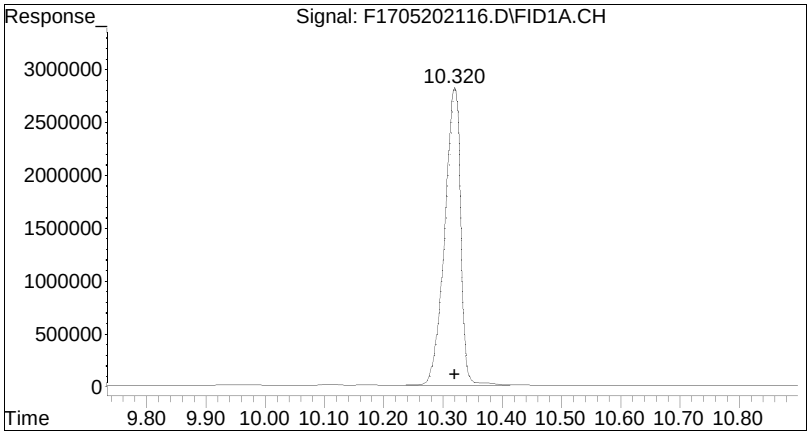
#2 n-Octane (C8)

R.T.: 5.626 min
Delta R.T.: 0.000 min
Response: 46862753
Conc: 50.85 ug/mL M4



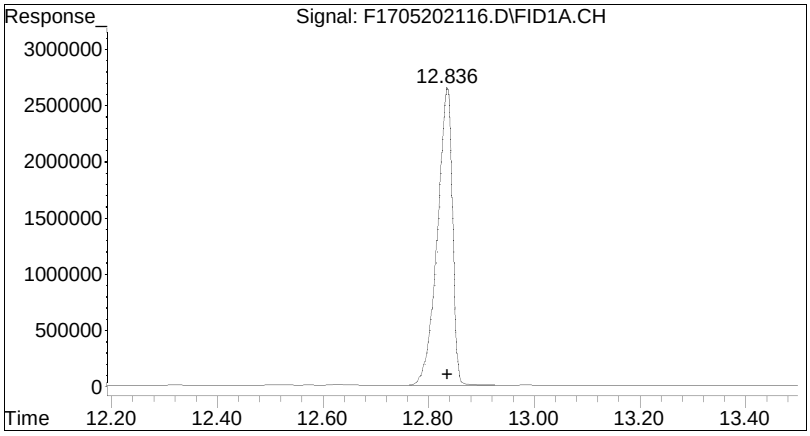
#3 n-Nonane (C9)

R.T.: 7.830 min
Delta R.T.: 0.000 min
Response: 48771924
Conc: 49.59 ug/mL M4



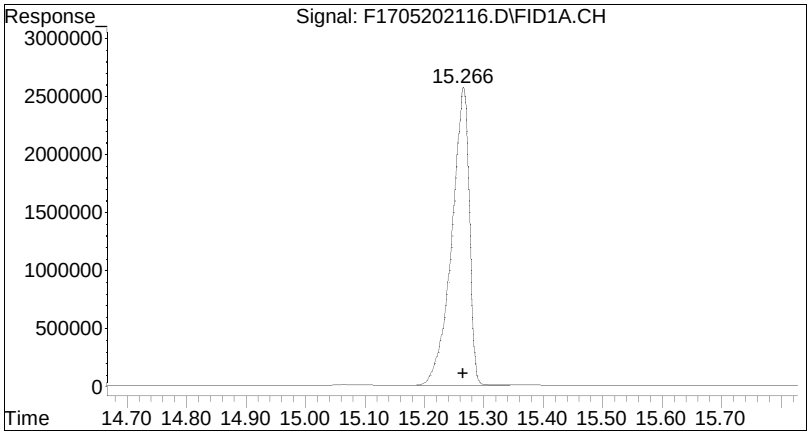
#4 n-Decane (C10)

R.T.: 10.320 min
Delta R.T.: 0.000 min
Response: 51075440
Conc: 50.73 ug/mL M4



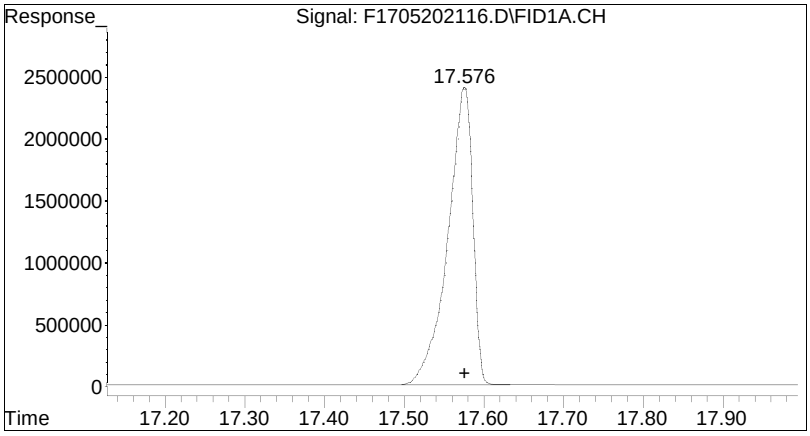
#5 n-Undecane (C11)

R.T.:	12.836 min
Delta R.T.:	0.000 min
Response:	50678912
Conc:	51.52 ug/mL M4



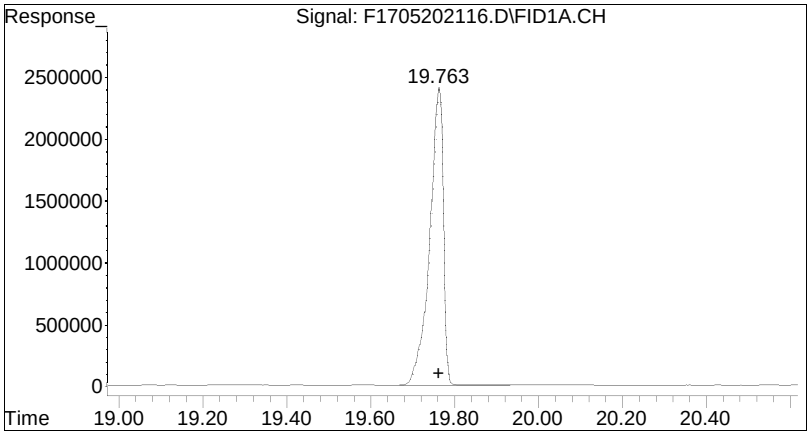
#6 n-Dodecane (C12)

R.T.: 15.266 min
Delta R.T.: 0.000 min
Response: 50957984
Conc: 51.66 ug/mL M4



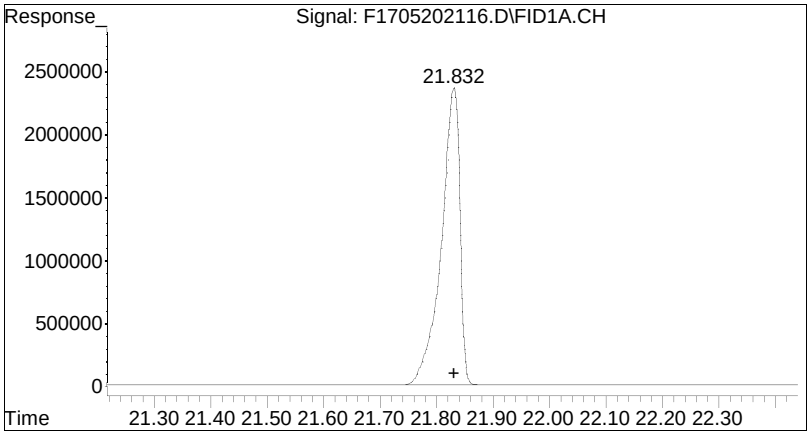
#7 n-Tridecane (C13)

R.T.: 17.576 min
Delta R.T.: 0.000 min
Response: 50845026
Conc: 51.41 ug/mL M4



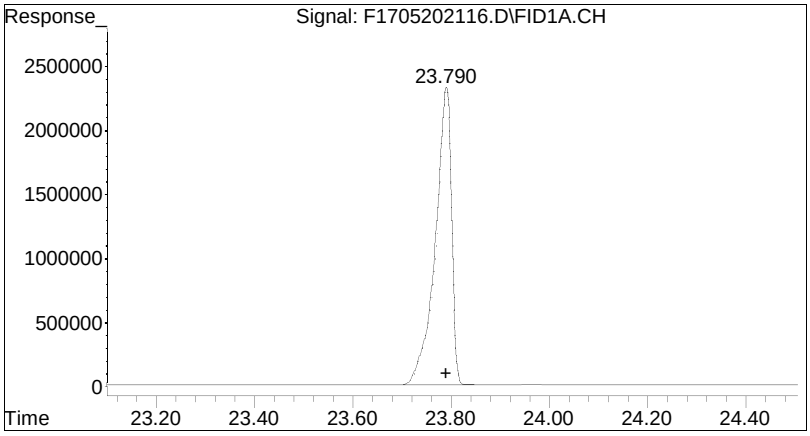
#9 n-Tetradecane (C14)

R.T.: 19.763 min
Delta R.T.: 0.000 min
Response: 52094599
Conc: 51.12 ug/mL M4



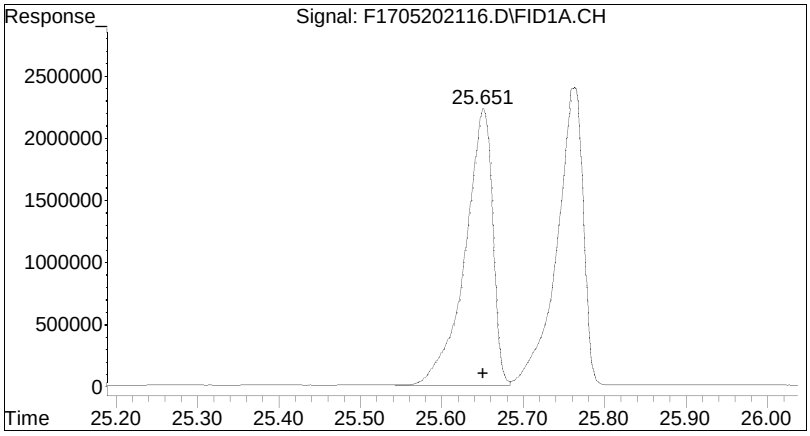
#11 n-Pentadecane (C15)

R.T.: 21.832 min
Delta R.T.: 0.000 min
Response: 52229146
Conc: 51.20 ug/mL M4



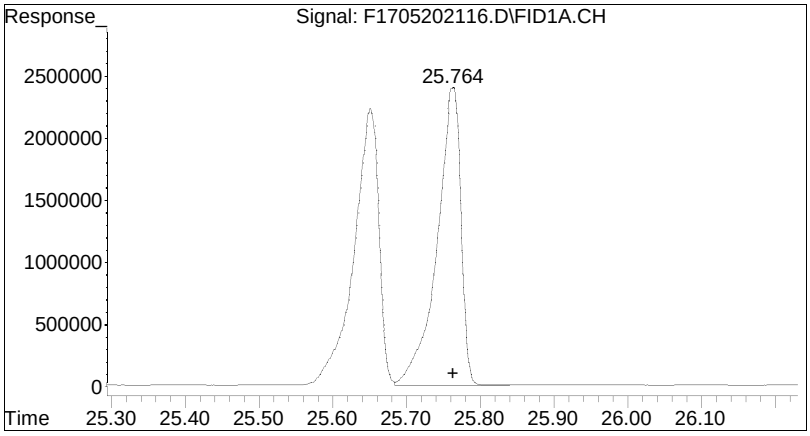
#12 n-Hexadecane (C16)

R.T.: 23.790 min
Delta R.T.: 0.000 min
Response: 51751351
Conc: 50.82 ug/mL M4



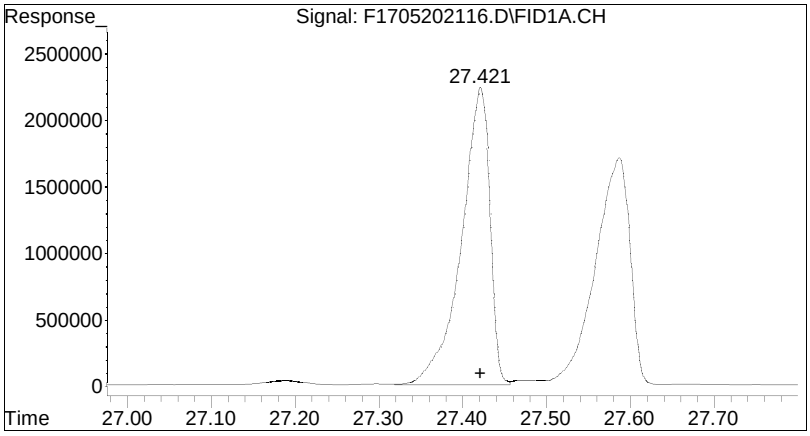
#14 n-Heptadecane (C17)

R.T.: 25.651 min
Delta R.T.: 0.000 min
Response: 52277862
Conc: 51.39 ug/mL M4



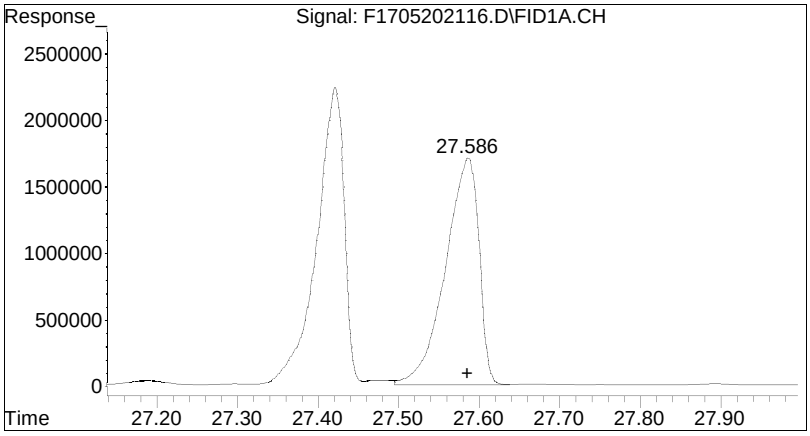
#15 Pristane

R.T.: 25.764 min
Delta R.T.: 0.000 min
Response: 53447132
Conc: 50.66 ug/mL M4



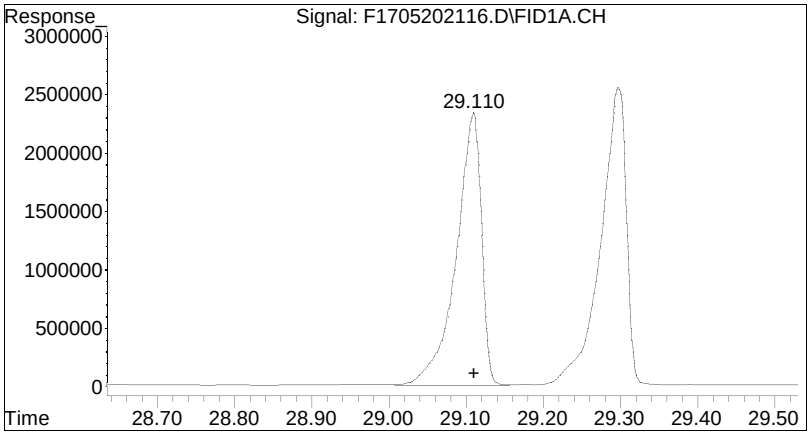
#16 n-Octadecane (C18)

R.T.: 27.421 min
Delta R.T.: 0.000 min
Response: 52735680
Conc: 50.98 ug/mL M4



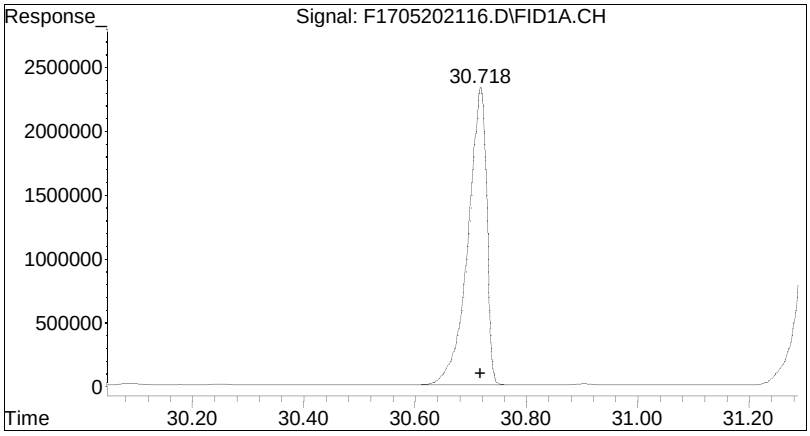
#17 Phytane

R.T.: 27.586 min
Delta R.T.: 0.000 min
Response: 49215356
Conc: 50.86 ug/mL M4



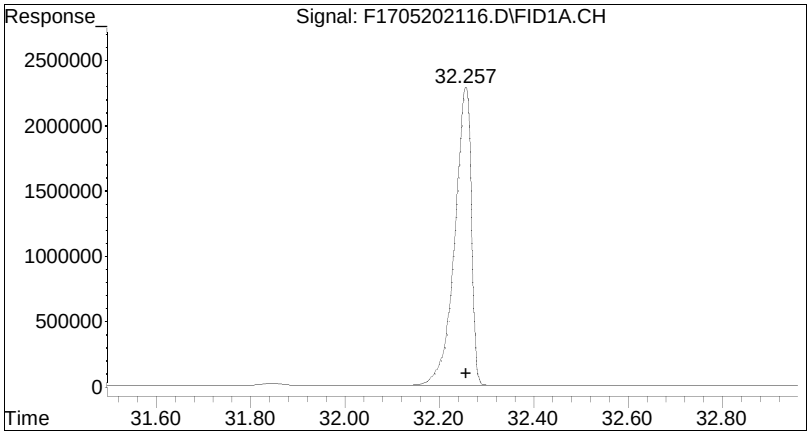
#18 n-Nonadecane (C19)

R.T.: 29.110 min
Delta R.T.: 0.000 min
Response: 52976616
Conc: 51.06 ug/mL M4



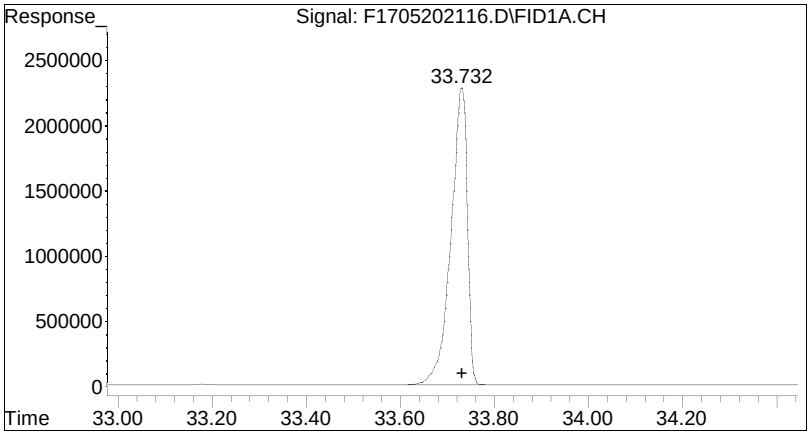
#20 n-Eicosane (C20)

R.T.: 30.718 min
Delta R.T.: 0.000 min
Response: 53233894
Conc: 51.02 ug/mL M4



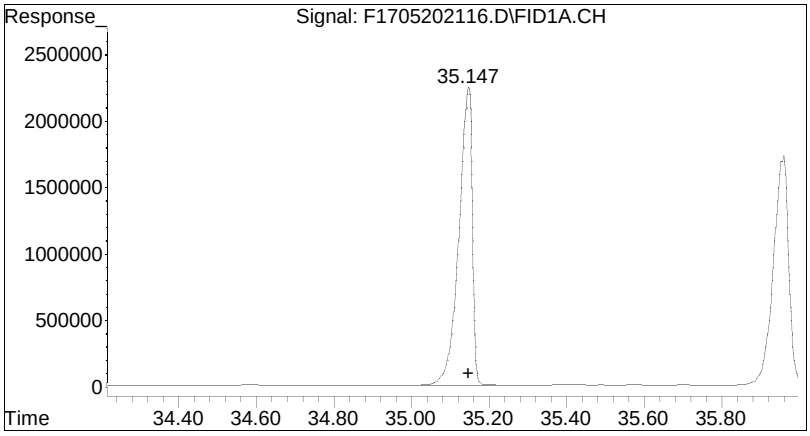
#21 n-Heneicosane (C21)

R.T.: 32.257 min
Delta R.T.: 0.000 min
Response: 53418501
Conc: 51.03 ug/mL M4



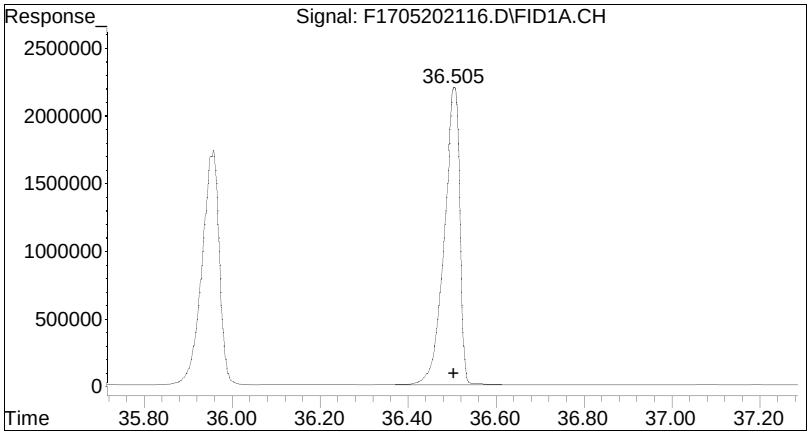
#22 n-Docosane (C22)

R.T.: 33.732 min
Delta R.T.: 0.000 min
Response: 53373025
Conc: 50.91 ug/mL M4



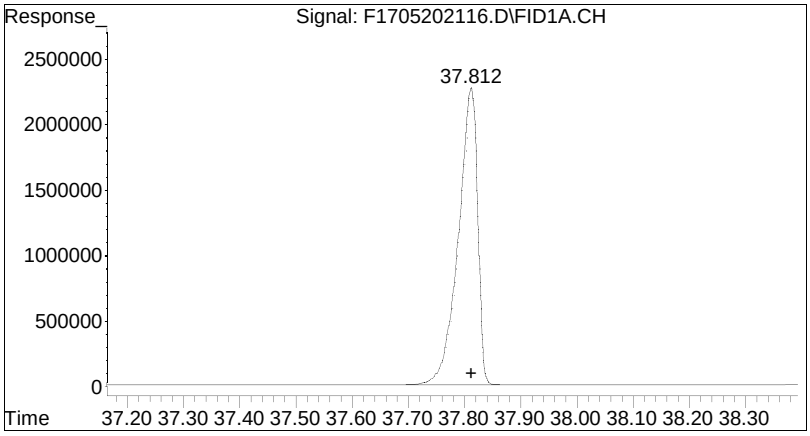
#23 n-Tricosane (C23)

R.T.: 35.147 min
Delta R.T.: 0.000 min
Response: 53358924
Conc: 50.79 ug/mL M4



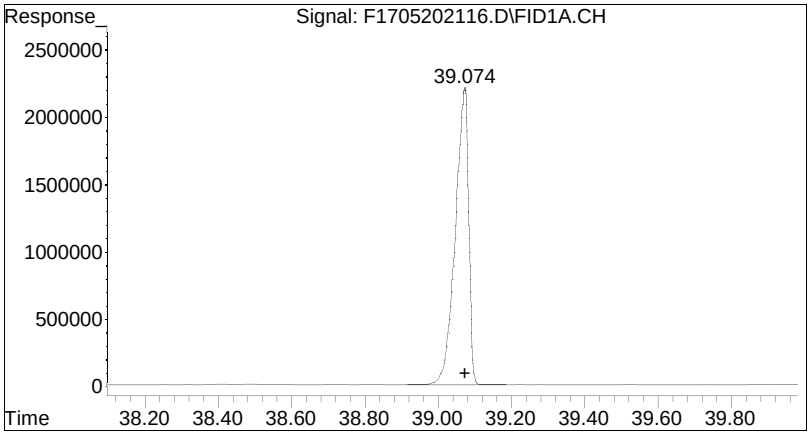
#25 n-Tetracosane (C24)

R.T.: 36.505 min
Delta R.T.: 0.000 min
Response: 53197968
Conc: 50.80 ug/mL M4



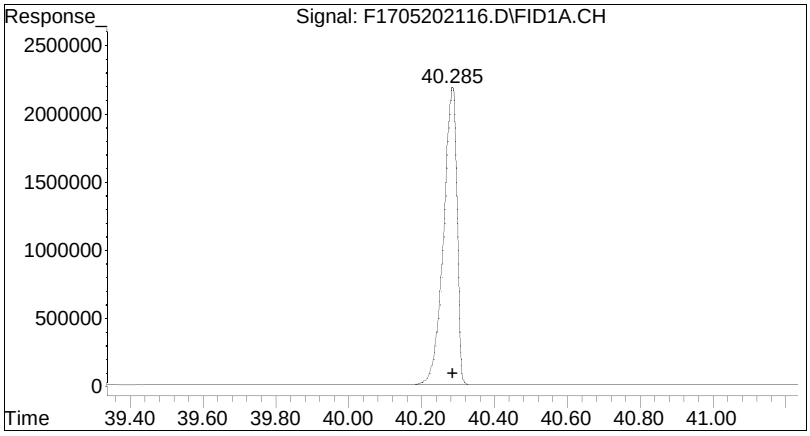
#26 n-Pentacosane (C25)

R.T.: 37.812 min
Delta R.T.: 0.000 min
Response: 52079856
Conc: 50.82 ug/mL M4



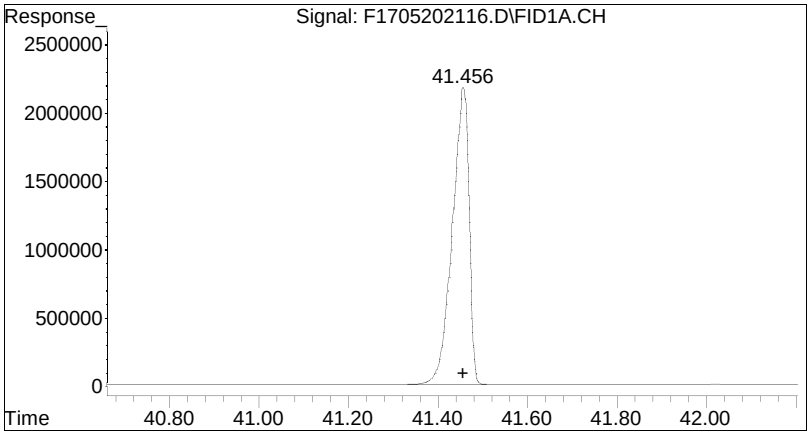
#27 n-Hexacosane (C26)

R.T.: 39.074 min
Delta R.T.: 0.000 min
Response: 53440082
Conc: 50.80 ug/mL M4



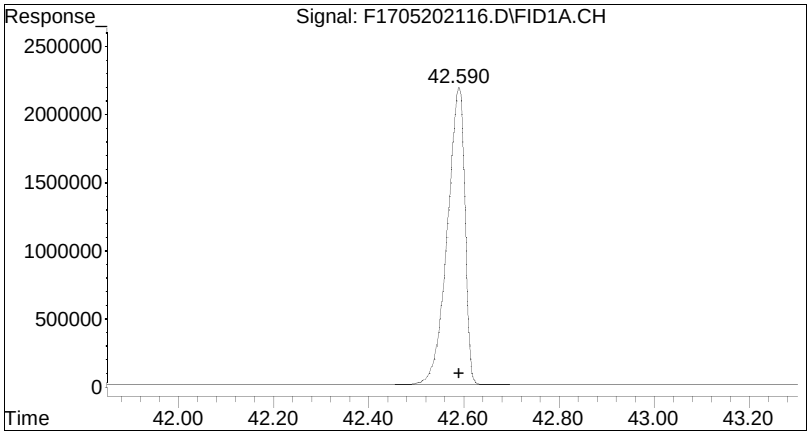
#28 n-Heptacosane (C27)

R.T.: 40.285 min
Delta R.T.: 0.000 min
Response: 53387647
Conc: 50.62 ug/mL M4



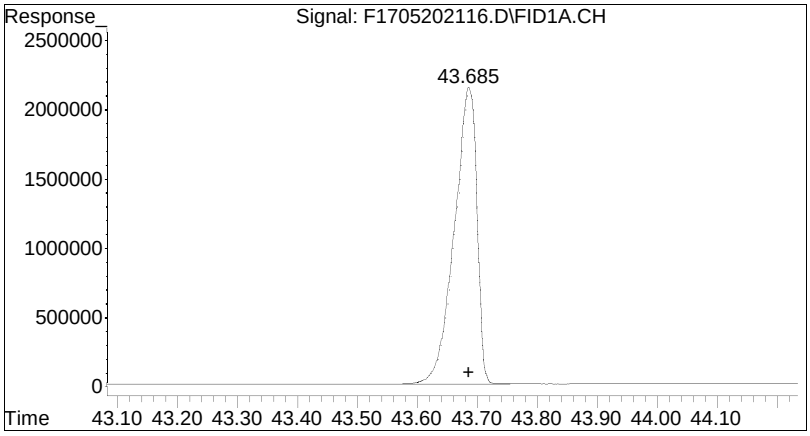
#29 n-Octacosane (C28)

R.T.: 41.456 min
Delta R.T.: 0.000 min
Response: 54460527
Conc: 49.81 ug/mL M4



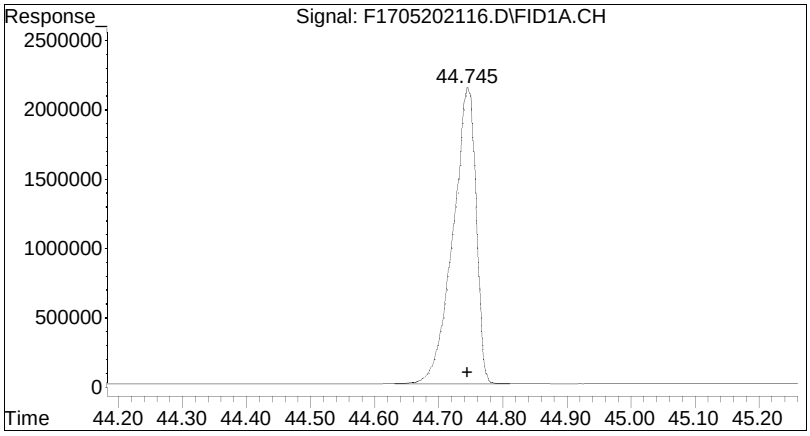
#30 n-Nonacosane (C29)

R.T.: 42.590 min
Delta R.T.: 0.000 min
Response: 54143436
Conc: 50.48 ug/mL M4



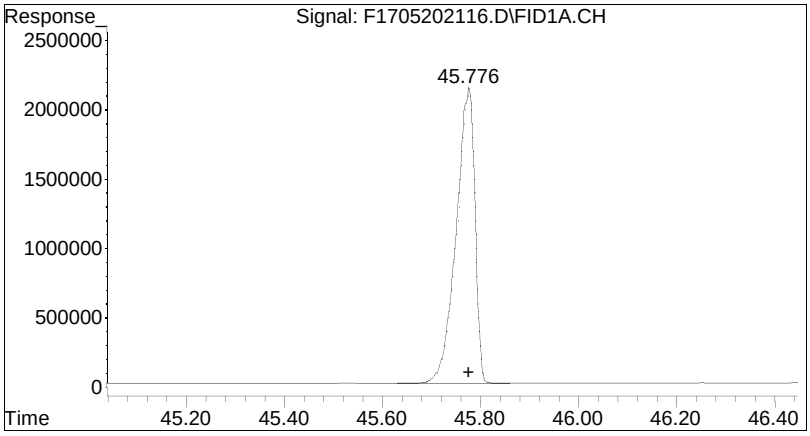
#31 n-Triacontane (C30)

R.T.: 43.685 min
Delta R.T.: 0.000 min
Response: 54272054
Conc: 50.41 ug/mL M4



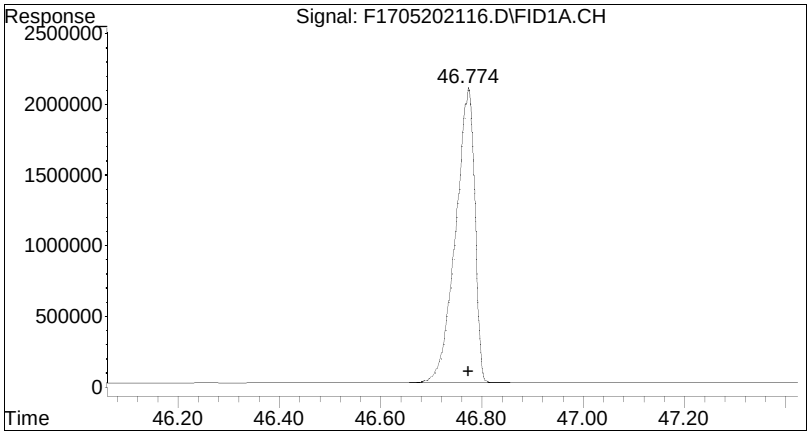
#32 n-Hentriacontane (C31)

R.T.: 44.745 min
Delta R.T.: 0.000 min
Response: 52296054
Conc: 50.22 ug/mL M4



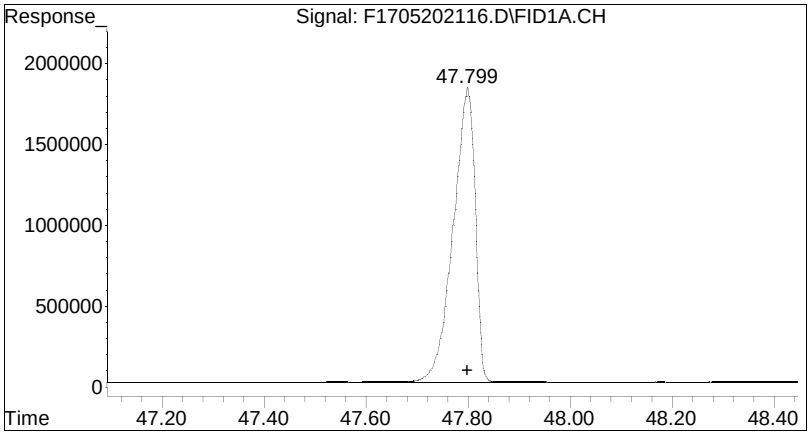
#33 n-Dotriacontane (C32)

R.T.: 45.776 min
Delta R.T.: 0.000 min
Response: 54818806
Conc: 50.15 ug/mL M4



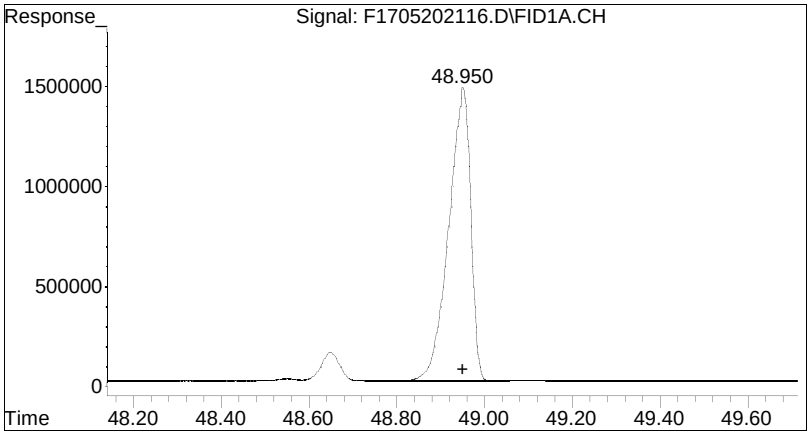
#34 n-Tritriacontane (C33)

R.T.: 46.774 min
Delta R.T.: 0.000 min
Response: 53208653
Conc: 50.01 ug/mL M4



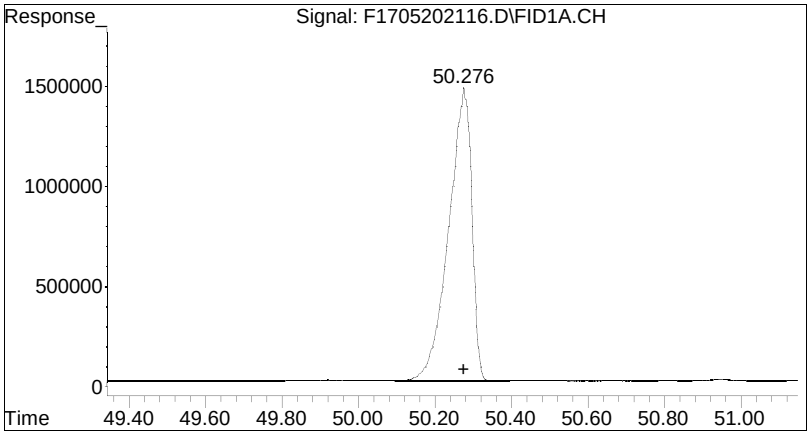
#35 n-tetratriacontane (C34)

R.T.: 47.799 min
Delta R.T.: 0.000 min
Response: 52932855
Conc: 50.10 ug/mL M4



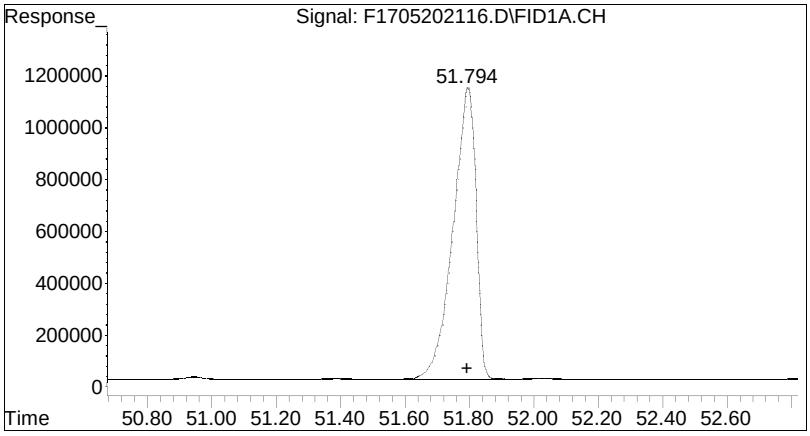
#36 n-Pentatriacontane (C35)

R.T.: 48.950 min
Delta R.T.: 0.000 min
Response: 49392769
Conc: 50.04 ug/mL M4



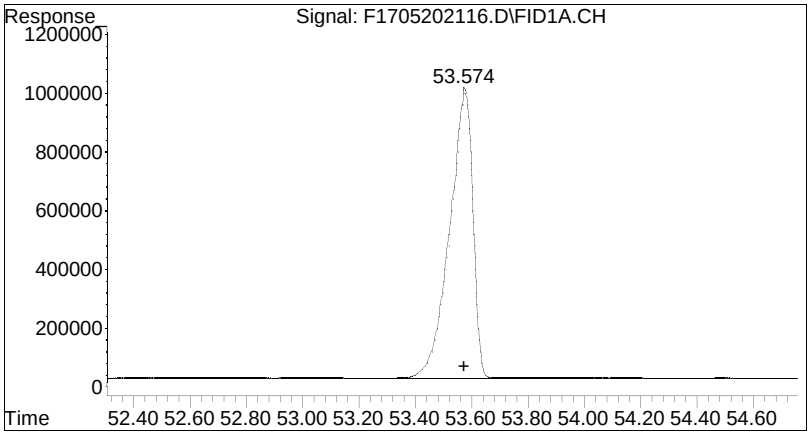
#37 n-Hexatriacontane (C36)

R.T.: 50.276 min
Delta R.T.: 0.000 min
Response: 59548004
Conc: 50.11 ug/mL M4



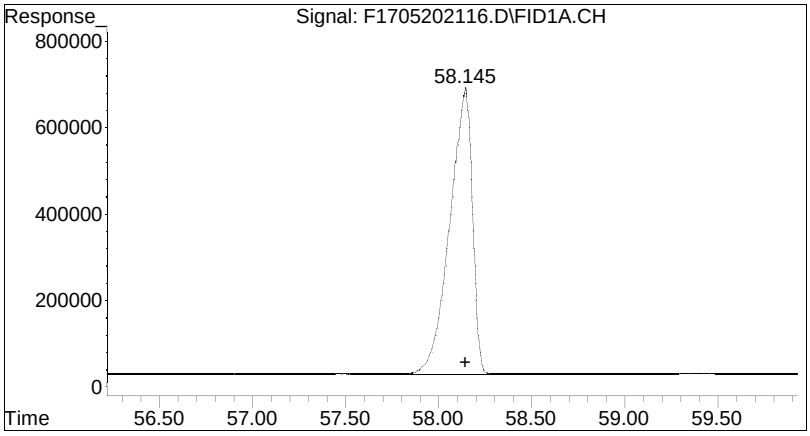
#38 n-Heptatriacontane (C37)

R.T.: 51.794 min
Delta R.T.: 0.000 min
Response: 54257423
Conc: 50.34 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.: 53.574 min
Delta R.T.: 0.000 min
Response: 54921096
Conc: 50.41 ug/mL M4



#41 n-Tetracontane (C40)

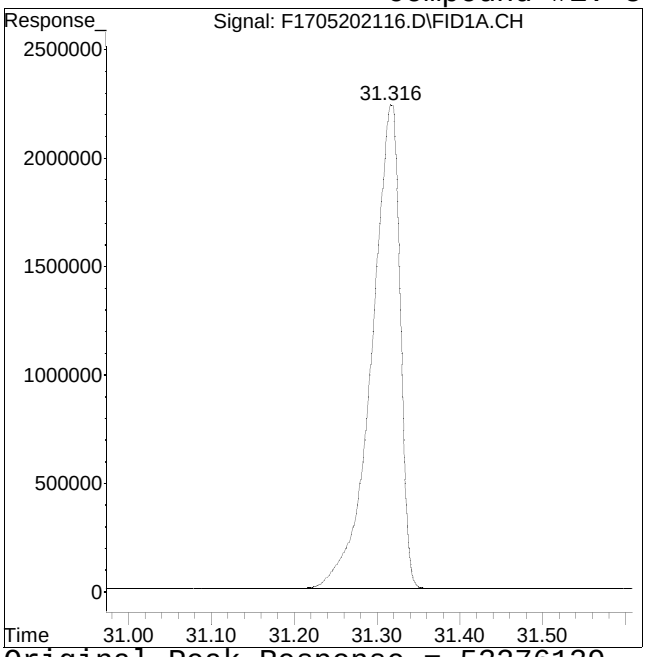
R.T.: 58.145 min
Delta R.T.: 0.000 min
Response: 54254862
Conc: 50.45 ug/mL M4

Manual Integration/Negative Proof Report

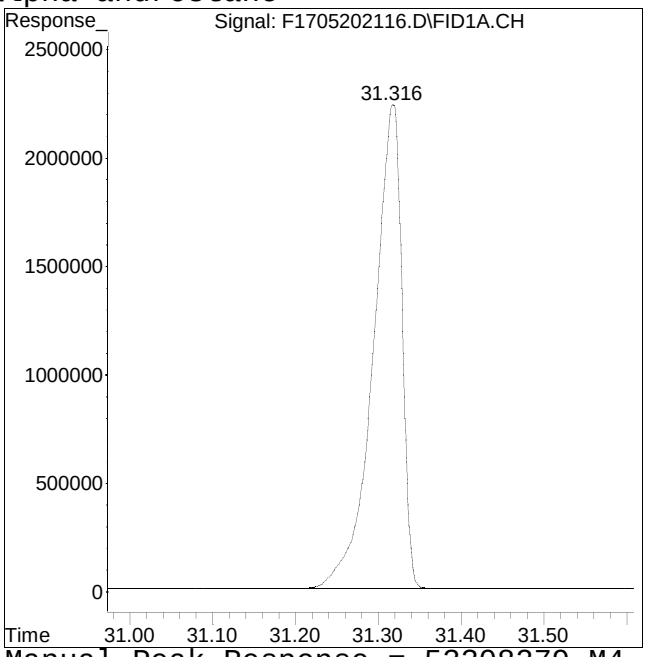
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 53276139



Manual Peak Response = 53308279 M4

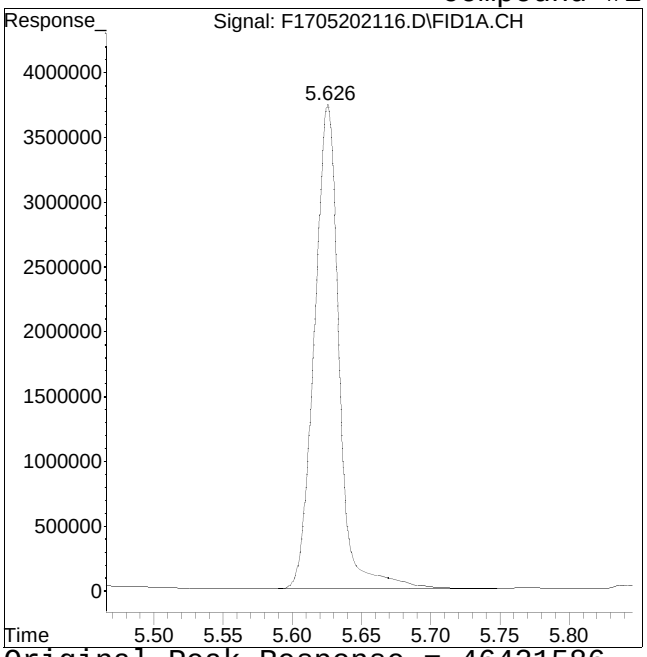
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

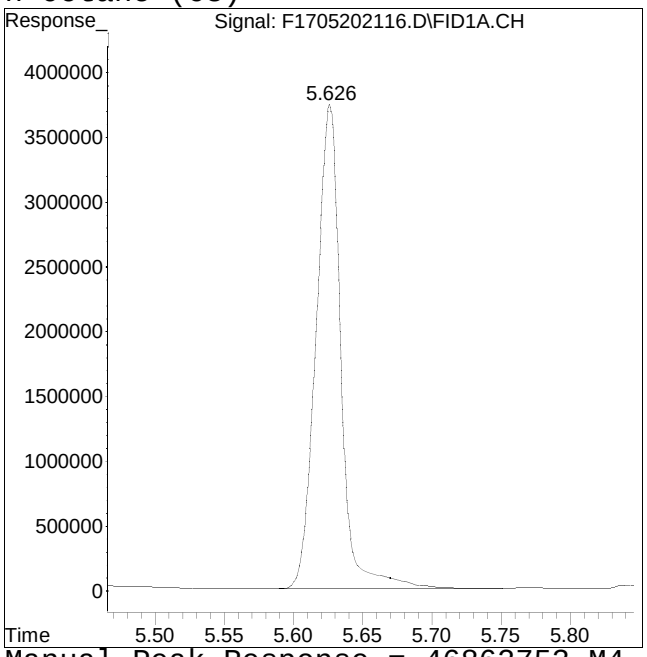
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #2: n-Octane (C8)



Original Peak Response = 46421586



Manual Peak Response = 46862753 M4

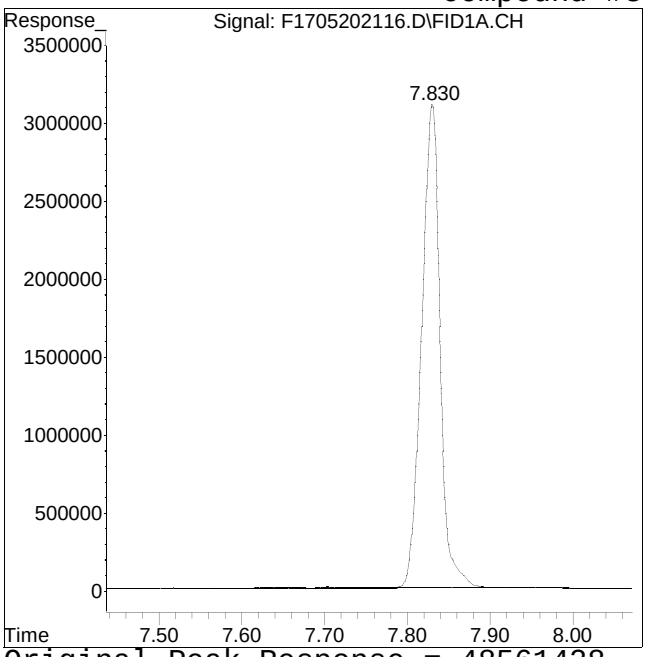
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

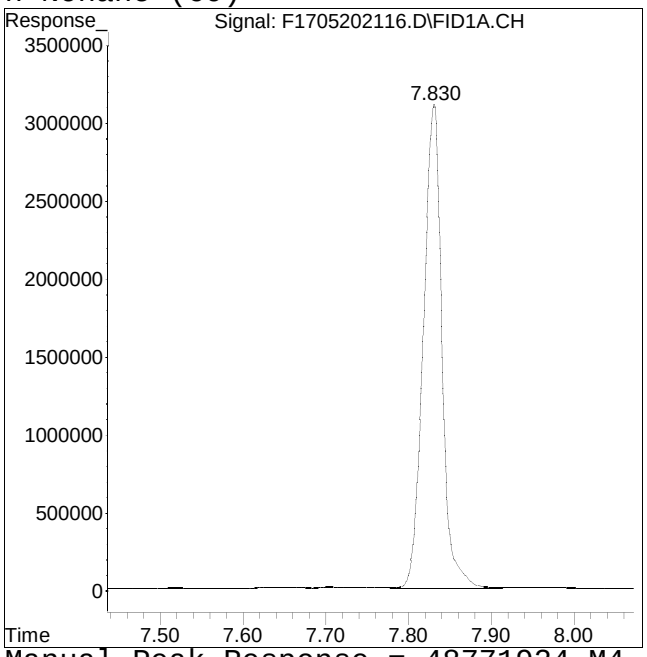
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 48561428



Manual Peak Response = 48771924 M4

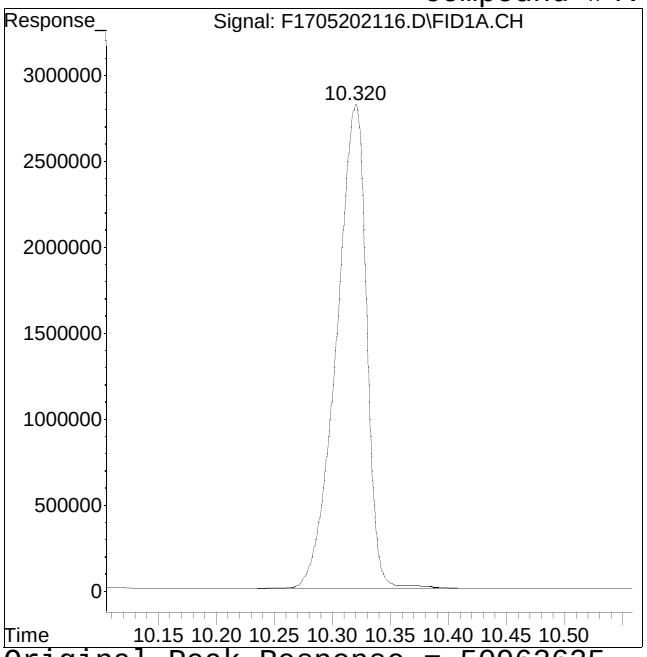
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

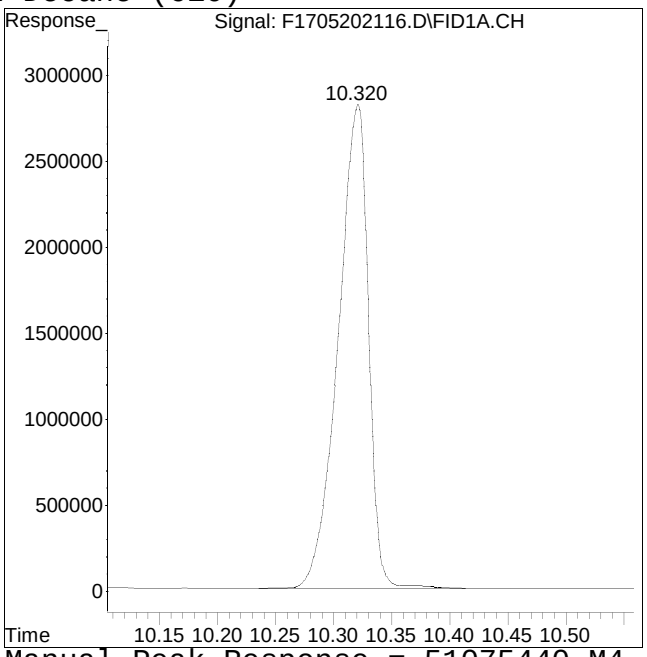
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #4: n-Decane (C10)



Original Peak Response = 50962625



Manual Peak Response = 51075440 M4

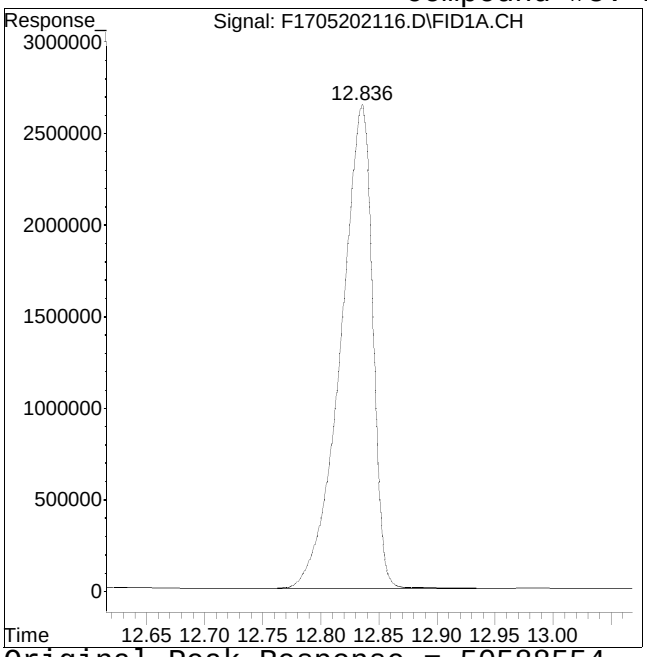
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

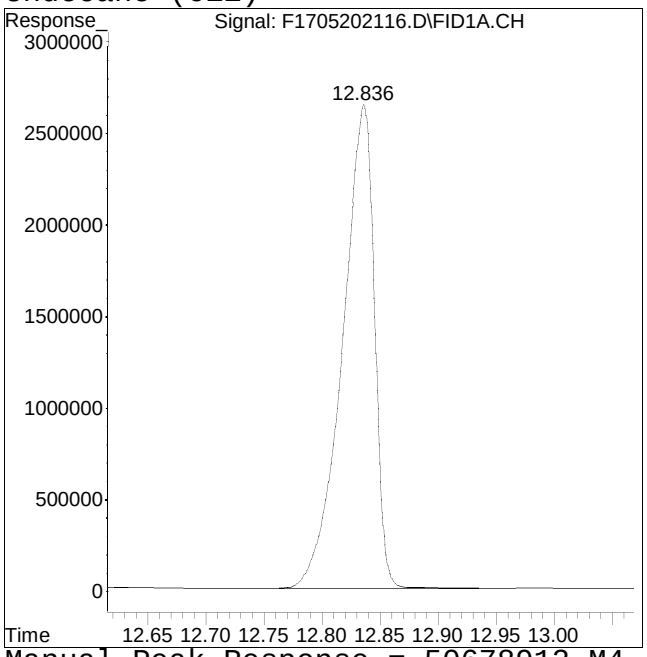
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 50588554



Manual Peak Response = 50678912 M4

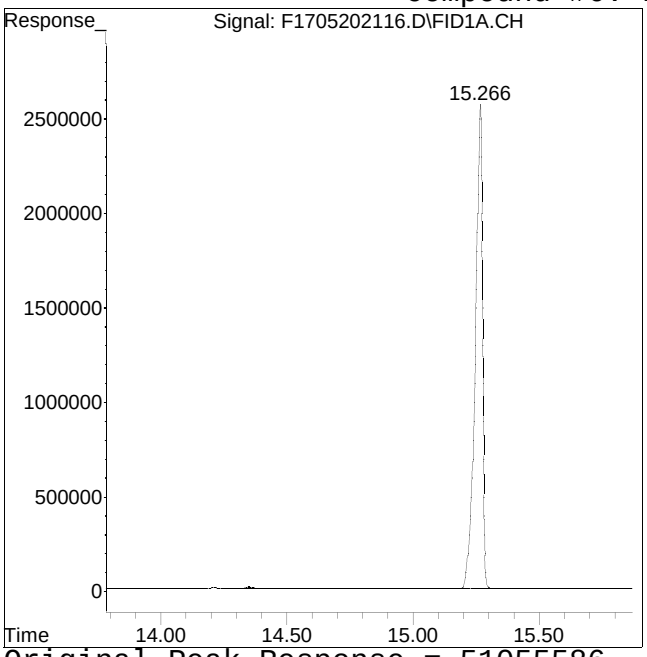
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

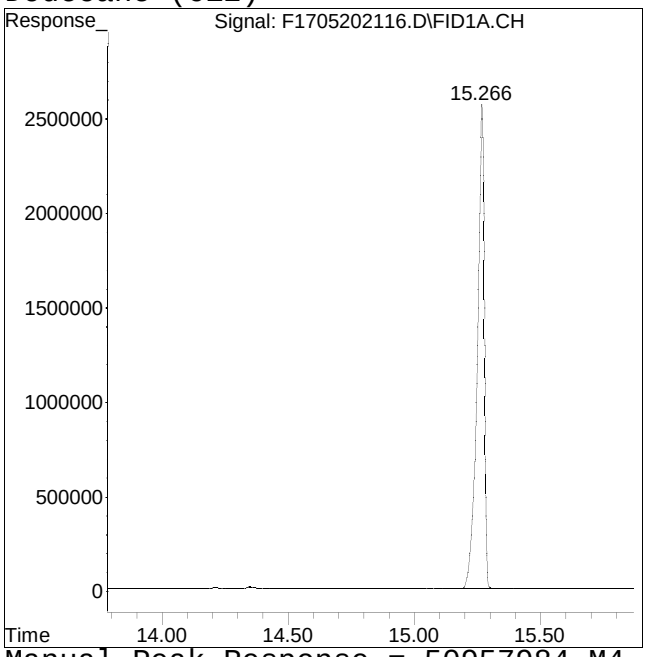
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 51055586



Manual Peak Response = 50957984 M4

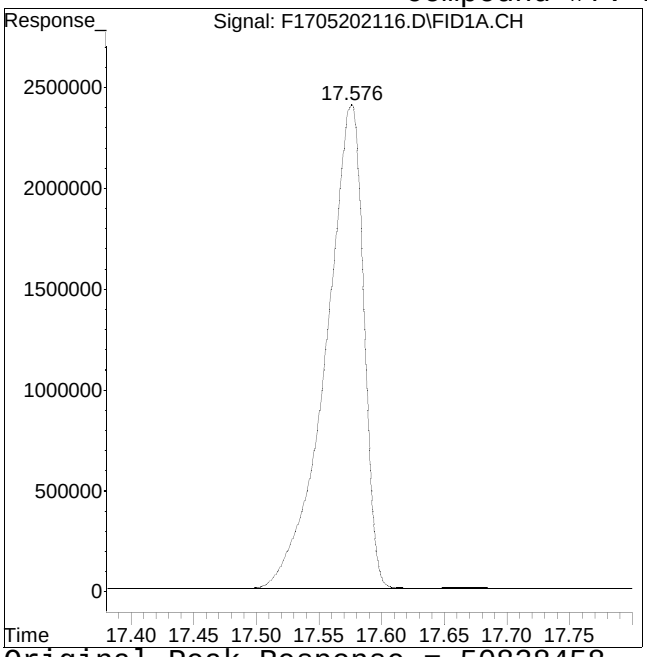
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

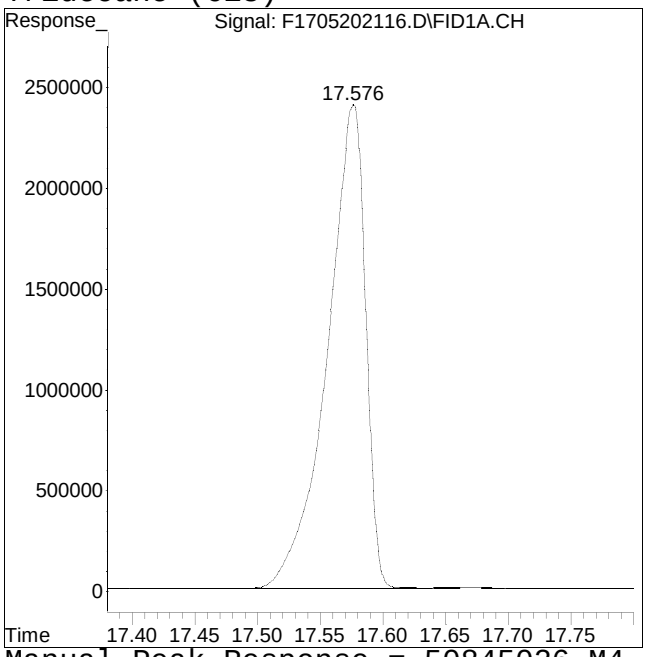
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 50838458



Manual Peak Response = 50845026 M4

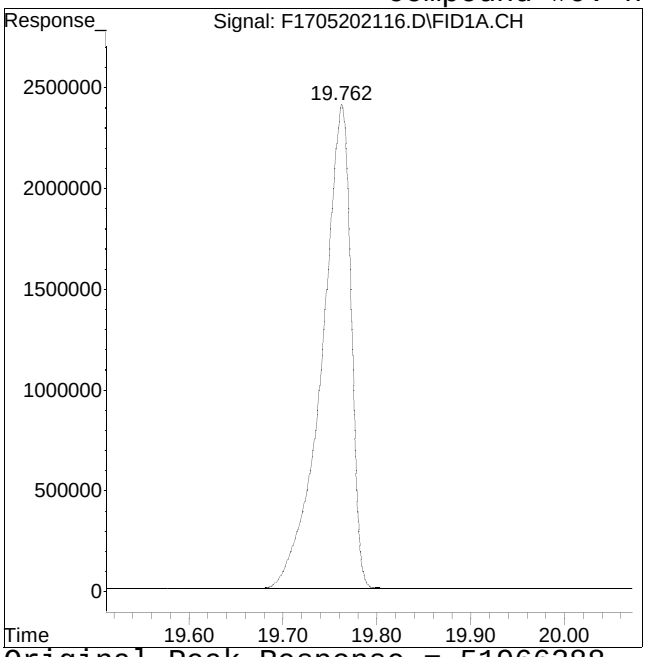
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

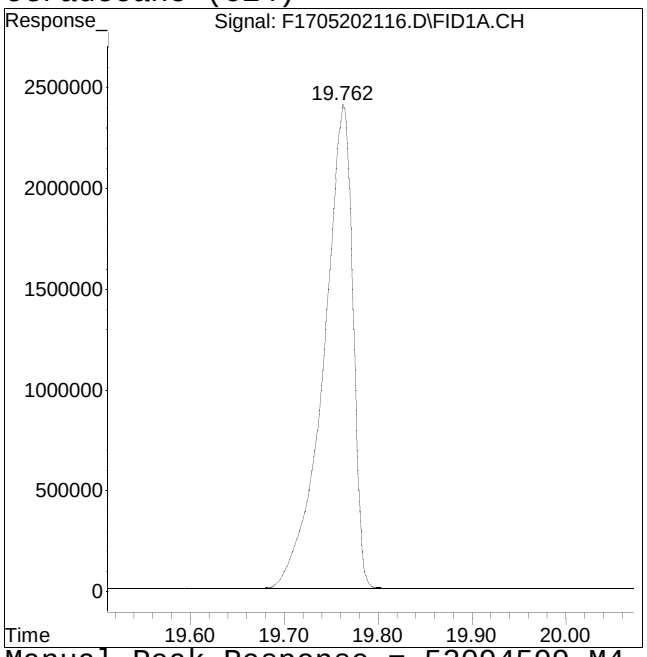
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 51966388



Manual Peak Response = 52094599 M4

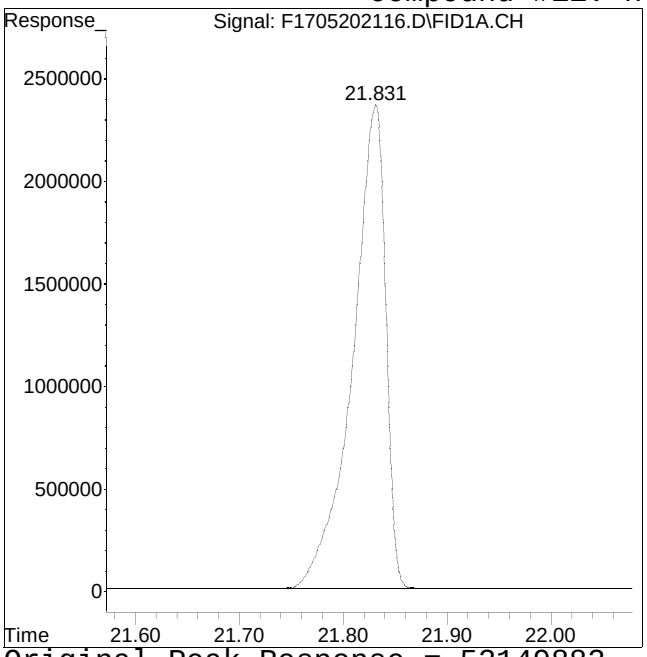
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

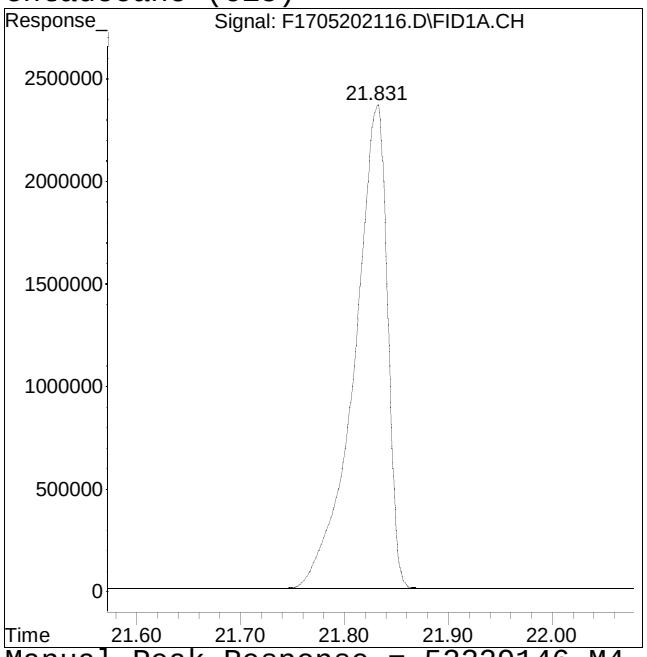
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 52149882



Manual Peak Response = 52229146 M4

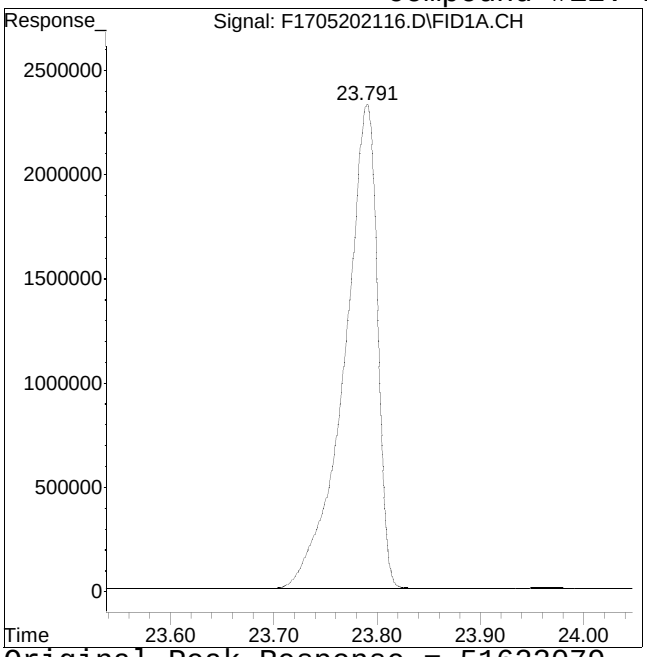
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

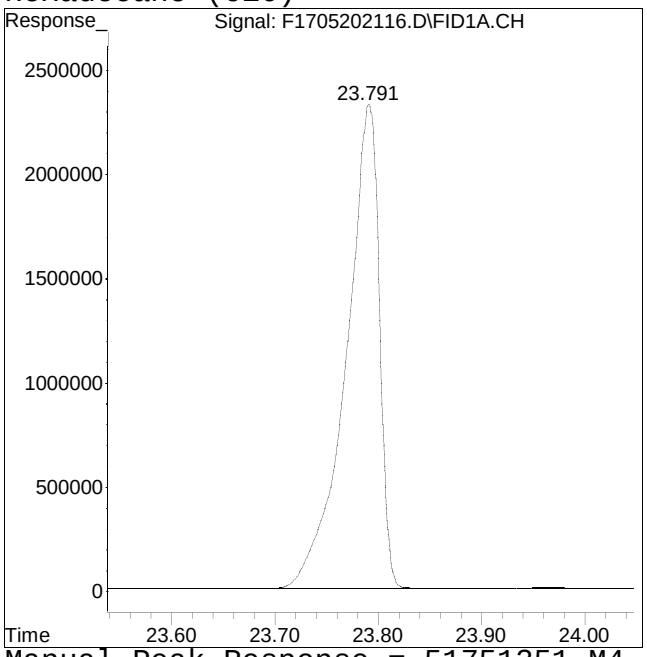
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 51623079



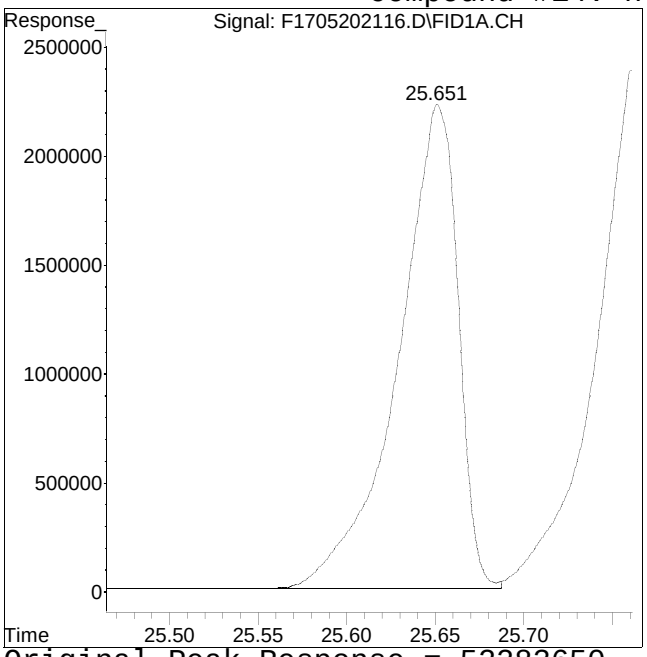
Manual Peak Response = 51751351 M4

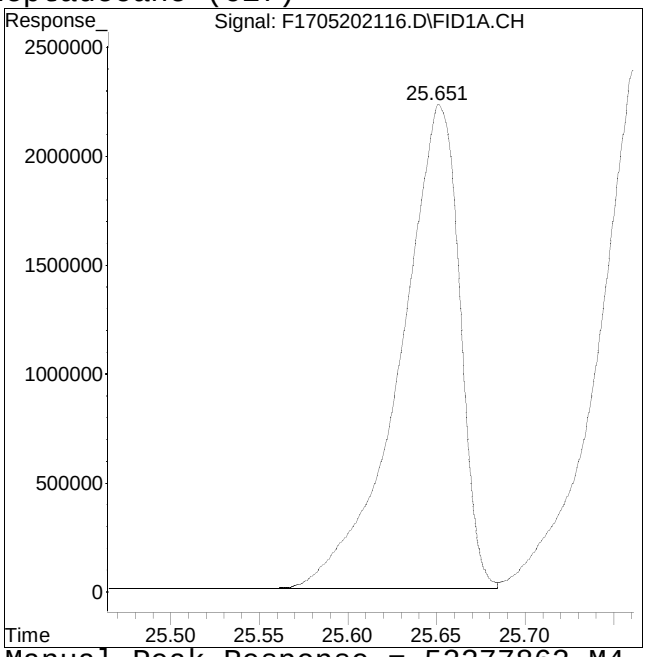
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path	: O:\Forensics\Data\FID17\202Q	Method	: HC17052021F_DRO.M
Data File	: F1705202116.D	Operator	: FID17:WR
Date Inj'd	: 5/20/2021 11:47 pm	Instrument	: FID17
Sample	: I1705202103F	Quant Date	: 5/28/2021 2:02 pm

Compound #14: n-Heptadecane (C17)





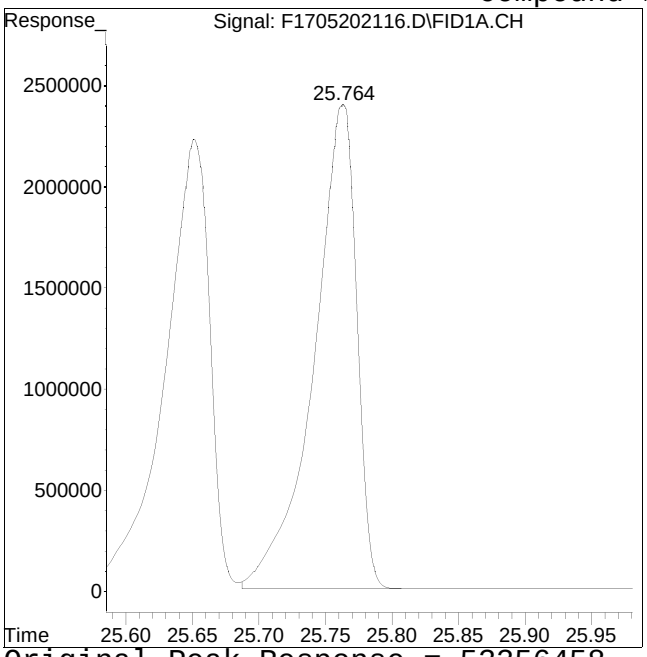
Original Peak Response = 52283650 Manual Peak Response = 52277862 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

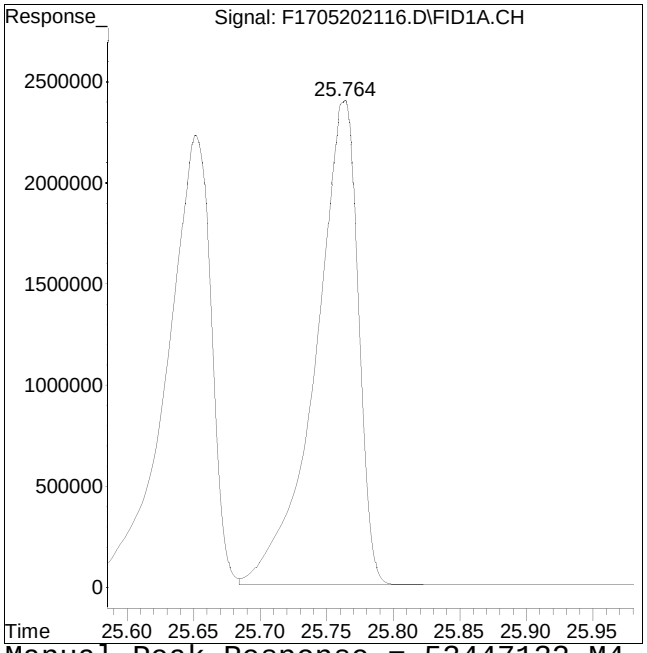
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #15: Pristane



Original Peak Response = 53356458



Manual Peak Response = 53447132 M4

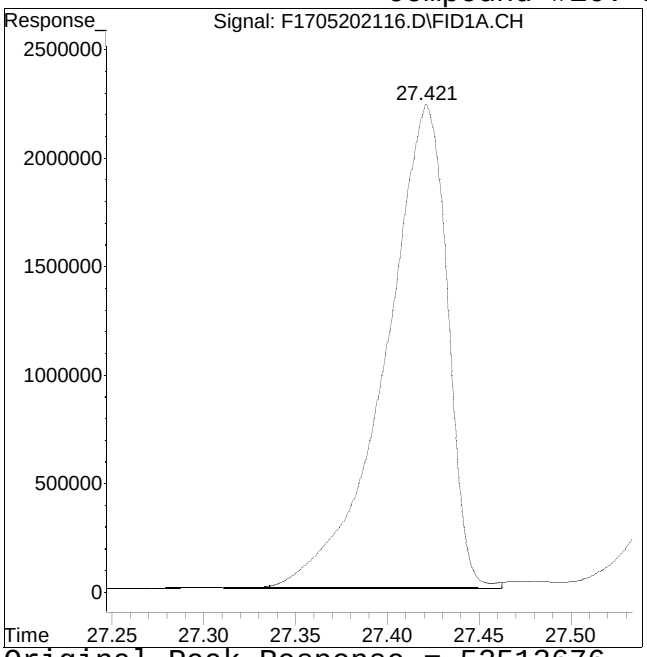
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

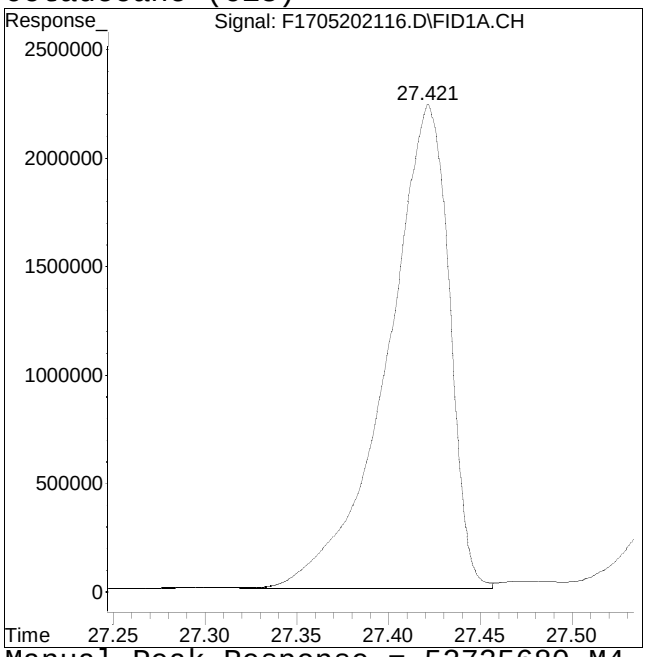
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 52513676



Manual Peak Response = 52735680 M4

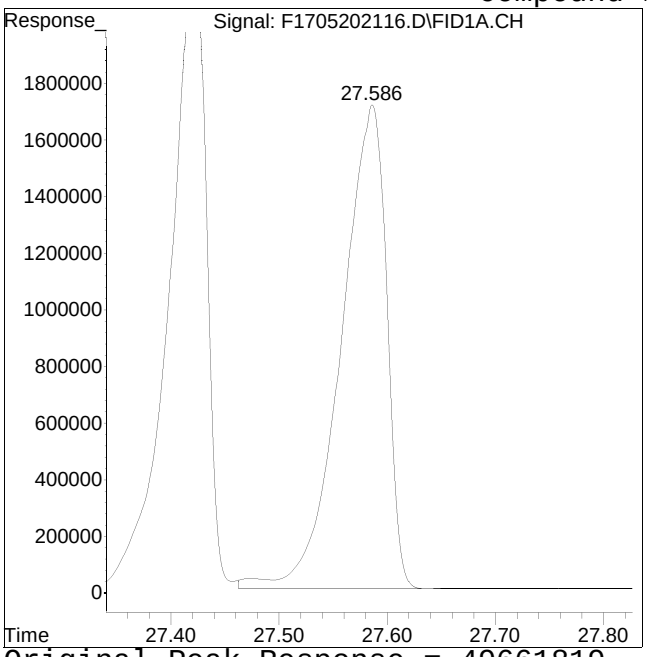
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

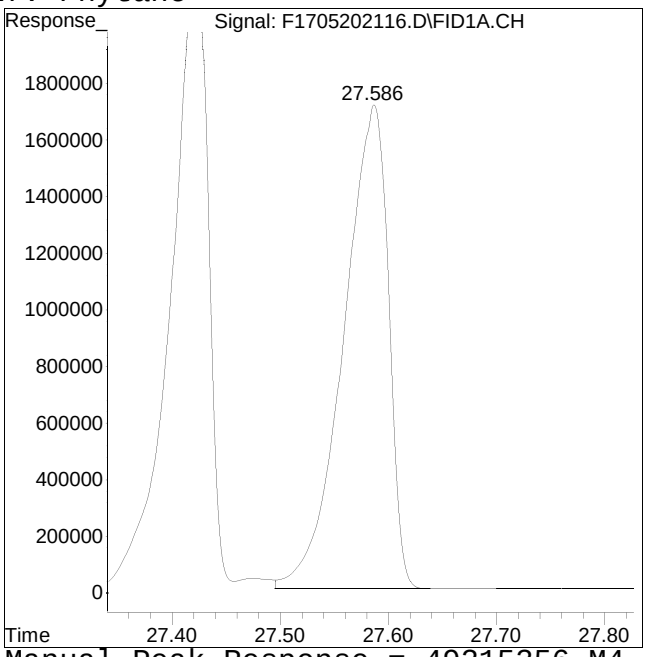
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #17: Phytane



Original Peak Response = 49661819



Manual Peak Response = 49215356 M4

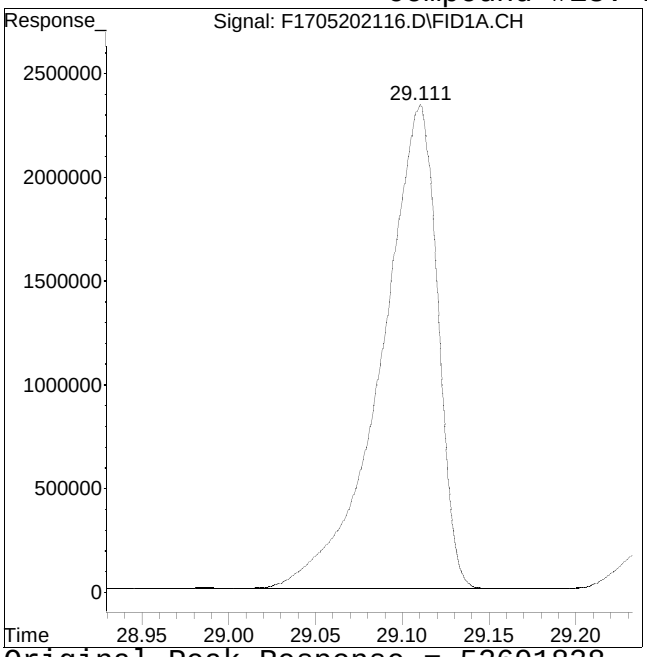
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

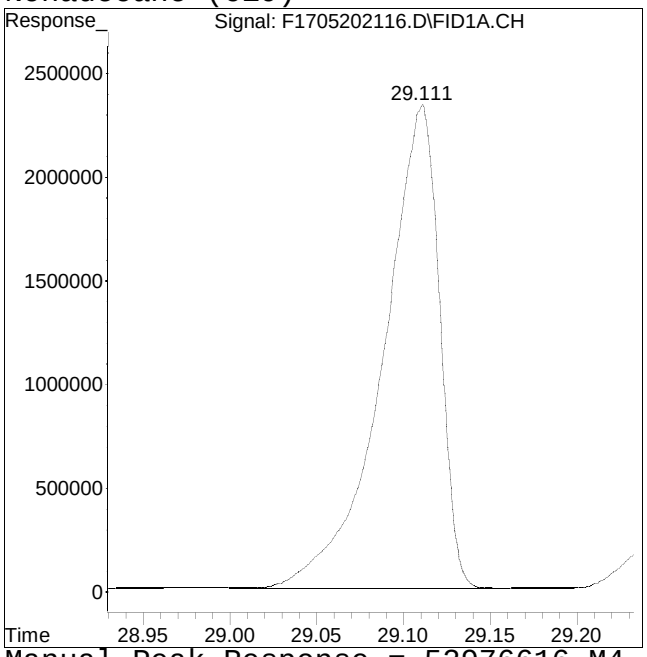
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 52691838



Manual Peak Response = 52976616 M4

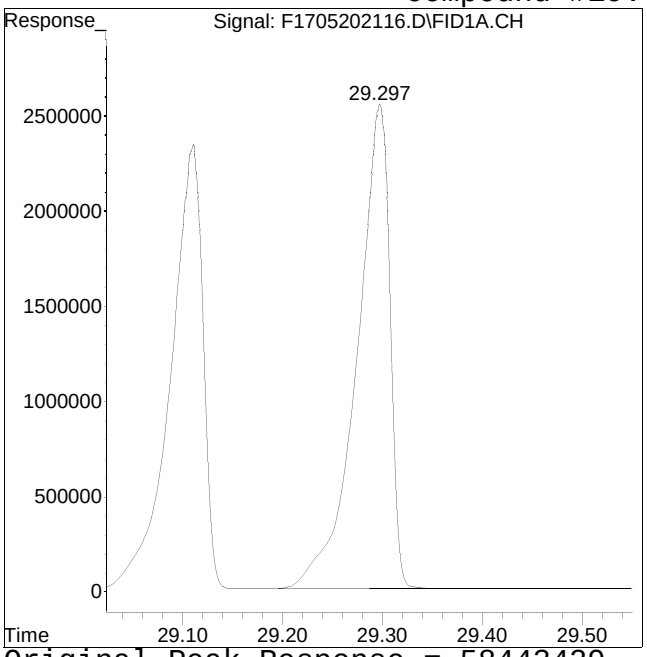
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

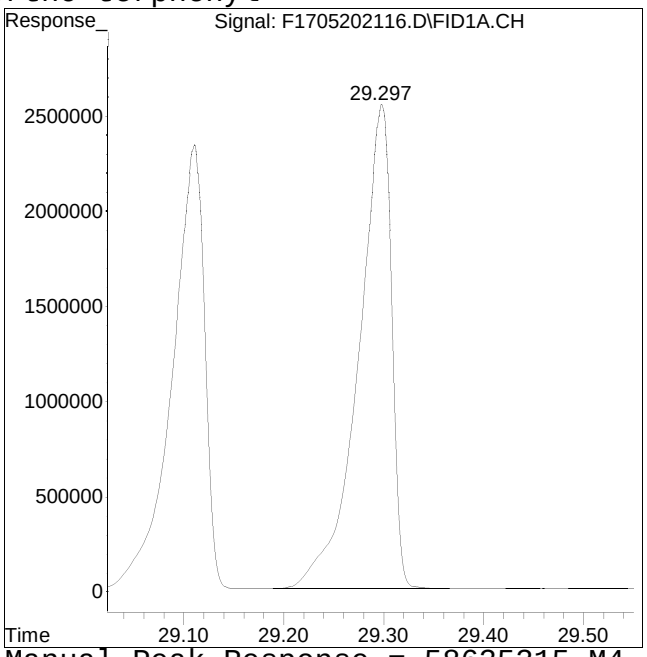
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #19: ortho-terphenyl



Original Peak Response = 58443429



Manual Peak Response = 58635315 M4

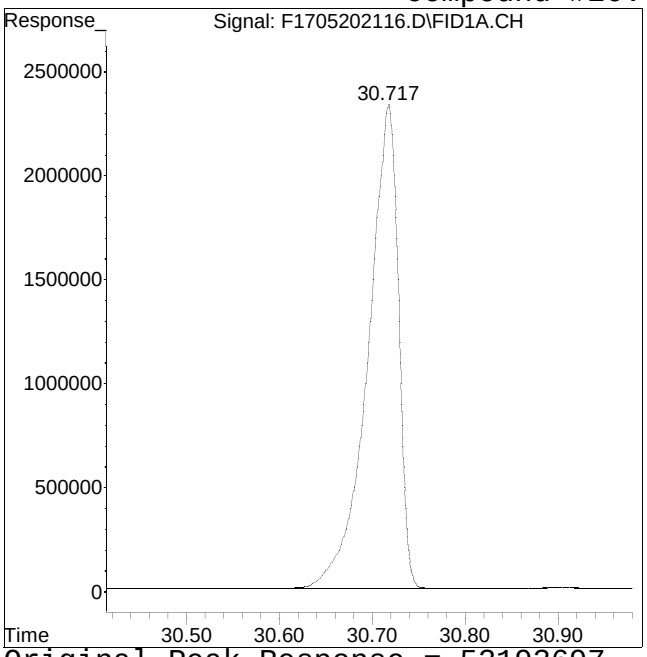
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

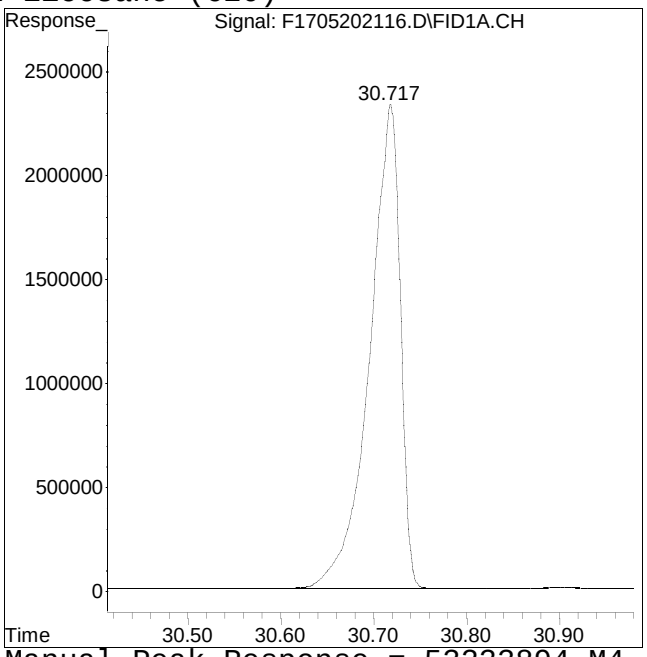
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 53193697



Manual Peak Response = 53233894 M4

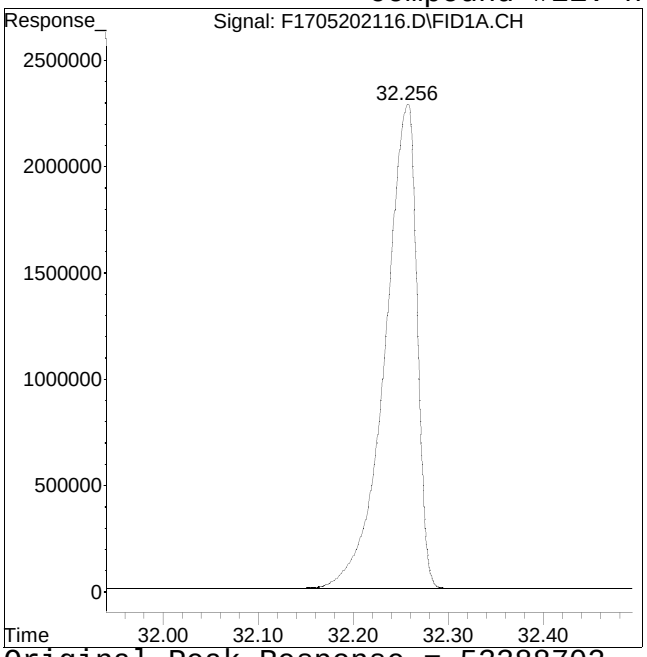
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

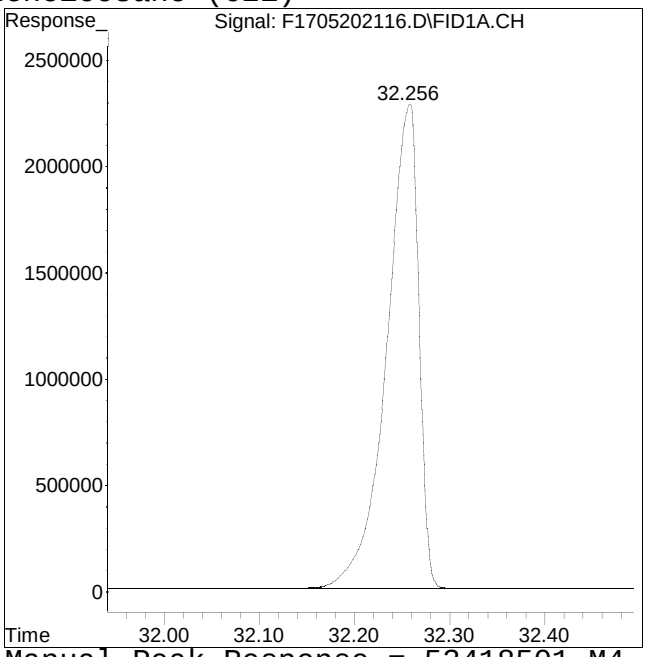
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 53388702



Manual Peak Response = 53418501 M4

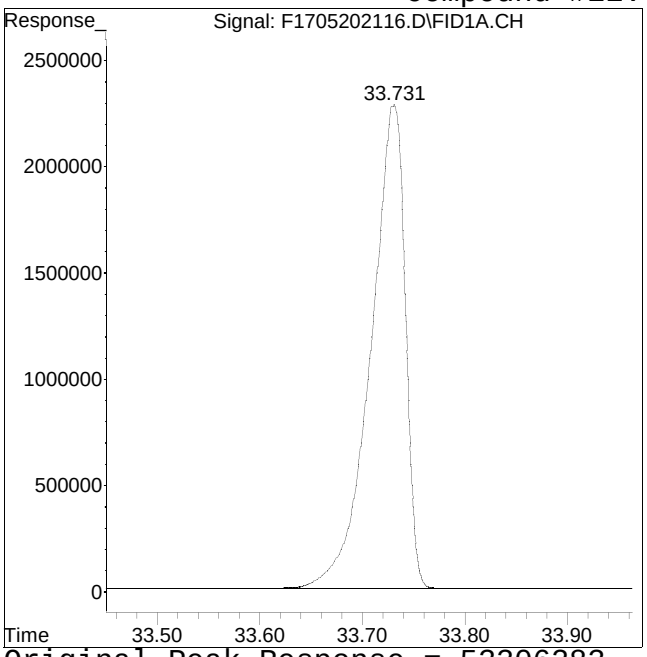
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

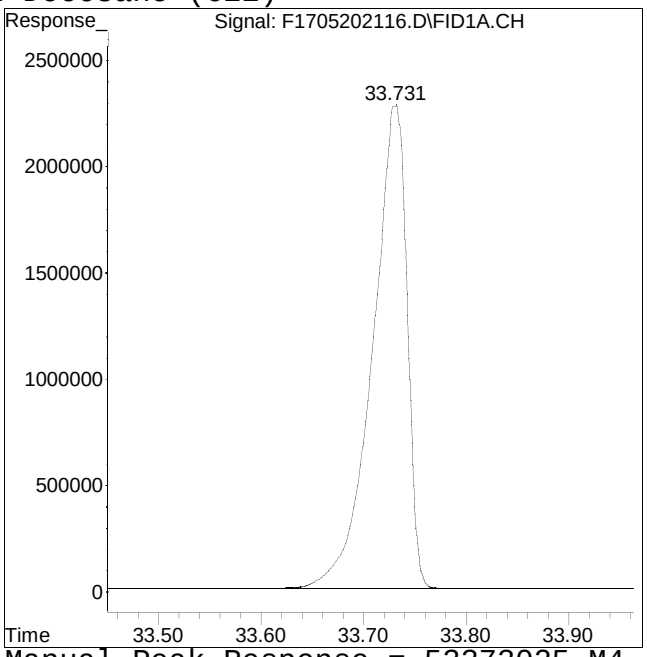
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 53306283



Manual Peak Response = 53373025 M4

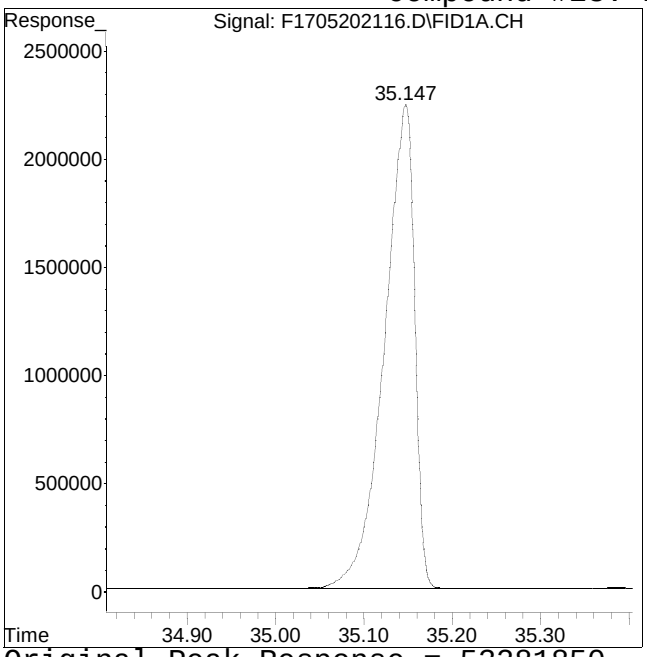
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

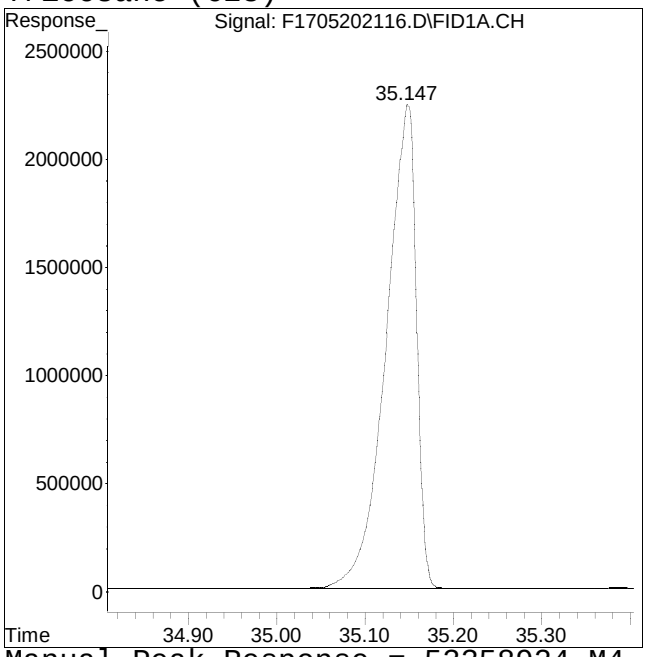
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 53281850



Manual Peak Response = 53358924 M4

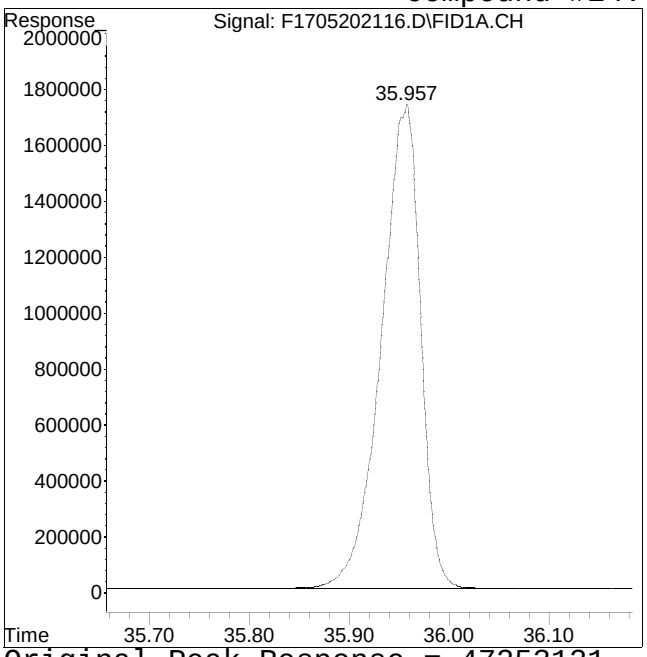
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

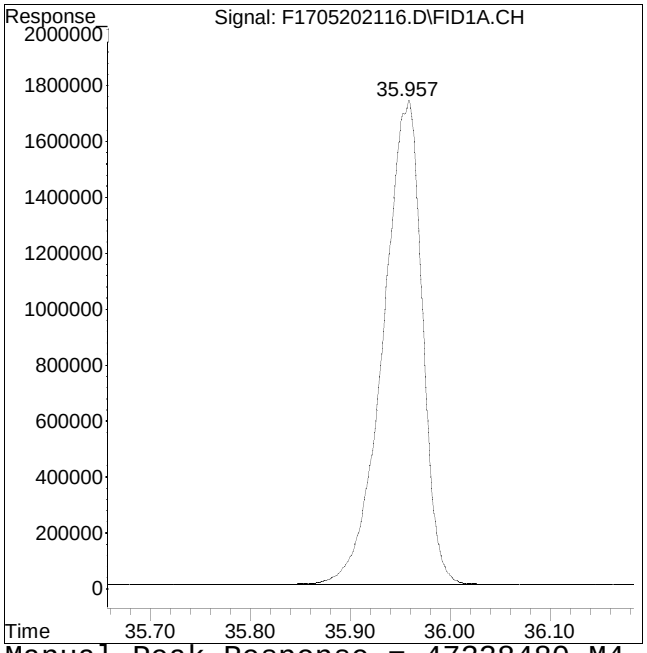
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #24: d50-Tetracosane



Original Peak Response = 47253121



Manual Peak Response = 47338480 M4

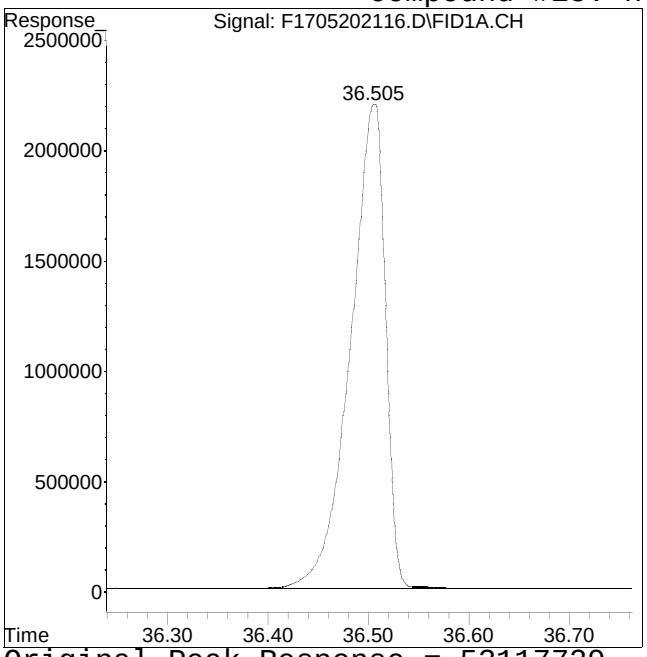
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

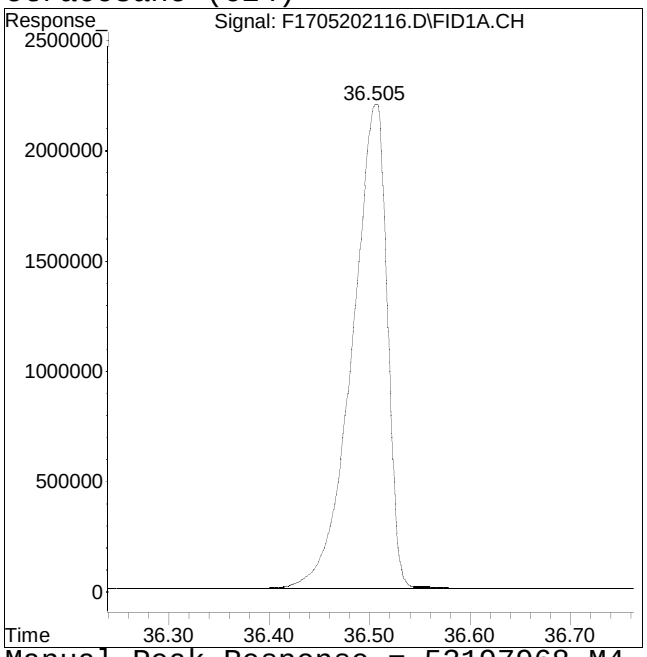
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 53117729



Manual Peak Response = 53197968 M4

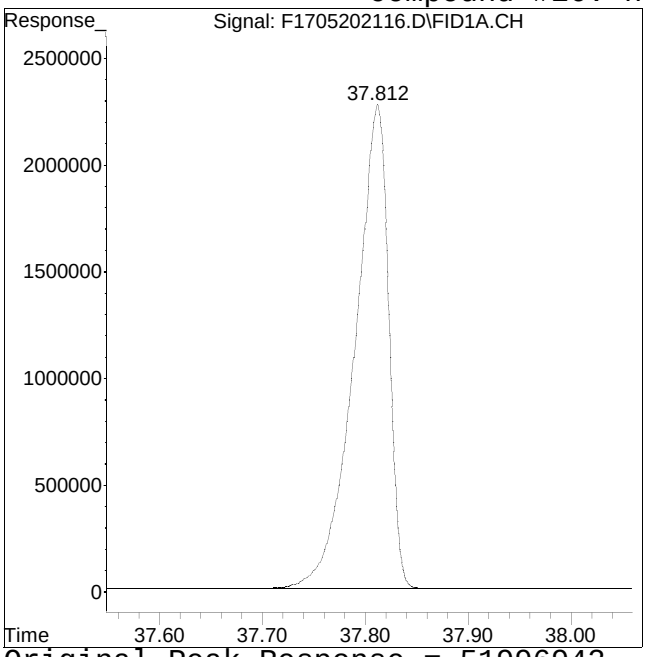
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

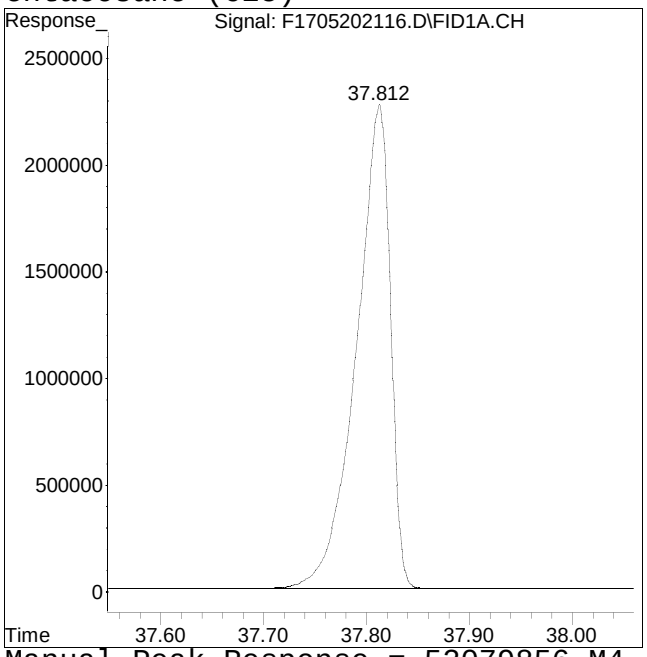
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 51996942



Manual Peak Response = 52079856 M4

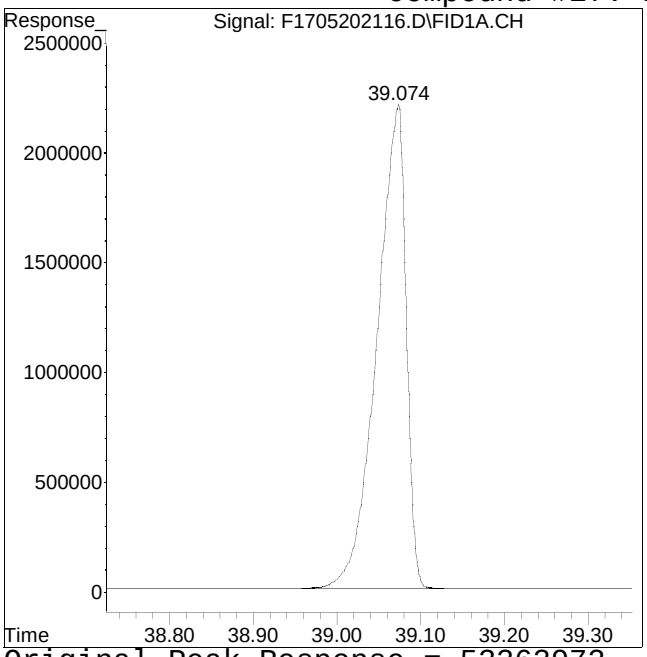
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

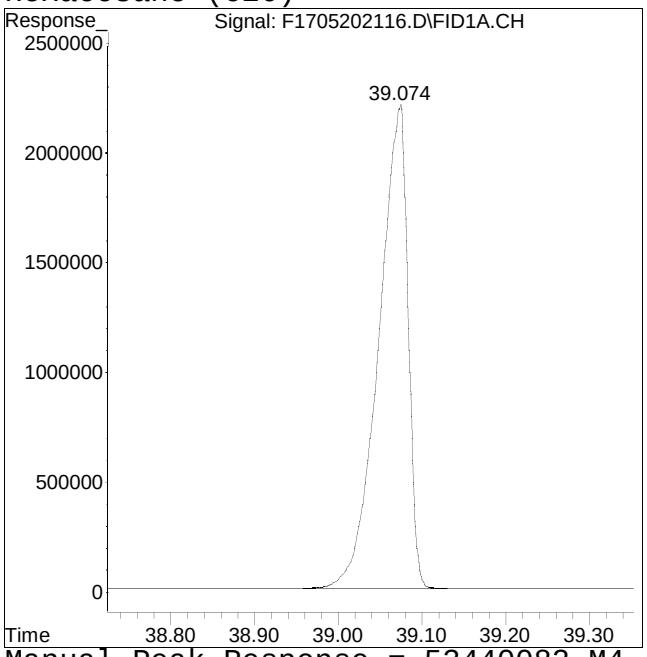
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 53363972



Manual Peak Response = 53440082 M4

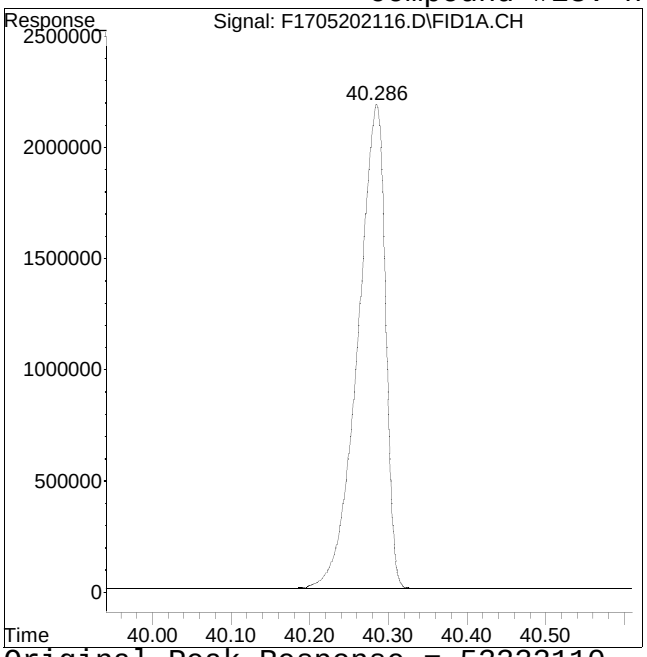
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

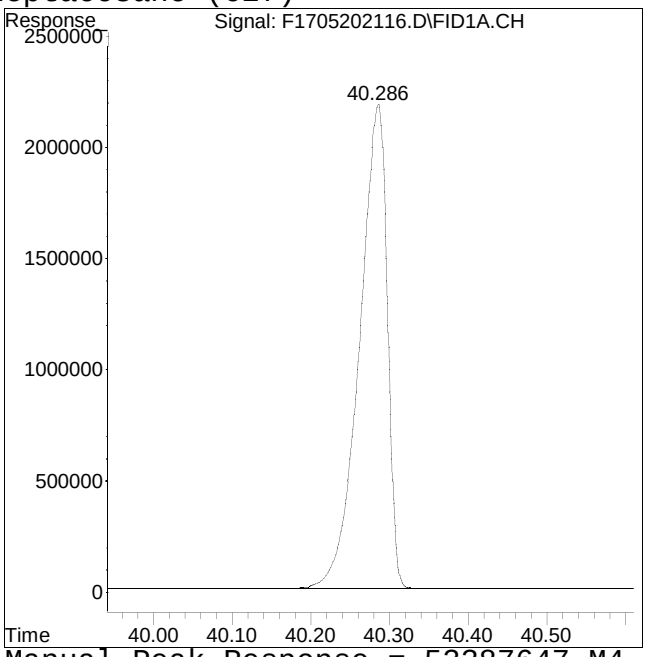
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 53333110



Manual Peak Response = 53387647 M4

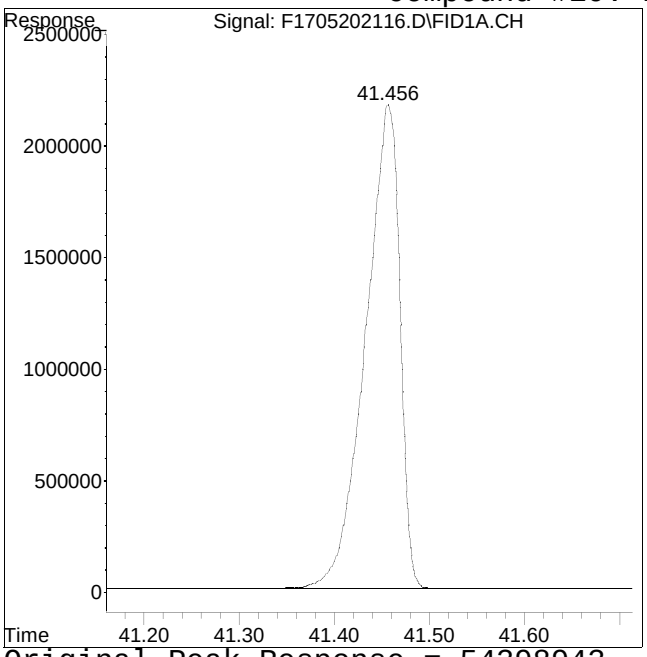
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

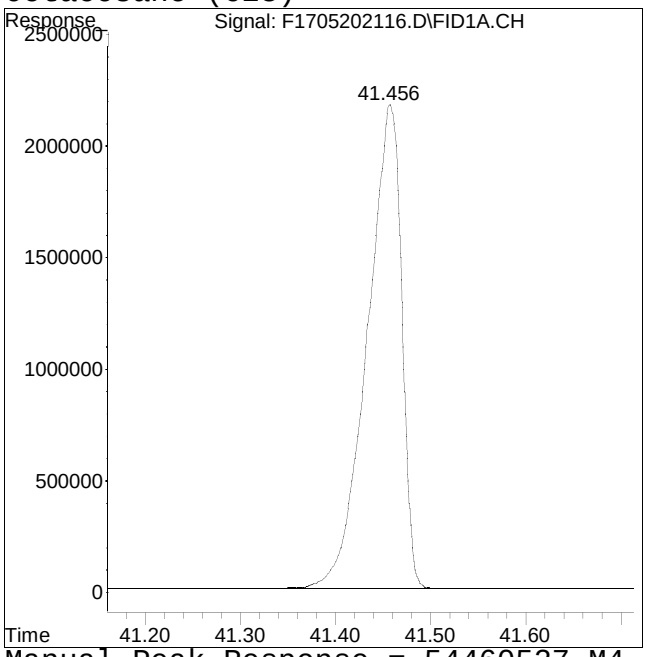
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 54398943



Manual Peak Response = 54460527 M4

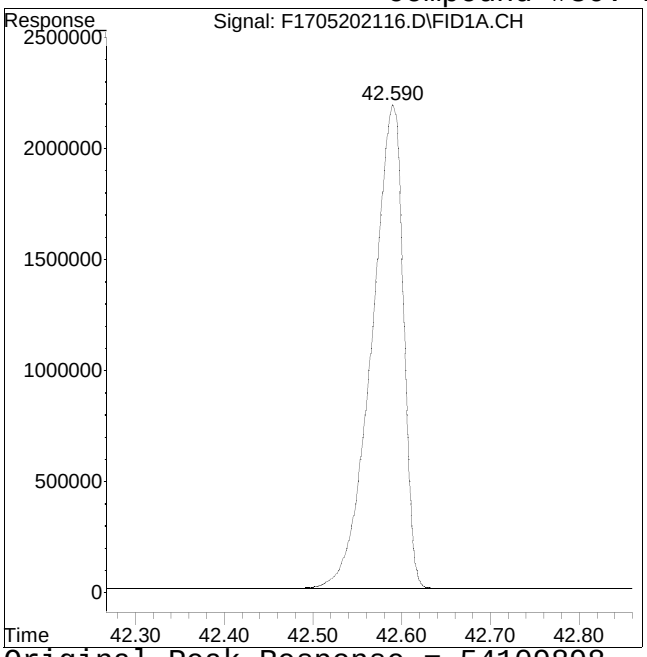
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

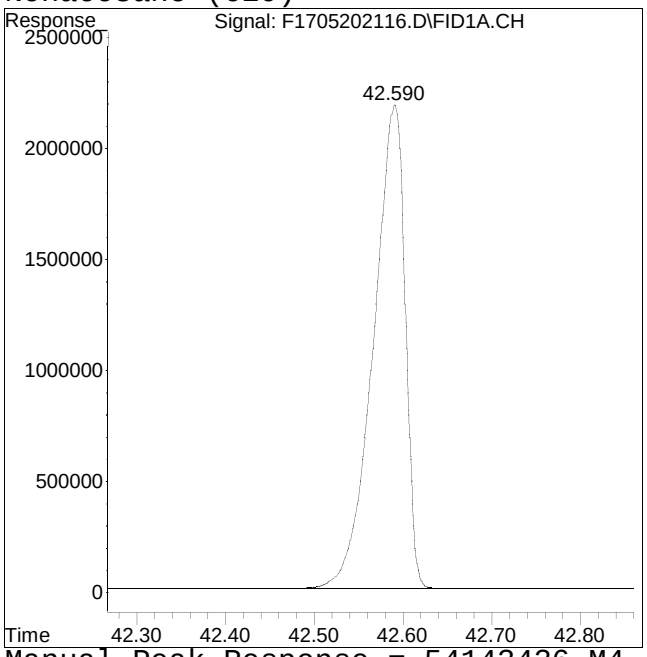
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 54109898



Manual Peak Response = 54143436 M4

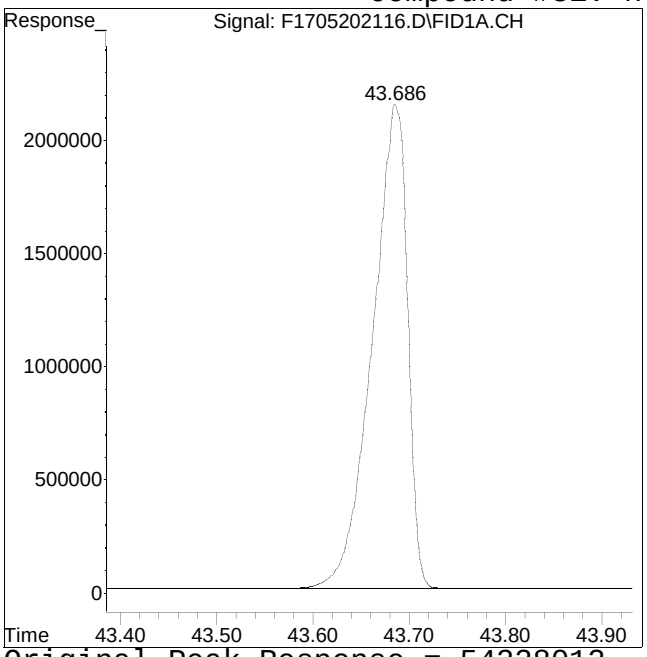
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

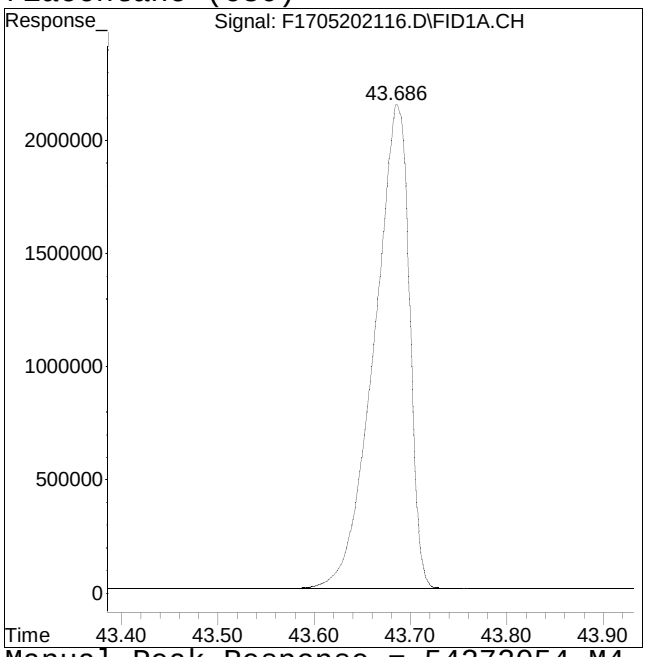
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 54228012



Manual Peak Response = 54272054 M4

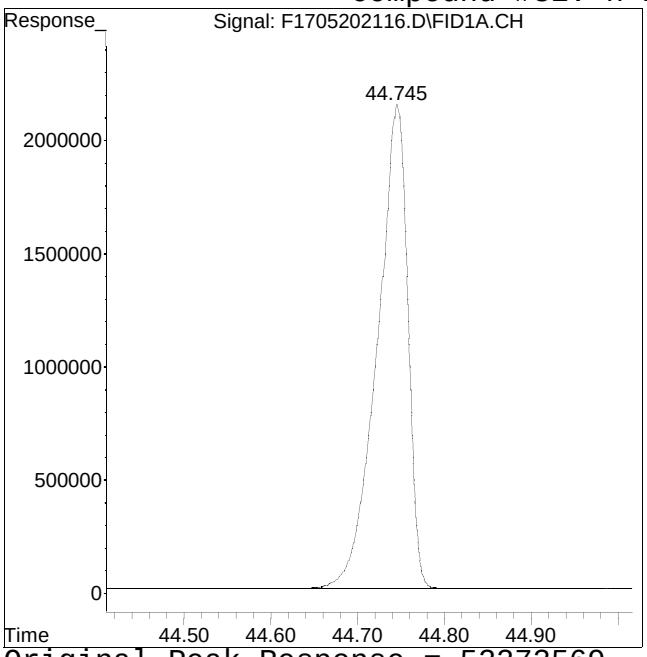
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

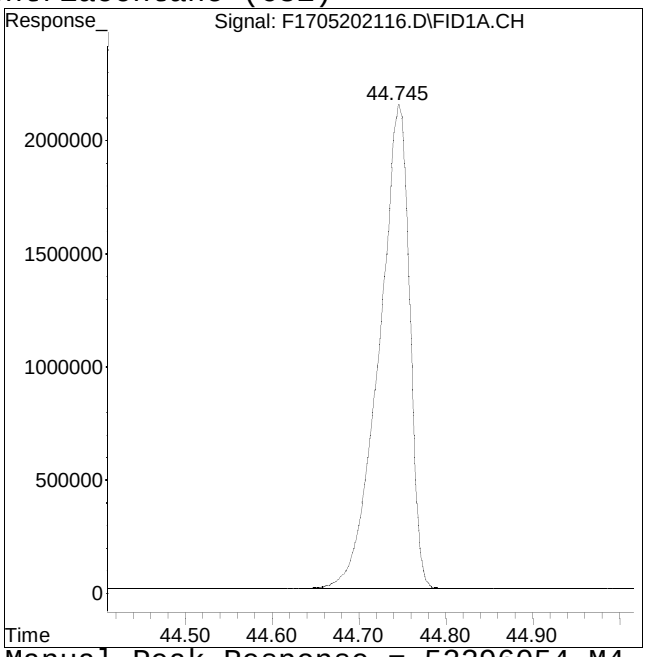
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 52273569



Manual Peak Response = 52296054 M4

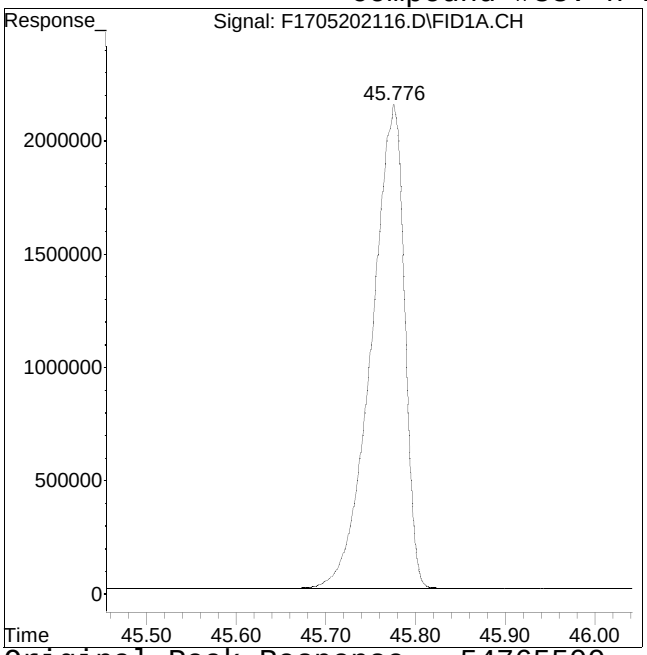
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

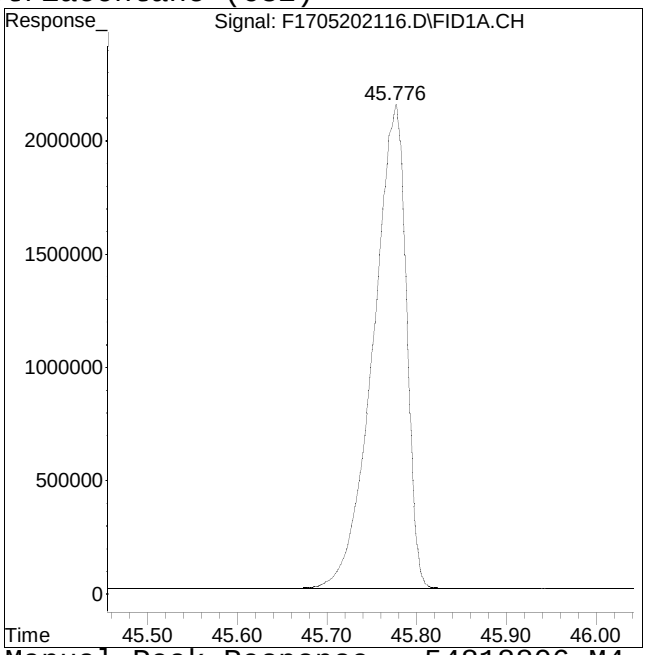
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 54765500



Manual Peak Response = 54818806 M4

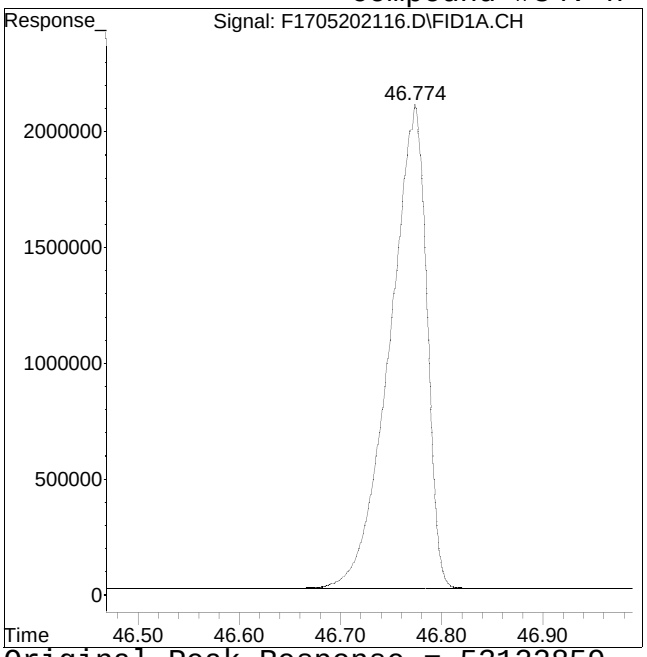
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

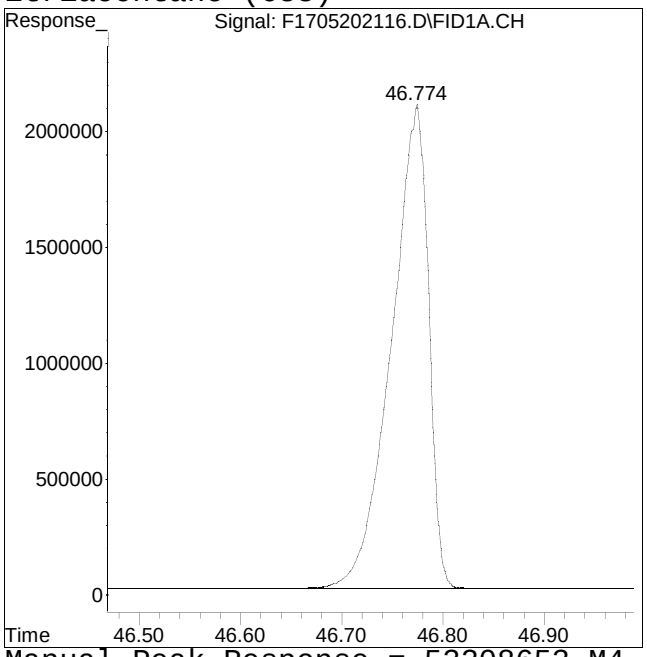
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 53122859



Manual Peak Response = 53208653 M4

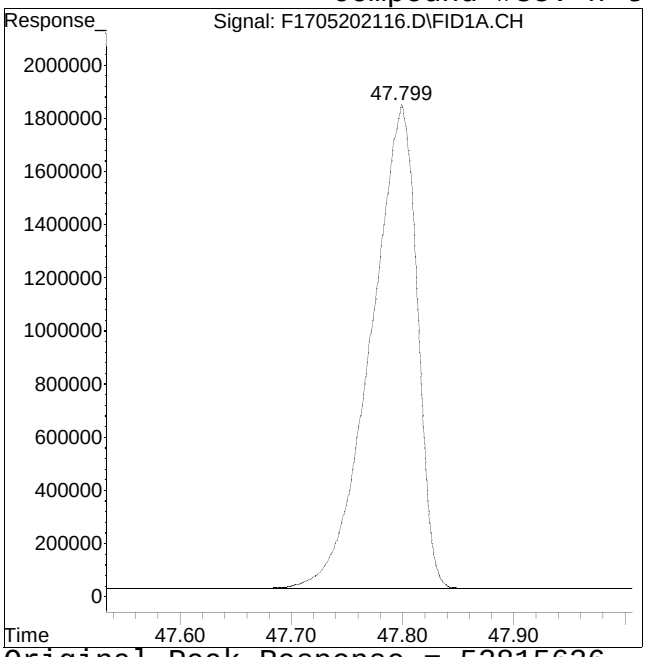
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

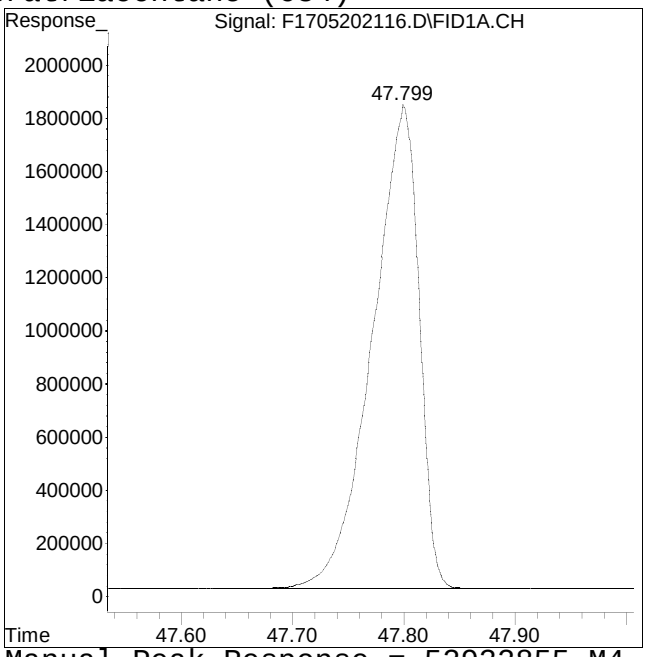
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 52815636



Manual Peak Response = 52932855 M4

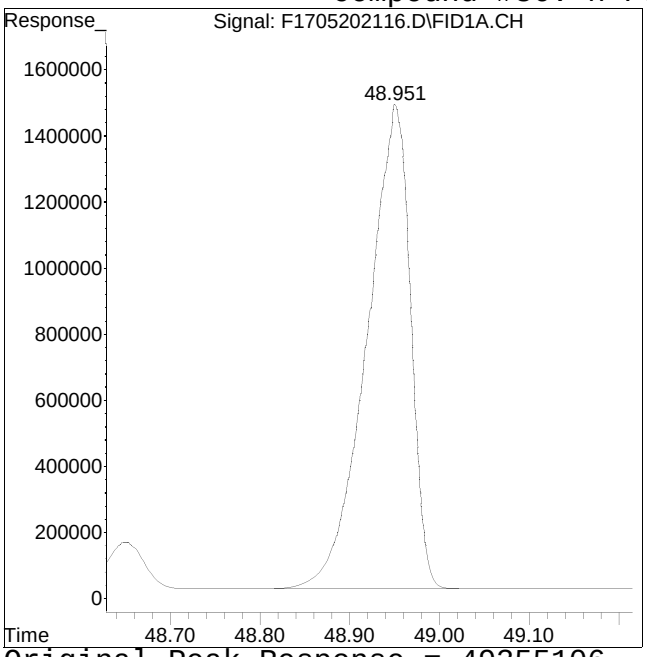
M4 = Poor automated baseline construction.

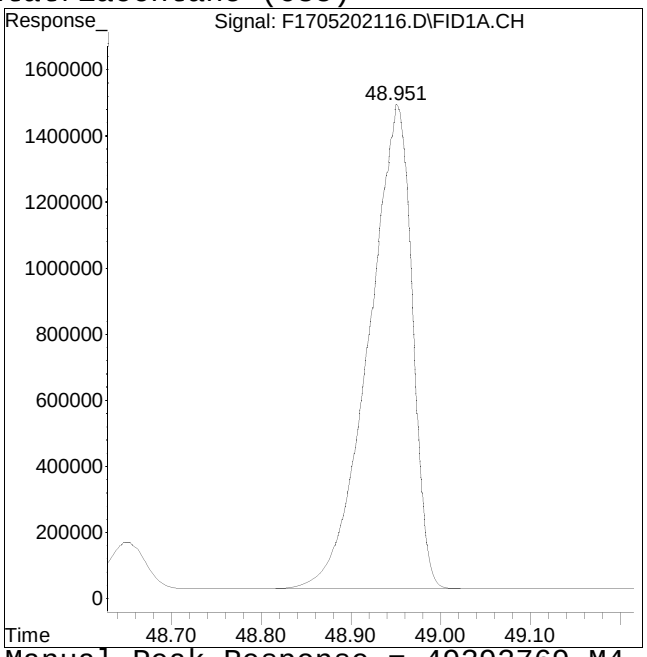
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #36: n-Pentatriacontane (C35)





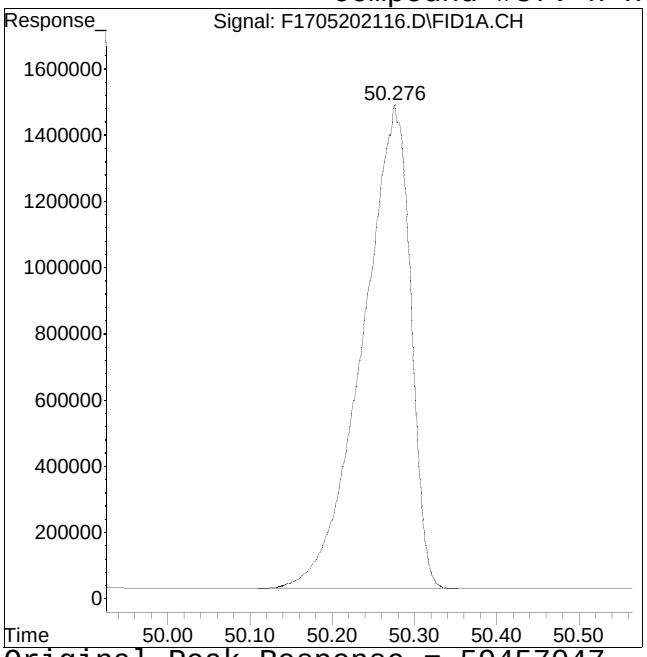
Original Peak Response = 49355106 Manual Peak Response = 49392769 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

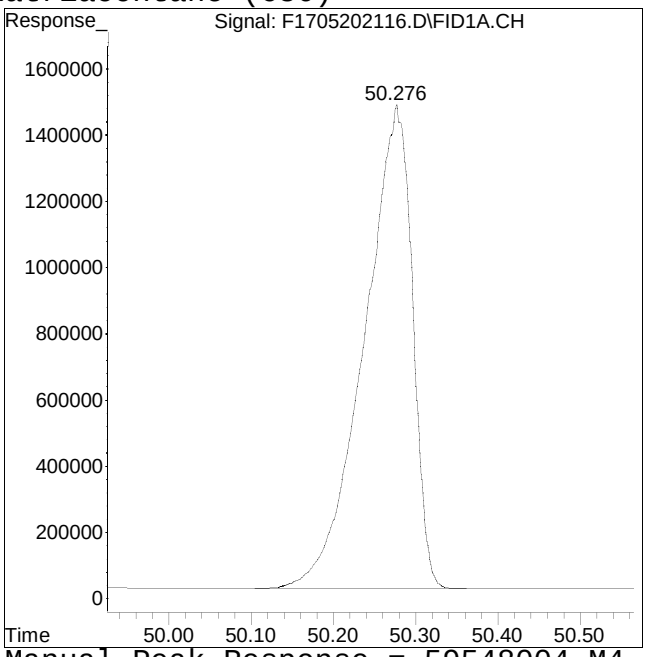
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 59457047



Manual Peak Response = 59548004 M4

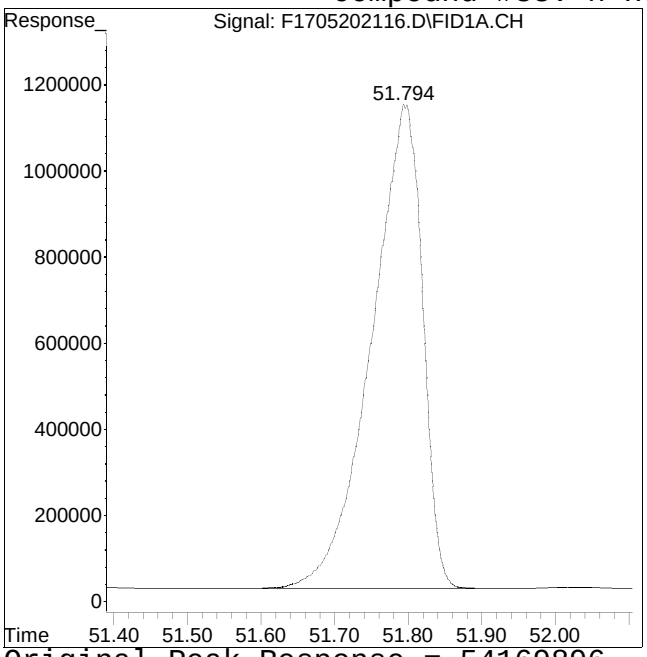
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

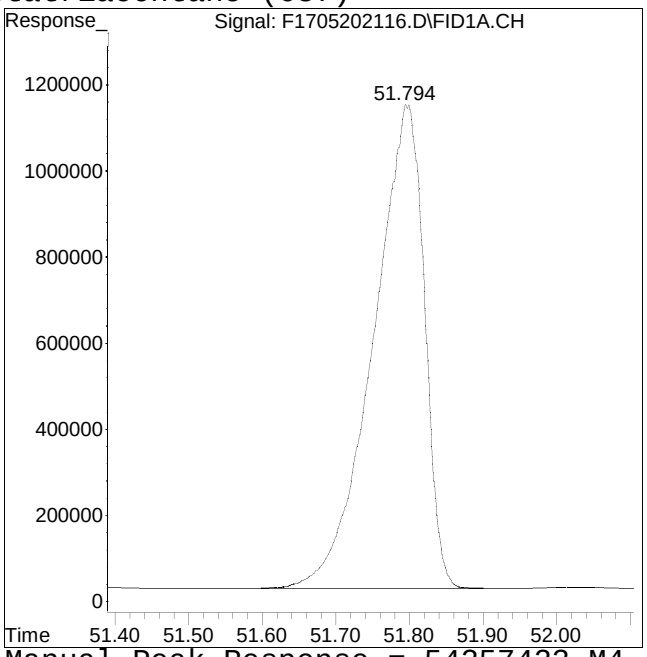
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 54169896



Manual Peak Response = 54257423 M4

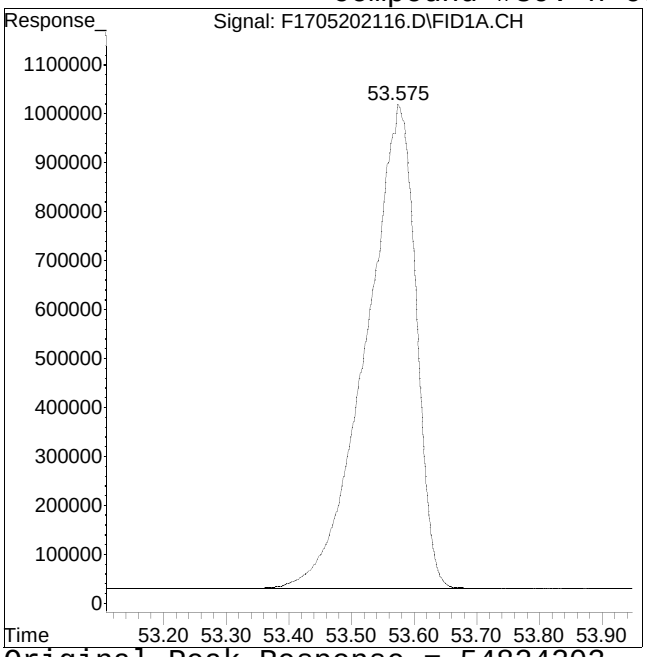
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

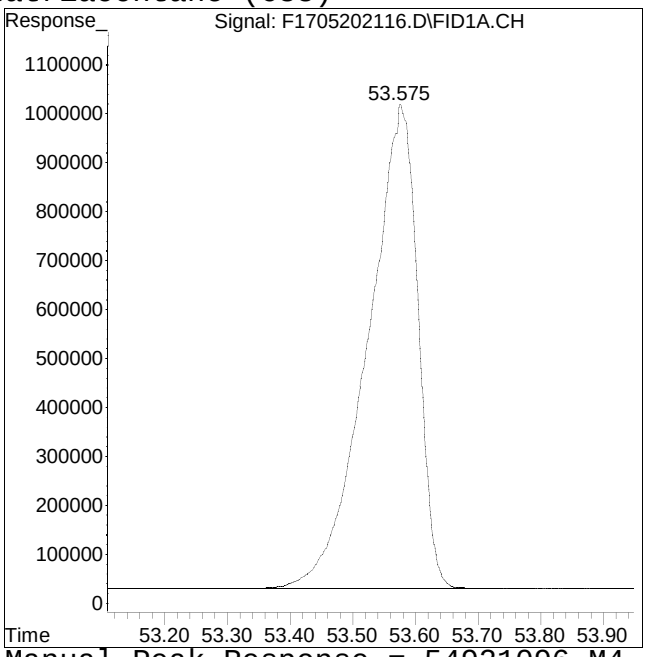
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 54824203



Manual Peak Response = 54921096 M4

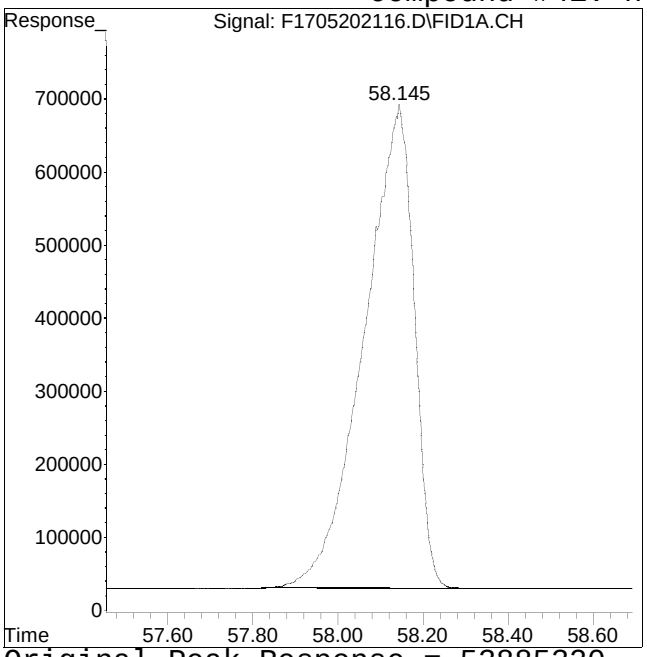
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

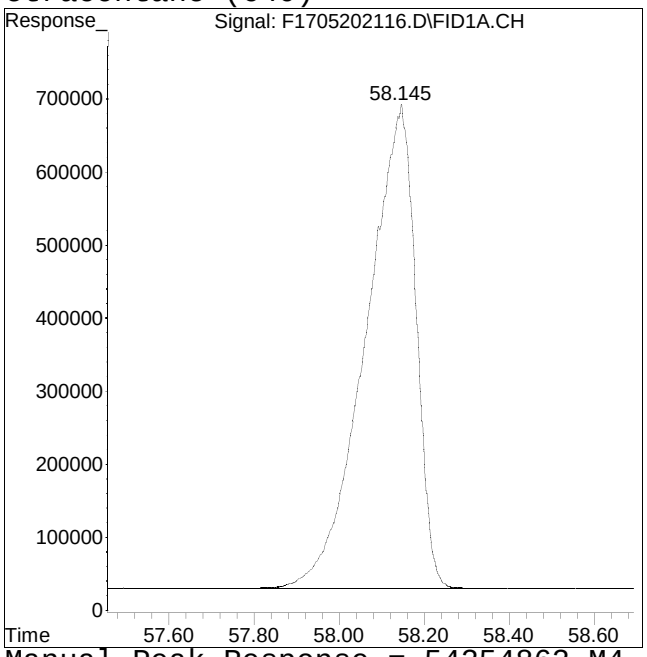
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 53885320



Manual Peak Response = 54254862 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202118.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 1:16 am
Operator : FID17:WR
Sample : I1705202104F
Misc : WG1505003,FRBD79,100ug/ml
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:30:21 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:24:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.320	54871636	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.320	117364622	96.775	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	193.55%#		
24) s	d50-Tetracosane	35.977	93770148	97.575	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	195.15%#		
	Target Compounds					
2) t	n-Octane (C8)	5.661	93555203	95.520	ug/mL	M4
3) t	n-Nonane (C9)	7.856	96616068	90.974	ug/mL	M4
4) t	n-Decane (C10)	10.339	101268677	94.522	ug/mL	M4
5) t	n-Undecane (C11)	12.853	100584077	97.192	ug/mL	M4
6) t	n-Dodecane (C12)	15.283	101404379	98.064	ug/mL	M4
7) t	n-Tridecane (C13)	17.594	101382804	97.628	ug/mL	M4
9) t	n-Tetradecane (C14)	19.780	103951622	96.855	ug/mL	M4
11) t	n-Pentadecane (C15)	21.849	104381725	97.358	ug/mL	M4
12) t	n-Hexadecane (C16)	23.809	103498291	96.255	ug/mL	M4
14) t	n-Heptadecane (C17)	25.669	104608998	98.382	ug/mL	M4
15) t	Pristane	25.785	106780009	95.401	ug/mL	M4
16) t	n-Octadecane (C18)	27.443	105576842	97.057	ug/mL	M4
17) t	Phytane	27.608	98121494	96.142	ug/mL	M4
18) t	n-Nonadecane (C19)	29.131	106027848	97.203	ug/mL	M4
20) t	n-Eicosane (C20)	30.739	106535091	97.058	ug/mL	M4
21) t	n-Heneicosane (C21)	32.276	107060132	97.302	ug/mL	M4
22) t	n-Docosane (C22)	33.751	107024076	96.976	ug/mL	M4
23) t	n-Tricosane (C23)	35.167	107222101	96.930	ug/mL	M4
25) t	n-Tetracosane (C24)	36.526	107072363	97.150	ug/mL	M4
26) t	n-Pentacosane (C25)	37.833	105388822	98.061	ug/mL	M4
27) t	n-Hexacosane (C26)	39.094	108489730	98.481	ug/mL	M4
28) t	n-Heptacosane (C27)	40.309	108907457	98.592	ug/mL	M4
29) t	n-Octacosane (C28)	41.482	111710931	96.863	ug/mL	M4
30) t	n-Nonacosane (C29)	42.616	111802404	99.997	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202118.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 1:16 am
Operator : FID17:WR
Sample : I1705202104F
Misc : WG1505003,FRBD79,100ug/ml
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:30:21 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:24:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

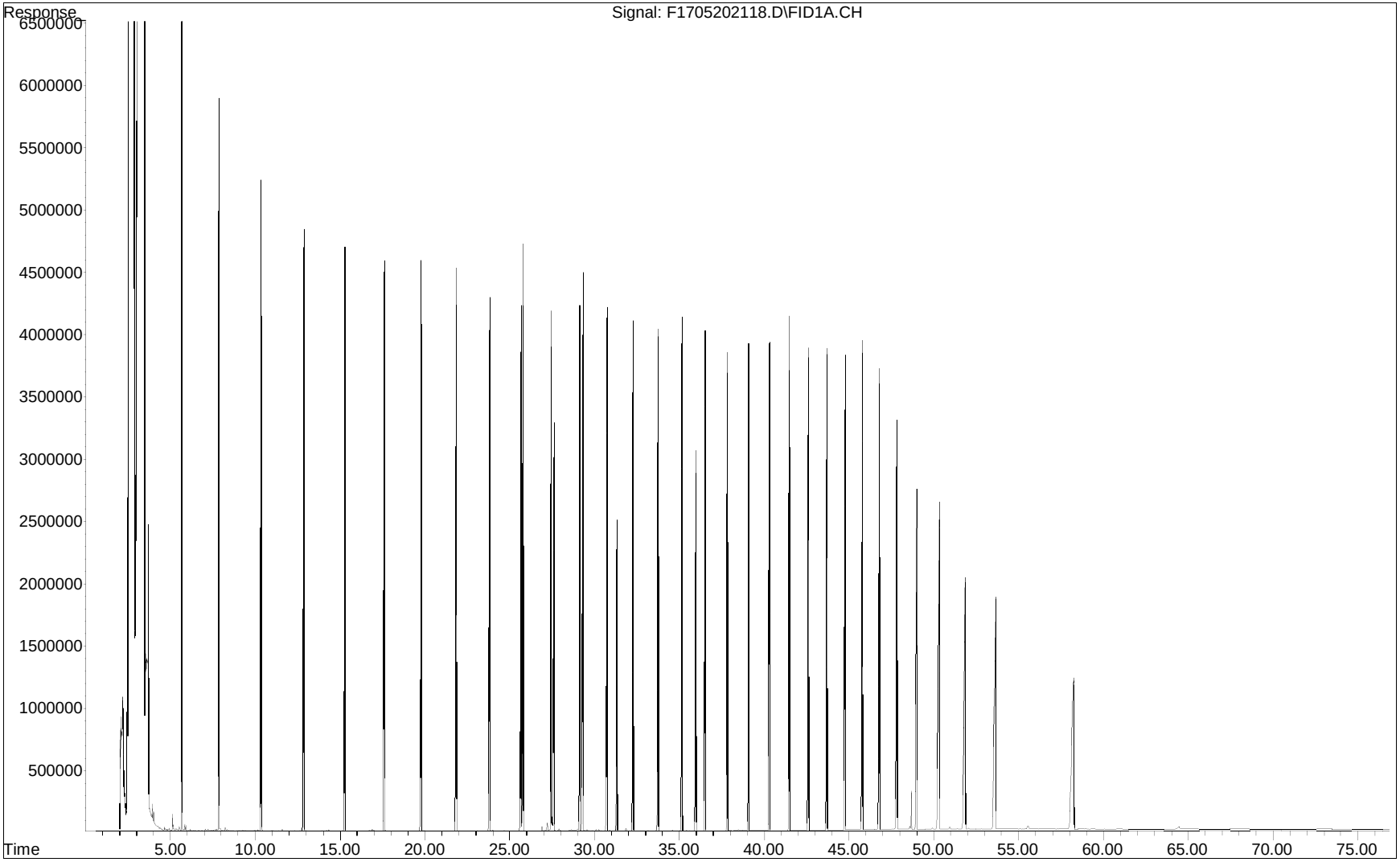
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.709	112736860	100.636 ug/mL M4
32) t	n-Hentriacontane (C31)	44.767	109283276	100.893 ug/mL M4
33) t	n-Dotriacontane (C32)	45.801	115267518	101.571 ug/mL M4
34) t	n-Tritriacontane (C33)	46.797	112385732	101.695 ug/mL M4
35) t	n-tetratriacontane (C34)	47.829	112321184	102.624 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.985	105135244	102.780 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.316	127058279	103.257 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.851	115889230	104.034 ug/mL M4
39) t	n-Octatriacontane (C38)	53.638	117351711	104.132 ug/mL M4
41) t	n-Tetracontane (C40)	58.229	116054901	104.127 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202118.D
Operator : FID17:WR
Acquired : 21 May 2021 1:16 am using AcqMethod FID17A.M
Sample Name: I1705202104F
Instrument: FID17
Misc Info : WG1505003,FRBD79,100ug/ml
Vial Number: 9
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

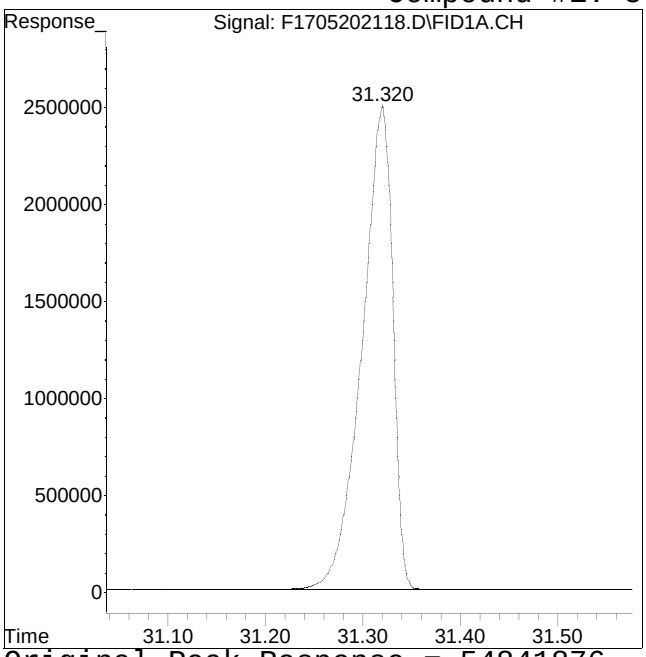


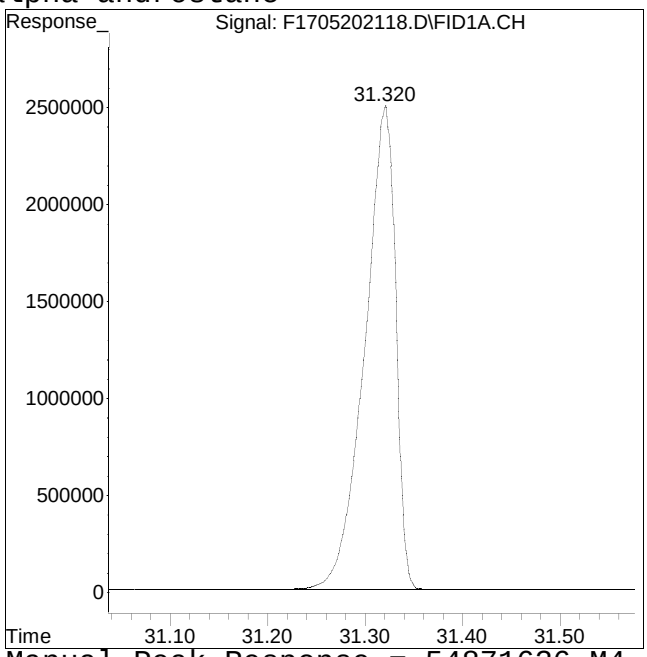
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #1: 5-alpha-androstane





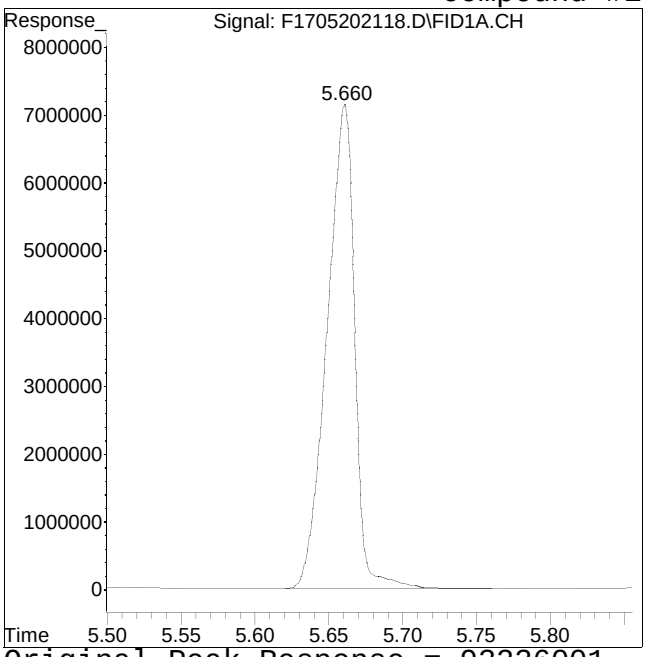
Original Peak Response = 54841876 Manual Peak Response = 54871636 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

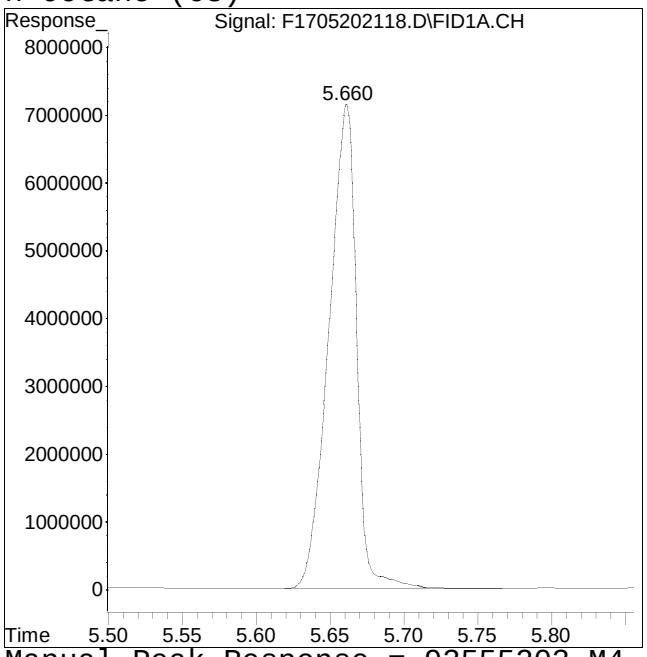
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #2: n-Octane (C8)



Original Peak Response = 93236001



Manual Peak Response = 93555203 M4

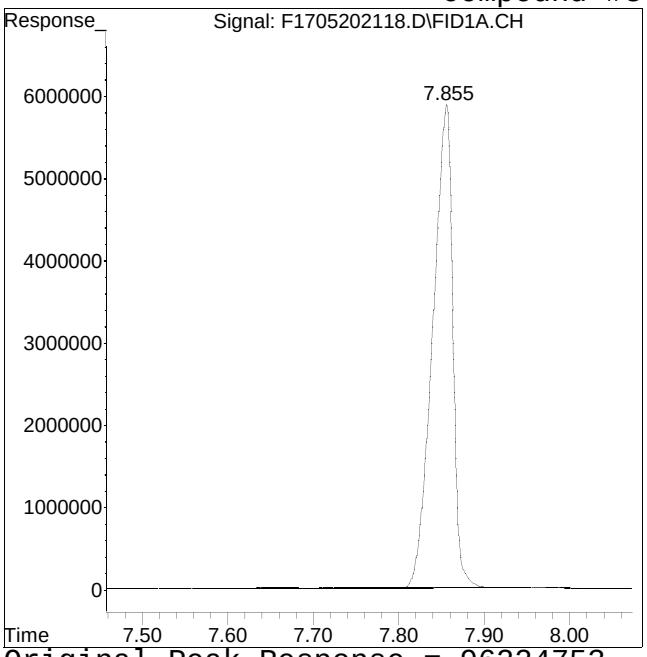
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

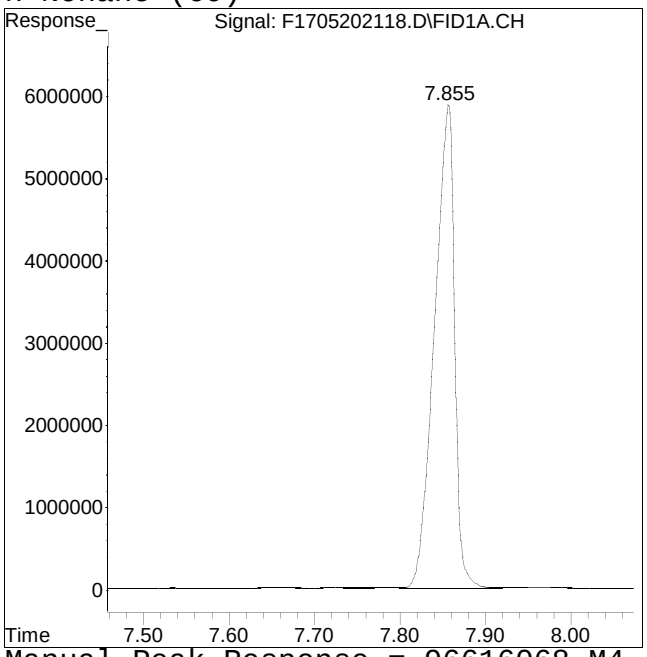
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 96224753



Manual Peak Response = 96616068 M4

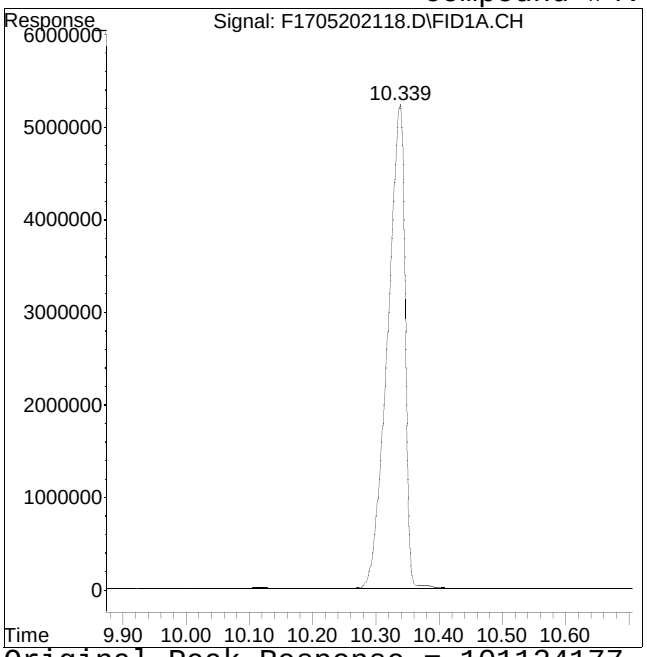
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

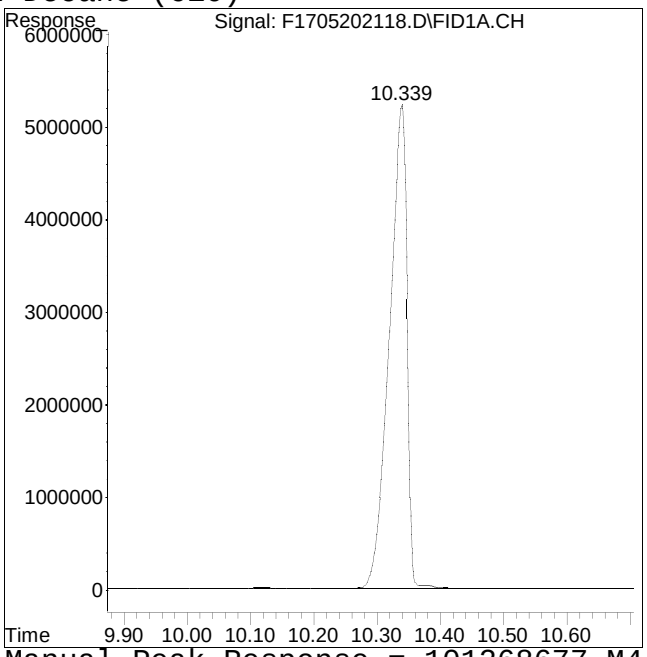
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #4: n-Decane (C10)



Original Peak Response = 101124177



Manual Peak Response = 101268677 M4

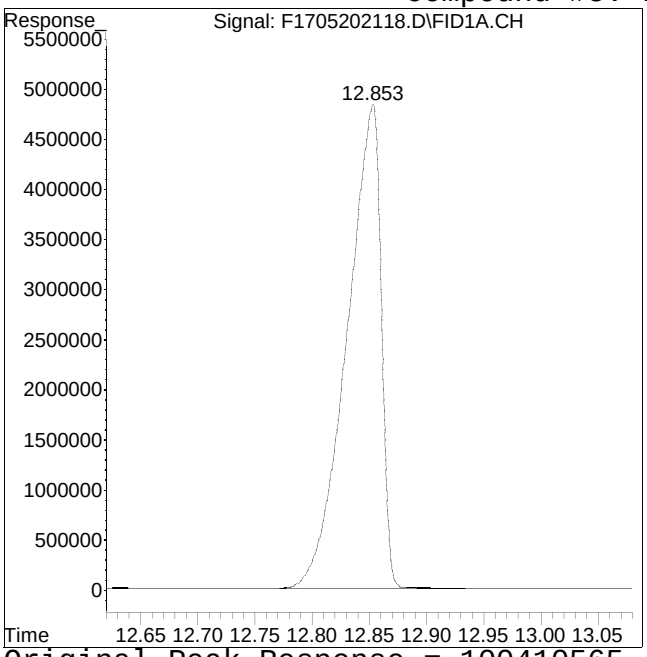
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

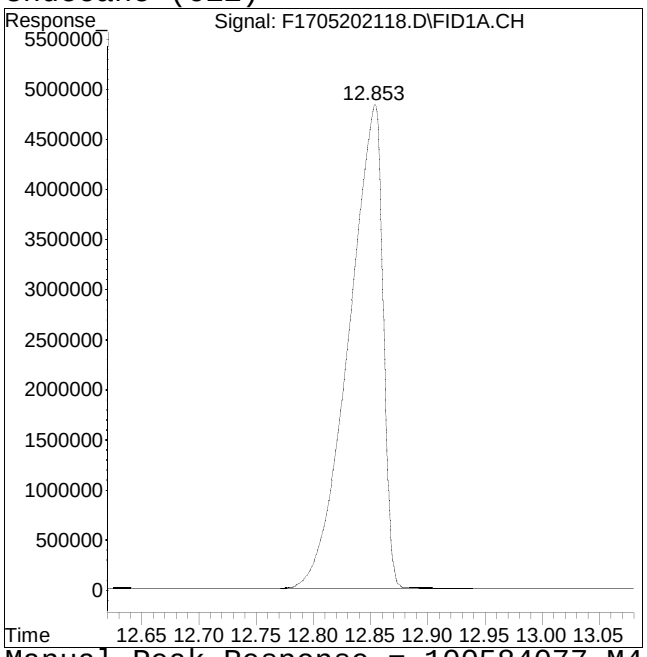
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 100410565



Manual Peak Response = 100584077 M4

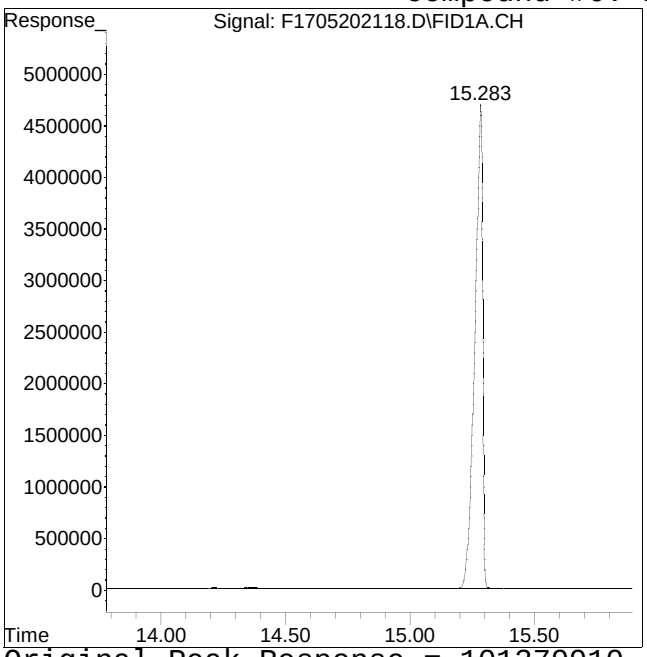
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

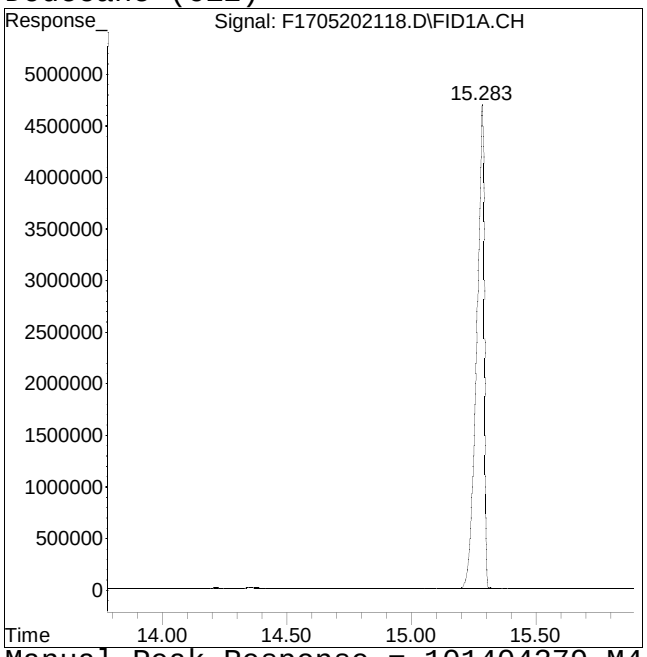
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 101379910



Manual Peak Response = 101404379 M4

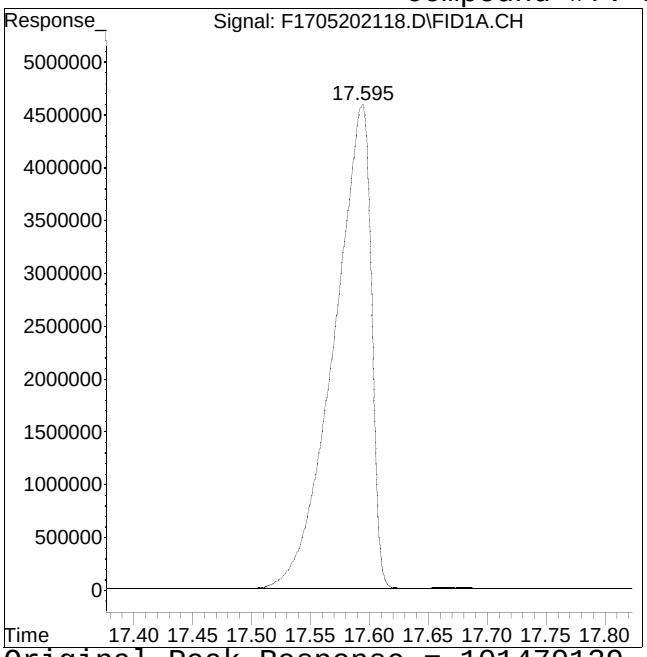
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

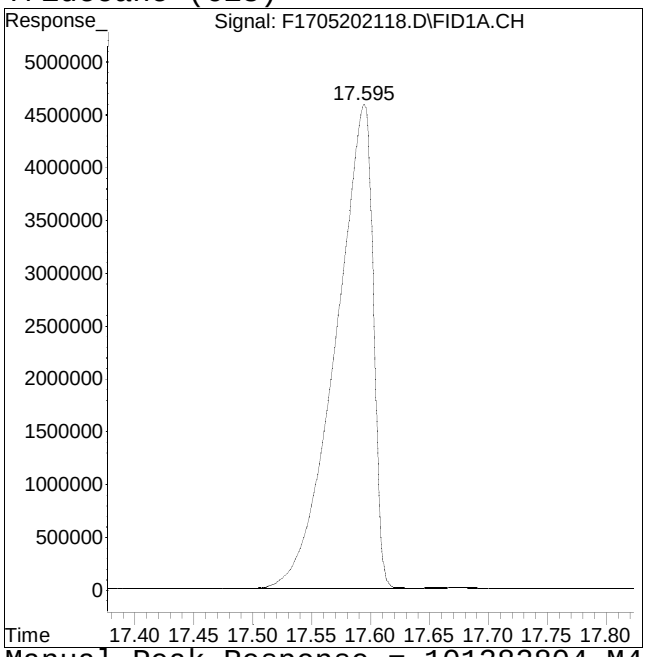
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 101479139



Manual Peak Response = 101382804 M4

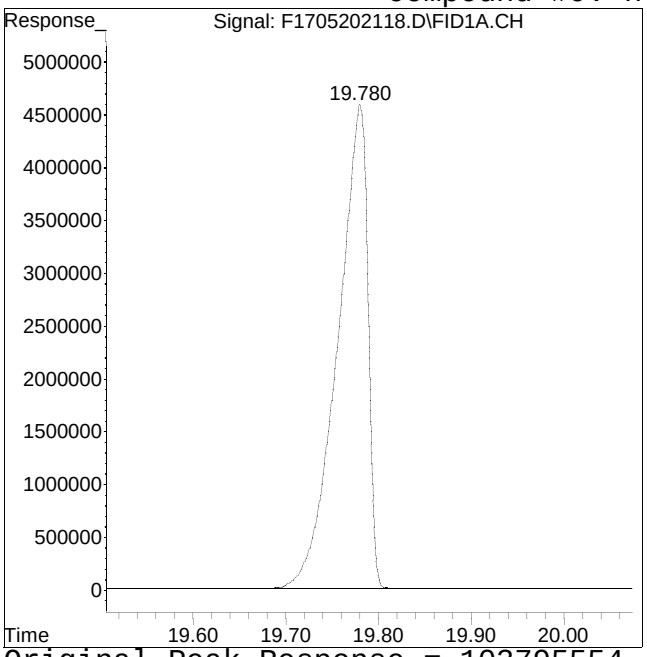
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

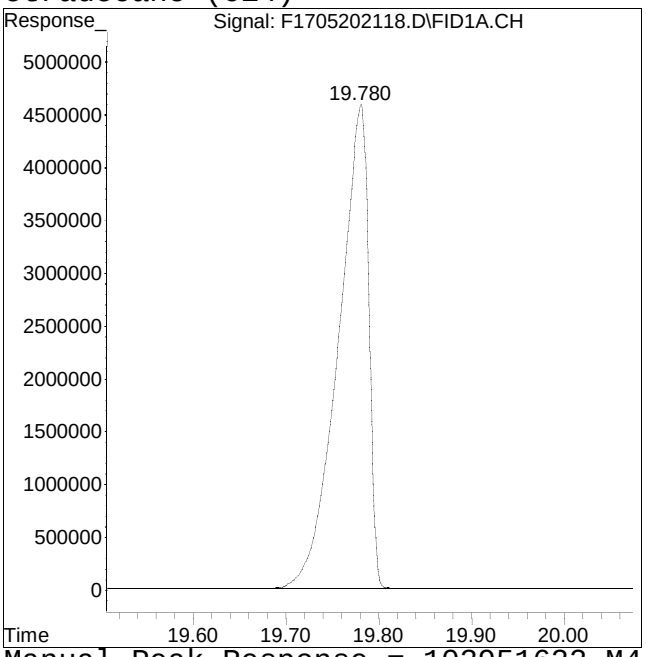
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 103795554



Manual Peak Response = 103951622 M4

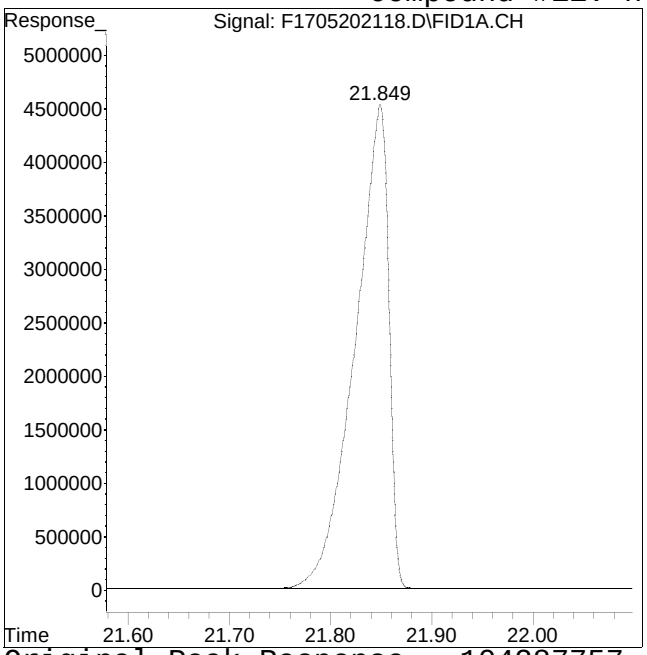
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

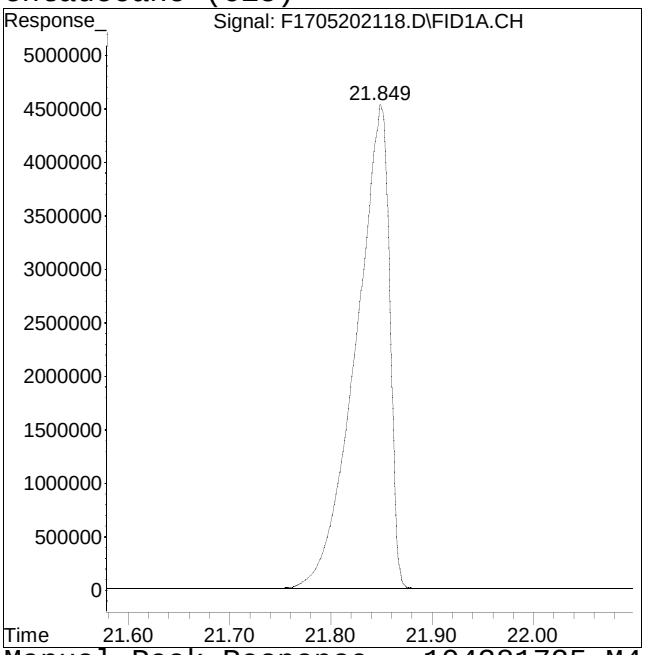
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 104287757



Manual Peak Response = 104381725 M4

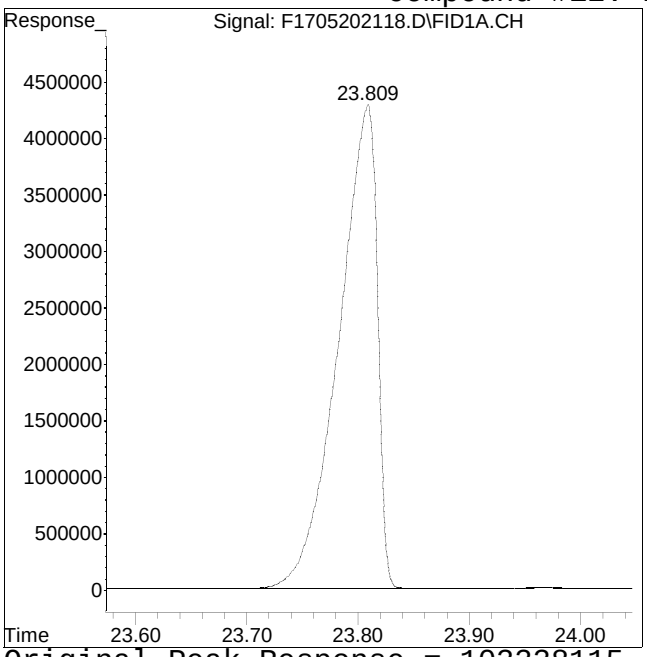
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

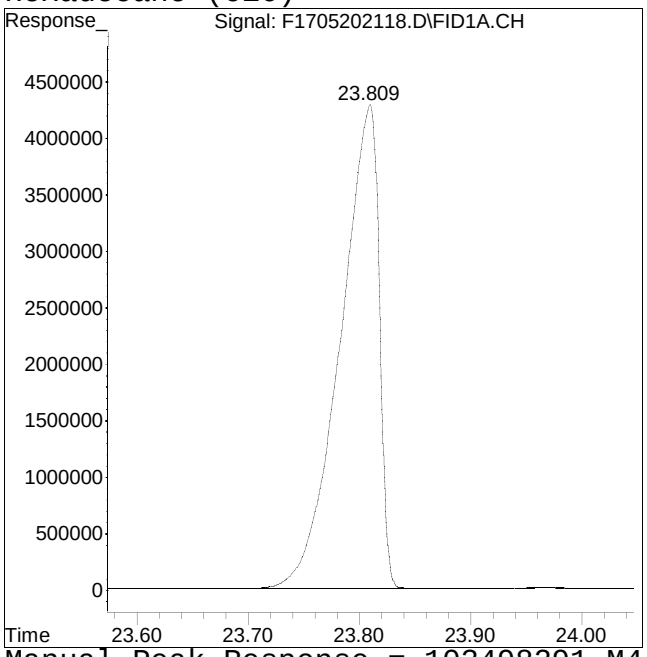
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 103338115



Manual Peak Response = 103498291 M4

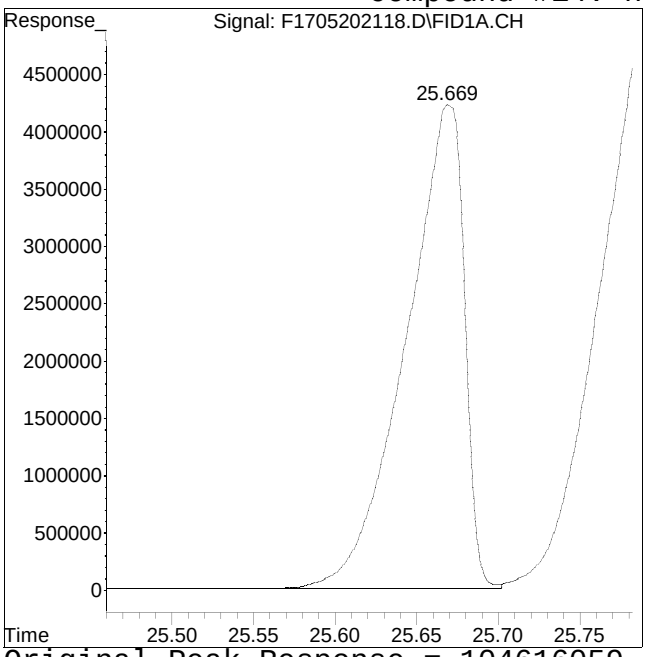
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

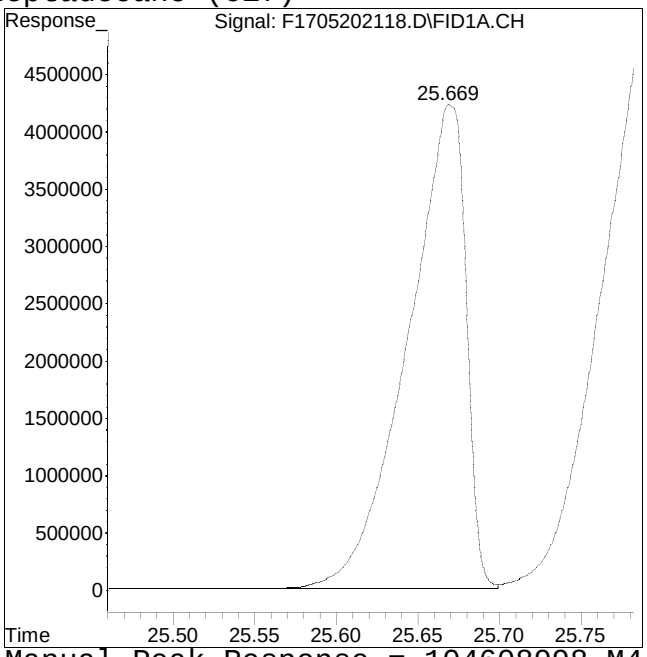
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 104616059



Manual Peak Response = 104608998 M4

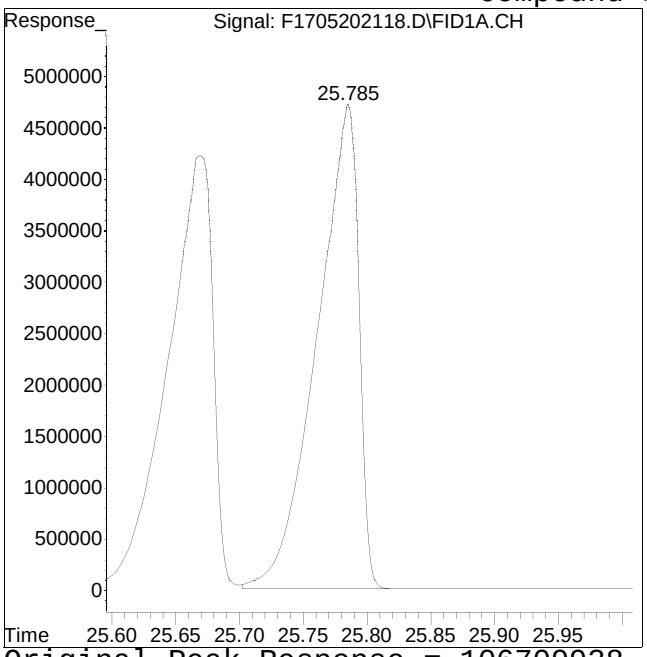
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

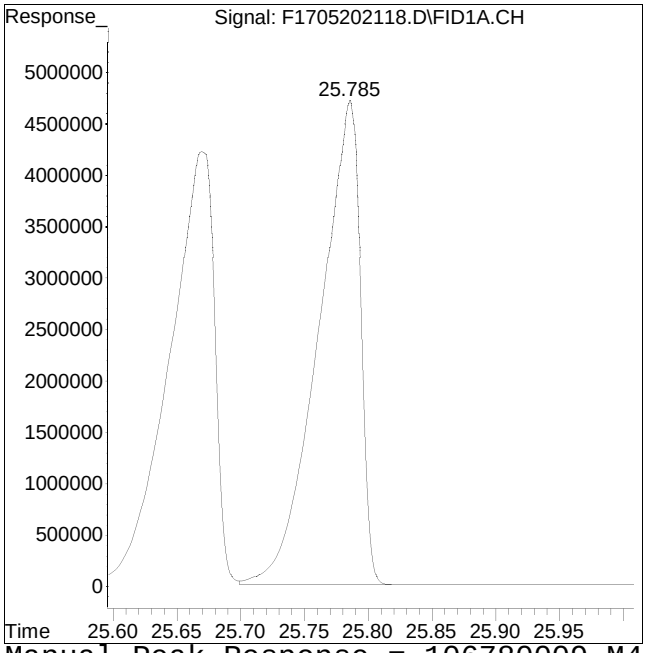
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #15: Pristane



Original Peak Response = 106709938



Manual Peak Response = 106780009 M4

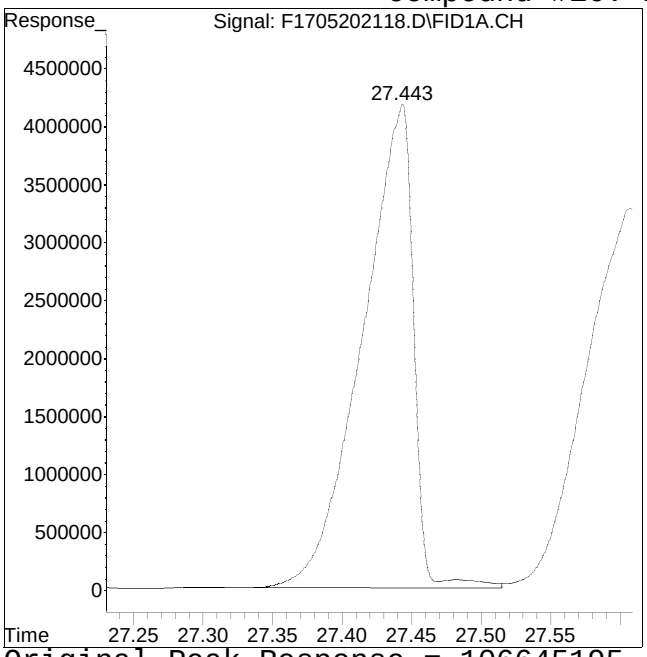
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

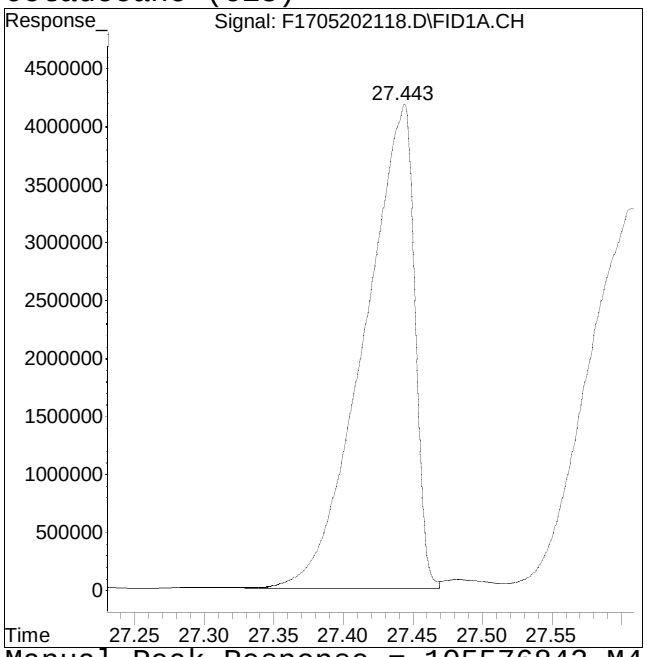
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 106645195



Manual Peak Response = 105576842 M4

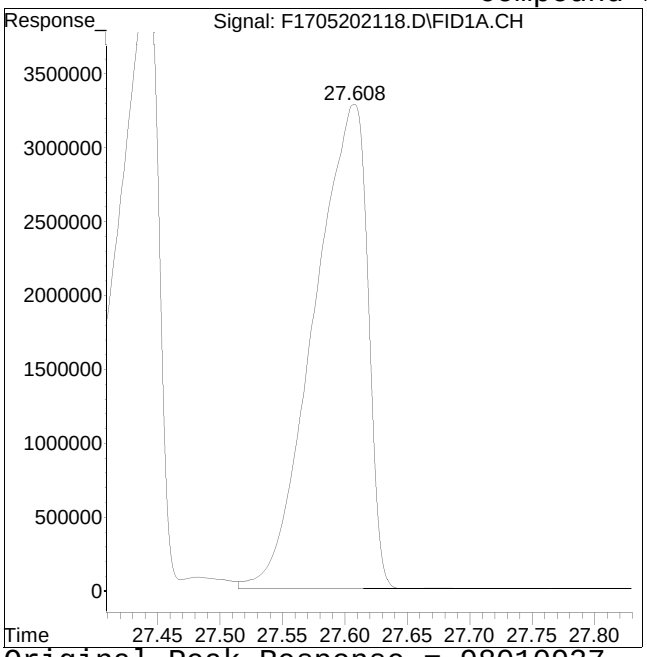
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

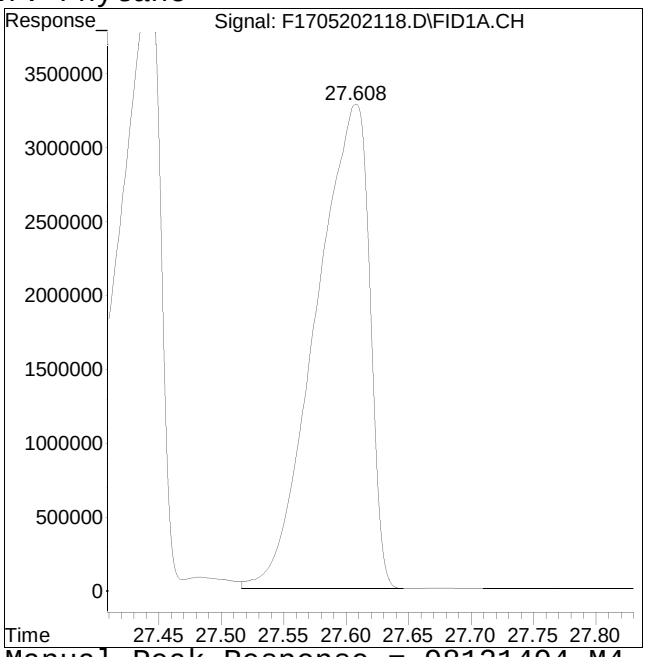
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #17: Phytane



Original Peak Response = 98010937



Manual Peak Response = 98121494 M4

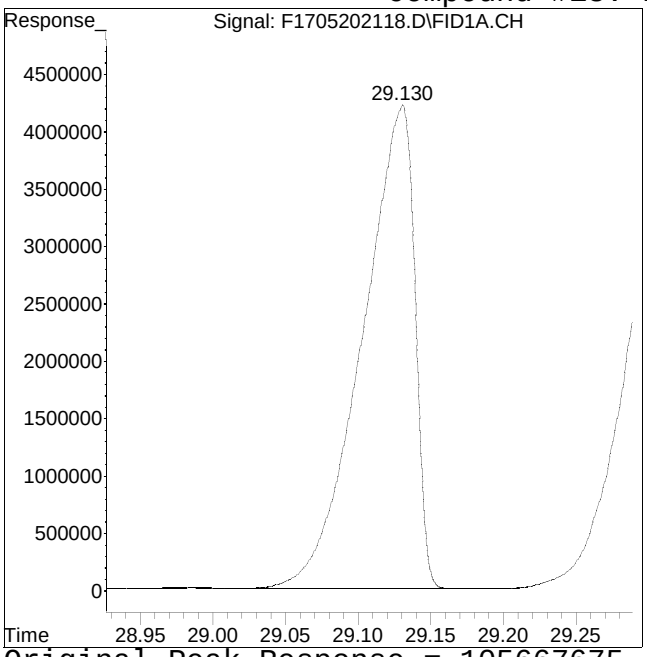
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

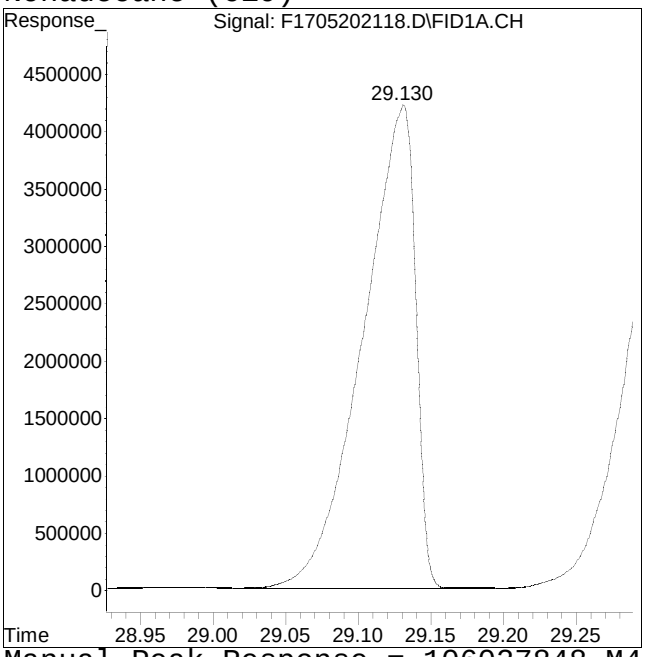
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 105667675



Manual Peak Response = 106027848 M4

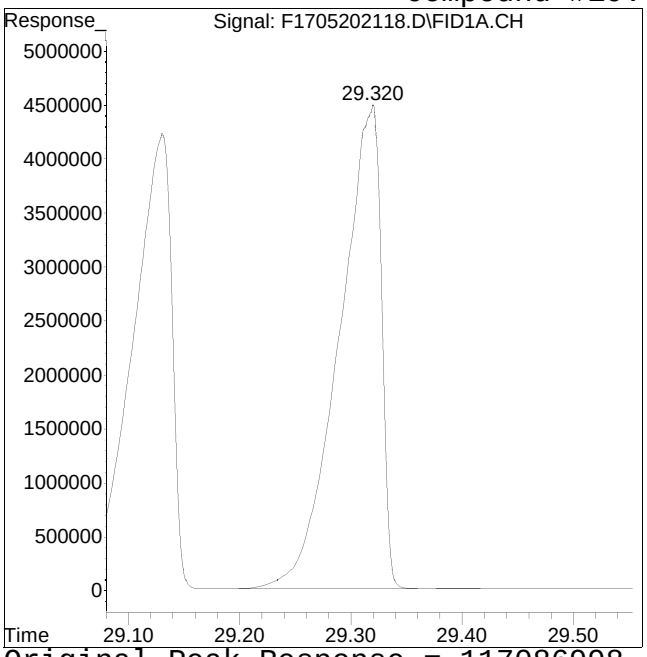
M4 = Poor automated baseline construction.

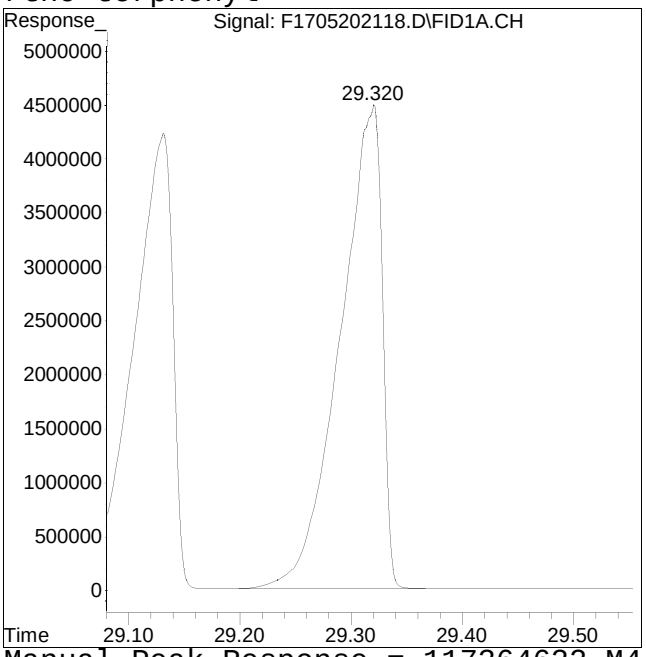
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #19: ortho-terphenyl





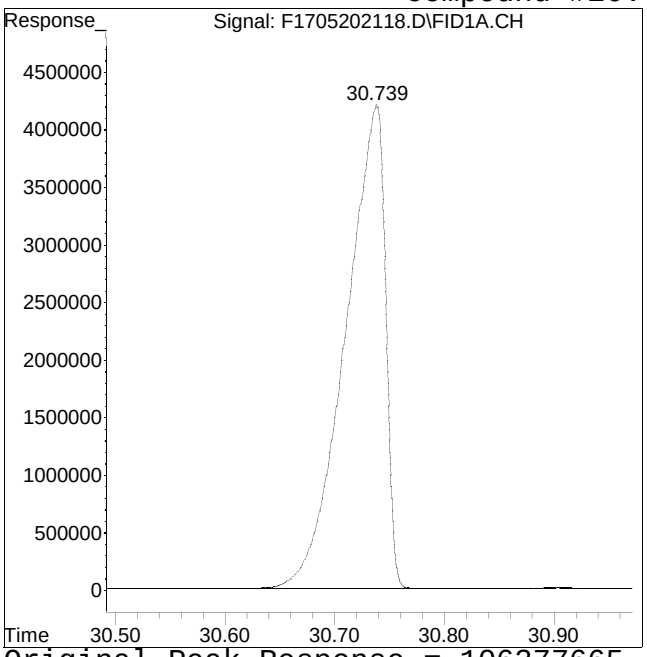
Original Peak Response = 117086998 Manual Peak Response = 117364622 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

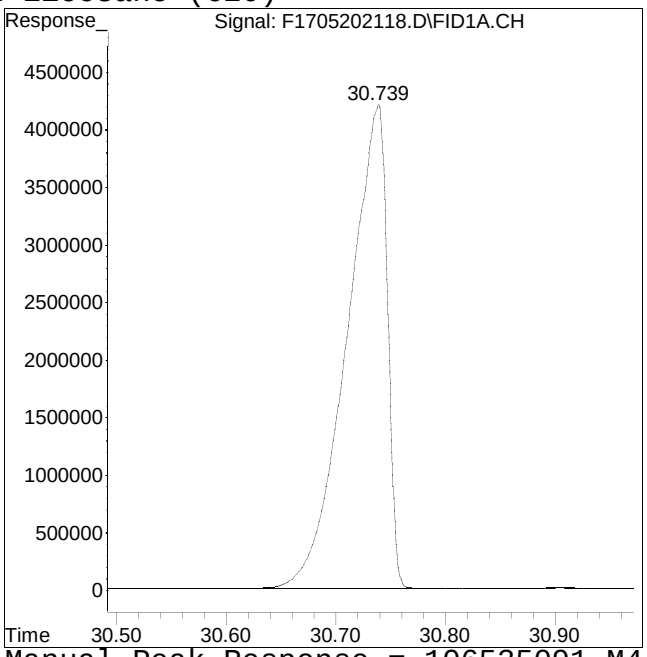
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 106377665



Manual Peak Response = 106535091 M4

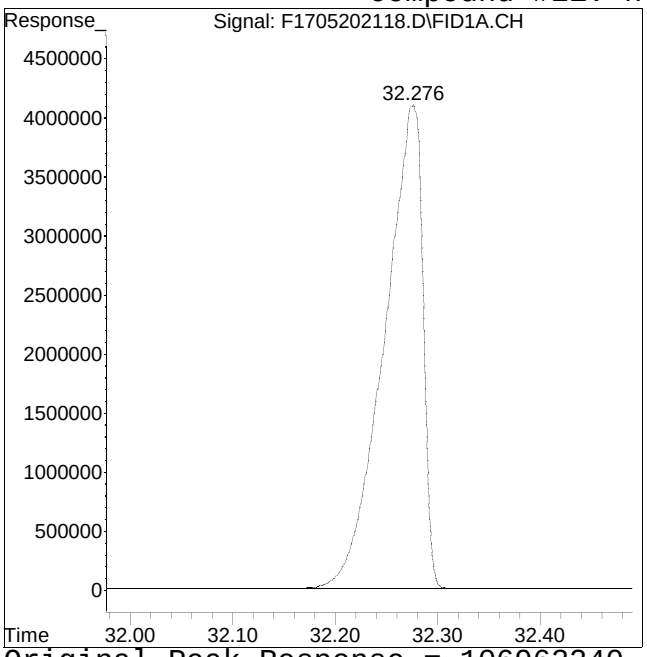
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

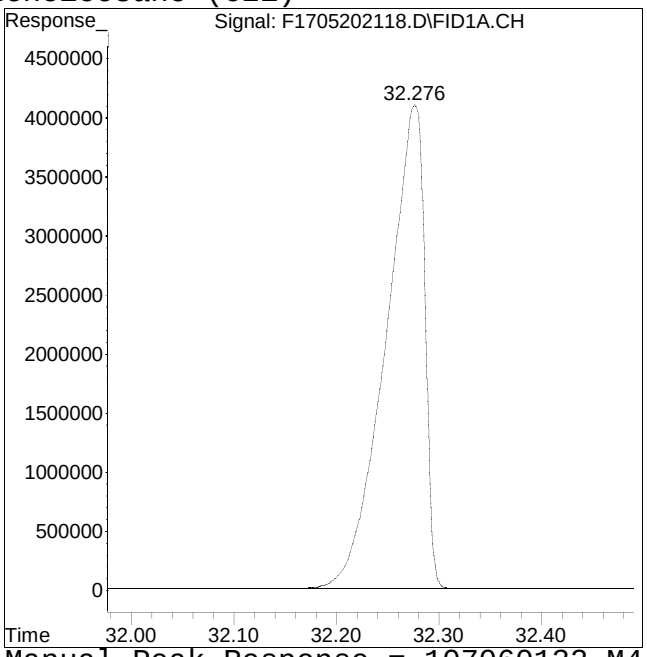
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 106962240



Manual Peak Response = 107060132 M4

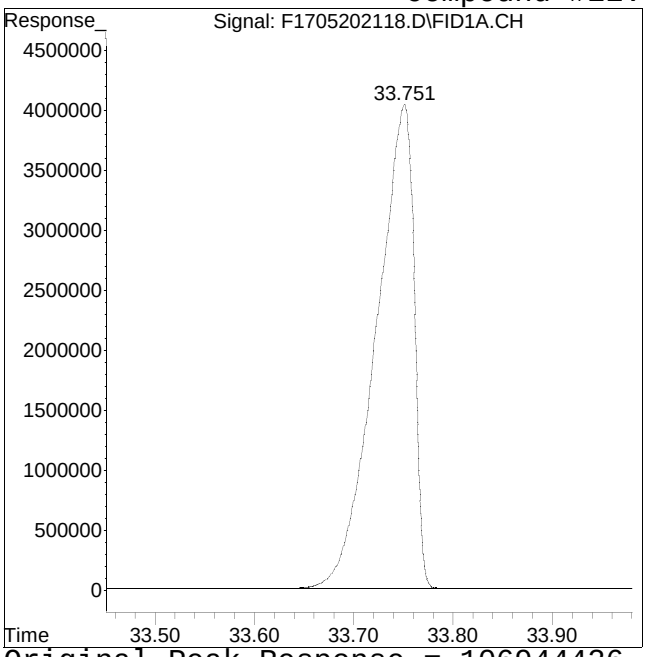
M4 = Poor automated baseline construction.

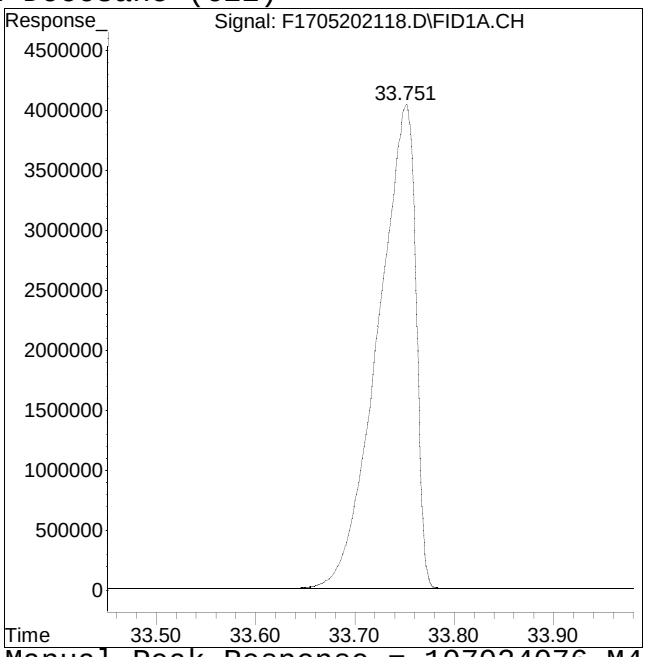
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #22: n-Docosane (C22)





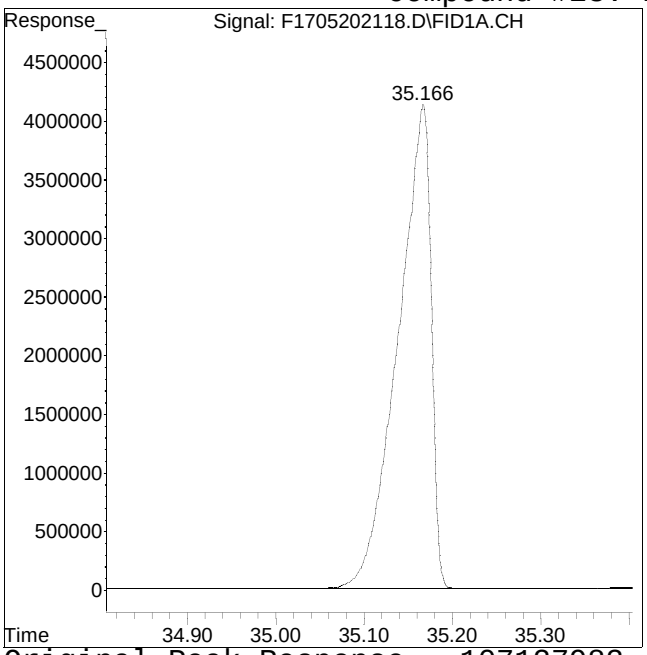
Original Peak Response = 106944426 Manual Peak Response = 107024076 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

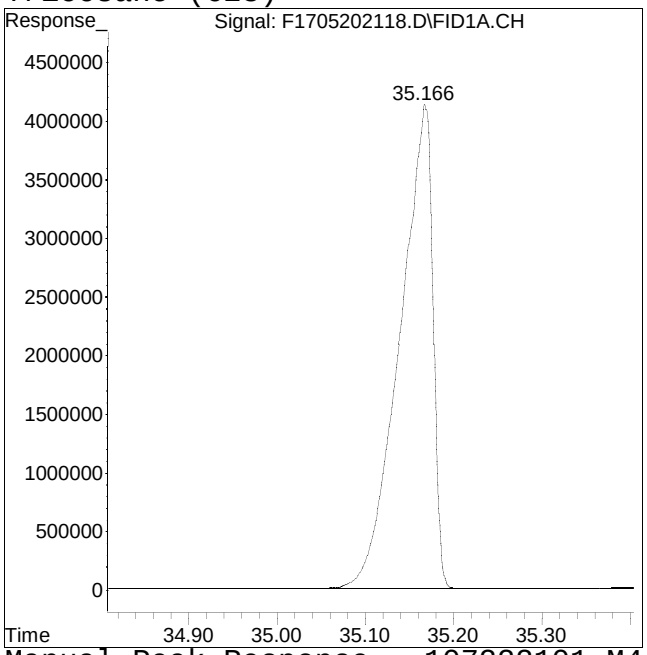
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 107127983



Manual Peak Response = 107222101 M4

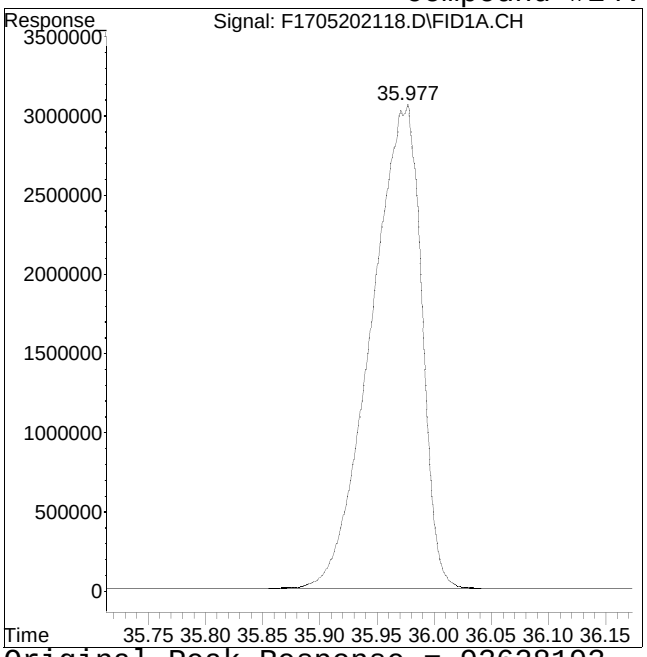
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

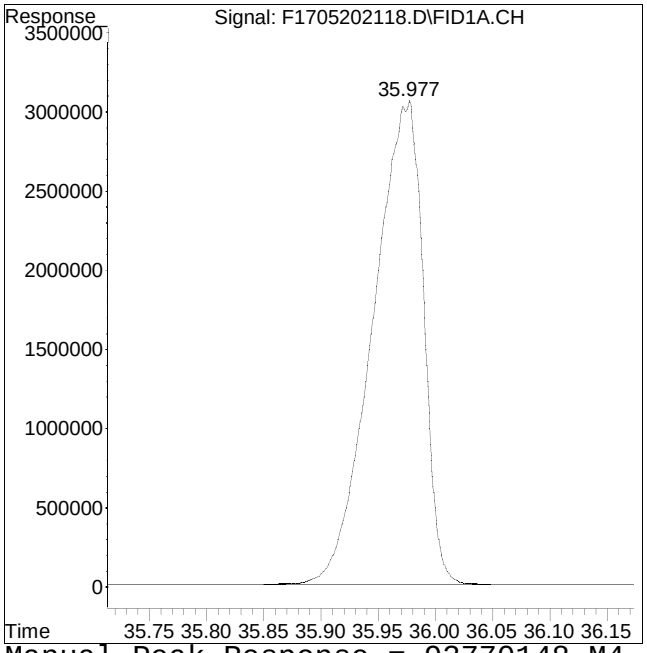
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #24: d50-Tetracosane



Original Peak Response = 93628193



Manual Peak Response = 93770148 M4

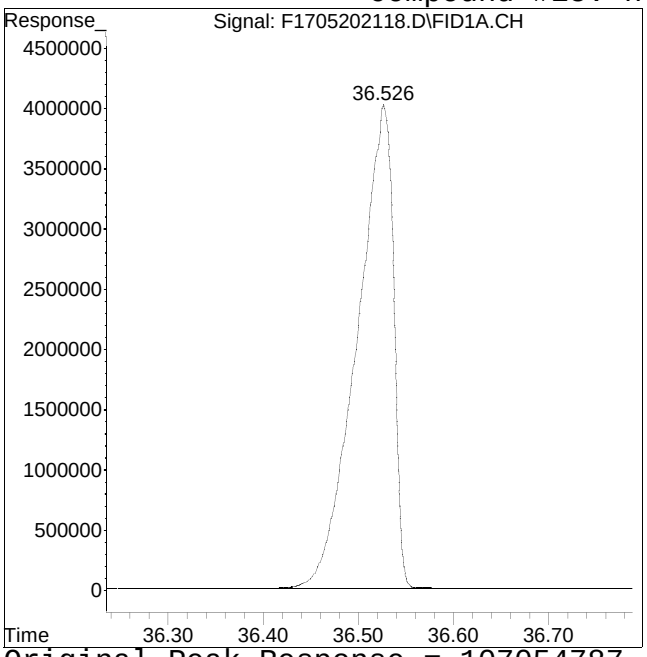
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

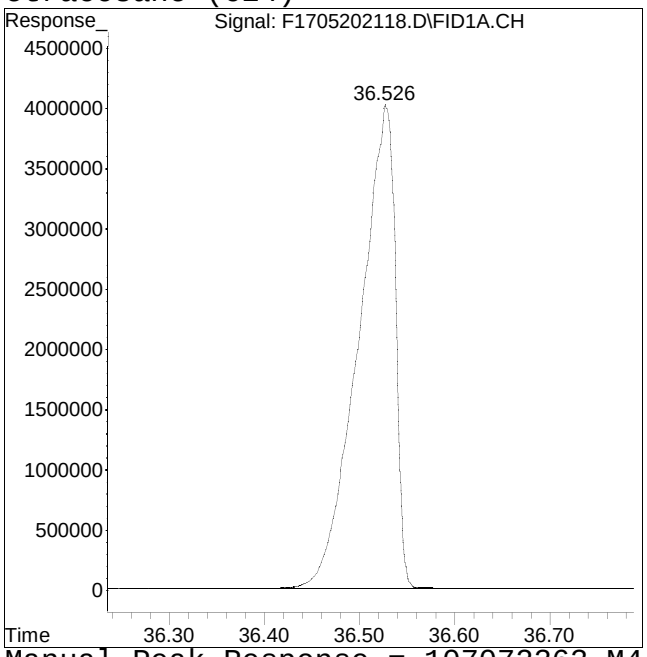
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 107054787



Manual Peak Response = 107072363 M4

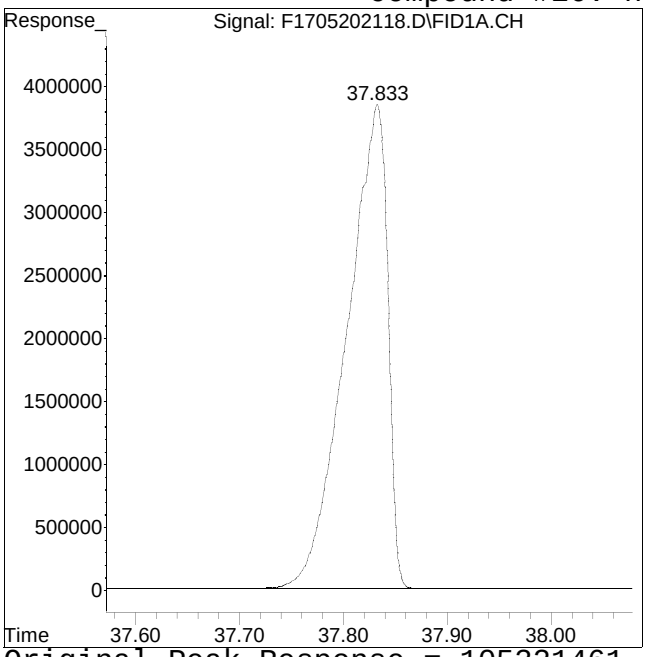
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

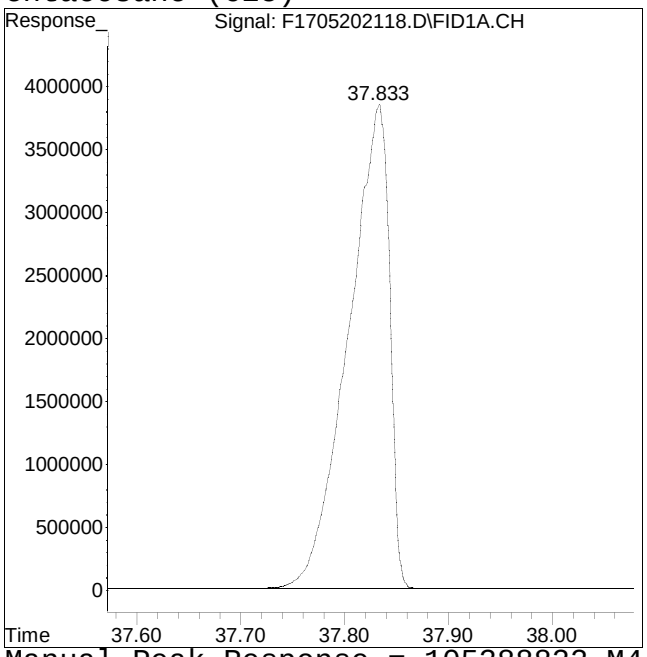
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 105321461



Manual Peak Response = 105388822 M4

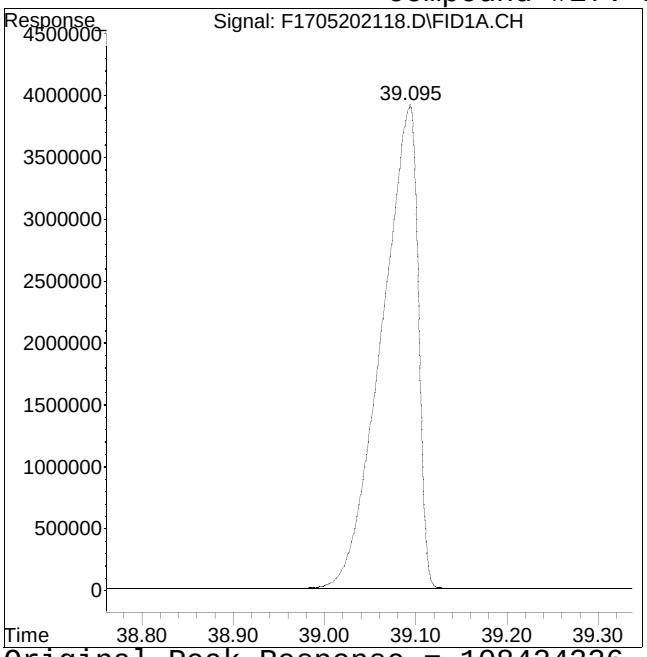
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

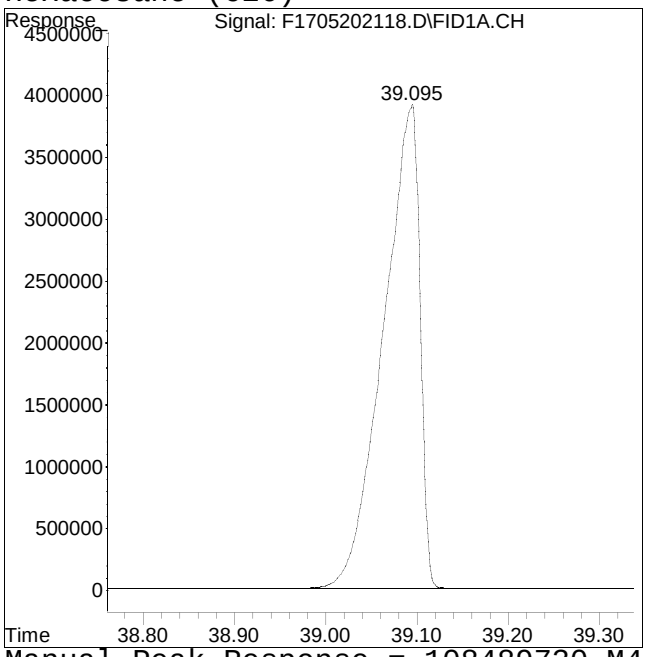
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 108424326



Manual Peak Response = 108489730 M4

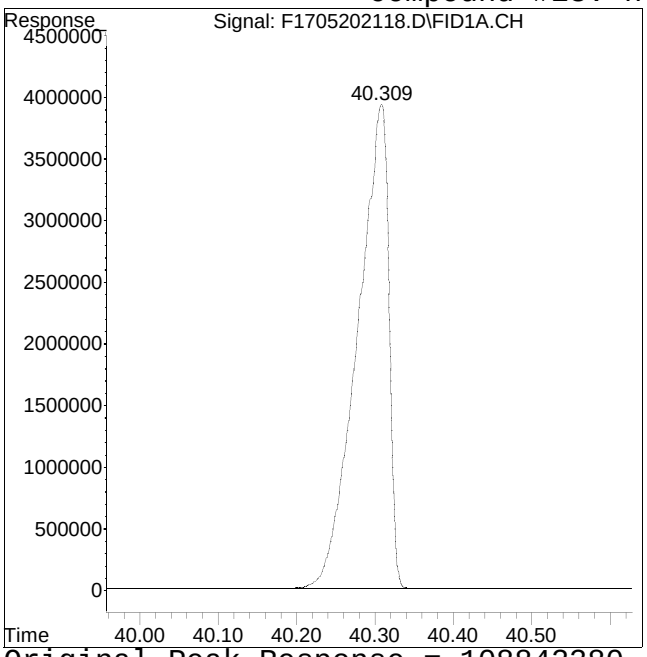
M4 = Poor automated baseline construction.

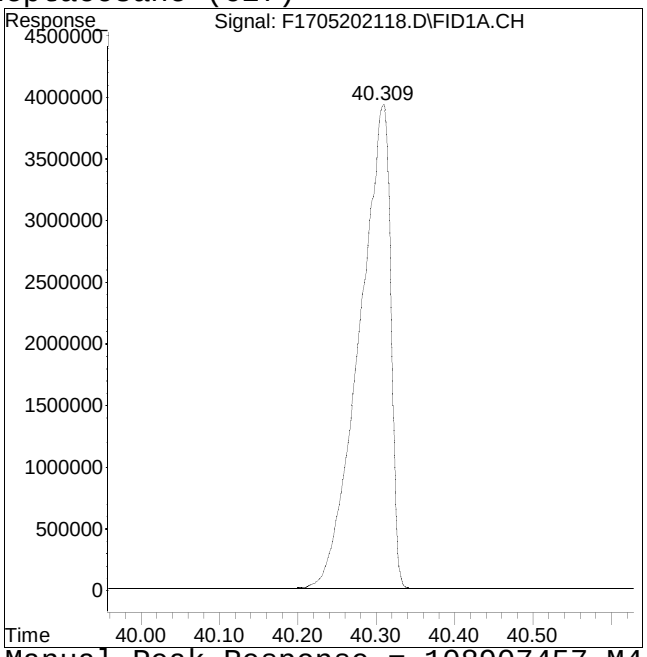
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #28: n-Heptacosane (C27)





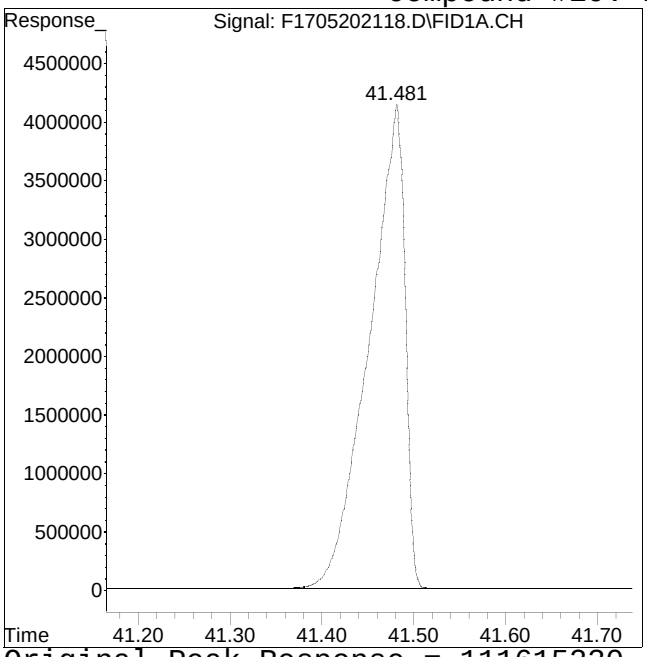
Original Peak Response = 108842380 Manual Peak Response = 108907457 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

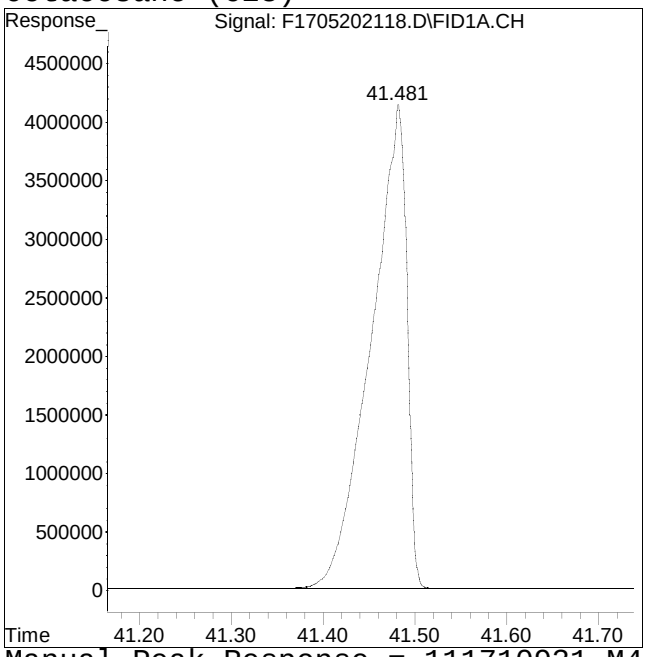
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 111615230



Manual Peak Response = 111710931 M4

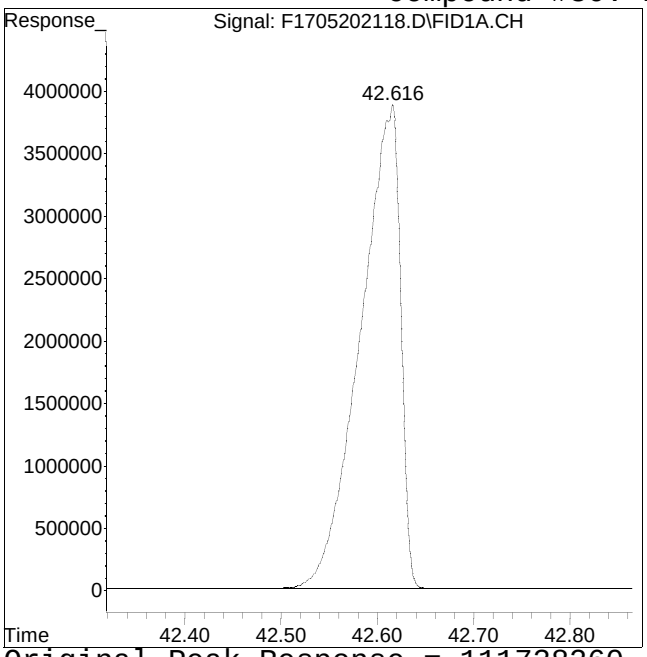
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

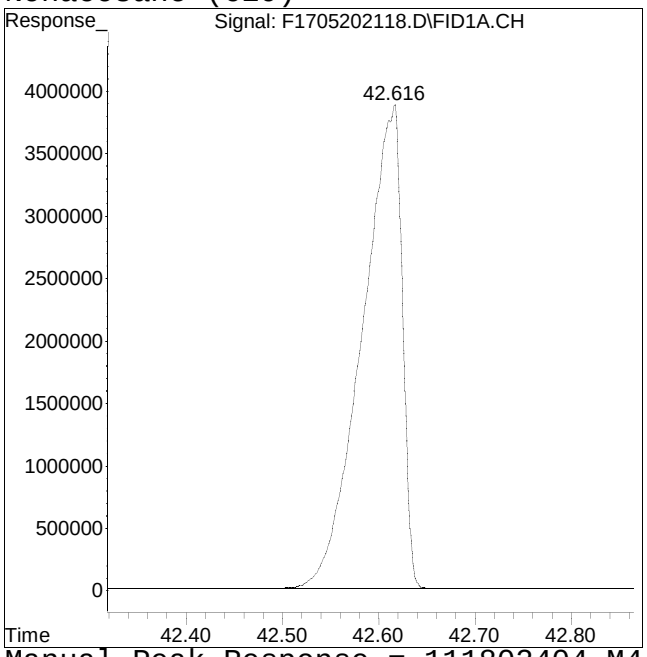
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 111738260



Manual Peak Response = 111802404 M4

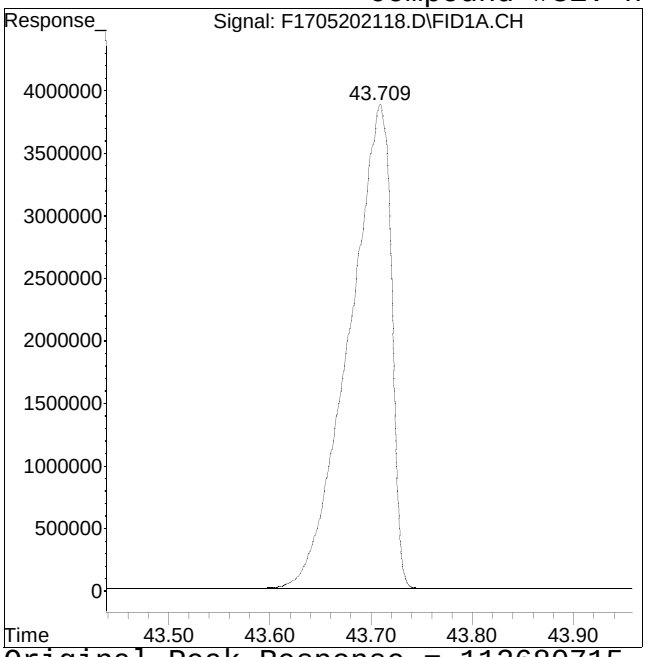
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

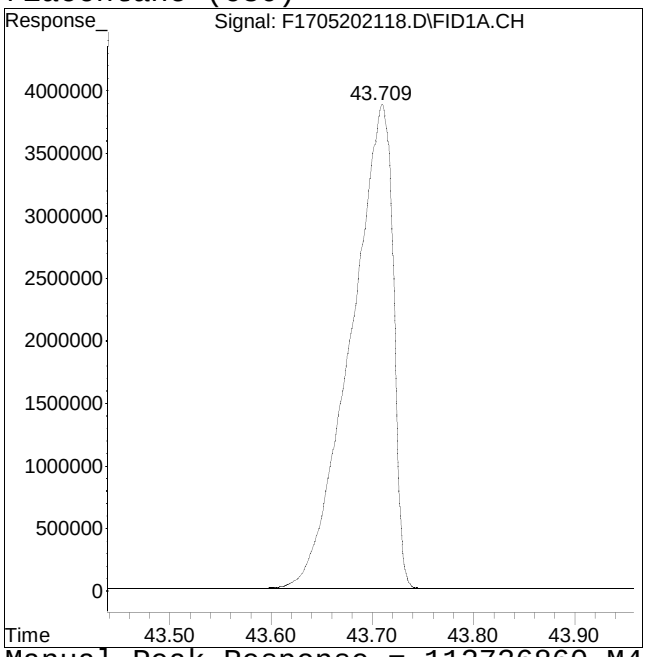
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 112680715



Manual Peak Response = 112736860 M4

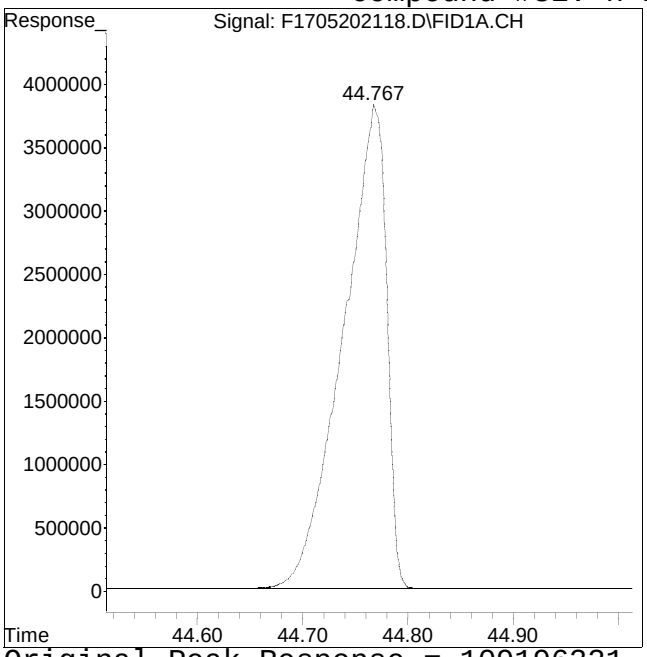
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

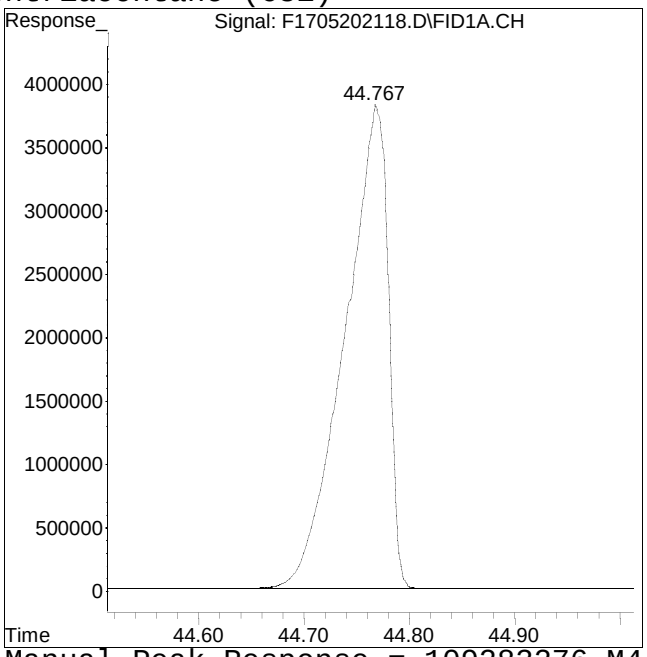
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 109196321



Manual Peak Response = 109283276 M4

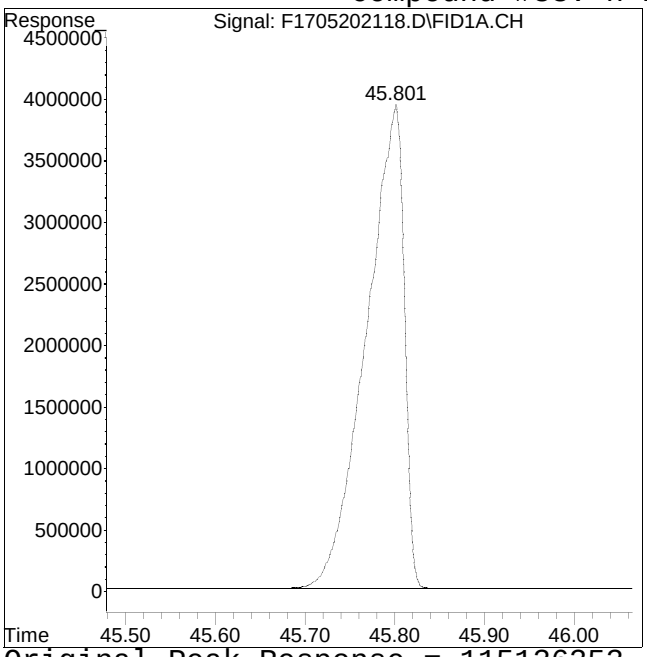
M4 = Poor automated baseline construction.

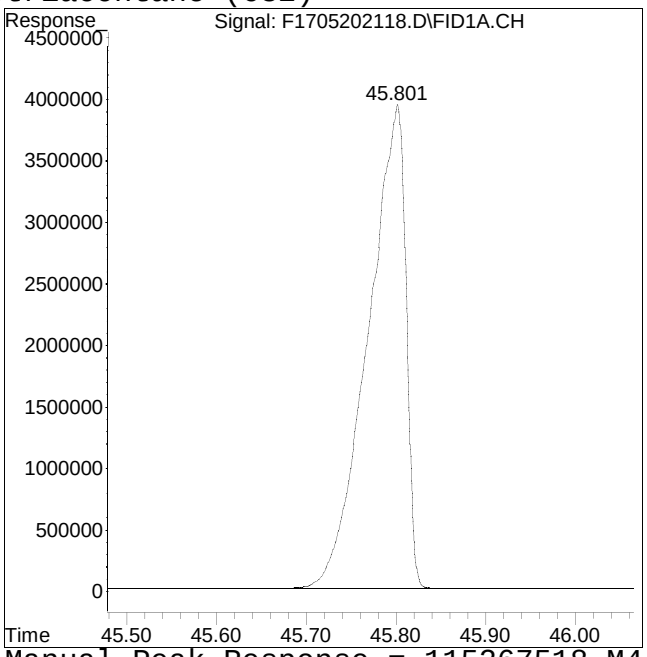
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #33: n-Dotriacontane (C32)





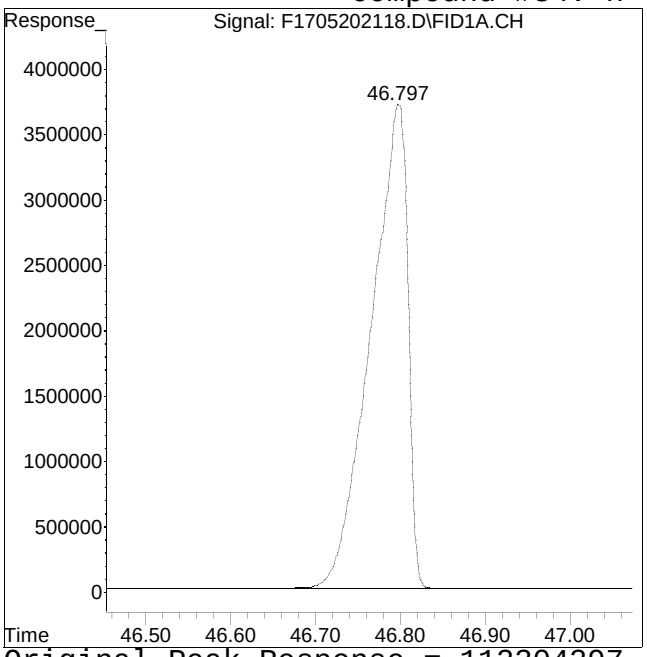
Original Peak Response = 115136353 Manual Peak Response = 115267518 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

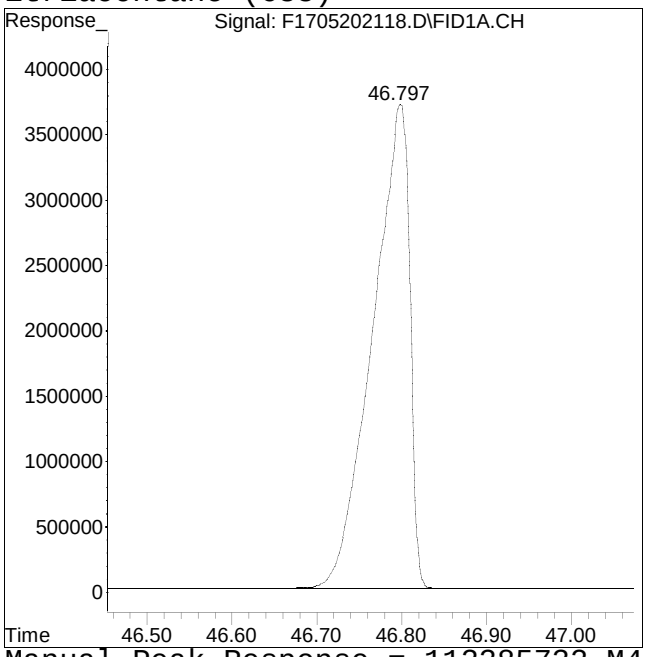
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 112304297



Manual Peak Response = 112385732 M4

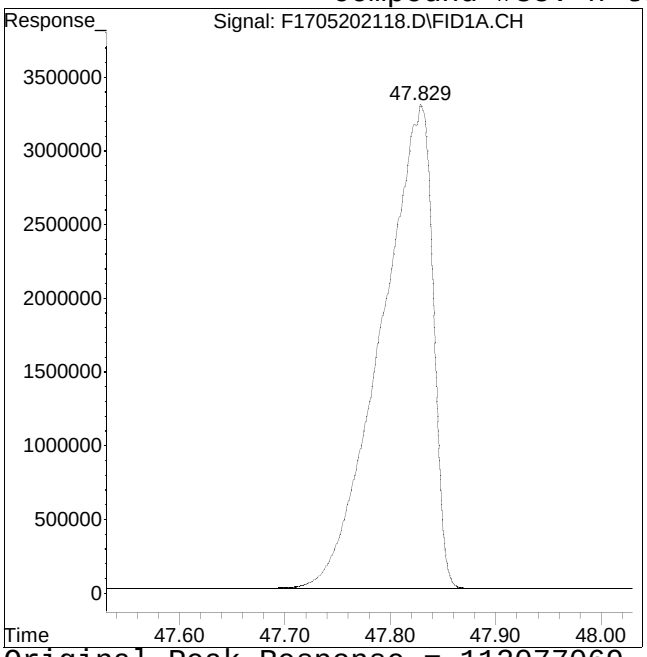
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

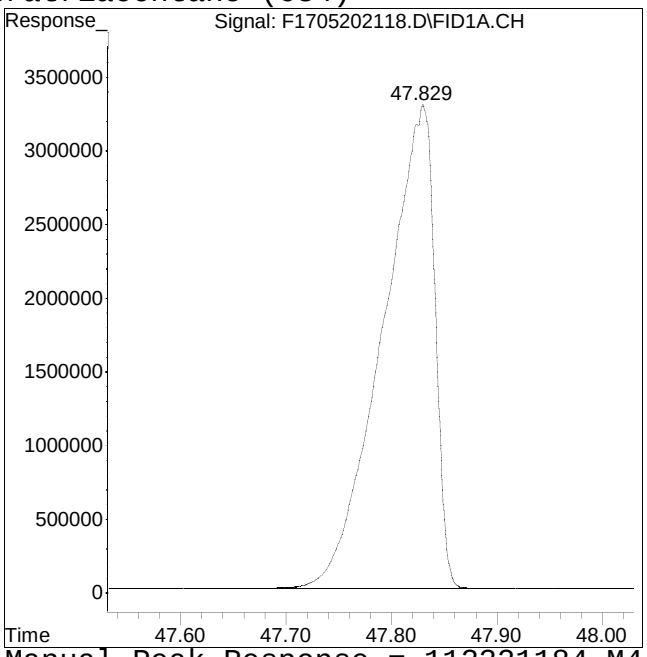
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 112077069



Manual Peak Response = 112321184 M4

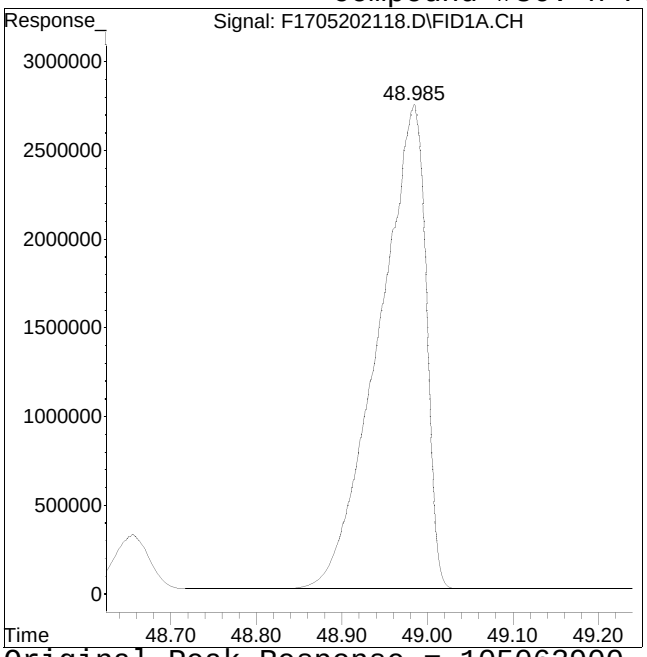
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

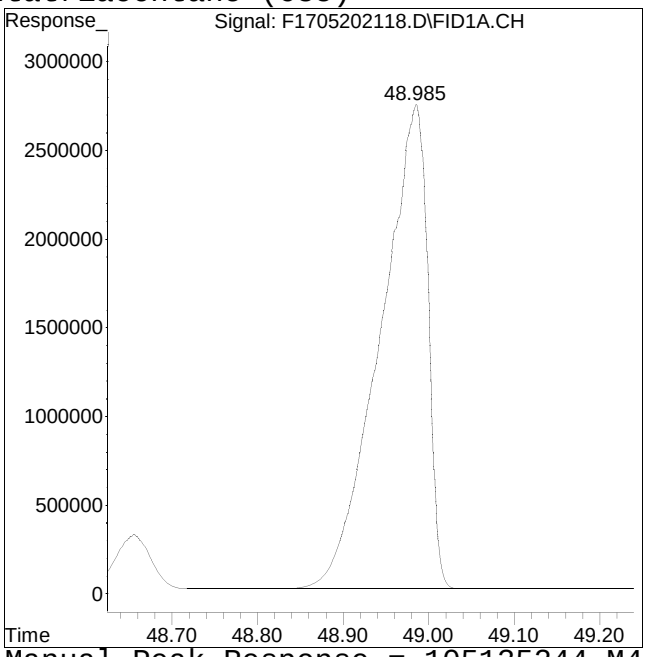
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 105063900



Manual Peak Response = 105135244 M4

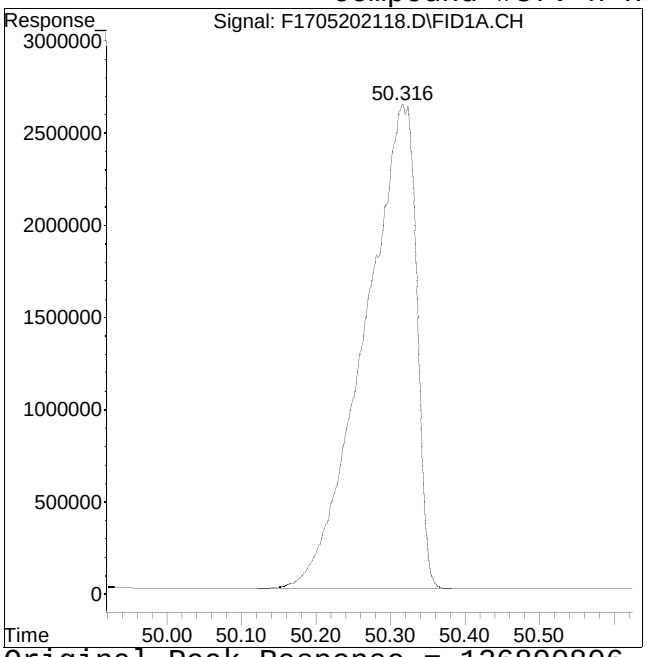
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

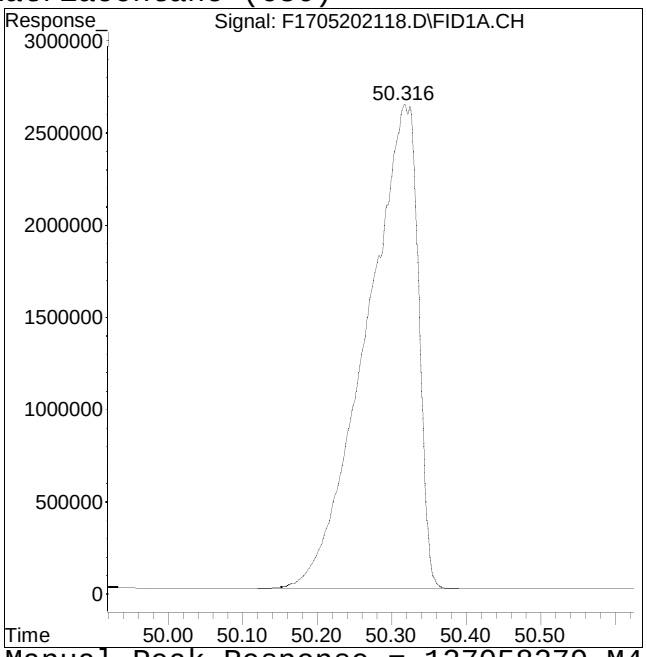
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 126890806



Manual Peak Response = 127058279 M4

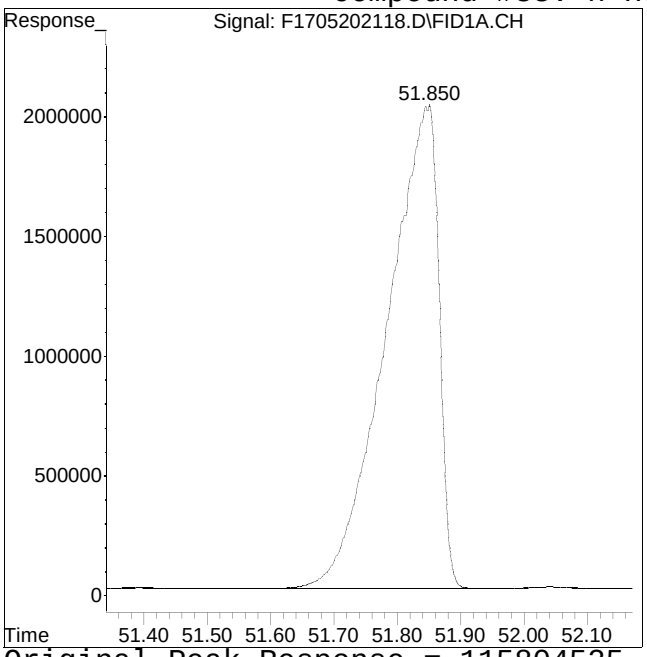
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

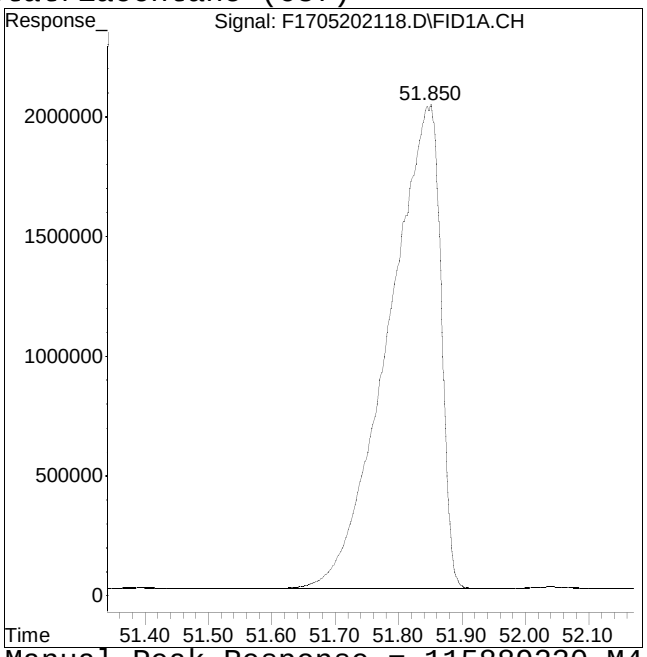
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 115804525



Manual Peak Response = 115889230 M4

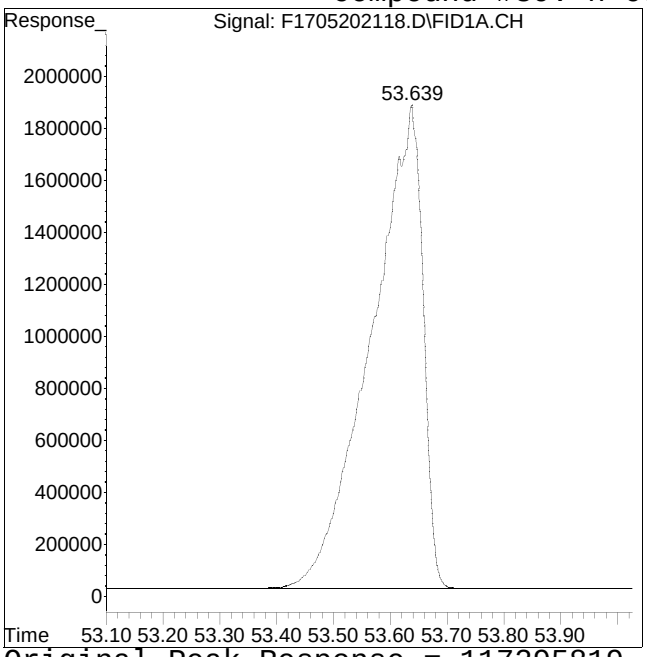
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

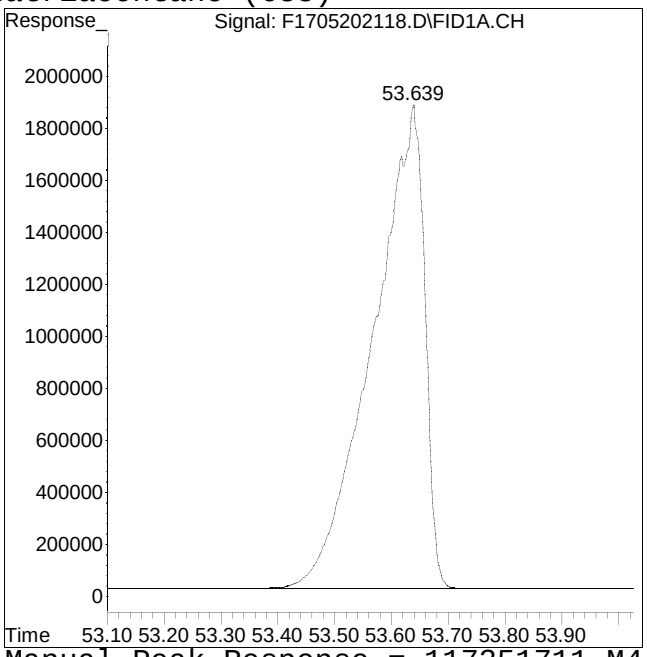
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 117295819



Manual Peak Response = 117351711 M4

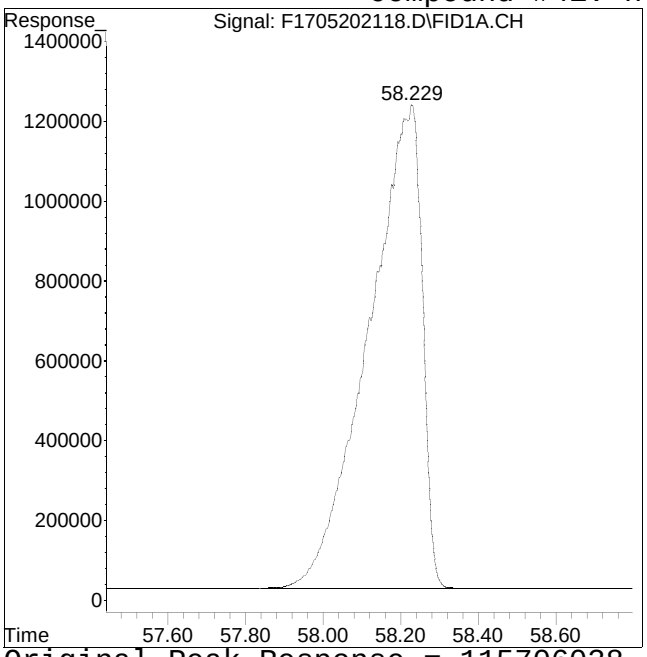
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

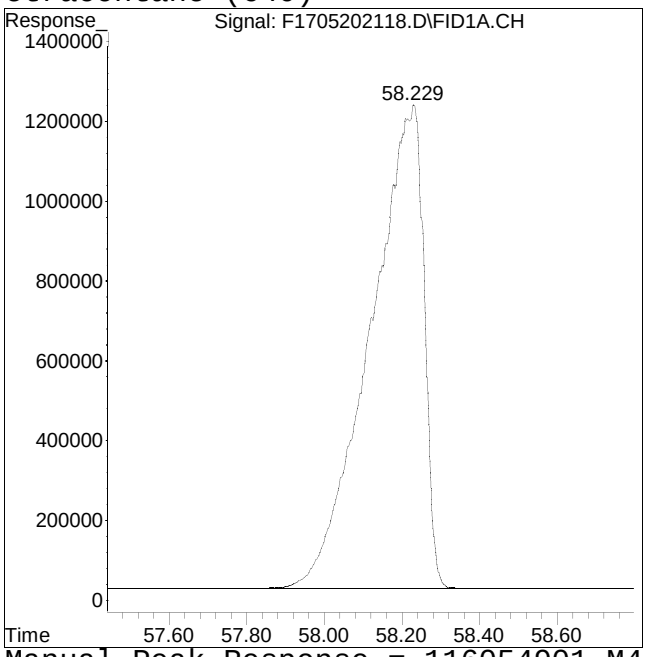
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 115706038



Manual Peak Response = 116054901 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202120.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 2:44 am
Operator : FID17:WR
Sample : I1705202105F
Misc : WG1505003,FRBD80,200ug/ml
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:36:45 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:30:35 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.329	60780044	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.351	249308938	187.097	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 374.19%#			
24) s	d50-Tetracosane	36.003	199017511	188.102	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 376.20%#			
	Target Compounds					
2) t	n-Octane (C8)	5.729f	192619914	179.559	ug/mL	M4
3) t	n-Nonane (C9)	7.900	201433030	175.185	ug/mL	M4
4) t	n-Decane (C10)	10.367	211499703	180.694	ug/mL	M4
5) t	n-Undecane (C11)	12.874	210848120	185.232	ug/mL	M4
6) t	n-Dodecane (C12)	15.305	212672282	186.576	ug/mL	M4
7) t	n-Tridecane (C13)	17.614	212839738	186.137	ug/mL	M4
9) t	n-Tetradecane (C14)	19.805	218208938	185.003	ug/mL	M4
11) t	n-Pentadecane (C15)	21.875	219341702	185.923	ug/mL	M4
12) t	n-Hexadecane (C16)	23.835	217167666	184.059	ug/mL	M4
14) t	n-Heptadecane (C17)	25.697	221556768	188.877	ug/mL	M4
15) t	Pristane	25.817	222551621	181.595	ug/mL	M4
16) t	n-Octadecane (C18)	27.469	222568929	186.087	ug/mL	M4
17) t	Phytane	27.642	207645520	185.468	ug/mL	M4
18) t	n-Nonadecane (C19)	29.162	223138563	185.982	ug/mL	M4
20) t	n-Eicosane (C20)	30.768	224220195	185.784	ug/mL	M4
21) t	n-Heneicosane (C21)	32.306	225118581	185.965	ug/mL	M4
22) t	n-Docosane (C22)	33.783	224840261	185.327	ug/mL	M4
23) t	n-Tricosane (C23)	35.198	225071564	185.109	ug/mL	M4
25) t	n-Tetracosane (C24)	36.560	224349501	185.090	ug/mL	M4
26) t	n-Pentacosane (C25)	37.866	220635797	186.240	ug/mL	M4
27) t	n-Hexacosane (C26)	39.125	226867832	186.628	ug/mL	M4
28) t	n-Heptacosane (C27)	40.337	227180739	186.326	ug/mL	M4
29) t	n-Octacosane (C28)	41.515	232741442	183.629	ug/mL	M4
30) t	n-Nonacosane (C29)	42.648	232059129	187.380	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202120.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 2:44 am
Operator : FID17:WR
Sample : I1705202105F
Misc : WG1505003,FRBD80,200ug/ml
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:36:45 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:30:35 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

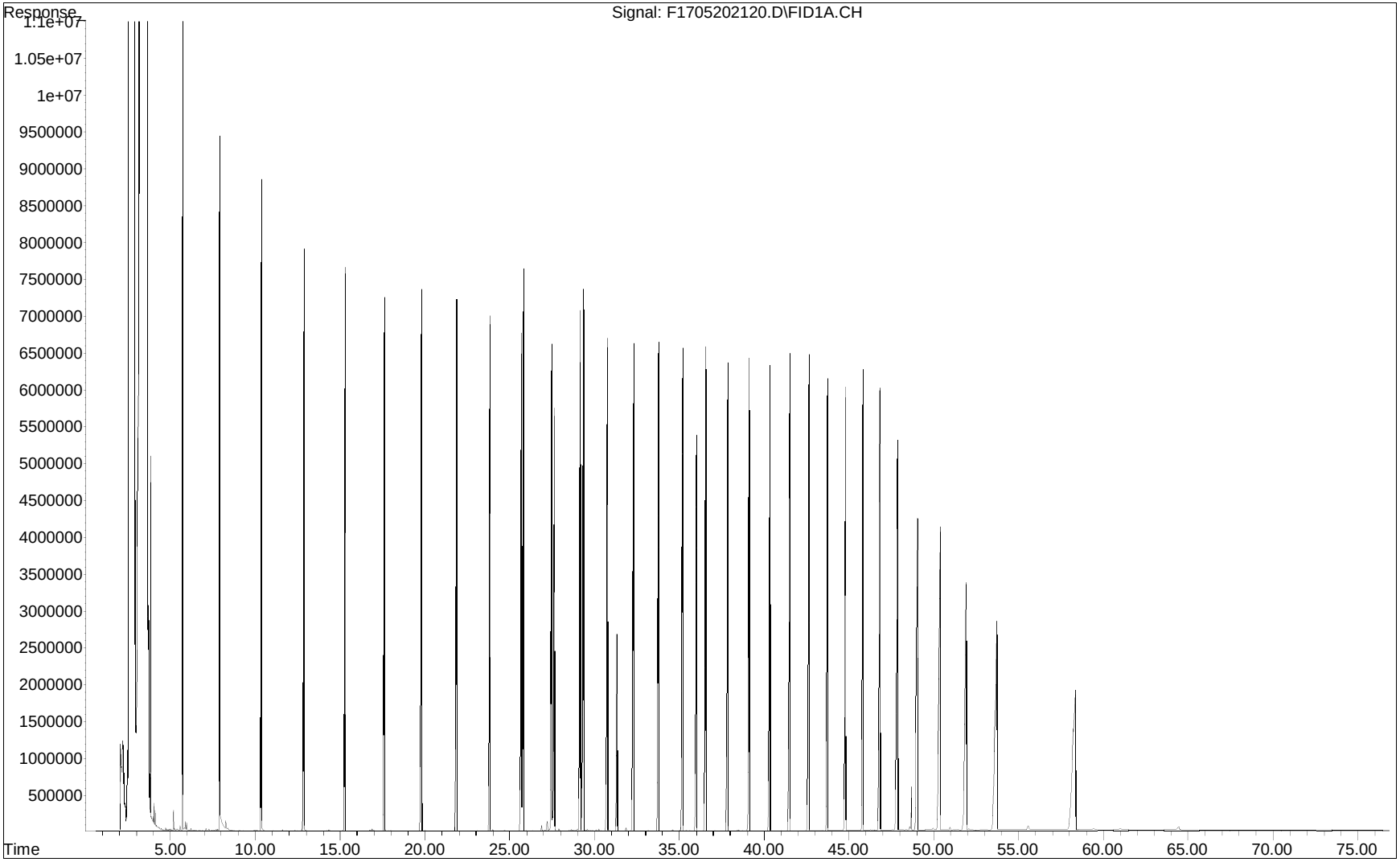
	Compound	R.T.	Response	Conc	Units	
31) t	n-Triacontane (C30)	43.748	233302652	187.717	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.806	225361978	187.416	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.837	236707432	187.568	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.836	229699744	186.852	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.870	228455680	187.214	ug/mL	M4
36) t	n-Pentatriacontane (C35)	49.027	212723470	186.447	ug/mL	M4
37) t	n-Hexatriacontane (C36)	50.381f	255619091	186.026	ug/mL	M4
38) t	n-Heptatriacontane (C37)	51.913	231704397	185.907	ug/mL	M4
39) t	n-Octatriacontane (C38)	53.710	233342360	185.017	ug/mL	M4
41) t	n-Tetracontane (C40)	58.324	228203729	182.958	ug/mL	M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202120.D
Operator : FID17:WR
Acquired : 21 May 2021 2:44 am using AcqMethod FID17A.M
Sample Name: I1705202105F
Instrument: FID17
Misc Info : WG1505003,FRBD80,200ug/ml
Vial Number: 10
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

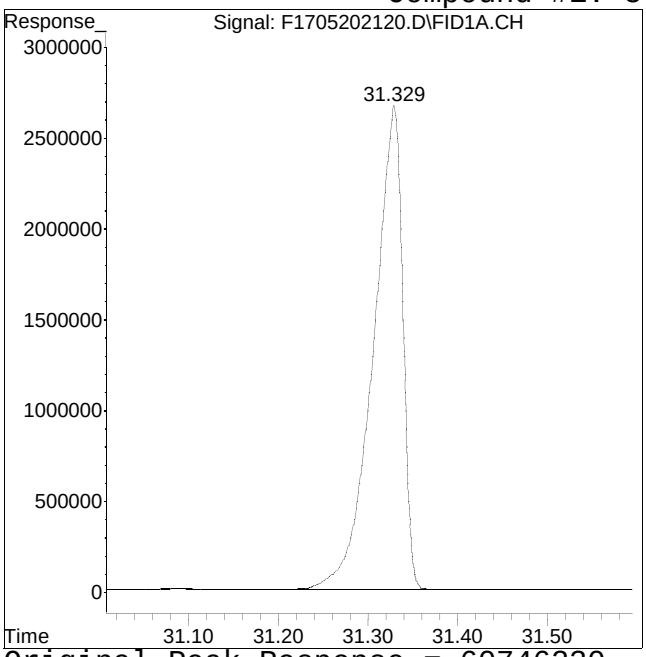


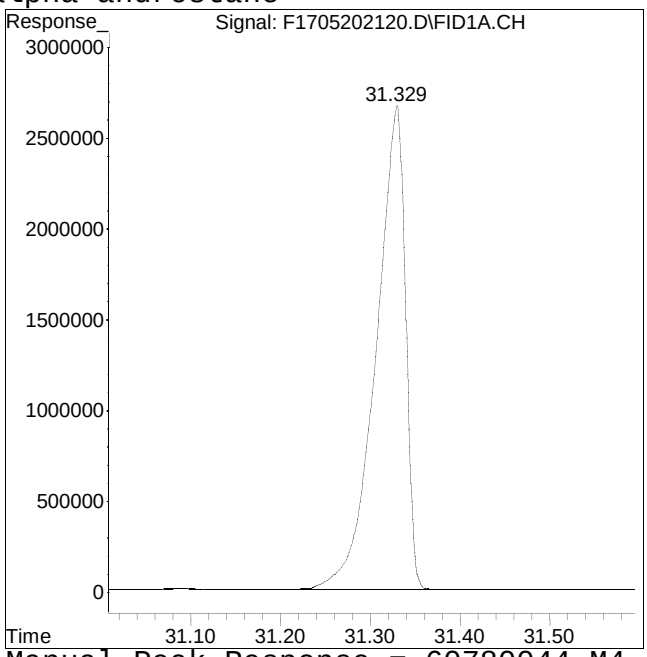
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #1: 5-alpha-androstane





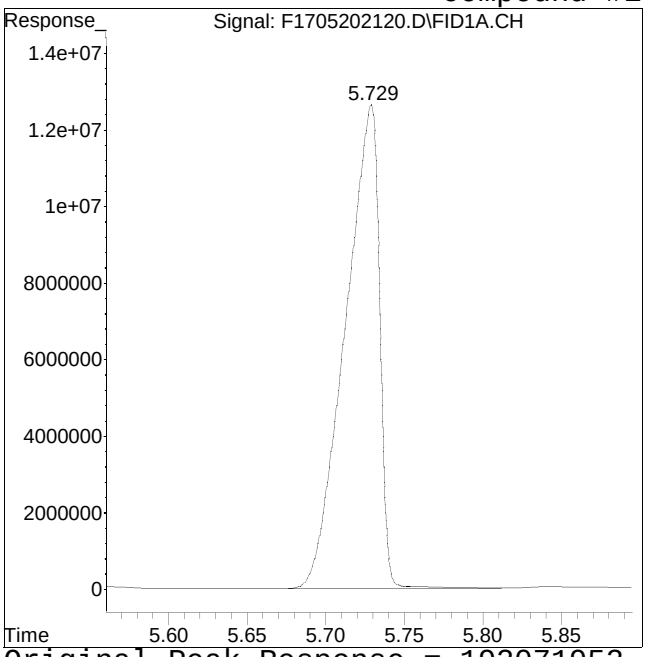
Original Peak Response = 60746230 Manual Peak Response = 60780044 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

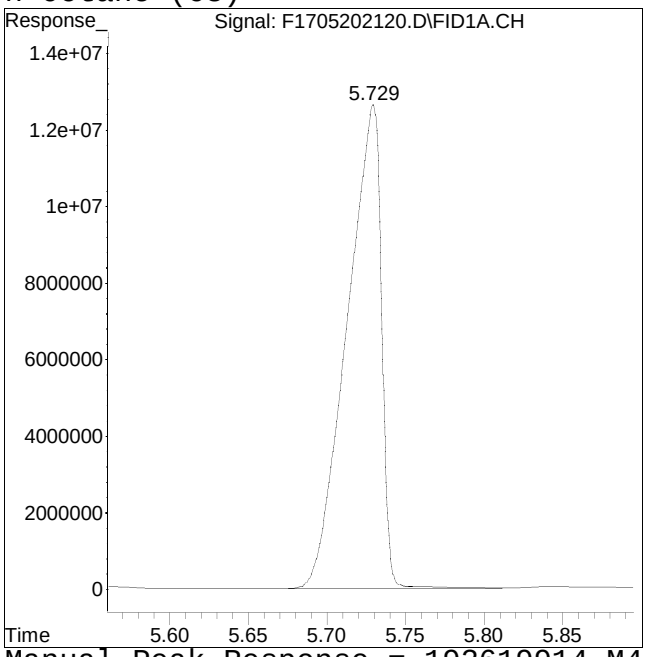
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #2: n-Octane (C8)



Original Peak Response = 192071952



Manual Peak Response = 192619914 M4

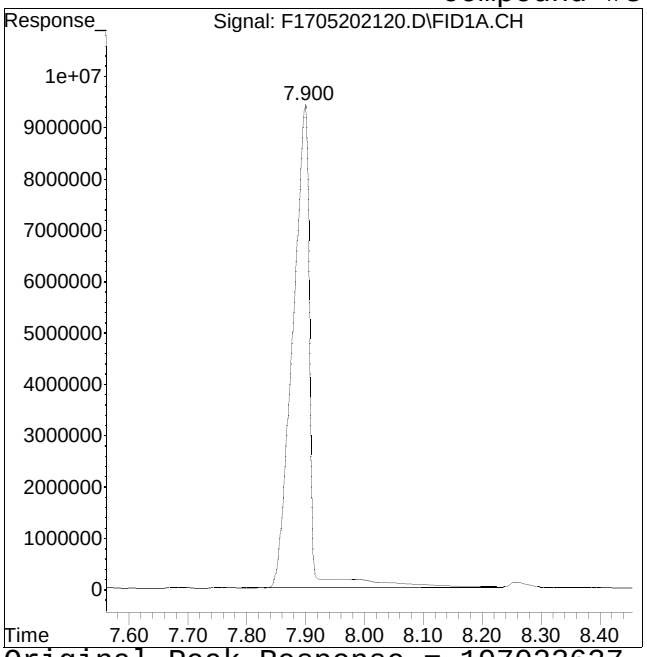
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

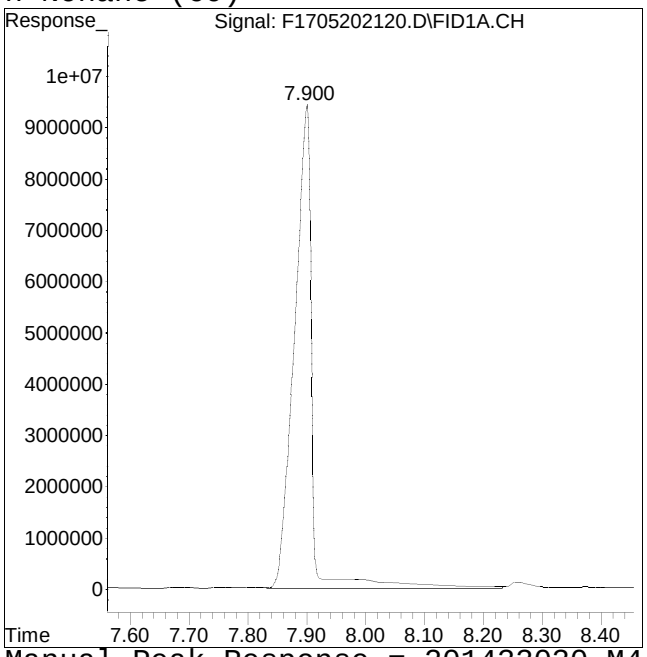
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 197023637



Manual Peak Response = 201433030 M4

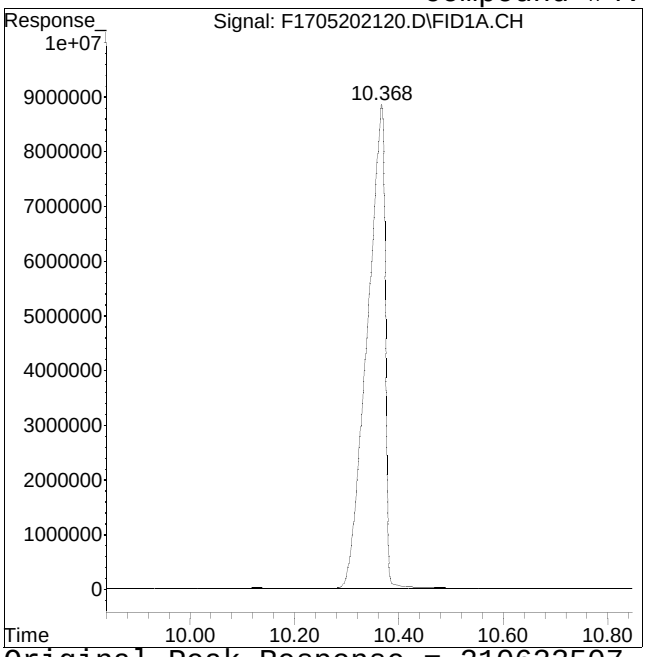
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

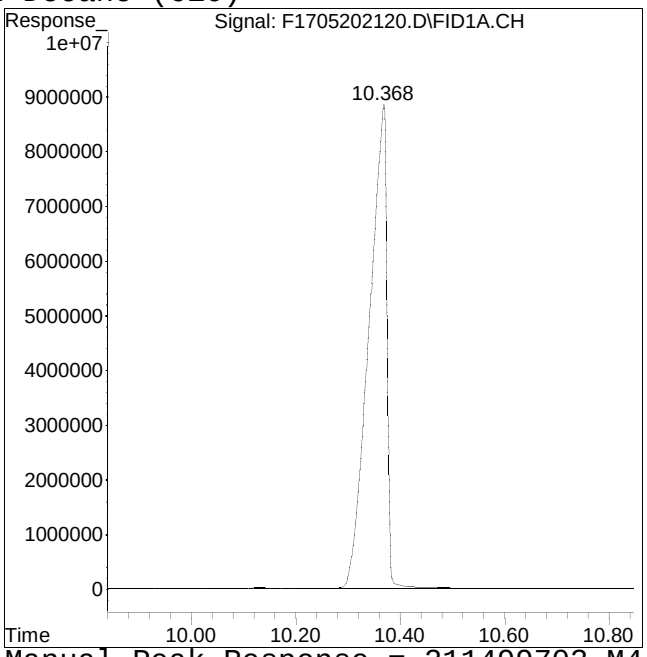
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #4: n-Decane (C10)



Original Peak Response = 210633507



Manual Peak Response = 211499703 M4

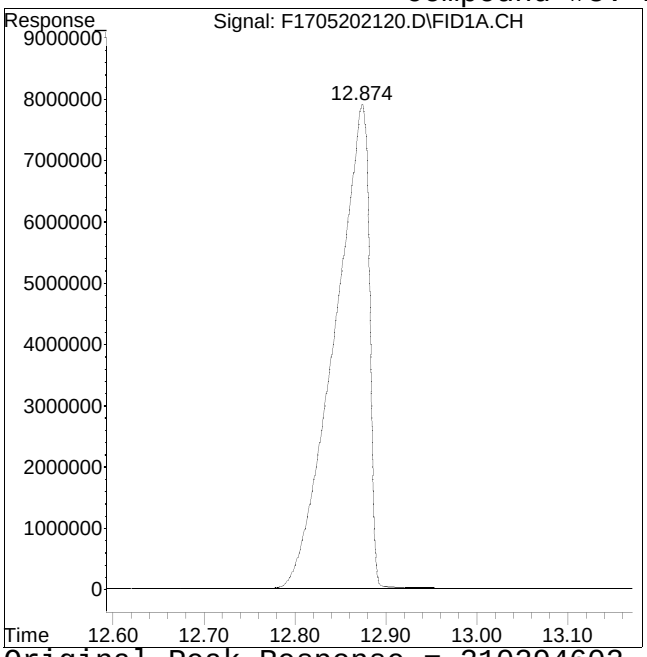
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

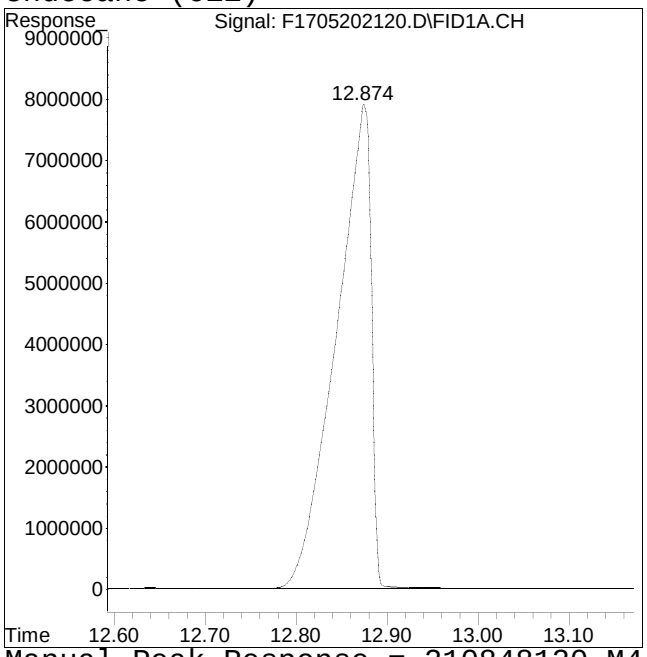
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 210294602



Manual Peak Response = 210848120 M4

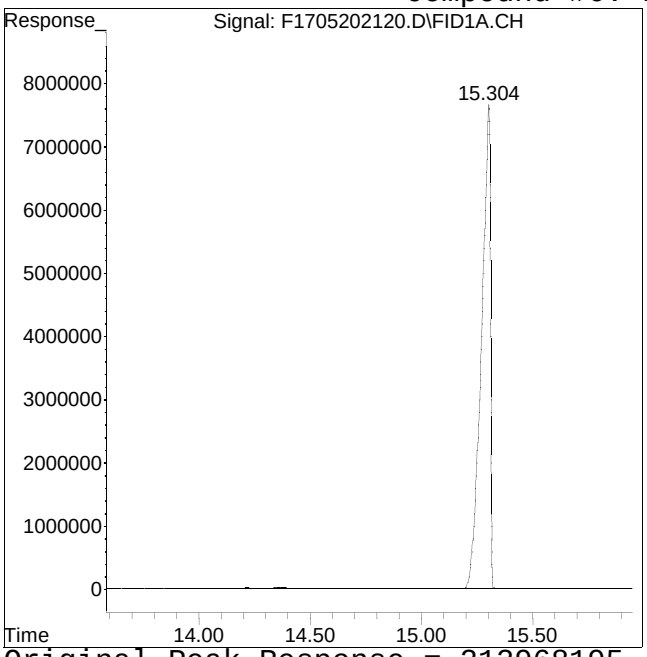
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

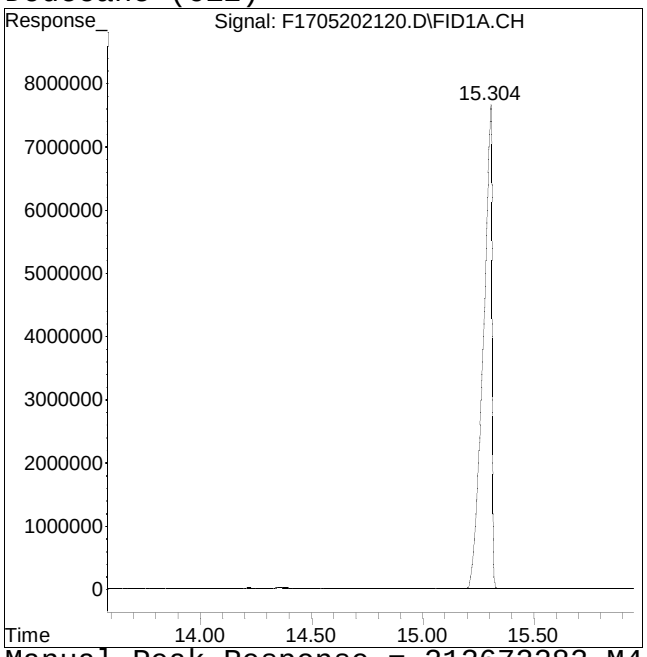
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 212968195



Manual Peak Response = 212672282 M4

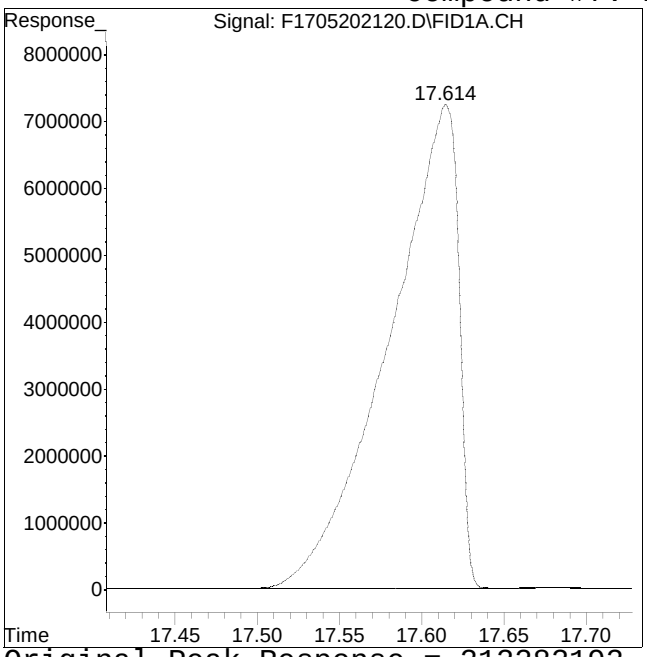
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

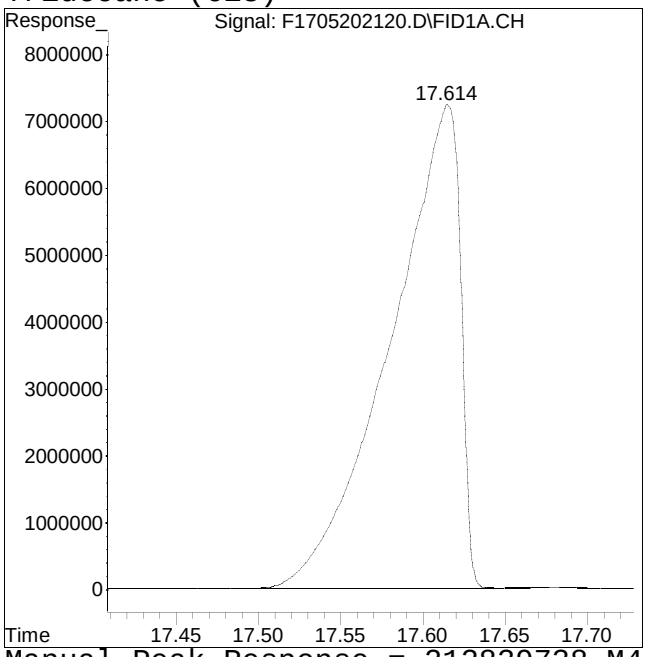
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 212282192



Manual Peak Response = 212839738 M4

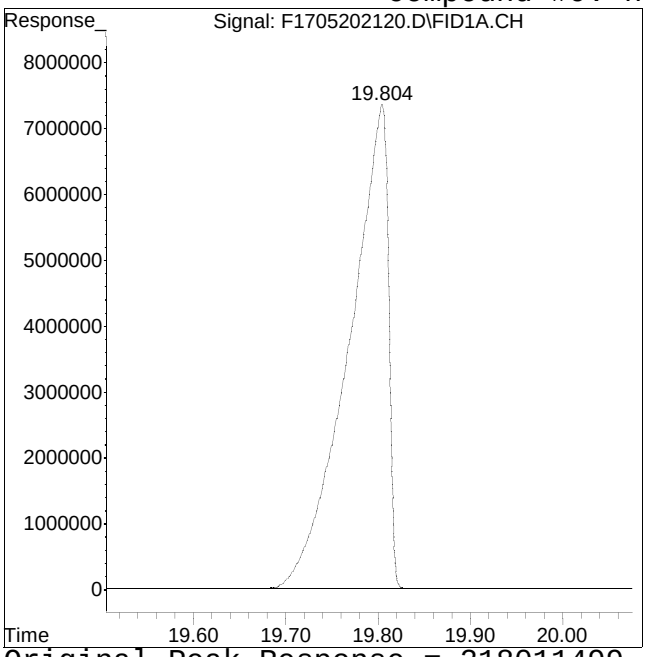
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

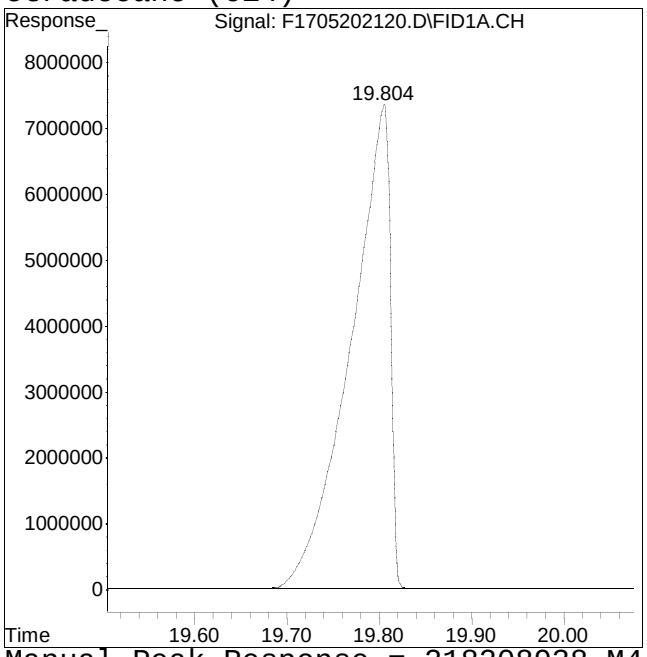
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 218011499



Manual Peak Response = 218208938 M4

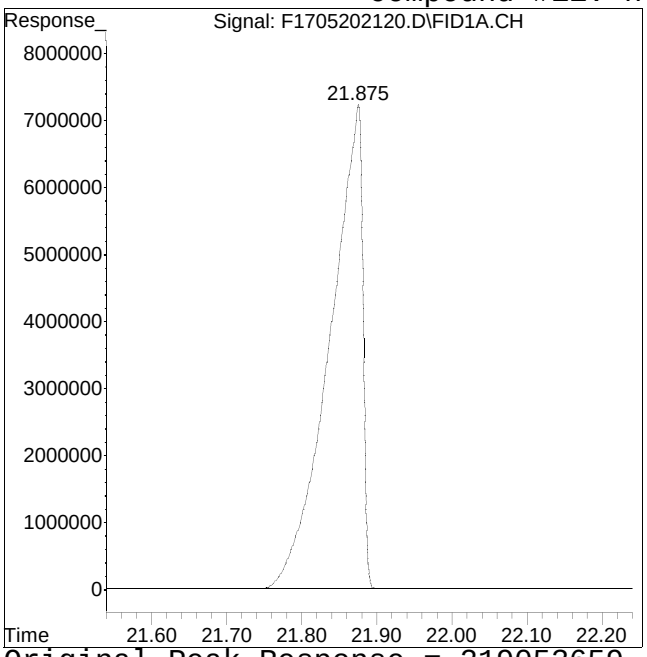
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

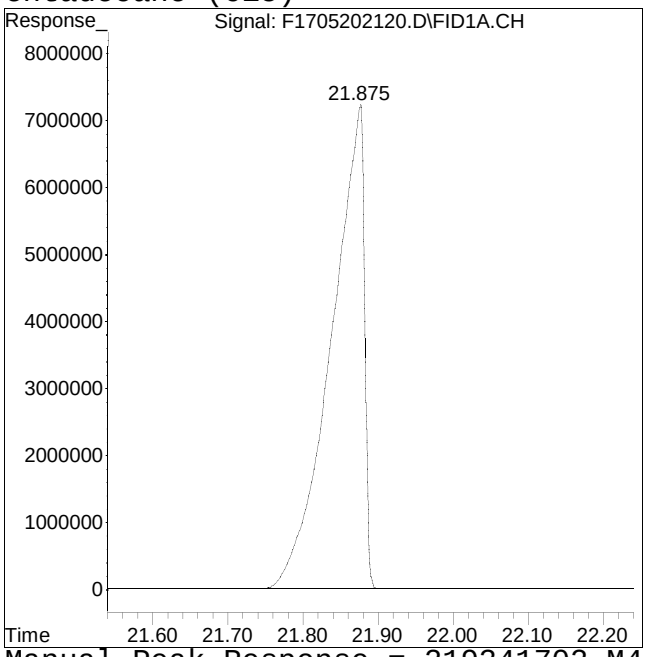
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 219053659



Manual Peak Response = 219341702 M4

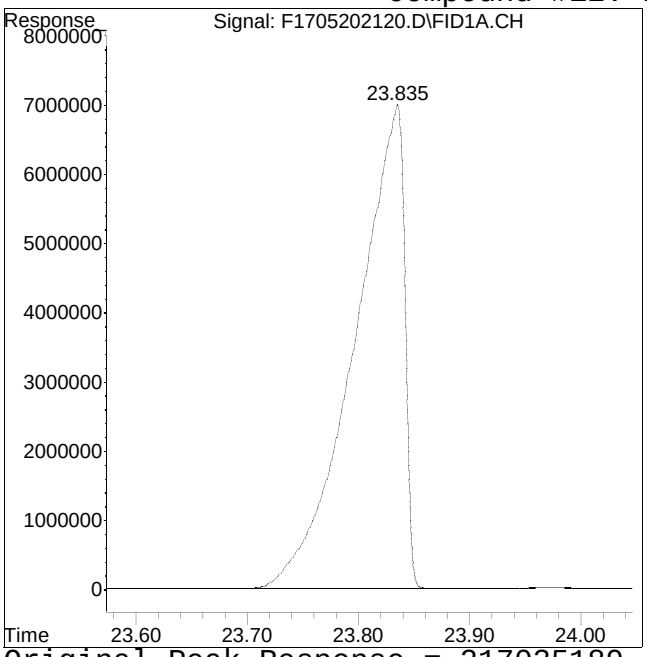
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

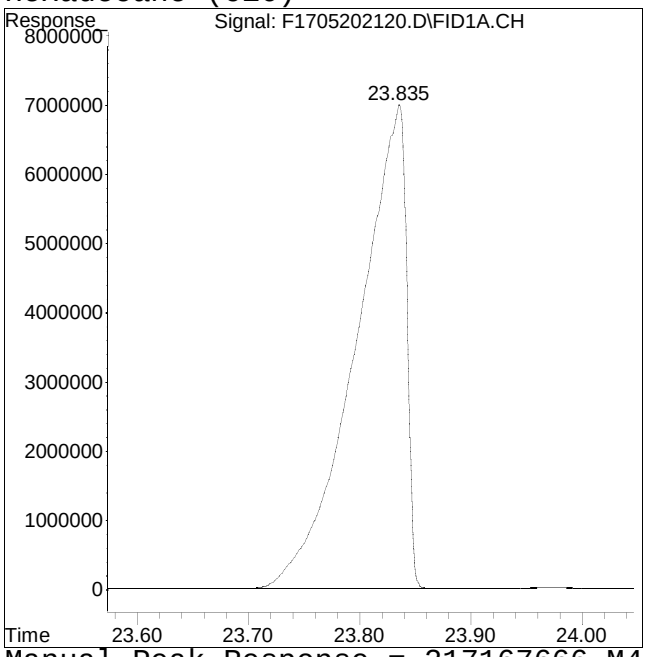
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 217035189



Manual Peak Response = 217167666 M4

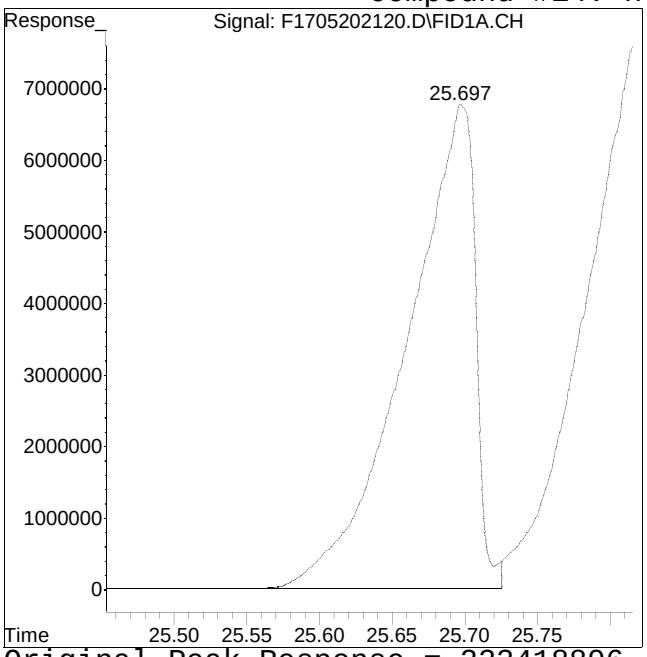
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

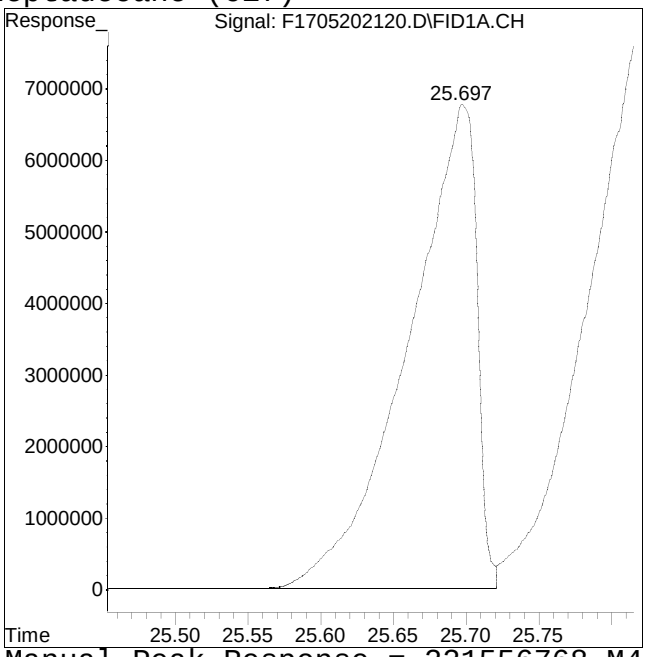
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 222418896



Manual Peak Response = 221556768 M4

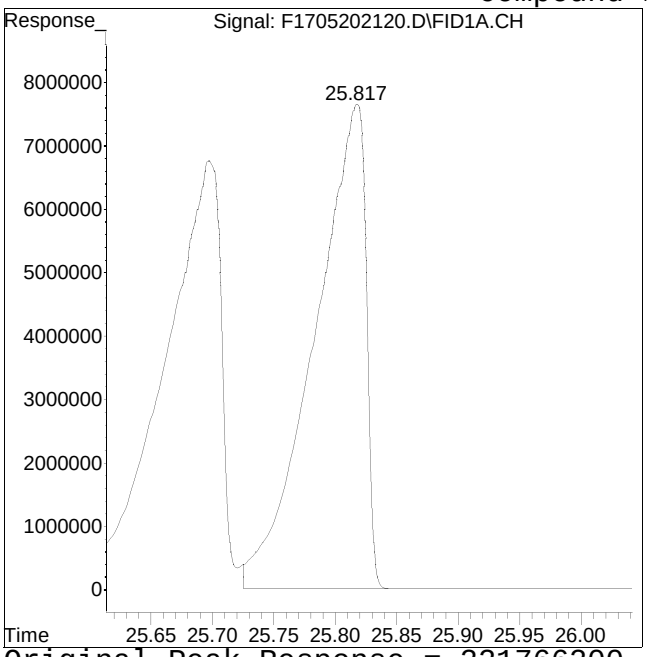
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

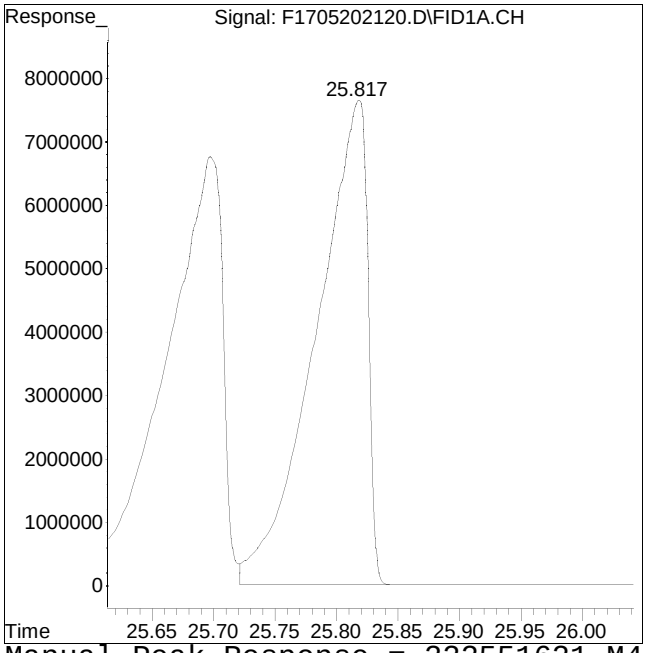
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #15: Pristane



Original Peak Response = 221766200



Manual Peak Response = 222551621 M4

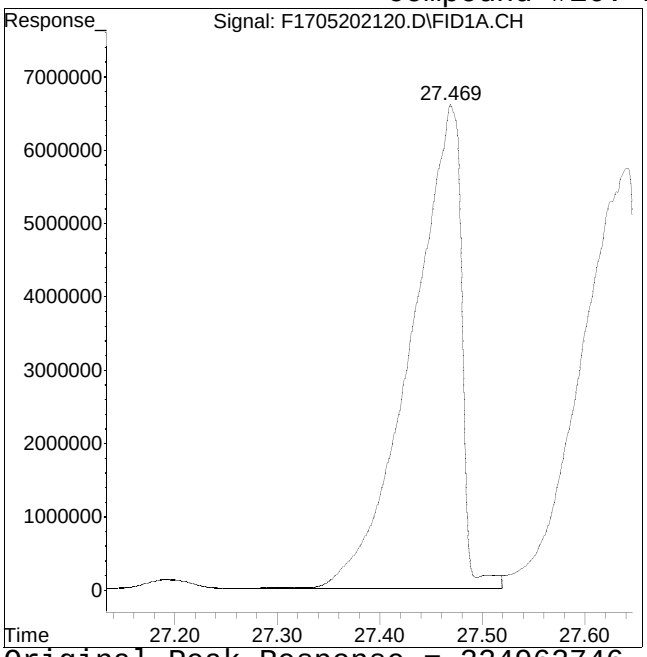
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

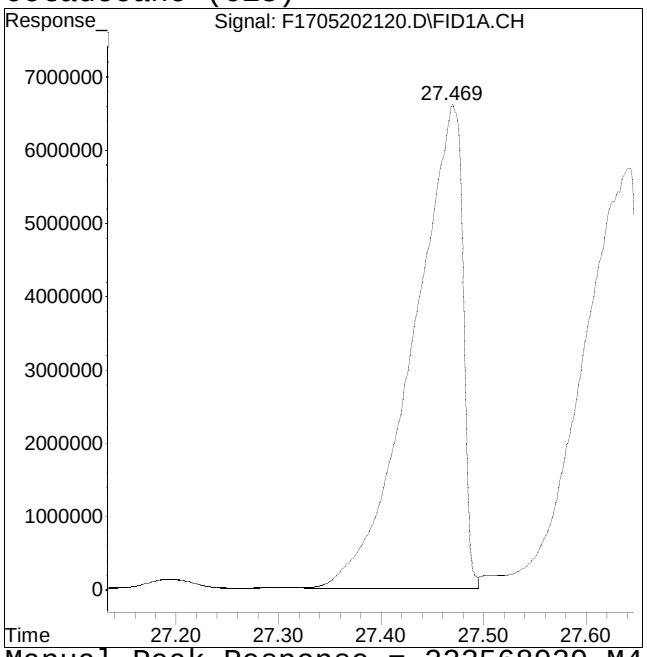
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 224962746



Manual Peak Response = 222568929 M4

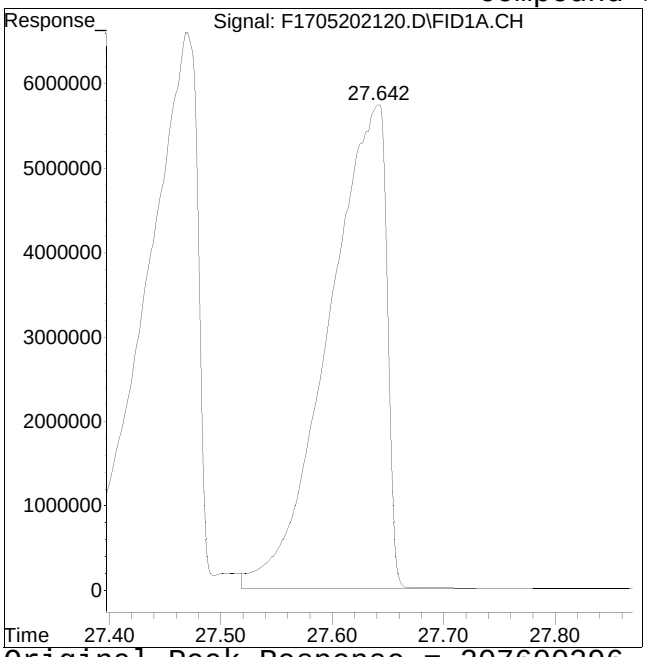
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

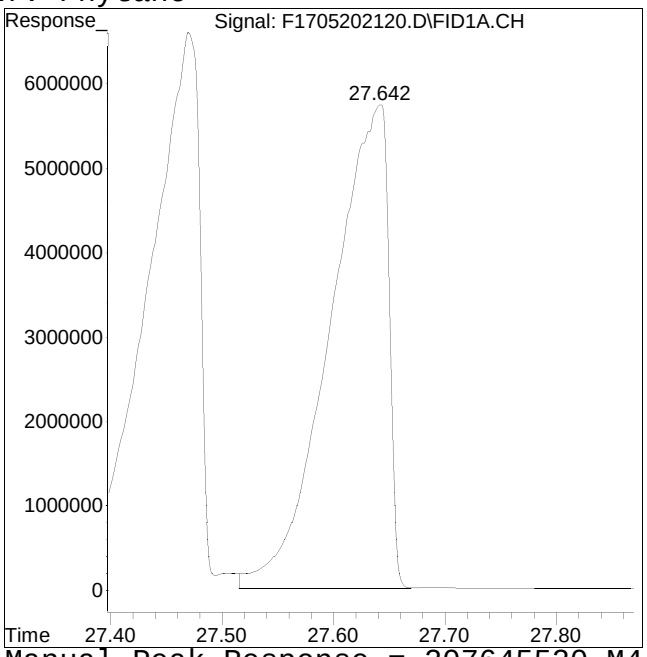
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #17: Phytane



Original Peak Response = 207600296



Manual Peak Response = 207645520 M4

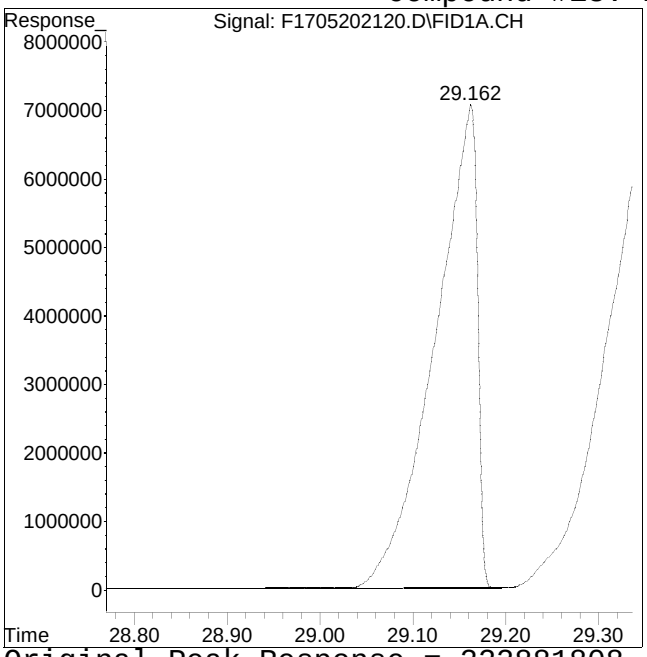
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

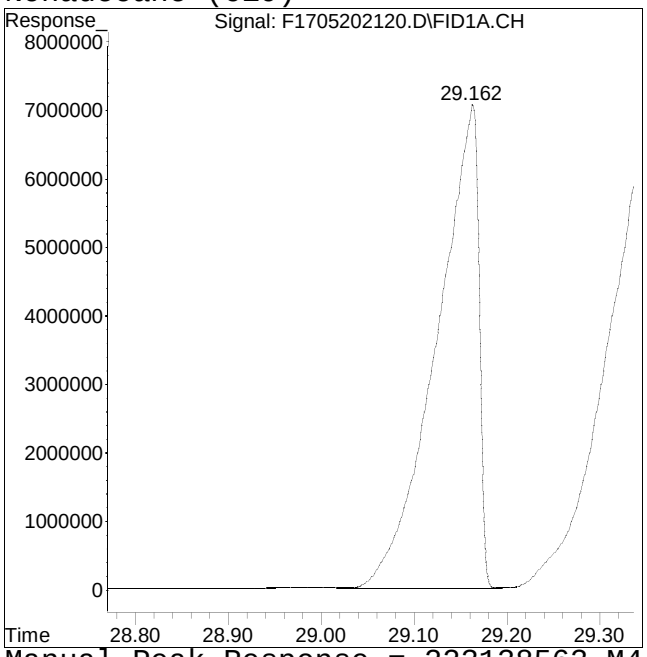
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 222881808



Manual Peak Response = 223138563 M4

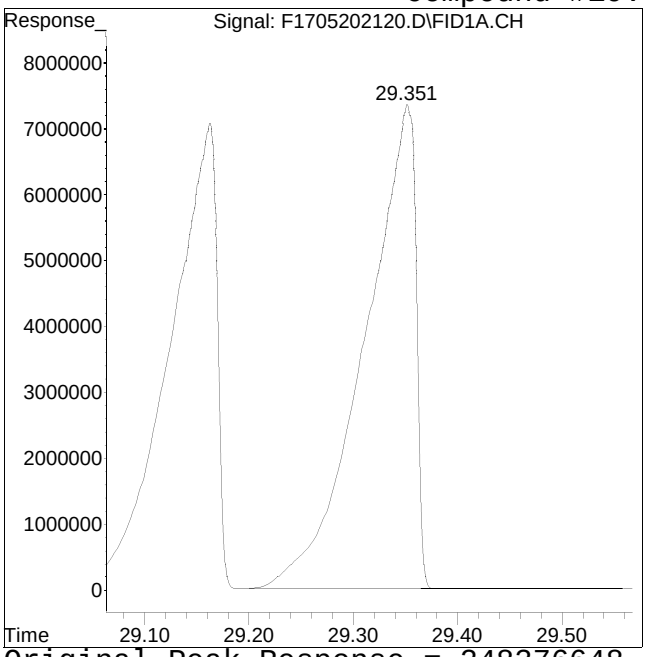
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

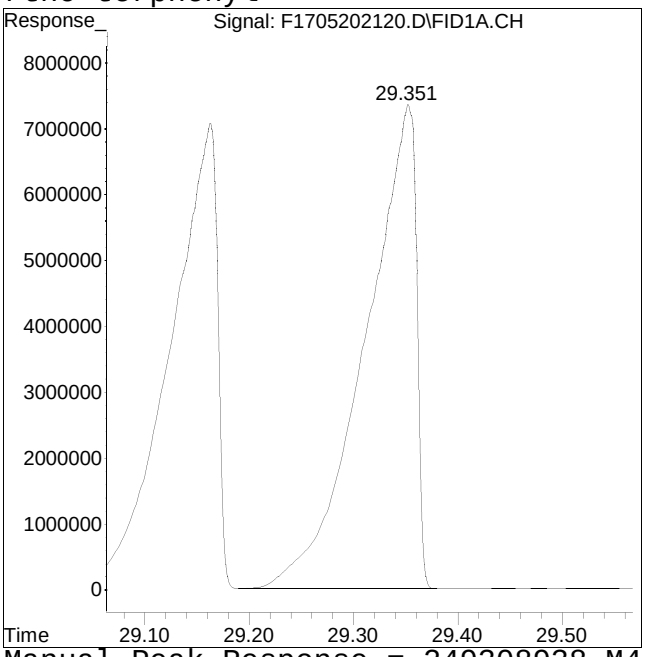
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #19: ortho-terphenyl



Original Peak Response = 248376648



Manual Peak Response = 249308938 M4

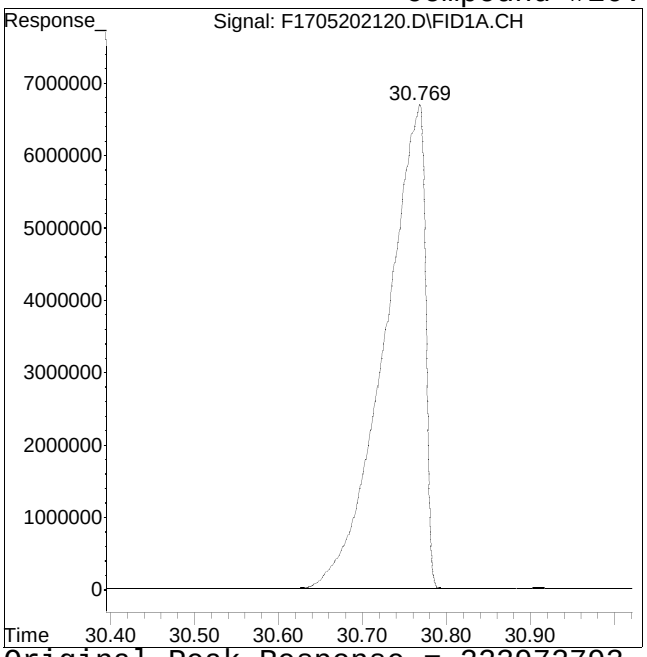
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

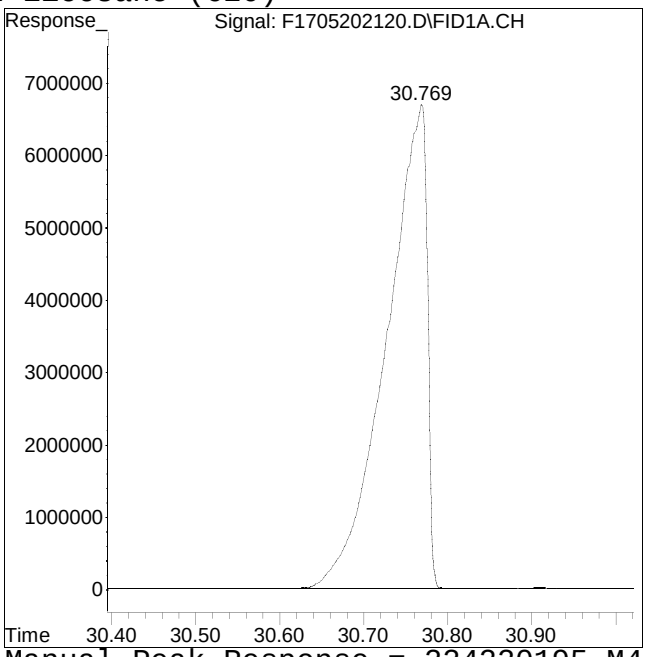
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 223972793



Manual Peak Response = 224220195 M4

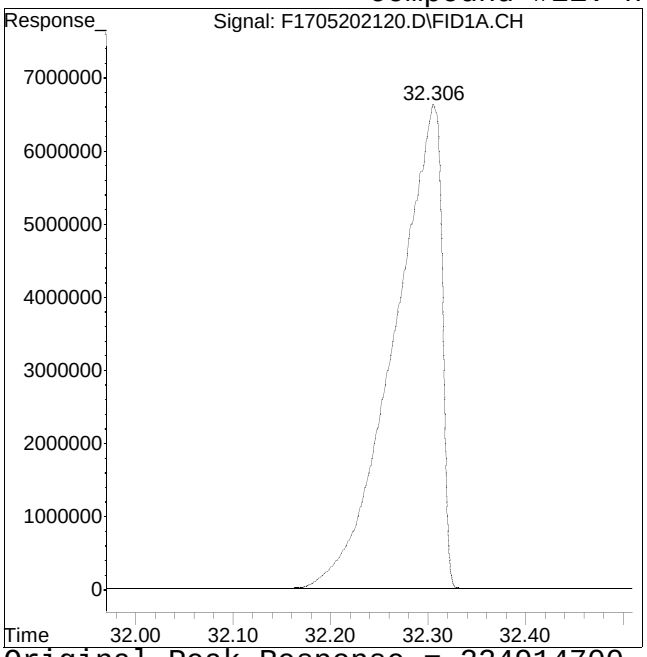
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

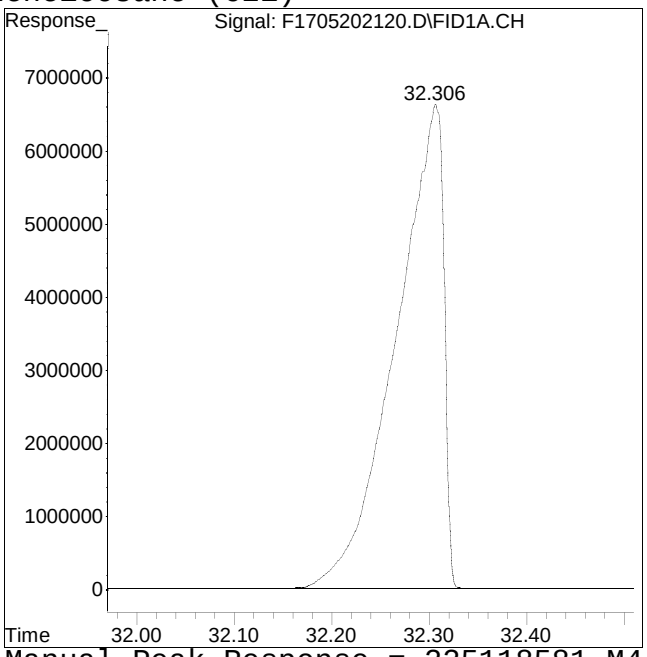
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 224914700



Manual Peak Response = 225118581 M4

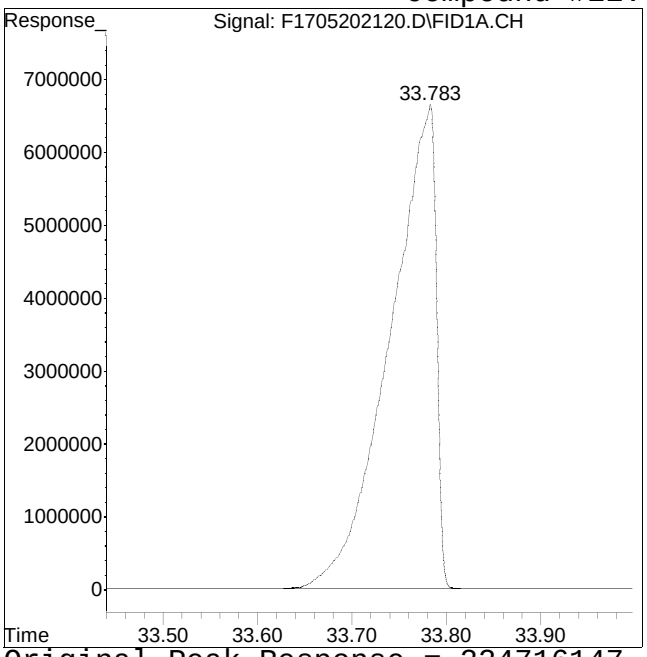
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

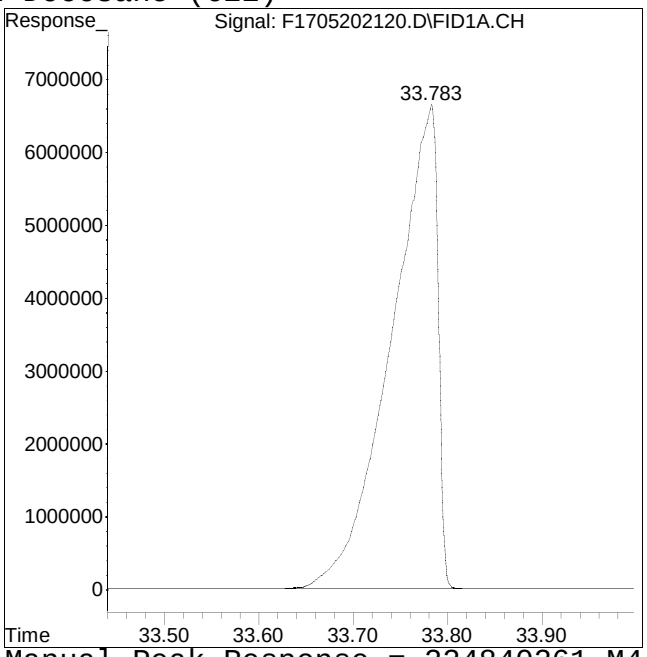
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 224716147



Manual Peak Response = 224840261 M4

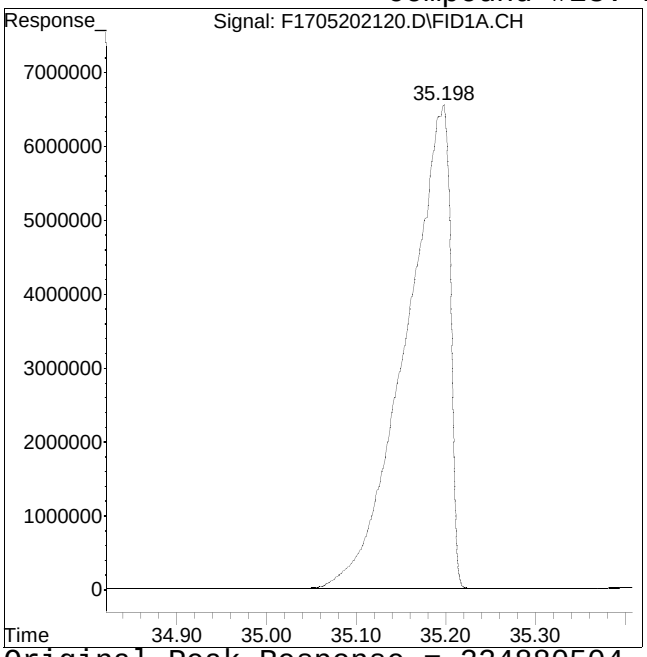
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

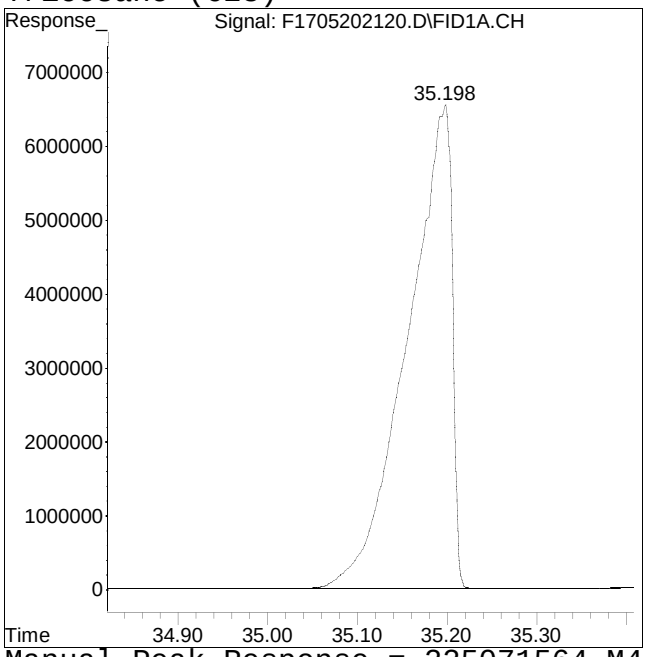
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 224880504



Manual Peak Response = 225071564 M4

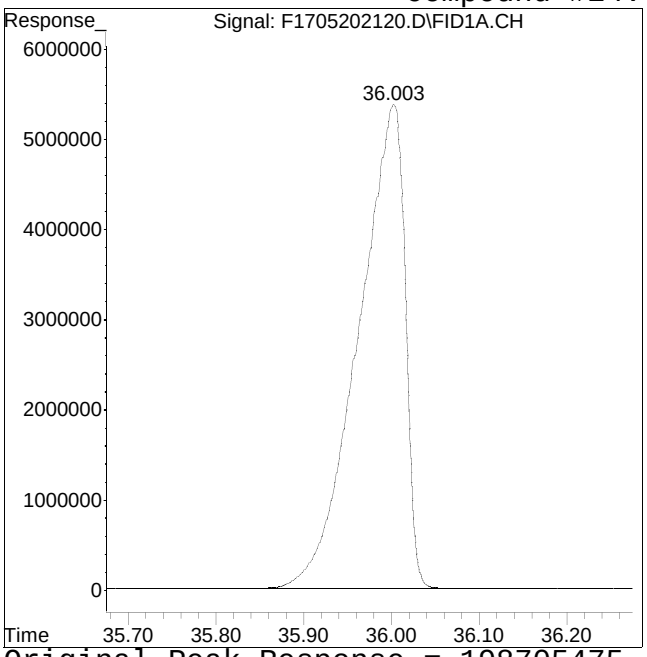
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

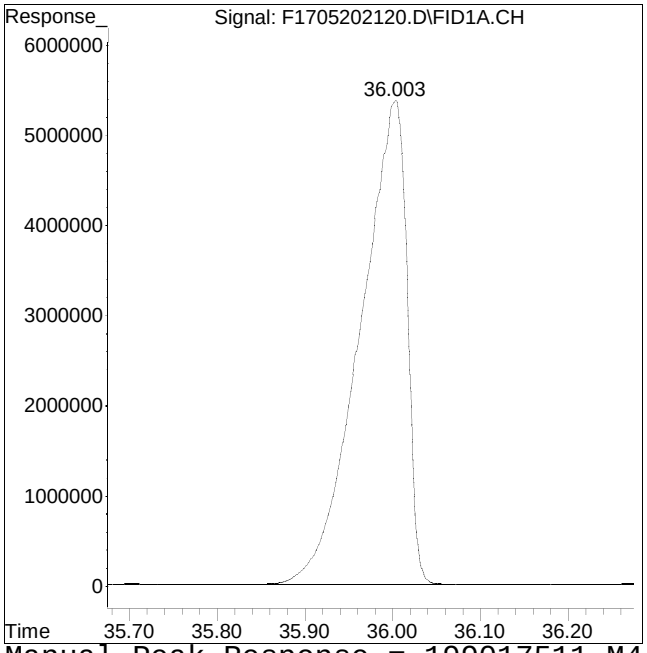
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #24: d50-Tetracosane



Original Peak Response = 198705475



Manual Peak Response = 199017511 M4

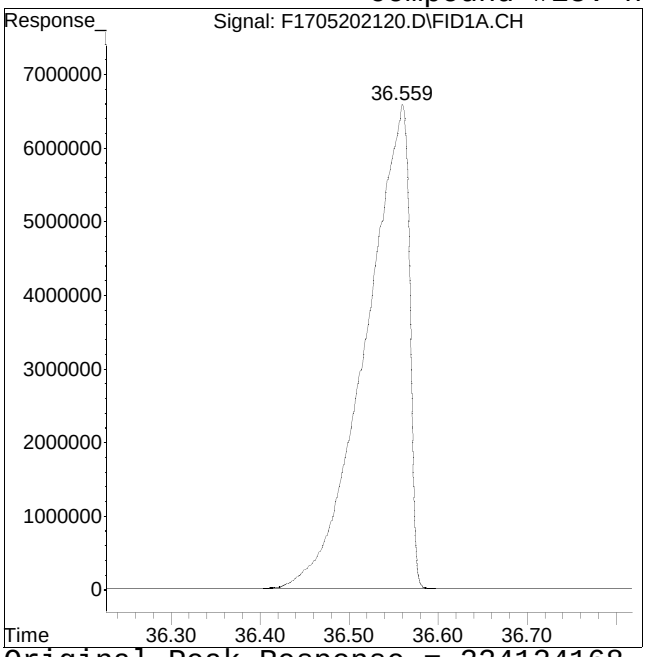
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

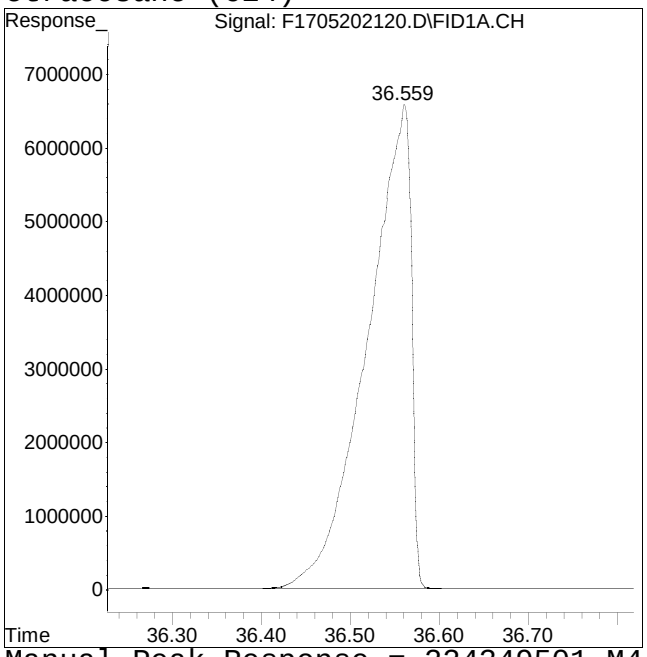
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 224124168



Manual Peak Response = 224349501 M4

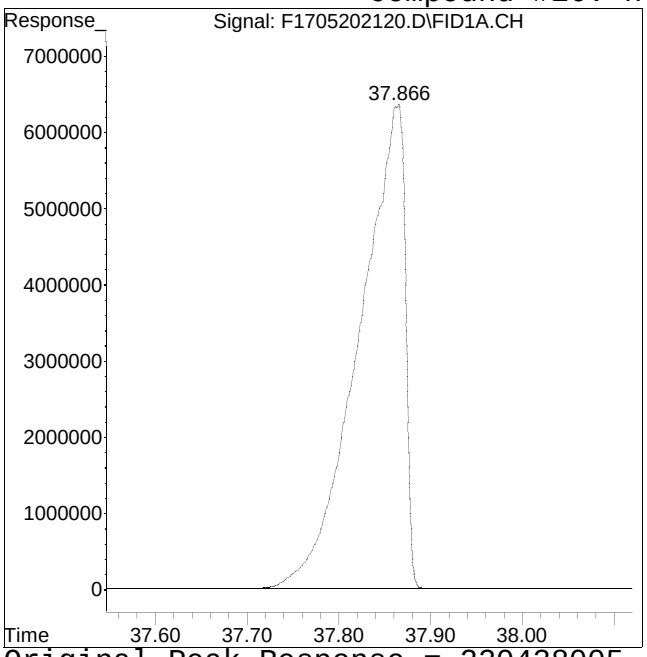
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

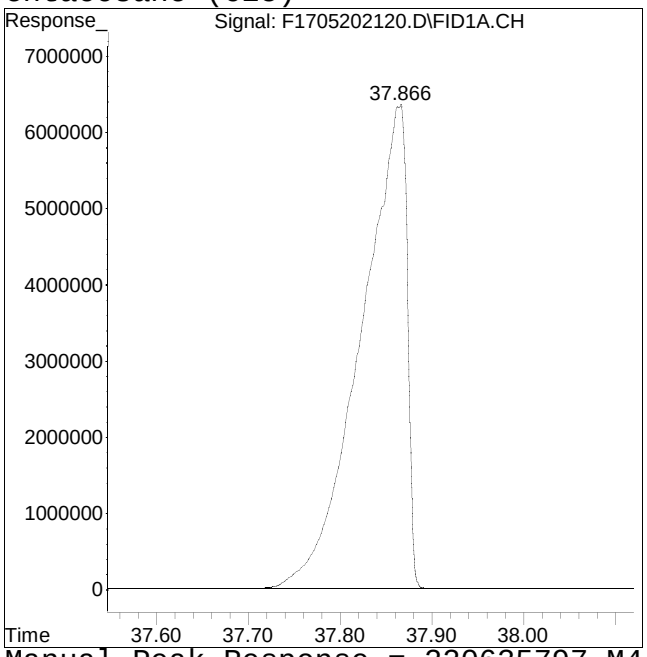
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 220438005



Manual Peak Response = 220635797 M4

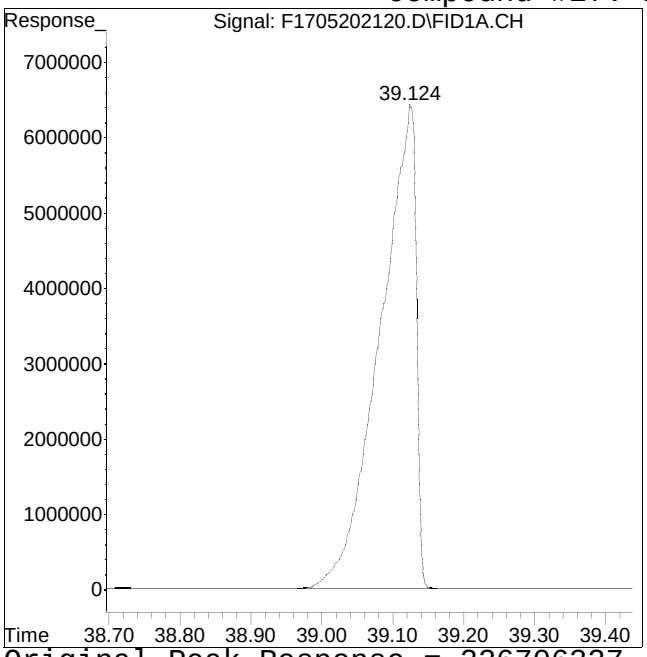
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

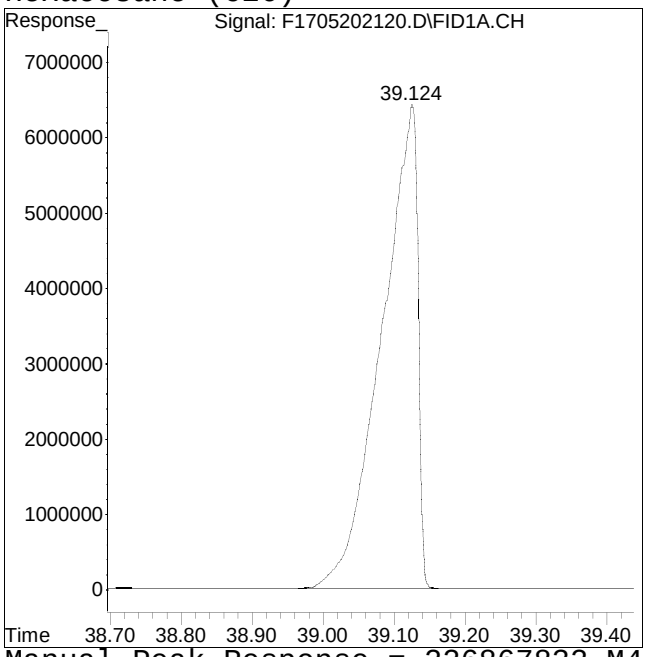
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 226706327



Manual Peak Response = 226867832 M4

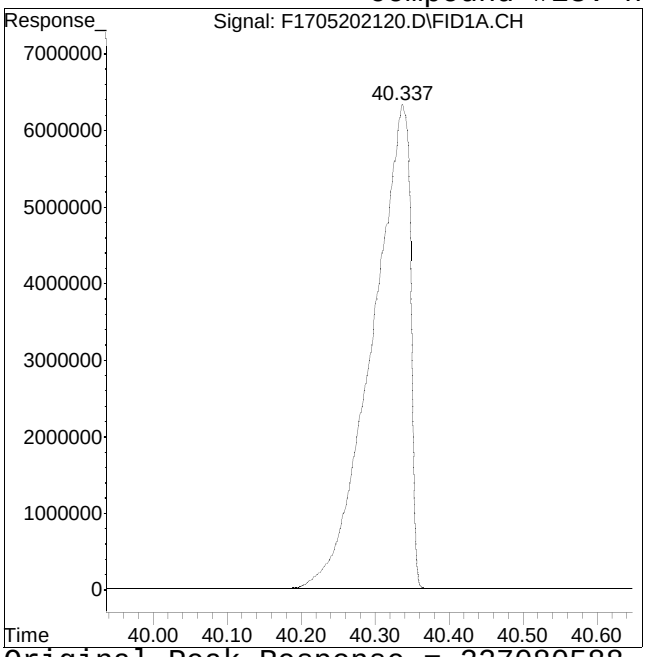
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

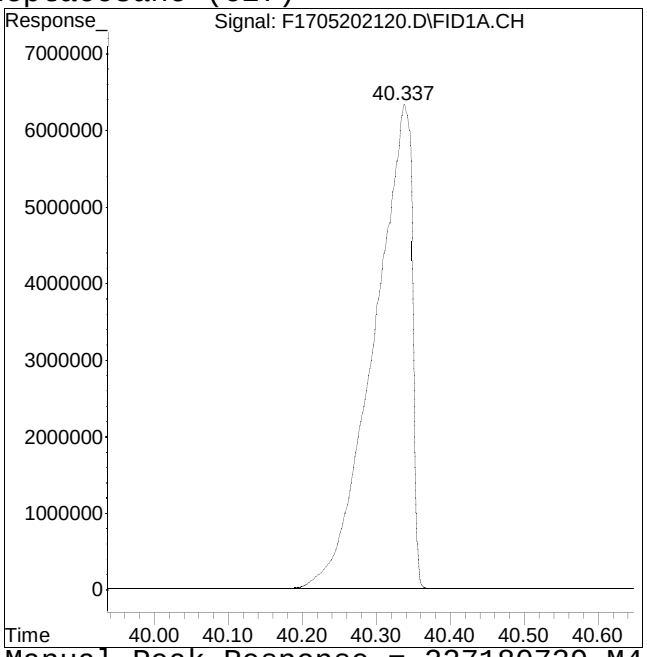
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 227080588



Manual Peak Response = 227180739 M4

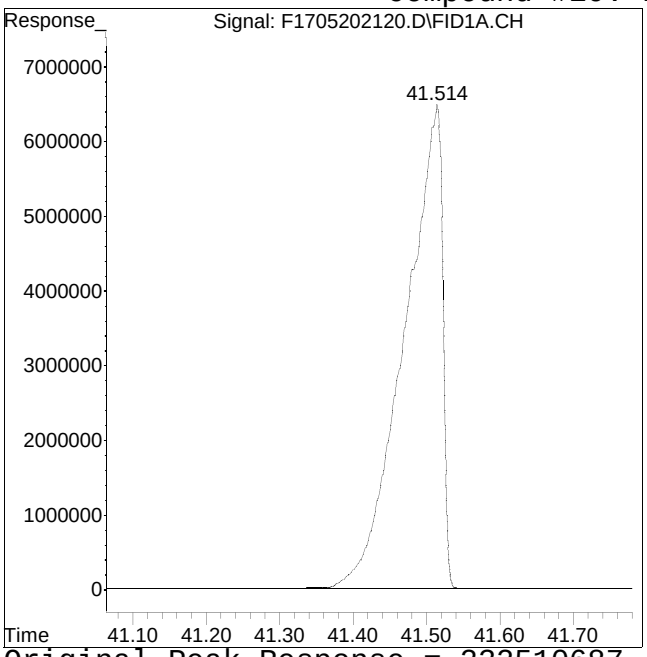
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

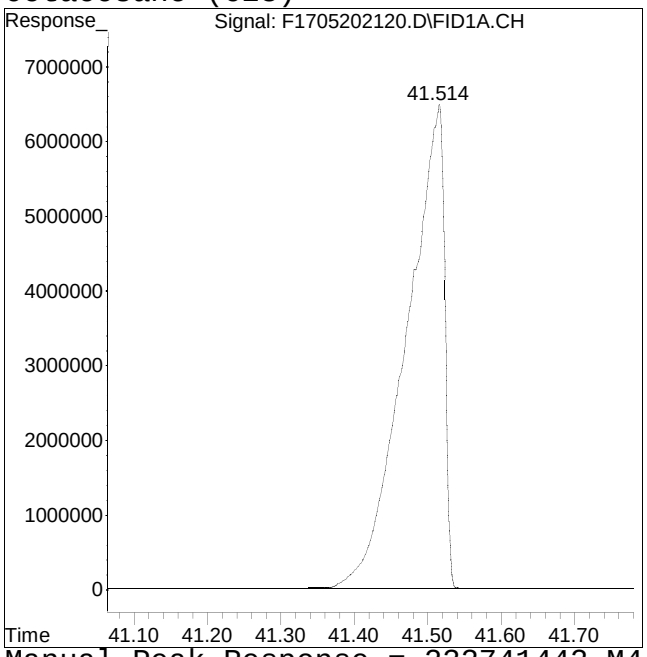
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 232510687



Manual Peak Response = 232741442 M4

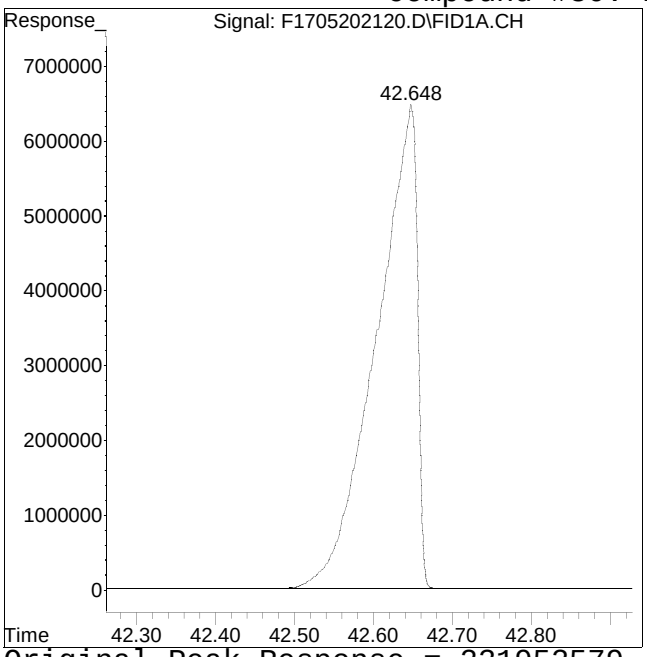
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

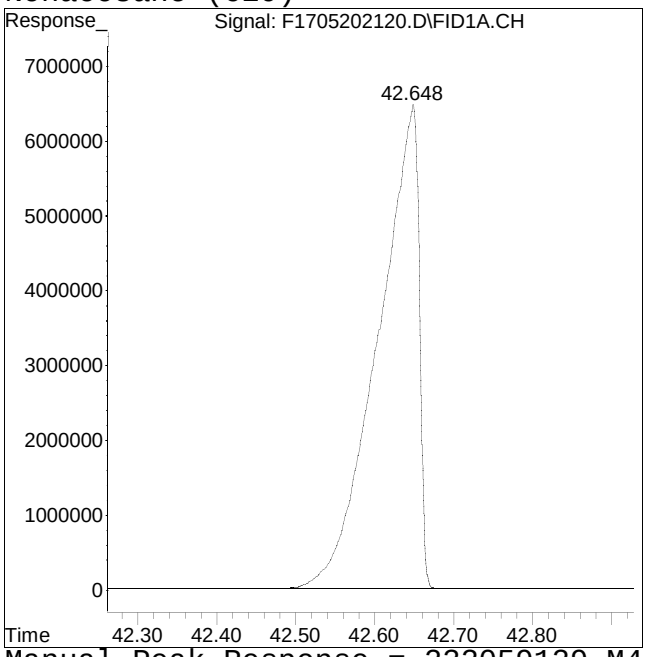
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 231952579



Manual Peak Response = 232059129 M4

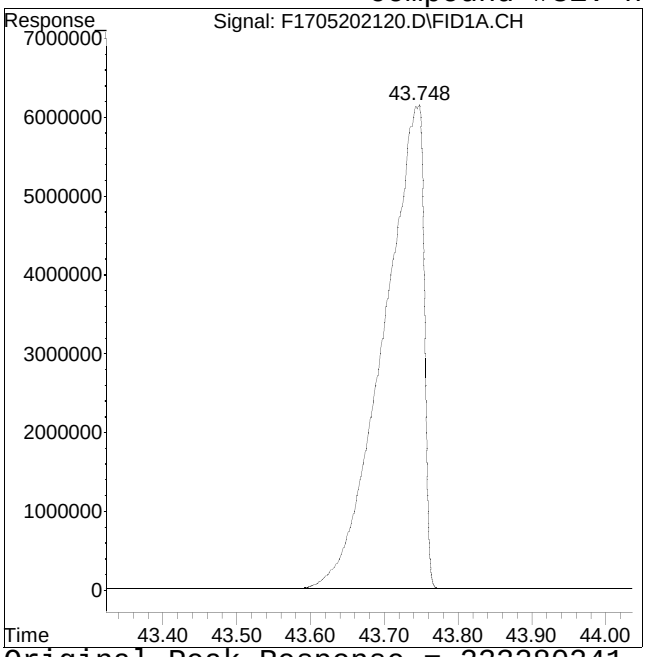
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

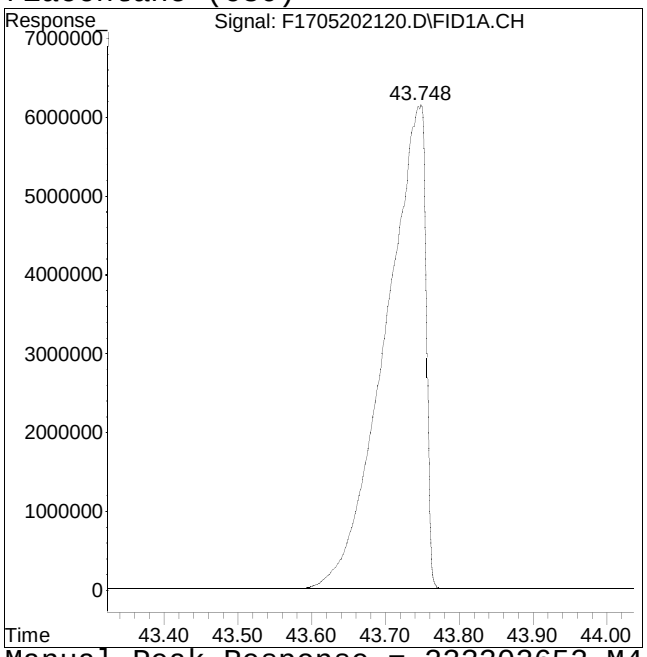
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 233280241



Manual Peak Response = 233302652 M4

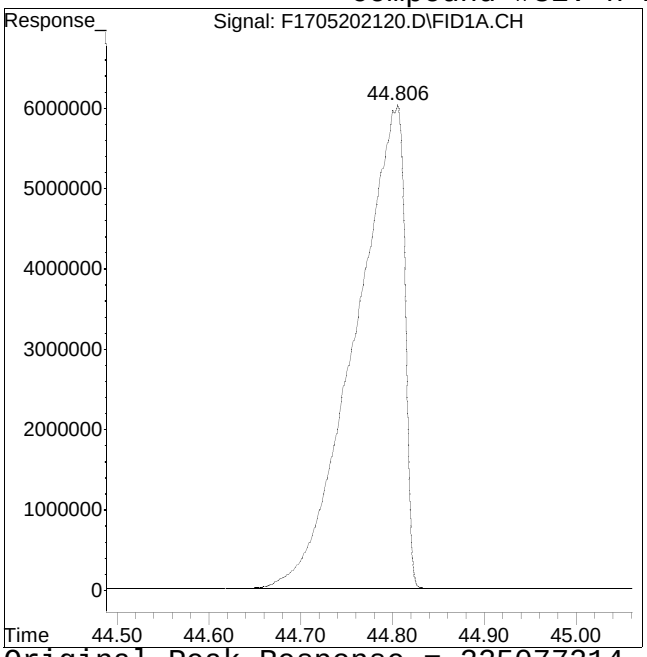
M4 = Poor automated baseline construction.

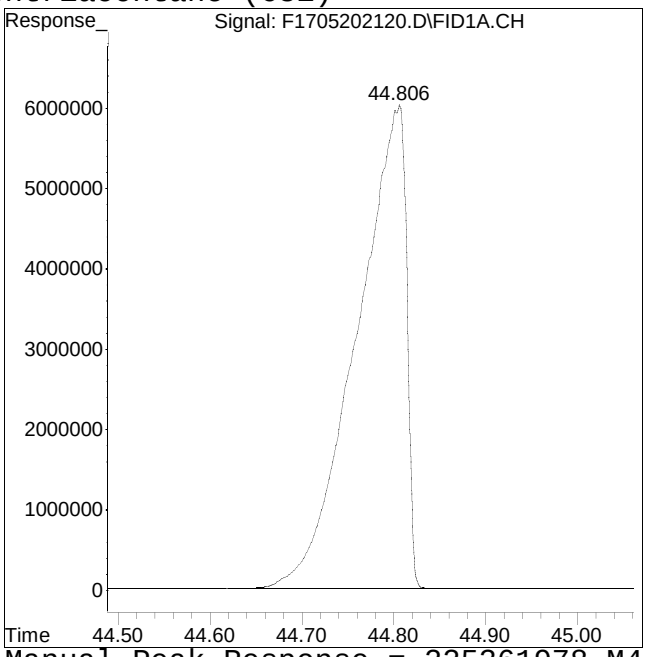
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #32: n-Hentriacontane (C31)





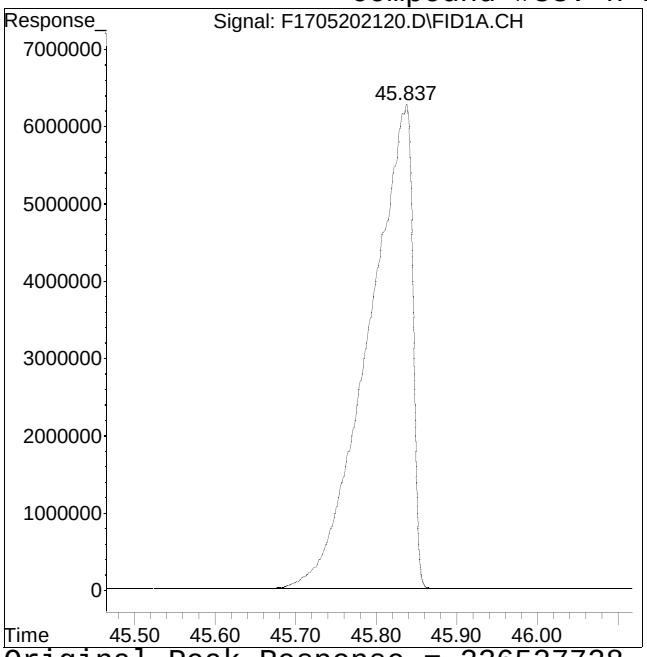
Original Peak Response = 225077214 Manual Peak Response = 225361978 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

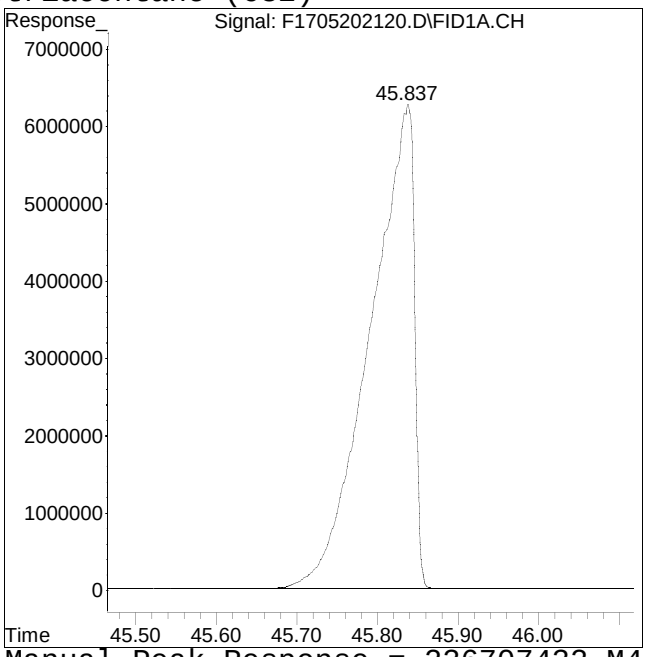
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 236527728



Manual Peak Response = 236707432 M4

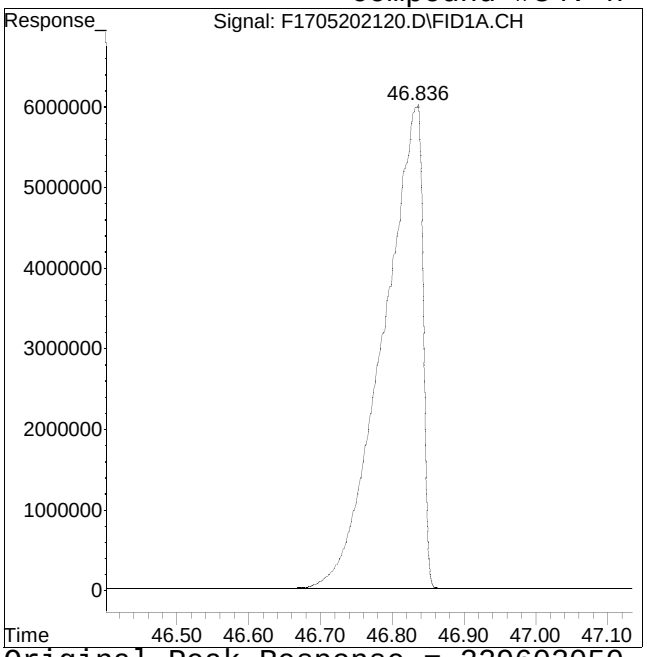
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

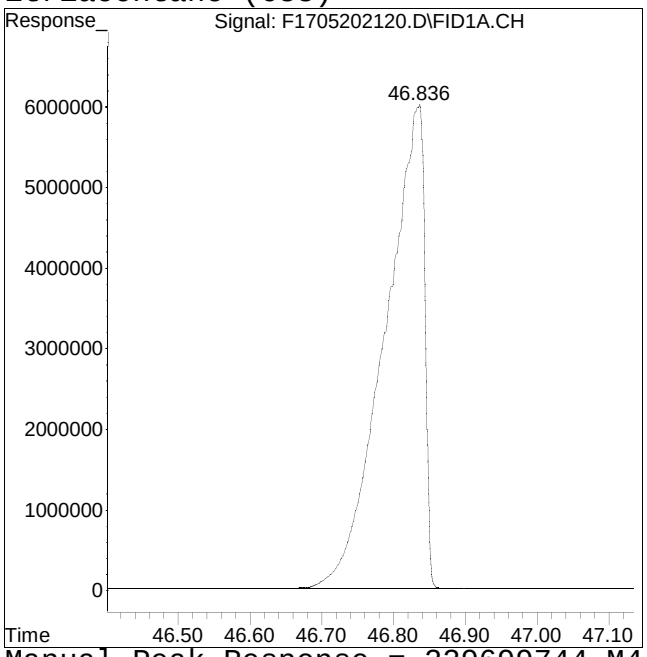
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 229603050



Manual Peak Response = 229699744 M4

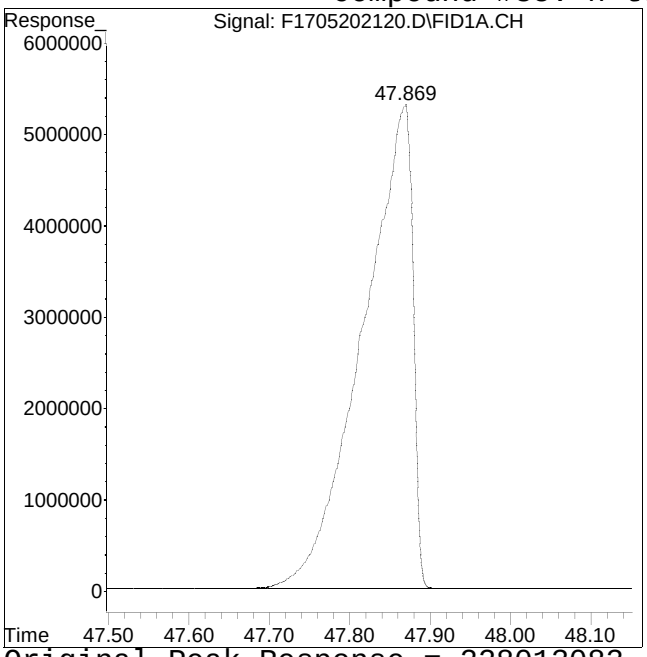
M4 = Poor automated baseline construction.

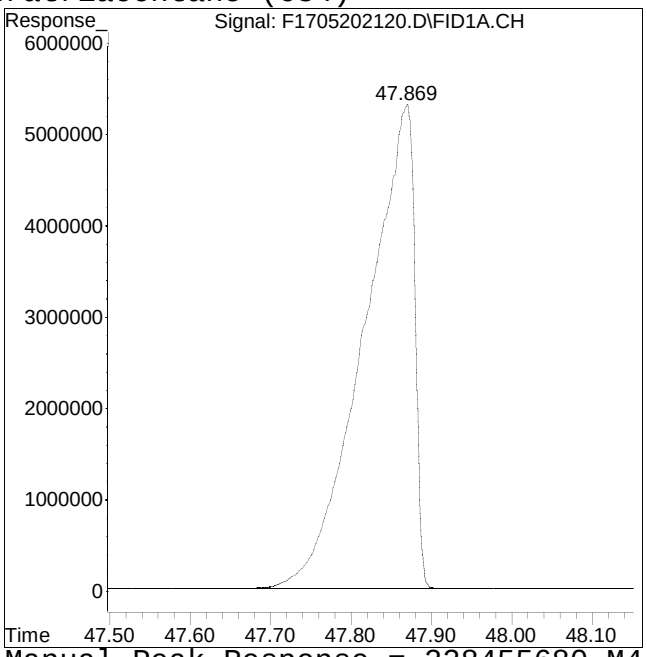
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #35: n-tetratriacontane (C34)





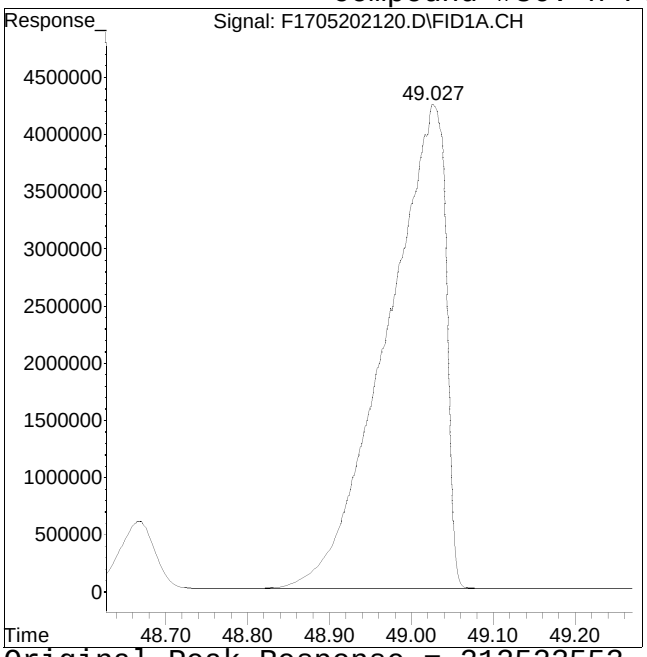
Original Peak Response = 228013083 Manual Peak Response = 228455680 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

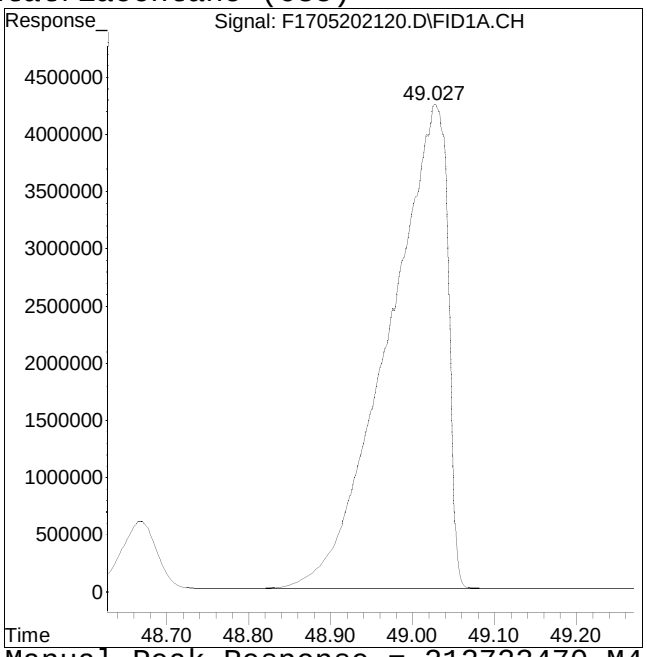
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 212523553



Manual Peak Response = 212723470 M4

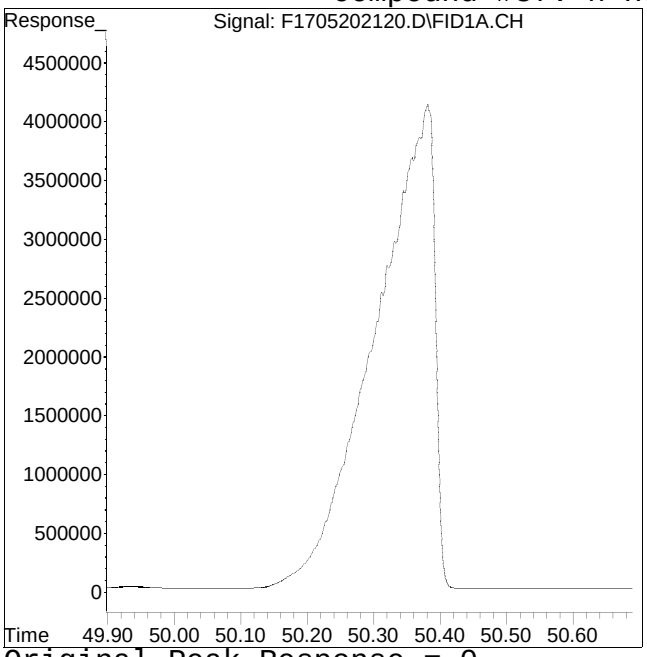
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

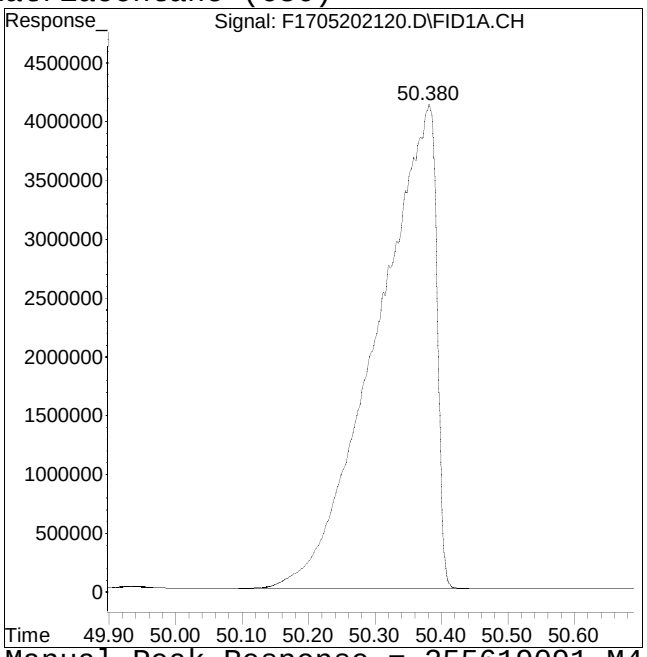
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 0



Manual Peak Response = 255619091 M4

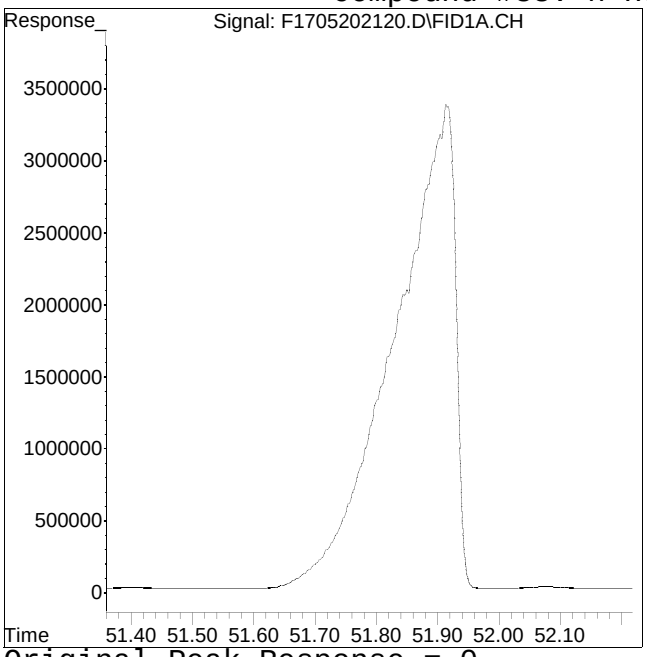
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

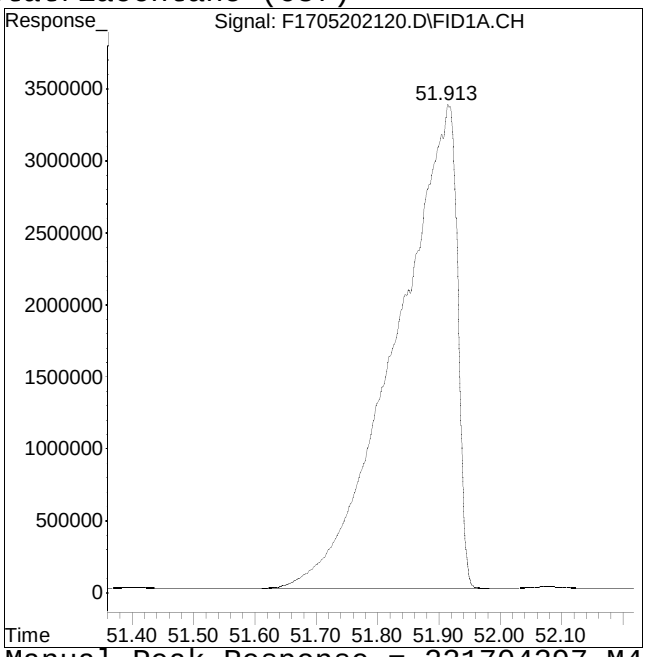
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 0



Manual Peak Response = 231704397 M4

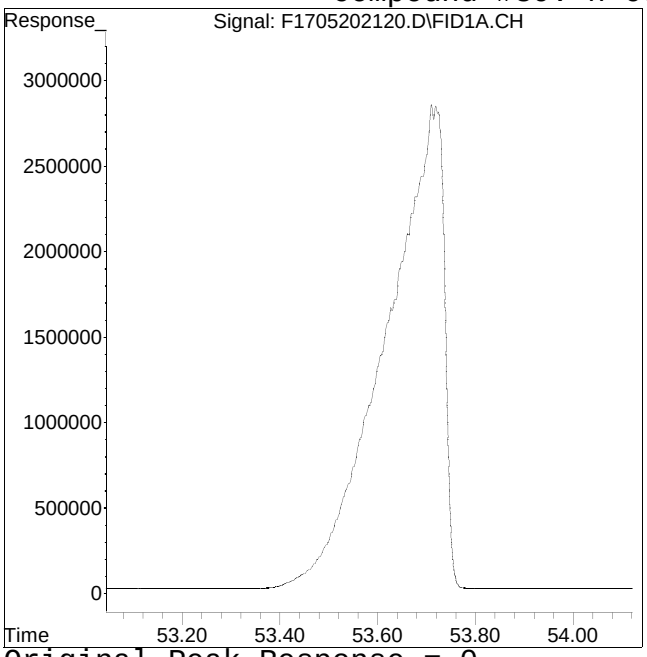
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

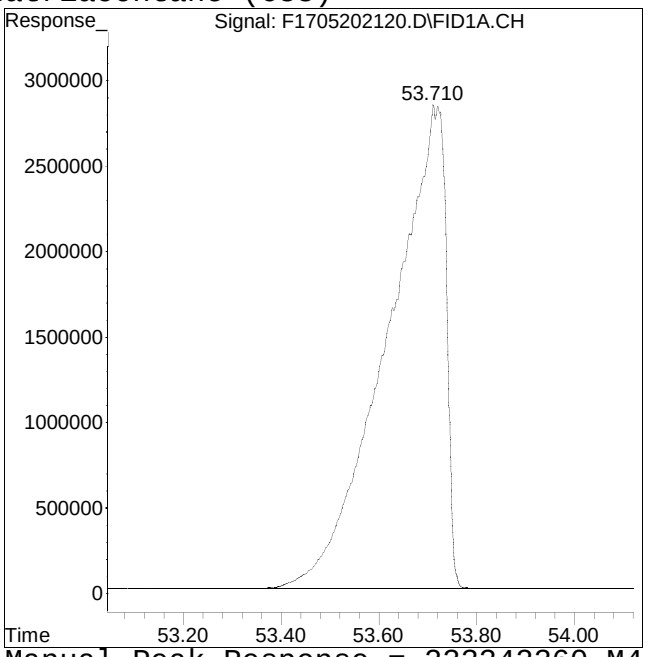
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 233342360 M4

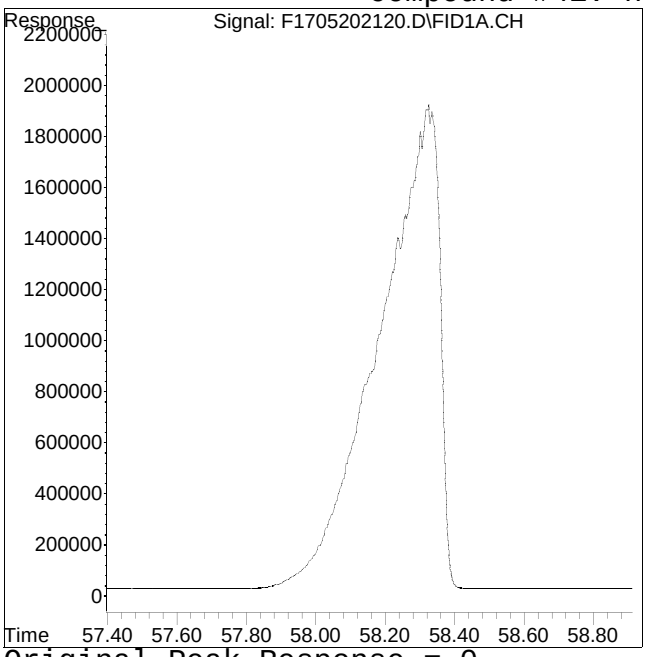
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

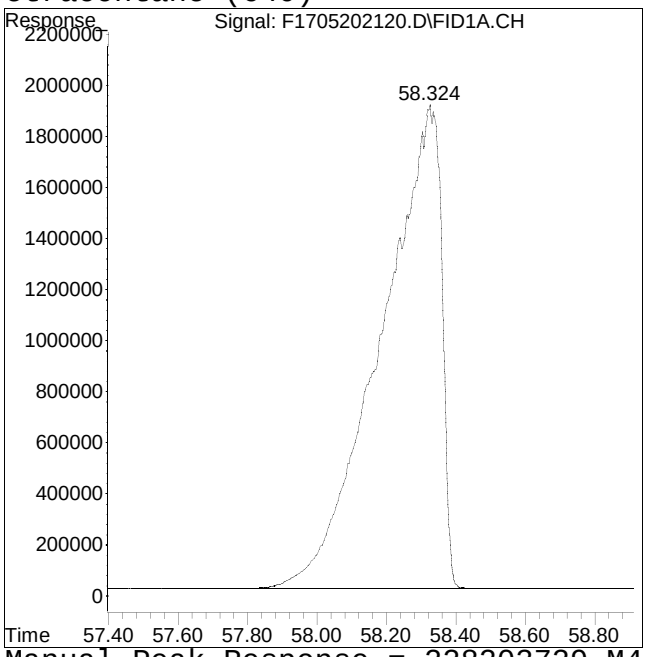
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 228203729 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202122.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 4:13 am
Operator : FID17:WR
Sample : I1705202106F
Misc : WG1505003,FRBD81,500ug/ml
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:39:00 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:37:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.316	57227748	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.394	625580720	505.135	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 1010.27%#			
24) s	d50-Tetracosane	36.046	491899494	499.724	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 999.45%#			
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202122.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 4:13 am
Operator : FID17:WR
Sample : I1705202106F
Misc : WG1505003,FRBD81,500ug/ml
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:39:00 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:37:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

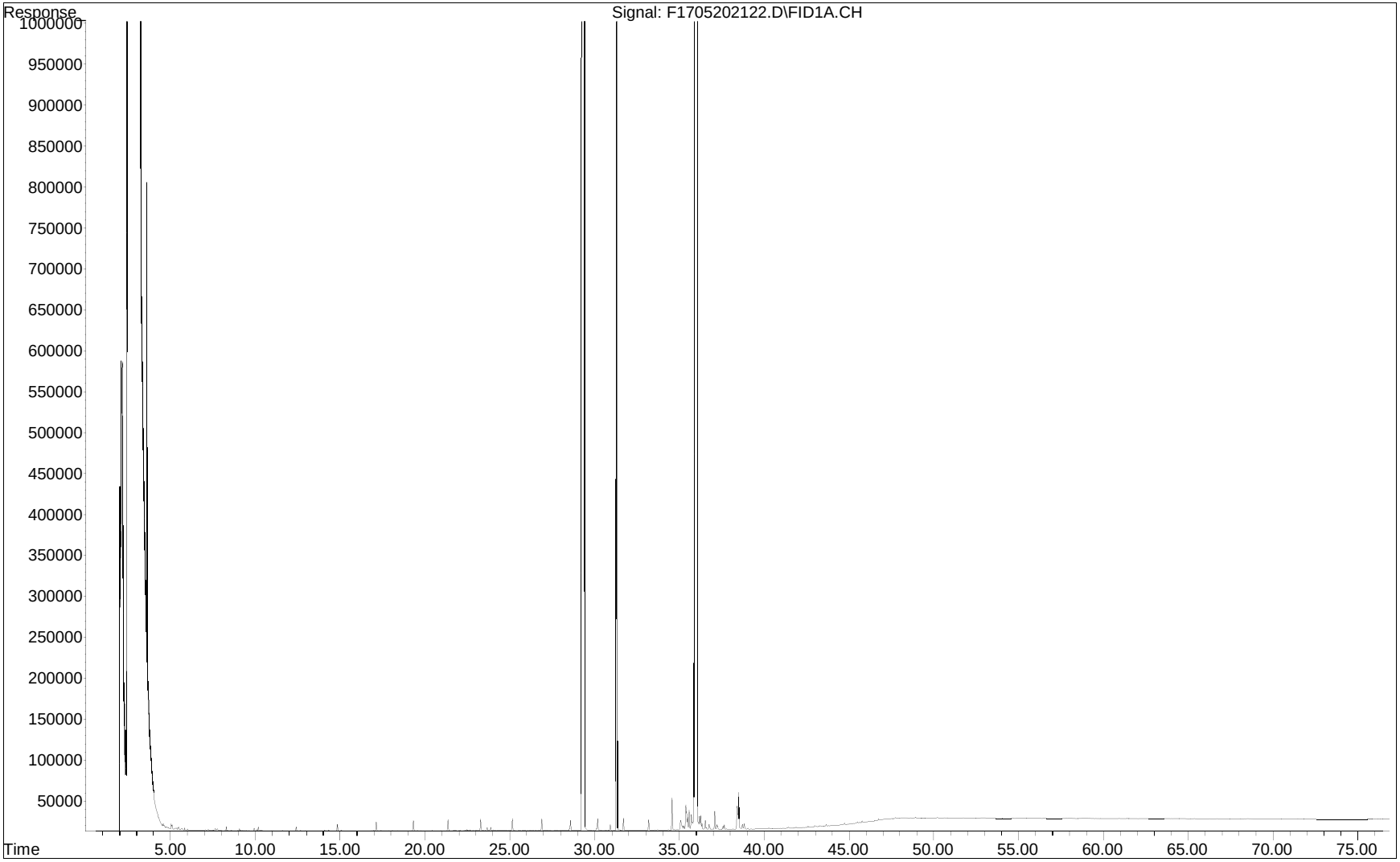
	Compound	R.T.	Response	Conc	Units
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

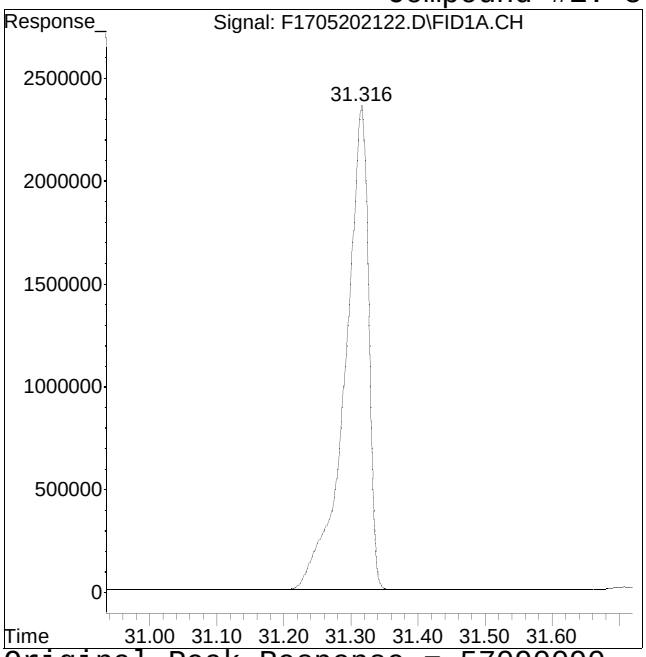
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202122.D
Operator : FID17:WR
Acquired : 21 May 2021 4:13 am using AcqMethod FID17A.M
Sample Name: I1705202106F
Instrument: FID17
Misc Info : WG1505003,FRBD81,500ug/ml
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

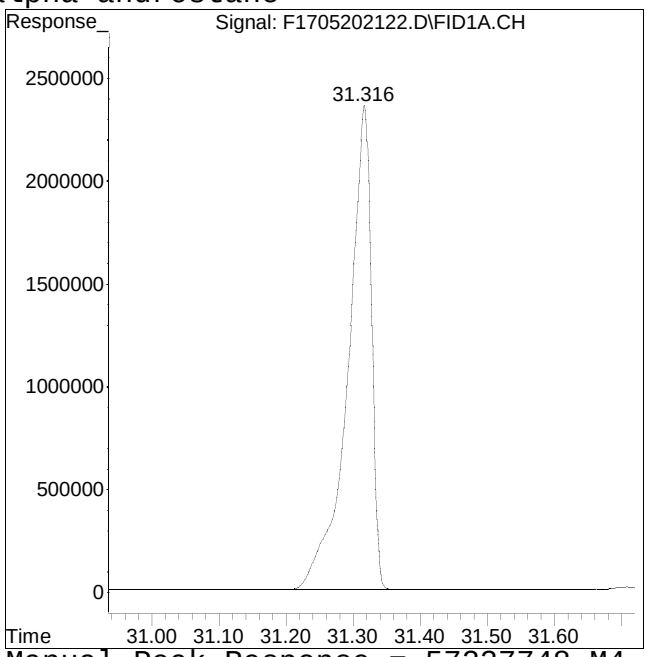


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17052021F_DRO.M
Data File : F1705202122.D Operator : FID17:WR
Date Inj'd : 5/21/2021 4:13 am Instrument : FID17
Sample : I1705202106F Quant Date : 5/27/2021 3:37 pm

Compound #1: 5-alpha-androstane





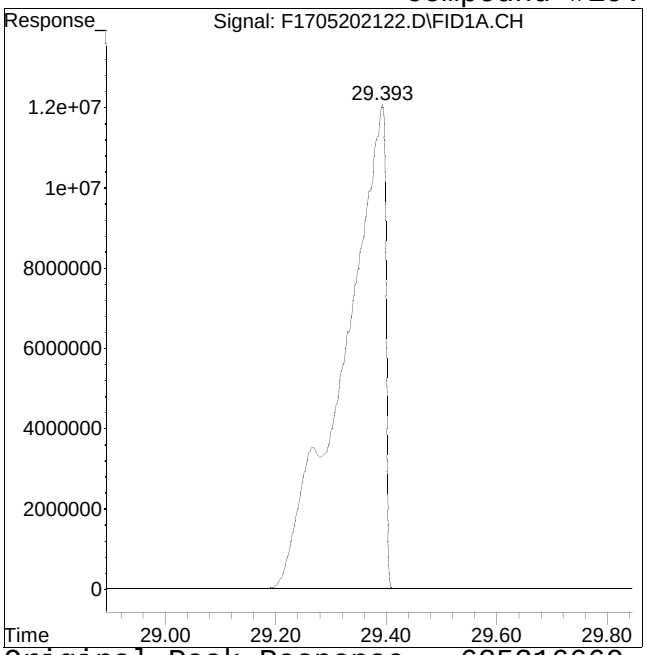
Original Peak Response = 57090090 Manual Peak Response = 57227748 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

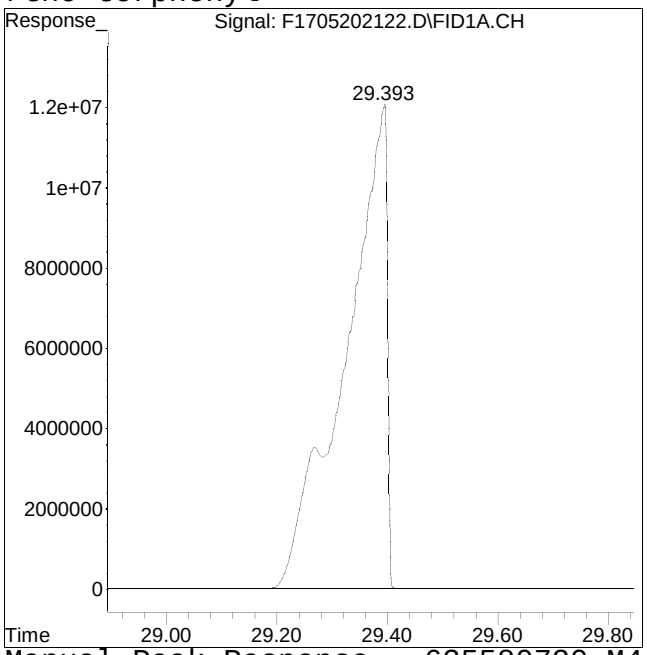
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202122.D
Date Inj'd : 5/21/2021 4:13 am
Sample : I1705202106F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:37 pm

Compound #19: ortho-terphenyl



Original Peak Response = 625216660



Manual Peak Response = 625580720 M4

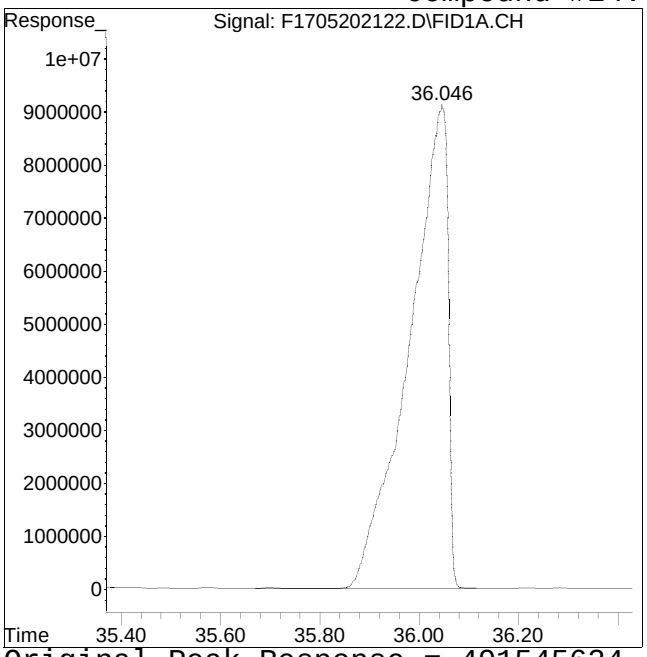
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

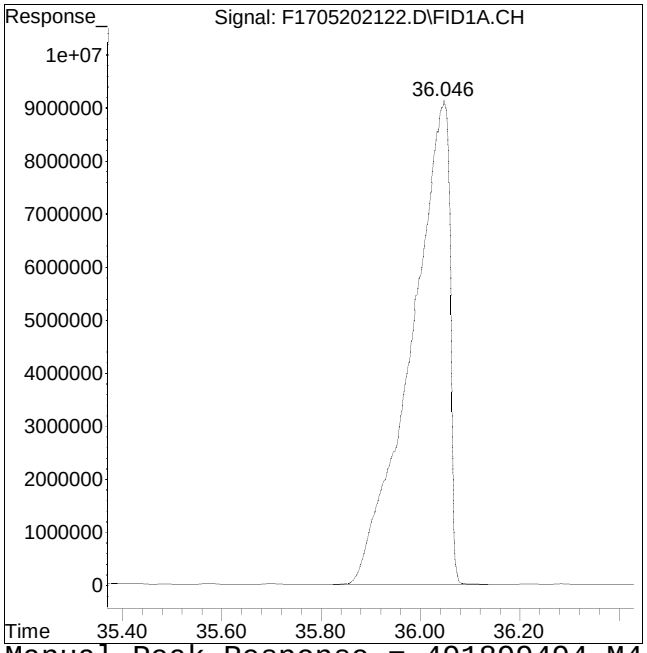
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202122.D
Date Inj'd : 5/21/2021 4:13 am
Sample : I1705202106F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:37 pm

Compound #24: d50-Tetracosane



Original Peak Response = 491545624



Manual Peak Response = 491899494 M4

M4 = Poor automated baseline construction.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202126.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 7:10 am
Operator : FID17:WR
Sample : CQ1705202101F
Misc : WG1505003,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:10:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	113	0.00
2	t	n-Octane (C8)	0.864	0.806	6.7	104	0.00
3	t	n-Nonane (C9)	0.922	0.885	4.0	110	0.00
4	t	n-Decane (C10)	0.944	0.923	2.2	109	0.00
5	t	n-Undecane (C11)	0.923	0.921	0.2	110	0.00
6	t	n-Dodecane (C12)	0.925	0.937	-1.3	111	0.00
7	t	n-Tridecane (C13)	0.928	0.922	0.6	110	0.00
9	t	n-Tetradecane (C14)	0.956	0.940	1.7	109	0.00
11	t	n-Pentadecane (C15)	0.957	0.943	1.5	109	0.00
12	t	n-Hexadecane (C16)	0.955	0.956	-0.1	112	0.00
14	t	n-Heptadecane (C17)	0.954	0.926	2.9	107	0.00
15	t	Pristane	0.990	0.952	3.8	108	0.00
16	t	n-Octadecane (C18)	0.970	0.939	3.2	108	0.00
17	t	Phytane	0.908	0.861	5.2	106	0.00
18	t	n-Nonadecane (C19)	0.973	0.954	2.0	109	0.00
19	s	ortho-terphenyl	1.084	1.104	-1.8	114	0.00
20	t	n-Eicosane (C20)	0.979	0.962	1.7	109	0.00
21	t	n-Heneicosane (C21)	0.982	0.962	2.0	109	0.00
22	t	n-Docosane (C22)	0.983	0.991	-0.8	112	0.00
23	t	n-Tricosane (C23)	0.985	0.942	4.4	107	0.00
24	s	d50-Tetracosane	0.860	0.865	-0.6	110	0.00
25	t	n-Tetracosane (C24)	0.982	0.964	1.8	109	0.00
26	t	n-Pentacosane (C25)	0.961	0.952	0.9	110	0.00
27	t	n-Hexacosane (C26)	0.987	0.976	1.1	110	0.00
28	t	n-Heptacosane (C27)	0.989	0.940	5.0	106	0.00
29	t	n-Octacosane (C28)	1.026	0.971	5.4	108	0.00
30	t	n-Nonacosane (C29)	1.006	0.961	4.5	107	0.00
31	t	n-Triacontane (C30)	1.010	0.964	4.6	107	0.00
32	t	n-Hentriacontane (C31)	0.977	0.947	3.1	109	0.00
33	t	n-Dotriacontane (C32)	1.025	0.948	7.5	104	0.00
34	t	n-Tritriacontane (C33)	0.998	0.946	5.2	107	0.00
35	t	n-tetratriacontane (C34)	0.991	0.962	2.9	110	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202126.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 7:10 am
Operator : FID17:WR
Sample : CQ1705202101F
Misc : WG1505003,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:10:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.933	-0.8	114	0.00
37 t	n-Hexatriacontane (C36)	1.115	0.991	11.1	101	0.00
38 t	n-Heptatriacontane (C37)	1.011	0.943	6.7	105	0.00
39 t	n-Octatriacontane (C38)	1.022	0.977	4.4	107	0.00
41 t	n-Tetracontane (C40)	1.009	0.887	12.1	99	-0.01

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.03	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202126.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 7:10 am
Operator : FID17:WR
Sample : CQ1705202101F
Misc : WG1505003,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:10:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.313	60431004	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.294	66731161	50.940 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	101.88%
24) s	d50-Tetracosane	35.953	52287156	50.308 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	100.62%
	Target Compounds			
2) t	n-Octane (C8)	5.634	48677991	46.592 ug/mL M4
3) t	n-Nonane (C9)	7.832	53485759	47.975 ug/mL M4
4) t	n-Decane (C10)	10.318	55801662	48.893 ug/mL M4
5) t	n-Undecane (C11)	12.833	55662276	49.920 ug/mL M4
6) t	n-Dodecane (C12)	15.263	56645652	50.662 ug/mL M4
7) t	n-Tridecane (C13)	17.574	55716065	49.696 ug/mL M4
9) t	n-Tetradecane (C14)	19.759	56791817	49.165 ug/mL M4
11) t	n-Pentadecane (C15)	21.827	56971479	49.264 ug/mL M4
12) t	n-Hexadecane (C16)	23.787	57798725	50.068 ug/mL M4
14) t	n-Heptadecane (C17)	25.649	55957481	48.519 ug/mL M4
15) t	Pristane	25.761	57545646	48.112 ug/mL M4
16) t	n-Octadecane (C18)	27.417	56773246	48.415 ug/mL M4
17) t	Phytane	27.583	52025288	47.426 ug/mL M4
18) t	n-Nonadecane (C19)	29.105	57663073	49.026 ug/mL M4
20) t	n-Eicosane (C20)	30.715	58128852	49.141 ug/mL M4
21) t	n-Heneicosane (C21)	32.253	58118216	48.975 ug/mL M4
22) t	n-Docosane (C22)	33.727	59879423	50.381 ug/mL M4
23) t	n-Tricosane (C23)	35.141	56896330	47.776 ug/mL M4
25) t	n-Tetracosane (C24)	36.503	58227519	49.047 ug/mL M4
26) t	n-Pentacosane (C25)	37.810	57511809	49.508 ug/mL M4
27) t	n-Hexacosane (C26)	39.067	58979418	49.460 ug/mL M4
28) t	n-Heptacosane (C27)	40.282	56778438	47.486 ug/mL M4
29) t	n-Octacosane (C28)	41.454	58676379	47.337 ug/mL M4
30) t	n-Nonacosane (C29)	42.585	58069356	47.763 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202126.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 7:10 am
Operator : FID17:WR
Sample : CQ1705202101F
Misc : WG1505003,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:10:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

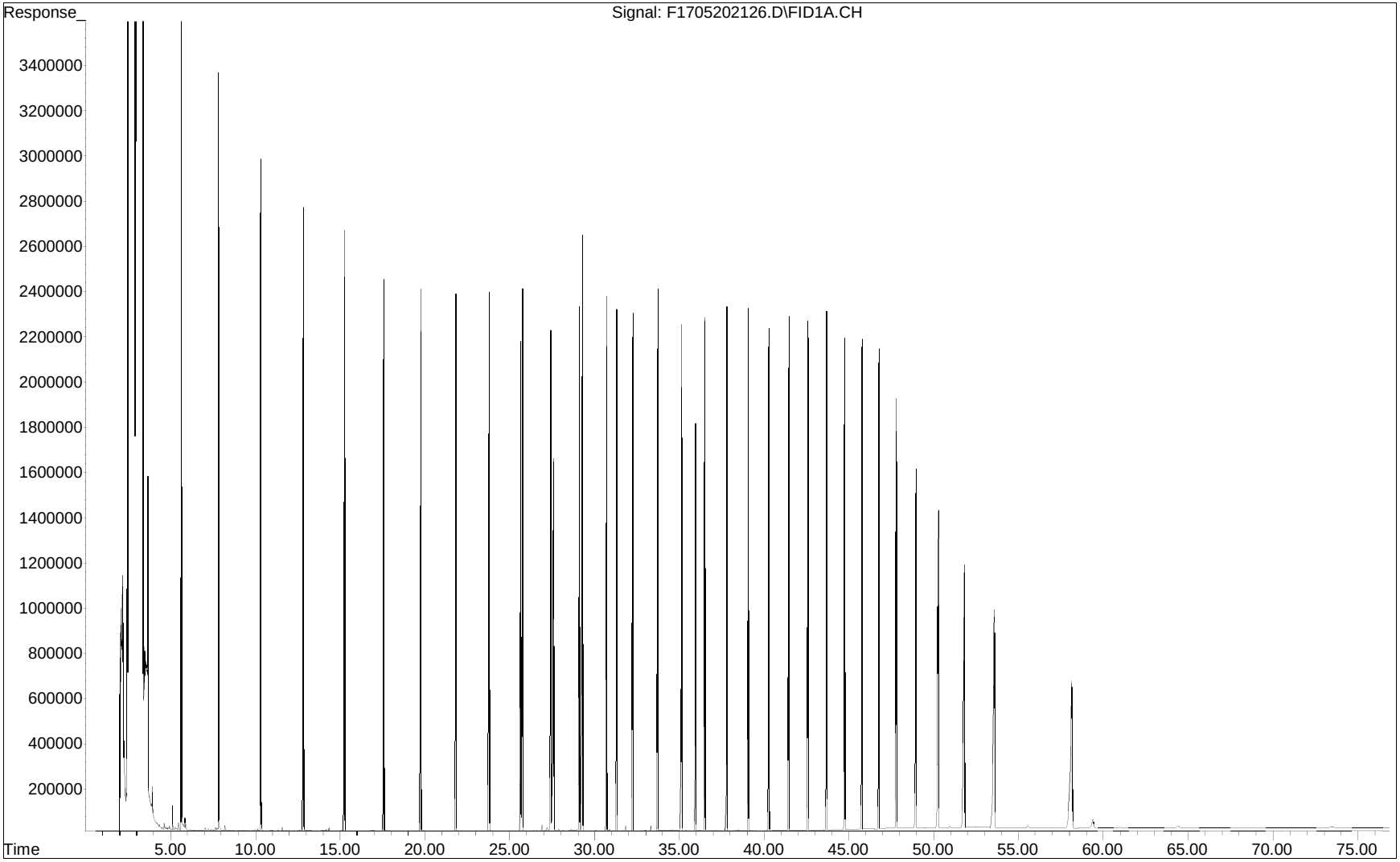
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.682	58266055	47.738 ug/mL M4
32) t	n-Hentriacontane (C31)	44.744	57246918	48.493 ug/mL M4
33) t	n-Dotriacontane (C32)	45.770	57276637	46.223 ug/mL M4
34) t	n-Tritriacontane (C33)	46.770	57185523	47.410 ug/mL M4
35) t	n-tetratriacontane (C34)	47.796	58145113	48.544 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.947	56378870	50.383 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.268	59901079	44.466 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.785	56961346	46.624 ug/mL M4
39) t	n-Octatriacontane (C38)	53.573	59030227	47.791 ug/mL M4
41) t	n-Tetracontane (C40)	58.131	53596293	43.967 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202126.D
Operator : FID17:WR
Acquired : 21 May 2021 7:10 am using AcqMethod FID17A.M
Sample Name: CQ1705202101F
Instrument: FID17
Misc Info : WG1505003,FRBD82,50ug/ml
Vial Number: 13
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

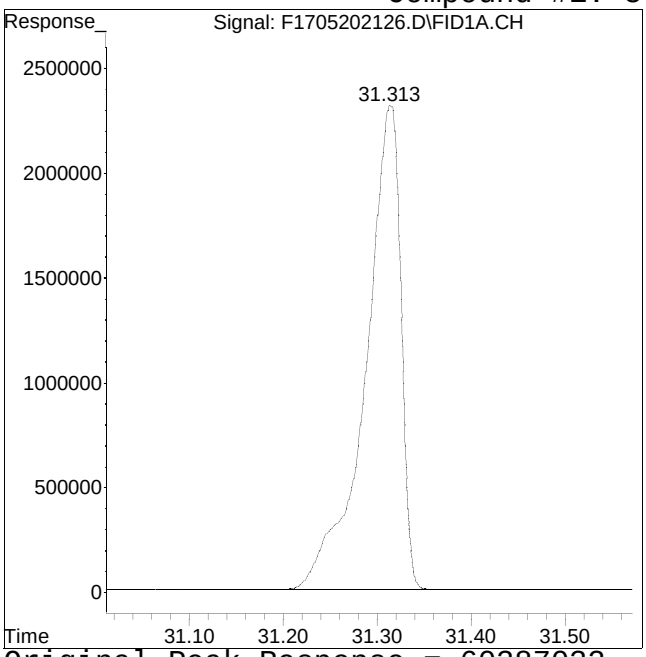


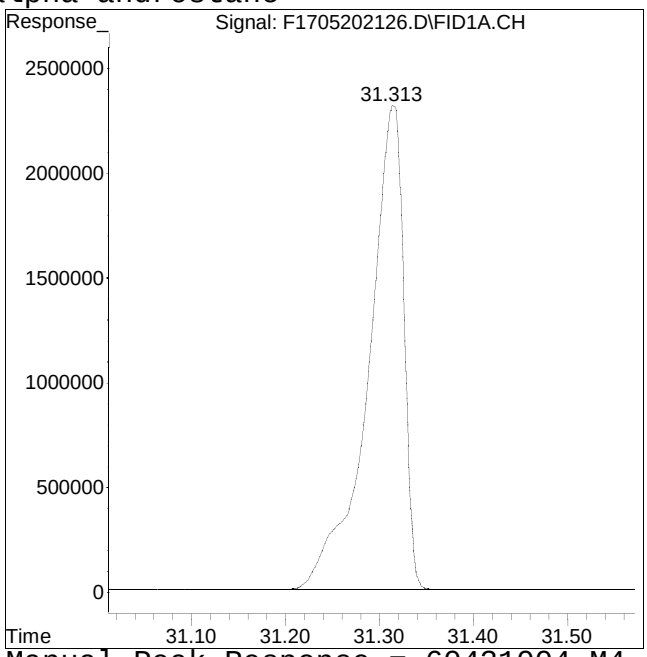
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #1: 5-alpha-androstane





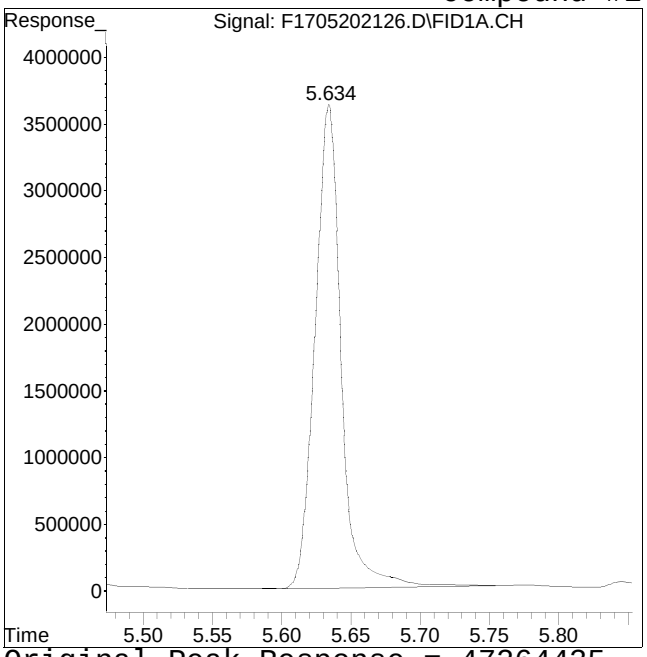
Original Peak Response = 60387032 Manual Peak Response = 60431004 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

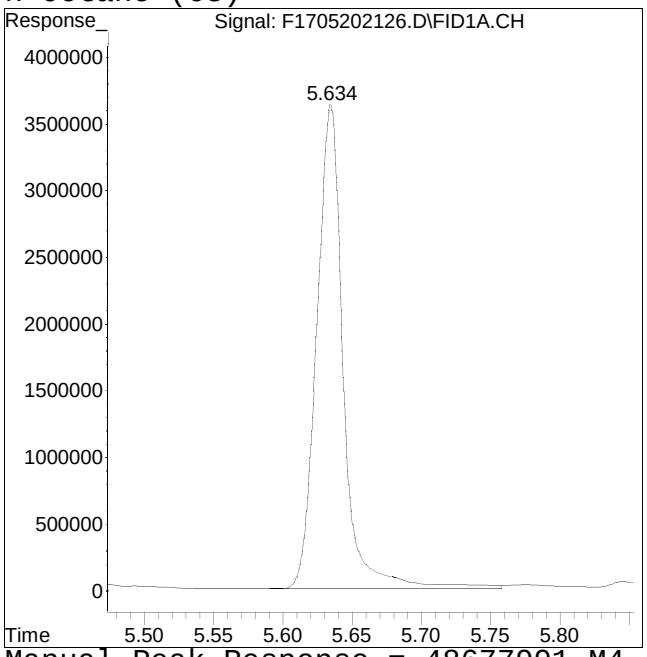
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #2: n-Octane (C8)



Original Peak Response = 47264435



Manual Peak Response = 48677991 M4

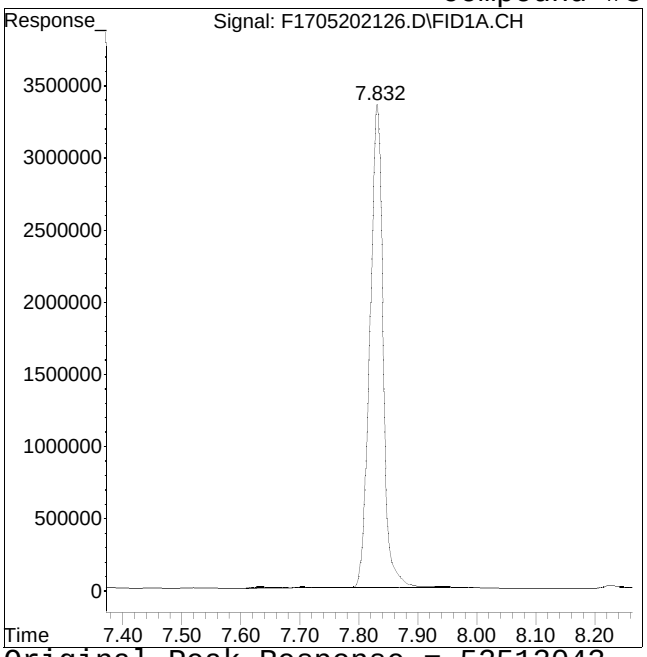
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

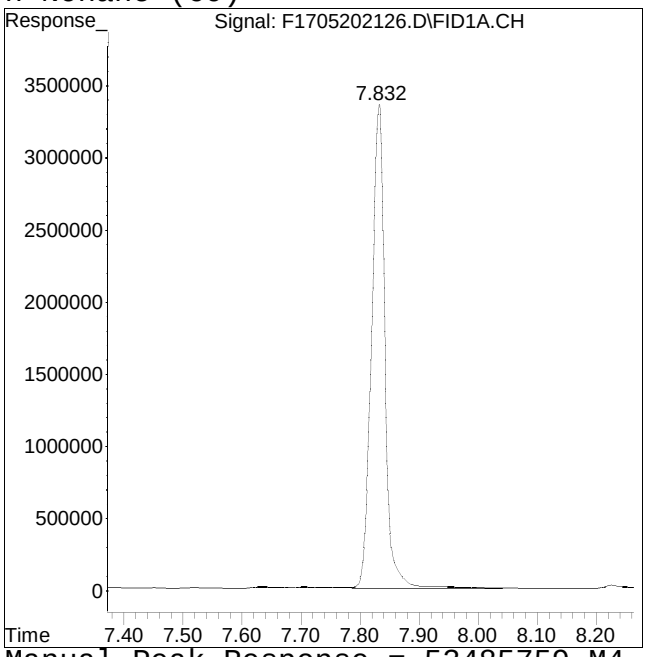
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 52513043



Manual Peak Response = 53485759 M4

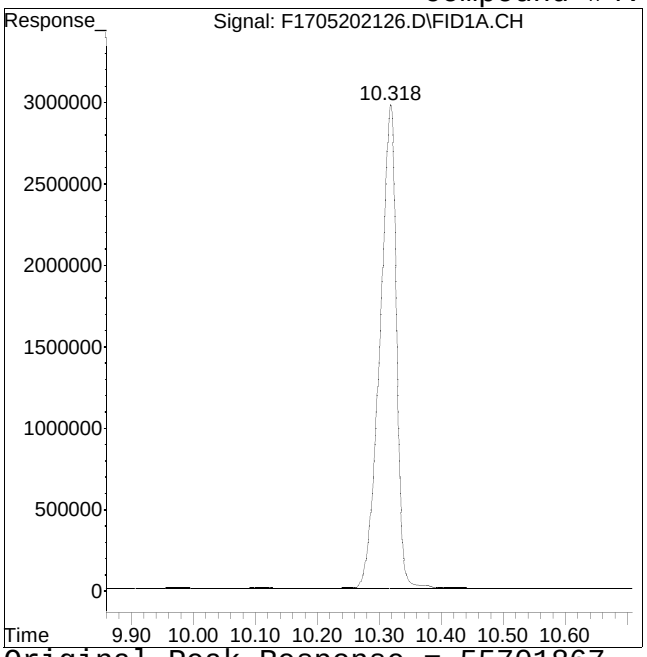
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

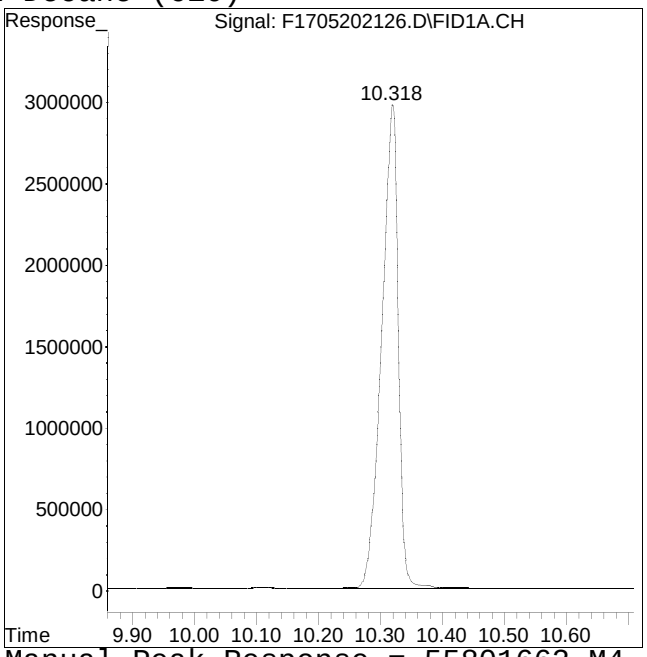
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #4: n-Decane (C10)



Original Peak Response = 55701867



Manual Peak Response = 55801662 M4

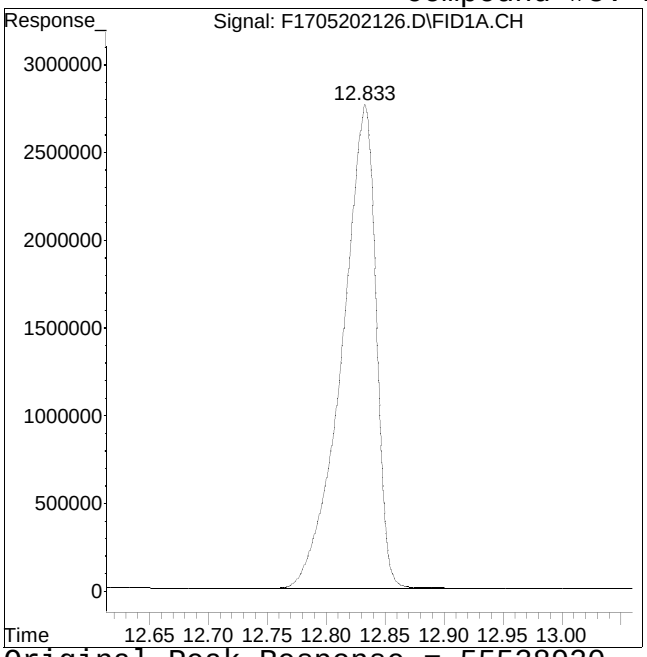
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

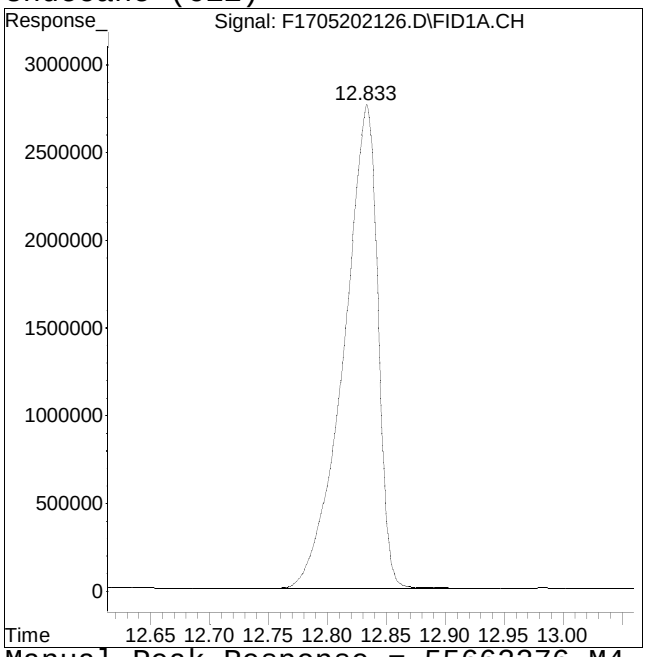
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 55538920



Manual Peak Response = 55662276 M4

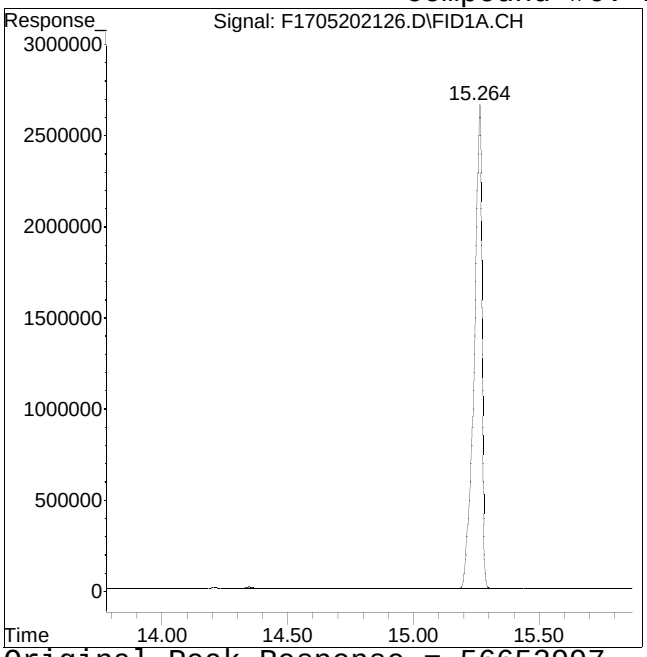
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

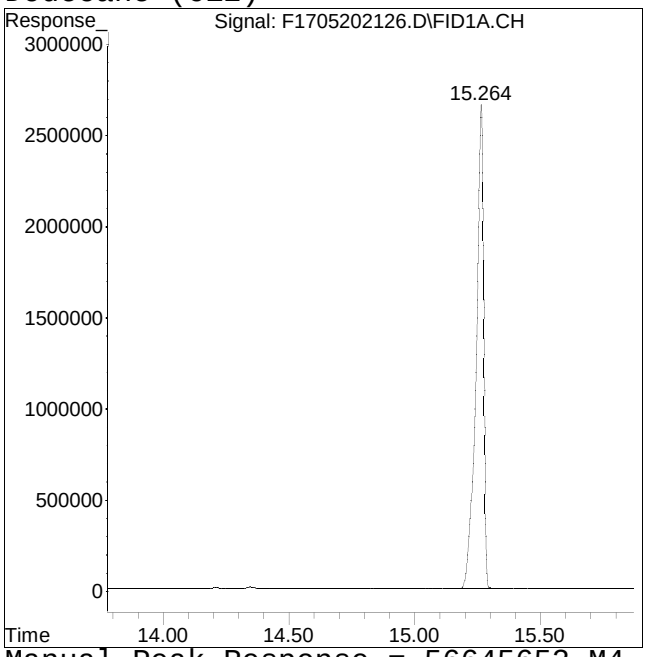
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 56652997



Manual Peak Response = 56645652 M4

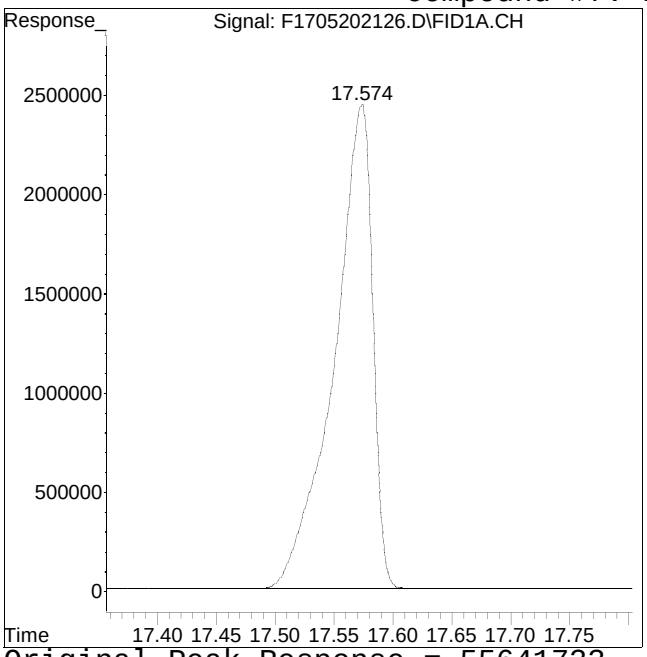
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

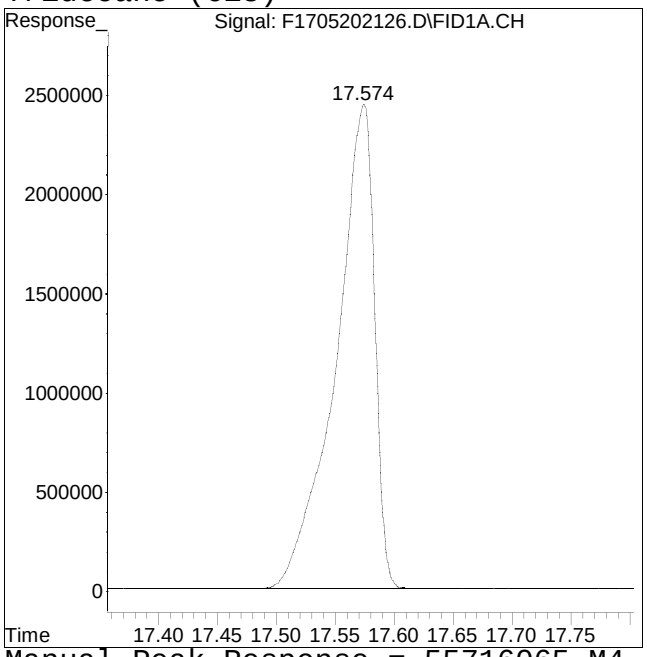
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 55641733



Manual Peak Response = 55716065 M4

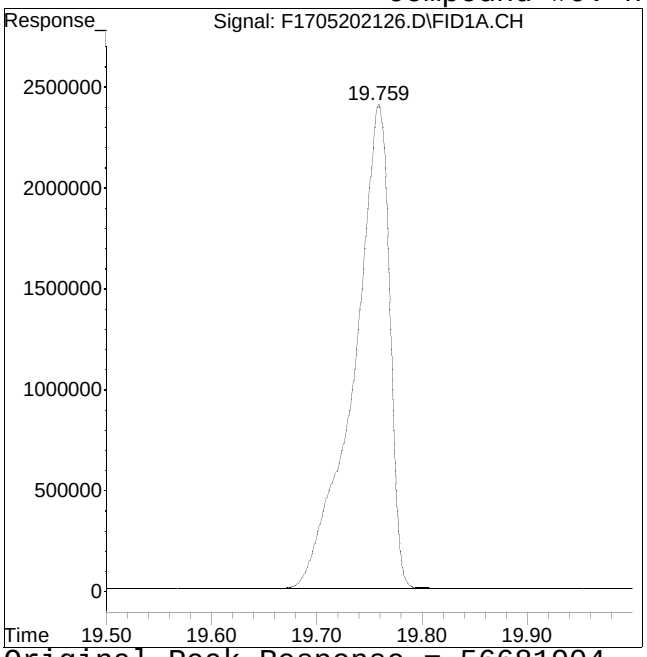
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

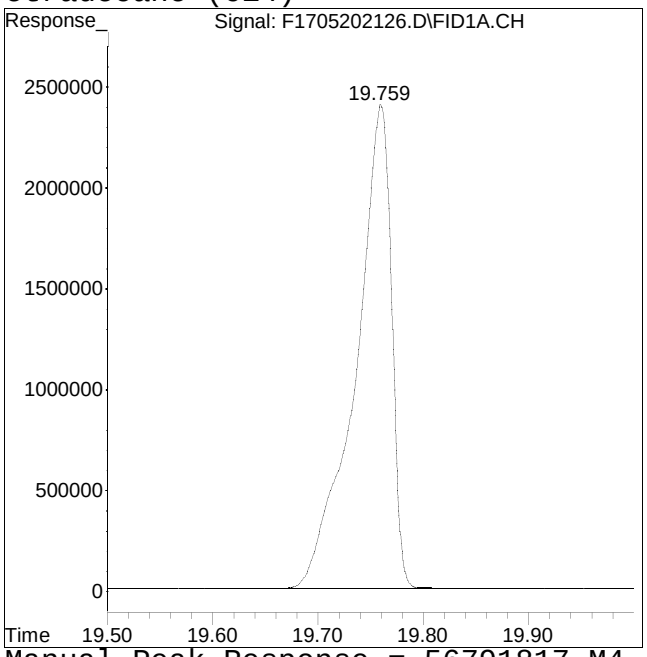
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 56681904



Manual Peak Response = 56791817 M4

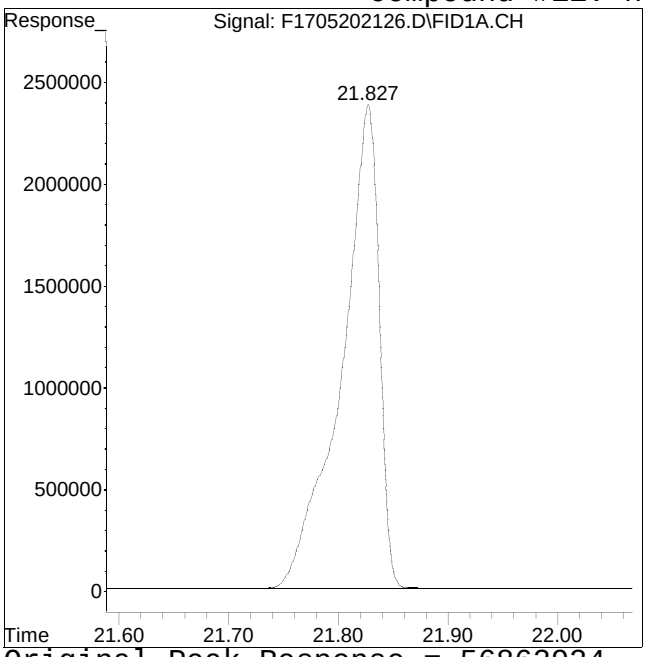
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

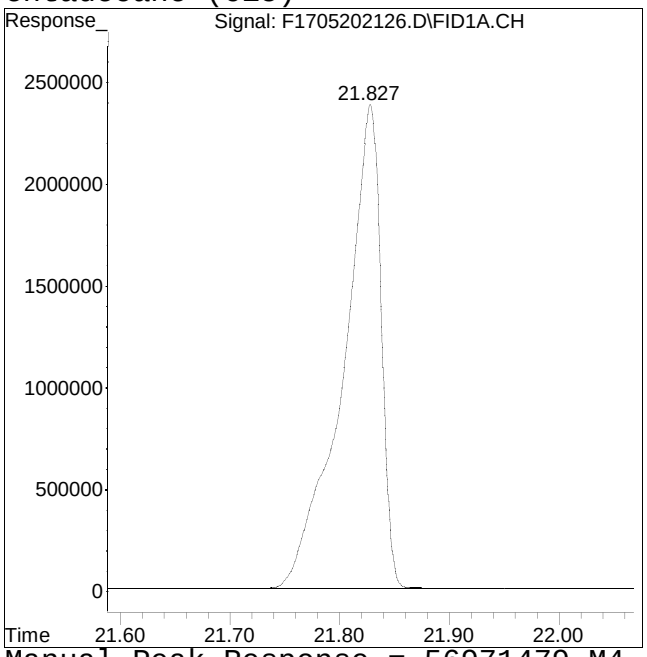
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 56862924



Manual Peak Response = 56971479 M4

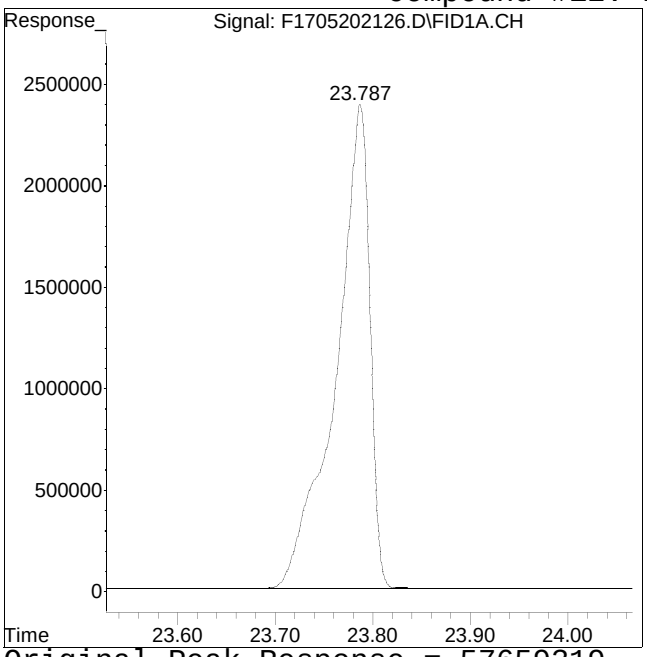
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

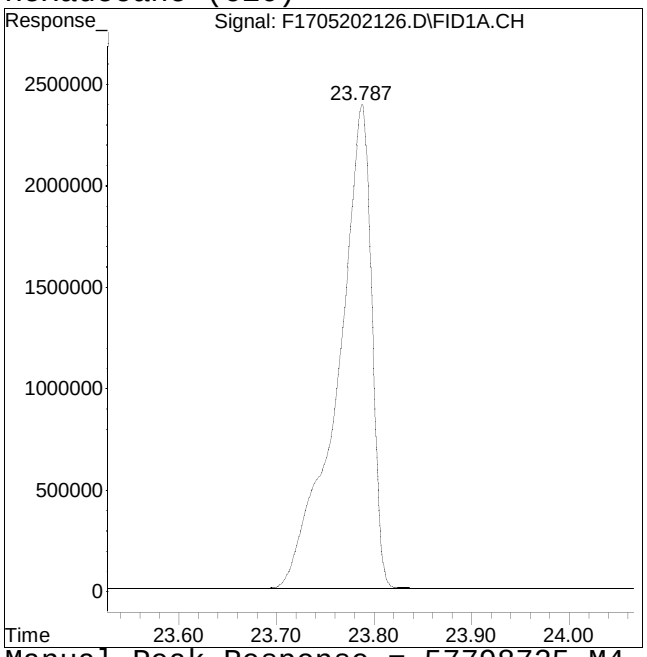
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 57659319



Manual Peak Response = 57798725 M4

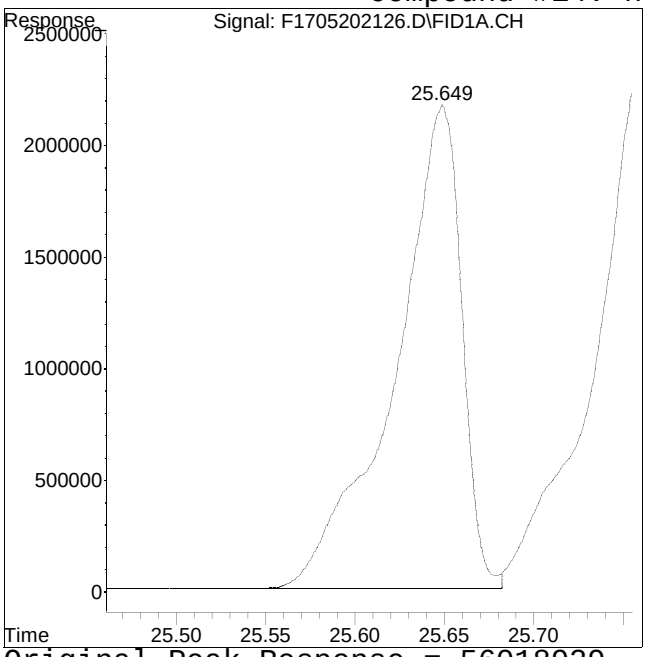
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

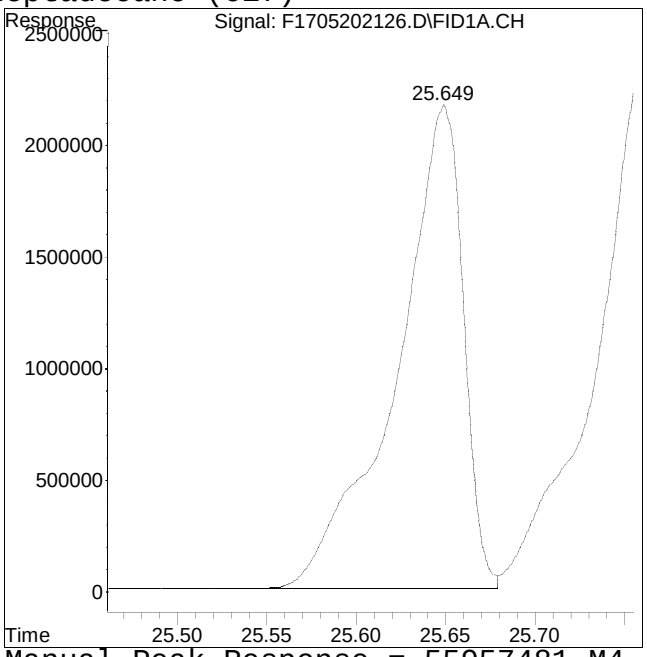
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 56018929



Manual Peak Response = 55957481 M4

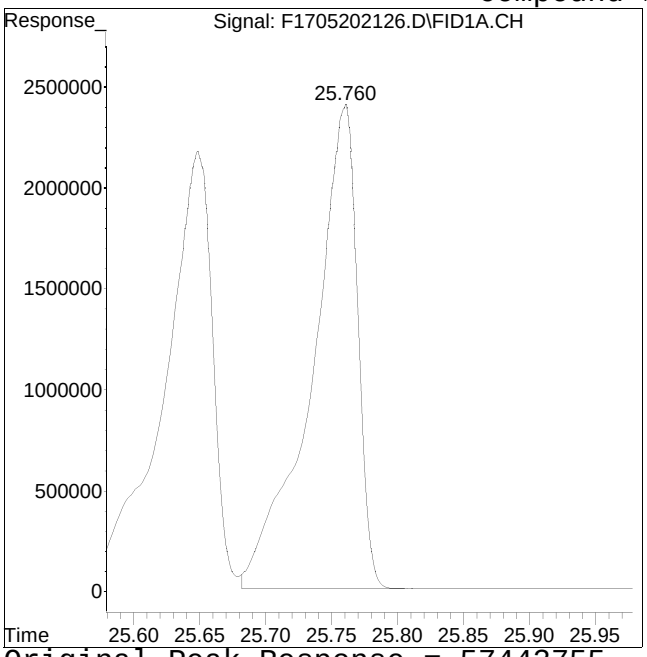
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

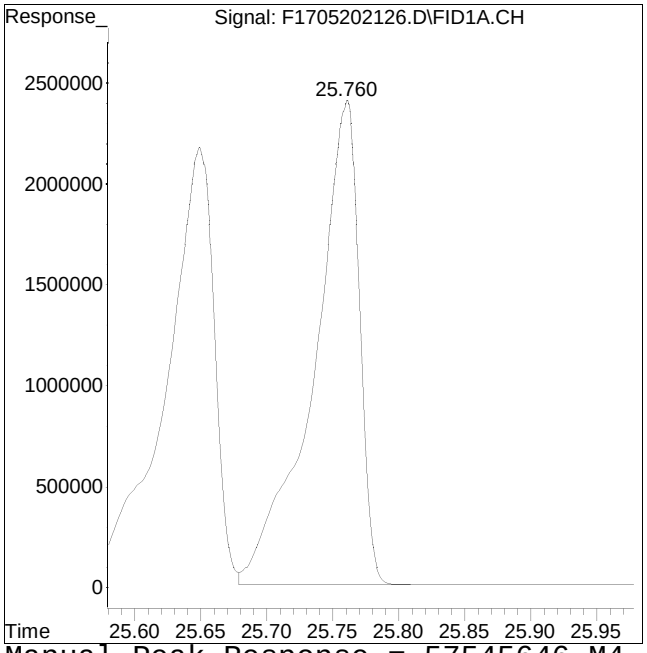
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #15: Pristane



Original Peak Response = 57443755



Manual Peak Response = 57545646 M4

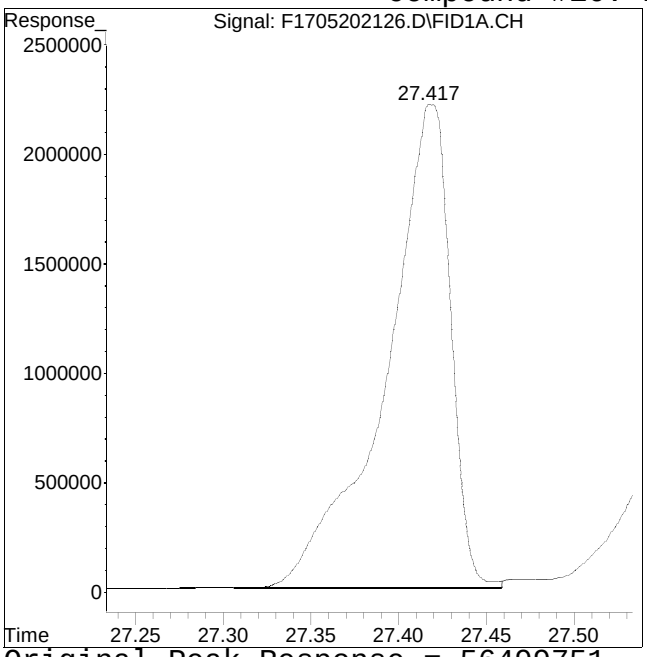
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

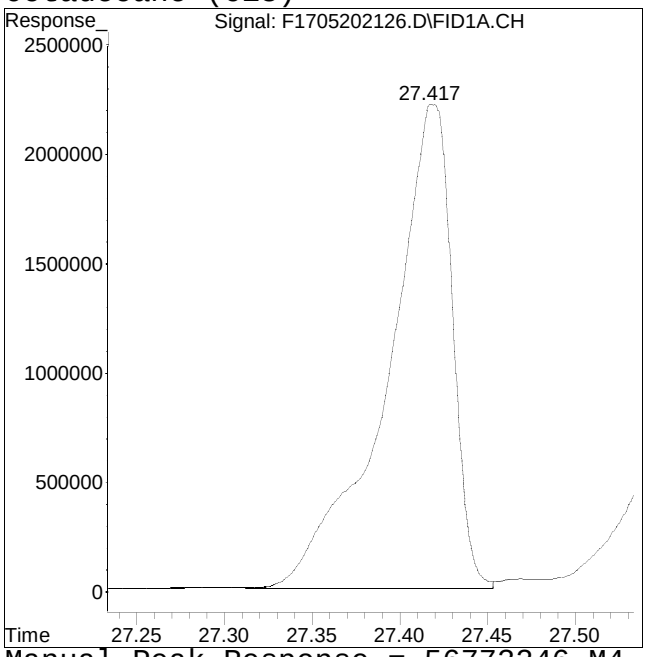
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 56499751



Manual Peak Response = 56773246 M4

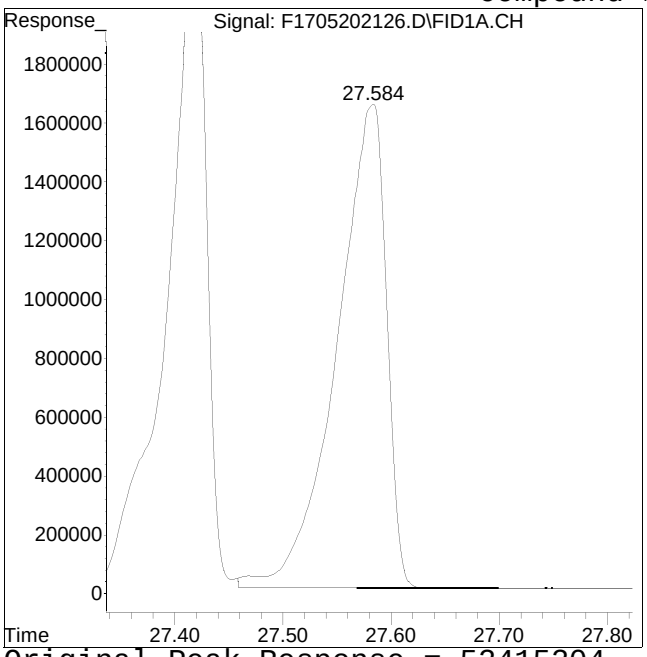
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

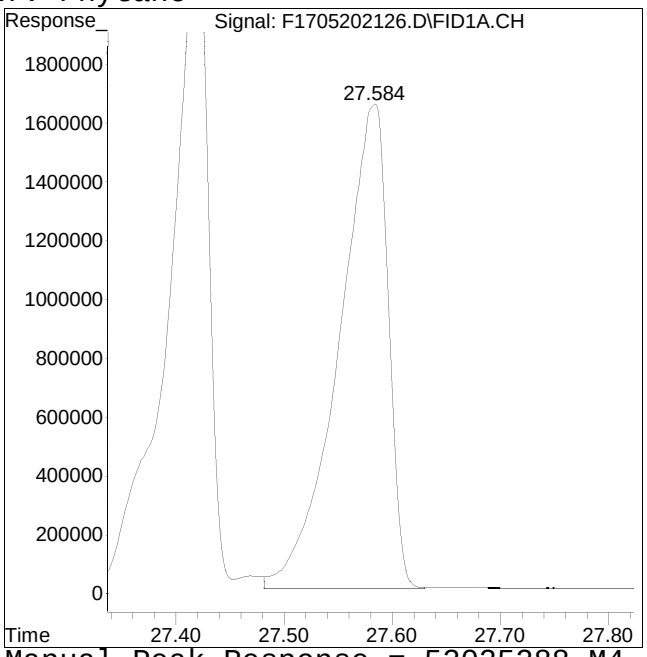
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #17: Phytane



Original Peak Response = 52415204



Manual Peak Response = 52025288 M4

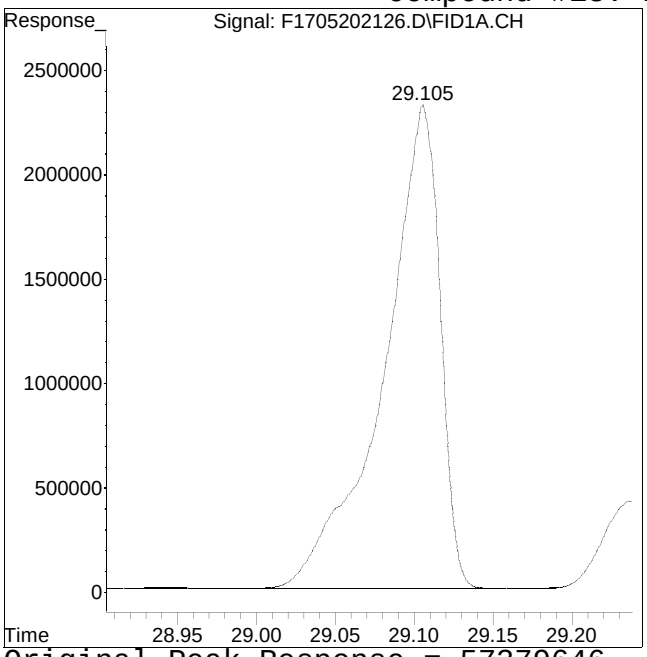
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

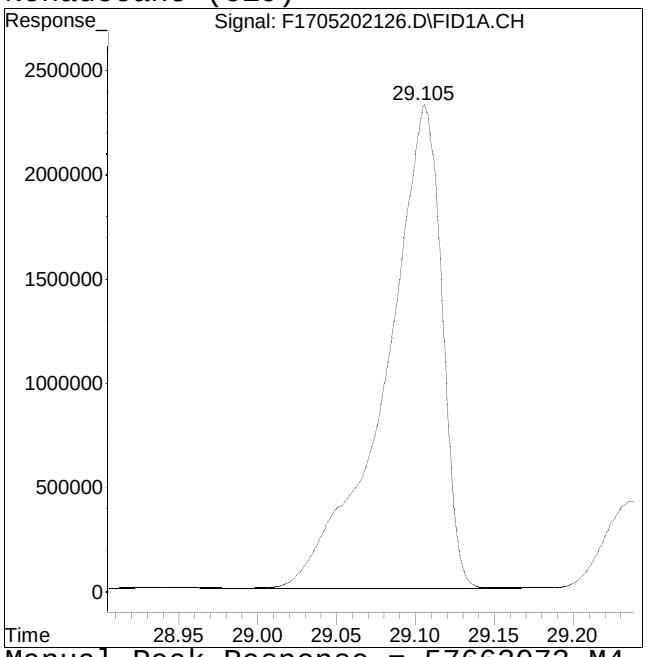
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 57379646



Manual Peak Response = 57663073 M4

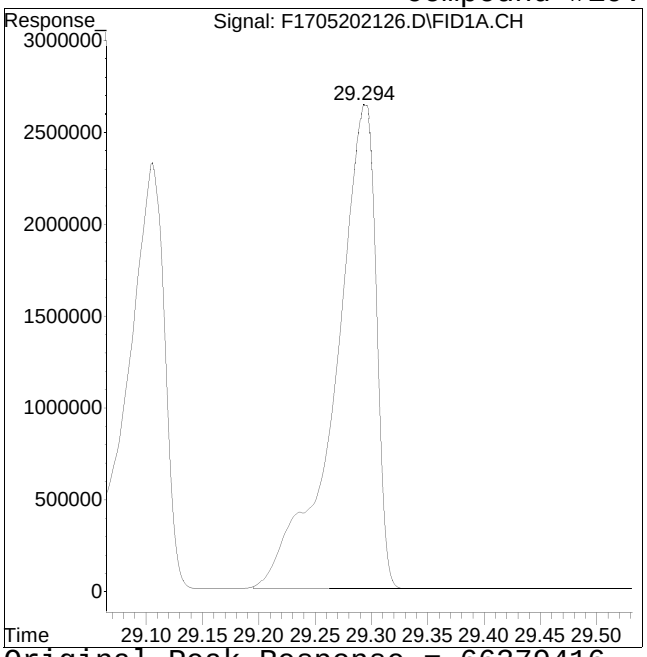
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

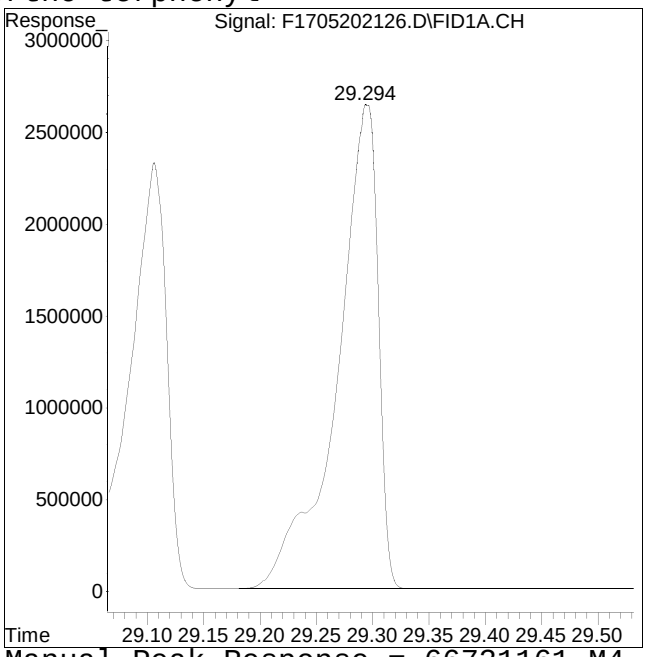
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #19: ortho-terphenyl



Original Peak Response = 66379416



Manual Peak Response = 66731161 M4

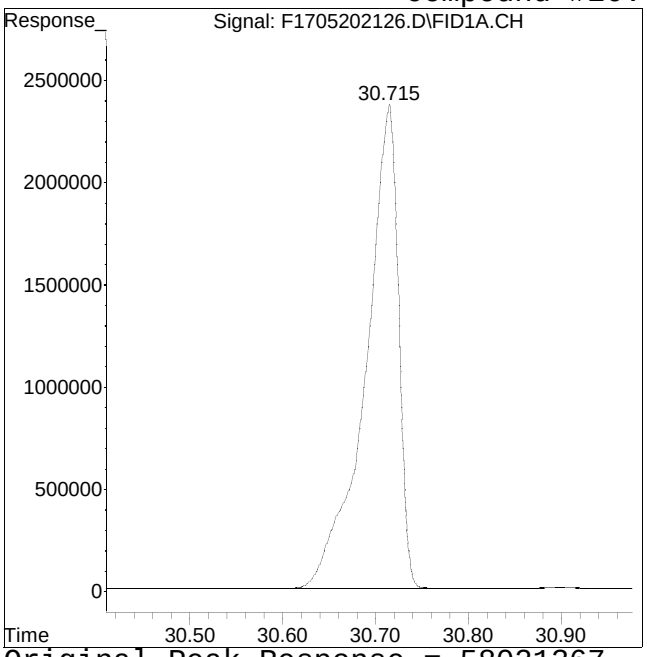
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

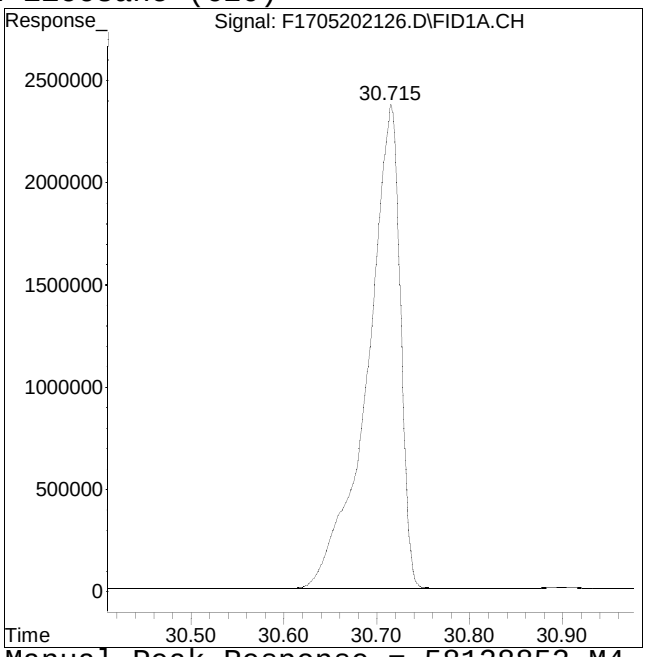
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 58021367



Manual Peak Response = 58128852 M4

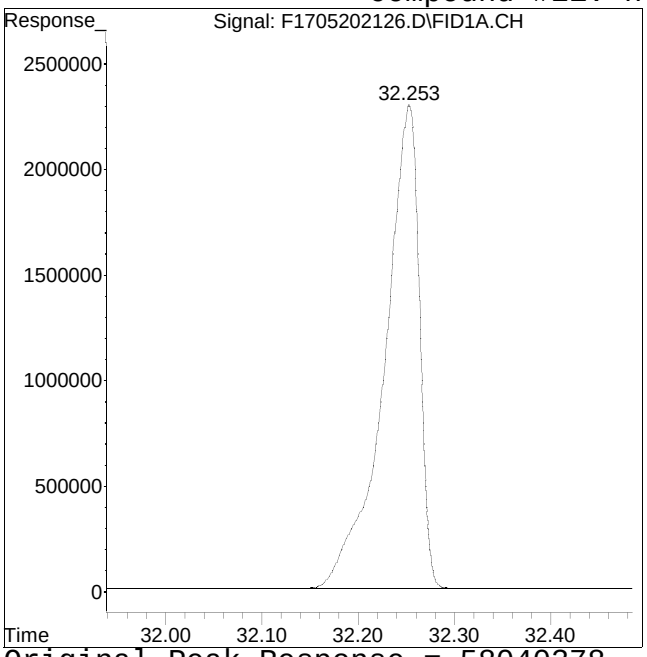
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

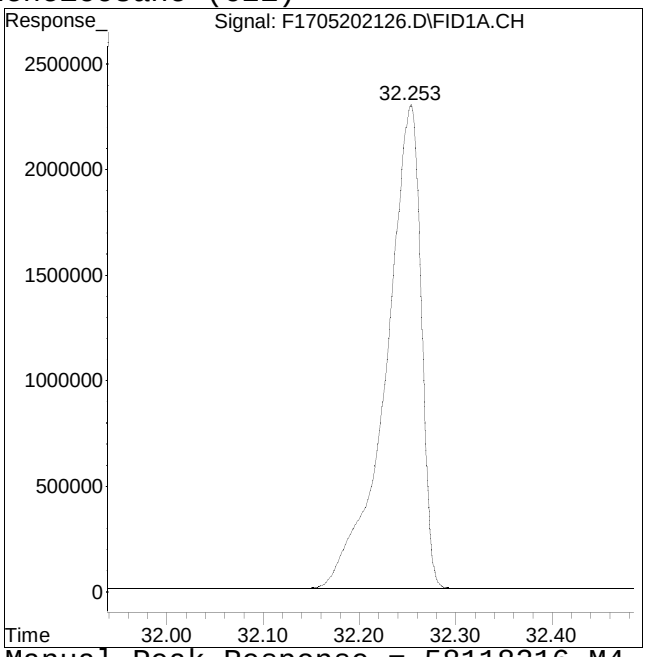
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 58040378



Manual Peak Response = 58118216 M4

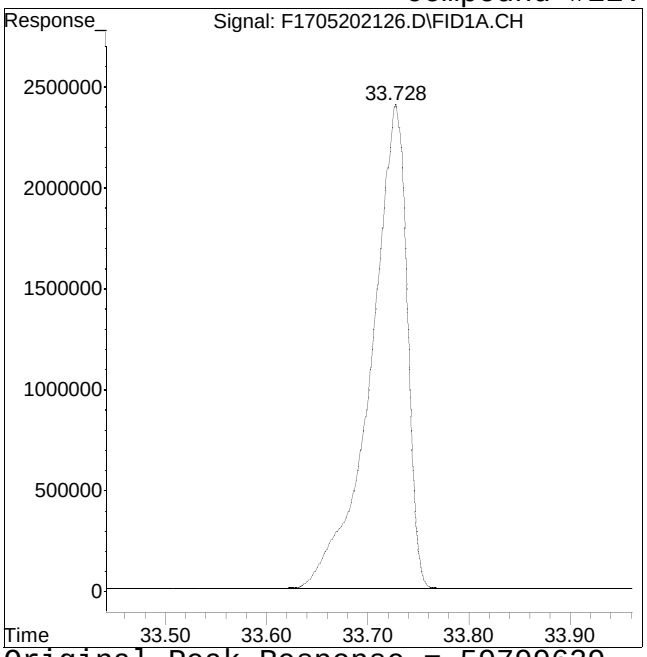
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

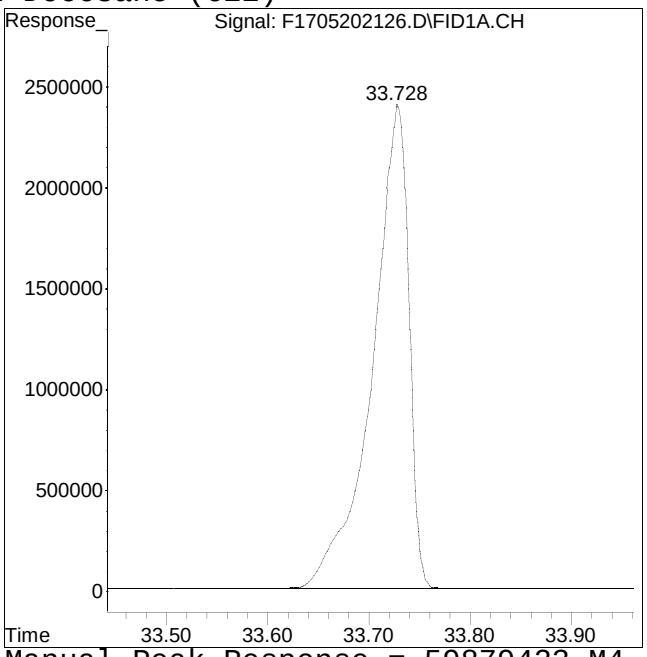
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 59799629



Manual Peak Response = 59879423 M4

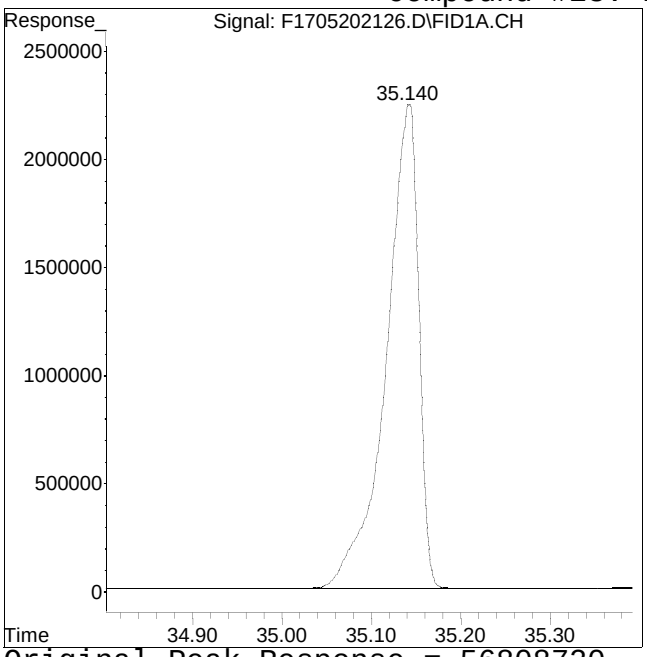
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

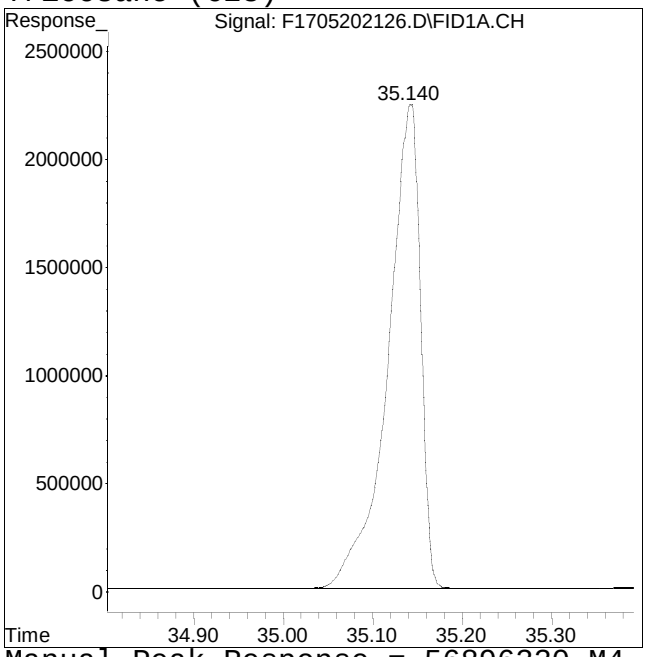
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 56808720



Manual Peak Response = 56896330 M4

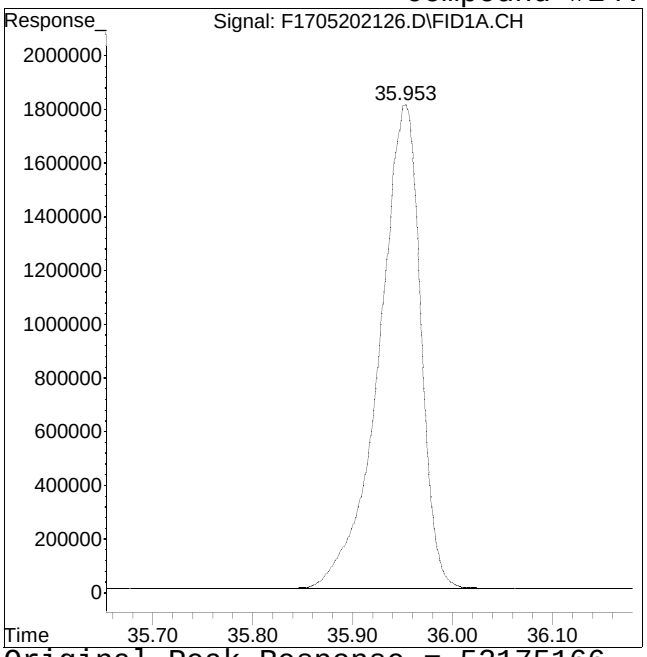
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

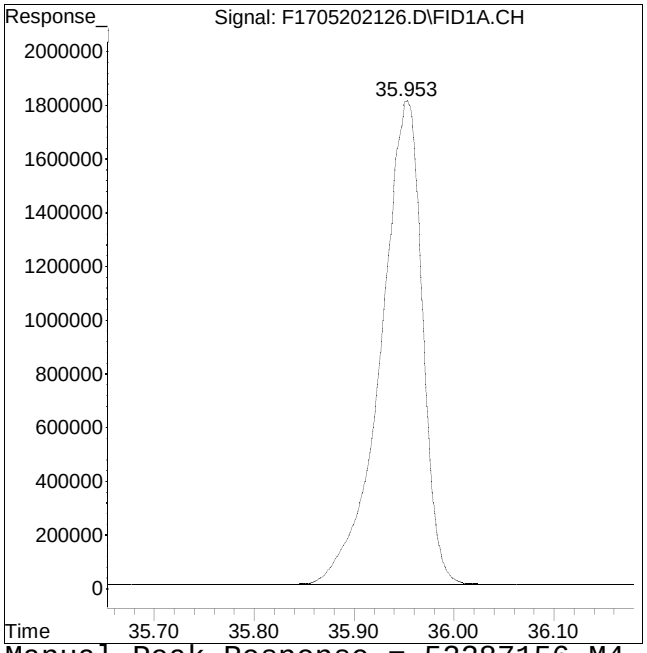
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #24: d50-Tetracosane



Original Peak Response = 52175166



Manual Peak Response = 52287156 M4

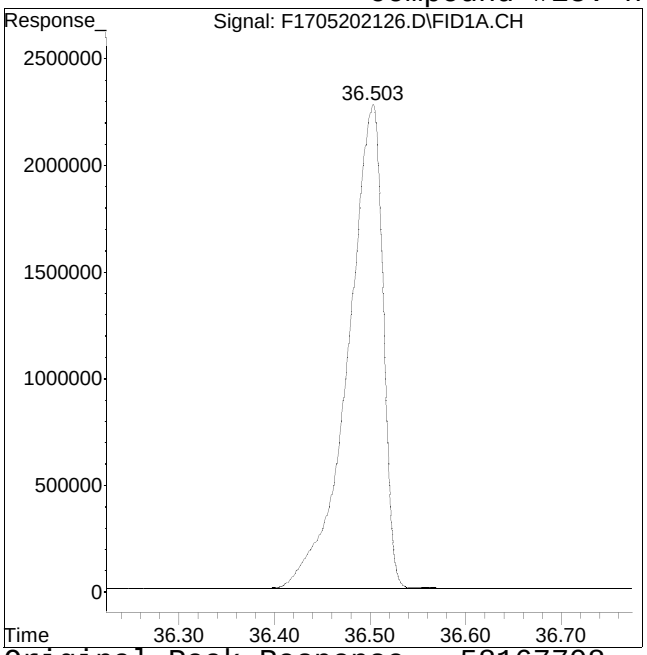
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

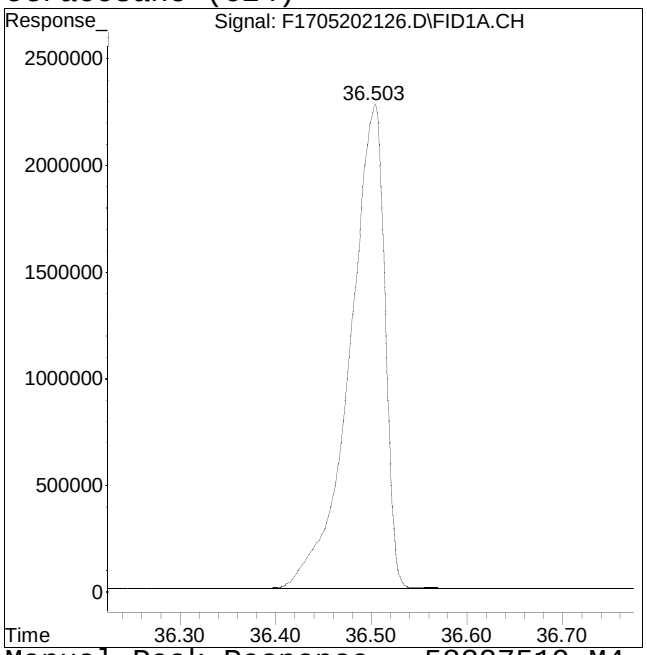
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 58167708



Manual Peak Response = 58227519 M4

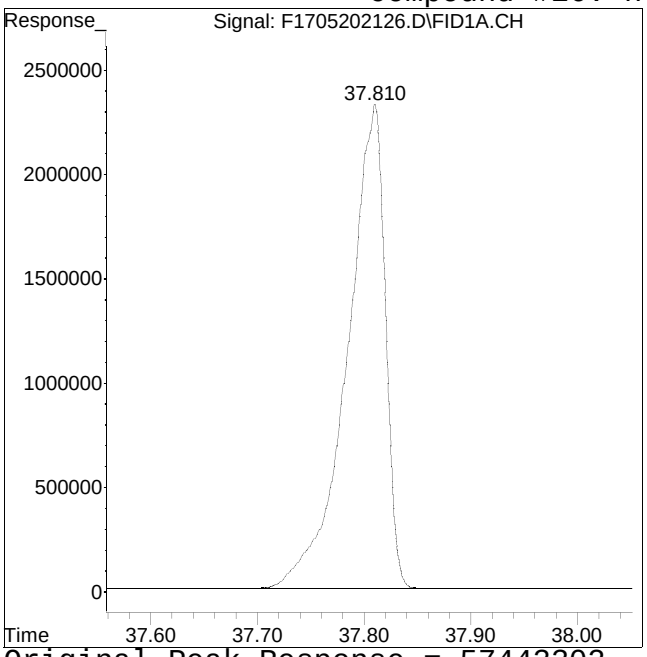
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

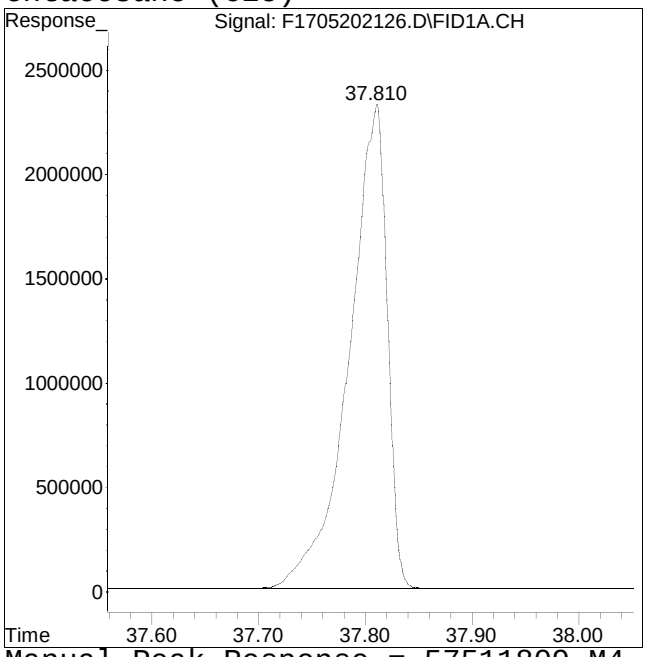
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 57443302



Manual Peak Response = 57511809 M4

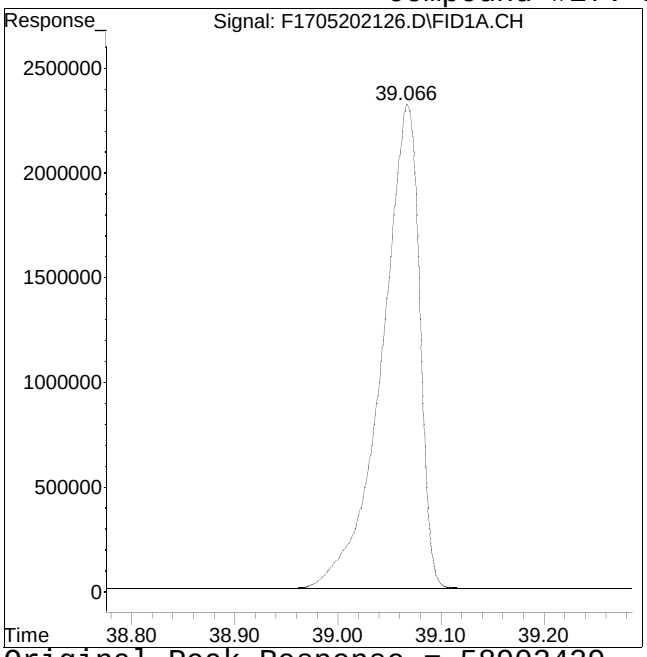
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

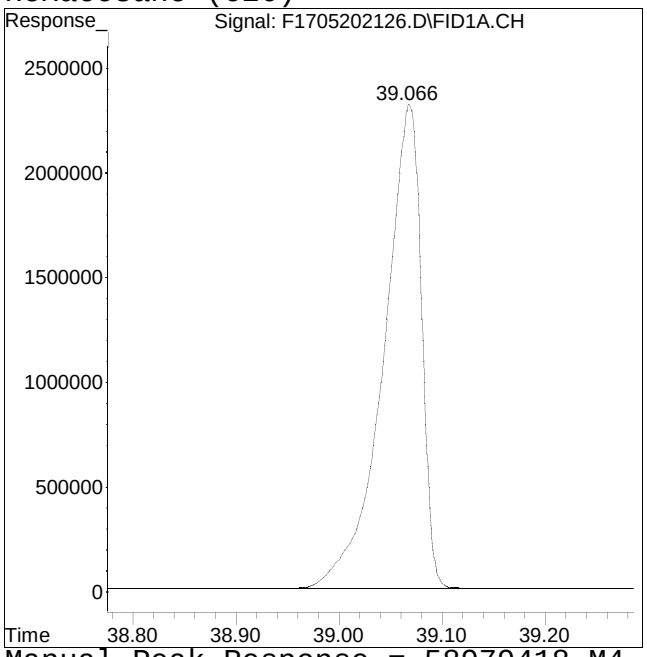
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 58902429



Manual Peak Response = 58979418 M4

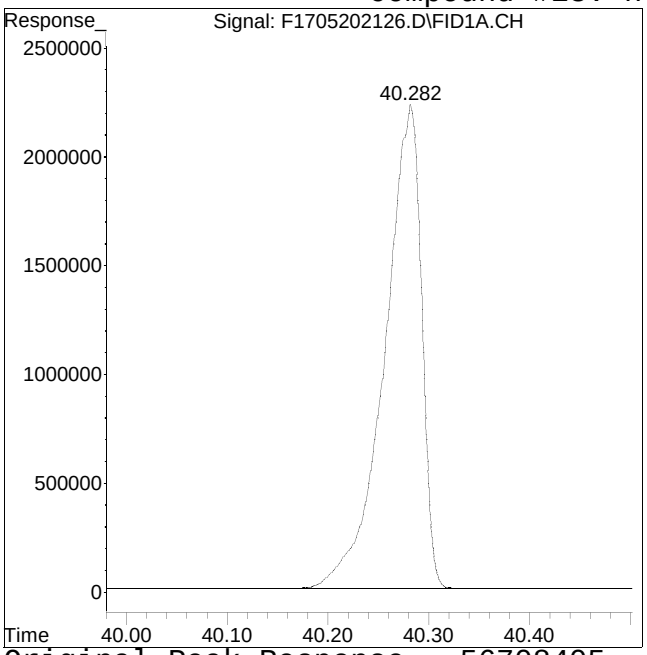
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

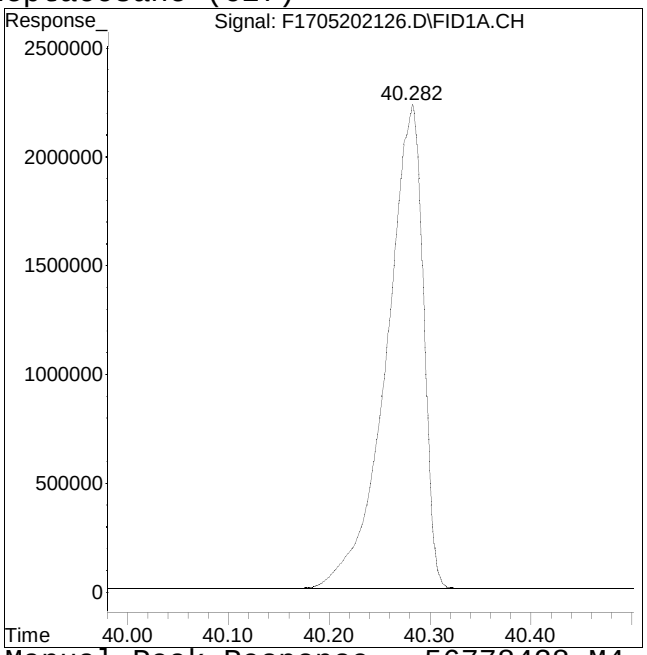
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 56708405



Manual Peak Response = 56778438 M4

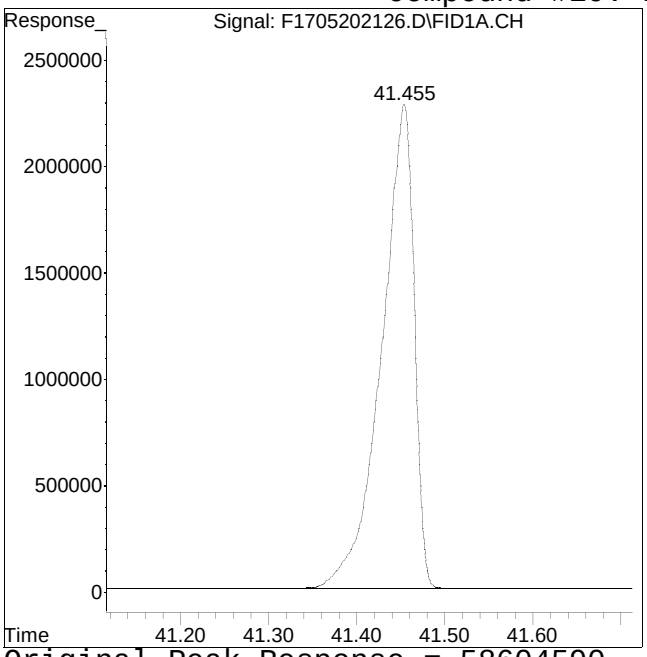
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

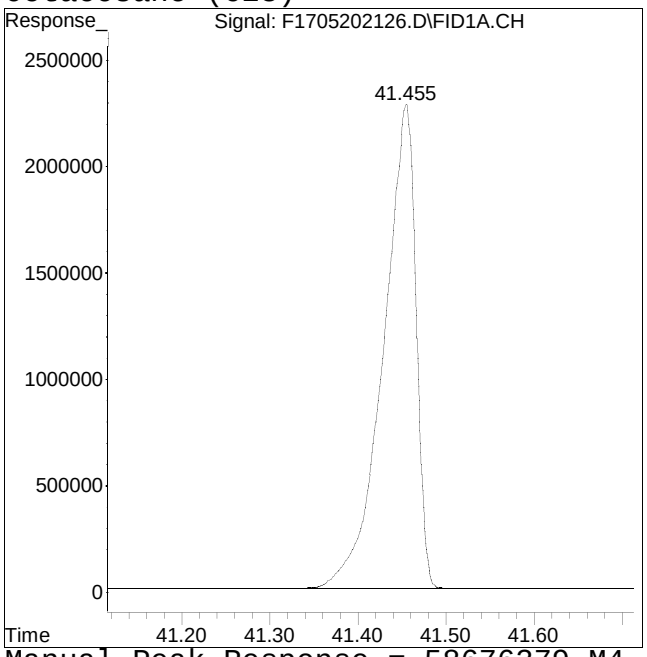
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 58604590



Manual Peak Response = 58676379 M4

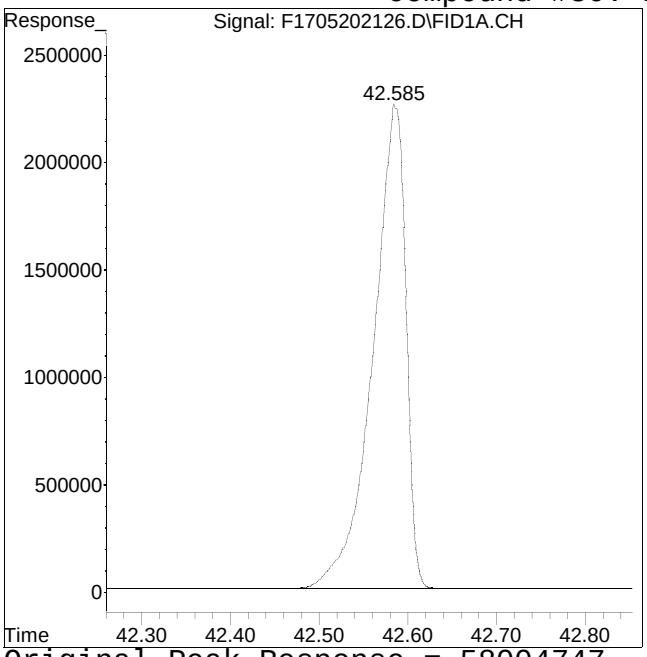
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

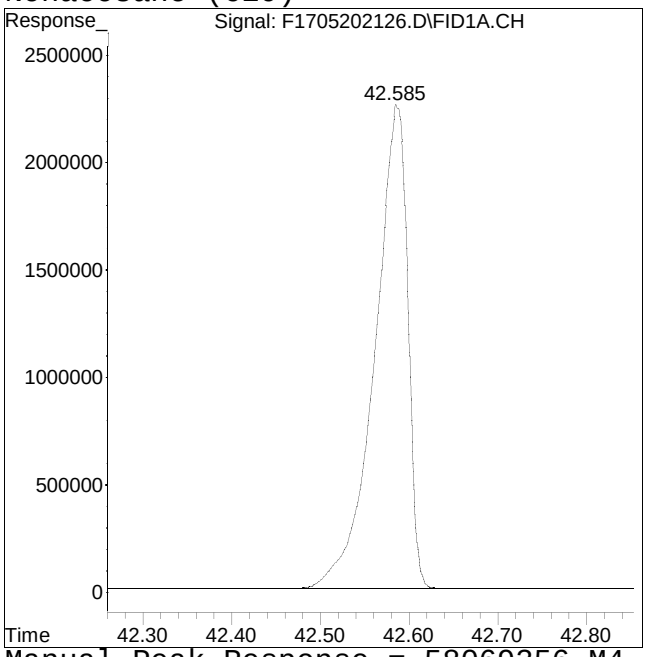
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 58004747



Manual Peak Response = 58069356 M4

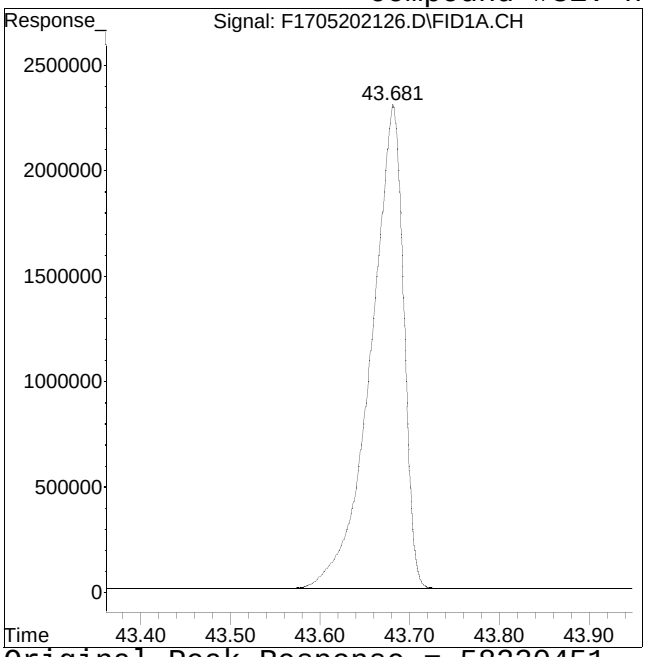
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

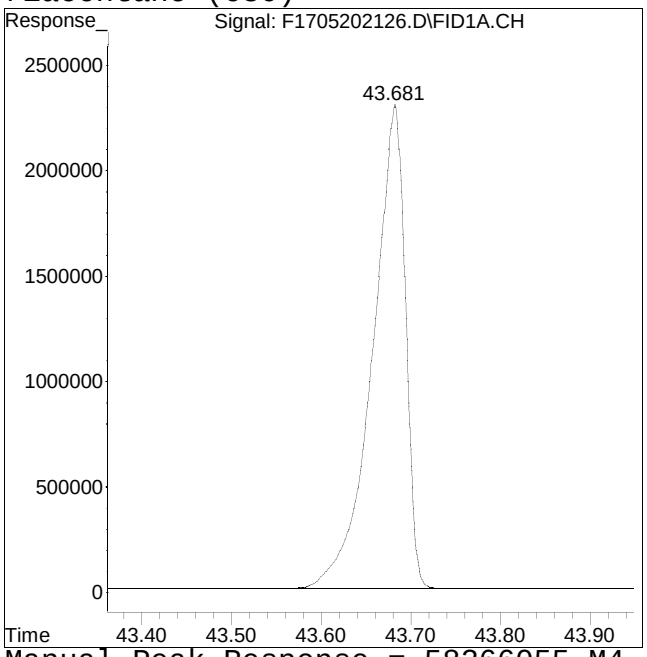
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 58230451



Manual Peak Response = 58266055 M4

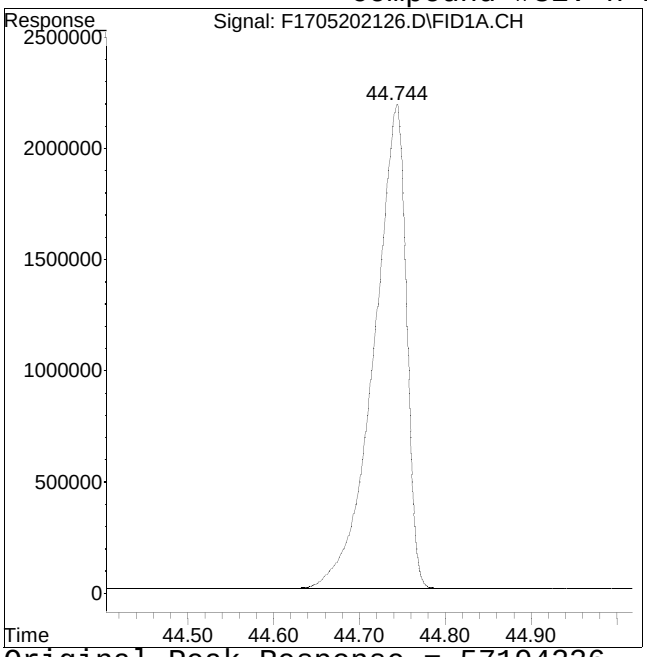
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

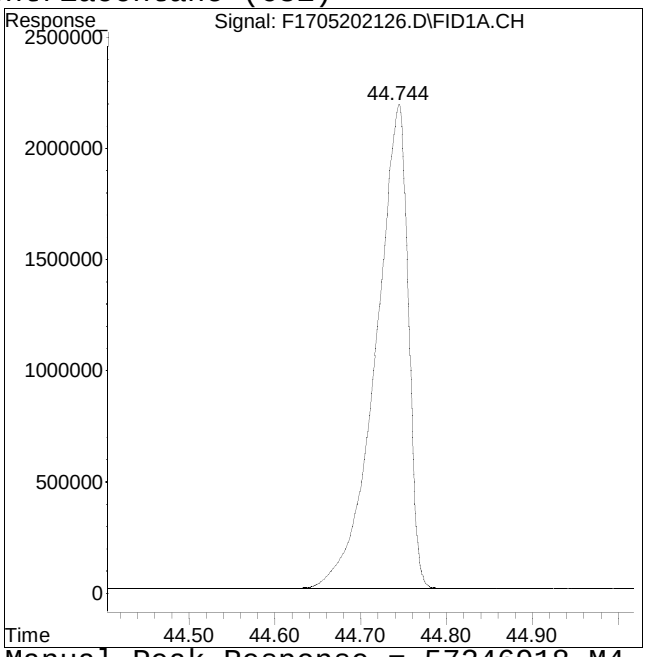
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 57194236



Manual Peak Response = 57246918 M4

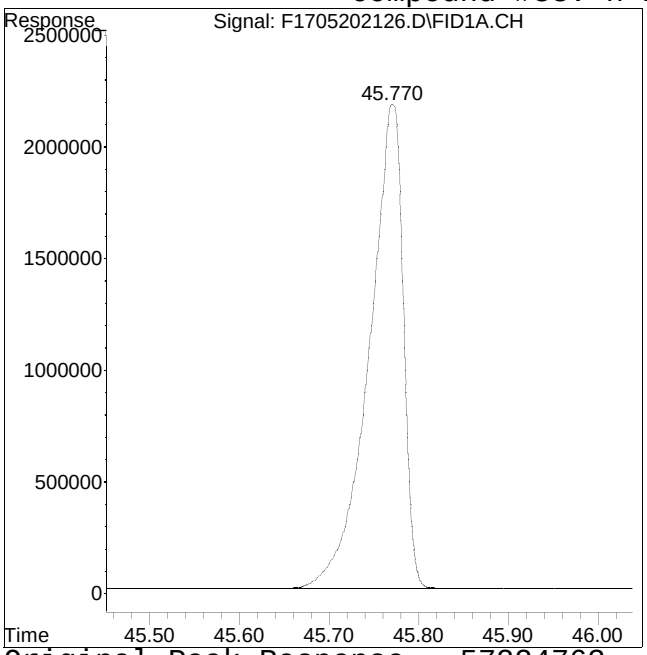
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

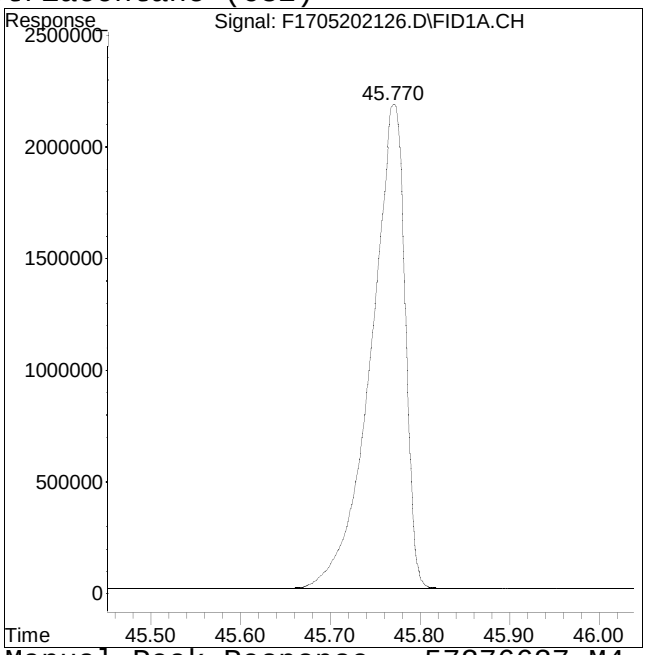
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 57224763



Manual Peak Response = 57276637 M4

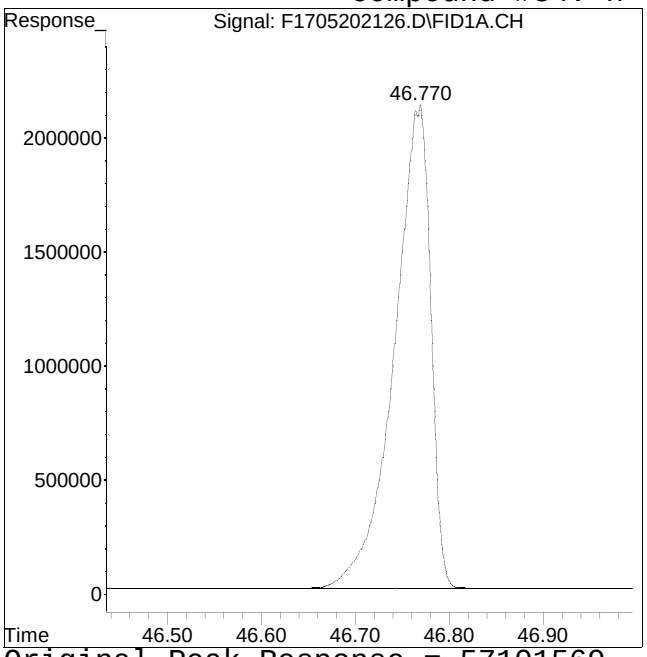
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

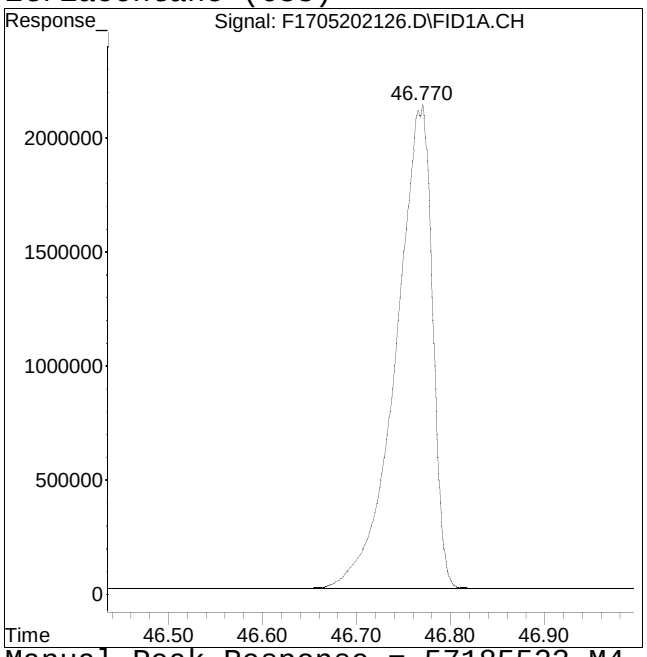
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 57101569



Manual Peak Response = 57185523 M4

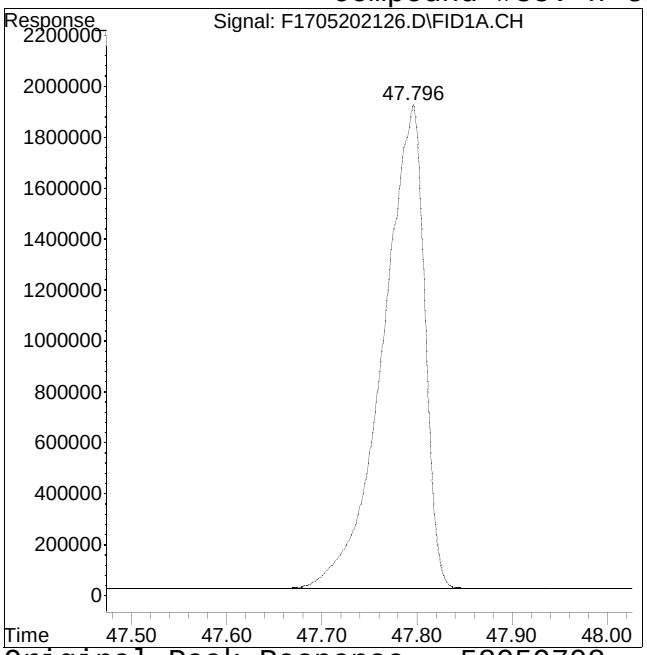
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

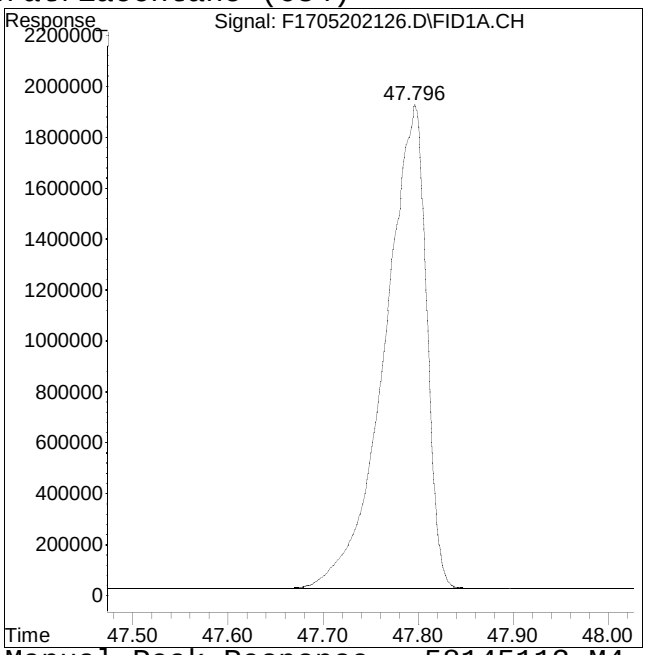
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 58059708



Manual Peak Response = 58145113 M4

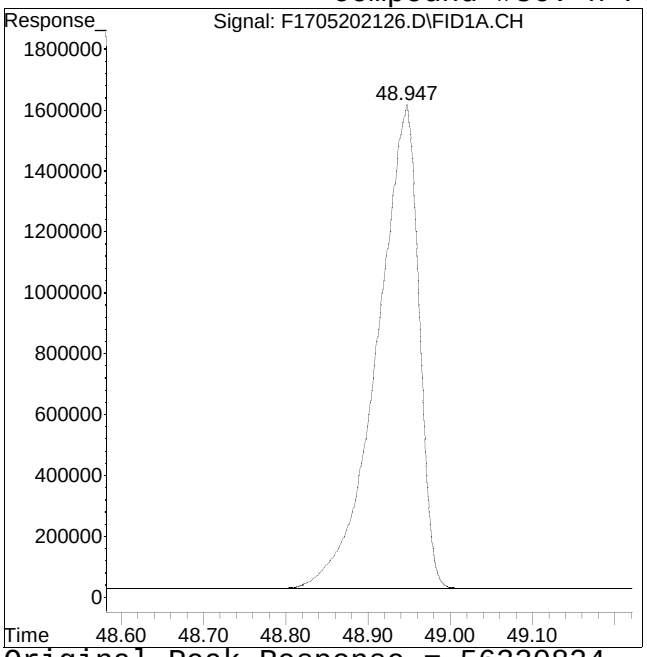
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

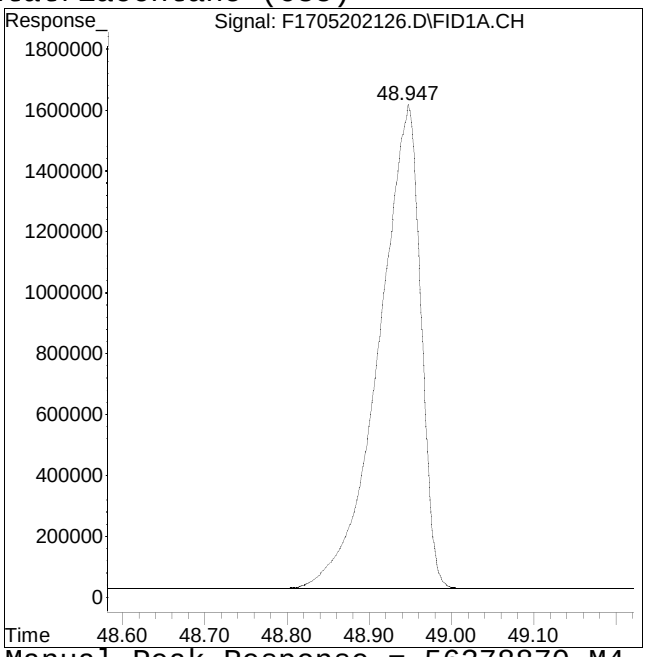
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 56330824



Manual Peak Response = 56378870 M4

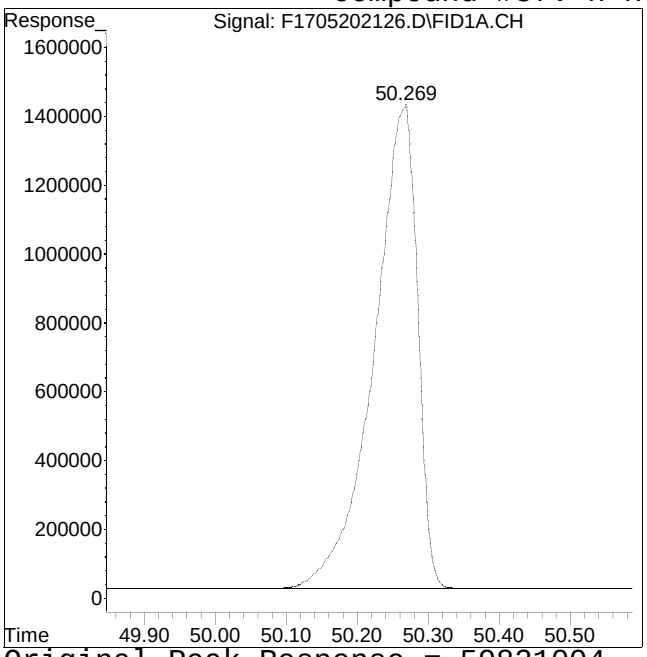
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

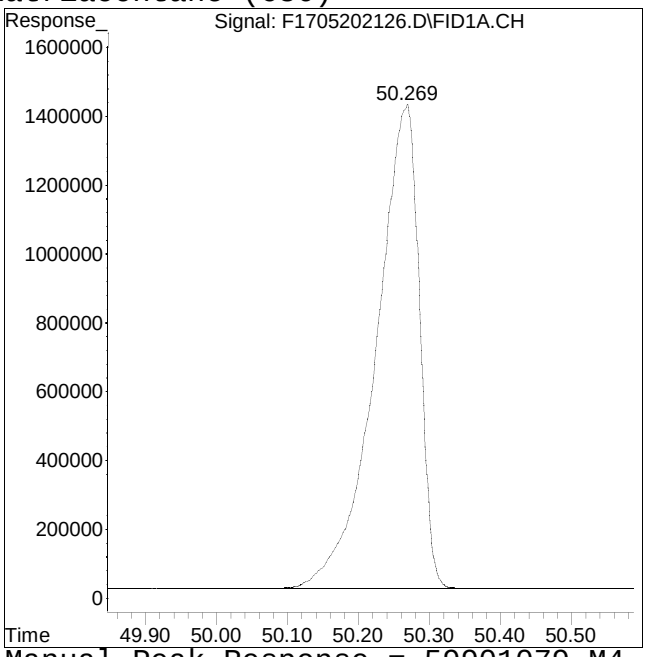
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 59821004



Manual Peak Response = 59901079 M4

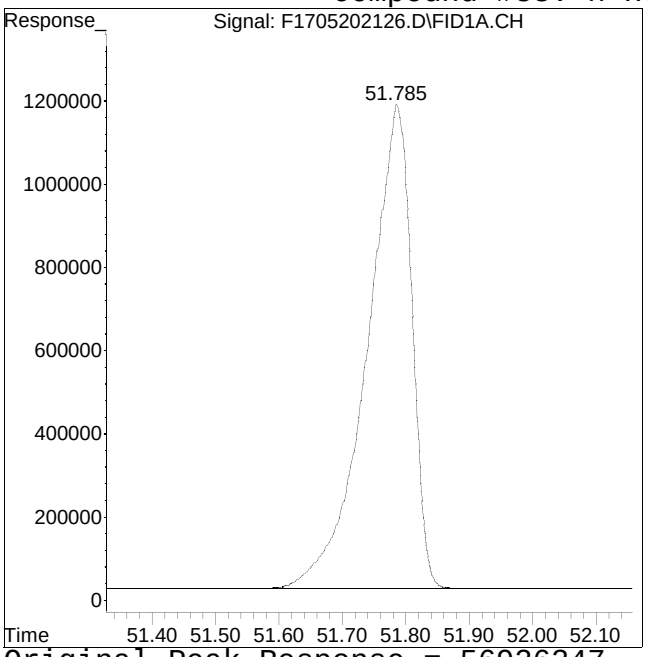
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

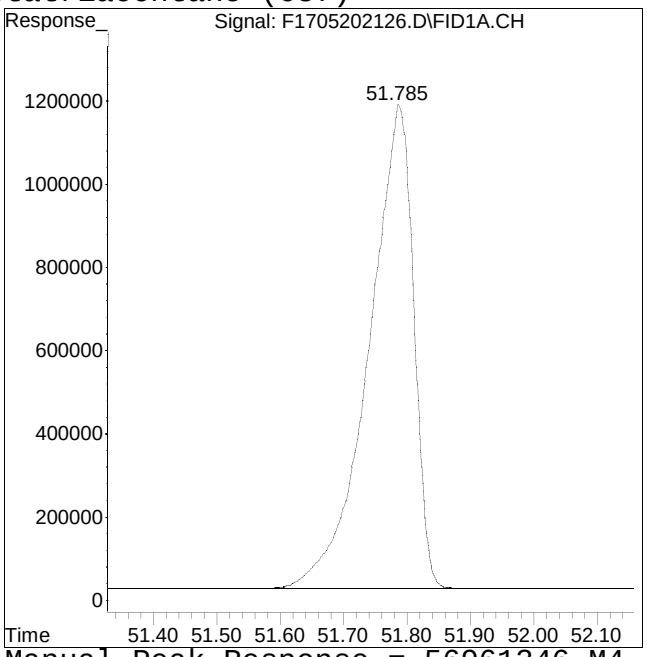
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 56926247



Manual Peak Response = 56961346 M4

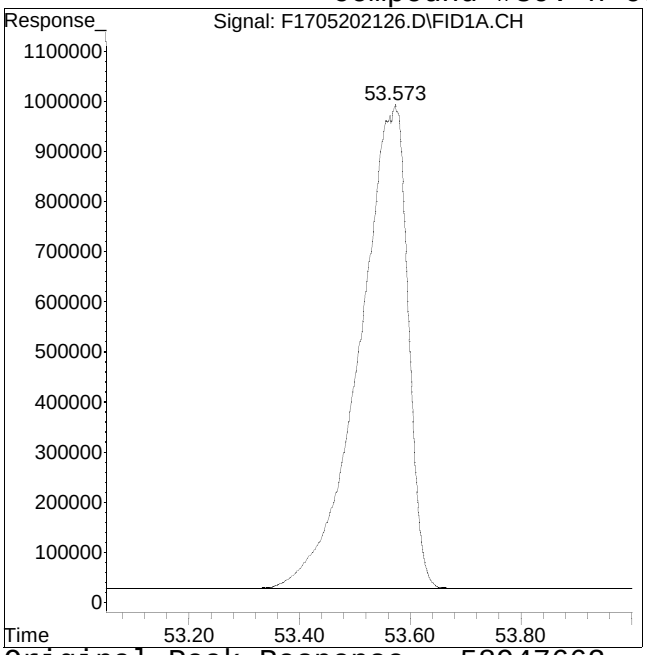
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

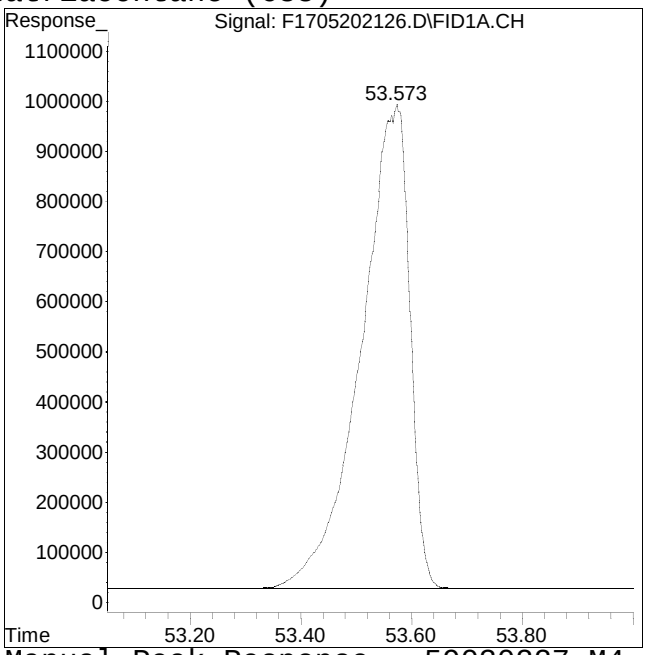
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 58947662



Manual Peak Response = 59030227 M4

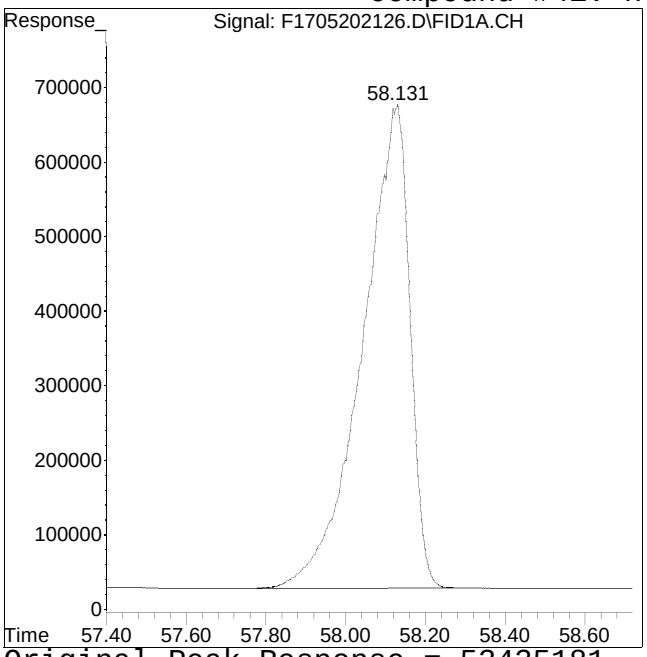
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

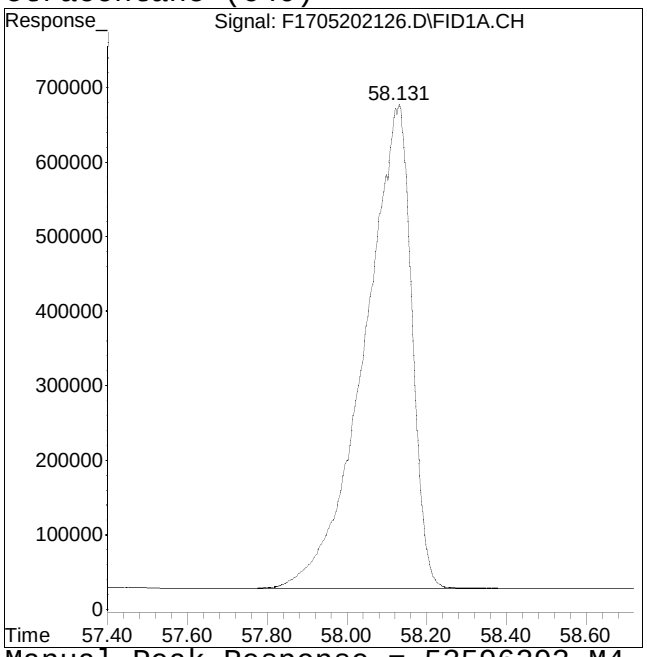
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 53435181



Manual Peak Response = 53596293 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202130.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 10:07 am
Operator : FID17:WR
Sample : WG1505003-1,0.10054
Misc : WG1505003,FRBD62,10.054ug/ml
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:30:24 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1705202101F
Blank File : F1705202128.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.324	60585272	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.298	54325120	41.364 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	82.73%
24) s	d50-Tetracosane	35.960	53344686	51.195 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	102.39%
	Target Compounds			
2) t	n-Octane (C8)	5.606	92691242	88.493 ug/mL M4
3) t	n-Nonane (C9)	7.821	69928951	62.565 ug/mL M4
4) t	n-Decane (C10)	10.317	58104981	50.782 ug/mL M4
5) t	n-Undecane (C11)	12.836	52663443	47.110 ug/mL M4
6) t	n-Dodecane (C12)	15.265	48798290	43.532 ug/mL M4
7) t	n-Tridecane (C13)	17.577	45482073	40.465 ug/mL M4
8) t	1380	19.249	10920224	9.430 ug/mL M4
9) t	n-Tetradecane (C14)	19.761	41442066	35.785 ug/mL M4
10) t	1470	21.046	16356247	14.107 ug/mL M4
11) t	n-Pentadecane (C15)	21.830	41182941	35.521 ug/mL M4
12) t	n-Hexadecane (C16)	23.788	38055175	32.881 ug/mL M4
13) t	1650	24.691	12713730	10.996 ug/mL M4
14) t	n-Heptadecane (C17)	25.649	33056204	28.589 ug/mL M4
15) t	Pristane	25.747	26846492	22.388 ug/mL M4
16) t	n-Octadecane (C18)	27.416	28935553	24.613 ug/mL M4
17) t	Phytane	27.577	14310976	13.013 ug/mL M4
18) t	n-Nonadecane (C19)	29.105	29201966	24.765 ug/mL M4
20) t	n-Eicosane (C20)	30.711	28220031	23.796 ug/mL M4
21) t	n-Heneicosane (C21)	32.248	25862599	21.738 ug/mL M4
22) t	n-Docosane (C22)	33.723	24381323	20.461 ug/mL M4
23) t	n-Tricosane (C23)	35.139	21679172	18.158 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202130.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 10:07 am
Operator : FID17:WR
Sample : WG1505003-1,0.10054
Misc : WG1505003,FRBD62,10.054ug/ml
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:30:24 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1705202101F
Blank File : F1705202128.D

Sub List : SHC - SHC

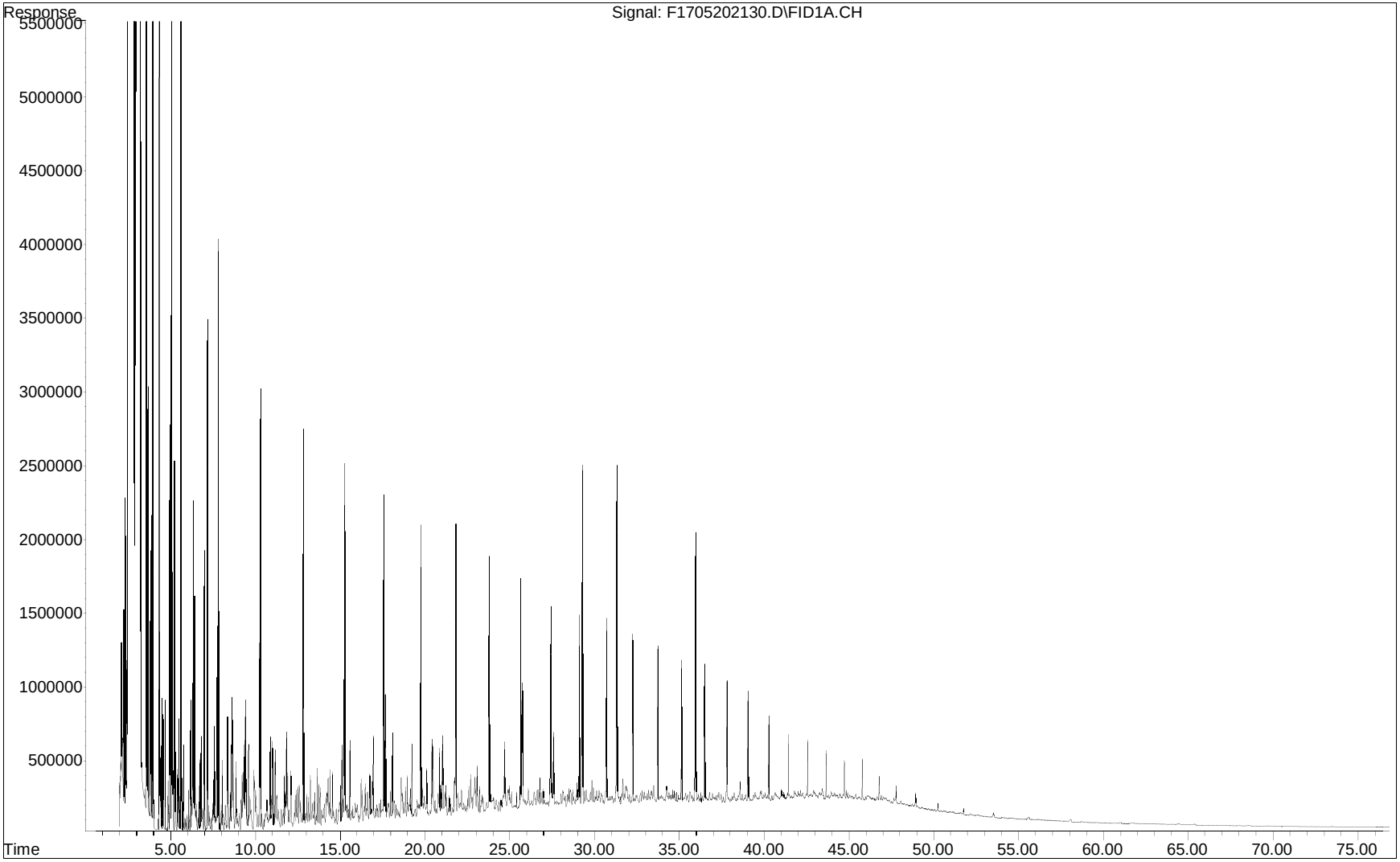
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	36.496	20306669	17.061	ug/mL	M4
26) t	n-Pentacosane (C25)	37.801	19467223	16.715	ug/mL	M4
27) t	n-Hexacosane (C26)	39.058	17404010	14.558	ug/mL	M4
28) t	n-Heptacosane (C27)	40.272	13297910	11.093	ug/mL	M4
29) t	n-Octacosane (C28)	41.442	9758990	7.853	ug/mL	M4
30) t	n-Nonacosane (C29)	42.572	9521699	7.812	ug/mL	M4
31) t	n-Triacontane (C30)	43.668	7817772	6.389	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.727	6398616	5.406	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.754	6895955	5.551	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.752	4008837	3.315	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.773	4018885	3.347	ug/mL	M4
36) t	n-Pentatriacontane (C35)	48.920	3476985	3.099	ug/mL	M4
37) t	n-Hexatriacontane (C36)	50.228	2300095	1.703	ug/mL	M4
38) t	n-Heptatriacontane (C37)	51.753	2053231	1.676	ug/mL	M4
39) t	n-Octatriacontane (C38)	53.526	1776959	1.435	ug/mL	M4
40) t	n-Nonatriacontane (C39)	55.601	1071186	0.877	ug/mL	M4
41) t	n-Tetracontane (C40)	58.062	1027669	0.841	ug/mL	M4
42) h	C9-C44 Total Petroleu...	40.642	7012714990	5918.857	ug/mL	m
42) h	C9-C44 Total Petroleu BS	40.642	6704202598	5658.467	ug/mLm	
46) h	Total Resolved Hydroc...	38.937	2309550069	1949.302	ug/mL	m

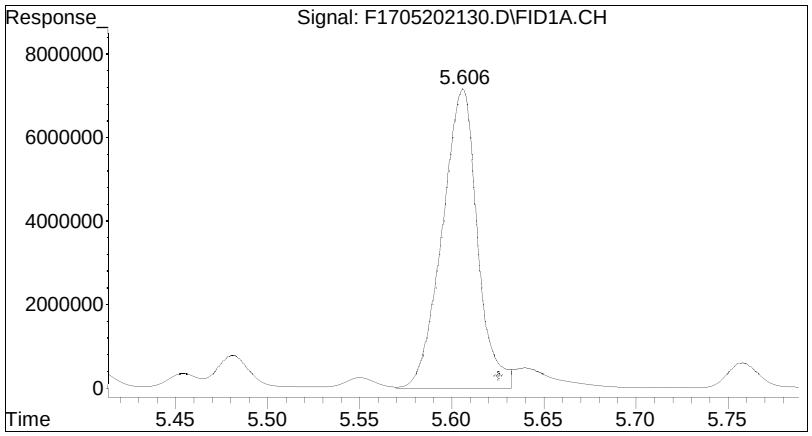
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

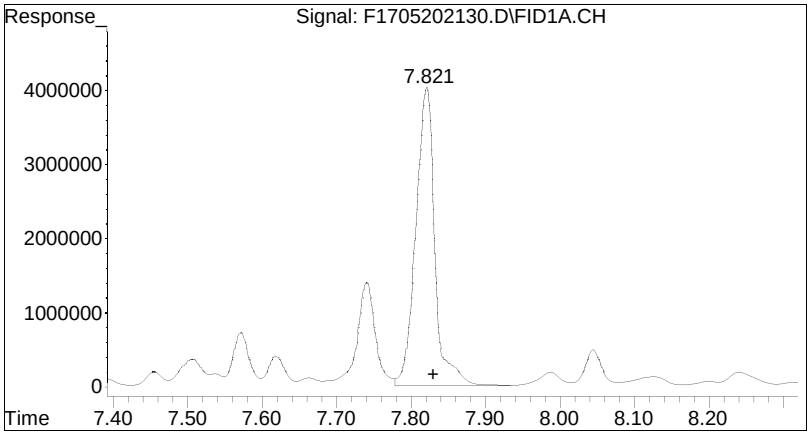
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202130.D
Operator : FID17:WR
Acquired : 21 May 2021 10:07 am using AcqMethod FID17A.M
Sample Name: WG1505003-1,0.10054
Instrument: FID17
Misc Info : WG1505003,FRBD62,10.054ug/ml
Vial Number: 15
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M





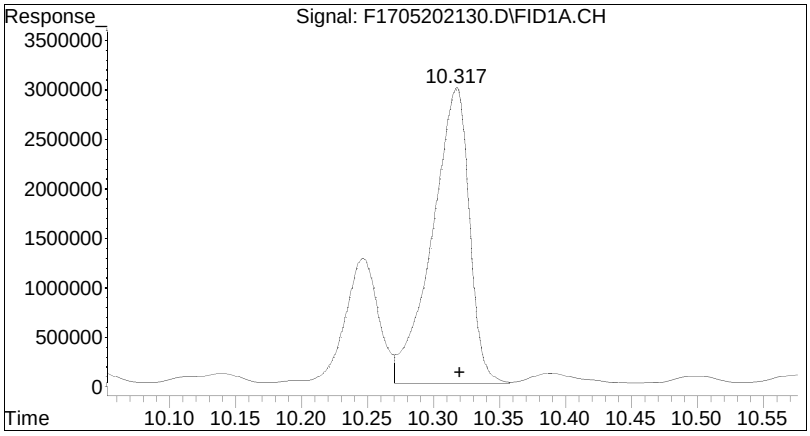
#2 n-Octane (C8)

R.T.:	5.606 min
Delta R.T.:	-0.020 min
Response:	92691242
Conc:	88.49 ug/mL M4



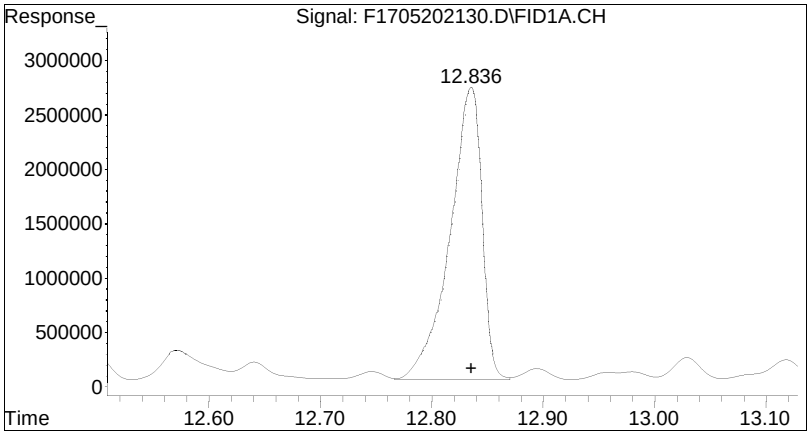
#3 n-Nonane (C9)

R.T.: 7.821 min
Delta R.T.: -0.009 min
Response: 69928951
Conc: 62.56 ug/mL M4



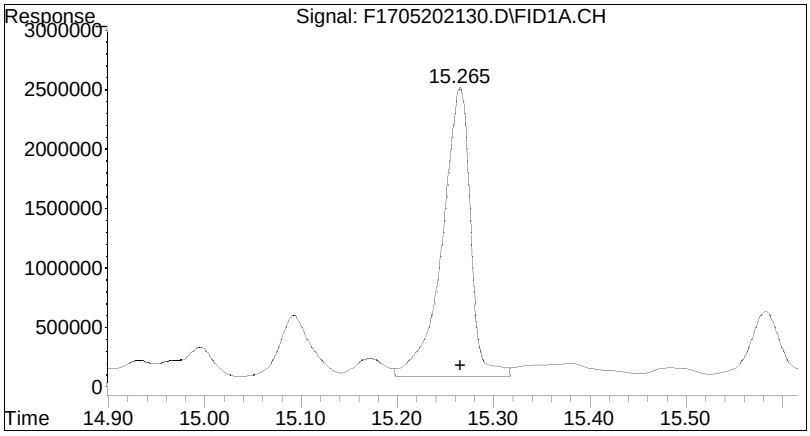
#4 n-Decane (C10)

R.T.: 10.317 min
Delta R.T.: -0.003 min
Response: 58104981
Conc: 50.78 ug/mL M4



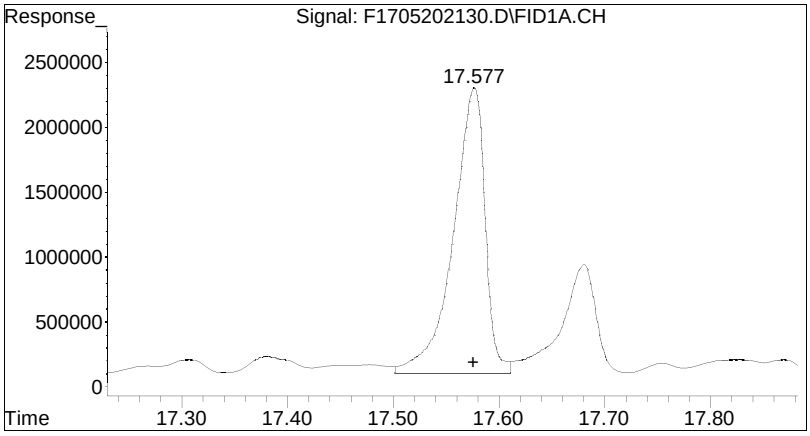
#5 n-Undecane (C11)

R.T.: 12.836 min
Delta R.T.: 0.000 min
Response: 52663443
Conc: 47.11 ug/mL M4



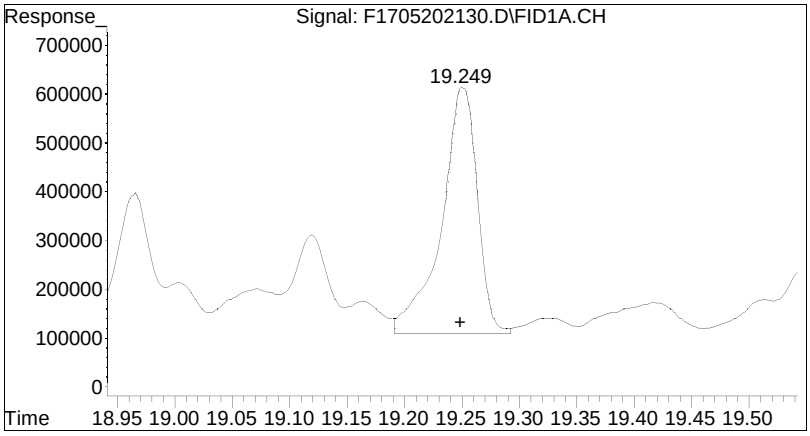
#6 n-Dodecane (C12)

R.T.: 15.265 min
Delta R.T.: 0.000 min
Response: 48798290
Conc: 43.53 ug/mL M4



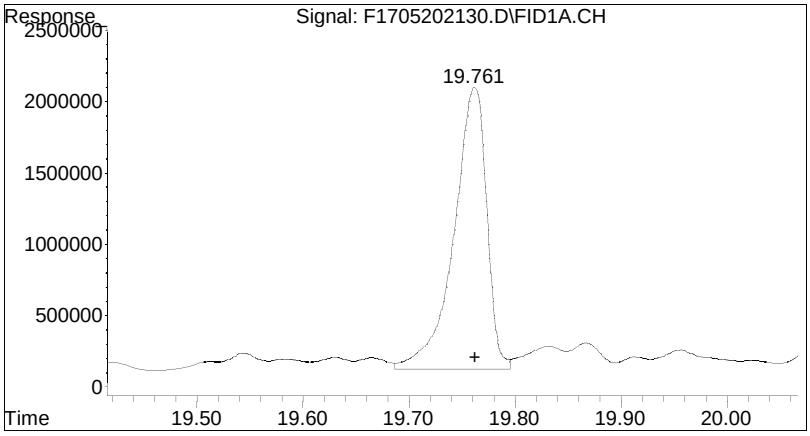
#7 n-Tridecane (C13)

R.T.: 17.577 min
Delta R.T.: 0.000 min
Response: 45482073
Conc: 40.46 ug/mL M4



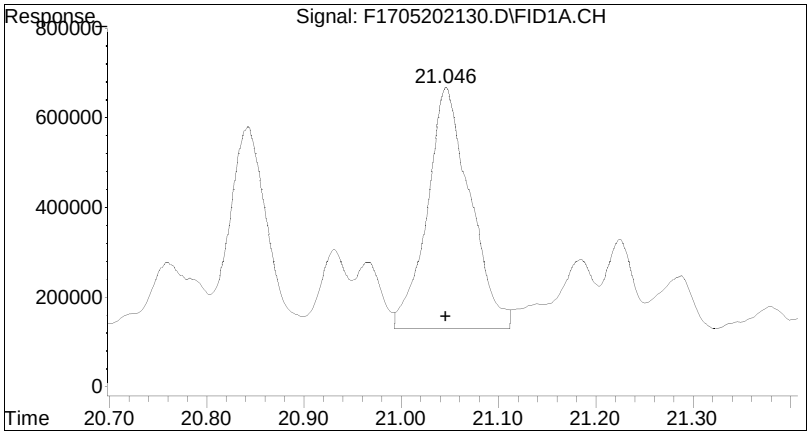
#8 1380

R.T.: 19.249 min
Delta R.T.: 0.000 min
Response: 10920224
Conc: 9.43 ug/mL M4



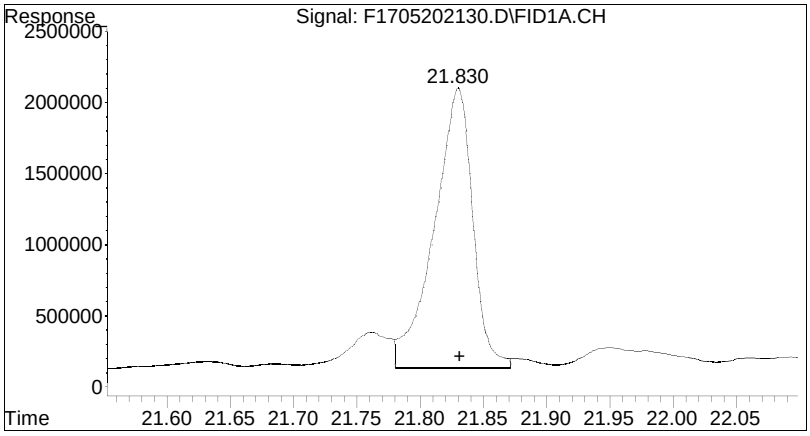
#9 n-Tetradecane (C14)

R.T.:	19.761 min
Delta R.T.:	-0.001 min
Response:	41442066
Conc:	35.79 ug/mL M4



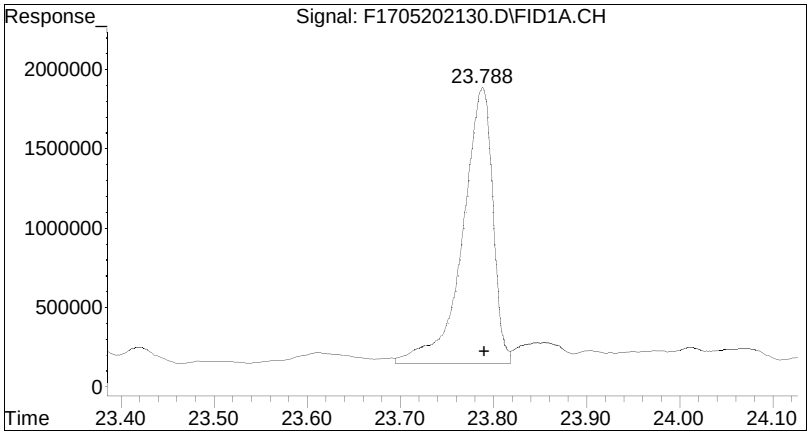
#10 1470

R.T.: 21.046 min
Delta R.T.: 0.000 min
Response: 16356247
Conc: 14.11 ug/mL M4



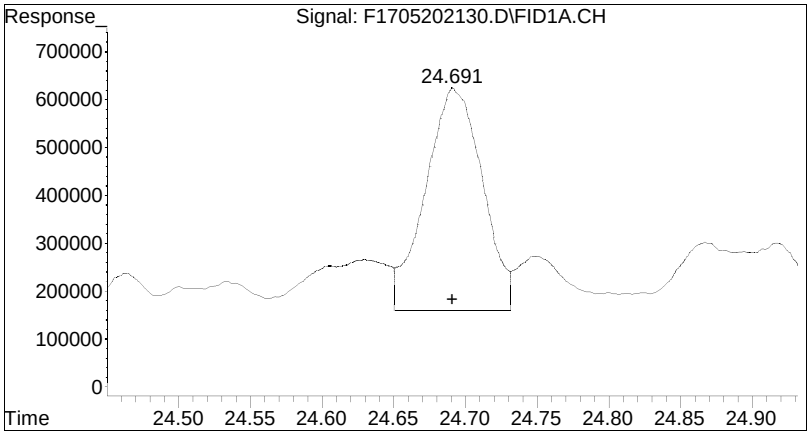
#11 n-Pentadecane (C15)

R.T.: 21.830 min
Delta R.T.: -0.001 min
Response: 41182941
Conc: 35.52 ug/mL M4



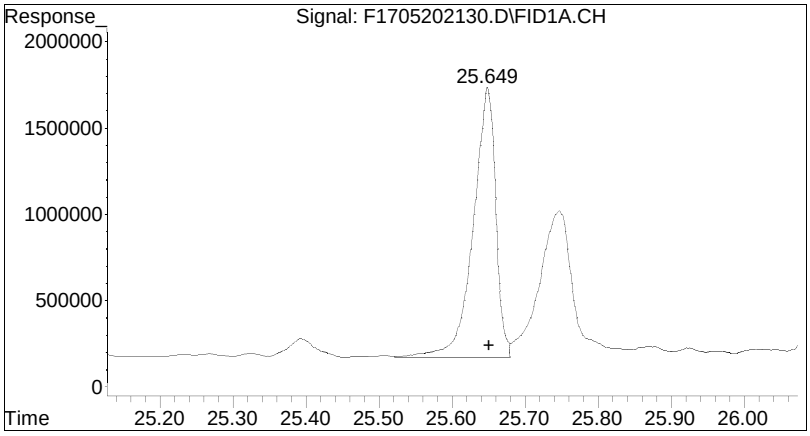
#12 n-Hexadecane (C16)

R.T.: 23.788 min
Delta R.T.: -0.002 min
Response: 38055175
Conc: 32.88 ug/mL M4



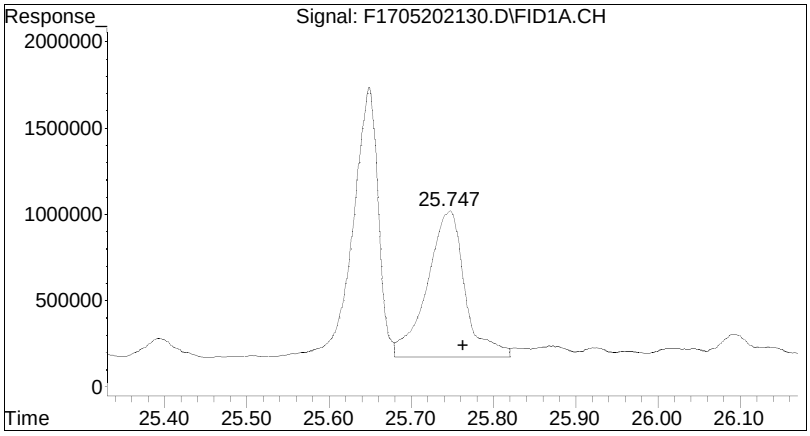
#13 1650

R.T.: 24.691 min
Delta R.T.: 0.000 min
Response: 12713730
Conc: 11.00 ug/mL M4



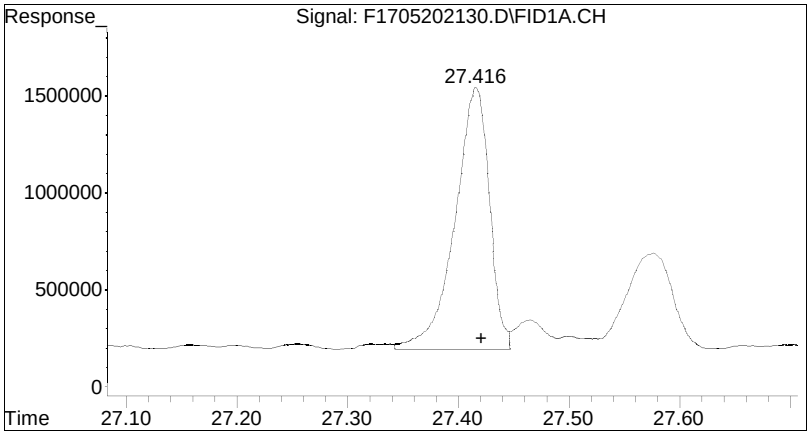
#14 n-Heptadecane (C17)

R.T.: 25.649 min
Delta R.T.: -0.002 min
Response: 33056204
Conc: 28.59 ug/mL M4



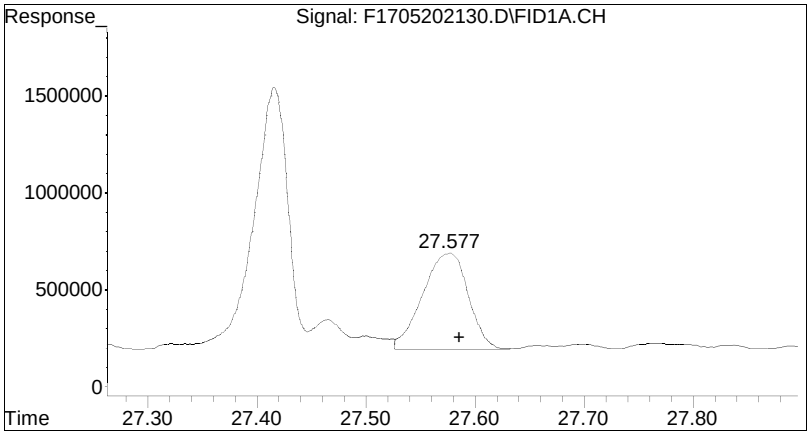
#15 Pristane

R.T.: 25.747 min
Delta R.T.: -0.017 min
Response: 26846492
Conc: 22.39 ug/mL M4



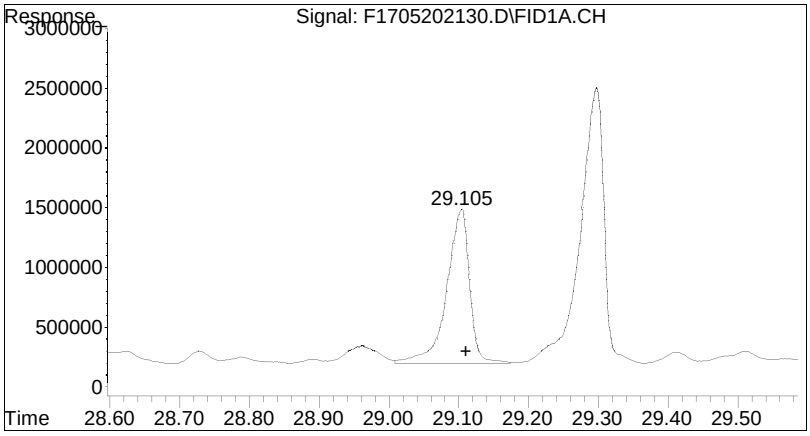
#16 n-Octadecane (C18)

R.T.: 27.416 min
Delta R.T.: -0.005 min
Response: 28935553
Conc: 24.61 ug/mL M4



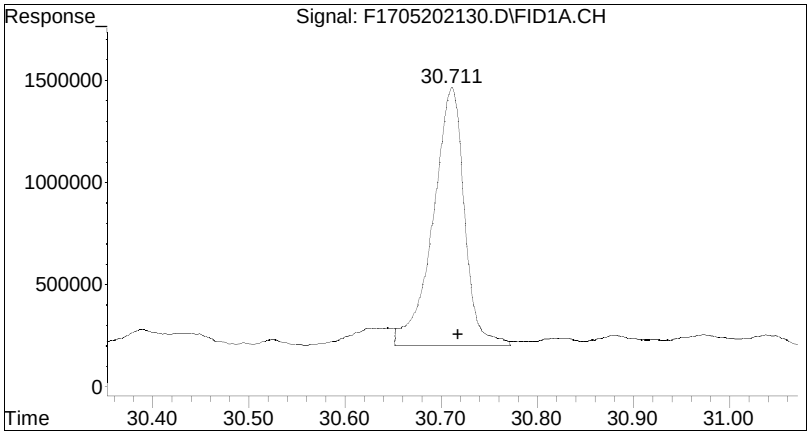
#17 Phytane

R.T.: 27.577 min
Delta R.T.: -0.009 min
Response: 14310976
Conc: 13.01 ug/mL M4



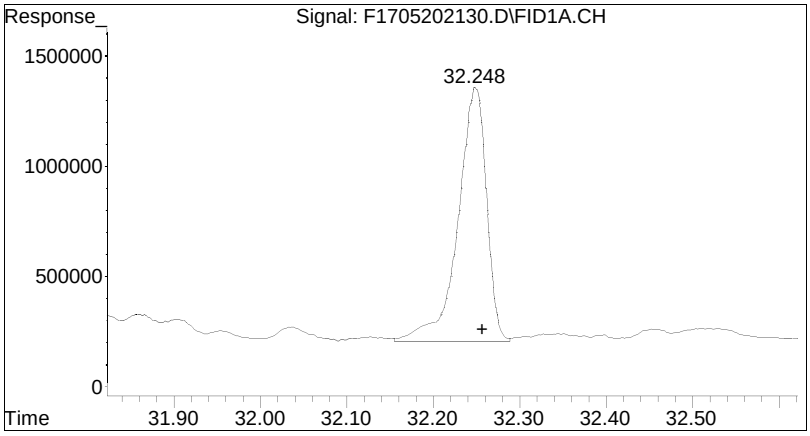
#18 n-Nonadecane (C19)

R.T.: 29.105 min
Delta R.T.: -0.006 min
Response: 29201966
Conc: 24.76 ug/mL M4



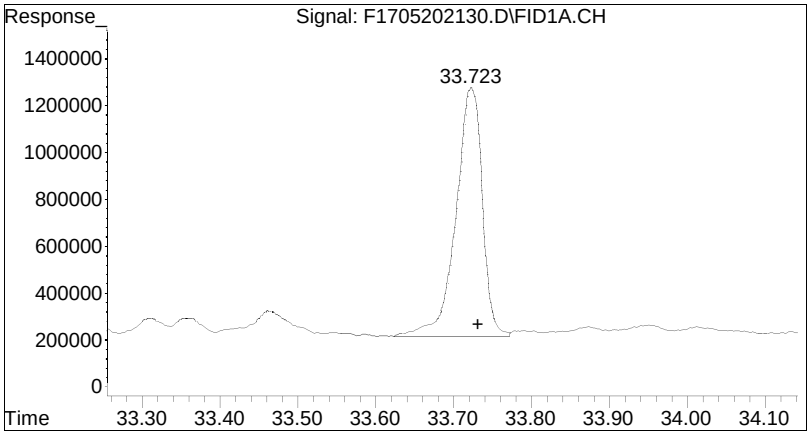
#20 n-Eicosane (C20)

R.T.: 30.711 min
Delta R.T.: -0.006 min
Response: 28220031
Conc: 23.80 ug/mL M4



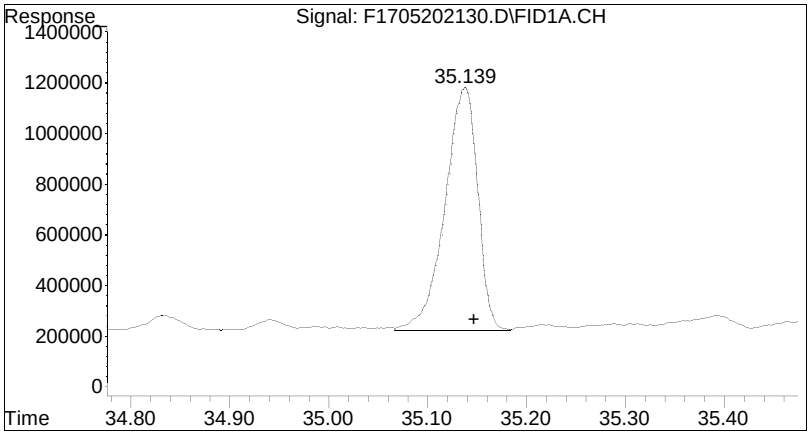
#21 n-Heneicosane (C21)

R.T.: 32.248 min
Delta R.T.: -0.009 min
Response: 25862599
Conc: 21.74 ug/mL M4



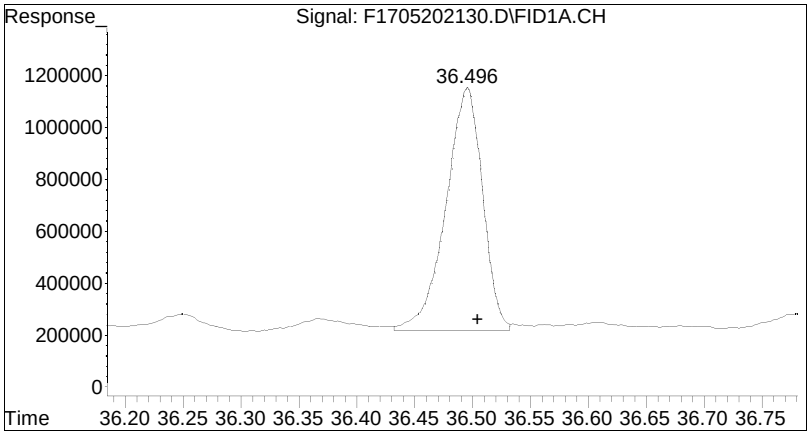
#22 n-Docosane (C22)

R.T.: 33.723 min
Delta R.T.: -0.009 min
Response: 24381323
Conc: 20.46 ug/mL M4



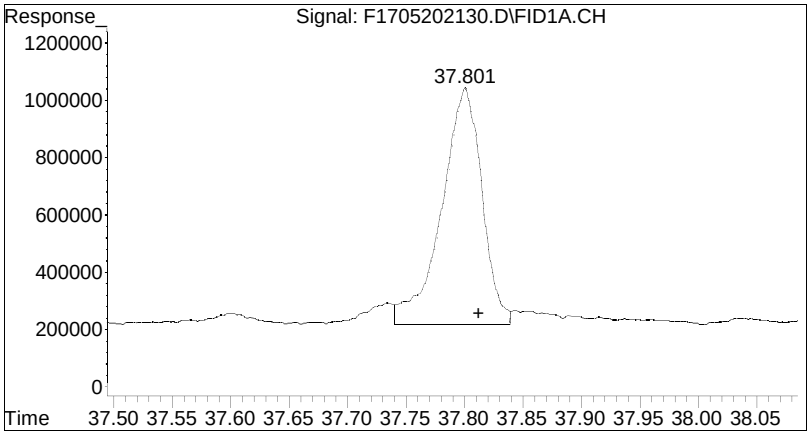
#23 n-Tricosane (C23)

R.T.: 35.139 min
Delta R.T.: -0.008 min
Response: 21679172
Conc: 18.16 ug/mL M4



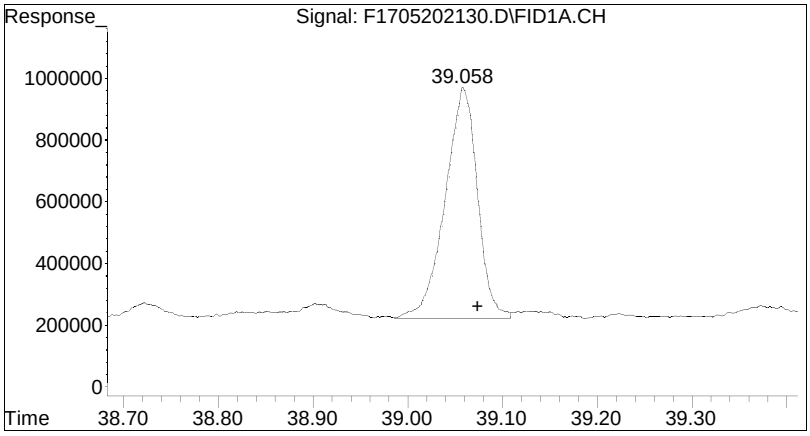
#25 n-Tetracosane (C24)

R.T.: 36.496 min
Delta R.T.: -0.009 min
Response: 20306669
Conc: 17.06 ug/mL M4



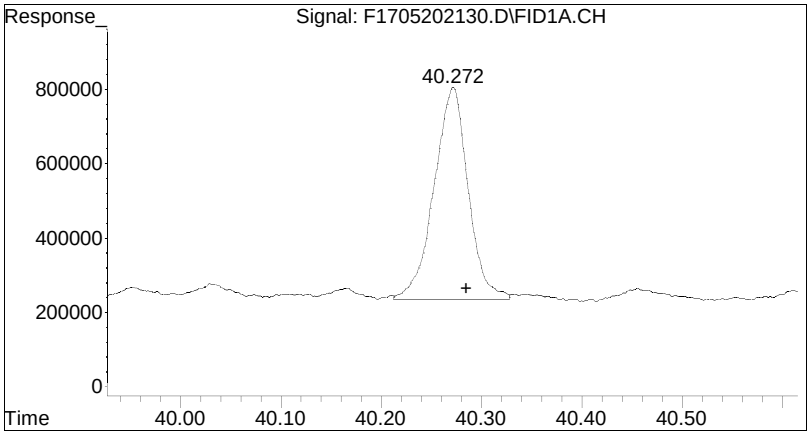
#26 n-Pentacosane (C25)

R.T.: 37.801 min
Delta R.T.: -0.012 min
Response: 19467223
Conc: 16.72 ug/mL M4



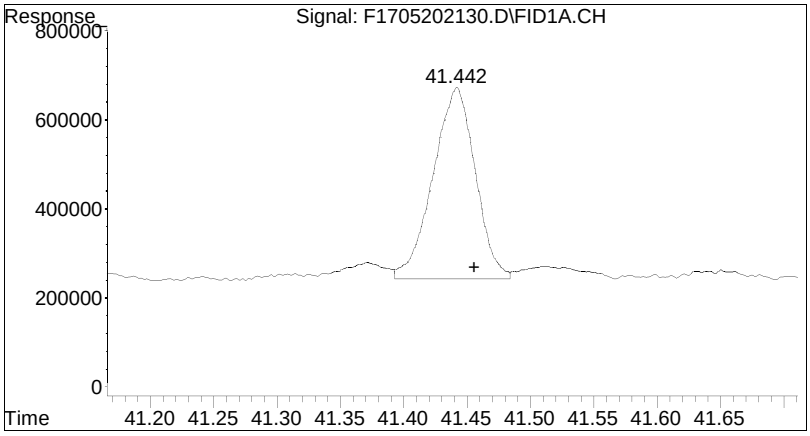
#27 n-Hexacosane (C26)

R.T.:	39.058 min
Delta R.T.:	-0.016 min
Response:	17404010
Conc:	14.56 ug/mL M4



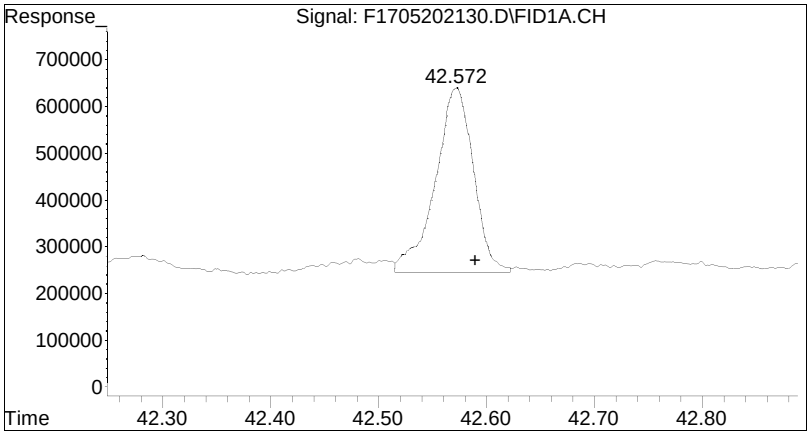
#28 n-Heptacosane (C27)

R.T.: 40.272 min
Delta R.T.: -0.013 min
Response: 13297910
Conc: 11.09 ug/mL M4



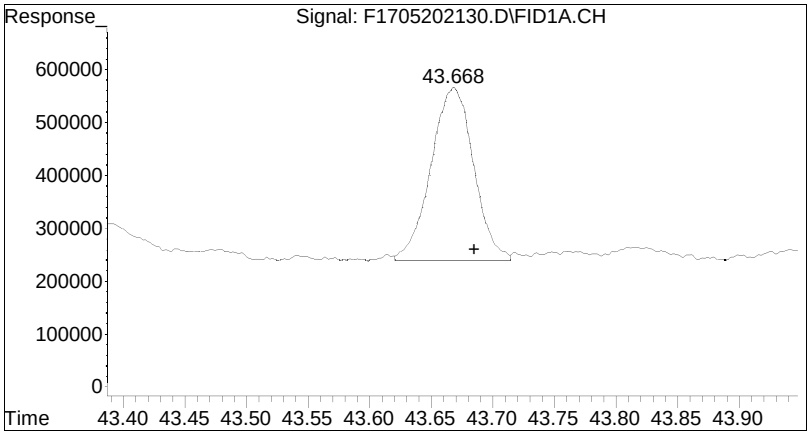
#29 n-Octacosane (C28)

R.T.:	41.442 min
Delta R.T.:	-0.014 min
Response:	9758990
Conc:	7.85 ug/mL M4



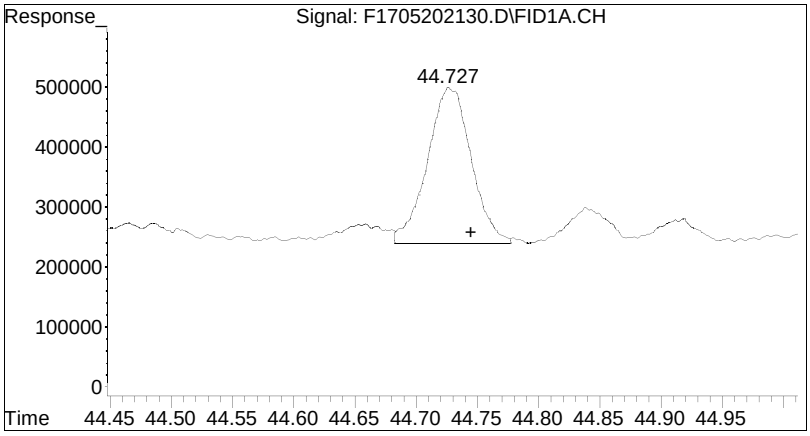
#30 n-Nonacosane (C29)

R.T.:	42.572 min
Delta R.T.:	-0.018 min
Response:	9521699
Conc:	7.81 ug/mL M4



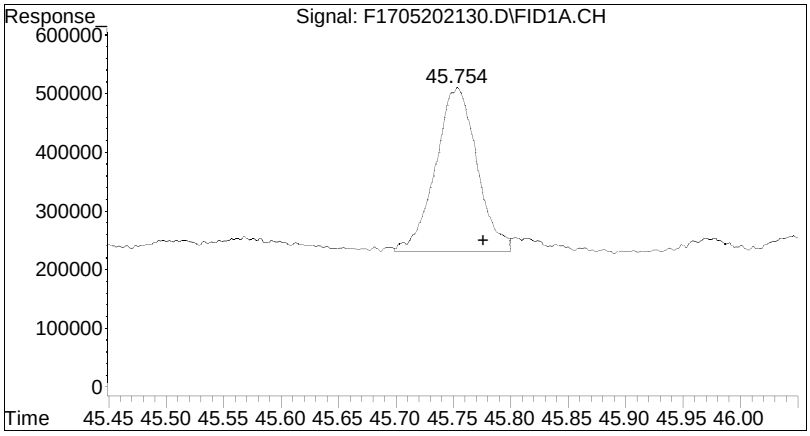
#31 n-Triacontane (C30)

R.T.:	43.668 min
Delta R.T.:	-0.017 min
Response:	7817772
Conc:	6.39 ug/mL M4



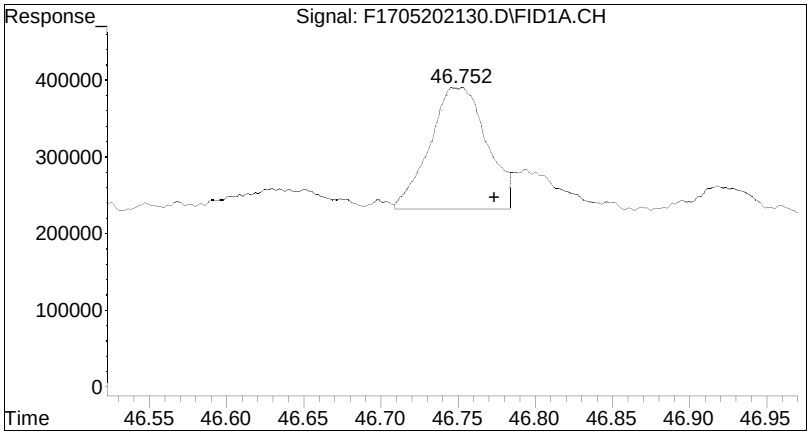
#32 n-Hentriacontane (C31)

R.T.:	44.727 min
Delta R.T.:	-0.019 min
Response:	6398616
Conc:	5.41 ug/mL M4



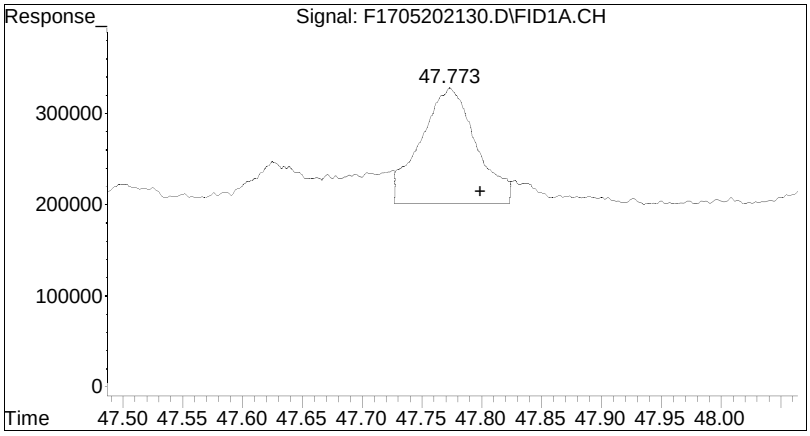
#33 n-Dotriacontane (C32)

R.T.:	45.754 min
Delta R.T.:	-0.023 min
Response:	6895955
Conc:	5.55 ug/mL M4



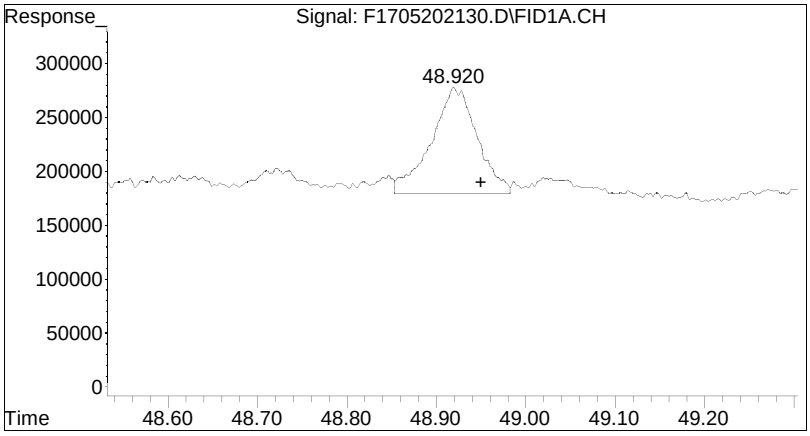
#34 n-Tritriacontane (C33)

R.T.:	46.752 min
Delta R.T.:	-0.021 min
Response:	4008837
Conc:	3.32 ug/mL M4



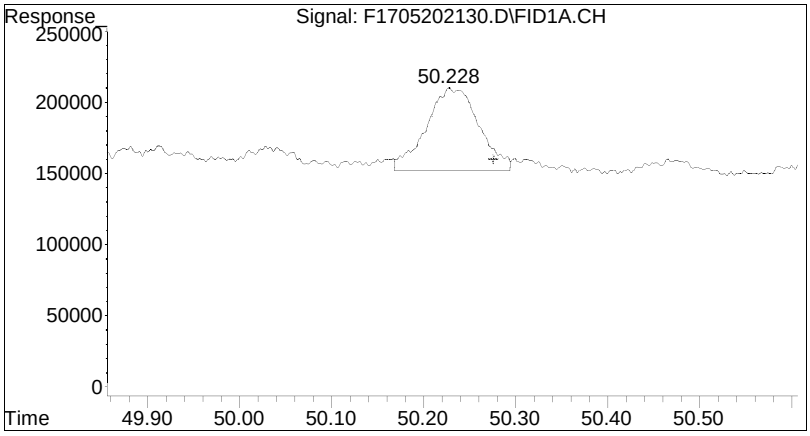
#35 n-tetratriacontane (C34)

R.T.:	47.773 min
Delta R.T.:	-0.026 min
Response:	4018885
Conc:	3.35 ug/mL M4



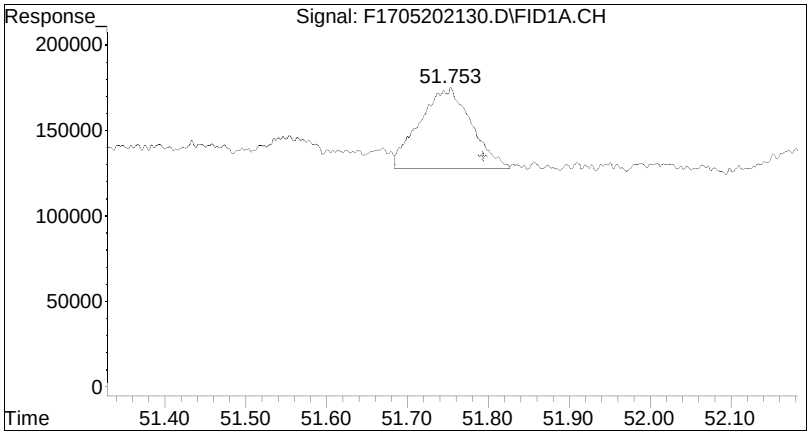
#36 n-Pentatriacontane (C35)

R.T.:	48.920 min
Delta R.T.:	-0.031 min
Response:	3476985
Conc:	3.10 ug/mL M4



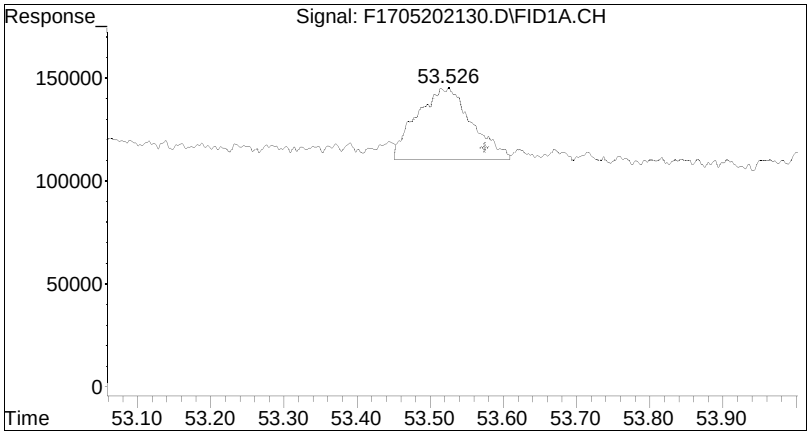
#37 n-Hexatriacontane (C36)

R.T.:	50.228 min
Delta R.T.:	-0.048 min
Response:	2300095
Conc:	1.70 ug/mL M4



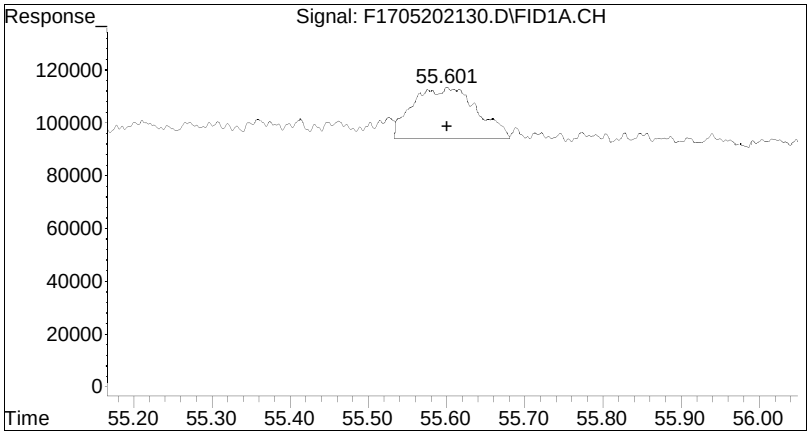
#38 n-Heptatriacontane (C37)

R.T.:	51.753 min
Delta R.T.:	-0.040 min
Response:	2053231
Conc:	1.68 ug/mL M4



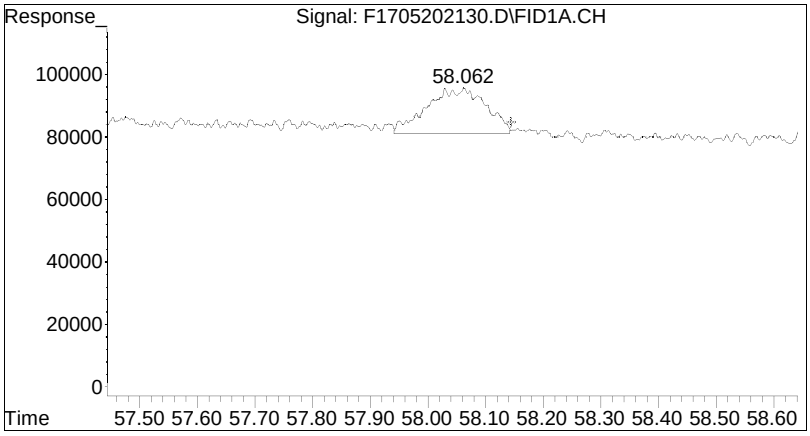
#39 n-Octatriacontane (C38)

R.T.:	53.526 min
Delta R.T.:	-0.049 min
Response:	1776959
Conc:	1.43 ug/mL M4



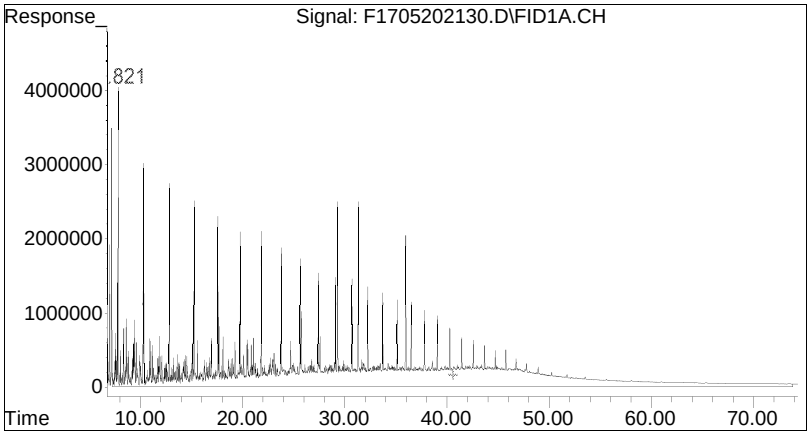
#40 n-Nonatriacontane (C39)

R.T.:	55.601 min
Delta R.T.:	0.000 min
Response:	1071186
Conc:	0.88 ug/mL M4



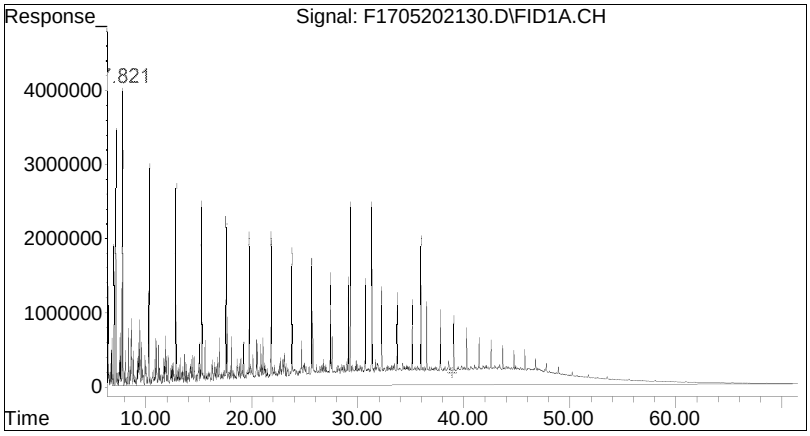
#41 n-Tetracontane (C40)

R.T.:	58.062 min
Delta R.T.:	-0.083 min
Response:	1027669
Conc:	0.84 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 40.642 min
Delta R.T.: 0.000 min
Response: 7012714990
Conc: 5918.86 ug/mL m



#46 Total Resolved Hydrocarbo

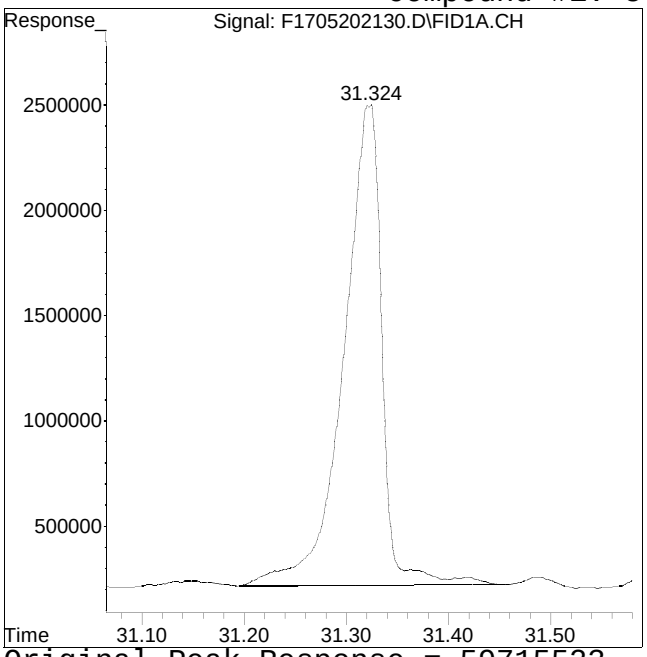
R.T.: 38.937 min
Delta R.T.: 0.000 min
Response: 2309550069
Conc: 1949.30 ug/mL m

Manual Integration/Negative Proof Report

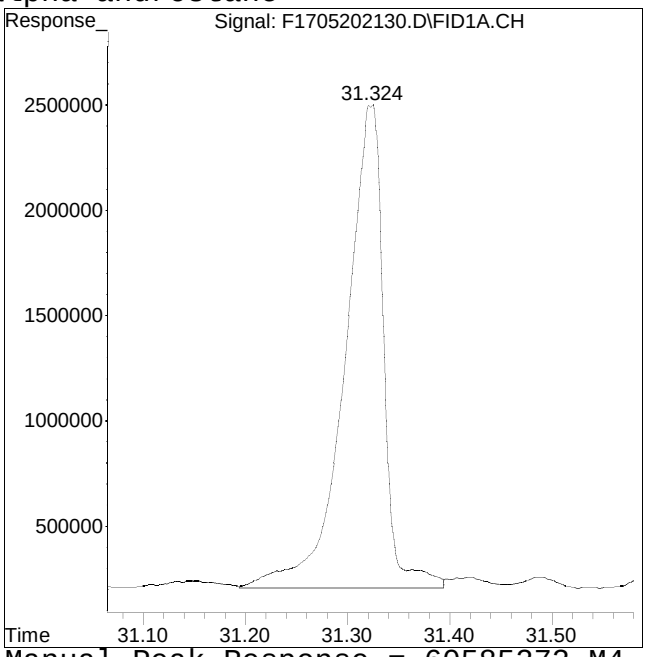
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 59715523



Manual Peak Response = 60585272 M4

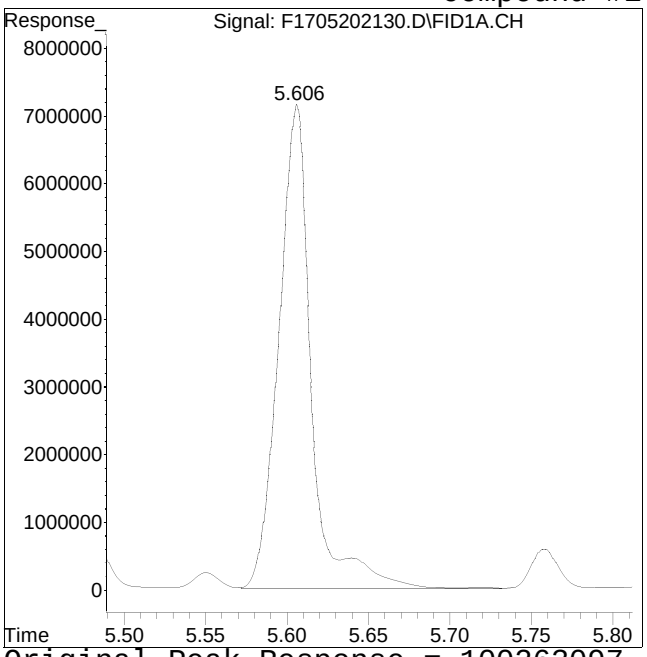
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

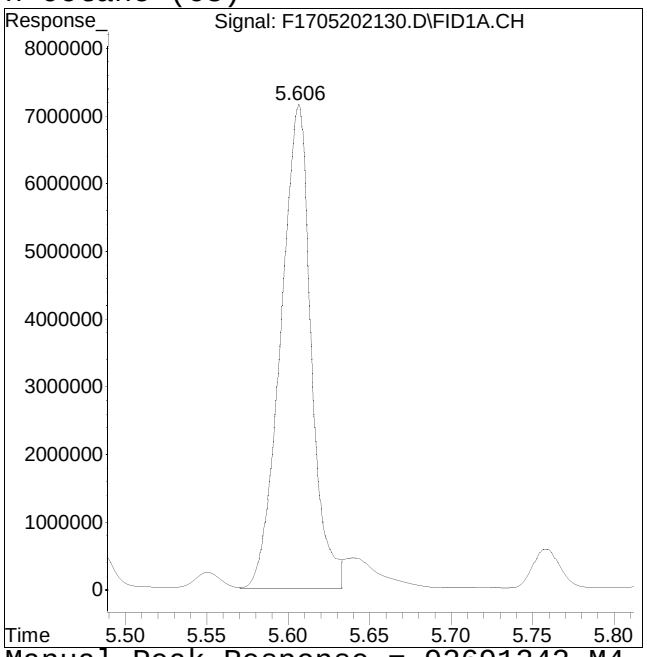
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #2: n-Octane (C8)



Original Peak Response = 100263097



Manual Peak Response = 92691242 M4

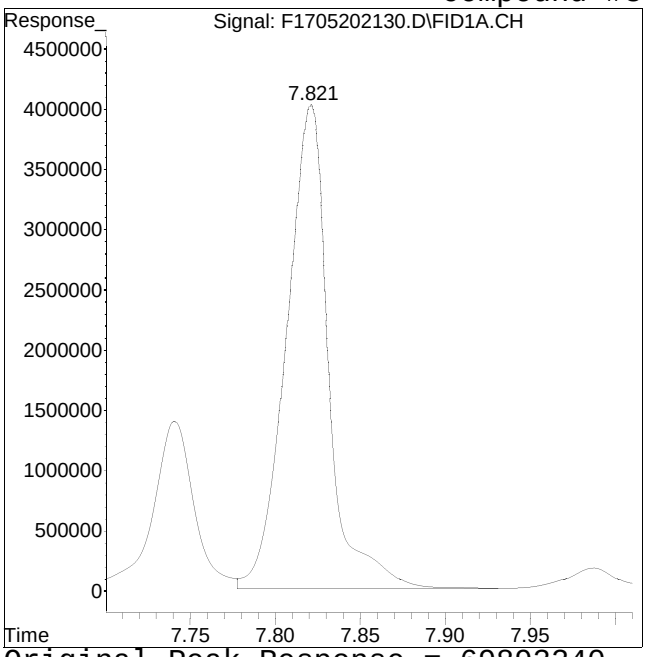
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

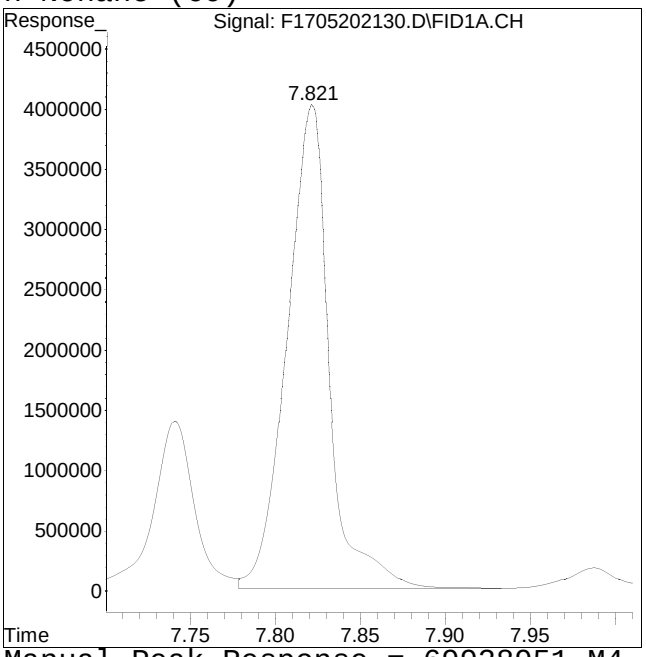
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 69893240



Manual Peak Response = 69928951 M4

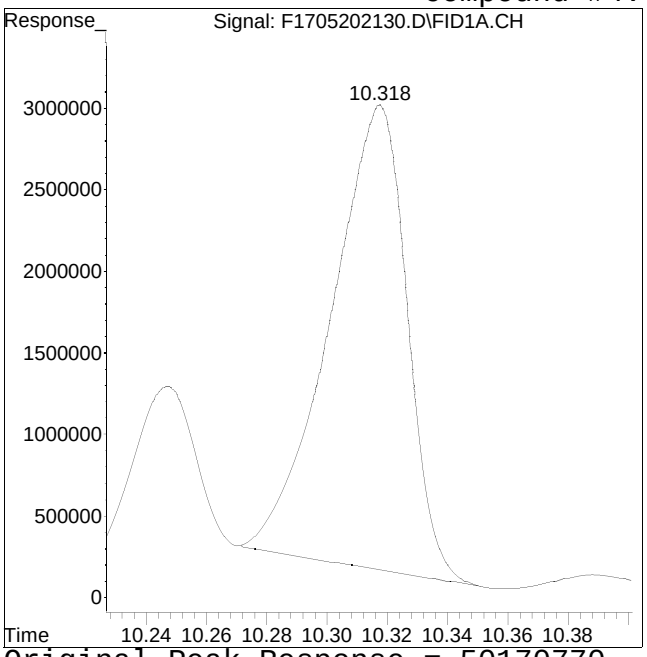
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

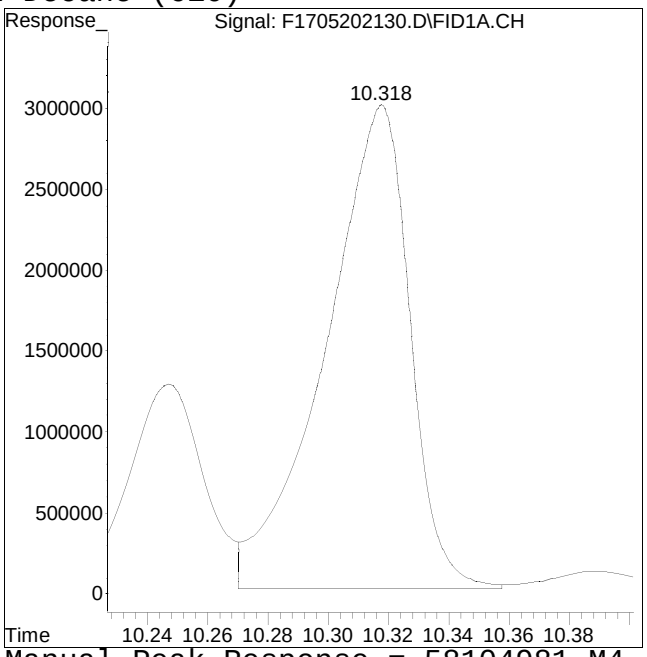
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #4: n-Decane (C10)



Original Peak Response = 50170770



Manual Peak Response = 58104981 M4

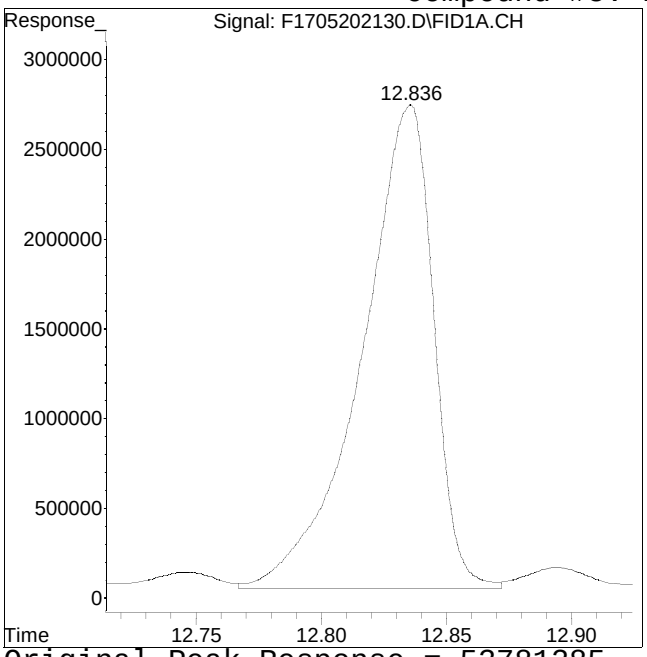
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

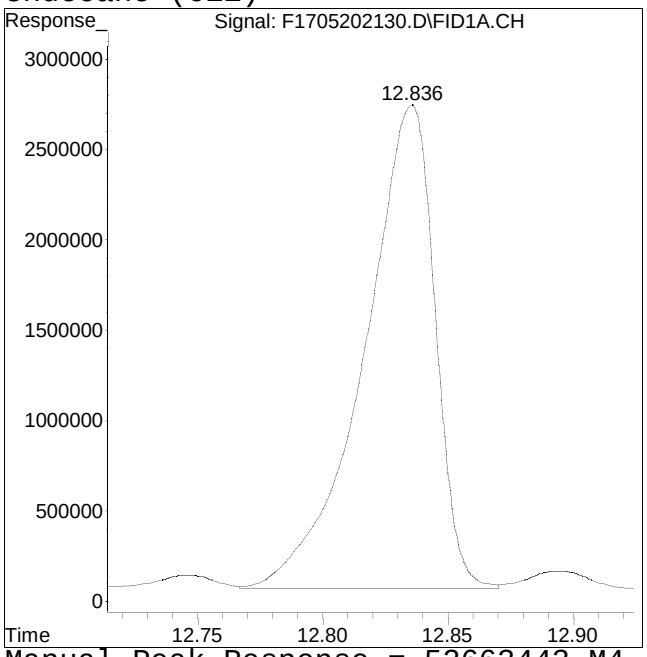
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 53781285



Manual Peak Response = 52663443 M4

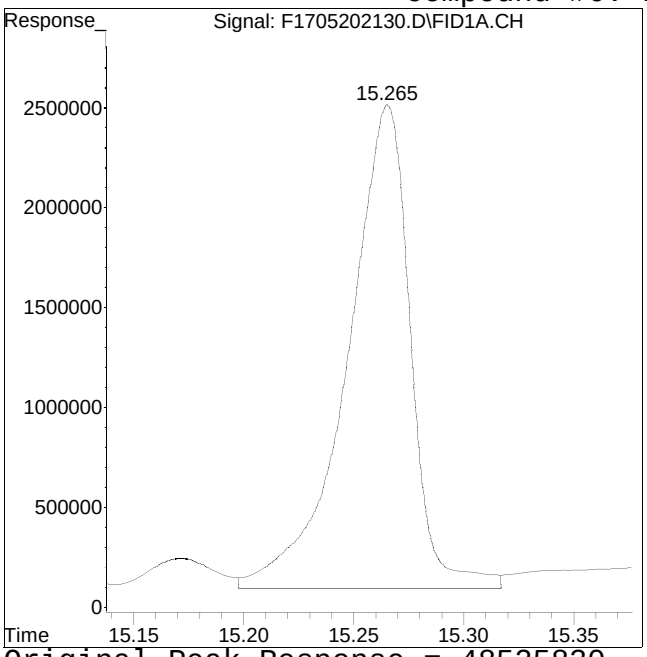
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

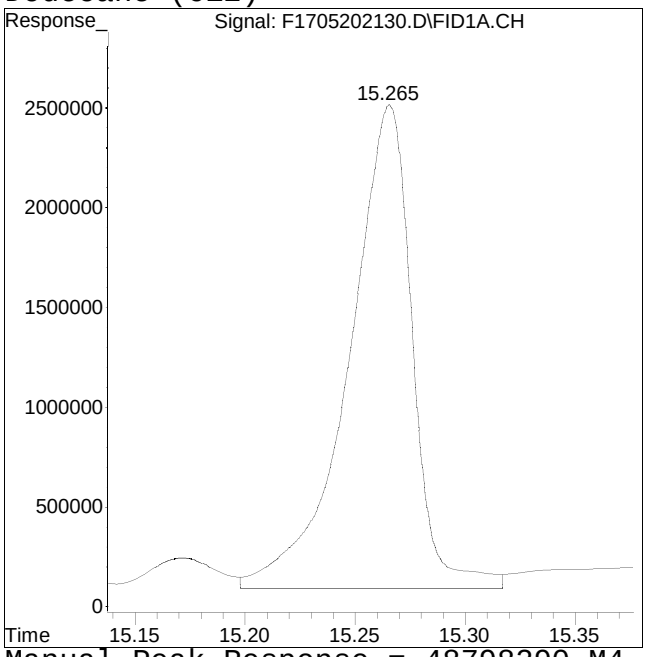
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 48525830



Manual Peak Response = 48798290 M4

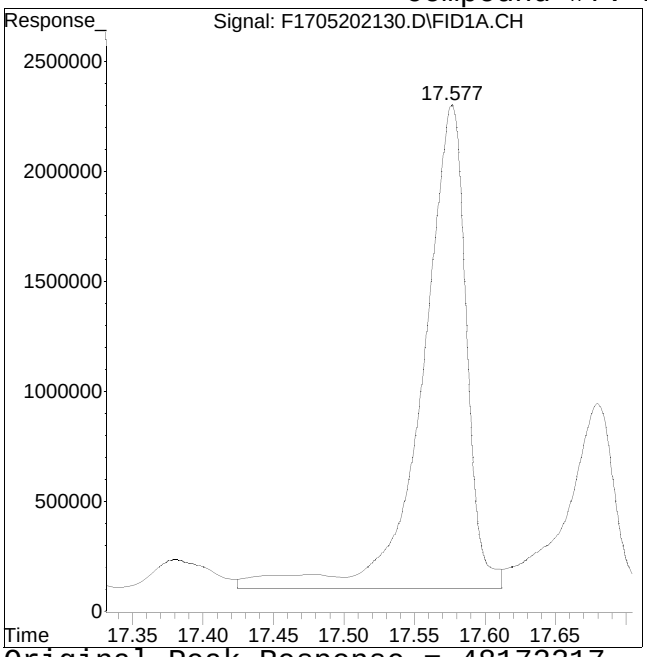
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

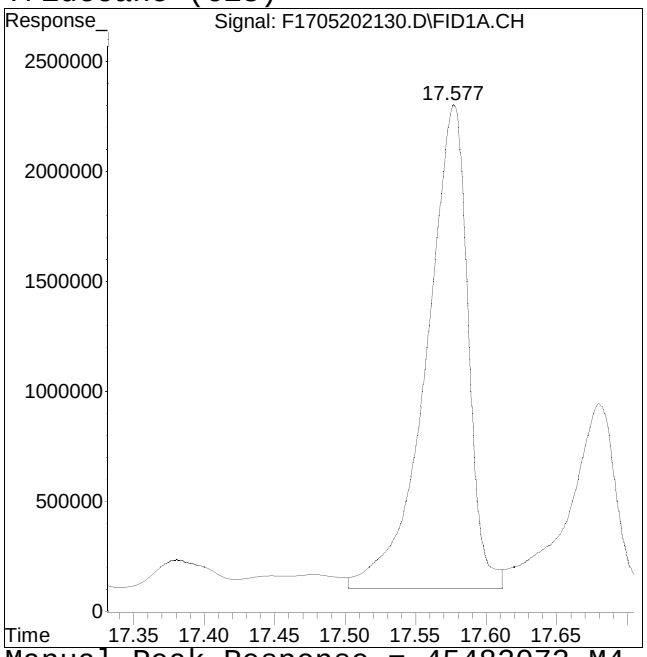
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 48173317



Manual Peak Response = 45482073 M4

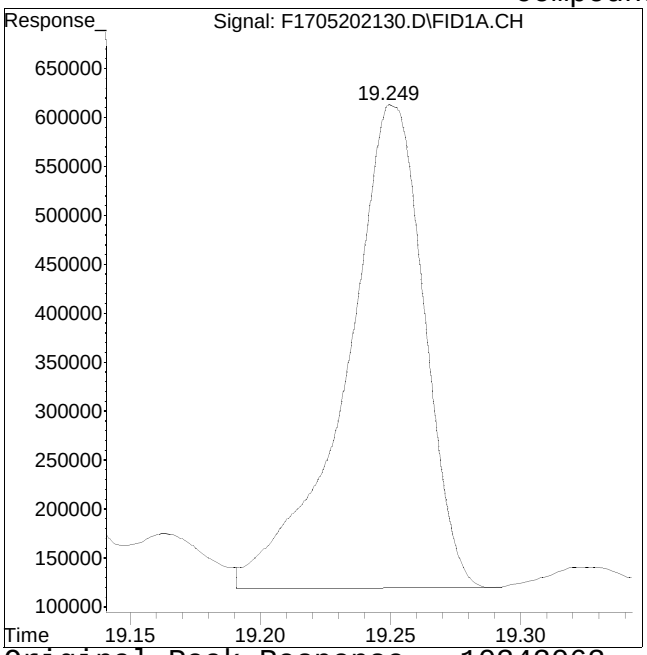
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

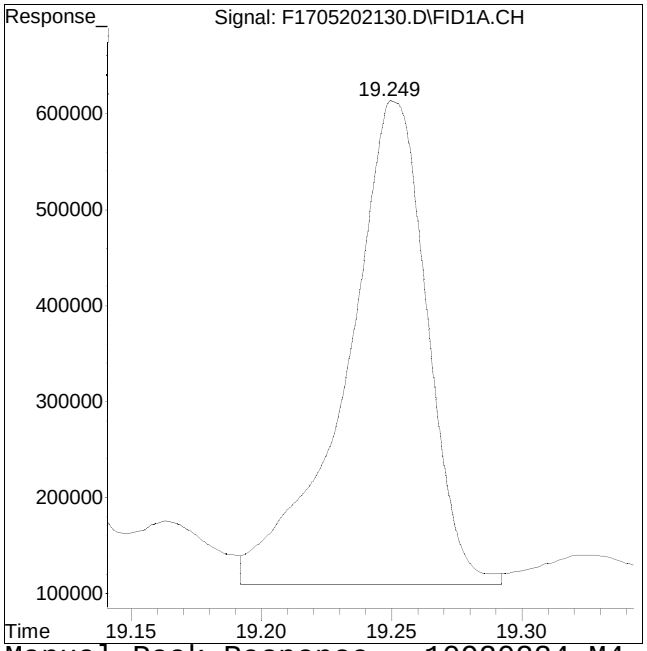
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #8: 1380



Original Peak Response = 10343063



Manual Peak Response = 10920224 M4

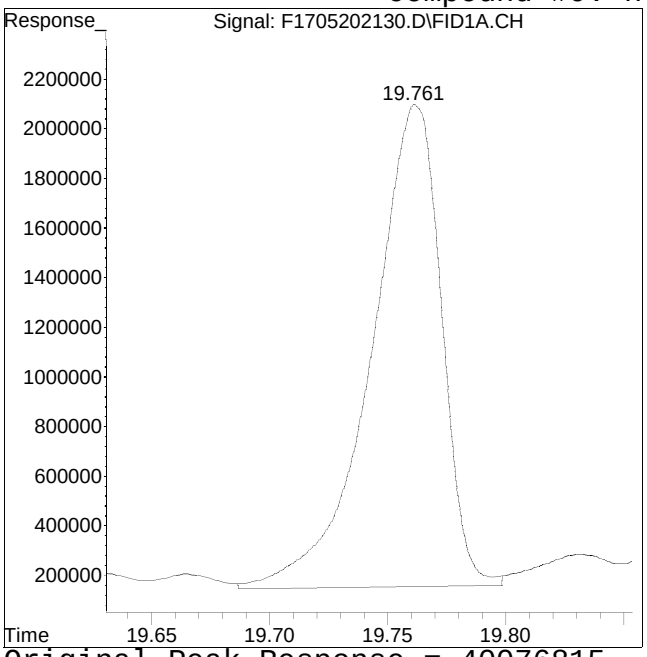
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

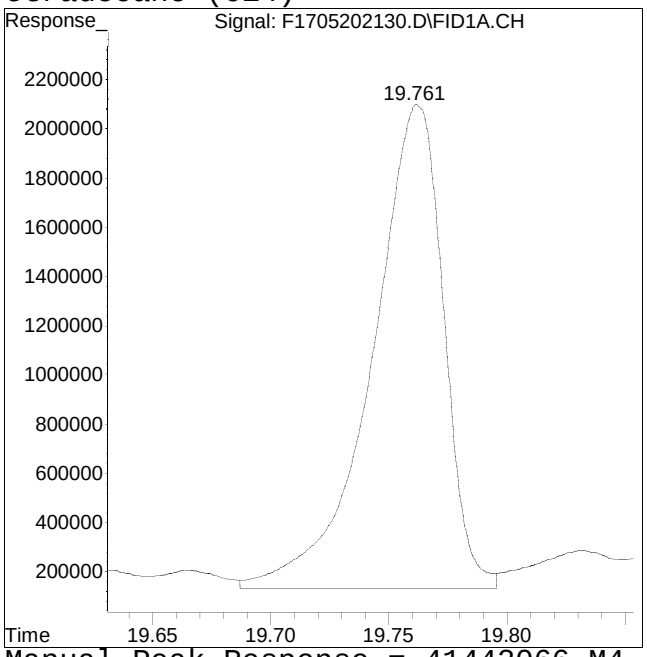
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 40076815



Manual Peak Response = 41442066 M4

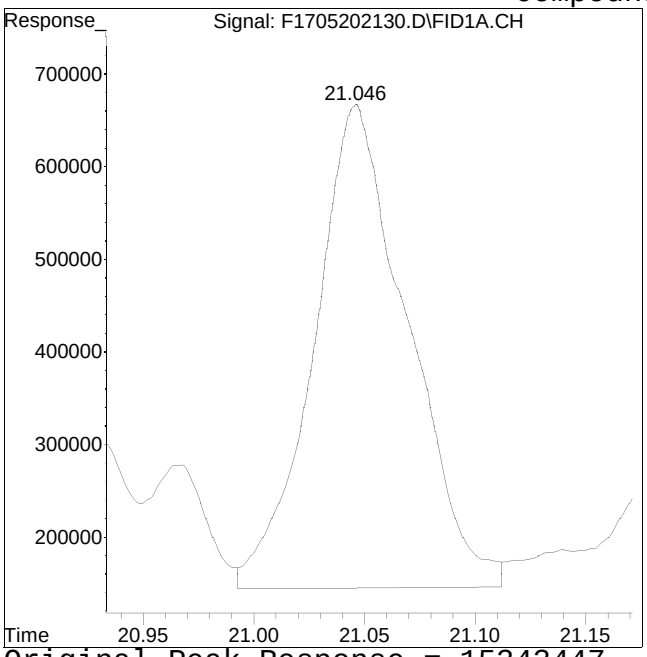
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

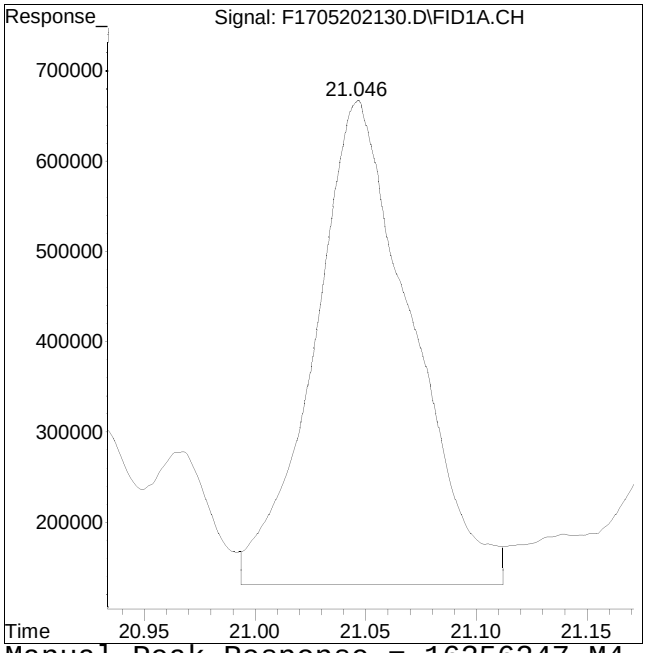
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #10: 1470



Original Peak Response = 15343447



Manual Peak Response = 16356247 M4

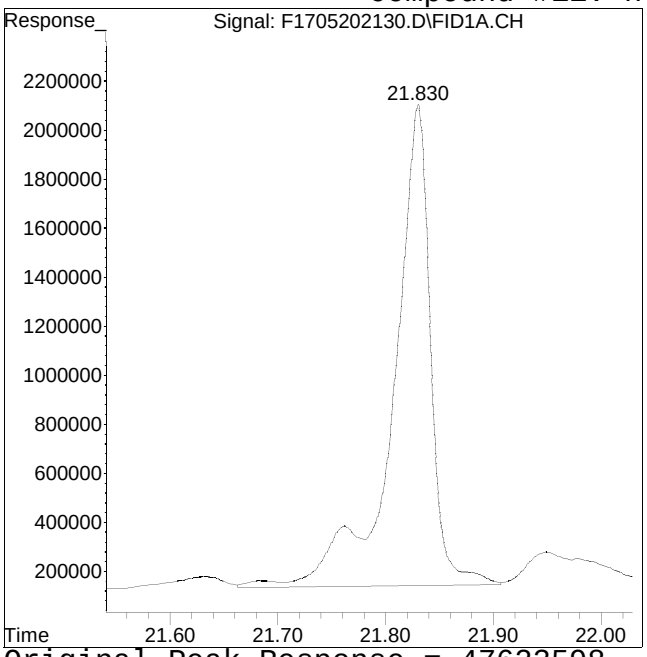
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

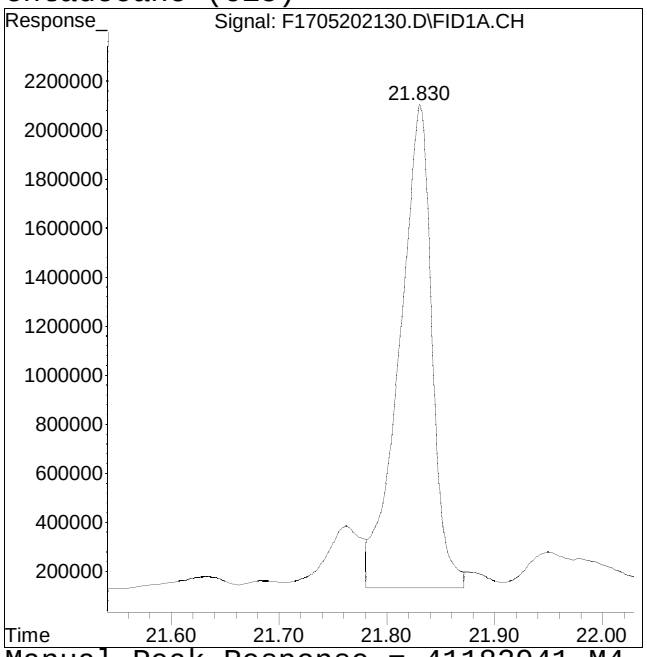
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 47623598



Manual Peak Response = 41182941 M4

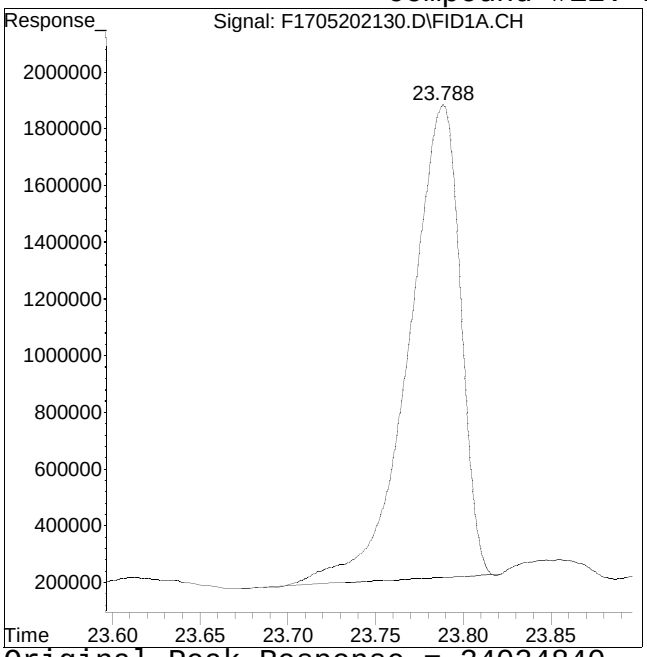
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

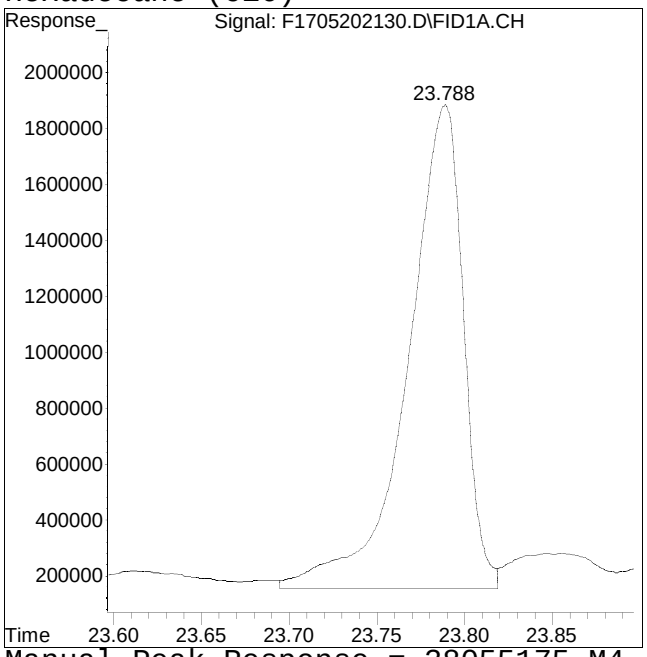
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 34034840



Manual Peak Response = 38055175 M4

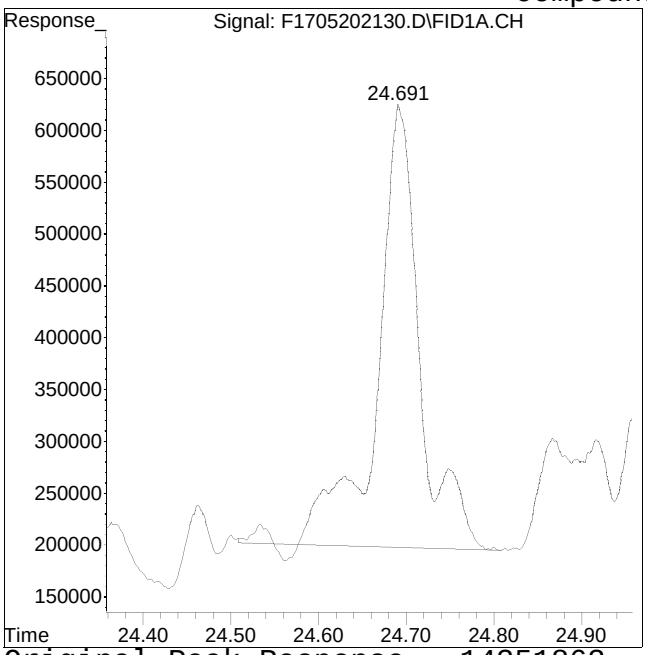
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

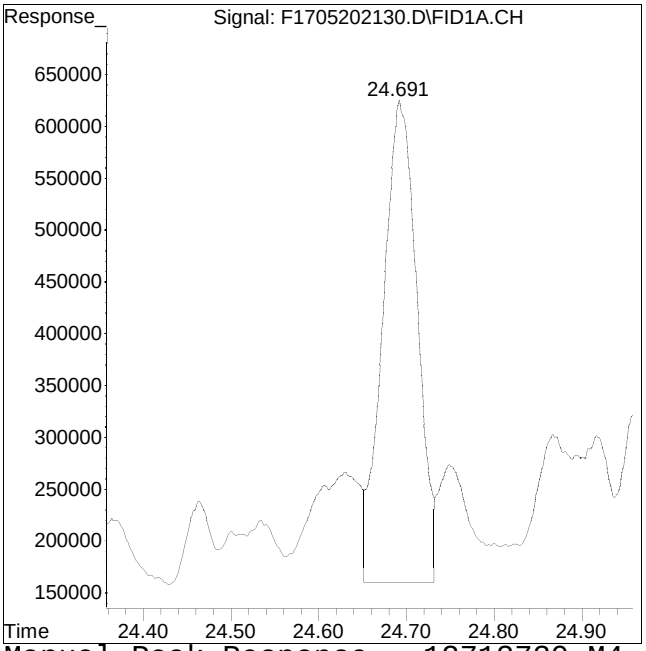
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #13: 1650



Original Peak Response = 14351863



Manual Peak Response = 12713730 M4

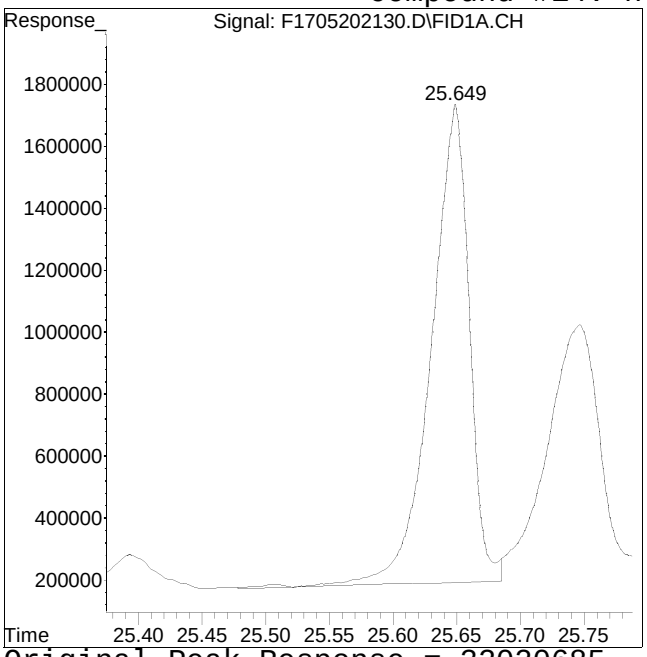
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

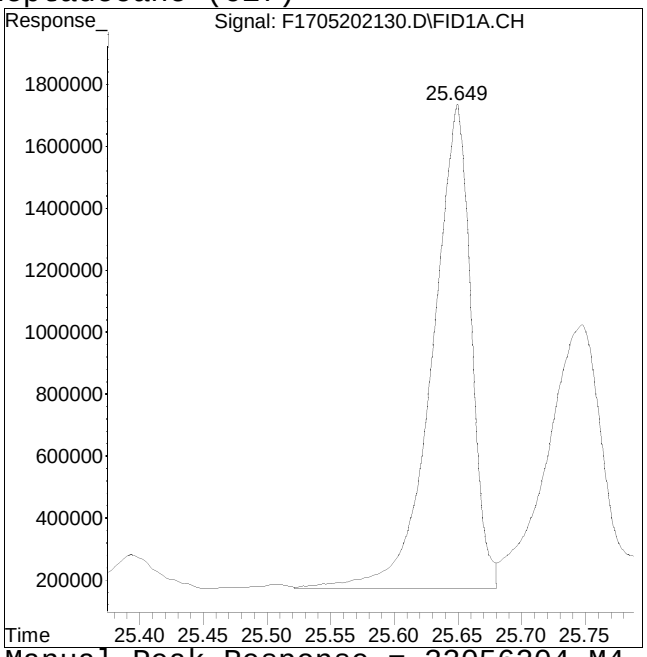
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 32020685



Manual Peak Response = 33056204 M4

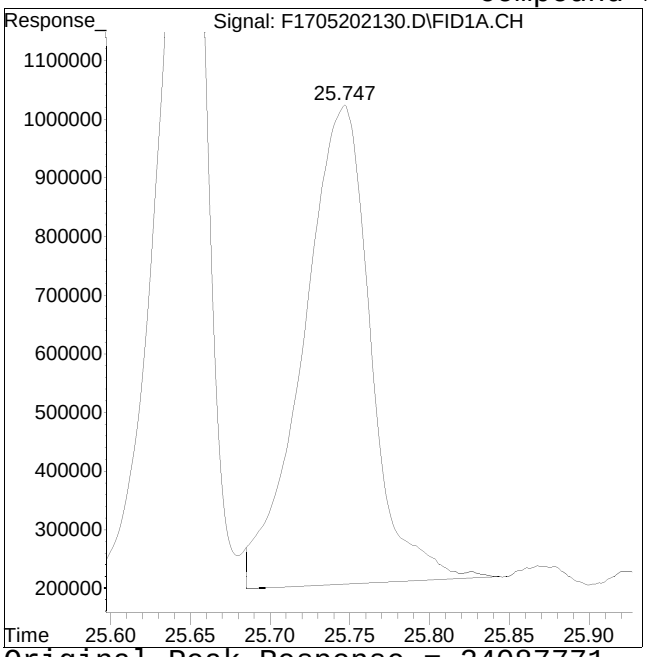
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

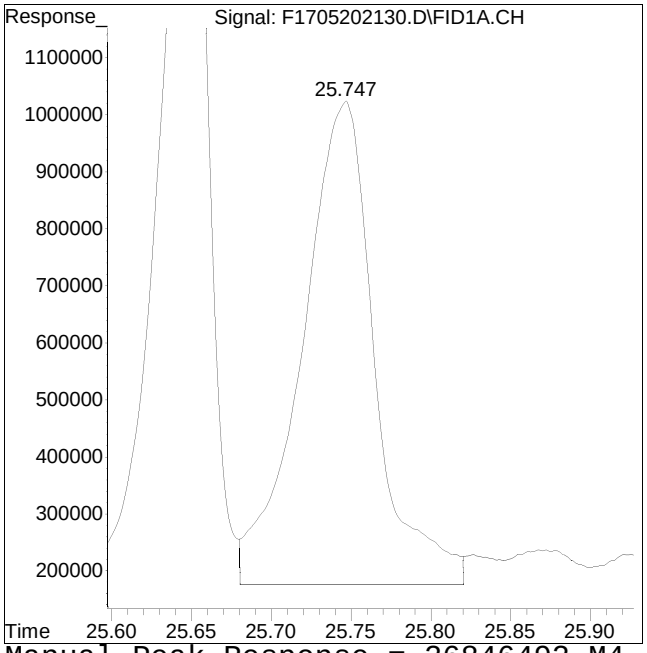
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #15: Pristane



Original Peak Response = 24087771



Manual Peak Response = 26846492 M4

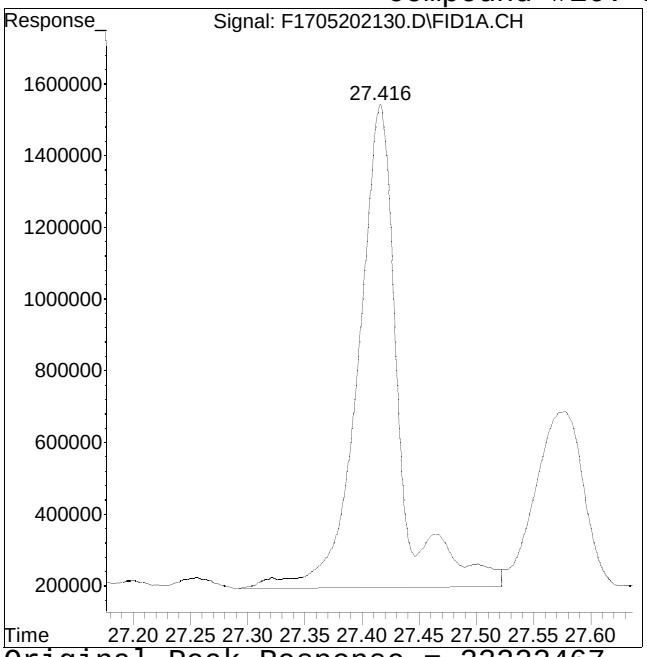
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

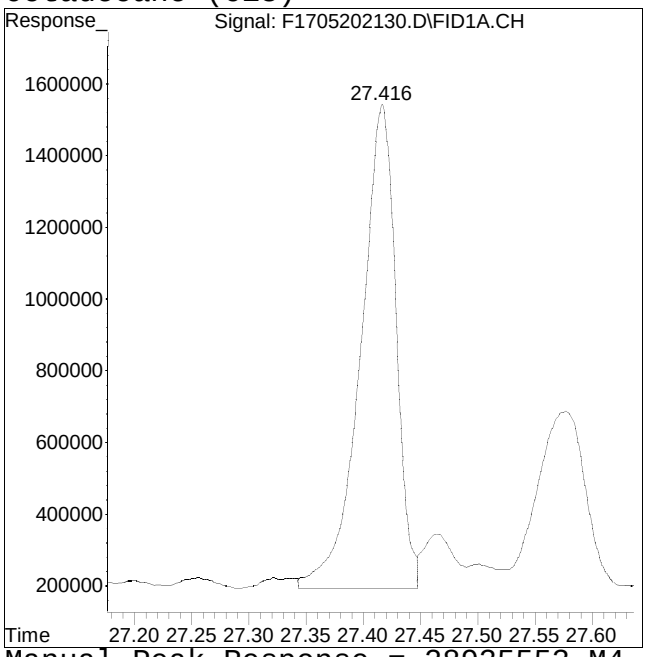
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 33222467



Manual Peak Response = 28935553 M4

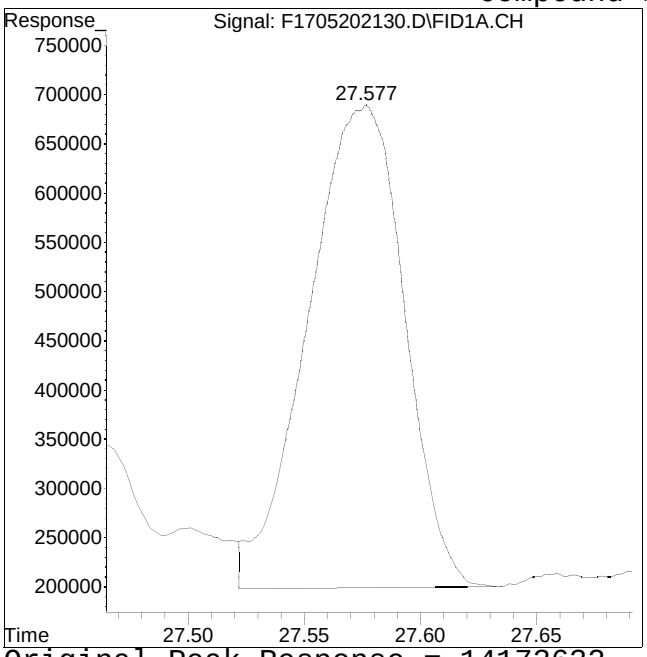
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

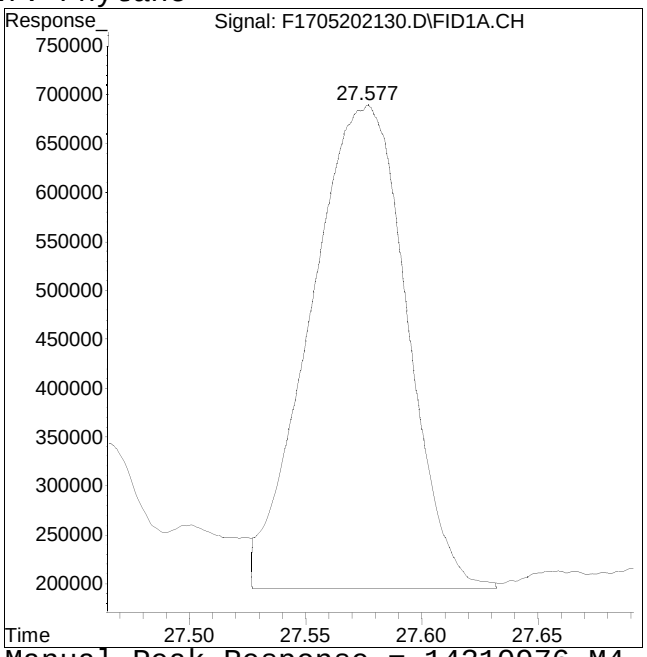
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #17: Phytane



Original Peak Response = 14173632



Manual Peak Response = 14310976 M4

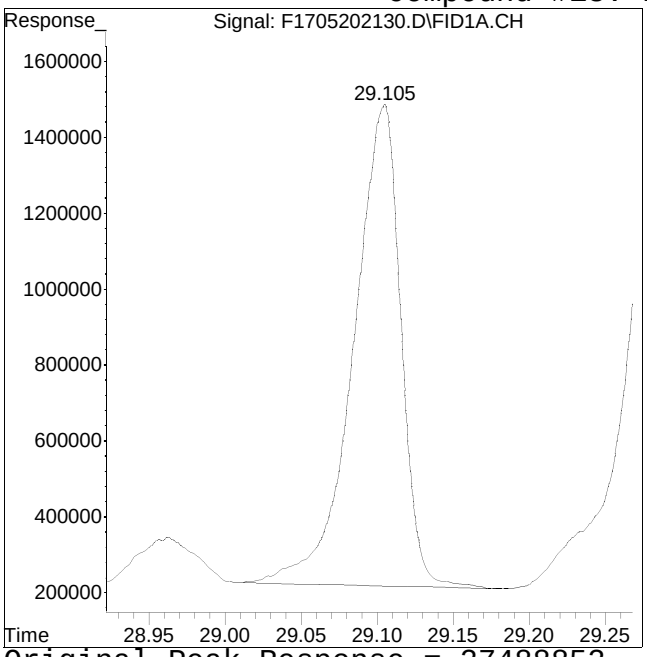
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

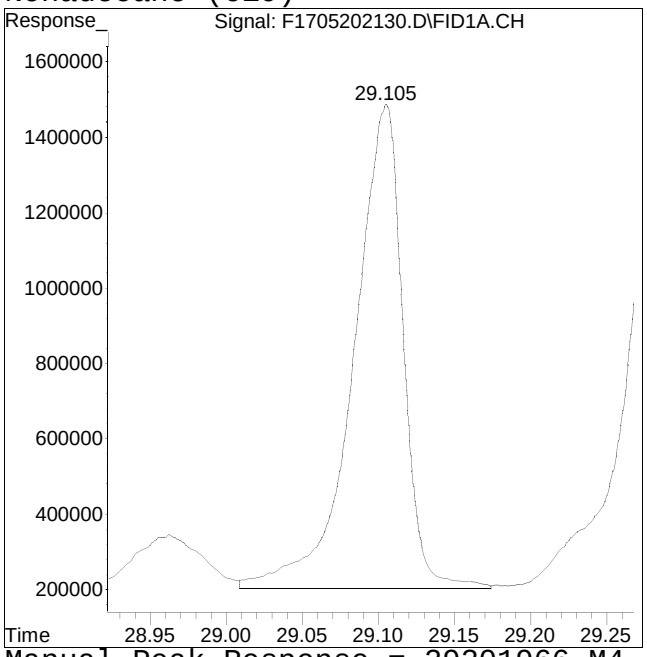
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 27488852



Manual Peak Response = 29201966 M4

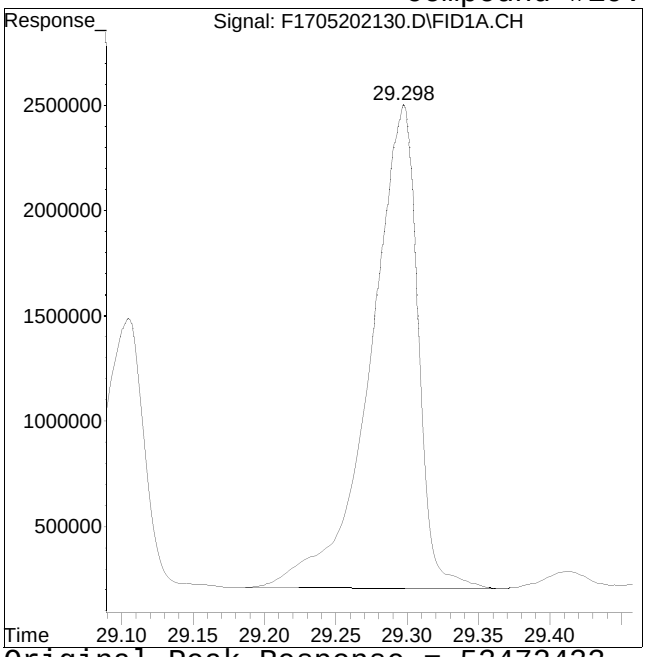
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

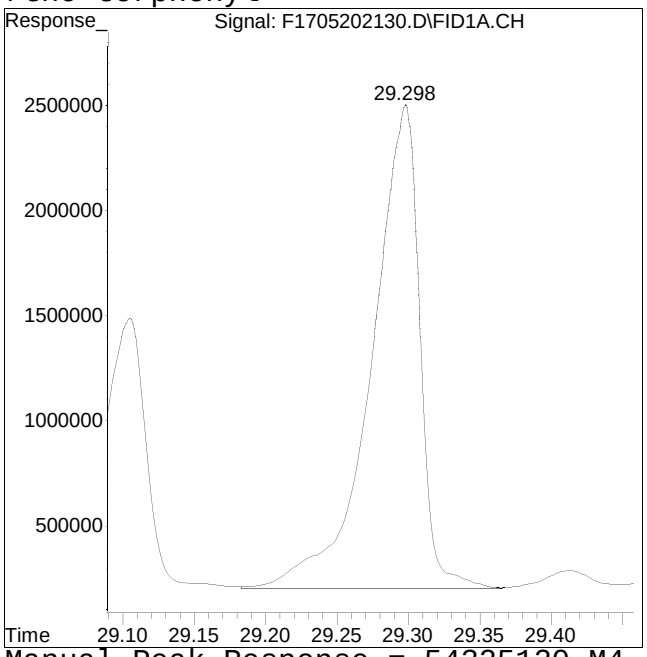
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #19: ortho-terphenyl



Original Peak Response = 53472433



Manual Peak Response = 54325120 M4

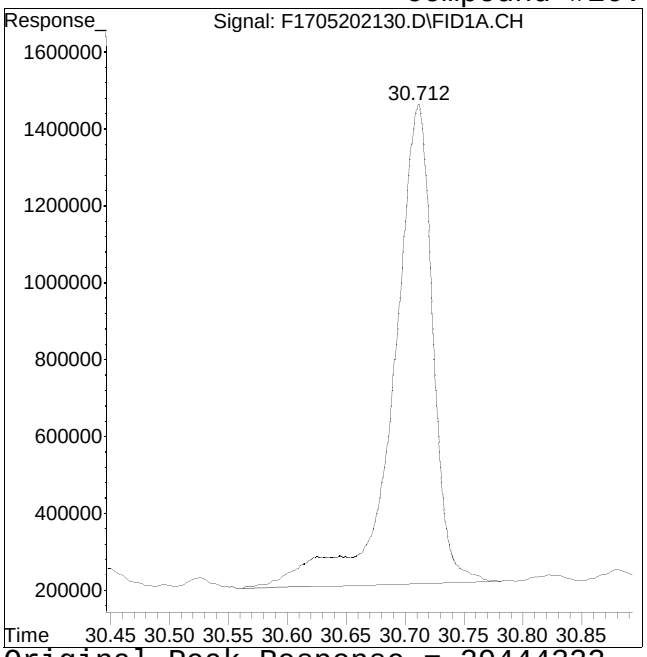
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

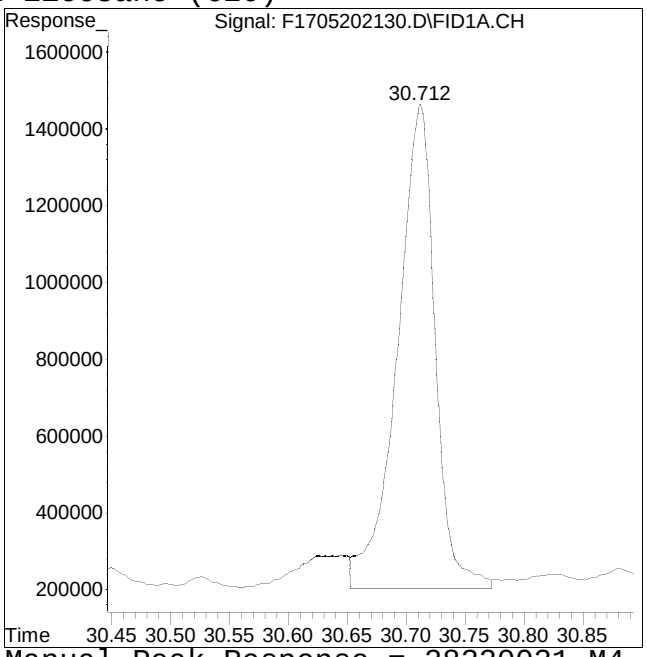
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 29444322



Manual Peak Response = 28220031 M4

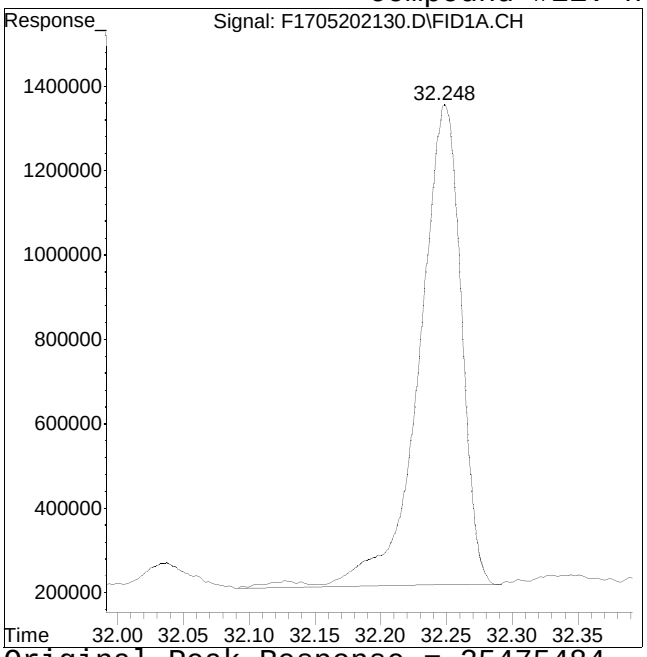
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

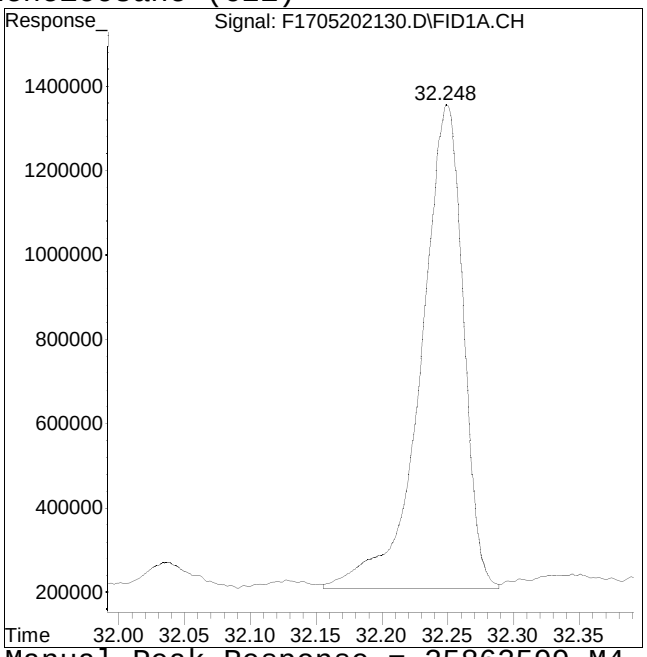
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 25475484



Manual Peak Response = 25862599 M4

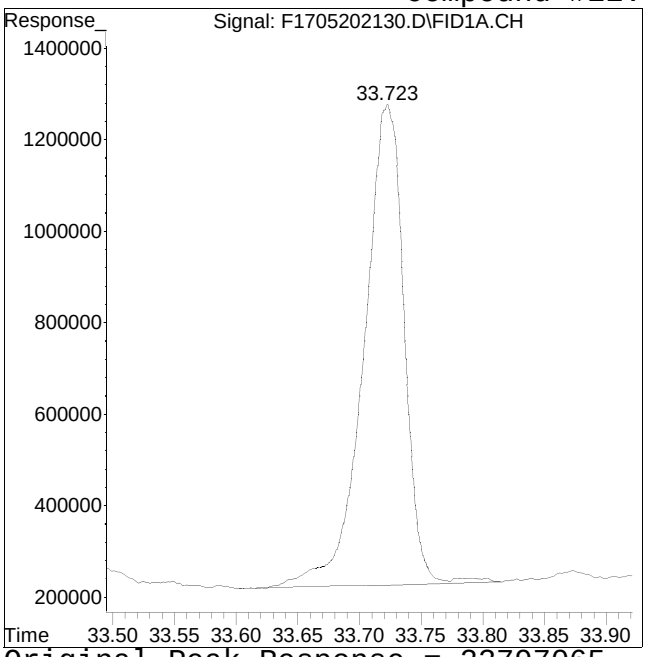
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

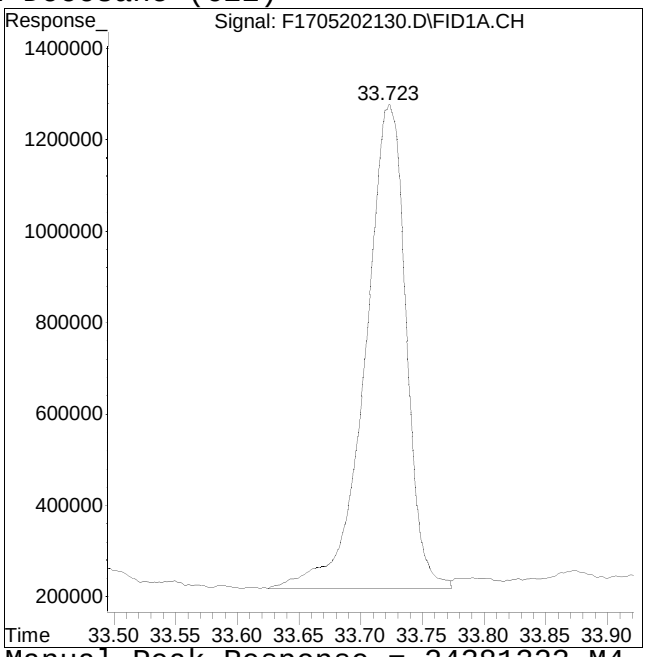
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 23797065



Manual Peak Response = 24381323 M4

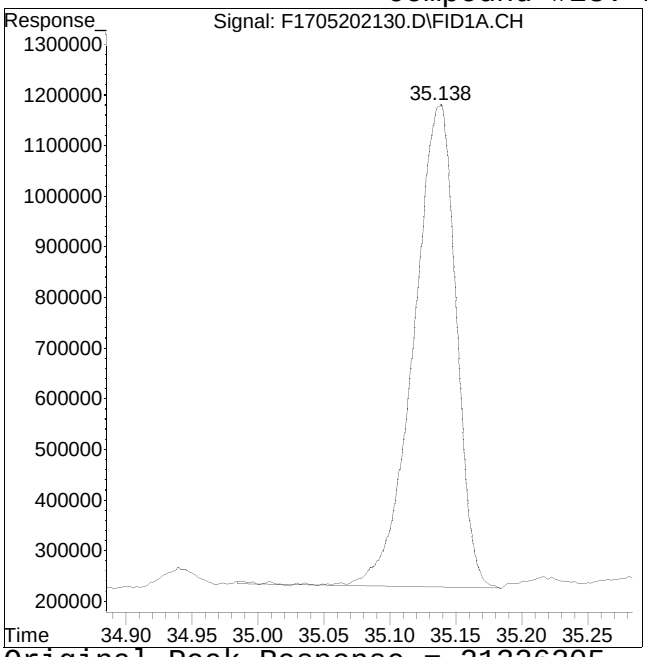
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

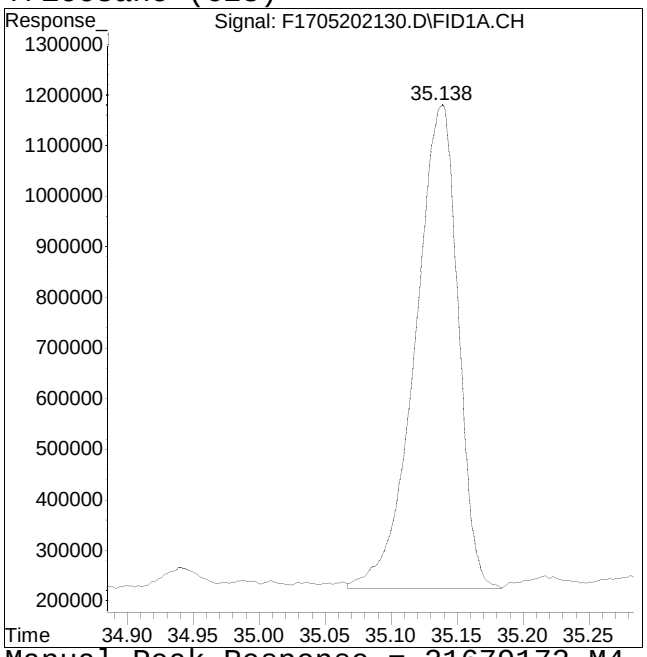
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 21326205



Manual Peak Response = 21679172 M4

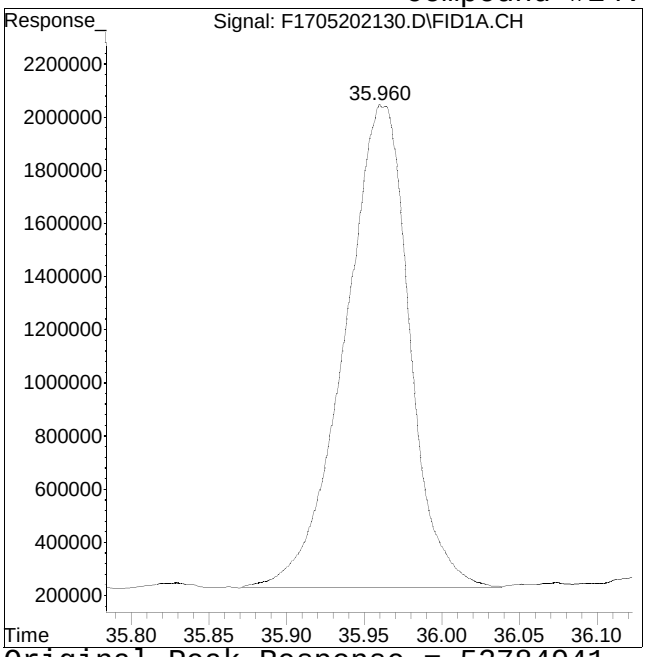
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

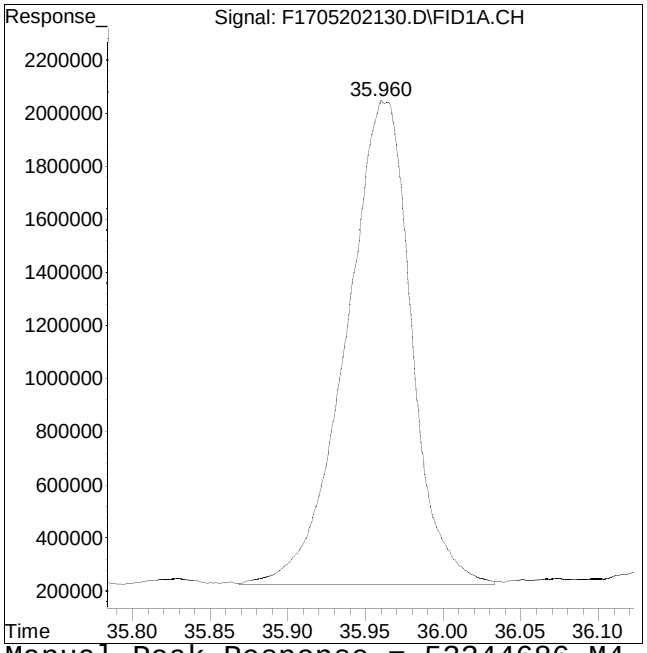
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #24: d50-Tetracosane



Original Peak Response = 52784941



Manual Peak Response = 53344686 M4

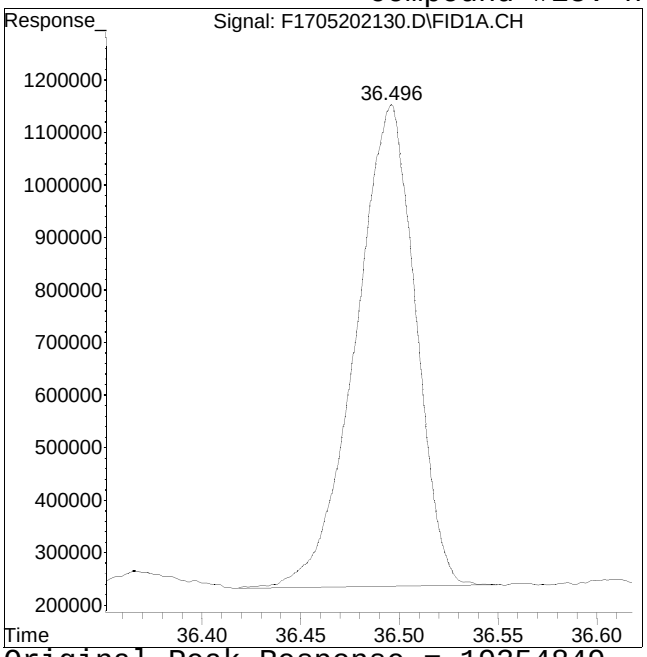
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

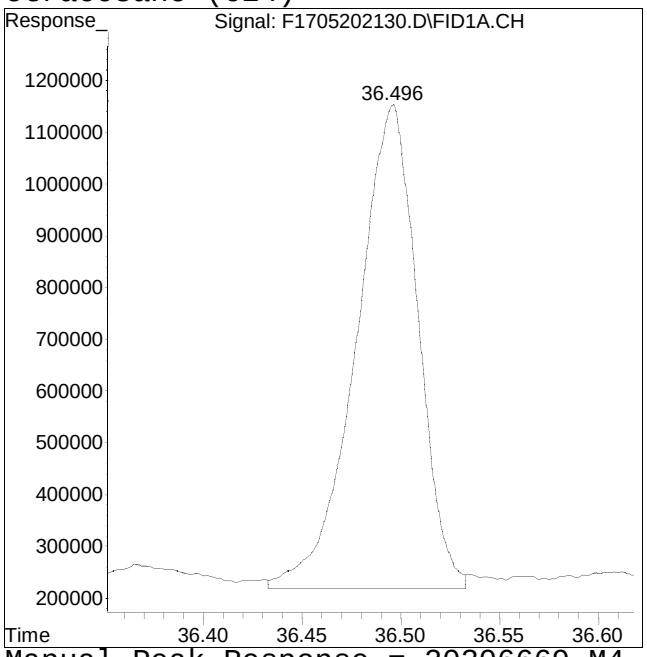
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 19354849



Manual Peak Response = 20306669 M4

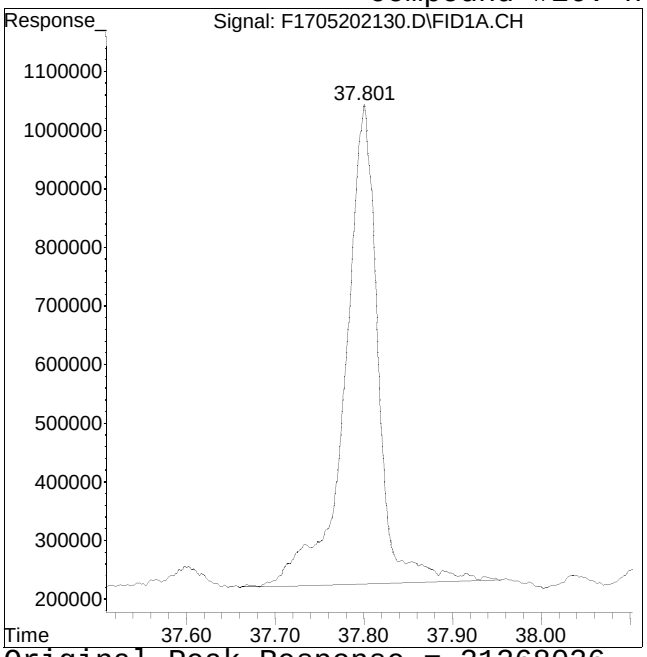
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

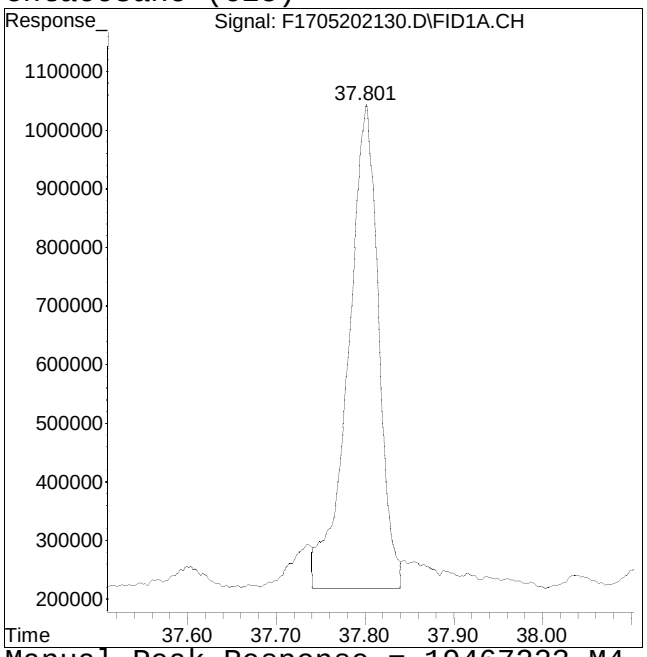
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 21268026



Manual Peak Response = 19467223 M4

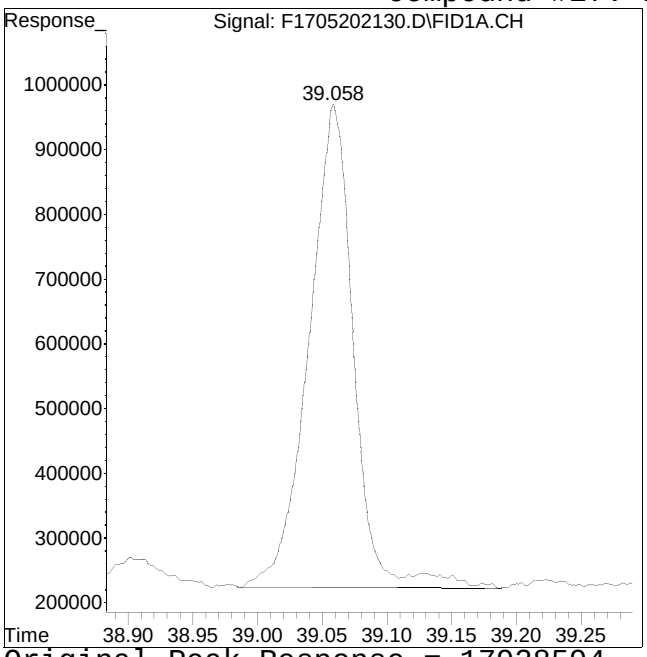
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

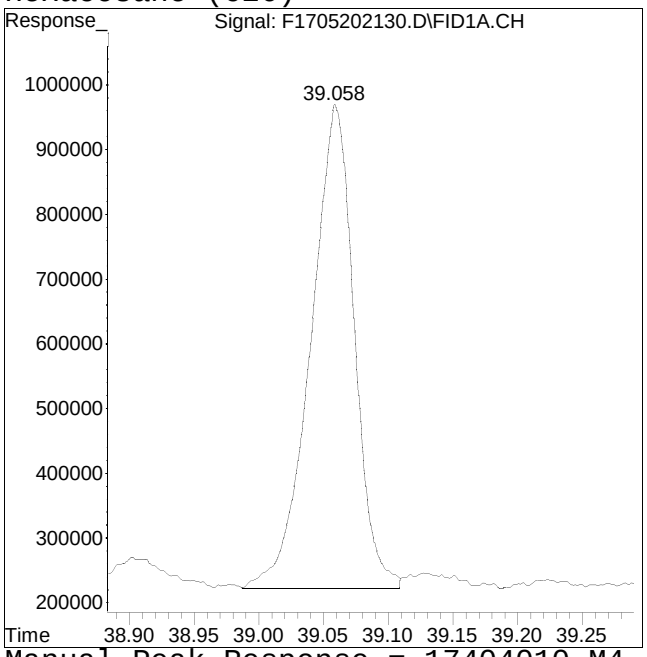
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 17928594



Manual Peak Response = 17404010 M4

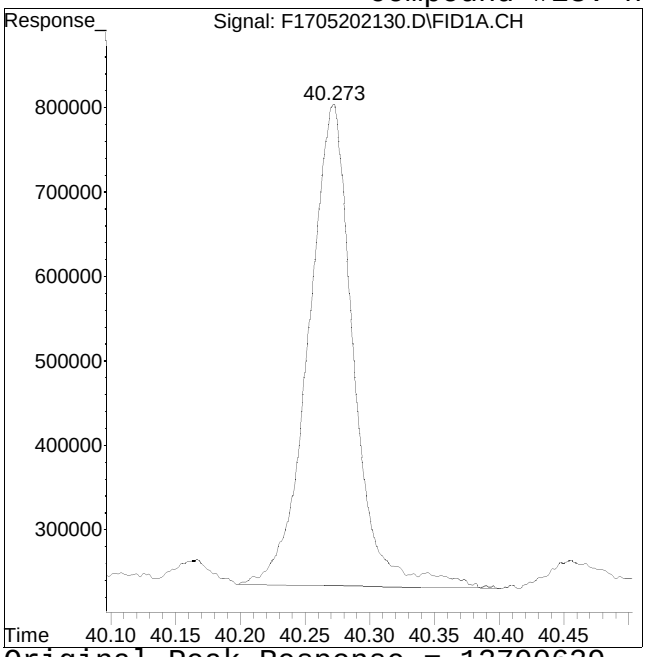
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

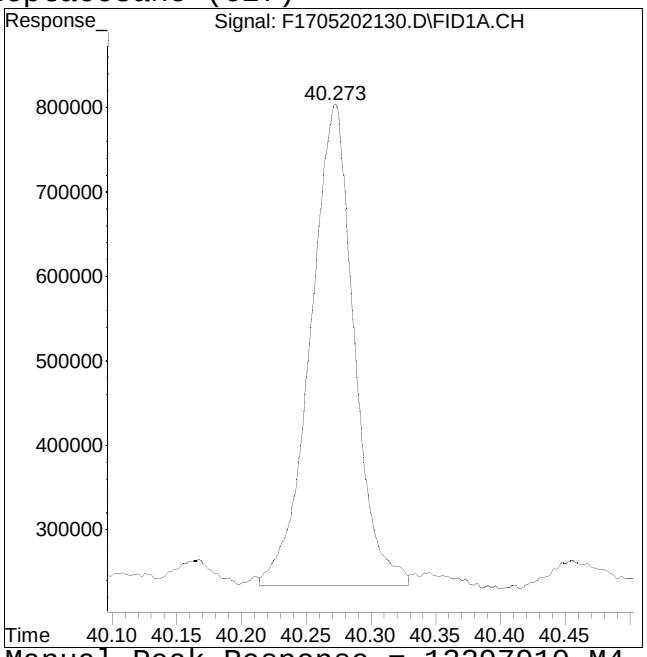
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 13790639



Manual Peak Response = 13297910 M4

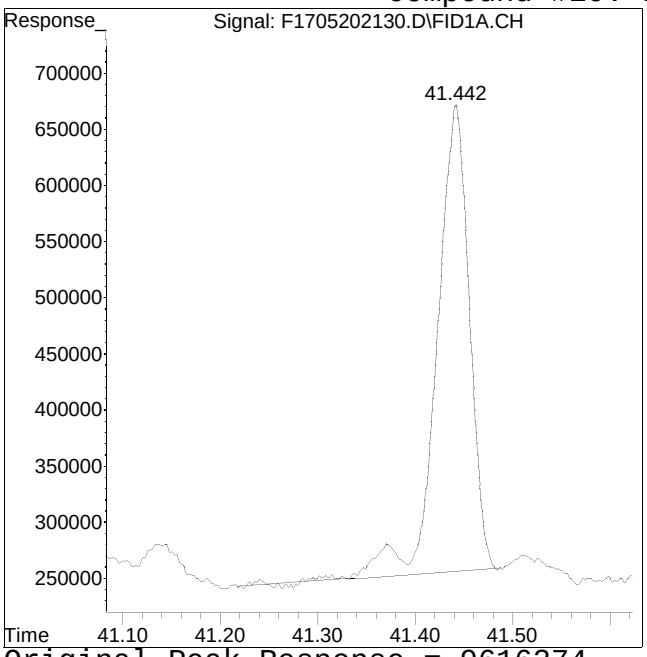
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

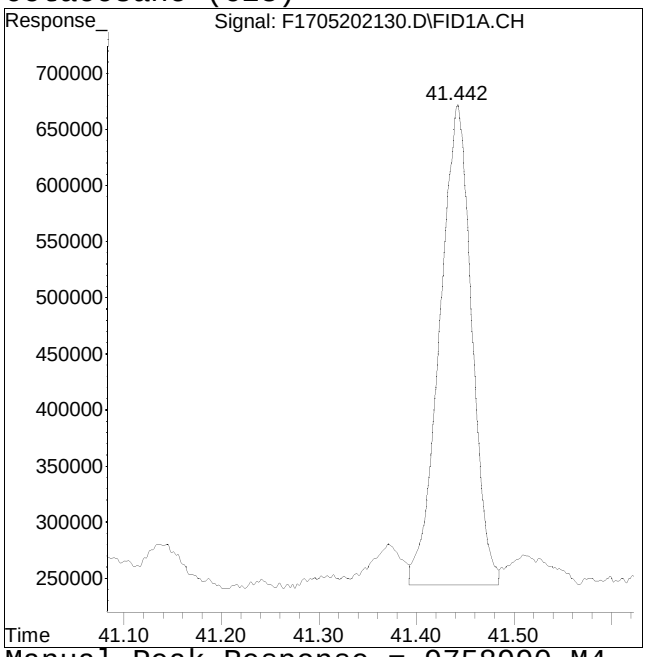
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 9616274



Manual Peak Response = 9758990 M4

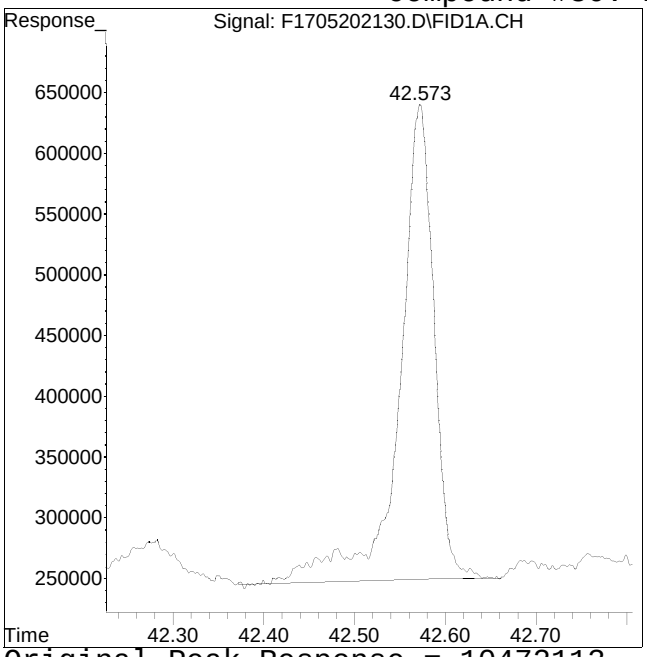
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

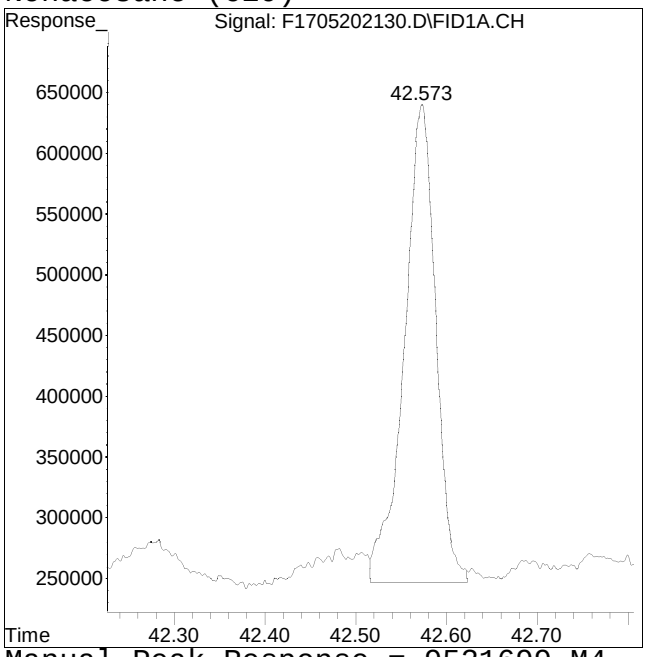
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 10472113



Manual Peak Response = 9521699 M4

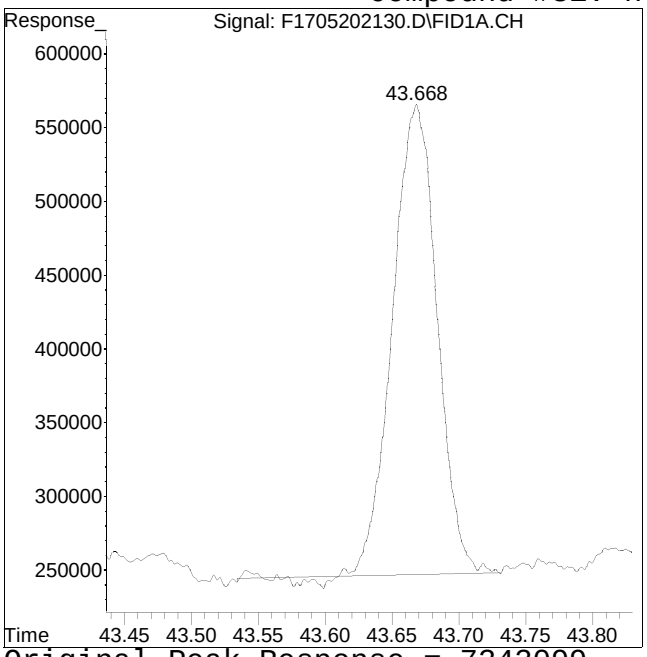
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

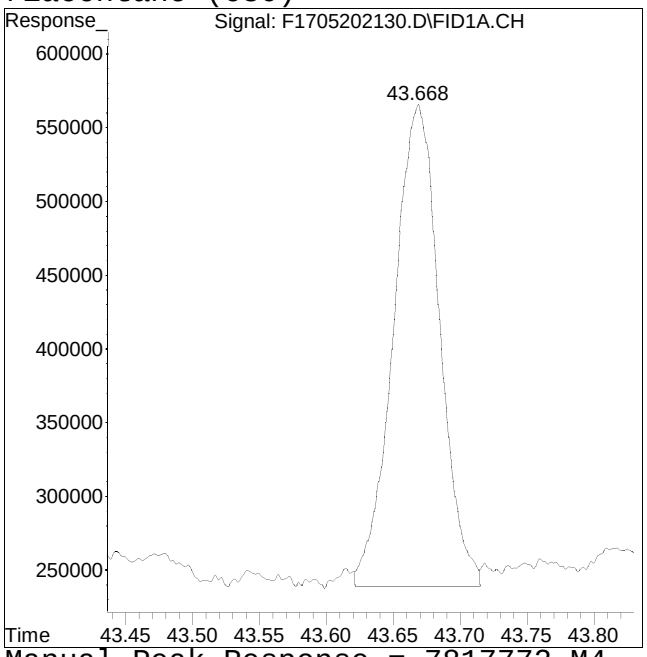
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 7343099



Manual Peak Response = 7817772 M4

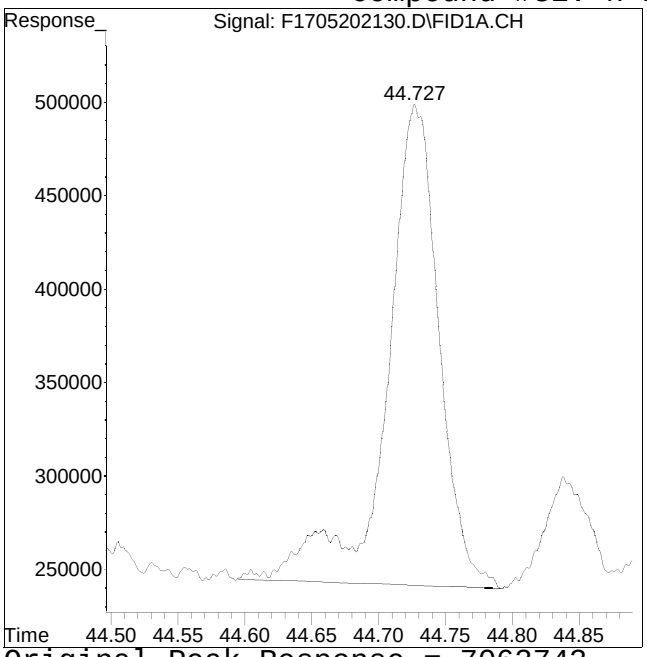
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

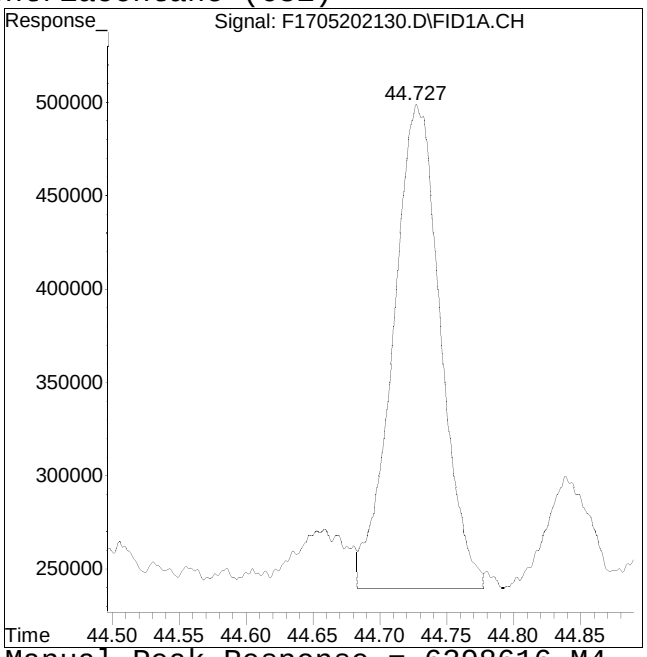
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 7063743



Manual Peak Response = 6398616 M4

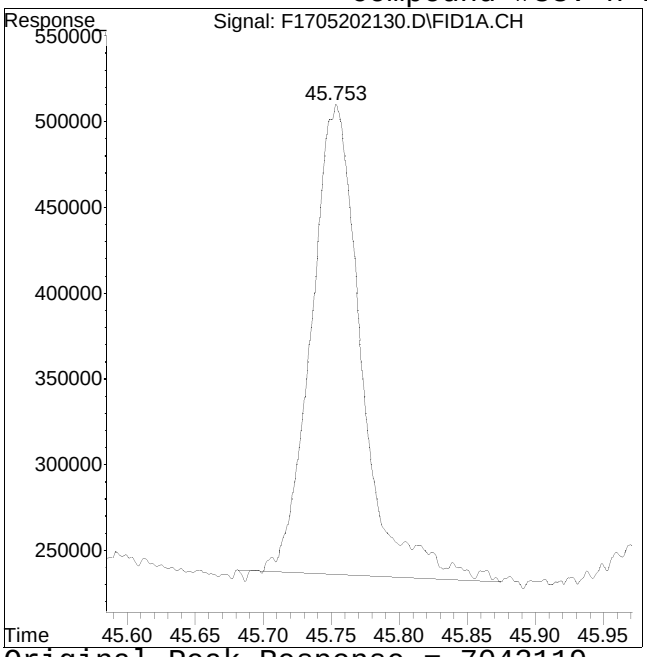
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

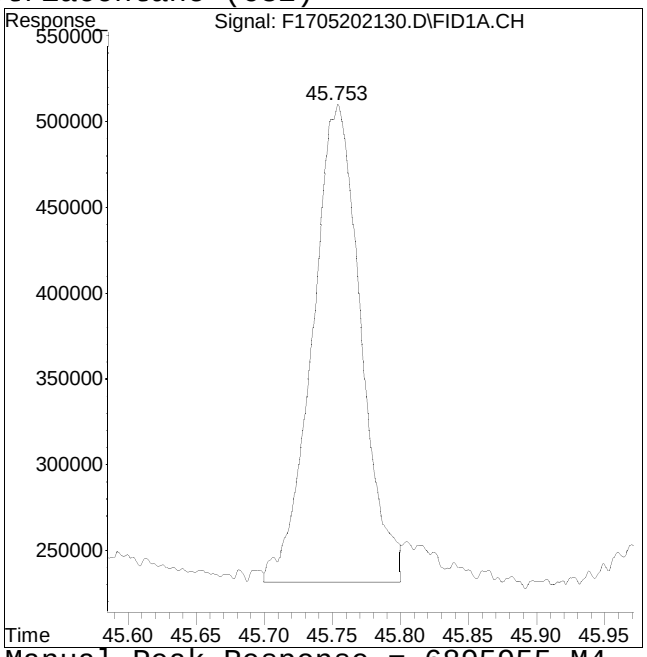
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 7043119



Manual Peak Response = 6895955 M4

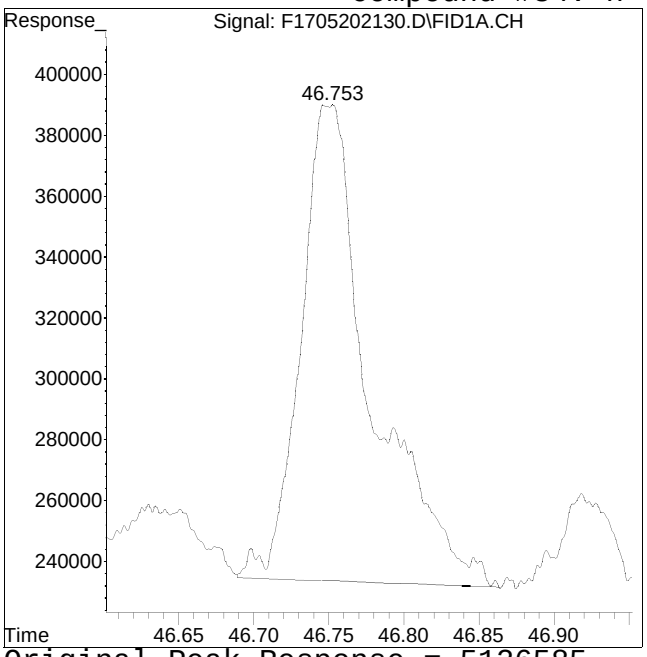
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

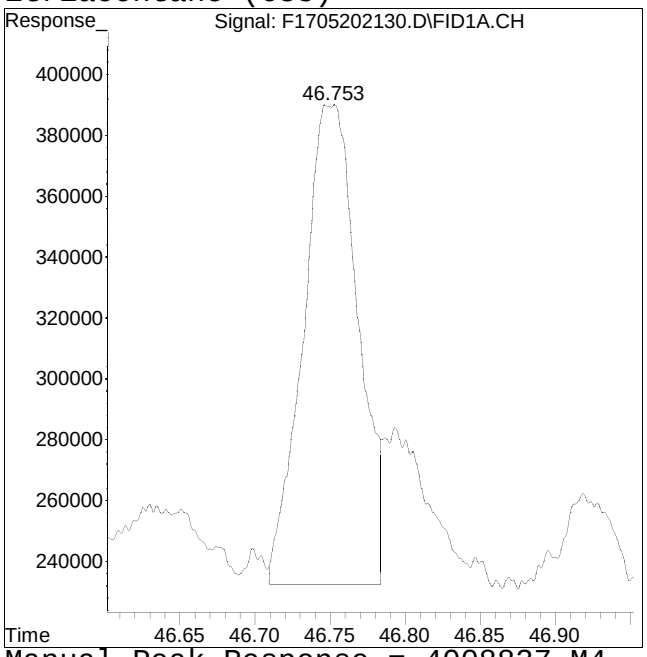
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 5126585



Manual Peak Response = 4008837 M4

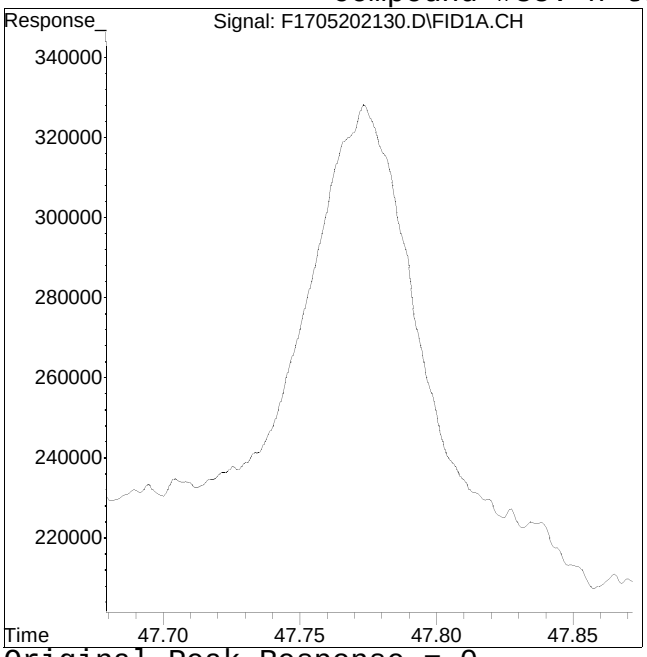
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

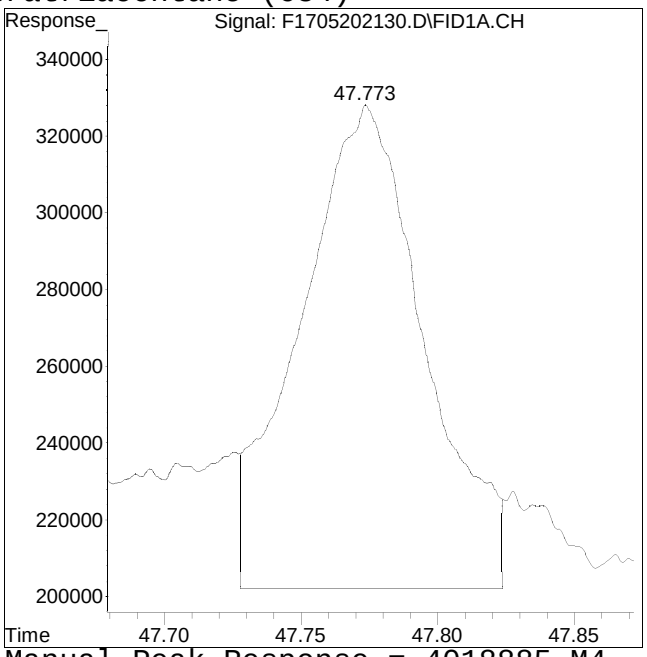
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 0



Manual Peak Response = 4018885 M4

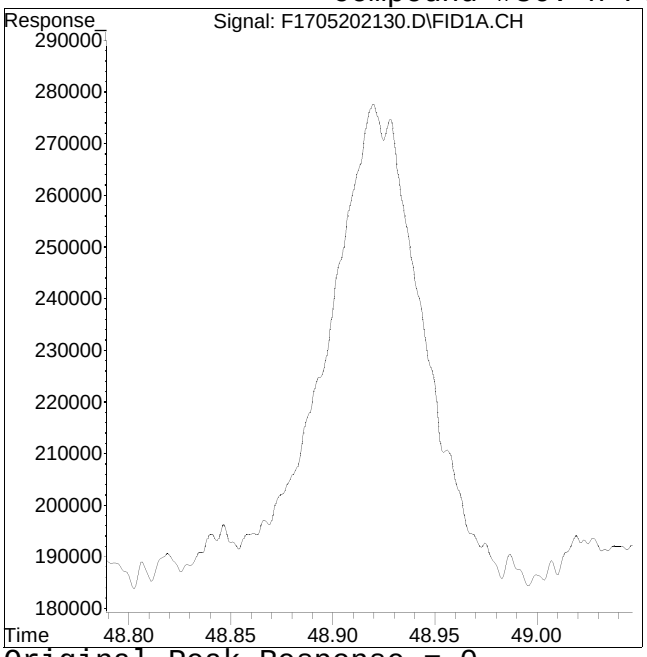
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

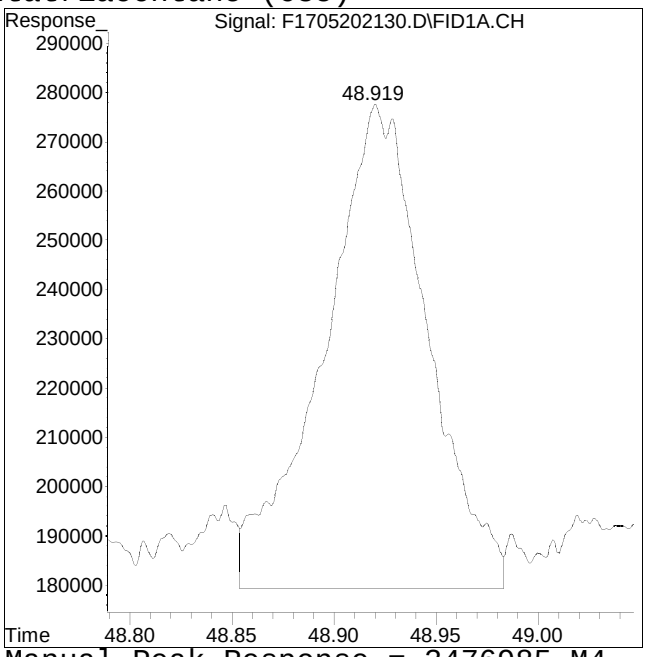
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 0



Manual Peak Response = 3476985 M4

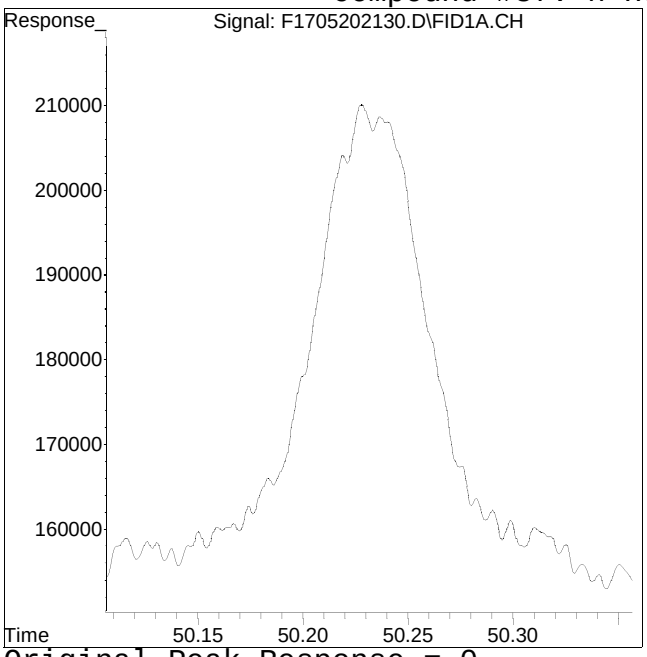
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

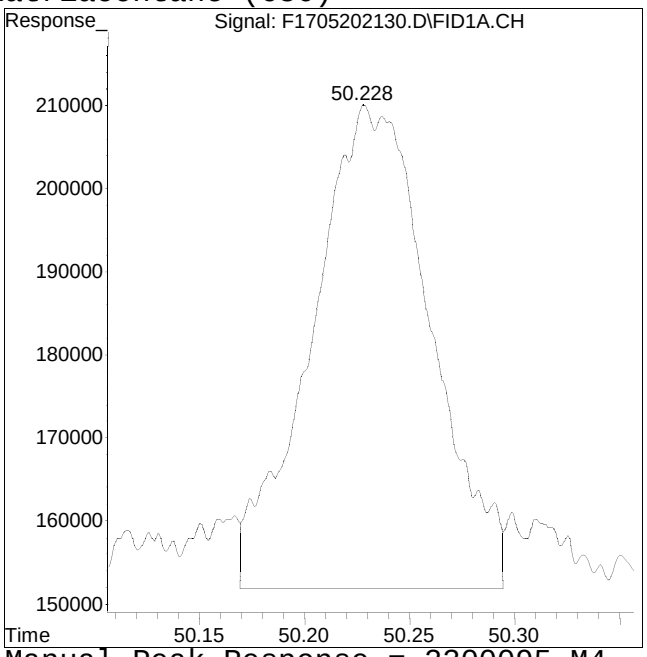
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 0



Manual Peak Response = 2300095 M4

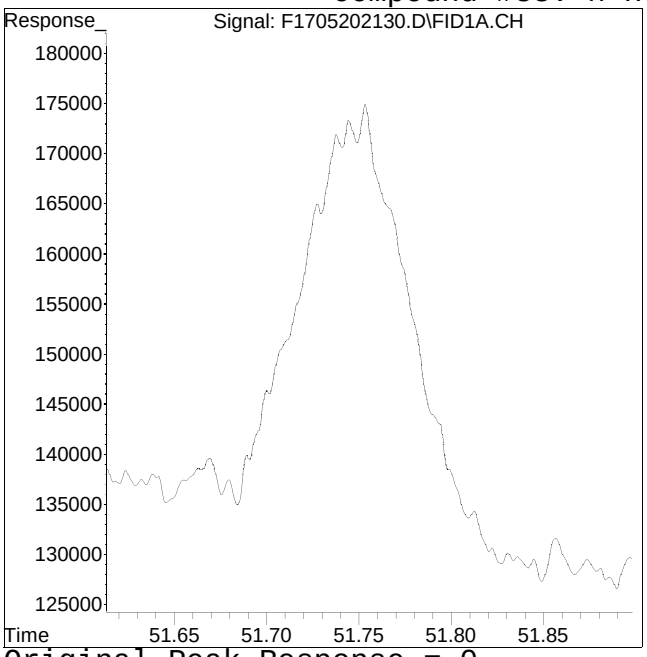
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

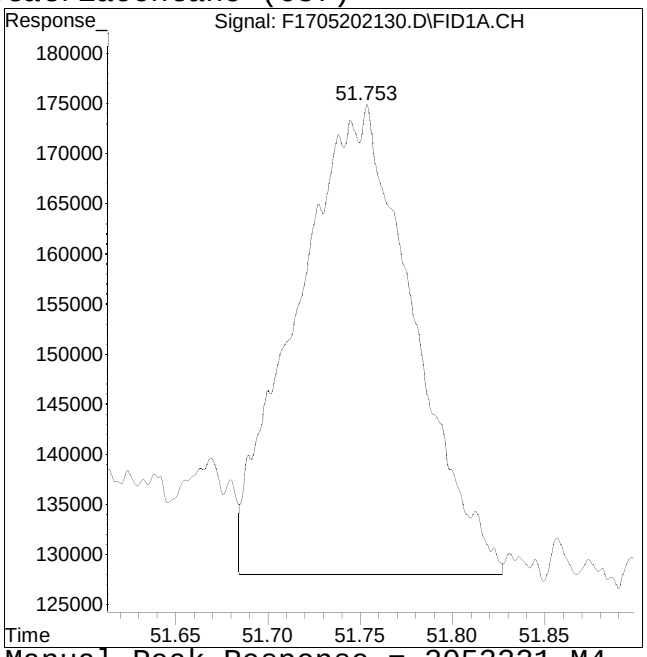
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 0



Manual Peak Response = 2053231 M4

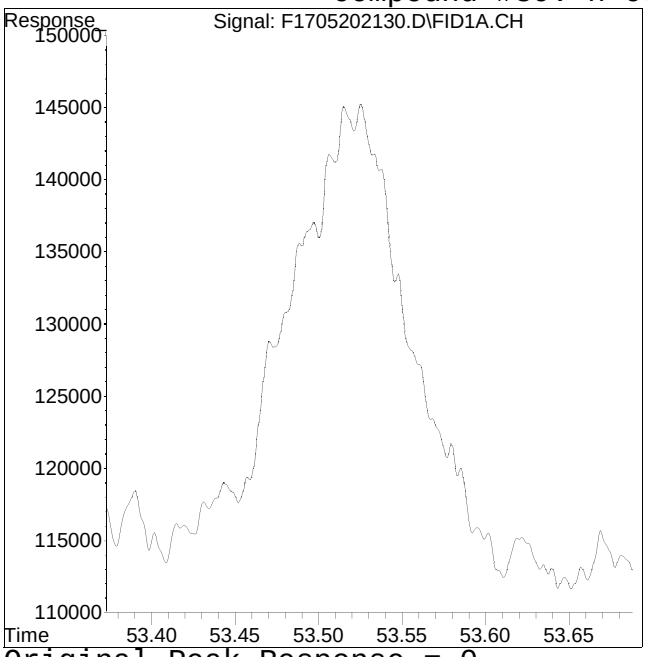
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

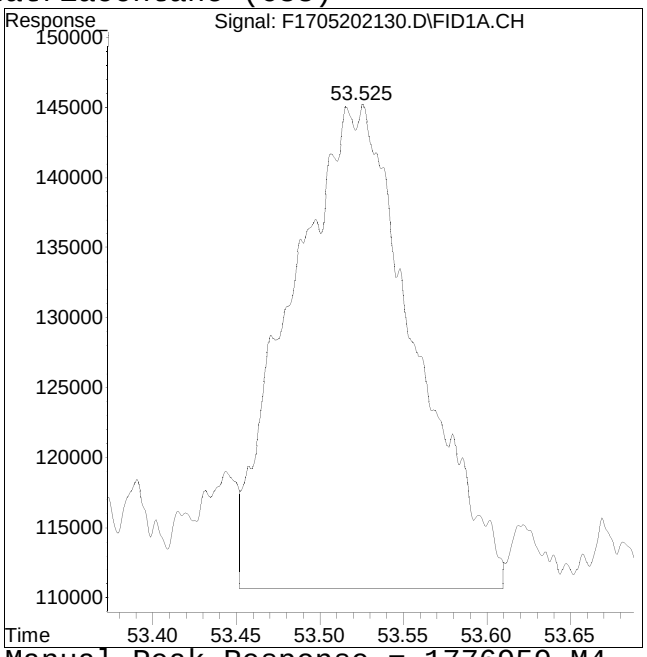
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 1776959 M4

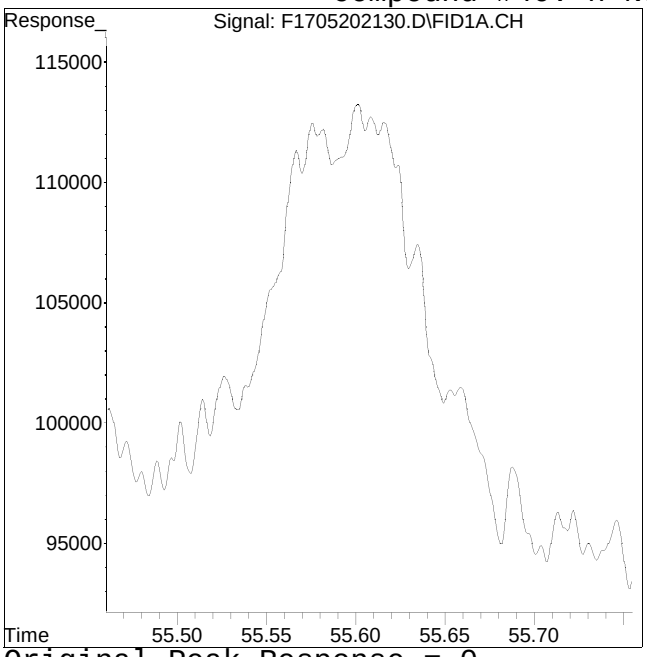
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

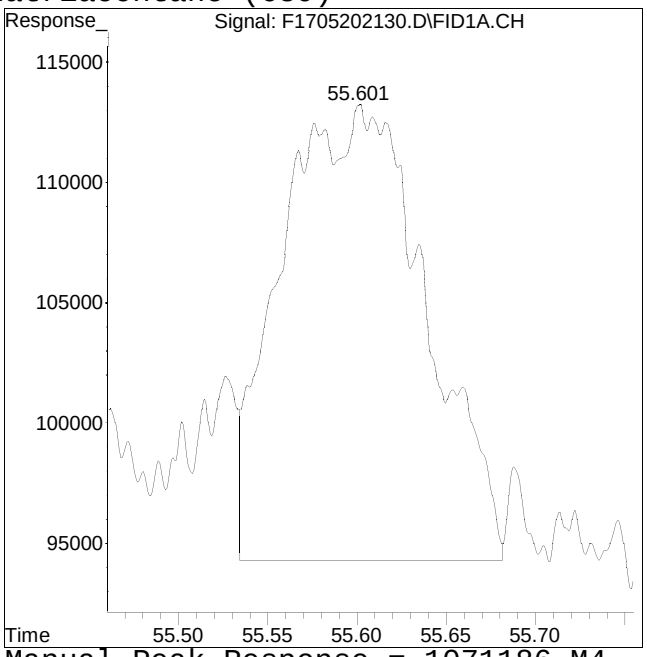
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #40: n-Nonatriacontane (C39)



Original Peak Response = 0



Manual Peak Response = 1071186 M4

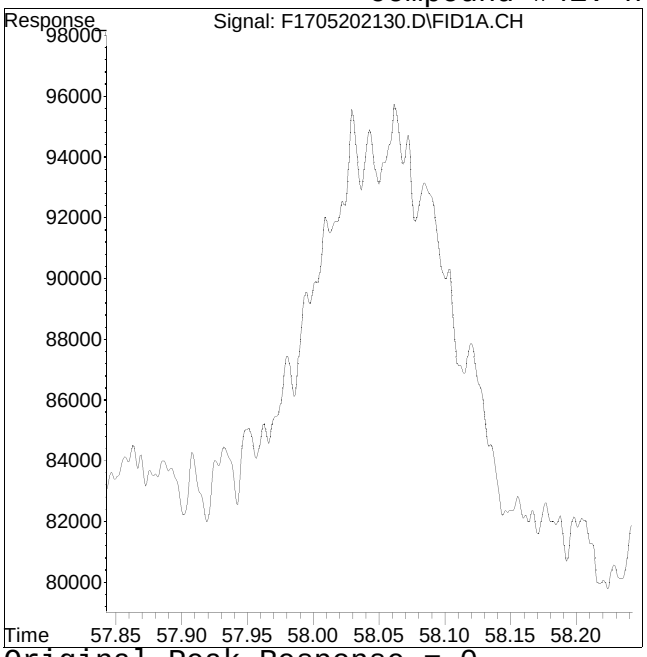
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

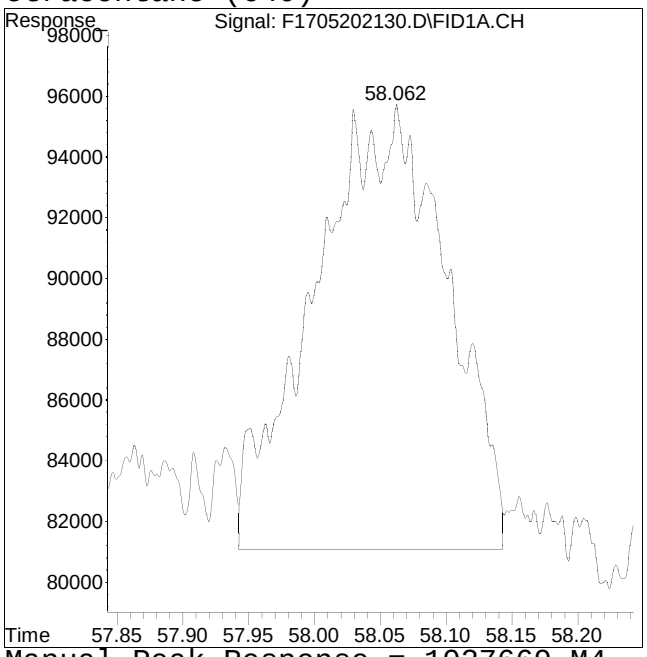
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 1027669 M4

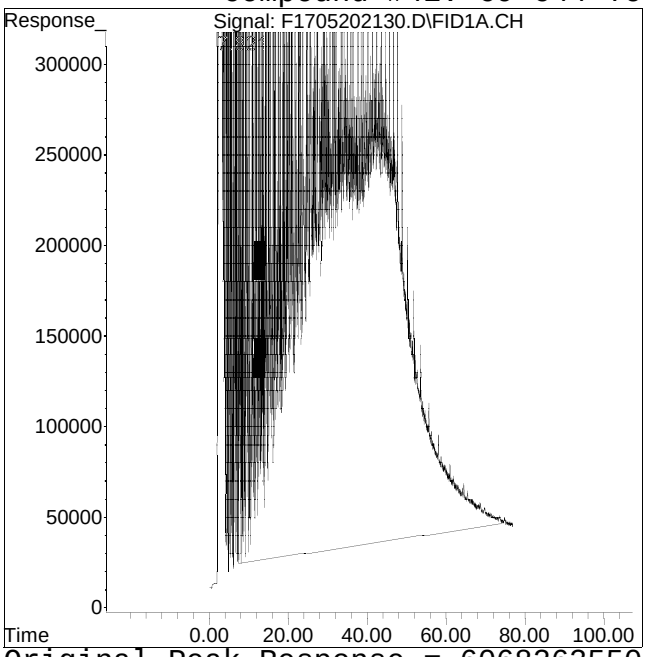
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

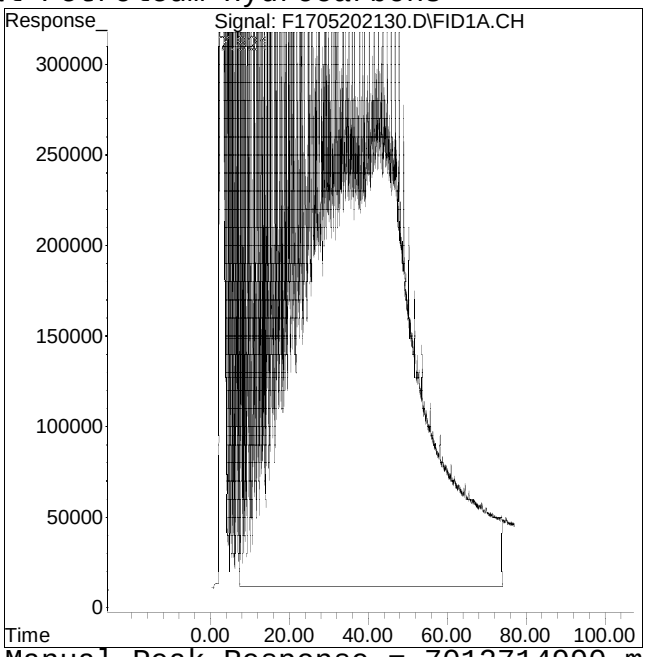
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #42: C9-C44 Total Petroleum Hydrocarbons



Original Peak Response = 6068263550



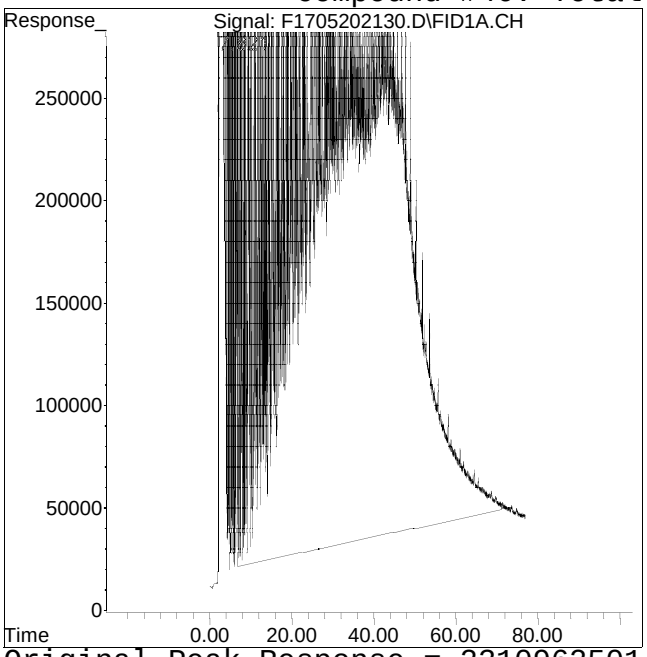
Manual Peak Response = 7012714990 m

Manual Integration/Negative Proof Report

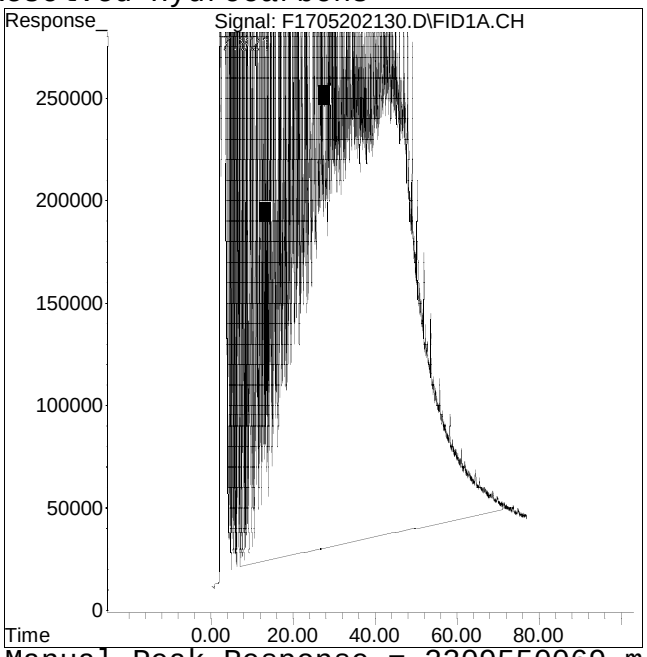
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #46: Total Resolved Hydrocarbons



Original Peak Response = 2310962501



Manual Peak Response = 2309550069 m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202128.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 8:39 am
Operator : FID17:WR
Sample : IB1705202101F
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:29:47 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : TPH - TPH

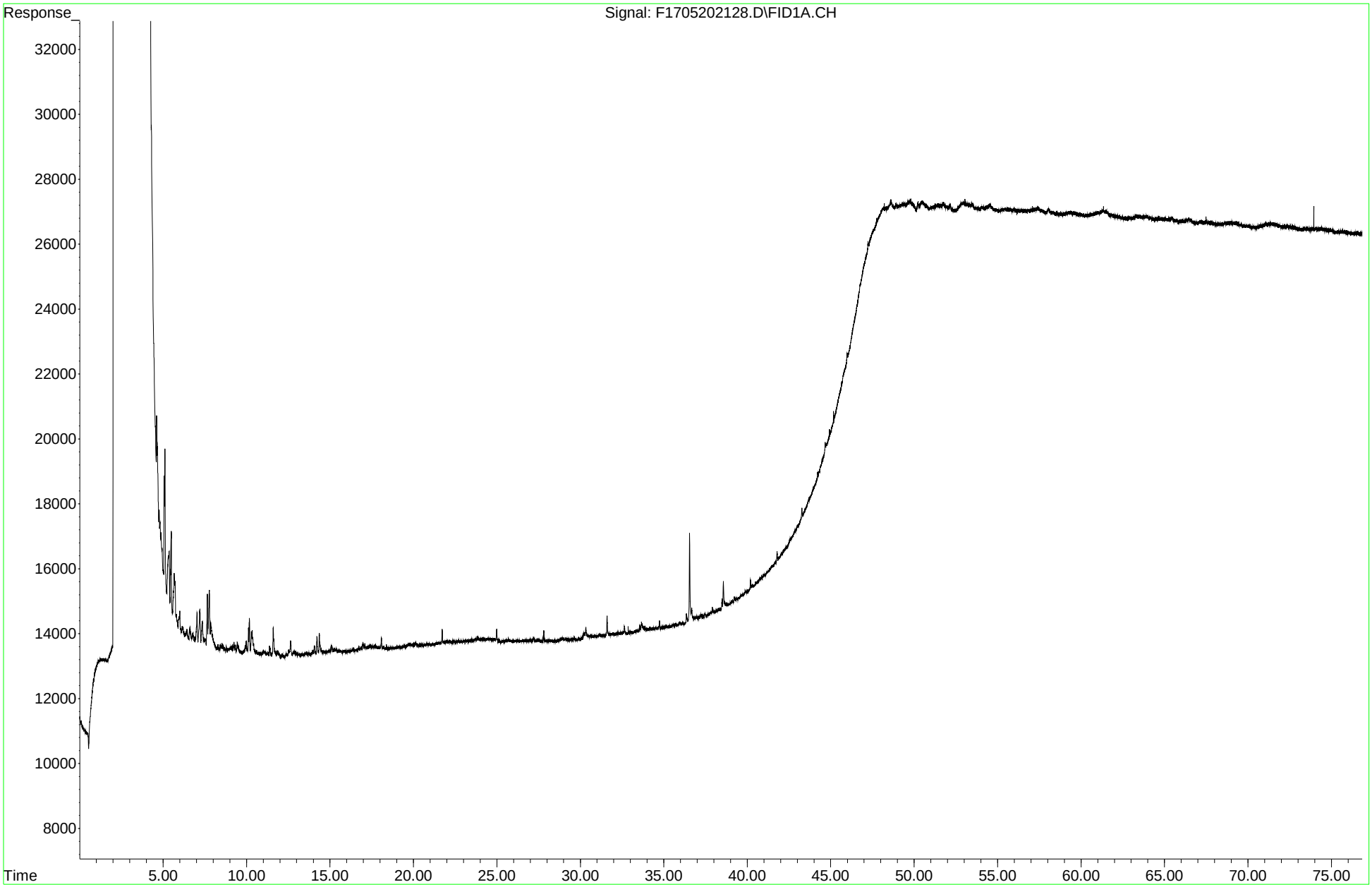
	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.316	5738	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
24) s	d50-Tetracosane	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
	Target Compounds					
42) h	C9-C44 Total Petroleu...	40.642	308512392	2749239.815	ug/mL	M5
46) h	Total Resolved Hydroc...	38.937	2087921	18606.044	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202128.D
Operator : FID17:WR
Acquired : 21 May 2021 8:39 am using AcqMethod FID17A.M
Sample Name: IB1705202101F
Instrument: FID17
Misc Info :
Vial Number: 14
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

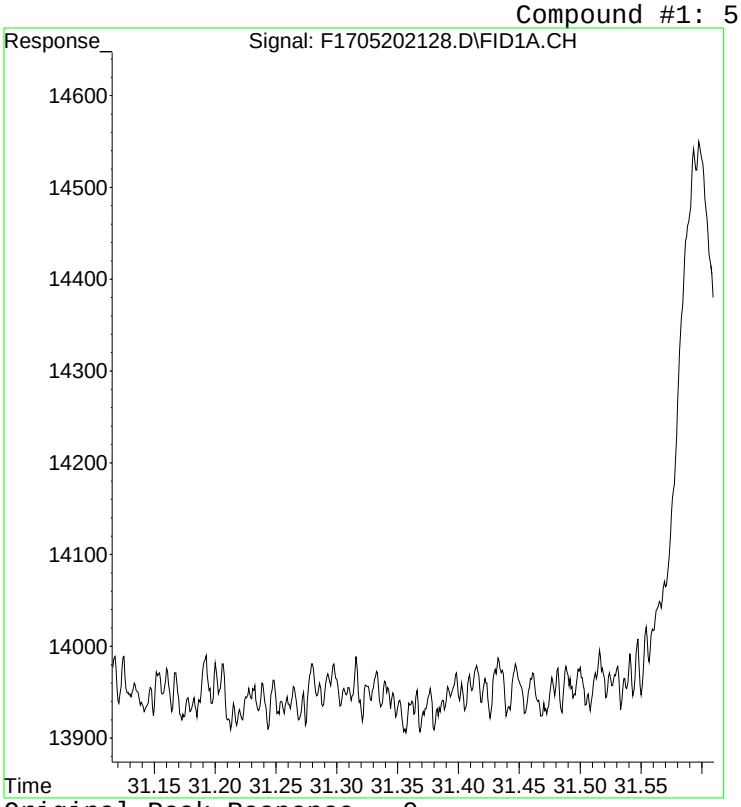


Manual Integration/Negative Proof Report

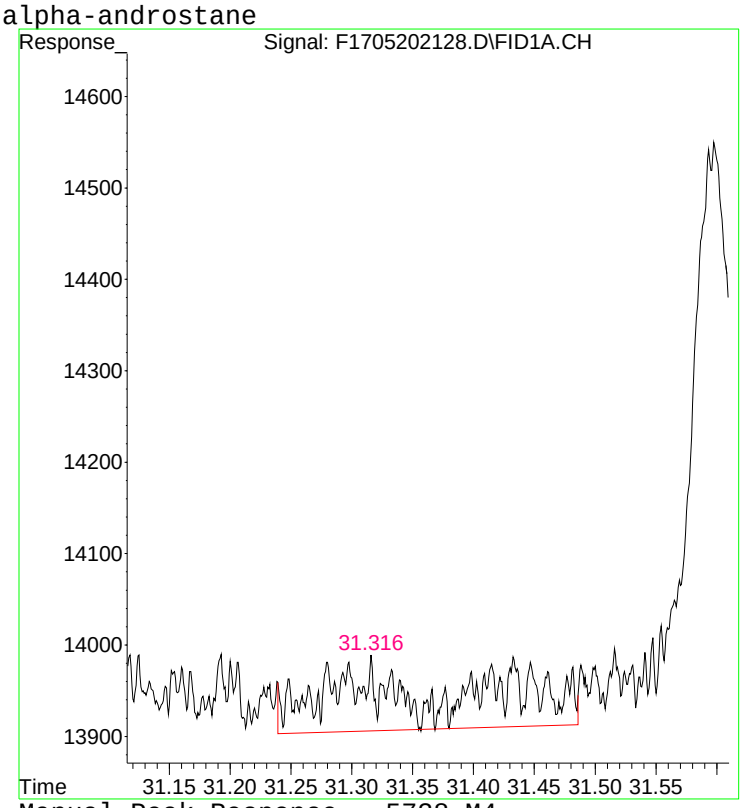
Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20
Data File : F1705202128.D
Date Inj'd : 5/21/2021 8:39 am
Sample : IB1705202101F

QMethod : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:29 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 0



Manual Peak Response = 5738 M4

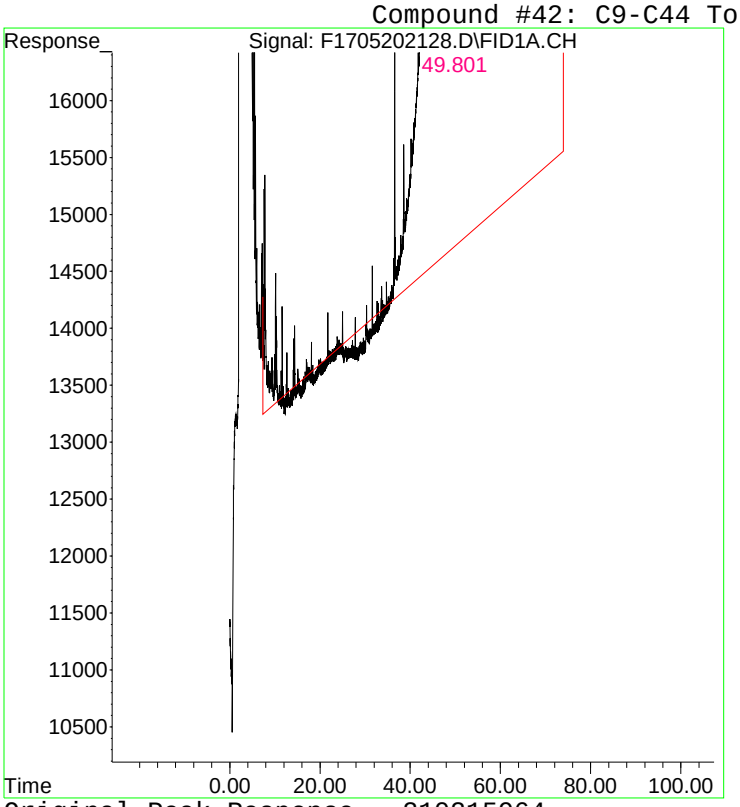
M4 = Poor automated baseline construction.

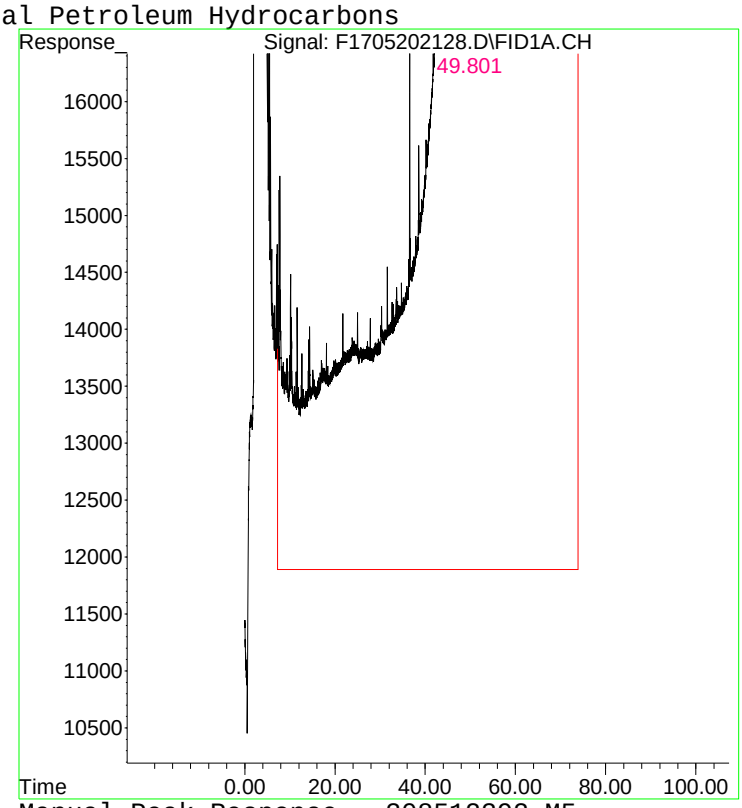
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202128.D
Date Inj'd : 5/21/2021 8:39 am
Sample : IB1705202101F

QMethod : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:29 pm

Compound #42: C9-C44 Total Petroleum Hydrocarbons





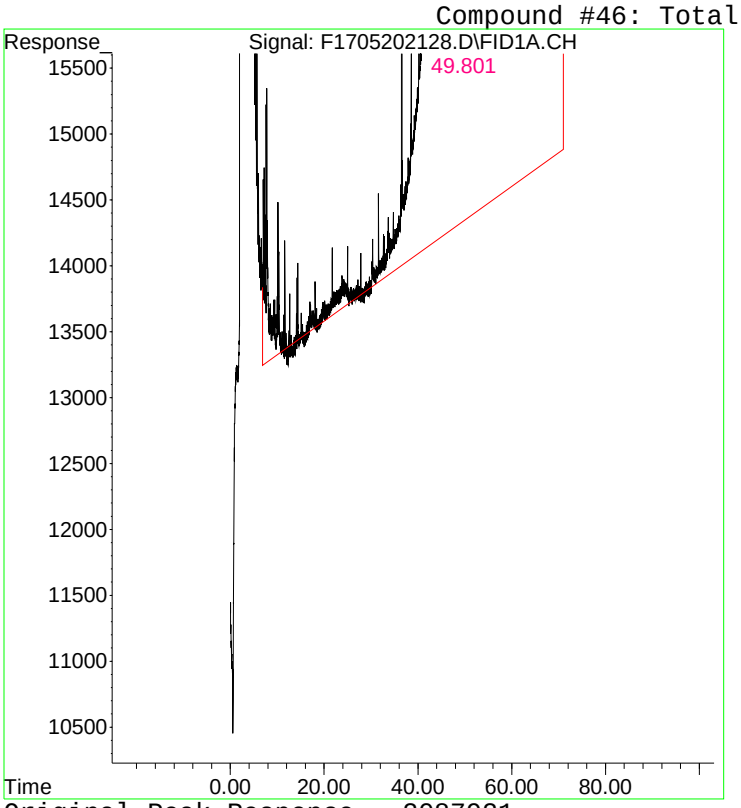
Original Peak Response = 210215964
Manual Peak Response = 308512392 M5
M5 = Manual integration over a retention time range required, i.e. for hydrocarbon range methods.

Manual Integration/Negative Proof Report

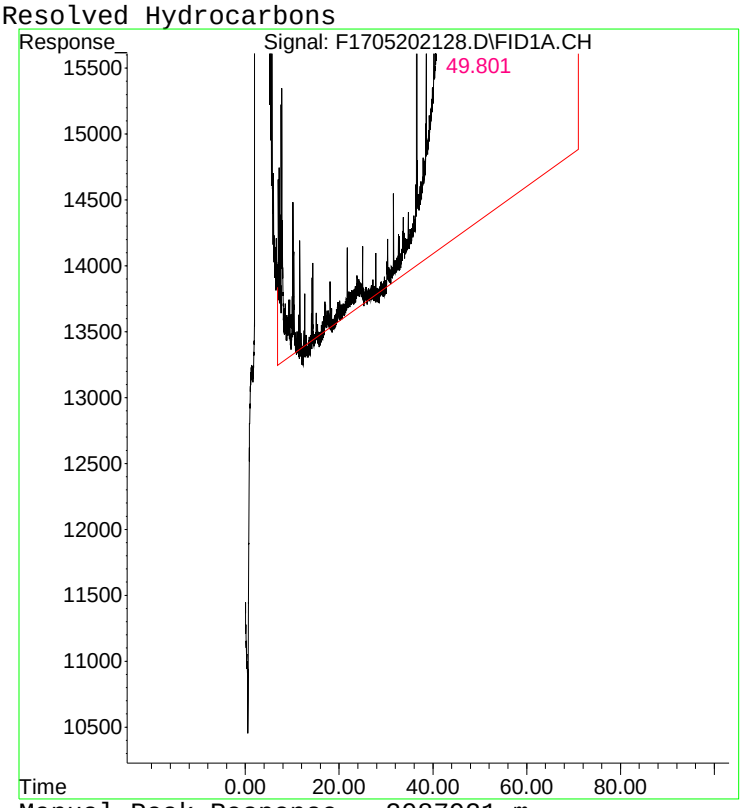
Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202128.D
Date Inj'd : 5/21/2021 8:39 am
Sample : IB1705202101F

QMethod : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:29 pm

Compound #46: Total Resolved Hydrocarbons



Original Peak Response = 2087921



Manual Peak Response = 2087921 m

Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Dec 10 2021, 03:29 pm

Work Group: WG1577487 for Department: 2 Organic Preparation

Created: 01-DEC-21 Due: Operator: BA

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2165245-02	ERH1968	S	A2-SHC	WATER	DONE	U	1201	1220	S0	Amber-A1
WG1577487-1	Laboratory Method Bl	S	A2-SHC	WATER	DONE	U				
WG1577487-2	Laboratory Control S	S	A2-SHC	WATER	DONE	U				
WG1577487-3	LCS Duplicate	S	A2-SHC	WATER	DONE	U				

Comments:

WG1577487-3 WG1577487-2

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Dec 10 2021, 03:29 pm

Work Group: WG1577488 for Department: 2 Organic Preparation

Created: 01-DEC-21 Due: Operator: BA

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2165245-03	ERH1968 - SGC	S	A2-SHC	WATER	DONE	U		1201 1220	S0	Amber-A1
WG1577488-1	Laboratory Method Bl	S	A2-SHC	WATER	DONE	U				
WG1577488-2	Laboratory Control S	S	A2-SHC	WATER	DONE	U				
WG1577488-3	LCS Duplicate	S	A2-SHC	WATER	DONE	U				

Comments:

WG1577488-3 WG1577488-2

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Dec 10 2021, 03:29 pm

Work Group: WG1579479 for Department: 2 Organic Preparation

Created: 06-DEC-21 Due: Operator: BA

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2165245-01	ERH1967	S	A2-SHC	OIL	DONE	U	1124	1220	S0	Glass-A.06
WG1579479-1	Laboratory Method Bl	S	A2-SHC	OIL	DONE	U				
WG1579479-2	Laboratory Control S	S	A2-SHC	OIL	DONE	U				
WG1579479-3	LCS Duplicate	S	A2-SHC	OIL	DONE	U				

Comments:

WG1579479-3 WG1579479-2

Sequence Logs

Analysis log File

Total Files Reported in Log : 27
Log Generated From Directory: O:\Forensics\Data\FID17\2021\MAY\MAY20\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1705202102.D	FID17A.M	LL		5/20/2021 1:25 pm
2	F1705202104.D	FID17A.M	ANS		5/20/2021 2:54 pm
3	F1705202106.D	FID17A.M	CCV		5/20/2021 4:23 pm
4	F1705202108.D	FID17A.M	DCM		5/20/2021 5:52 pm
5	F1705202110.D	FID17A.M	IB		5/20/2021 7:22 pm
6	F1705202112.D	FID17A.M	I1705202101F	WG1505003,FRBD77,1ug/ml	5/20/2021 8:50 pm
7	F1705202114.D	FID17A.M	I1705202102F	WG1505003,FRBD78,10ug/m..	5/20/2021 10:19 pm
8	F1705202116.D	FID17A.M	I1705202103F	WG1505003,FRBD73,50ug/m..	5/20/2021 11:47 pm
9	F1705202118.D	FID17A.M	I1705202104F	WG1505003,FRBD79,100ug/..	5/21/2021 1:16 am
10	F1705202120.D	FID17A.M	I1705202105F	WG1505003,FRBD80,200ug/..	5/21/2021 2:44 am
11	F1705202122.D	FID17A.M	I1705202106F	WG1505003,FRBD81,500ug/..	5/21/2021 4:13 am
12	F1705202124.D	FID17A.M	DCM		5/21/2021 5:41 am
13	F1705202126.D	FID17A.M	CQ1705202101F	WG1505003,FRBD82,50ug/m..	5/21/2021 7:10 am
14	F1705202128.D	FID17A.M	IB1705202101F		5/21/2021 8:39 am
15	F1705202130.D	FID17A.M	WG1505003-1,0.10054	WG1505003,FRBD62,10.054..	5/21/2021 10:07 am
16	F1705202132.D	FID17A.M	DCM		5/21/2021 11:36 am
17	F1705202134.D	FID17A.M			5/21/2021 1:05 pm
18	F1705202136.D	FID17A.M			5/21/2021 2:34 pm
19	F1705202138.D	FID17A.M			5/21/2021 4:04 pm
20	F1705202140.D	FID17A.M			5/21/2021 5:33 pm
21	F1705202142.D	FID17A.M			5/21/2021 7:02 pm
22	F1705202144.D	FID17A.M			5/21/2021 8:31 pm
23	F1705202146.D	FID17A.M			5/21/2021 10:00 pm
24	F1705202148.D	FID17A.M			5/21/2021 11:28 pm
25	F1705202150.D	FID17A.M			5/22/2021 12:56 am
26	F1705202152.D	FID17A.M			5/22/2021 2:24 am
27	F1705202154.D	FID17A.M			5/22/2021 3:52 am

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 36
Log Generated From Directory: O:\Forensics\Data\FID17\2021\DEC\DEC03\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1712032102.D	FID17A.M	LL		12/3/2021 10:44 am
2	F1712032104.D	FID17A.M	ANS		12/3/2021 12:13 pm
3	F1712032106.D	FID17A.M	WG1579117-1	WG1579117,FRBE18,..	12/3/2021 1:41 pm
4	F1712032108.D	FID17A.M	DCM		12/3/2021 3:10 pm
5	F1712032110.D	FID17A.M	IB1712032101		12/3/2021 4:38 pm
6	F1712032112.D	FID17A.M	WG1577487-1	WG1579117,WG15774..	12/3/2021 6:07 pm
7	F1712032114.D	FID17A.M	WG1577488-1	WG1579117,WG15774..	12/3/2021 7:35 pm
8	F1712032116.D	FID17A.M	WG1577487-2	WG1579117,WG15774..	12/3/2021 9:03 pm
9	F1712032118.D	FID17A.M	WG1577487-3	WG1579117,WG15774..	12/3/2021 10:32 pm
10	F1712032120.D	FID17A.M	WG1577488-2	WG1579117,WG15774..	12/4/2021 12:00 am
11	F1712032122.D	FID17A.M	WG1577488-3	WG1579117,WG15774..	12/4/2021 1:28 am
12	F1712032124.D	FID17A.M	DCM		12/4/2021 2:56 am
13	F1712032126.D	FID17A.M	L2165245-02	SEE DILUTION	12/4/2021 4:24 am
14	F1712032128.D	FID17A.M	L2165245-03	SEE DILUTION	12/4/2021 5:52 am
15	F1712032130.D	FID17A.M	WG1579117-2	WG1579117,FRBE18,..	12/4/2021 7:20 am
16	F1712032132.D	FID17A.M	DCM		12/4/2021 8:48 am
17	F1712032134.D	FID17A.M	IB1712032102		12/4/2021 10:16 am
18	F1712032136.D	FID17A.M	wG1579102-1,42,,	WG1579117,WG15791..	12/4/2021 11:44 am
19	F1712032138.D	FID17A.M	wG1579102-2,42,,	WG1579117,WG15791..	12/4/2021 1:13 pm
20	F1712032140.D	FID17A.M	wG1579102-3,42,,	WG1579117,WG15791..	12/4/2021 2:41 pm
21	F1712032142.D	FID17A.M	DCM		12/4/2021 4:10 pm
22	F1712032144.D	FID17A.M	12166503-01,42,,,r2a	WG1579117,WG15791..	12/4/2021 5:38 pm
23	F1712032146.D	FID17A.M	WG1579117-3	WG1579117,FRBE18,..	12/4/2021 7:06 pm
24	F1712032148.D	FID17A.M	DCM		12/4/2021 8:34 pm
25	F1712032150.D	FID17A.M	IB1712032103		12/4/2021 10:02 pm
26	F1712032152.D	FID17A.M	wG1579126-1,42,,	WG1579117,WG15791..	12/4/2021 11:30 pm
27	F1712032154.D	FID17A.M	wg1579126-2,42,,	WG1579117,WG15791..	12/5/2021 12:59 am
28	F1712032156.D	FID17A.M	wg1579126-3,42,,	WG1579117,WG15791..	12/5/2021 2:27 am
29	F1712032158.D	FID17A.M	12166503-02,42,,,r2a	WG1579117,WG15791..	12/5/2021 3:55 am
30	F1712032160.D	FID17A.M	L2165245-02D,42,10	WG1579117,WG15774..	12/5/2021 5:23 am
31	F1712032162.D	FID17A.M	L2165245-03D,42,20	WG1579117,WG15774..	12/5/2021 6:51 am
32	F1712032164.D	FID17A.M	WG1579117-4	WG1579117,FRBE18,..	12/5/2021 8:19 am
33	F1712032166.D	FID17A.M	IB1712032104		12/5/2021 9:47 am
34	F1712032168.D	FID17A.M	12166503-01d,42,2	WG1579117,WG15791..	12/5/2021 12:50 pm
35	F1712032170.D	FID17A.M	12166503-02d,42,10	WG1579117,WG15791..	12/5/2021 2:18 pm
36	F1712032172.D	FID17A.M	WG1579117-5	WG1579117,FRBE18,..	12/5/2021 3:46 pm

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 29
Log Generated From Directory: O:\Forensics\Data\FID17\2021\DEC\DEC07\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1712072102.D	FID17A.M	LL		12/7/2021 9:33 am
2	F1712072104.D	FID17A.M	ANS		12/7/2021 11:01 am
3	F1712072106.D	FID17A.M	WG1580304-1	WG1580304,FRBE37,..	12/7/2021 12:29 pm
4	F1712072108.D	FID17A.M	DCM		12/7/2021 1:58 pm
5	F1712072110.D	FID17A.M	IB1712072101F		12/7/2021 3:26 pm
6	F1712072112.D	FID17A.M	dcm check	ec757-us sn:20804..	12/7/2021 4:55 pm
7	F1712072114.D	FID17A.M	WG1579476-1,32,,		12/7/2021 6:23 pm
8	F1712072116.D	FID17A.M	WG1579479-1,42,,	WG1580304,WG15794..	12/7/2021 7:51 pm
9	F1712072118.D	FID17A.M	WG1579476-2,32,,		12/7/2021 9:19 pm
10	F1712072120.D	FID17A.M	WG1579476-3,32,,		12/7/2021 10:48 pm
11	F1712072122.D	FID17A.M	WG1579479-2,42,,	WG1580304,WG15794..	12/8/2021 12:16 am
12	F1712072124.D	FID17A.M	WG1579479-3,42,,	WG1580304,WG15794..	12/8/2021 1:44 am
13	F1712072126.D	FID17A.M	dcm		12/8/2021 3:13 am
14	F1712072128.D	FID17A.M	L2154408-09,42,,		12/8/2021 4:41 am
15	F1712072130.D	FID17A.M	WG1579476-4,32,,		12/8/2021 6:09 am
16	F1712072132.D	FID17A.M	L2163692-01,42,,		12/8/2021 7:37 am
17	F1712072134.D	FID17A.M	WG1579476-5,32,,		12/8/2021 9:05 am
18	F1712072136.D	FID17A.M	WG1580304-2	WG1580304,FRBE37,..	12/8/2021 10:33 am
19	F1712072138.D	FID17A.M	dcm		12/8/2021 12:02 pm
20	F1712072140.D	FID17A.M	IB1712072102F		12/8/2021 1:31 pm
21	F1712072142.D	FID17A.M	L2164644-01,32,,		12/8/2021 2:59 pm
22	F1712072144.D	FID17A.M	WG1579476-6,32,,		12/8/2021 4:28 pm
23	F1712072146.D	FID17A.M	L2164644-02,32,,		12/8/2021 5:57 pm
24	F1712072148.D	FID17A.M	L2164644-04,32,,		12/8/2021 7:26 pm
25	F1712072150.D	FID17A.M	L2165053-01,42,,	WG1580304,WG15794..	12/8/2021 8:54 pm
26	F1712072152.D	FID17A.M	L2165245-01,42,,	WG1580304,WG15794..	12/8/2021 10:22 pm
27	F1712072154.D	FID17A.M	WG1580304-3	WG1580304,FRBE37,..	12/8/2021 11:51 pm
28	F1712072156.D	FID17A.M	dcm		12/9/2021 1:19 am
29	F1712072158.D	FID17A.M	ib		12/9/2021 2:47 am

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 17
Log Generated From Directory: O:\Forensics\Data\FID17\2021\DEC\DEC09\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1712092102.D	FID17A.M	LL		12/9/2021 9:33 am
2	F1712092104.D	FID17A.M	ANS		12/9/2021 11:02 am
3	F1712092106.D	FID17A.M	WG1580304-4	WG1580304,FRBE37,..	12/9/2021 12:30 pm
4	F1712092108.D	FID17A.M	DCM		12/9/2021 1:59 pm
5	F1712092110.D	FID17A.M	IB1712092101F		12/9/2021 3:27 pm
6	F1712092112.D	FID17A.M	L2165245-01D,42,2	WG1580304,WG15794..	12/9/2021 4:56 pm
7	F1712092114.D	FID17A.M	WG1580304-5	WG1580304,FRBE37,..	12/9/2021 6:24 pm
8	F1712092116.D	FID17A.M	dcm		12/9/2021 7:53 pm
9	F1712092118.D	FID17A.M	ib		12/9/2021 9:21 pm
10	F1712092120.D	FID17A.M	WG1580989-1,42,,		12/9/2021 10:49 pm
11	F1712092122.D	FID17A.M	WG1571660-1,42,,		12/10/2021 12:18 am
12	F1712092124.D	FID17A.M	WG1579762-1,42,,		12/10/2021 1:46 am
13	F1712092126.D	FID17A.M	WG1580989-2,42,,		12/10/2021 3:14 am
14	F1712092128.D	FID17A.M	WG1580989-3,42,,		12/10/2021 4:42 am
15	F1712092130.D	FID17A.M	WG1579762-2,42,,		12/10/2021 6:11 am
16	F1712092132.D	FID17A.M	WG1579762-3,42,,		12/10/2021 7:39 am
17	F1712092134.D	FID17A.M	WG1571660-2,42,,		12/10/2021 9:07 am

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032106.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 1:41 pm
Operator : FID17:CC
Sample : WG1579117-1
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 10:39:34 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:43 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	113	0.00
2	t	n-Octane (C8)	0.864	0.859	0.6	111	0.00
3	t	n-Nonane (C9)	0.922	0.882	4.3	109	0.00
4	t	n-Decane (C10)	0.944	0.939	0.5	111	0.00
5	t	n-Undecane (C11)	0.923	0.950	-2.9	113	0.00
6	t	n-Dodecane (C12)	0.925	0.951	-2.8	113	0.00
7	t	n-Tridecane (C13)	0.928	0.961	-3.6	114	0.00
9	t	n-Tetradecane (C14)	0.956	0.977	-2.2	113	0.00
11	t	n-Pentadecane (C15)	0.957	0.969	-1.3	112	0.00
12	t	n-Hexadecane (C16)	0.955	0.983	-2.9	115	0.00
14	t	n-Heptadecane (C17)	0.954	0.987	-3.5	114	0.00
15	t	Pristane	0.990	1.007	-1.7	114	0.00
16	t	n-Octadecane (C18)	0.970	0.994	-2.5	114	0.00
17	t	Phytane	0.908	0.938	-3.3	115	0.00
18	t	n-Nonadecane (C19)	0.973	1.070	-10.0	122	0.00
19	s	ortho-terphenyl	1.084	1.133	-4.5	117	0.00
20	t	n-Eicosane (C20)	0.979	1.007	-2.9	114	0.00
21	t	n-Heneicosane (C21)	0.982	1.002	-2.0	113	0.00
22	t	n-Docosane (C22)	0.983	1.013	-3.1	115	0.00
23	t	n-Tricosane (C23)	0.985	1.015	-3.0	115	0.00
24	s	d50-Tetracosane	0.860	0.971	-12.9	124	0.00
25	t	n-Tetracosane (C24)	0.982	0.960	2.2	109	0.00
26	t	n-Pentacosane (C25)	0.961	0.992	-3.2	115	0.00
27	t	n-Hexacosane (C26)	0.987	1.020	-3.3	115	0.00
28	t	n-Heptacosane (C27)	0.989	0.983	0.6	111	0.00
29	t	n-Octacosane (C28)	1.026	1.024	0.2	114	0.00
30	t	n-Nonacosane (C29)	1.006	1.019	-1.3	114	0.00
31	t	n-Triacontane (C30)	1.010	1.020	-1.0	113	0.00
32	t	n-Hentriacontane (C31)	0.977	0.989	-1.2	114	0.00
33	t	n-Dotriacontane (C32)	1.025	1.037	-1.2	114	0.00
34	t	n-Tritriacontane (C33)	0.998	1.001	-0.3	114	0.00
35	t	n-tetratriacontane (C34)	0.991	0.996	-0.5	114	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032106.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 1:41 pm
Operator : FID17:CC
Sample : WG1579117-1
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 10:39:34 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:43 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	1.006	-8.6	123	0.00
37 t	n-Hexatriacontane (C36)	1.115	1.078	3.3	109	0.01
38 t	n-Heptatriacontane (C37)	1.011	0.992	1.9	110	0.01
39 t	n-Octatriacontane (C38)	1.022	1.021	0.1	112	0.01
41 t	n-Tetracontane (C40)	1.009	1.016	-0.7	113	0.01

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.07	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032106.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 1:41 pm
Operator : FID17:CC
Sample : WG1579117-1
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 10:39:34 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:43 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.629	60378967	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.694	68380092	52.243 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	104.49%
24) s	d50-Tetracosane	34.437	58599943	56.430 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	112.86%
	Target Compounds			
2) t	n-Octane (C8)	4.604	51885192	49.704 ug/mL M4
3) t	n-Nonane (C9)	6.626	53277483	47.830 ug/mL M4
4) t	n-Decane (C10)	9.007	56677310	49.703 ug/mL M4
5) t	n-Undecane (C11)	11.469	57334604	51.464 ug/mL M4
6) t	n-Dodecane (C12)	13.868	57399447	51.380 ug/mL M4
7) t	n-Tridecane (C13)	16.157	58003232	51.781 ug/mL M4
9) t	n-Tetradecane (C14)	18.327	58972210	51.096 ug/mL M4
11) t	n-Pentadecane (C15)	20.382	58531620	50.656 ug/mL M4
12) t	n-Hexadecane (C16)	22.327	59354662	51.460 ug/mL M4
14) t	n-Heptadecane (C17)	24.180	59619101	51.738 ug/mL M4
15) t	Pristane	24.288	60797722	50.875 ug/mL M4
16) t	n-Octadecane (C18)	25.940	59990393	51.203 ug/mL M4
17) t	Phytane	26.096	56639691	51.677 ug/mL M4
18) t	n-Nonadecane (C19)	27.617	64581274	54.955 ug/mL M4
20) t	n-Eicosane (C20)	29.217	60774594	51.422 ug/mL M4
21) t	n-Heneicosane (C21)	30.747	60512819	51.036 ug/mL M4
22) t	n-Docosane (C22)	32.217	61189657	51.527 ug/mL M4
23) t	n-Tricosane (C23)	33.624	61256101	51.481 ug/mL M4
25) t	n-Tetracosane (C24)	34.978	57943642	48.850 ug/mL M4
26) t	n-Pentacosane (C25)	36.280	59873827	51.585 ug/mL M4
27) t	n-Hexacosane (C26)	37.532	61595652	51.698 ug/mL M4
28) t	n-Heptacosane (C27)	38.743	59368598	49.695 ug/mL M4
29) t	n-Octacosane (C28)	39.911	61845940	49.937 ug/mL M4
30) t	n-Nonacosane (C29)	41.039	61523316	50.647 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032106.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 1:41 pm
Operator : FID17:CC
Sample : WG1579117-1
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 10:39:34 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:43 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

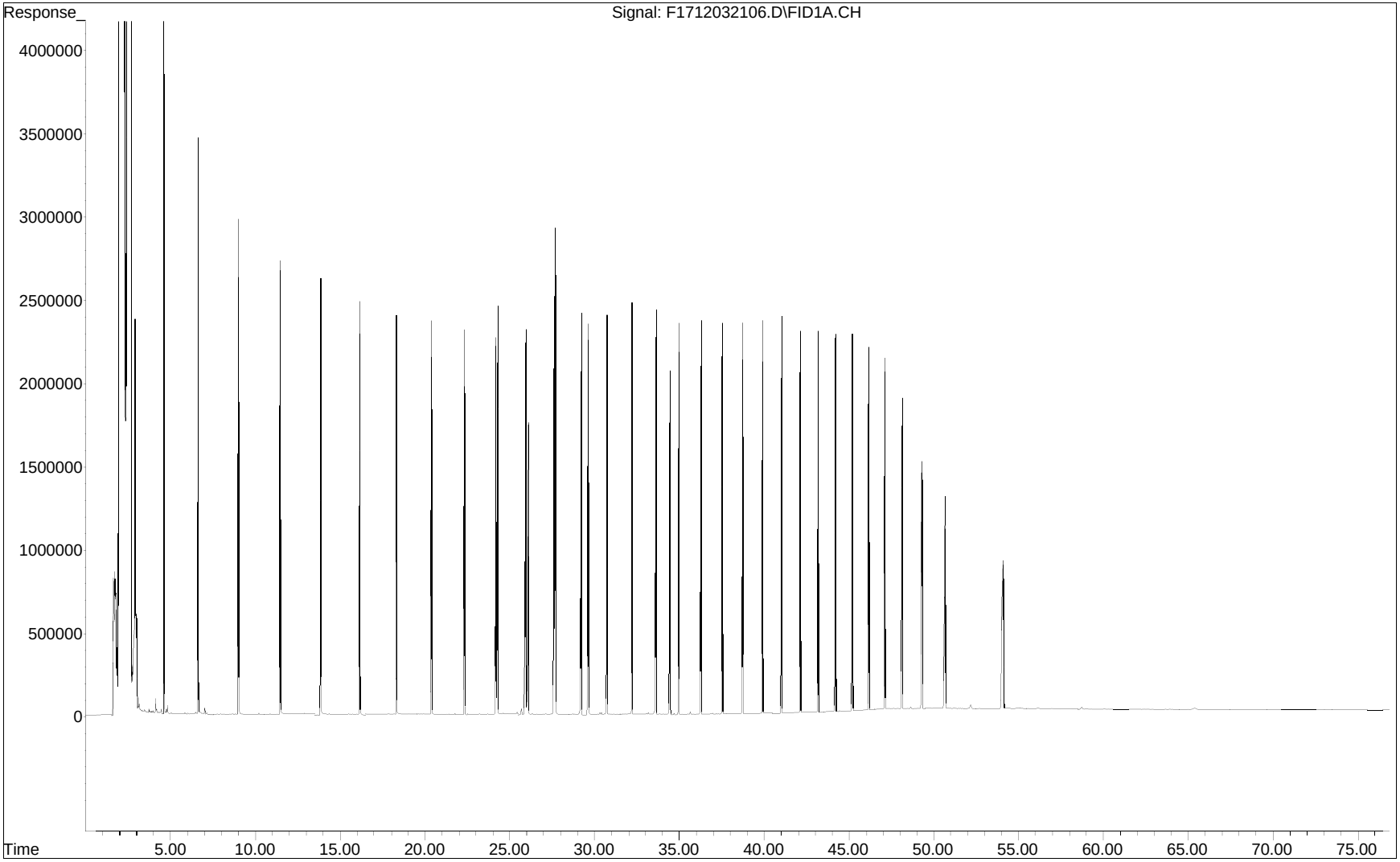
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.133	61570620	50.489 ug/mL M4
32) t	n-Hentriacontane (C31)	43.189	59743013	50.651 ug/mL M4
33) t	n-Dotriacontane (C32)	44.217	62594414	50.558 ug/mL M4
34) t	n-Tritriacontane (C33)	45.208	60451584	50.161 ug/mL M4
35) t	n-tetratriacontane (C34)	46.171	60152550	50.264 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.117	60721873	54.311 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.146	65087706	48.358 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.306	59908732	49.078 ug/mL M4
39) t	n-Octatriacontane (C38)	50.657	61633797	49.942 ug/mL M4
41) t	n-Tetracontane (C40)	54.083	61339913	50.363 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032106.D
Operator : FID17:CC
Acquired : 03 Dec 2021 1:41 pm using AcqMethod FID17A.M
Sample Name: WG1579117-1
Instrument: FID17
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 3
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032130.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:20 am
Operator : FID17:CC
Sample : WG1579117-2
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 11:14:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	112	-0.01
2	t	n-Octane (C8)	0.864	0.837	3.1	107	-0.01
3	t	n-Nonane (C9)	0.922	0.866	6.1	106	0.00
4	t	n-Decane (C10)	0.944	0.932	1.3	109	0.00
5	t	n-Undecane (C11)	0.923	0.945	-2.4	112	-0.01
6	t	n-Dodecane (C12)	0.925	0.949	-2.6	112	-0.01
7	t	n-Tridecane (C13)	0.928	0.959	-3.3	113	-0.01
9	t	n-Tetradecane (C14)	0.956	0.977	-2.2	113	0.00
11	t	n-Pentadecane (C15)	0.957	0.971	-1.5	111	-0.01
12	t	n-Hexadecane (C16)	0.955	0.984	-3.0	114	0.00
14	t	n-Heptadecane (C17)	0.954	0.987	-3.5	113	-0.01
15	t	Pristane	0.990	1.014	-2.4	114	-0.01
16	t	n-Octadecane (C18)	0.970	1.001	-3.2	114	0.00
17	t	Phytane	0.908	0.945	-4.1	115	-0.01
18	t	n-Nonadecane (C19)	0.973	1.069	-9.9	121	0.00
19	s	ortho-terphenyl	1.084	1.155	-6.5	118	-0.01
20	t	n-Eicosane (C20)	0.979	1.008	-3.0	114	-0.01
21	t	n-Heneicosane (C21)	0.982	1.004	-2.2	113	0.00
22	t	n-Docosane (C22)	0.983	1.016	-3.4	114	0.00
23	t	n-Tricosane (C23)	0.985	1.017	-3.2	114	-0.01
24	s	d50-Tetracosane	0.860	0.973	-13.1	123	0.00
25	t	n-Tetracosane (C24)	0.982	0.959	2.3	108	0.00
26	t	n-Pentacosane (C25)	0.961	0.992	-3.2	114	0.00
27	t	n-Hexacosane (C26)	0.987	1.020	-3.3	114	0.00
28	t	n-Heptacosane (C27)	0.989	0.984	0.5	111	0.00
29	t	n-Octacosane (C28)	1.026	1.024	0.2	113	0.00
30	t	n-Nonacosane (C29)	1.006	1.017	-1.1	113	0.00
31	t	n-Triacontane (C30)	1.010	1.018	-0.8	113	0.00
32	t	n-Hentriacontane (C31)	0.977	0.986	-0.9	113	0.00
33	t	n-Dotriacontane (C32)	1.025	1.032	-0.7	113	0.00
34	t	n-Tritriacontane (C33)	0.998	0.993	0.5	112	0.00
35	t	n-tetratriacontane (C34)	0.991	0.986	0.5	112	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032130.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:20 am
Operator : FID17:CC
Sample : WG1579117-2
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 11:14:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.992	-7.1	120	0.00
37 t	n-Hexatriacontane (C36)	1.115	1.060	4.9	107	-0.01
38 t	n-Heptatriacontane (C37)	1.011	0.971	4.0	107	0.00
39 t	n-Octatriacontane (C38)	1.022	0.997	2.4	109	-0.01
41 t	n-Tetracontane (C40)	1.009	0.990	1.9	109	-0.02

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.05	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032130.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:20 am
Operator : FID17:CC
Sample : WG1579117-2
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 11:14:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.620	59971545	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.683	69242557	53.262 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 106.52%	
24) s	d50-Tetracosane	34.427	58375832	56.596 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 113.19%	
	Target Compounds			
2) t	n-Octane (C8)	4.601	50225864	48.442 ug/mL M4
3) t	n-Nonane (C9)	6.622	51917217	46.925 ug/mL M4
4) t	n-Decane (C10)	9.004	55889343	49.345 ug/mL M4
5) t	n-Undecane (C11)	11.463	56698547	51.238 ug/mL M4
6) t	n-Dodecane (C12)	13.863	56922416	51.300 ug/mL M4
7) t	n-Tridecane (C13)	16.151	57511827	51.691 ug/mL M4
9) t	n-Tetradecane (C14)	18.322	58613281	51.131 ug/mL M4
11) t	n-Pentadecane (C15)	20.374	58211496	50.722 ug/mL M4
12) t	n-Hexadecane (C16)	22.323	59015381	51.514 ug/mL M4
14) t	n-Heptadecane (C17)	24.172	59204569	51.728 ug/mL M4
15) t	Pristane	24.281	60790886	51.215 ug/mL M4
16) t	n-Octadecane (C18)	25.933	60015392	51.572 ug/mL M4
17) t	Phytane	26.087	56693013	52.077 ug/mL M4
18) t	n-Nonadecane (C19)	27.609	64089284	54.907 ug/mL M4
20) t	n-Eicosane (C20)	29.209	60460215	51.503 ug/mL M4
21) t	n-Heneicosane (C21)	30.741	60201282	51.119 ug/mL M4
22) t	n-Docosane (C22)	32.208	60918607	51.648 ug/mL M4
23) t	n-Tricosane (C23)	33.613	60964391	51.584 ug/mL M4
25) t	n-Tetracosane (C24)	34.966	57520235	48.822 ug/mL M4
26) t	n-Pentacosane (C25)	36.269	59513422	51.623 ug/mL M4
27) t	n-Hexacosane (C26)	37.521	61161811	51.683 ug/mL M4
28) t	n-Heptacosane (C27)	38.730	58993436	49.717 ug/mL M4
29) t	n-Octacosane (C28)	39.900	61428734	49.937 ug/mL M4
30) t	n-Nonacosane (C29)	41.027	61001398	50.559 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032130.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:20 am
Operator : FID17:CC
Sample : WG1579117-2
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 11:14:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

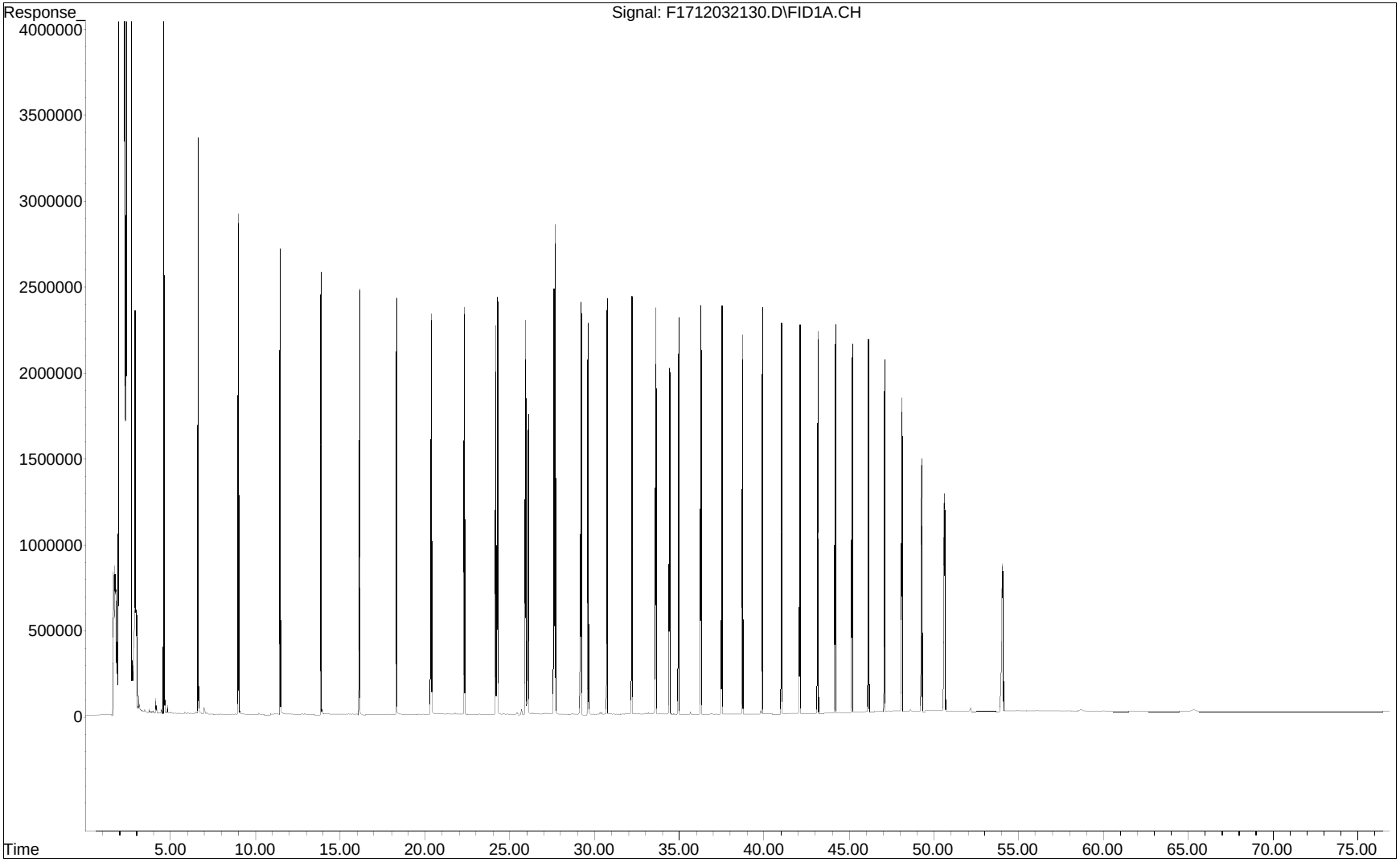
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.121	61070971	50.420 ug/mL M4
32) t	n-Hentriacontane (C31)	43.177	59137002	50.478 ug/mL M4
33) t	n-Dotriacontane (C32)	44.202	61868558	50.311 ug/mL M4
34) t	n-Tritriacontane (C33)	45.196	59560382	49.758 ug/mL M4
35) t	n-tetratriacontane (C34)	46.158	59142468	49.755 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.103	59464897	53.548 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.124	63551517	47.537 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.289	58208144	48.009 ug/mL M4
39) t	n-Octatriacontane (C38)	50.633	59786136	48.774 ug/mL M4
41) t	n-Tetracontane (C40)	54.047	59363044	49.071 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032130.D
Operator : FID17:CC
Acquired : 04 Dec 2021 7:20 am using AcqMethod FID17A.M
Sample Name: WG1579117-2
Instrument: FID17
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 15
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032146.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:06 pm
Operator : FID17:CC
Sample : WG1579117-3
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:06:08 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	110	-0.02
2	t	n-Octane (C8)	0.864	0.847	2.0	106	0.00
3	t	n-Nonane (C9)	0.922	0.866	6.1	105	-0.01
4	t	n-Decane (C10)	0.944	0.938	0.6	108	-0.01
5	t	n-Undecane (C11)	0.923	0.955	-3.5	111	-0.01
6	t	n-Dodecane (C12)	0.925	0.953	-3.0	110	-0.01
7	t	n-Tridecane (C13)	0.928	0.966	-4.1	112	-0.01
9	t	n-Tetradecane (C14)	0.956	0.984	-2.9	111	-0.01
11	t	n-Pentadecane (C15)	0.957	0.976	-2.0	110	-0.01
12	t	n-Hexadecane (C16)	0.955	0.988	-3.5	112	-0.01
14	t	n-Heptadecane (C17)	0.954	0.992	-4.0	112	-0.01
15	t	Pristane	0.990	1.019	-2.9	112	-0.01
16	t	n-Octadecane (C18)	0.970	1.004	-3.5	112	-0.01
17	t	Phytane	0.908	0.945	-4.1	113	-0.01
18	t	n-Nonadecane (C19)	0.973	1.055	-8.4	117	-0.01
19	s	ortho-terphenyl	1.084	1.162	-7.2	117	-0.01
20	t	n-Eicosane (C20)	0.979	1.007	-2.9	111	-0.02
21	t	n-Heneicosane (C21)	0.982	1.002	-2.0	110	-0.01
22	t	n-Docosane (C22)	0.983	1.014	-3.2	112	0.00
23	t	n-Tricosane (C23)	0.985	1.014	-2.9	112	-0.01
24	s	d50-Tetracosane	0.860	0.969	-12.7	121	-0.01
25	t	n-Tetracosane (C24)	0.982	0.957	2.5	106	0.00
26	t	n-Pentacosane (C25)	0.961	0.990	-3.0	112	-0.01
27	t	n-Hexacosane (C26)	0.987	1.017	-3.0	112	0.00
28	t	n-Heptacosane (C27)	0.989	0.980	0.9	108	-0.01
29	t	n-Octacosane (C28)	1.026	1.021	0.5	110	0.00
30	t	n-Nonacosane (C29)	1.006	1.014	-0.8	110	0.00
31	t	n-Triacontane (C30)	1.010	1.015	-0.5	110	-0.01
32	t	n-Hentriacontane (C31)	0.977	0.983	-0.6	111	0.00
33	t	n-Dotriacontane (C32)	1.025	1.029	-0.4	111	-0.01
34	t	n-Tritriacontane (C33)	0.998	0.991	0.7	110	0.00
35	t	n-tetratriacontane (C34)	0.991	0.986	0.5	110	-0.01

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032146.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:06 pm
Operator : FID17:CC
Sample : WG1579117-3
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:06:08 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.995	-7.5	119	-0.01
37 t	n-Hexatriacontane (C36)	1.115	1.067	4.3	106	-0.02
38 t	n-Heptatriacontane (C37)	1.011	0.981	3.0	106	-0.01
39 t	n-Octatriacontane (C38)	1.022	1.011	1.1	108	-0.01
41 t	n-Tetracontane (C40)	1.009	1.007	0.2	109	-0.02

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.06	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032146.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:06 pm
Operator : FID17:CC
Sample : WG1579117-3
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:06:08 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.618	58886559	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.681	68408191	53.590 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 107.18%	
24) s	d50-Tetracosane	34.424	57075194	56.355 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 112.71%	
	Target Compounds			
2) t	n-Octane (C8)	4.603	49898589	49.013 ug/mL M4
3) t	n-Nonane (C9)	6.621	51019497	46.963 ug/mL M4
4) t	n-Decane (C10)	9.002	55219009	49.652 ug/mL M4
5) t	n-Undecane (C11)	11.462	56209490	51.732 ug/mL M4
6) t	n-Dodecane (C12)	13.861	56109495	51.499 ug/mL M4
7) t	n-Tridecane (C13)	16.149	56857295	52.044 ug/mL M4
9) t	n-Tetradecane (C14)	18.319	57916591	51.454 ug/mL M4
11) t	n-Pentadecane (C15)	20.371	57492397	51.018 ug/mL M4
12) t	n-Hexadecane (C16)	22.319	58167574	51.709 ug/mL M4
14) t	n-Heptadecane (C17)	24.170	58437068	51.998 ug/mL M4
15) t	Pristane	24.277	59999015	51.479 ug/mL M4
16) t	n-Octadecane (C18)	25.930	59097378	51.719 ug/mL M4
17) t	Phytane	26.087	55657638	52.068 ug/mL M4
18) t	n-Nonadecane (C19)	27.607	62137345	54.216 ug/mL M4
20) t	n-Eicosane (C20)	29.206	59317152	51.461 ug/mL M4
21) t	n-Heneicosane (C21)	30.737	59002659	51.024 ug/mL M4
22) t	n-Docosane (C22)	32.206	59694030	51.542 ug/mL M4
23) t	n-Tricosane (C23)	33.611	59707883	51.452 ug/mL M4
25) t	n-Tetracosane (C24)	34.966	56359224	48.718 ug/mL M4
26) t	n-Pentacosane (C25)	36.263	58316047	51.517 ug/mL M4
27) t	n-Hexacosane (C26)	37.520	59904752	51.553 ug/mL M4
28) t	n-Heptacosane (C27)	38.728	57730878	49.549 ug/mL M4
29) t	n-Octacosane (C28)	39.898	60118564	49.773 ug/mL M4
30) t	n-Nonacosane (C29)	41.025	59697070	50.389 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032146.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:06 pm
Operator : FID17:CC
Sample : WG1579117-3
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:06:08 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

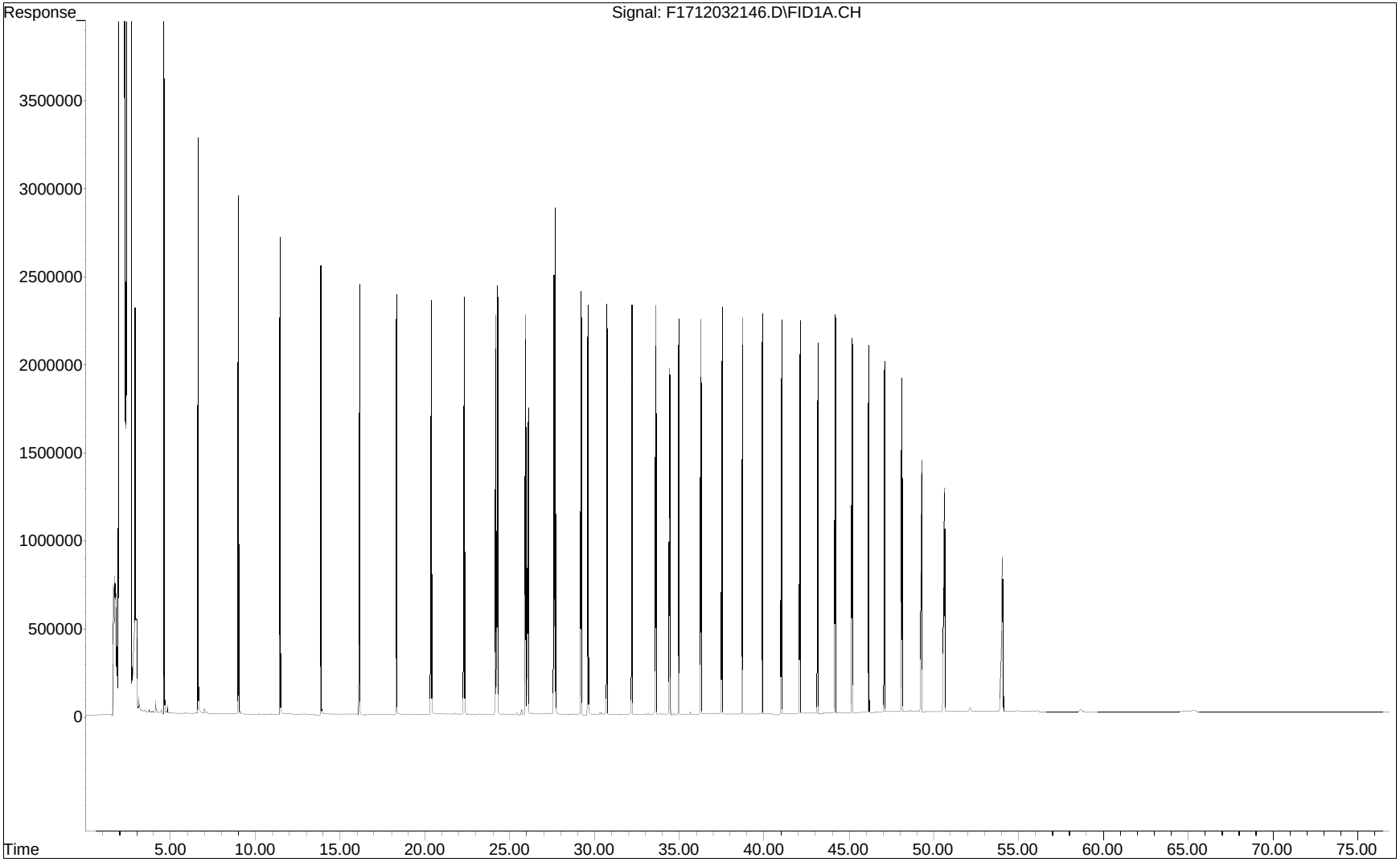
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.117	59772899	50.257 ug/mL M4
32) t	n-Hentriacontane (C31)	43.174	57887464	50.322 ug/mL M4
33) t	n-Dotriacontane (C32)	44.198	60596461	50.185 ug/mL M4
34) t	n-Tritriacontane (C33)	45.192	58385076	49.674 ug/mL M4
35) t	n-tetratriacontane (C34)	46.155	58035611	49.724 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.098	58593027	53.735 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.118	62855725	47.883 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.281	57776042	48.531 ug/mL M4
39) t	n-Octatriacontane (C38)	50.630	59527229	49.458 ug/mL M4
41) t	n-Tetracontane (C40)	54.047	59295958	49.919 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032146.D
Operator : FID17:CC
Acquired : 04 Dec 2021 7:06 pm using AcqMethod FID17A.M
Sample Name: WG1579117-3
Instrument: FID17
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 23
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032164.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 8:19 am
Operator : FID17:CC
Sample : WG1579117-4
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 32 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 14:05:42 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	110	-0.02
2	t	n-Octane (C8)	0.864	0.845	2.2	105	0.00
3	t	n-Nonane (C9)	0.922	0.878	4.8	105	-0.01
4	t	n-Decane (C10)	0.944	0.926	1.9	106	-0.01
5	t	n-Undecane (C11)	0.923	0.943	-2.2	109	-0.01
6	t	n-Dodecane (C12)	0.925	0.948	-2.5	109	-0.02
7	t	n-Tridecane (C13)	0.928	0.955	-2.9	110	-0.02
9	t	n-Tetradecane (C14)	0.956	0.972	-1.7	109	-0.02
11	t	n-Pentadecane (C15)	0.957	0.967	-1.0	108	-0.02
12	t	n-Hexadecane (C16)	0.955	0.979	-2.5	111	-0.02
14	t	n-Heptadecane (C17)	0.954	0.981	-2.8	110	-0.02
15	t	Pristane	0.990	1.020	-3.0	112	-0.02
16	t	n-Octadecane (C18)	0.970	0.998	-2.9	111	-0.02
17	t	Phytane	0.908	0.943	-3.9	112	-0.02
18	t	n-Nonadecane (C19)	0.973	1.063	-9.2	117	-0.02
19	s	ortho-terphenyl	1.084	1.139	-5.1	114	-0.02
20	t	n-Eicosane (C20)	0.979	1.004	-2.6	110	-0.02
21	t	n-Heneicosane (C21)	0.982	1.001	-1.9	110	-0.02
22	t	n-Docosane (C22)	0.983	1.013	-3.1	111	-0.02
23	t	n-Tricosane (C23)	0.985	1.014	-2.9	111	-0.02
24	s	d50-Tetracosane	0.860	0.970	-12.8	120	-0.02
25	t	n-Tetracosane (C24)	0.982	0.956	2.6	105	-0.02
26	t	n-Pentacosane (C25)	0.961	0.990	-3.0	111	-0.02
27	t	n-Hexacosane (C26)	0.987	1.019	-3.2	112	-0.02
28	t	n-Heptacosane (C27)	0.989	0.982	0.7	108	-0.02
29	t	n-Octacosane (C28)	1.026	1.023	0.3	110	-0.02
30	t	n-Nonacosane (C29)	1.006	1.016	-1.0	110	-0.02
31	t	n-Triacontane (C30)	1.010	1.018	-0.8	110	-0.02
32	t	n-Hentriacontane (C31)	0.977	0.986	-0.9	110	-0.02
33	t	n-Dotriacontane (C32)	1.025	1.032	-0.7	110	-0.02
34	t	n-Tritriacontane (C33)	0.998	0.994	0.4	109	-0.02
35	t	n-tetratriacontane (C34)	0.991	0.990	0.1	109	-0.02

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032164.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 8:19 am
Operator : FID17:CC
Sample : WG1579117-4
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 32 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 14:05:42 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.998	-7.8	118	-0.02
37 t	n-Hexatriacontane (C36)	1.115	1.071	3.9	105	-0.03
38 t	n-Heptatriacontane (C37)	1.011	0.985	2.6	106	-0.03
39 t	n-Octatriacontane (C38)	1.022	1.016	0.6	108	-0.03
41 t	n-Tetracontane (C40)	1.009	1.015	-0.6	109	-0.05

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.07	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032164.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 8:19 am
Operator : FID17:CC
Sample : WG1579117-4
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 32 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 14:05:42 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.609	58469116	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.672	66585387	52.534	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 105.07%			
24) s	d50-Tetracosane	34.414	56701887	56.386	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 112.77%			
	Target Compounds					
2) t	n-Octane (C8)	4.602	49388484	48.858	ug/mL	M4
3) t	n-Nonane (C9)	6.621	51334424	47.591	ug/mL	M4
4) t	n-Decane (C10)	8.999	54128691	49.019	ug/mL	M4
5) t	n-Undecane (C11)	11.459	55130252	51.101	ug/mL	M4
6) t	n-Dodecane (C12)	13.857	55422084	51.231	ug/mL	M4
7) t	n-Tridecane (C13)	16.144	55835972	51.474	ug/mL	M4
9) t	n-Tetradecane (C14)	18.313	56828363	50.847	ug/mL	M4
11) t	n-Pentadecane (C15)	20.368	56535568	50.527	ug/mL	M4
12) t	n-Hexadecane (C16)	22.313	57261049	51.267	ug/mL	M4
14) t	n-Heptadecane (C17)	24.164	57355218	51.400	ug/mL	M4
15) t	Pristane	24.270	59622574	51.521	ug/mL	M4
16) t	n-Octadecane (C18)	25.923	58337169	51.418	ug/mL	M4
17) t	Phytane	26.078	55153237	51.965	ug/mL	M4
18) t	n-Nonadecane (C19)	27.600	62153459	54.617	ug/mL	M4
20) t	n-Eicosane (C20)	29.200	58703954	51.292	ug/mL	M4
21) t	n-Heneicosane (C21)	30.728	58528167	50.975	ug/mL	M4
22) t	n-Docosane (C22)	32.198	59219090	51.497	ug/mL	M4
23) t	n-Tricosane (C23)	33.605	59265317	51.435	ug/mL	M4
25) t	n-Tetracosane (C24)	34.956	55920620	48.684	ug/mL	M4
26) t	n-Pentacosane (C25)	36.257	57906506	51.520	ug/mL	M4
27) t	n-Hexacosane (C26)	37.510	59598846	51.656	ug/mL	M4
28) t	n-Heptacosane (C27)	38.719	57394273	49.612	ug/mL	M4
29) t	n-Octacosane (C28)	39.886	59826509	49.884	ug/mL	M4
30) t	n-Nonacosane (C29)	41.014	59394027	50.491	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032164.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 8:19 am
Operator : FID17:CC
Sample : WG1579117-4
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 32 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 14:05:42 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

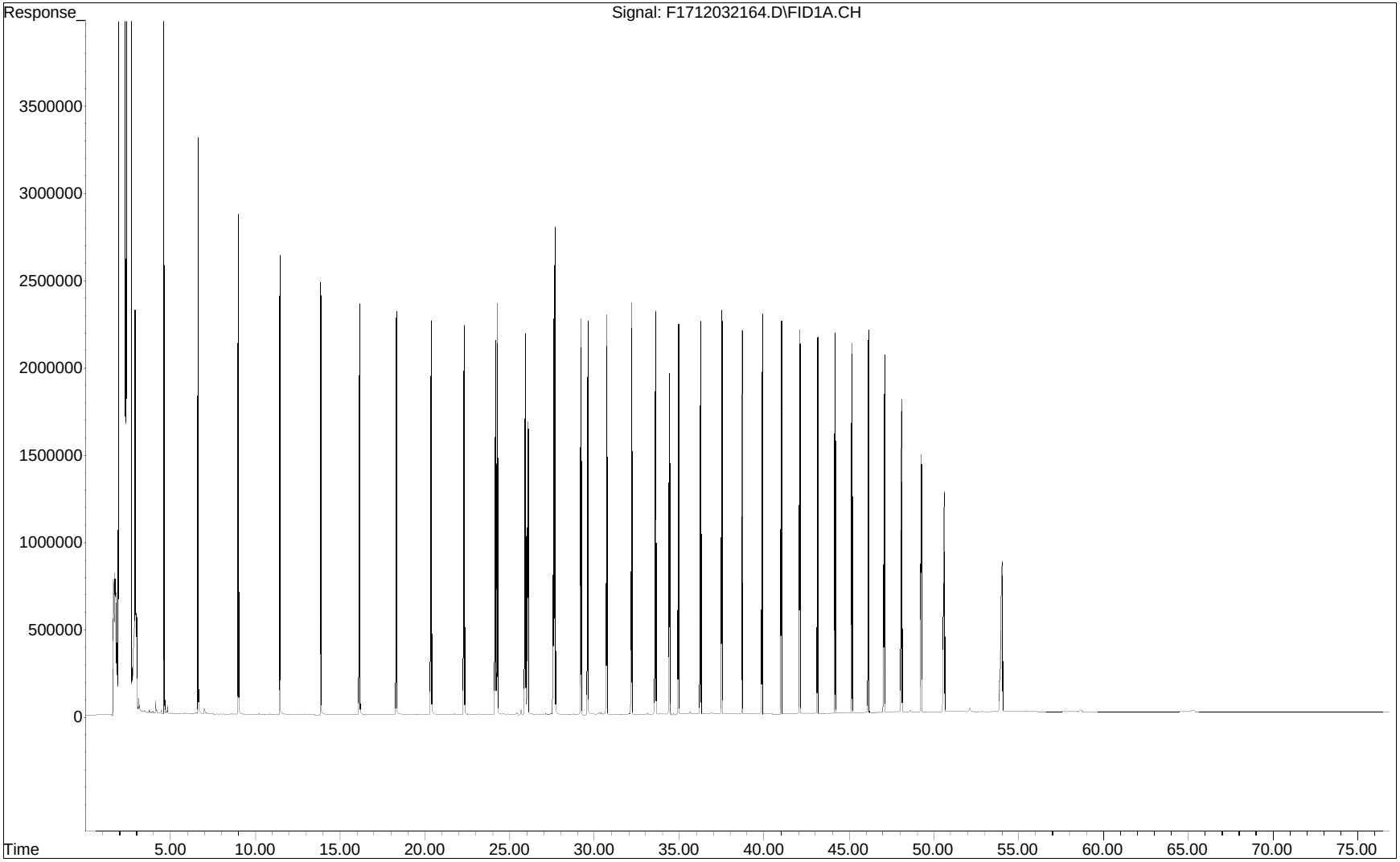
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.105	59495947	50.382 ug/mL M4
32) t	n-Hentriacontane (C31)	43.162	57638511	50.463 ug/mL M4
33) t	n-Dotriacontane (C32)	44.185	60315880	50.309 ug/mL M4
34) t	n-Tritriacontane (C33)	45.180	58143822	49.822 ug/mL M4
35) t	n-tetratriacontane (C34)	46.144	57873178	49.939 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.087	58365991	53.909 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.108	62642133	48.061 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.269	57606982	48.734 ug/mL M4
39) t	n-Octatriacontane (C38)	50.611	59423255	49.724 ug/mL M4
41) t	n-Tetracontane (C40)	54.017	59348979	50.320 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032164.D
Operator : FID17:CC
Acquired : 05 Dec 2021 8:19 am using AcqMethod FID17A.M
Sample Name: WG1579117-4
Instrument: FID17
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 32
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032160.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 5:23 am
Operator : FID17:MJS
Sample : L2165245-02D,42,10
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 30 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 13:35:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.606	57786466	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.651	456969	0.365 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.73%#
24) s	d50-Tetracosane	34.407	337735	0.340 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.68%#
	Target Compounds			
2) t	n-Octane (C8)	4.566	480393	0.481 ug/mL M4
3) t	n-Nonane (C9)	6.594	5507811	5.166 ug/mL M4
4) t	n-Decane (C10)	8.989	30758891	28.184 ug/mL M4
5) t	n-Undecane (C11)	11.466	75633457	70.934 ug/mL M4
6) t	n-Dodecane (C12)	13.868	79161810	74.040 ug/mL M4
7) t	n-Tridecane (C13)	16.152	72921205	68.019 ug/mL M4
8) t	1380	17.803	10118326	9.160 ug/mL M4
9) t	n-Tetradecane (C14)	18.312	38906407	35.223 ug/mL M4
10) t	1470	19.582	8821739	7.977 ug/mL M4
11) t	n-Pentadecane (C15)	20.356	14394917	13.017 ug/mL M4
12) t	n-Hexadecane (C16)	22.300	2817665	2.552 ug/mL M4
13) t	1650	23.207	368167	0.334 ug/mL M4
14) t	n-Heptadecane (C17)	24.156	597477	0.542 ug/mL M4
15) t	Pristane	24.244	267911	0.234 ug/mL M4
16) t	n-Octadecane (C18)	25.919	193847	0.173 ug/mL M4
17) t	Phytane	26.062	52266	0.050 ug/mL M4
18) t	n-Nonadecane (C19)	27.603	34014	0.030 ug/mL M4
20) t	n-Eicosane (C20)	29.207	43516	0.038 ug/mL M4
21) t	n-Heneicosane (C21)	30.742	13278	0.012 ug/mL M4
22) t	n-Docosane (C22)	32.201	18244	0.016 ug/mL M4
23) t	n-Tricosane (C23)	33.598	59165	0.052 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032160.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 5:23 am
Operator : FID17:MJS
Sample : L2165245-02D,42,10
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 30 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 13:35:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

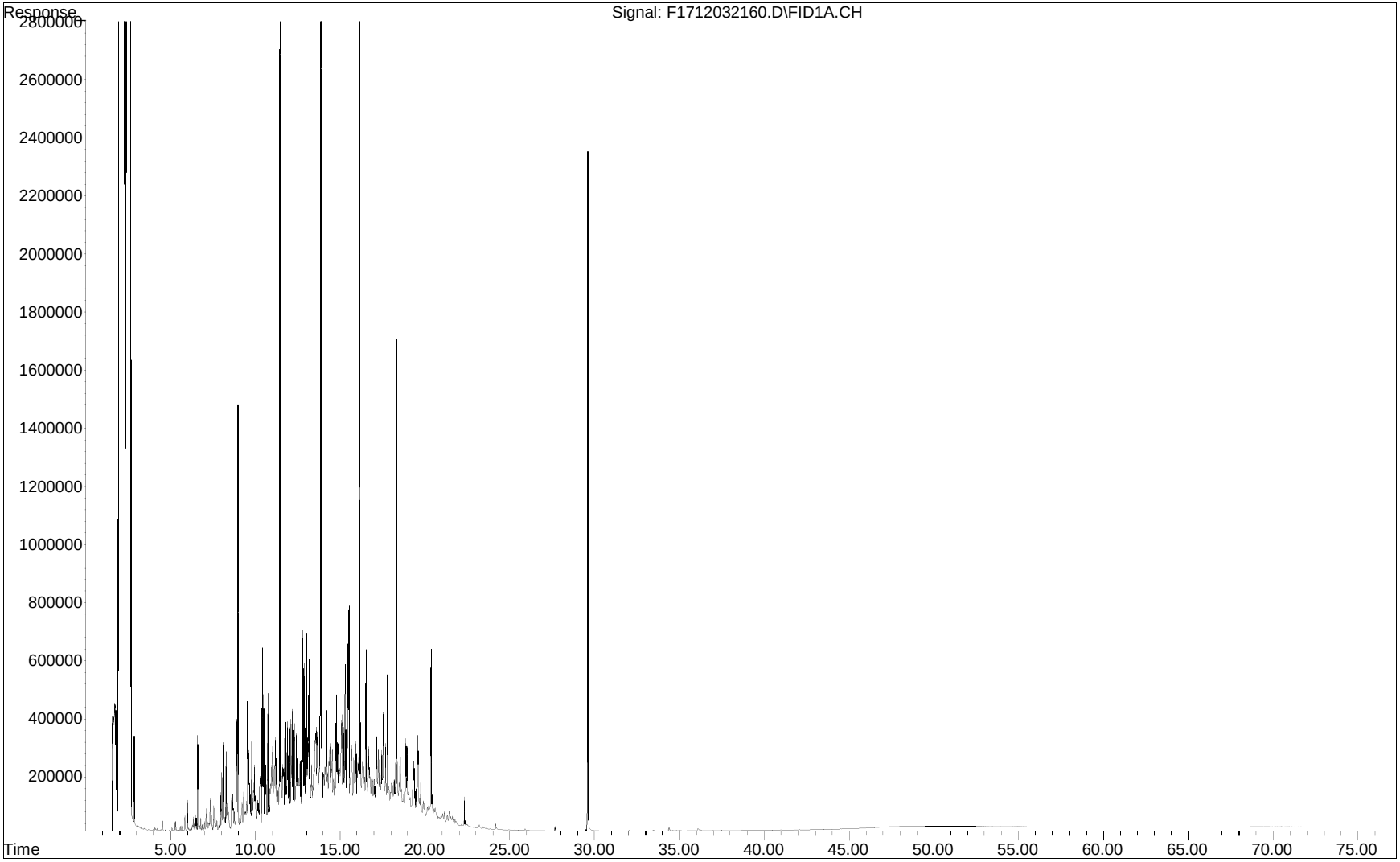
	Compound	R.T.	Response	Conc	Units
25) t	n-Tetracosane (C24)	34.952	46277	0.041	ug/mL M4
26) t	n-Pentacosane (C25)	36.250	131242	0.118	ug/mL M4
27) t	n-Hexacosane (C26)	37.506	55238	0.048	ug/mL M4
28) t	n-Heptacosane (C27)	38.713	61721	0.054	ug/mL M4
29) t	n-Octacosane (C28)	39.875	52789	0.045	ug/mL M4
30) t	n-Nonacosane (C29)	41.002	45341	0.039	ug/mL M4
31) t	n-Triacontane (C30)	42.088	33257	0.028	ug/mL M4
32) t	n-Hentriacontane (C31)	43.146	32880	0.029	ug/mL M4
33) t	n-Dotriacontane (C32)	44.168	23816	0.020	ug/mL M4
34) t	n-Tritriacontane (C33)	45.157	16609	0.014	ug/mL M4
35) t	n-tetratriacontane (C34)	46.131	13127	0.011	ug/mL M4
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	36.038	1972877555	1745.793	ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	1727019491	1528.234	ug/mLm
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml d
43) h	C9-C40 Total Petroleu BS	0.000	-115033617	N.D.	ug/mld
44) h	C10-C28 DRO	24.454	1691753548	1514.890	ug/mL m
44) h	C10-C28 DRO BS	24.454	1671800802	1497.023	ug/mLm
45) h	C28-C40 ORO	46.963	79497262	68.137	ug/mL m
45) h	C28-C40 ORO BS	46.963	-2106615	N.D.	ug/mLm
46) h	Total Resolved Hydroc...	36.038	1256471539	1111.848	ug/mL m

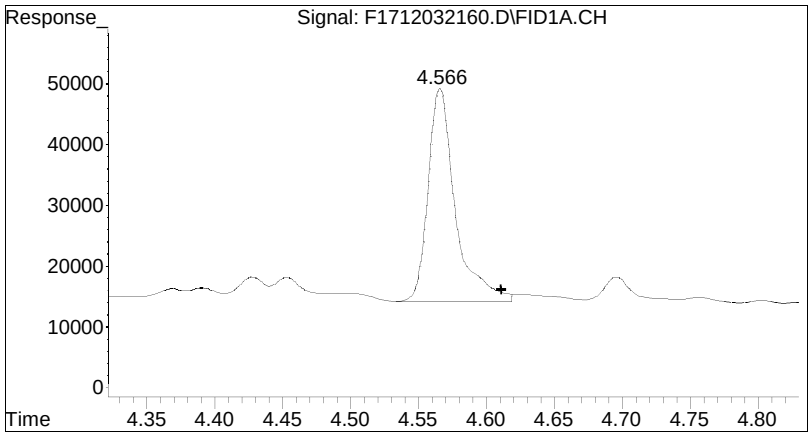
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

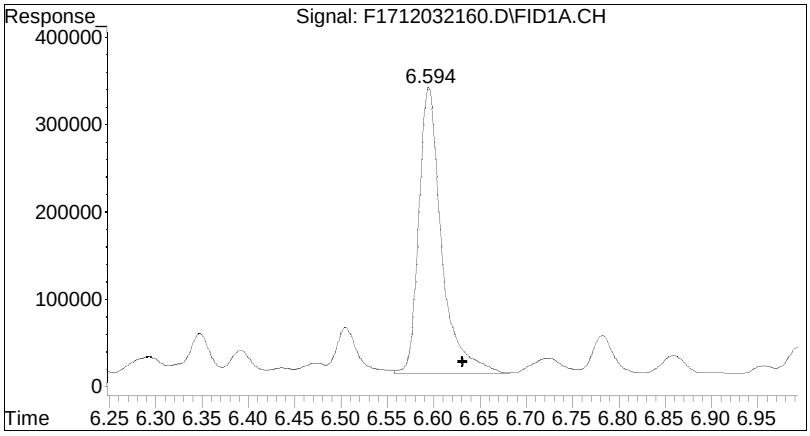
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032160.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 5:23 am using AcqMethod FID17A.M
Sample Name: L2165245-02D,42,10
Instrument: FID17
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 30
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





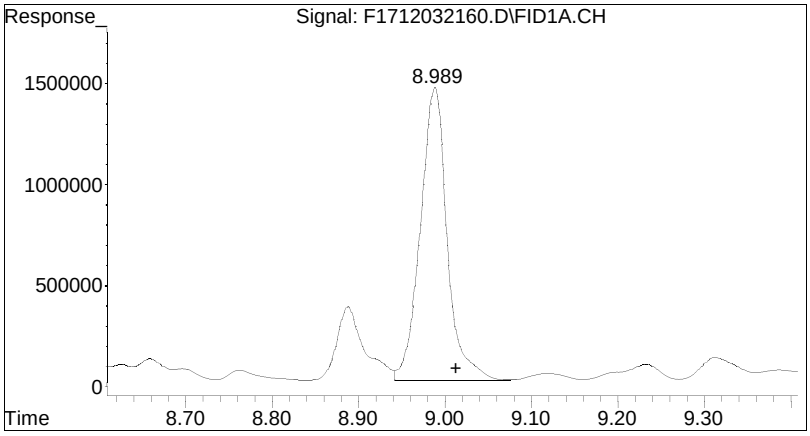
#2 n-Octane (C8)

R.T.:	4.566 min
Delta R.T.:	-0.046 min
Response:	480393
Conc:	0.48 ug/mL M4



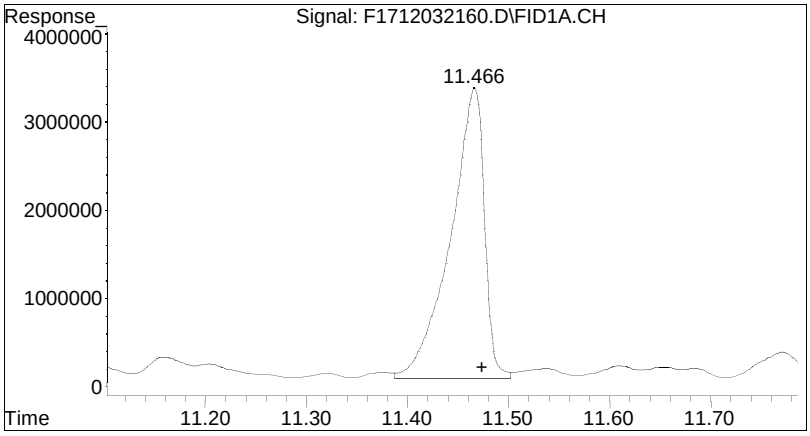
#3 n-Nonane (C9)

R.T.:	6.594 min
Delta R.T.:	-0.037 min
Response:	5507811
Conc:	5.17 ug/mL M4



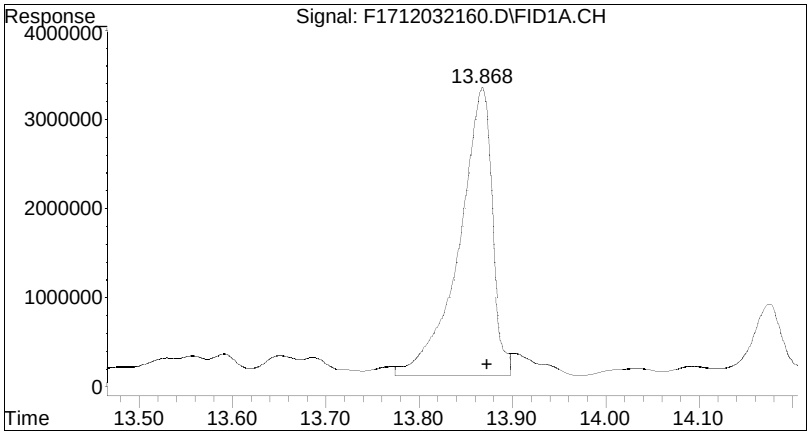
#4 n-Decane (C10)

R.T.:	8.989 min
Delta R.T.:	-0.025 min
Response:	30758891
Conc:	28.18 ug/mL M4



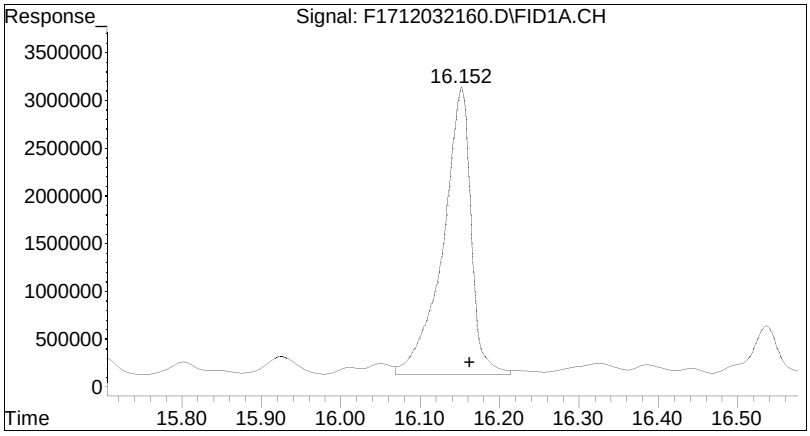
#5 n-Undecane (C11)

R.T.: 11.466 min
Delta R.T.: -0.008 min
Response: 75633457
Conc: 70.93 ug/mL M4



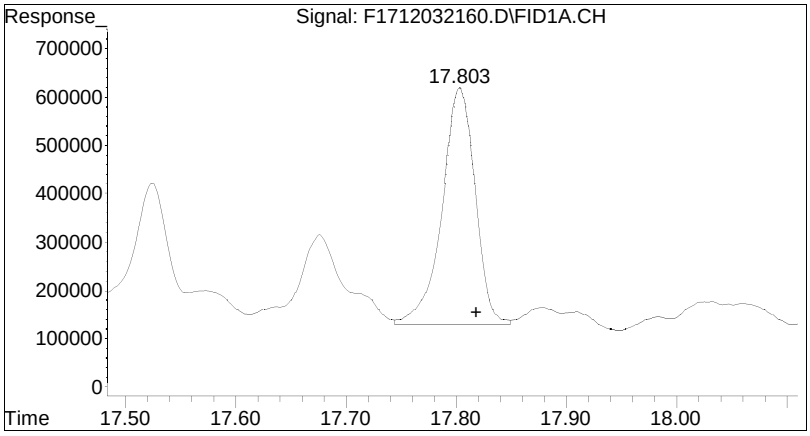
#6 n-Dodecane (C12)

R.T.: 13.868 min
Delta R.T.: -0.005 min
Response: 79161810
Conc: 74.04 ug/mL M4



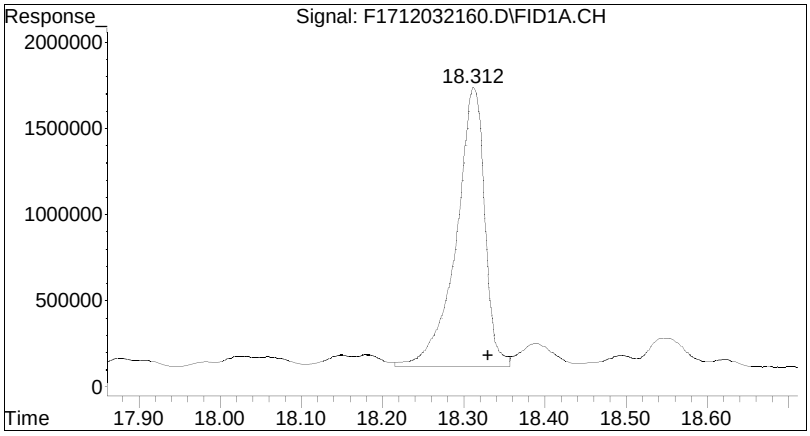
#7 n-Tridecane (C13)

R.T.: 16.152 min
Delta R.T.: -0.010 min
Response: 72921205
Conc: 68.02 ug/mL M4



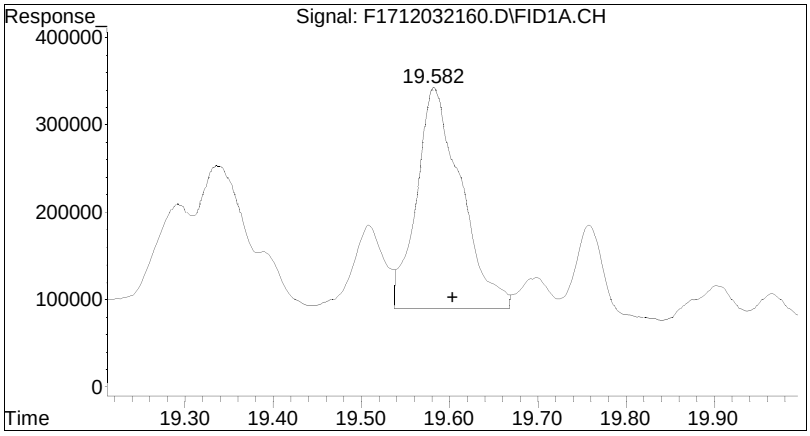
#8 1380

R.T.: 17.803 min
Delta R.T.: -0.015 min
Response: 10118326
Conc: 9.16 ug/mL M4



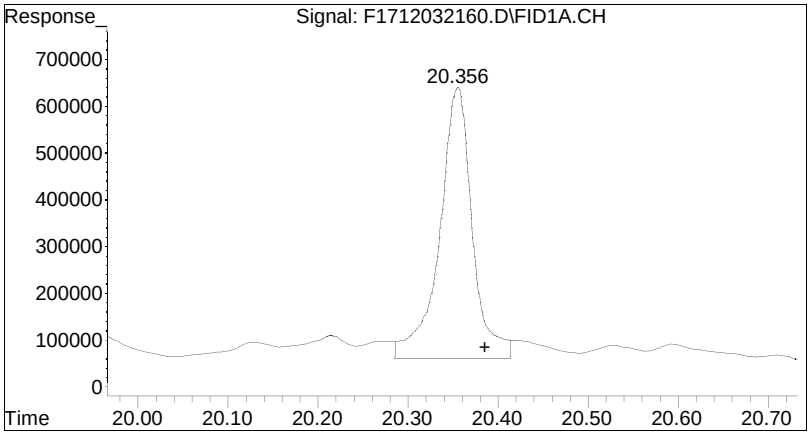
#9 n-Tetradecane (C14)

R.T.:	18.312 min
Delta R.T.:	-0.018 min
Response:	38906407
Conc:	35.22 ug/mL M4



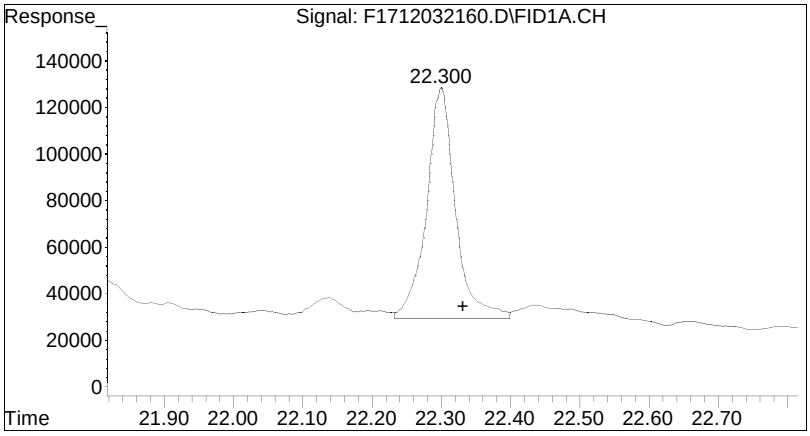
#10 1470

R.T.:	19.582 min
Delta R.T.:	-0.022 min
Response:	8821739
Conc:	7.98 ug/mL M4



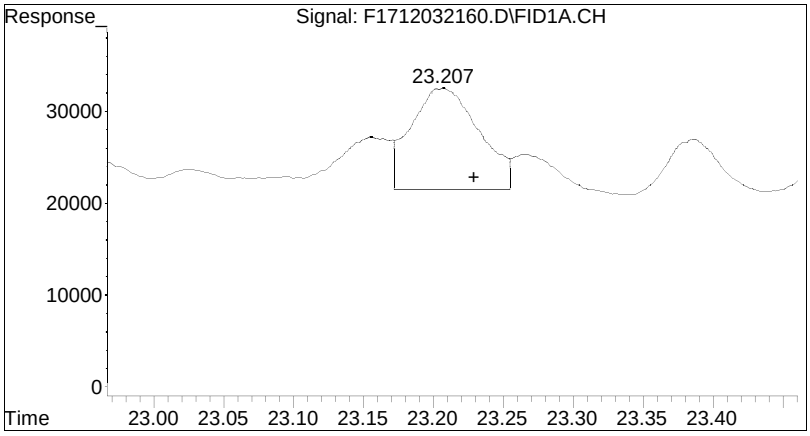
#11 n-Pentadecane (C15)

R.T.: 20.356 min
Delta R.T.: -0.030 min
Response: 14394917
Conc: 13.02 ug/mL M4



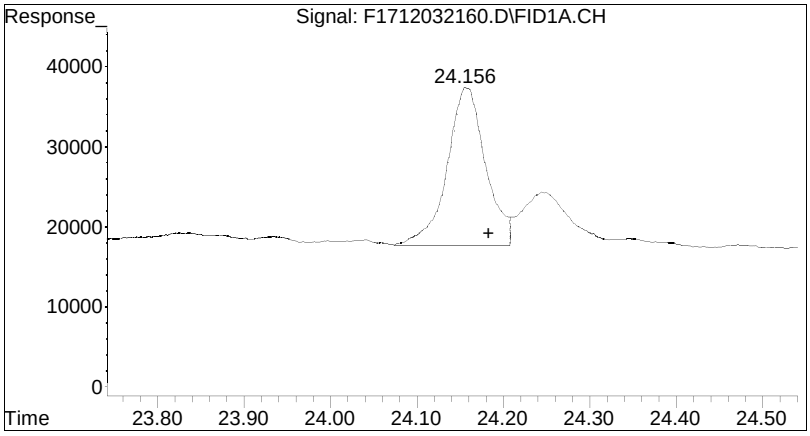
#12 n-Hexadecane (C16)

R.T.:	22.300 min
Delta R.T.:	-0.032 min
Response:	2817665
Conc:	2.55 ug/mL M4



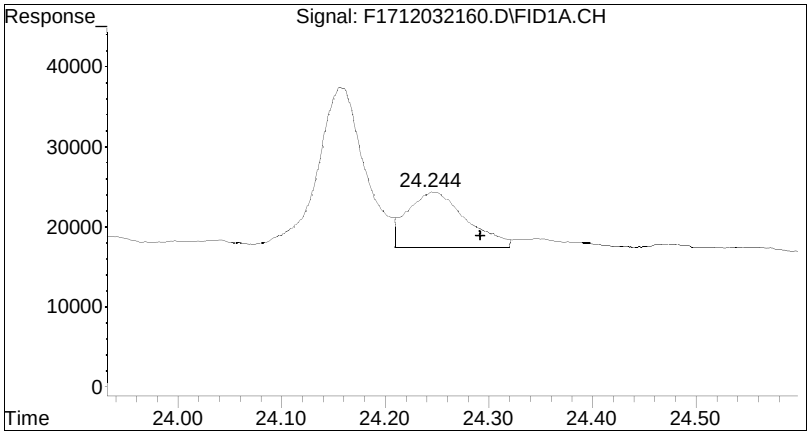
#13 1650

R.T.:	23.207 min
Delta R.T.:	-0.022 min
Response:	368167
Conc:	0.33 ug/mL M4



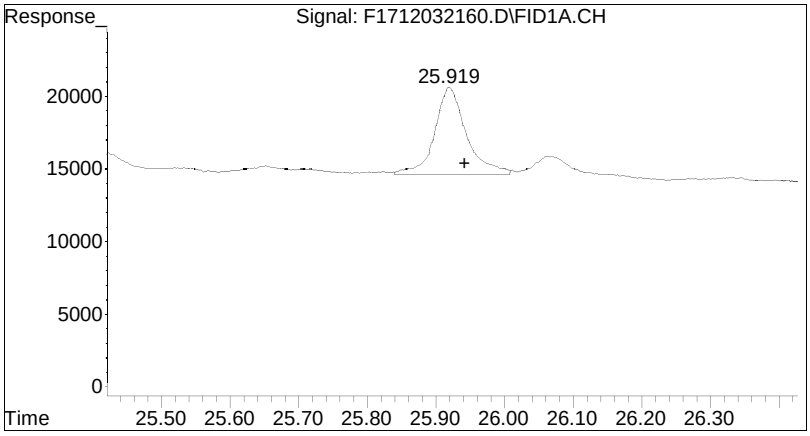
#14 n-Heptadecane (C17)

R.T.:	24.156 min
Delta R.T.:	-0.027 min
Response:	597477
Conc:	0.54 ug/mL M4



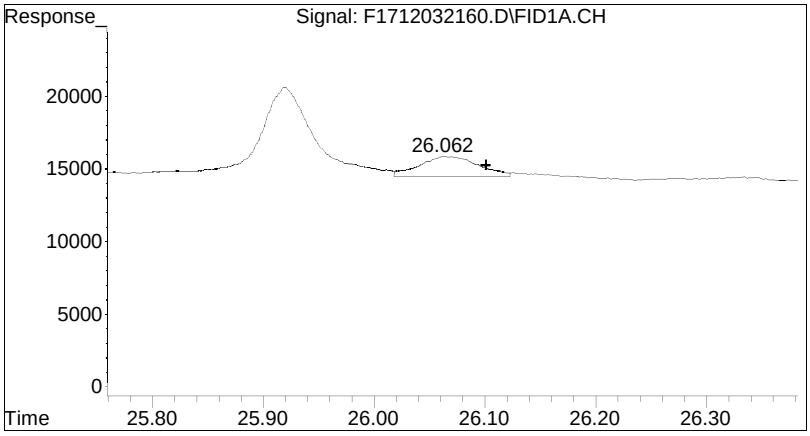
#15 Pristane

R.T.:	24.244 min
Delta R.T.:	-0.048 min
Response:	267911
Conc:	0.23 ug/mL M4



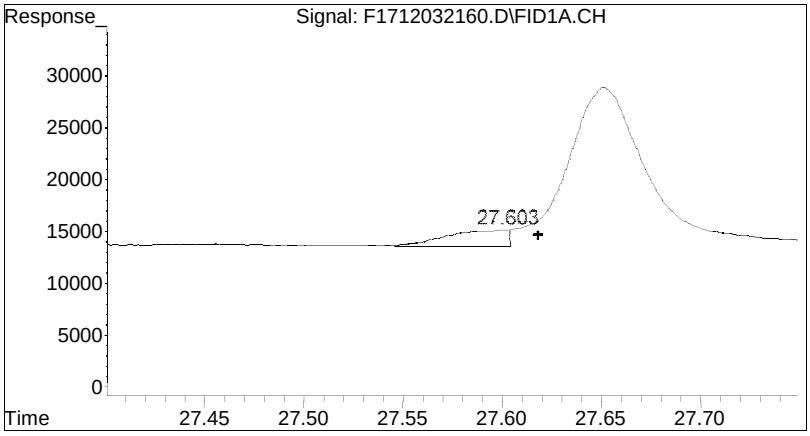
#16 n-Octadecane (C18)

R.T.:	25.919 min
Delta R.T.:	-0.023 min
Response:	193847
Conc:	0.17 ug/mL M4



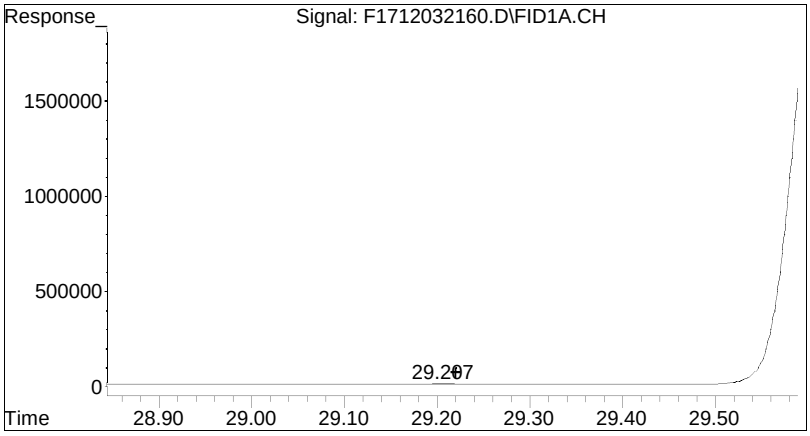
#17 Phytane

R.T.:	26.062 min
Delta R.T.:	-0.039 min
Response:	52266
Conc:	0.05 ug/mL M4



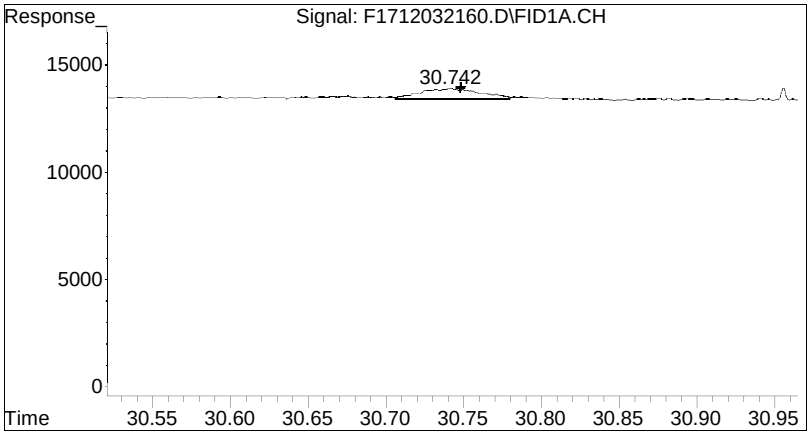
#18 n-Nonadecane (C19)

R.T.:	27.603 min
Delta R.T.:	-0.015 min
Response:	34014
Conc:	0.03 ug/mL M4



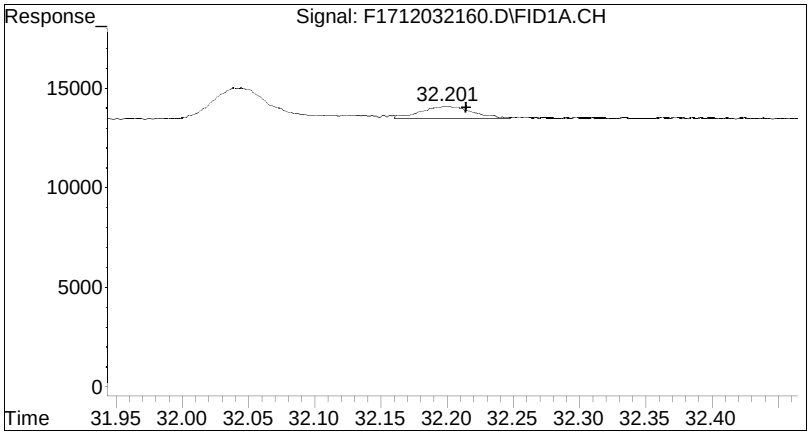
#20 n-Eicosane (C20)

R.T.:	29.207 min
Delta R.T.:	-0.014 min
Response:	43516
Conc:	0.04 ug/mL M4



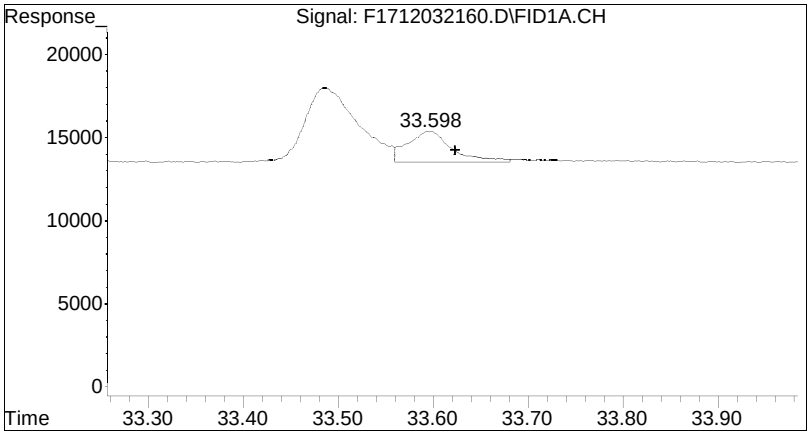
#21 n-Heneicosane (C21)

R.T.:	30.742 min
Delta R.T.:	-0.007 min
Response:	13278
Conc:	0.01 ug/mL M4



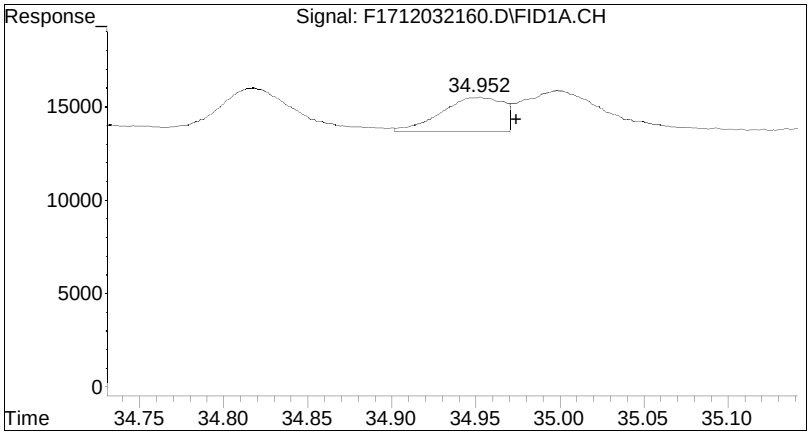
#22 n-Docosane (C22)

R.T.:	32.201 min
Delta R.T.:	-0.014 min
Response:	18244
Conc:	0.02 ug/mL M4



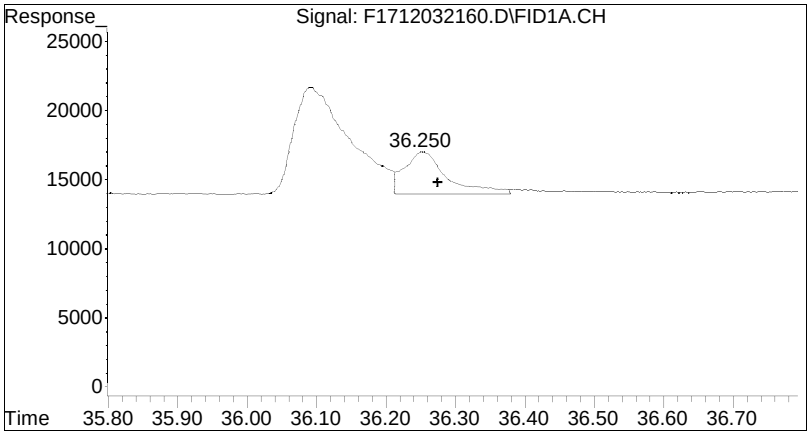
#23 n-Tricosane (C23)

R.T.:	33.598 min
Delta R.T.:	-0.025 min
Response:	59165
Conc:	0.05 ug/mL M4



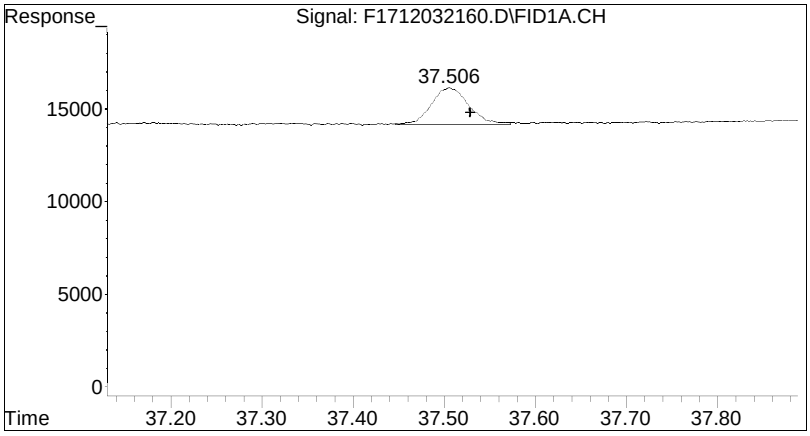
#25 n-Tetracosane (C24)

R.T.:	34.952 min
Delta R.T.:	-0.022 min
Response:	46277
Conc:	0.04 ug/mL M4



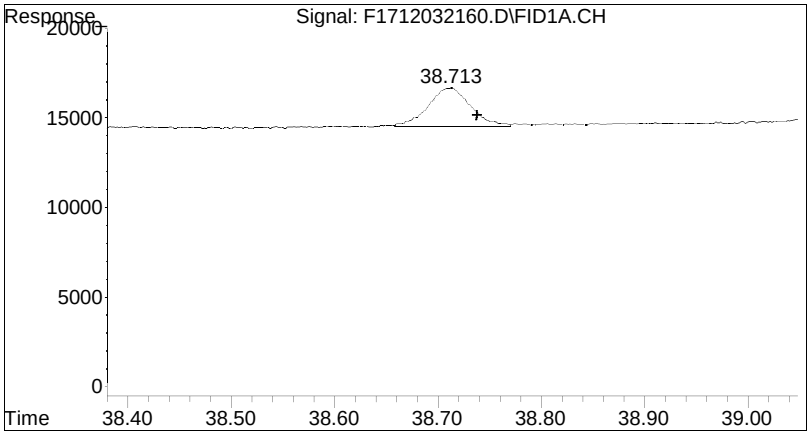
#26 n-Pentacosane (C25)

R.T.:	36.250 min
Delta R.T.:	-0.024 min
Response:	131242
Conc:	0.12 ug/mL M4



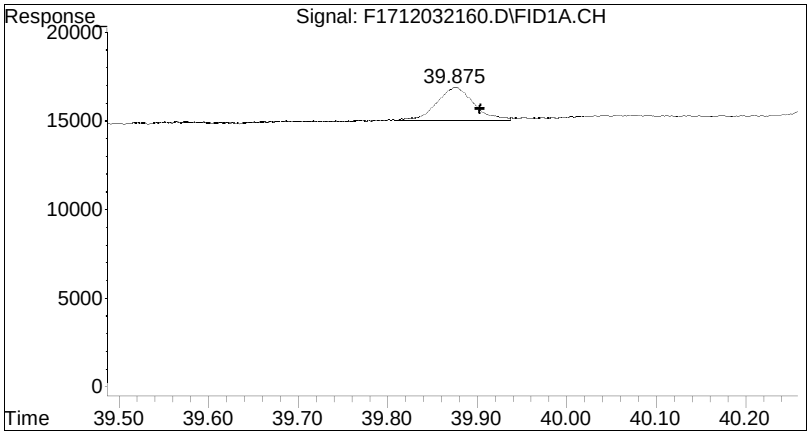
#27 n-Hexacosane (C26)

R.T.:	37.506 min
Delta R.T.:	-0.023 min
Response:	55238
Conc:	0.05 ug/mL M4



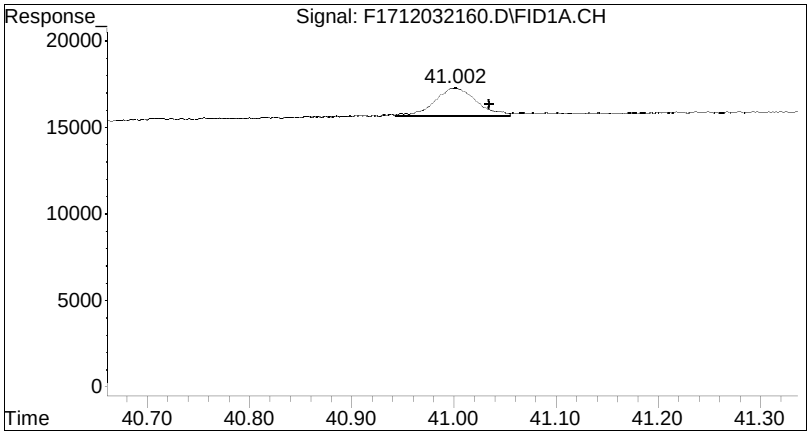
#28 n-Heptacosane (C27)

R.T.:	38.713 min
Delta R.T.:	-0.024 min
Response:	61721
Conc:	0.05 ug/mL M4



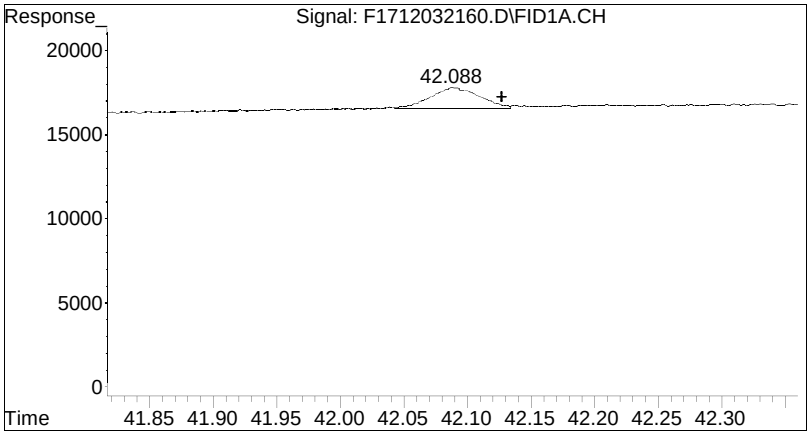
#29 n-Octacosane (C28)

R.T.:	39.875 min
Delta R.T.:	-0.028 min
Response:	52789
Conc:	0.04 ug/mL M4



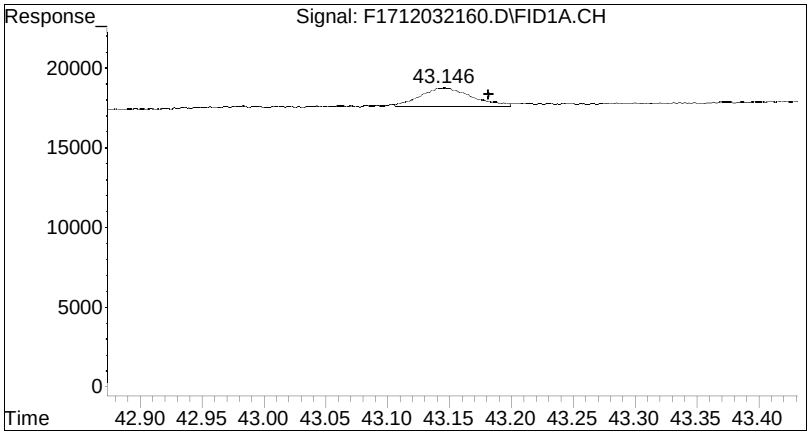
#30 n-Nonacosane (C29)

R.T.:	41.002 min
Delta R.T.:	-0.032 min
Response:	45341
Conc:	0.04 ug/mL M4



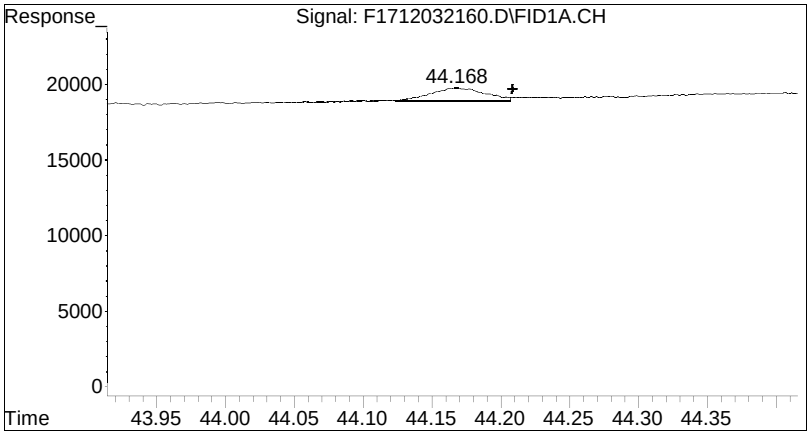
#31 n-Triacontane (C30)

R.T.:	42.088 min
Delta R.T.:	-0.040 min
Response:	33257
Conc:	0.03 ug/mL M4



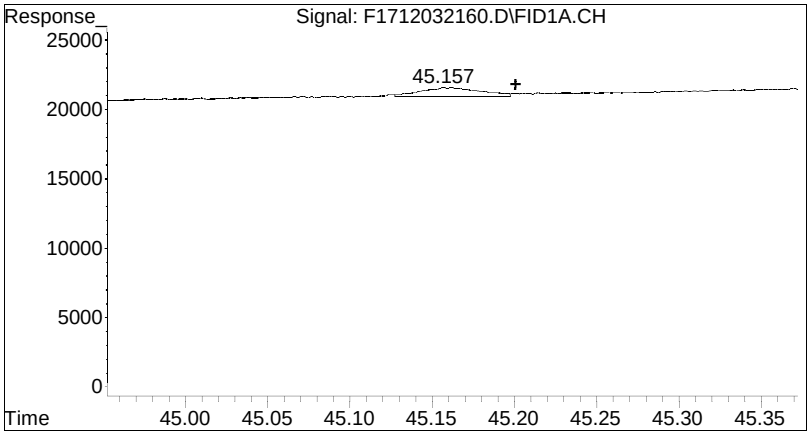
#32 n-Hentriacontane (C31)

R.T.:	43.146 min
Delta R.T.:	-0.036 min
Response:	32880
Conc:	0.03 ug/mL M4



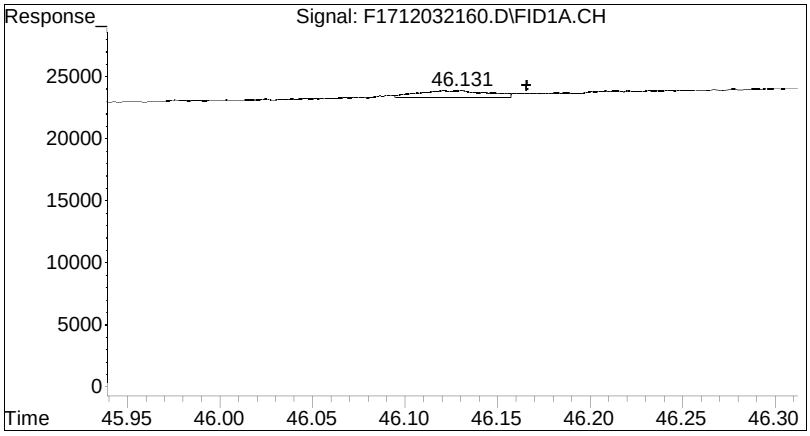
#33 n-Dotriacontane (C32)

R.T.:	44.168 min
Delta R.T.:	-0.040 min
Response:	23816
Conc:	0.02 ug/mL M4



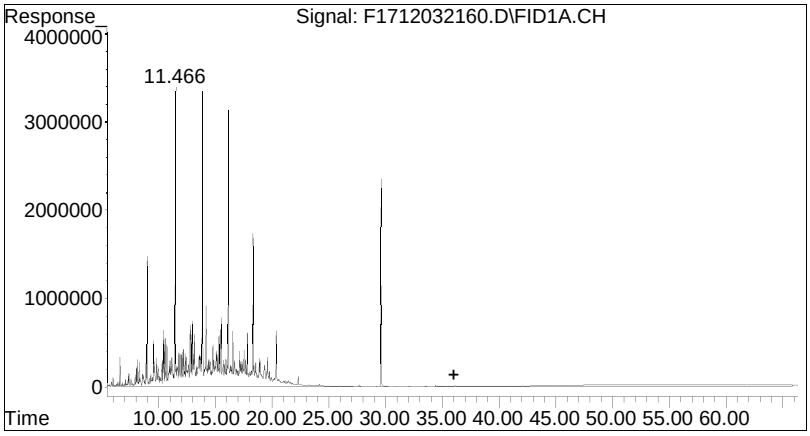
#34 n-Tritriacontane (C33)

R.T.:	45.157 min
Delta R.T.:	-0.044 min
Response:	16609
Conc:	0.01 ug/mL M4



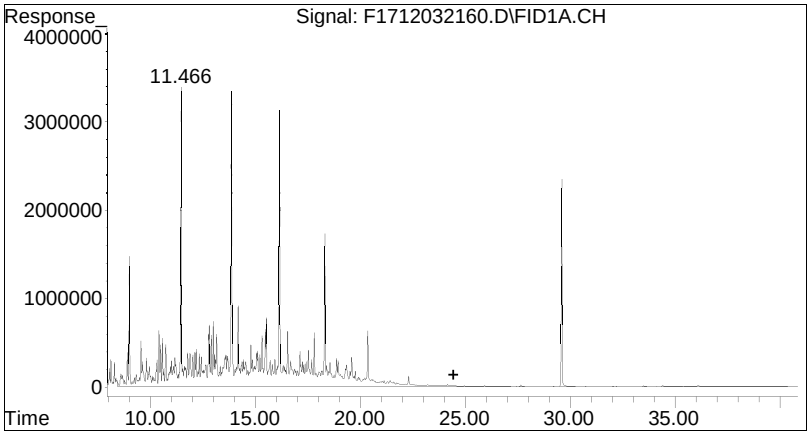
#35 n-tetratriacontane (C34)

R.T.:	46.131 min
Delta R.T.:	-0.035 min
Response:	13127
Conc:	0.01 ug/mL M4



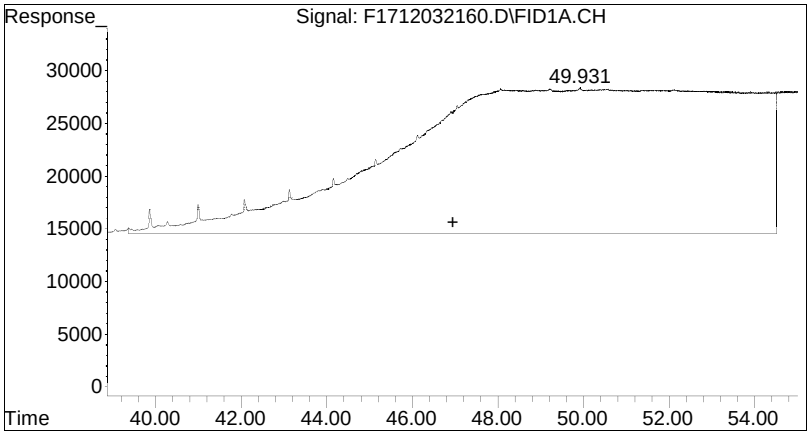
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 1972877555
Conc: 1745.79 ug/mL m



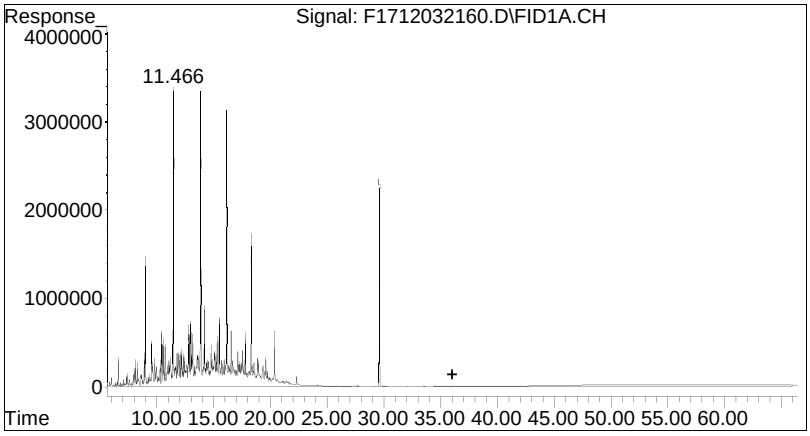
#44 C10-C28 DRO

R.T.: 24.454 min
Delta R.T.: 0.000 min
Response: 1691753548
Conc: 1514.89 ug/mL m



#45 C28-C40 ORO

R.T.: 46.963 min
Delta R.T.: 0.000 min
Response: 79497262
Conc: 68.14 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 1256471539
Conc: 1111.85 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032162.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 6:51 am
Operator : FID17:MJS
Sample : L2165245-03D,42,20
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 31 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 13:37:48 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.606	57794619	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.651	367259	0.293 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.59%#
24) s	d50-Tetracosane	34.410	273297	0.275 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.55%#
	Target Compounds			
2) t	n-Octane (C8)	4.568	293747	0.294 ug/mL M4
3) t	n-Nonane (C9)	6.596	4283196	4.017 ug/mL M4
4) t	n-Decane (C10)	8.988	25847036	23.680 ug/mL M4
5) t	n-Undecane (C11)	11.464	65029431	60.981 ug/mL M4
6) t	n-Dodecane (C12)	13.865	68492010	64.051 ug/mL M4
7) t	n-Tridecane (C13)	16.149	63257568	58.997 ug/mL M4
8) t	1380	17.802	8690557	7.867 ug/mL M4
9) t	n-Tetradecane (C14)	18.311	33719467	30.523 ug/mL M4
10) t	1470	19.580	7839341	7.088 ug/mL M4
11) t	n-Pentadecane (C15)	20.355	12565433	11.361 ug/mL M4
12) t	n-Hexadecane (C16)	22.301	2416275	2.189 ug/mL M4
13) t	1650	23.208	318389	0.289 ug/mL M4
14) t	n-Heptadecane (C17)	24.160	520063	0.472 ug/mL M4
15) t	Pristane	24.247	232045	0.203 ug/mL M4
16) t	n-Octadecane (C18)	25.923	167041	0.149 ug/mL M4
17) t	Phytane	26.064	51647	0.049 ug/mL M4
18) t	n-Nonadecane (C19)	27.594	19260	0.017 ug/mL M4
20) t	n-Eicosane (C20)	29.203	38817	0.034 ug/mL M4
21) t	n-Heneicosane (C21)	30.751	11329	0.010 ug/mL M4
22) t	n-Docosane (C22)	32.204	14545	0.013 ug/mL M4
23) t	n-Tricosane (C23)	33.603	57498	0.050 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032162.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 6:51 am
Operator : FID17:MJS
Sample : L2165245-03D,42,20
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 31 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 13:37:48 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

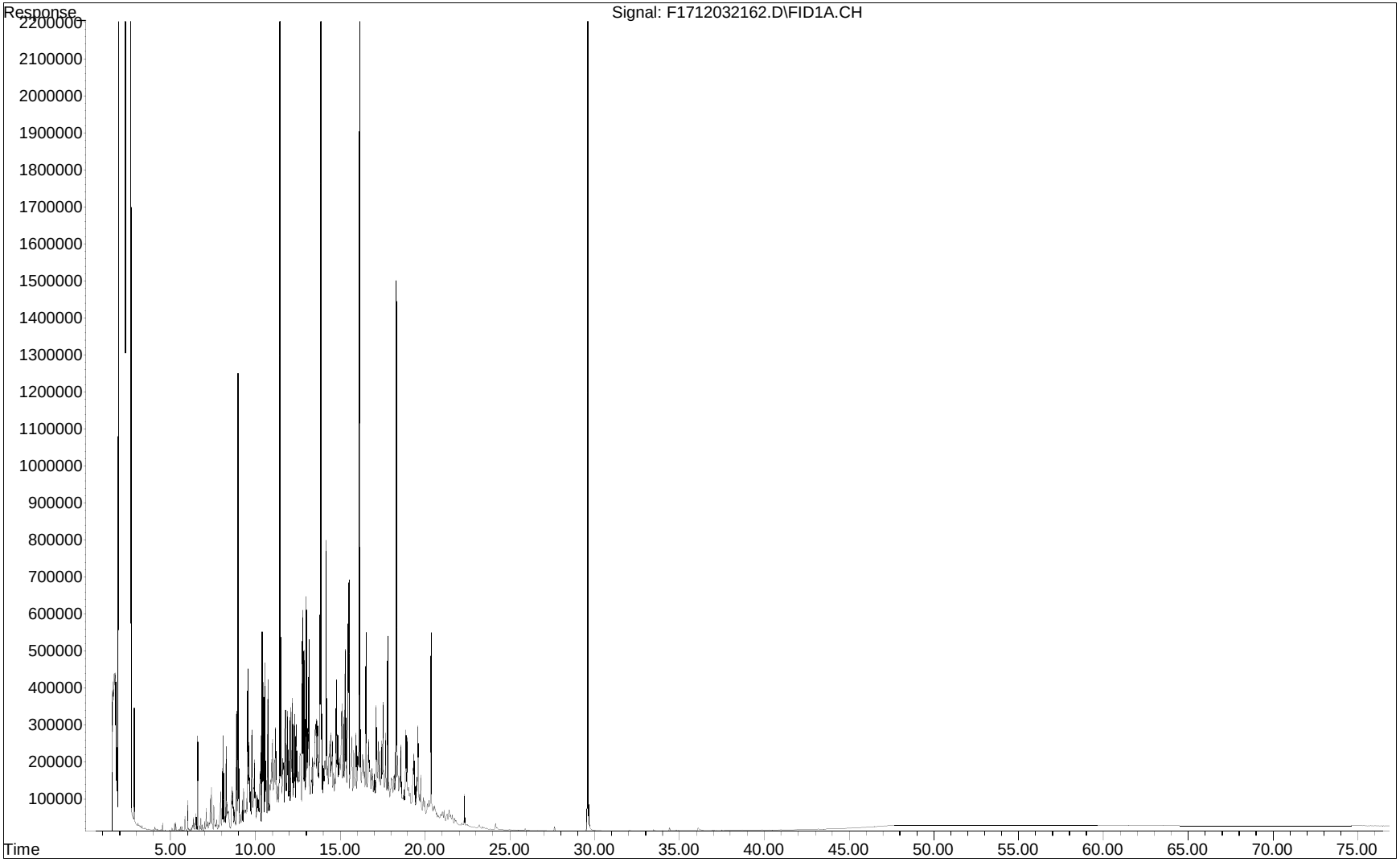
	Compound	R.T.	Response	Conc	Units
25) t	n-Tetracosane (C24)	34.954	54133	0.048	ug/mL M4
26) t	n-Pentacosane (C25)	36.261	131795	0.119	ug/mL M4
27) t	n-Hexacosane (C26)	37.511	49357	0.043	ug/mL M4
28) t	n-Heptacosane (C27)	38.714	59292	0.052	ug/mL M4
29) t	n-Octacosane (C28)	39.878	46861	0.040	ug/mL M4
30) t	n-Nonacosane (C29)	41.004	37455	0.032	ug/mL M4
31) t	n-Triacontane (C30)	42.090	31225	0.027	ug/mL M4
32) t	n-Hentriacontane (C31)	43.150	28724	0.025	ug/mL M4
33) t	n-Dotriacontane (C32)	44.171	19114	0.016	ug/mL M4
34) t	n-Tritriacontane (C33)	45.162	13876	0.012	ug/mL M4
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	36.038	1737961458	1537.700	ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	1492103394	1320.171	ug/mLm
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml d
43) h	C9-C40 Total Petroleu BS	0.000	-115033617	N.D.	ug/mld
44) h	C10-C28 DRO	24.454	1472642252	1318.499	ug/mL m
44) h	C10-C28 DRO BS	24.454	1452689506	1300.635	ug/mLm
45) h	C28-C40 ORO	46.963	76932667	65.929	ug/mL m
45) h	C28-C40 ORO BS	46.963	-4671210	N.D.	ug/mLm
46) h	Total Resolved Hydroc...	36.038	1058070931	936.151	ug/mL m

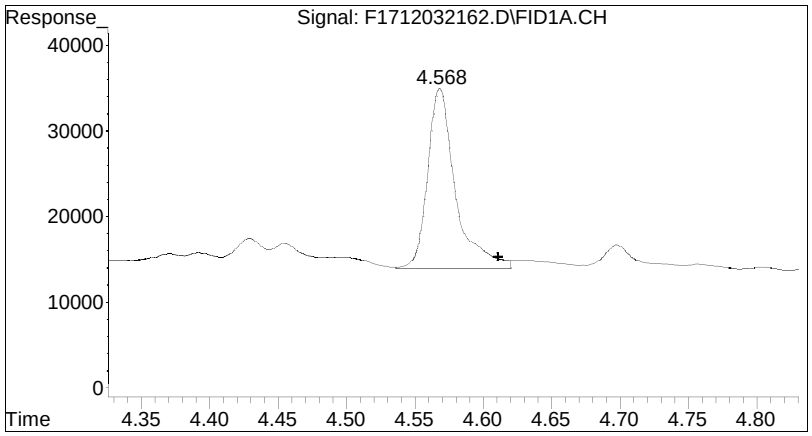
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

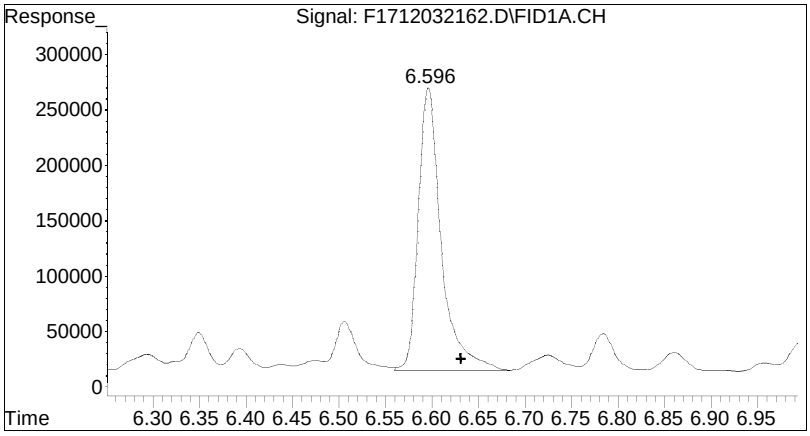
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032162.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 6:51 am using AcqMethod FID17A.M
Sample Name: L2165245-03D,42,20
Instrument: FID17
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 31
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





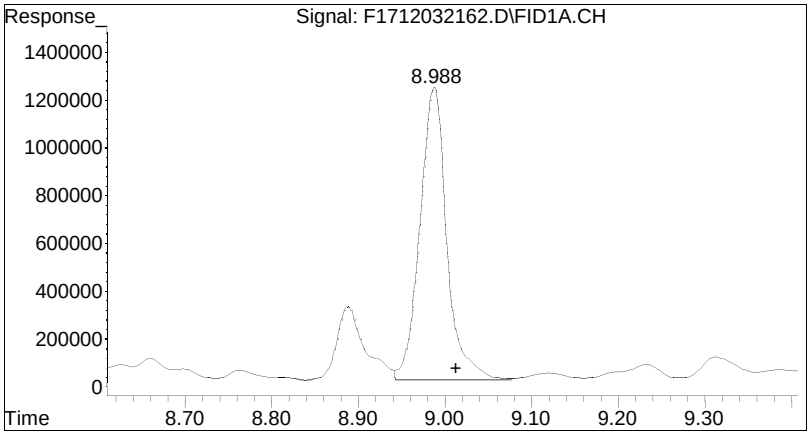
#2 n-Octane (C8)

R.T.:	4.568 min
Delta R.T.:	-0.043 min
Response:	293747
Conc:	0.29 ug/mL M4



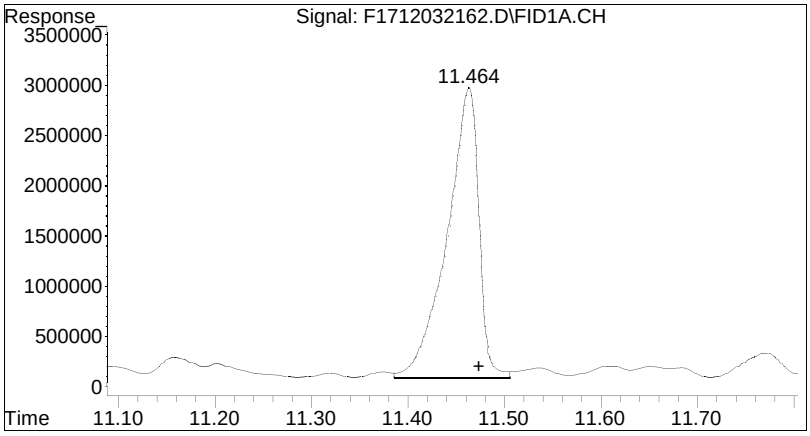
#3 n-Nonane (C9)

R.T.:	6.596 min
Delta R.T.:	-0.036 min
Response:	4283196
Conc:	4.02 ug/mL M4



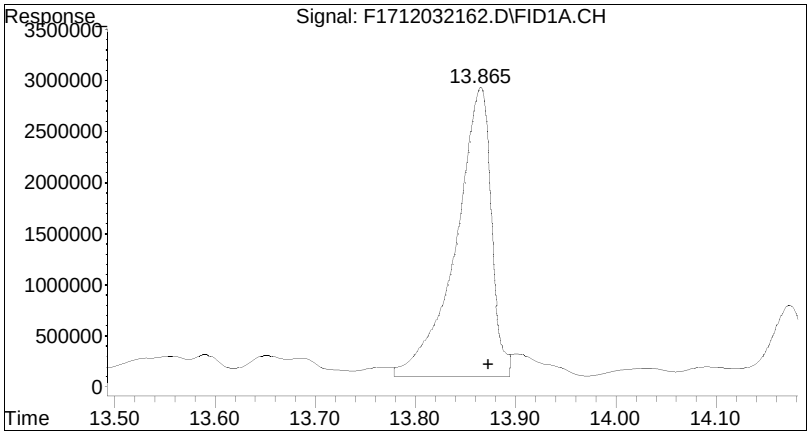
#4 n-Decane (C10)

R.T.:	8.988 min
Delta R.T.:	-0.026 min
Response:	25847036
Conc:	23.68 ug/mL M4



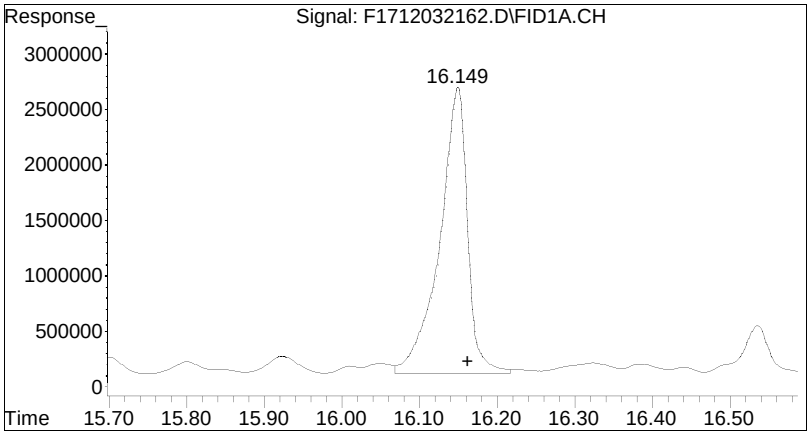
#5 n-Undecane (C11)

R.T.: 11.464 min
Delta R.T.: -0.010 min
Response: 65029431
Conc: 60.98 ug/mL M4



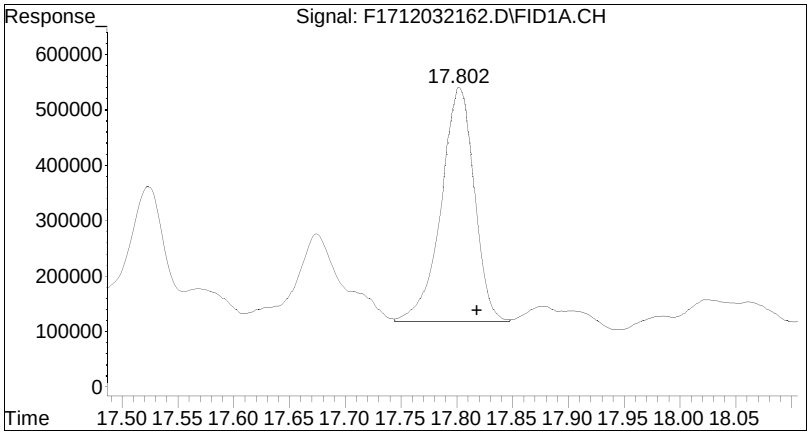
#6 n-Dodecane (C12)

R.T.: 13.865 min
Delta R.T.: -0.008 min
Response: 68492010
Conc: 64.05 ug/mL M4



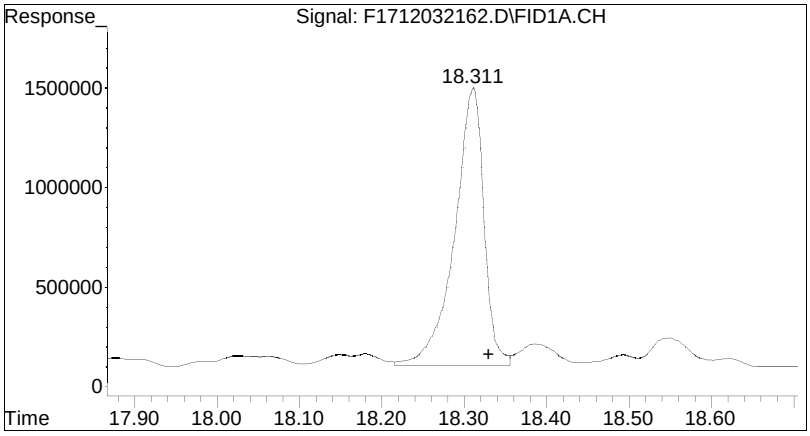
#7 n-Tridecane (C13)

R.T.:	16.149 min
Delta R.T.:	-0.013 min
Response:	63257568
Conc:	59.00 ug/mL M4



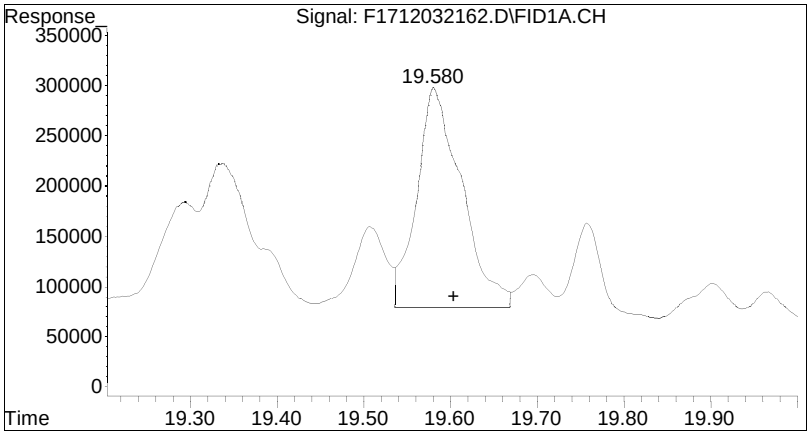
#8 1380

R.T.:	17.802 min
Delta R.T.:	-0.016 min
Response:	8690557
Conc:	7.87 ug/mL M4



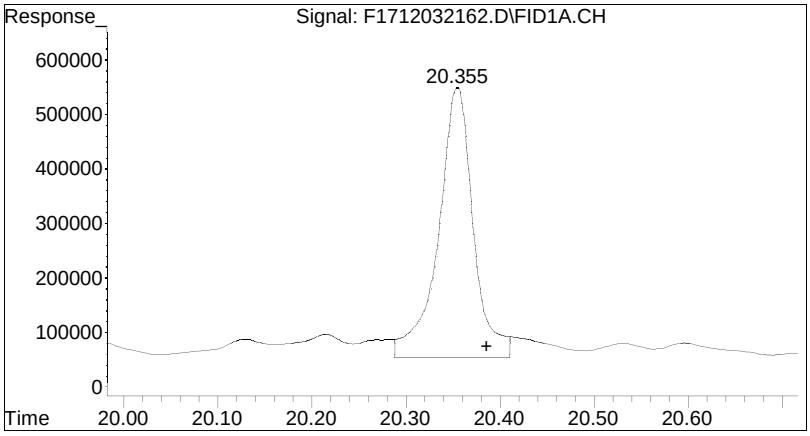
#9 n-Tetradecane (C14)

R.T.: 18.311 min
Delta R.T.: -0.019 min
Response: 33719467
Conc: 30.52 ug/mL M4



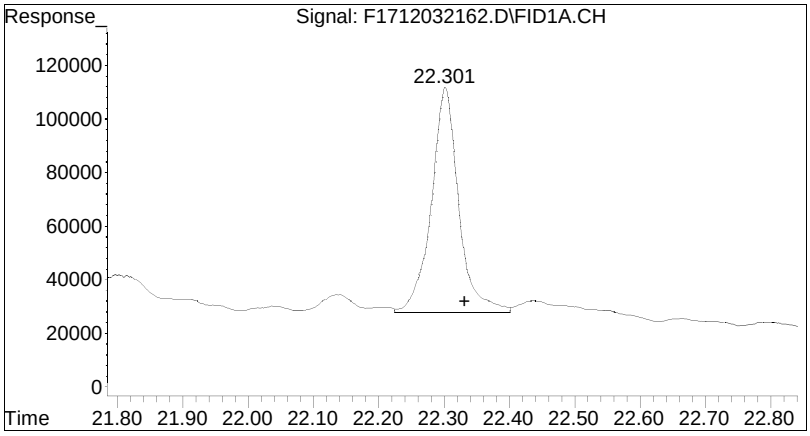
#10 1470

R.T.:	19.580 min
Delta R.T.:	-0.024 min
Response:	7839341
Conc:	7.09 ug/mL M4



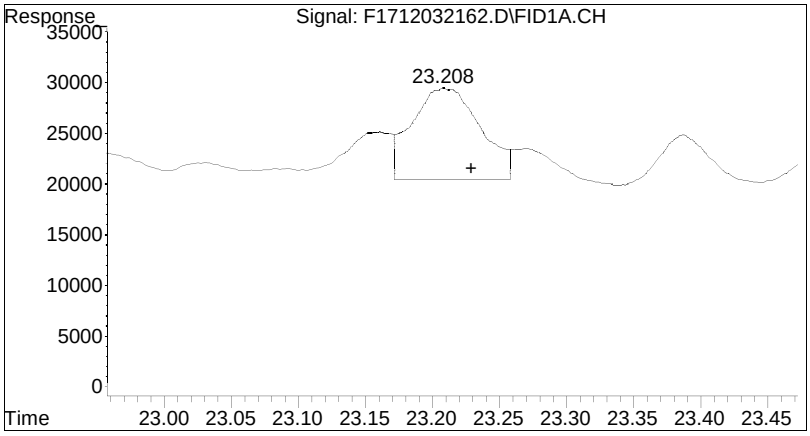
#11 n-Pentadecane (C15)

R.T.: 20.355 min
Delta R.T.: -0.031 min
Response: 12565433
Conc: 11.36 ug/mL M4



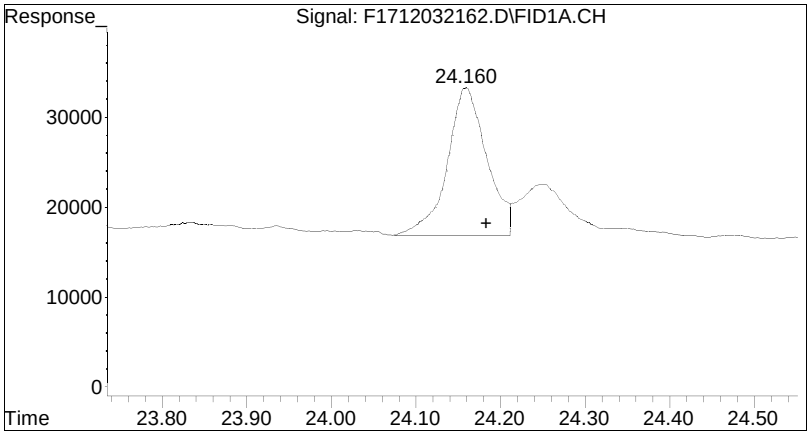
#12 n-Hexadecane (C16)

R.T.:	22.301 min
Delta R.T.:	-0.031 min
Response:	2416275
Conc:	2.19 ug/mL M4



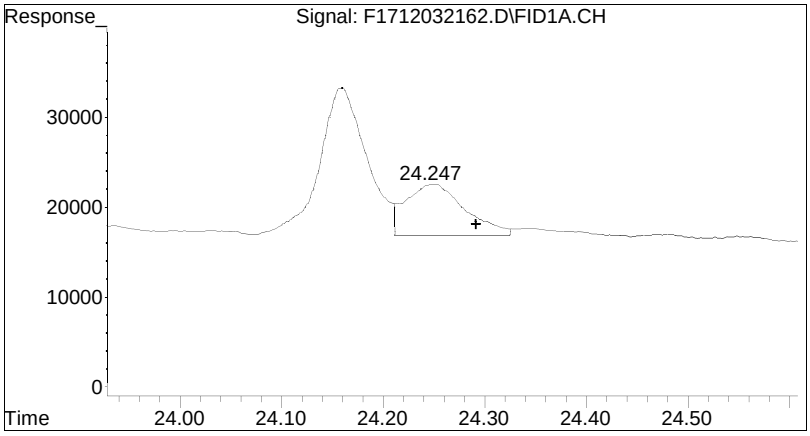
#13 1650

R.T.: 23.208 min
Delta R.T.: -0.021 min
Response: 318389
Conc: 0.29 ug/mL M4



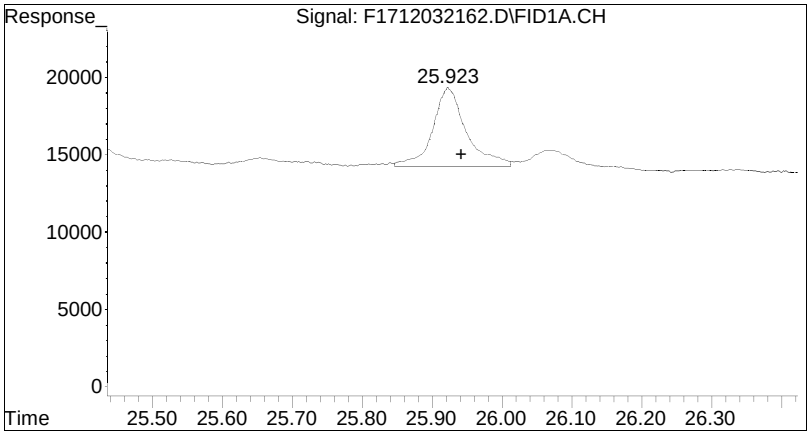
#14 n-Heptadecane (C17)

R.T.:	24.160 min
Delta R.T.:	-0.023 min
Response:	520063
Conc:	0.47 ug/mL M4



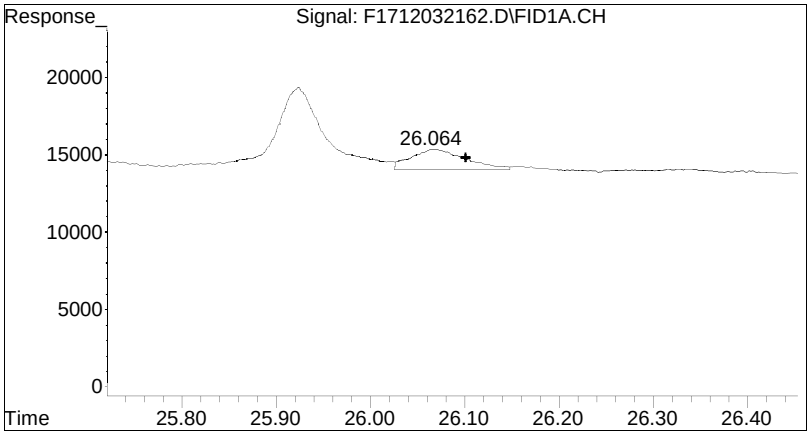
#15 Pristane

R.T.:	24.247 min
Delta R.T.:	-0.045 min
Response:	232045
Conc:	0.20 ug/mL M4



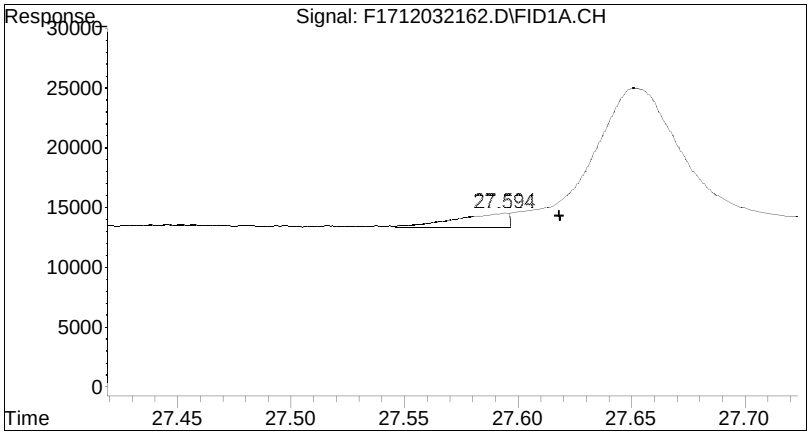
#16 n-Octadecane (C18)

R.T.:	25.923 min
Delta R.T.:	-0.019 min
Response:	167041
Conc:	0.15 ug/mL M4



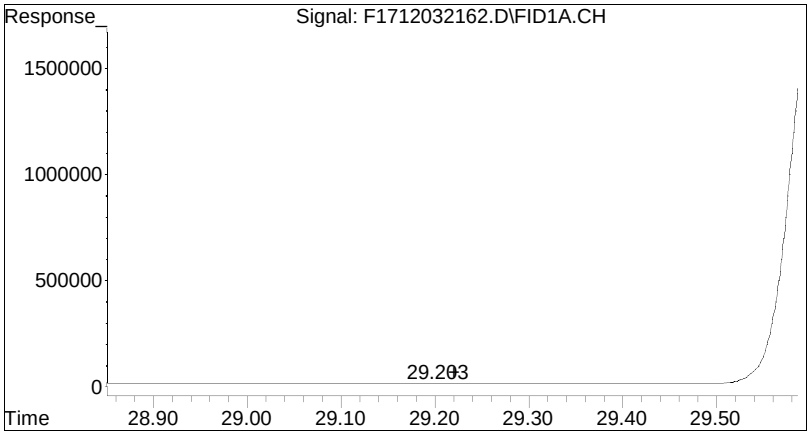
#17 Phytane

R.T.:	26.064 min
Delta R.T.:	-0.036 min
Response:	51647
Conc:	0.05 ug/mL M4



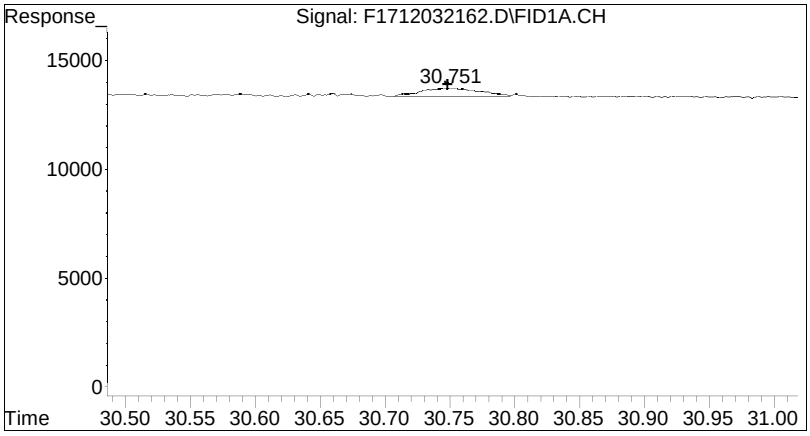
#18 n-Nonadecane (C19)

R.T.:	27.594 min
Delta R.T.:	-0.024 min
Response:	19260
Conc:	0.02 ug/mL M4



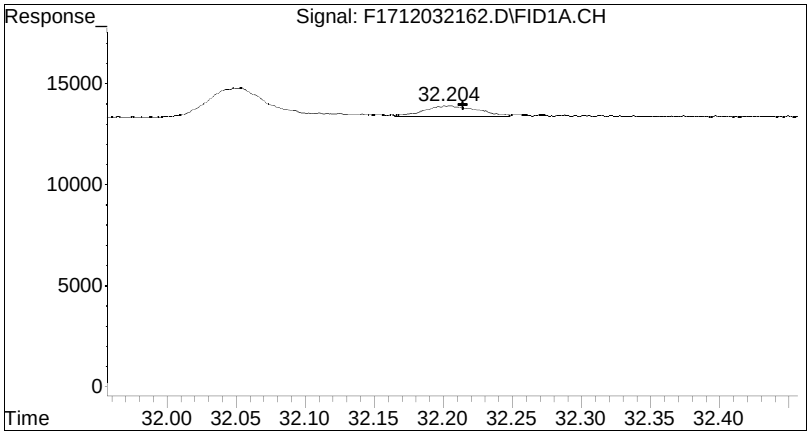
#20 n-Eicosane (C20)

R.T.:	29.203 min
Delta R.T.:	-0.017 min
Response:	38817
Conc:	0.03 ug/mL M4



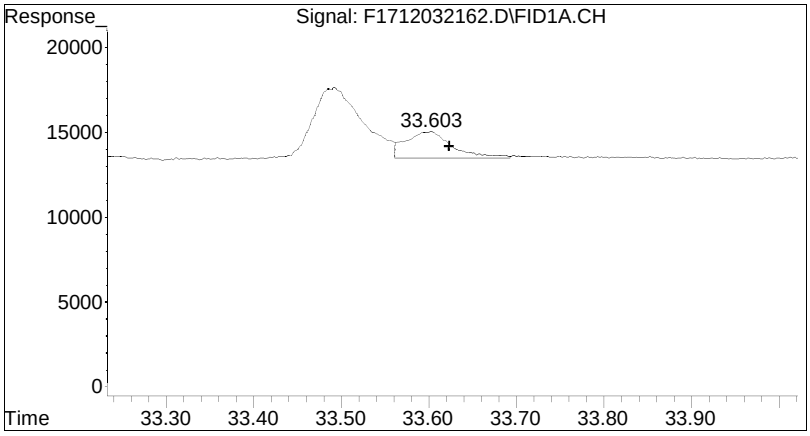
#21 n-Heneicosane (C21)

R.T.:	30.751 min
Delta R.T.:	0.002 min
Response:	11329
Conc:	0.01 ug/mL M4



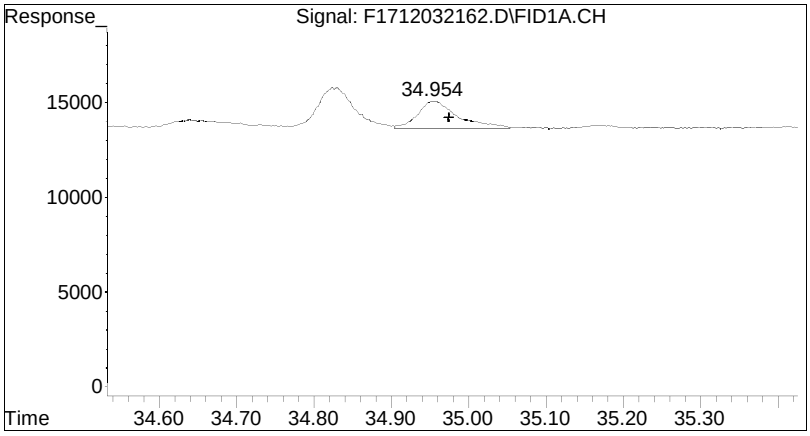
#22 n-Docosane (C22)

R.T.:	32.204 min
Delta R.T.:	-0.010 min
Response:	14545
Conc:	0.01 ug/mL M4



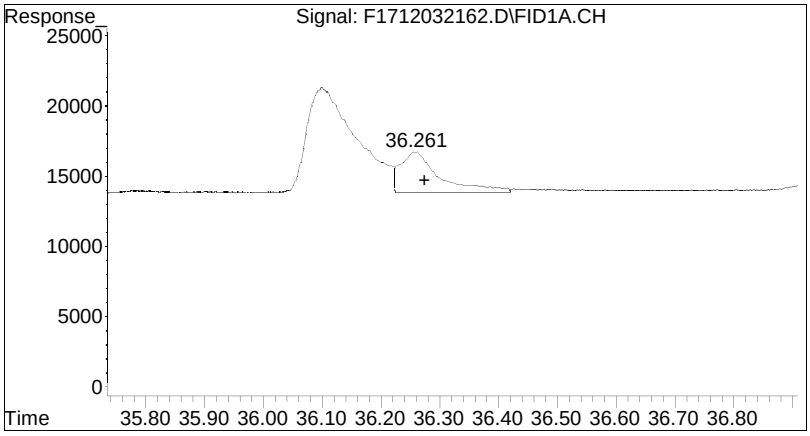
#23 n-Tricosane (C23)

R.T.:	33.603 min
Delta R.T.:	-0.020 min
Response:	57498
Conc:	0.05 ug/mL M4



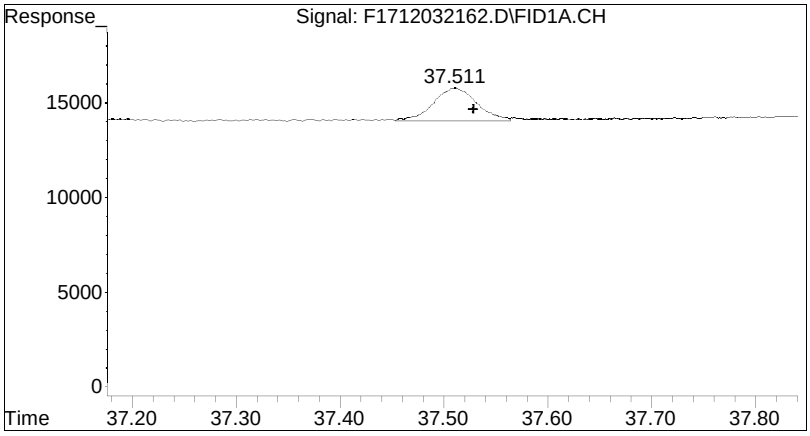
#25 n-Tetracosane (C24)

R.T.:	34.954 min
Delta R.T.:	-0.021 min
Response:	54133
Conc:	0.05 ug/mL M4



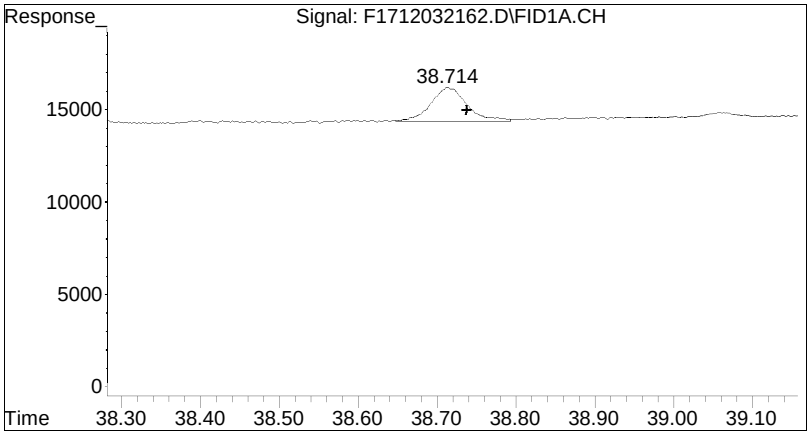
#26 n-Pentacosane (C25)

R.T.:	36.261 min
Delta R.T.:	-0.013 min
Response:	131795
Conc:	0.12 ug/mL M4



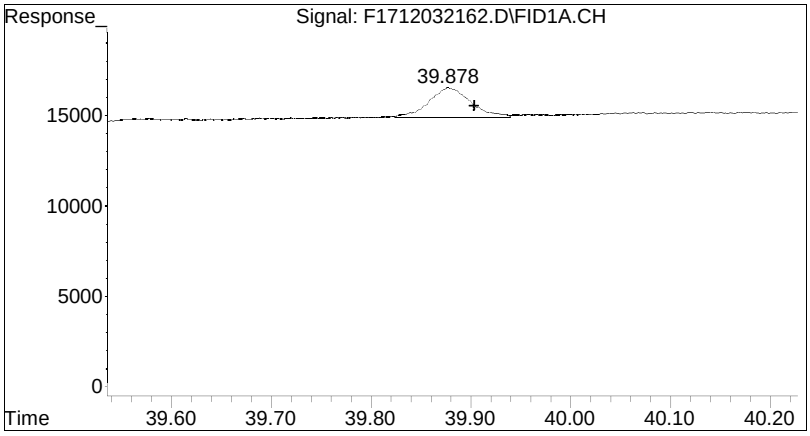
#27 n-Hexacosane (C26)

R.T.:	37.511 min
Delta R.T.:	-0.018 min
Response:	49357
Conc:	0.04 ug/mL M4



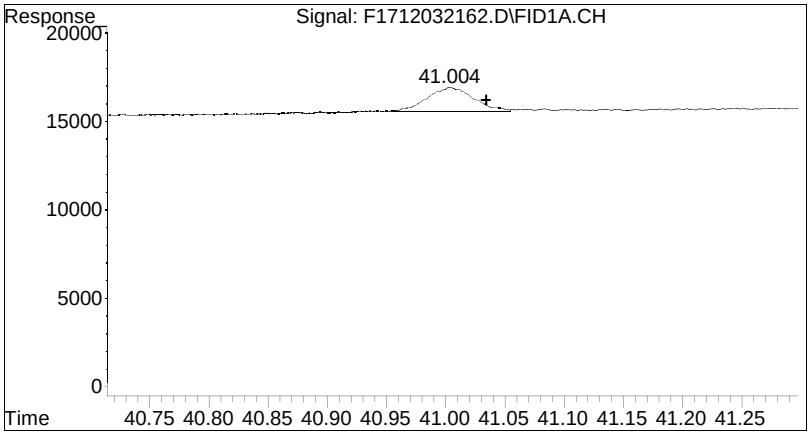
#28 n-Heptacosane (C27)

R.T.:	38.714 min
Delta R.T.:	-0.024 min
Response:	59292
Conc:	0.05 ug/mL M4



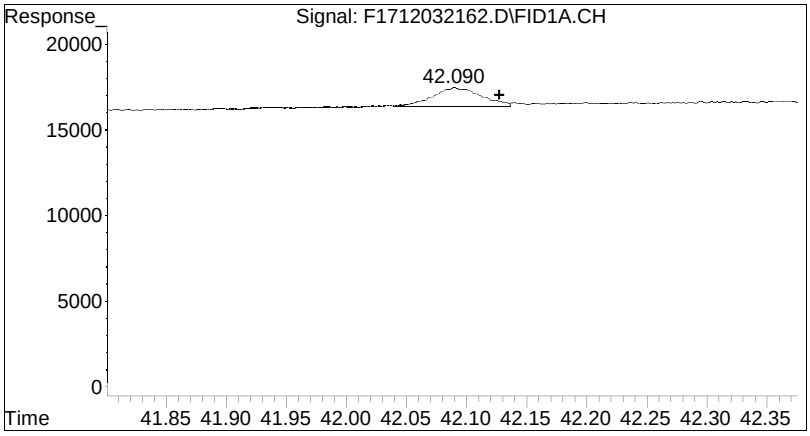
#29 n-Octacosane (C28)

R.T.:	39.878 min
Delta R.T.:	-0.026 min
Response:	46861
Conc:	0.04 ug/mL M4



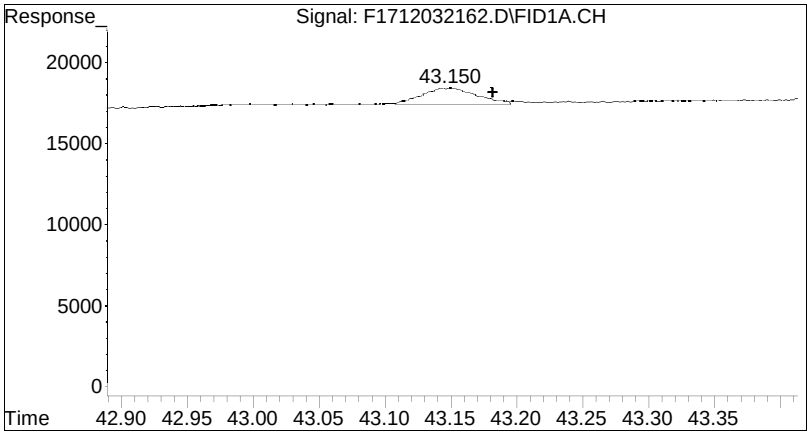
#30 n-Nonacosane (C29)

R.T.:	41.004 min
Delta R.T.:	-0.030 min
Response:	37455
Conc:	0.03 ug/mL M4



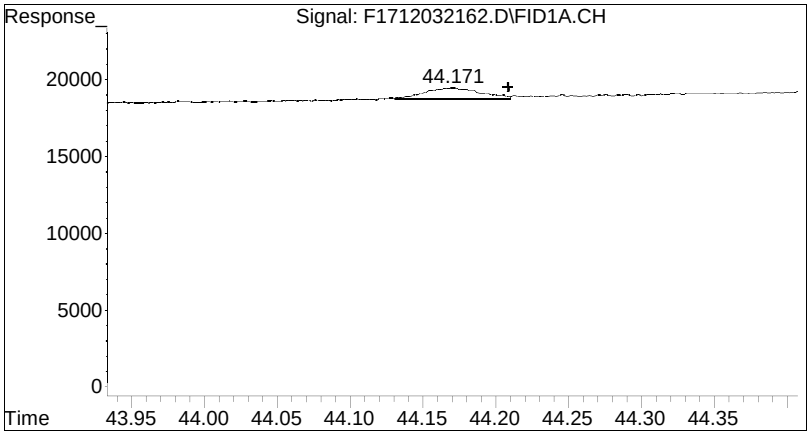
#31 n-Triacontane (C30)

R.T.:	42.090 min
Delta R.T.:	-0.037 min
Response:	31225
Conc:	0.03 ug/mL M4



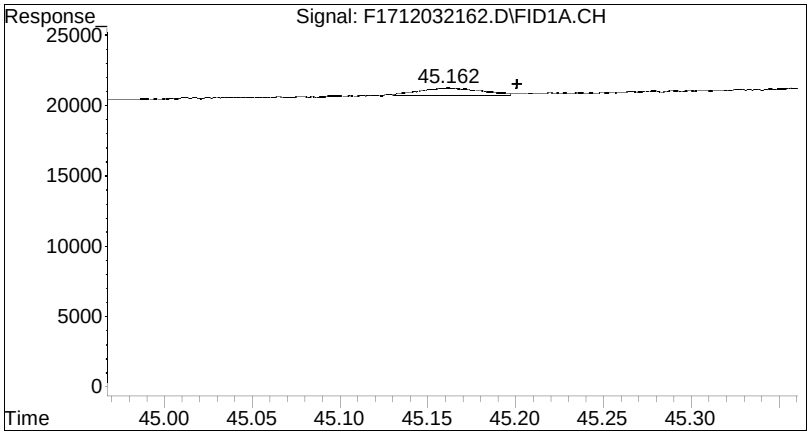
#32 n-Hentriacontane (C31)

R.T.:	43.150 min
Delta R.T.:	-0.032 min
Response:	28724
Conc:	0.03 ug/mL M4



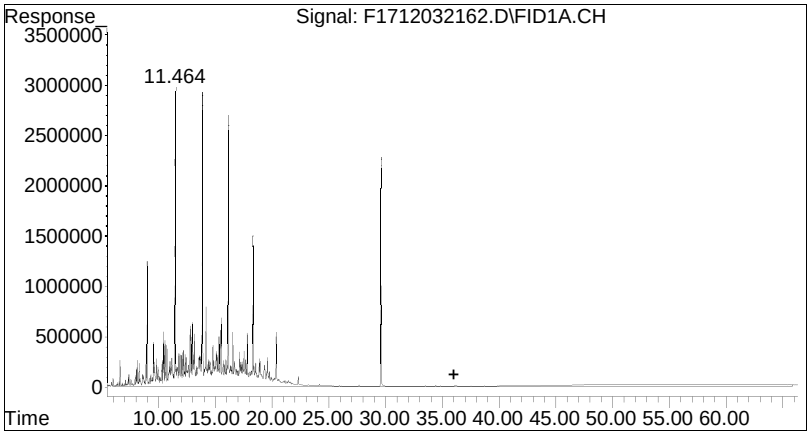
#33 n-Dotriacontane (C32)

R.T.:	44.171 min
Delta R.T.:	-0.037 min
Response:	19114
Conc:	0.02 ug/mL M4



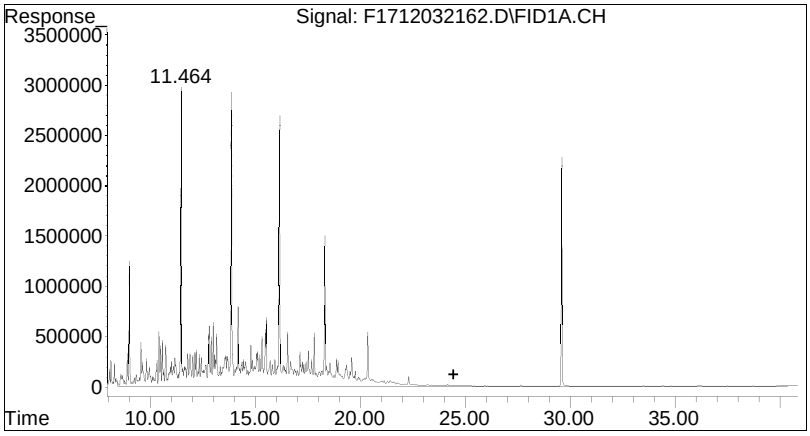
#34 n-Tritriacontane (C33)

R.T.:	45.162 min
Delta R.T.:	-0.039 min
Response:	13876
Conc:	0.01 ug/mL M4



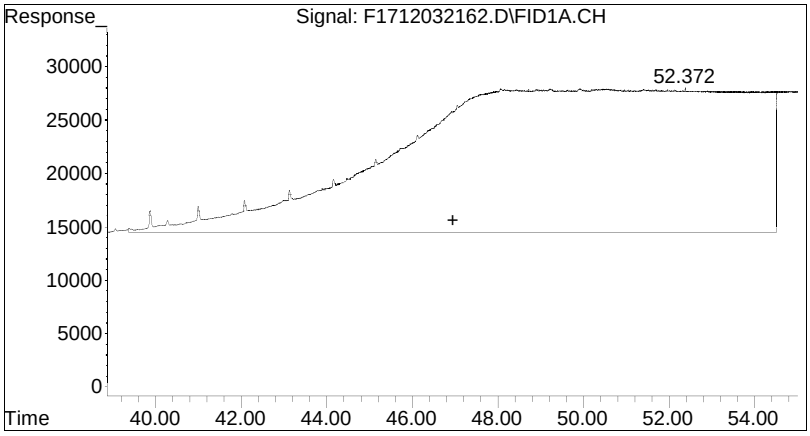
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 1737961458
Conc: 1537.70 ug/mL m



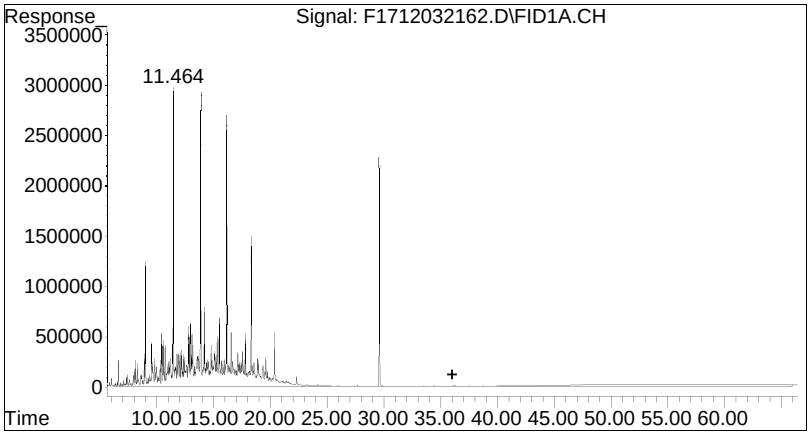
#44 C10-C28 DRO

R.T.: 24.454 min
Delta R.T.: 0.000 min
Response: 1472642252
Conc: 1318.50 ug/mL m



#45 C28-C40 ORO

R.T.: 46.963 min
Delta R.T.: 0.000 min
Response: 76932667
Conc: 65.93 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 1058070931
Conc: 936.15 ug/mL m

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072106.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 12:29 pm
Operator : FID17:WR
Sample : WG1580304-1
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 10:19:06 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	107	0.00
2	t	n-Octane (C8)	0.864	0.867	-0.3	105	0.00
3	t	n-Nonane (C9)	0.922	0.894	3.0	104	0.00
4	t	n-Decane (C10)	0.944	0.929	1.6	103	0.00
5	t	n-Undecane (C11)	0.923	0.946	-2.5	106	0.00
6	t	n-Dodecane (C12)	0.925	0.945	-2.2	105	0.00
7	t	n-Tridecane (C13)	0.928	0.960	-3.4	107	0.00
9	t	n-Tetradecane (C14)	0.956	0.979	-2.4	107	0.00
11	t	n-Pentadecane (C15)	0.957	0.966	-0.9	105	0.00
12	t	n-Hexadecane (C16)	0.955	0.989	-3.6	109	0.00
14	t	n-Heptadecane (C17)	0.954	0.963	-0.9	105	0.00
15	t	Pristane	0.990	1.039	-4.9	110	0.00
16	t	n-Octadecane (C18)	0.970	0.997	-2.8	107	0.00
17	t	Phytane	0.908	0.952	-4.8	110	0.00
18	t	n-Nonadecane (C19)	0.973	1.060	-8.9	114	0.00
19	s	ortho-terphenyl	1.084	1.151	-6.2	112	0.00
20	t	n-Eicosane (C20)	0.979	1.008	-3.0	108	0.00
21	t	n-Heneicosane (C21)	0.982	1.002	-2.0	107	0.00
22	t	n-Docosane (C22)	0.983	1.014	-3.2	108	0.00
23	t	n-Tricosane (C23)	0.985	1.013	-2.8	108	0.00
24	s	d50-Tetracosane	0.860	0.968	-12.6	116	0.00
25	t	n-Tetracosane (C24)	0.982	0.955	2.7	102	0.00
26	t	n-Pentacosane (C25)	0.961	0.989	-2.9	108	0.00
27	t	n-Hexacosane (C26)	0.987	1.017	-3.0	108	0.00
28	t	n-Heptacosane (C27)	0.989	0.979	1.0	104	0.00
29	t	n-Octacosane (C28)	1.026	1.020	0.6	106	0.00
30	t	n-Nonacosane (C29)	1.006	1.011	-0.5	106	0.00
31	t	n-Triacontane (C30)	1.010	1.012	-0.2	106	0.00
32	t	n-Hentriacontane (C31)	0.977	0.978	-0.1	106	0.00
33	t	n-Dotriacontane (C32)	1.025	1.022	0.3	106	0.00
34	t	n-Tritriacontane (C33)	0.998	0.983	1.5	105	0.00
35	t	n-tetratriacontane (C34)	0.991	0.972	1.9	104	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072106.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 12:29 pm
Operator : FID17:WR
Sample : WG1580304-1
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 10:19:06 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.977	-5.5	112	0.00
37 t	n-Hexatriacontane (C36)	1.115	1.043	6.5	100	0.00
38 t	n-Heptatriacontane (C37)	1.011	0.955	5.5	100	0.00
39 t	n-Octatriacontane (C38)	1.022	0.981	4.0	102	0.00
41 t	n-Tetracontane (C40)	1.009	0.968	4.1	101	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.04	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072106.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 12:29 pm
Operator : FID17:WR
Sample : WG1580304-1
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 10:19:06 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.612	56836628	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.674	65403622	53.084 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	106.17%
24) s	d50-Tetracosane	34.422	54990793	56.255 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	112.51%
	Target Compounds			
2) t	n-Octane (C8)	4.595	49266189	50.137 ug/mL M4
3) t	n-Nonane (C9)	6.620	50795376	48.444 ug/mL M4
4) t	n-Decane (C10)	8.997	52774936	49.166 ug/mL M4
5) t	n-Undecane (C11)	11.458	53751883	51.255 ug/mL M4
6) t	n-Dodecane (C12)	13.856	53713812	51.078 ug/mL M4
7) t	n-Tridecane (C13)	16.144	54560157	51.743 ug/mL M4
9) t	n-Tetradecane (C14)	18.313	55620026	51.196 ug/mL M4
11) t	n-Pentadecane (C15)	20.366	54902535	50.477 ug/mL M4
12) t	n-Hexadecane (C16)	22.315	56191225	51.754 ug/mL M4
14) t	n-Heptadecane (C17)	24.166	54730784	50.456 ug/mL M4
15) t	Pristane	24.273	59045637	52.488 ug/mL M4
16) t	n-Octadecane (C18)	25.924	56690140	51.402 ug/mL M4
17) t	Phytane	26.081	54095085	52.432 ug/mL M4
18) t	n-Nonadecane (C19)	27.603	60262638	54.476 ug/mL M4
20) t	n-Eicosane (C20)	29.202	57268480	51.475 ug/mL M4
21) t	n-Heneicosane (C21)	30.734	56936330	51.013 ug/mL M4
22) t	n-Docosane (C22)	32.202	57646510	51.569 ug/mL M4
23) t	n-Tricosane (C23)	33.610	57562174	51.392 ug/mL M4
25) t	n-Tetracosane (C24)	34.963	54279438	48.613 ug/mL M4
26) t	n-Pentacosane (C25)	36.266	56221562	51.458 ug/mL M4
27) t	n-Hexacosane (C26)	37.520	57791777	51.529 ug/mL M4
28) t	n-Heptacosane (C27)	38.730	55619260	49.458 ug/mL M4
29) t	n-Octacosane (C28)	39.898	57956561	49.713 ug/mL M4
30) t	n-Nonacosane (C29)	41.026	57458404	50.249 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072106.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 12:29 pm
Operator : FID17:WR
Sample : WG1580304-1
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 10:19:06 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

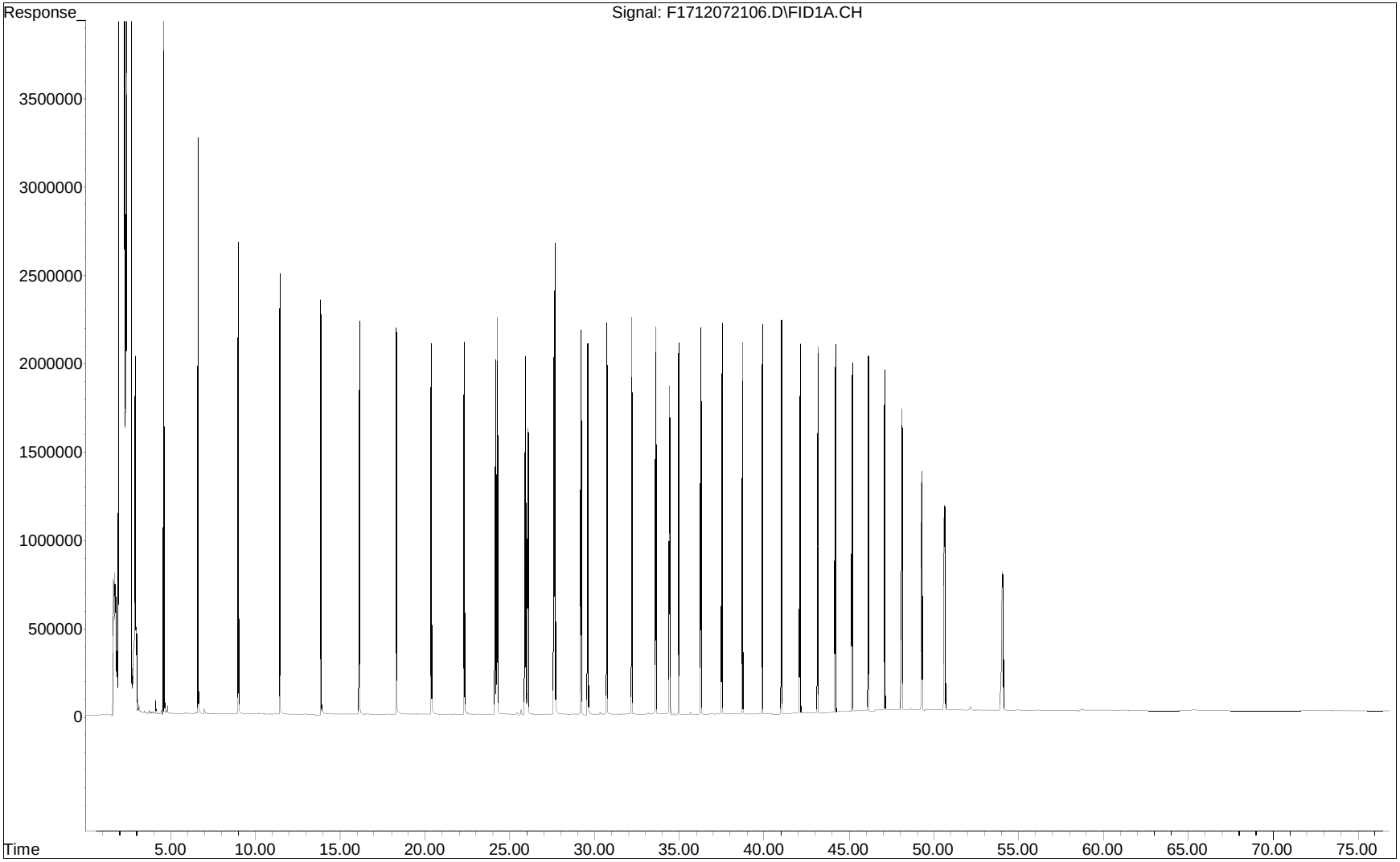
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.122	57492235	50.083 ug/mL M4
32) t	n-Hentriacontane (C31)	43.177	55612917	50.088 ug/mL M4
33) t	n-Dotriacontane (C32)	44.202	58078762	49.835 ug/mL M4
34) t	n-Tritriacontane (C33)	45.197	55870169	49.249 ug/mL M4
35) t	n-tetratriacontane (C34)	46.161	55248352	49.043 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.106	55523179	52.756 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.126	59284471	46.791 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.290	54292687	47.250 ug/mL M4
39) t	n-Octatriacontane (C38)	50.639	55747319	47.988 ug/mL M4
41) t	n-Tetracontane (C40)	54.047	55015976	47.986 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072106.D
Operator : FID17:WR
Acquired : 07 Dec 2021 12:29 pm using AcqMethod FID17A.M
Sample Name: WG1580304-1
Instrument: FID17
Misc Info : WG1580304,FRBE37,ICAL18012
Vial Number: 3
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072136.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 10:33 am
Operator : FID17:WR
Sample : WG1580304-2
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 18 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:00:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	108	0.00
2	t	n-Octane (C8)	0.864	0.840	2.8	103	0.00
3	t	n-Nonane (C9)	0.922	0.875	5.1	103	0.00
4	t	n-Decane (C10)	0.944	0.916	3.0	103	0.00
5	t	n-Undecane (C11)	0.923	0.943	-2.2	107	0.00
6	t	n-Dodecane (C12)	0.925	0.945	-2.2	107	0.00
7	t	n-Tridecane (C13)	0.928	0.959	-3.3	109	0.00
9	t	n-Tetradecane (C14)	0.956	0.977	-2.2	108	0.00
11	t	n-Pentadecane (C15)	0.957	0.963	-0.6	106	0.00
12	t	n-Hexadecane (C16)	0.955	0.971	-1.7	108	0.00
14	t	n-Heptadecane (C17)	0.954	0.959	-0.5	106	0.00
15	t	Pristane	0.990	1.037	-4.7	112	0.00
16	t	n-Octadecane (C18)	0.970	0.992	-2.3	108	0.00
17	t	Phytane	0.908	0.953	-5.0	112	0.00
18	t	n-Nonadecane (C19)	0.973	1.056	-8.5	115	0.00
19	s	ortho-terphenyl	1.084	1.166	-7.6	115	0.00
20	t	n-Eicosane (C20)	0.979	1.006	-2.8	109	0.00
21	t	n-Heneicosane (C21)	0.982	1.002	-2.0	108	0.00
22	t	n-Docosane (C22)	0.983	1.016	-3.4	110	0.00
23	t	n-Tricosane (C23)	0.985	1.010	-2.5	109	0.00
24	s	d50-Tetracosane	0.860	0.968	-12.6	118	0.00
25	t	n-Tetracosane (C24)	0.982	0.956	2.6	104	0.00
26	t	n-Pentacosane (C25)	0.961	0.991	-3.1	110	0.00
27	t	n-Hexacosane (C26)	0.987	1.018	-3.1	110	0.00
28	t	n-Heptacosane (C27)	0.989	0.979	1.0	106	0.00
29	t	n-Octacosane (C28)	1.026	1.020	0.6	108	0.00
30	t	n-Nonacosane (C29)	1.006	1.011	-0.5	108	0.00
31	t	n-Triacontane (C30)	1.010	1.011	-0.1	107	0.00
32	t	n-Hentriacontane (C31)	0.977	0.979	-0.2	108	0.00
33	t	n-Dotriacontane (C32)	1.025	1.020	0.5	107	0.00
34	t	n-Tritriacontane (C33)	0.998	0.983	1.5	107	0.00
35	t	n-tetratriacontane (C34)	0.991	0.976	1.5	106	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072136.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 10:33 am
Operator : FID17:WR
Sample : WG1580304-2
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 18 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:00:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.984	-6.3	115	0.00
37 t	n-Hexatriacontane (C36)	1.115	1.053	5.6	102	0.00
38 t	n-Heptatriacontane (C37)	1.011	0.967	4.4	103	0.00
39 t	n-Octatriacontane (C38)	1.022	0.995	2.6	104	0.00
41 t	n-Tetracontane (C40)	1.009	0.986	2.3	105	0.02

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.05	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072136.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 10:33 am
Operator : FID17:WR
Sample : WG1580304-2
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 18 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:00:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	29.612	57636351	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	27.673	67218147	53.799 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 107.60%	
24) s d50-Tetracosane	34.424	55771497	56.262 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 112.52%	
Target Compounds			
2) t n-Octane (C8)	4.593	48393928	48.566 ug/mL M4
3) t n-Nonane (C9)	6.618	50415012	47.414 ug/mL M4
4) t n-Decane (C10)	8.995	52798872	48.505 ug/mL M4
5) t n-Undecane (C11)	11.456	54345957	51.102 ug/mL M4
6) t n-Dodecane (C12)	13.855	54487953	51.095 ug/mL M4
7) t n-Tridecane (C13)	16.144	55285078	51.703 ug/mL M4
9) t n-Tetradecane (C14)	18.313	56310799	51.112 ug/mL M4
11) t n-Pentadecane (C15)	20.368	55527628	50.343 ug/mL M4
12) t n-Hexadecane (C16)	22.313	55948880	50.816 ug/mL M4
14) t n-Heptadecane (C17)	24.162	55288381	50.263 ug/mL M4
15) t Pristane	24.272	59788870	52.411 ug/mL M4
16) t n-Octadecane (C18)	25.924	57160067	51.109 ug/mL M4
17) t Phytane	26.080	54914145	52.487 ug/mL M4
18) t n-Nonadecane (C19)	27.604	60849880	54.244 ug/mL M4
20) t n-Eicosane (C20)	29.204	58010638	51.419 ug/mL M4
21) t n-Heneicosane (C21)	30.735	57724024	51.001 ug/mL M4
22) t n-Docosane (C22)	32.202	58580704	51.678 ug/mL M4
23) t n-Tricosane (C23)	33.610	58188459	51.230 ug/mL M4
25) t n-Tetracosane (C24)	34.965	55096536	48.660 ug/mL M4
26) t n-Pentacosane (C25)	36.267	57112743	51.548 ug/mL M4
27) t n-Hexacosane (C26)	37.522	58649106	51.567 ug/mL M4
28) t n-Heptacosane (C27)	38.729	56433041	49.486 ug/mL M4
29) t n-Octacosane (C28)	39.897	58767048	49.709 ug/mL M4
30) t n-Nonacosane (C29)	41.029	58271737	50.253 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072136.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 10:33 am
Operator : FID17:WR
Sample : WG1580304-2
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 18 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:00:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

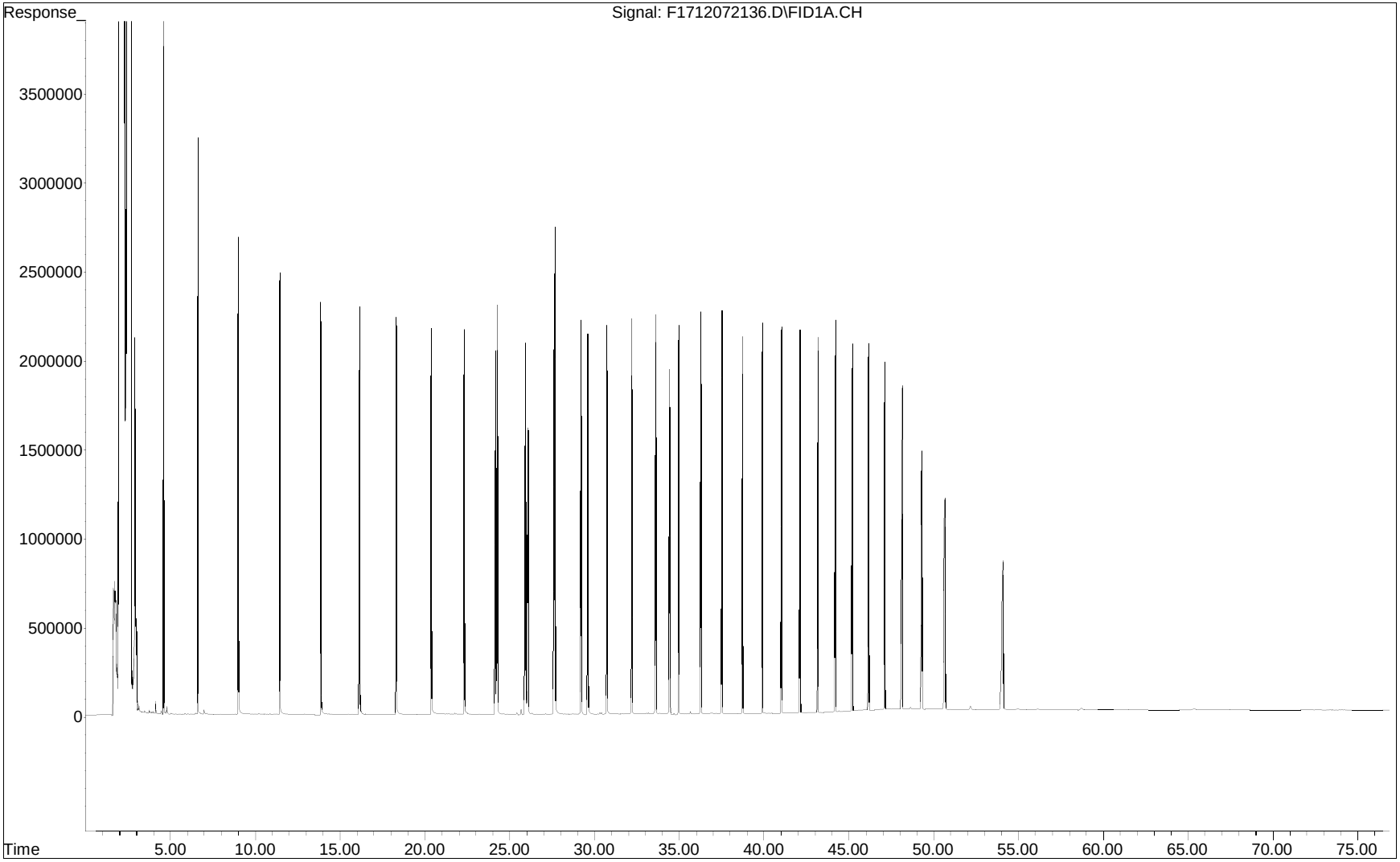
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.122	58279337	50.064 ug/mL M4
32) t	n-Hentriacontane (C31)	43.179	56403414	50.095 ug/mL M4
33) t	n-Dotriacontane (C32)	44.206	58809514	49.761 ug/mL M4
34) t	n-Tritriacontane (C33)	45.199	56680143	49.270 ug/mL M4
35) t	n-tetratriacontane (C34)	46.164	56231364	49.223 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.106	56685600	53.113 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.134	60666416	47.218 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.294	55719350	47.819 ug/mL M4
39) t	n-Octatriacontane (C38)	50.647	57332857	48.668 ug/mL M4
41) t	n-Tetracontane (C40)	54.063	56828125	48.879 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072136.D
Operator : FID17:WR
Acquired : 08 Dec 2021 10:33 am using AcqMethod FID17A.M
Sample Name: WG1580304-2
Instrument: FID17
Misc Info : WG1580304,FRBE37,ICAL18012
Vial Number: 18
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072154.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 11:51 pm
Operator : FID17:WR
Sample : WG1580304-3
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 27 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:13:28 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	118	0.00
2	t	n-Octane (C8)	0.864	0.796	7.9	107	0.00
3	t	n-Nonane (C9)	0.922	0.865	6.2	112	0.00
4	t	n-Decane (C10)	0.944	0.905	4.1	112	0.00
5	t	n-Undecane (C11)	0.923	0.941	-2.0	117	0.00
6	t	n-Dodecane (C12)	0.925	0.942	-1.8	116	0.00
7	t	n-Tridecane (C13)	0.928	0.950	-2.4	118	0.00
9	t	n-Tetradecane (C14)	0.956	0.974	-1.9	118	0.00
11	t	n-Pentadecane (C15)	0.957	0.959	-0.2	116	0.00
12	t	n-Hexadecane (C16)	0.955	0.967	-1.3	118	0.00
14	t	n-Heptadecane (C17)	0.954	0.958	-0.4	115	0.00
15	t	Pristane	0.990	1.035	-4.5	122	0.00
16	t	n-Octadecane (C18)	0.970	0.990	-2.1	118	0.00
17	t	Phytane	0.908	0.954	-5.1	122	0.00
18	t	n-Nonadecane (C19)	0.973	1.073	-10.3	128	0.00
19	s	ortho-terphenyl	1.084	1.150	-6.1	124	0.00
20	t	n-Eicosane (C20)	0.979	1.008	-3.0	119	0.00
21	t	n-Heneicosane (C21)	0.982	1.004	-2.2	118	0.00
22	t	n-Docosane (C22)	0.983	1.018	-3.6	120	0.00
23	t	n-Tricosane (C23)	0.985	1.017	-3.2	120	0.01
24	s	d50-Tetracosane	0.860	0.972	-13.0	129	0.01
25	t	n-Tetracosane (C24)	0.982	0.961	2.1	114	0.01
26	t	n-Pentacosane (C25)	0.961	0.995	-3.5	120	0.01
27	t	n-Hexacosane (C26)	0.987	1.023	-3.6	121	0.01
28	t	n-Heptacosane (C27)	0.989	0.987	0.2	116	0.00
29	t	n-Octacosane (C28)	1.026	1.028	-0.2	119	0.01
30	t	n-Nonacosane (C29)	1.006	1.020	-1.4	119	0.00
31	t	n-Triacontane (C30)	1.010	1.022	-1.2	119	0.00
32	t	n-Hentriacontane (C31)	0.977	0.990	-1.3	119	0.01
33	t	n-Dotriacontane (C32)	1.025	1.036	-1.1	119	0.01
34	t	n-Tritriacontane (C33)	0.998	0.999	-0.1	118	0.01
35	t	n-tetratriacontane (C34)	0.991	0.992	-0.1	118	0.01

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072154.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 11:51 pm
Operator : FID17:WR
Sample : WG1580304-3
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 27 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:13:28 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	1.001	-8.1	128	0.01
37 t	n-Hexatriacontane (C36)	1.115	1.072	3.9	113	0.02
38 t	n-Heptatriacontane (C37)	1.011	0.982	2.9	114	0.02
39 t	n-Octatriacontane (C38)	1.022	1.009	1.3	116	0.02
41 t	n-Tetracontane (C40)	1.009	0.997	1.2	116	0.04

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.06	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072154.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 11:51 pm
Operator : FID17:WR
Sample : WG1580304-3
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 27 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:13:28 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.622	62992255	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.682	72465378	53.068 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	106.14%
24) s	d50-Tetracosane	34.435	61225347	56.513 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	113.03%
	Target Compounds			
2) t	n-Octane (C8)	4.596	50141120	46.041 ug/mL M4
3) t	n-Nonane (C9)	6.622	54487061	46.886 ug/mL M4
4) t	n-Decane (C10)	8.999	56976914	47.893 ug/mL M4
5) t	n-Undecane (C11)	11.460	59267669	50.992 ug/mL M4
6) t	n-Dodecane (C12)	13.859	59309269	50.888 ug/mL M4
7) t	n-Tridecane (C13)	16.149	59859671	51.221 ug/mL M4
9) t	n-Tetradecane (C14)	18.319	61359161	50.959 ug/mL M4
11) t	n-Pentadecane (C15)	20.372	60380037	50.088 ug/mL M4
12) t	n-Hexadecane (C16)	22.318	60882928	50.595 ug/mL M4
14) t	n-Heptadecane (C17)	24.172	60325922	50.180 ug/mL M4
15) t	Pristane	24.279	65221658	52.313 ug/mL M4
16) t	n-Octadecane (C18)	25.930	62371861	51.027 ug/mL M4
17) t	Phytane	26.088	60108735	52.567 ug/mL M4
18) t	n-Nonadecane (C19)	27.610	67588814	55.128 ug/mL M4
20) t	n-Eicosane (C20)	29.210	63488351	51.490 ug/mL M4
21) t	n-Heneicosane (C21)	30.742	63258394	51.139 ug/mL M4
22) t	n-Docosane (C22)	32.212	64131069	51.764 ug/mL M4
23) t	n-Tricosane (C23)	33.622	64065448	51.608 ug/mL M4
25) t	n-Tetracosane (C24)	34.973	60520493	48.906 ug/mL M4
26) t	n-Pentacosane (C25)	36.277	62707160	51.785 ug/mL M4
27) t	n-Hexacosane (C26)	37.531	64458878	51.857 ug/mL M4
28) t	n-Heptacosane (C27)	38.740	62158236	49.872 ug/mL M4
29) t	n-Octacosane (C28)	39.909	64751617	50.114 ug/mL M4
30) t	n-Nonacosane (C29)	41.034	64235582	50.686 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072154.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 11:51 pm
Operator : FID17:WR
Sample : WG1580304-3
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 27 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:13:28 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

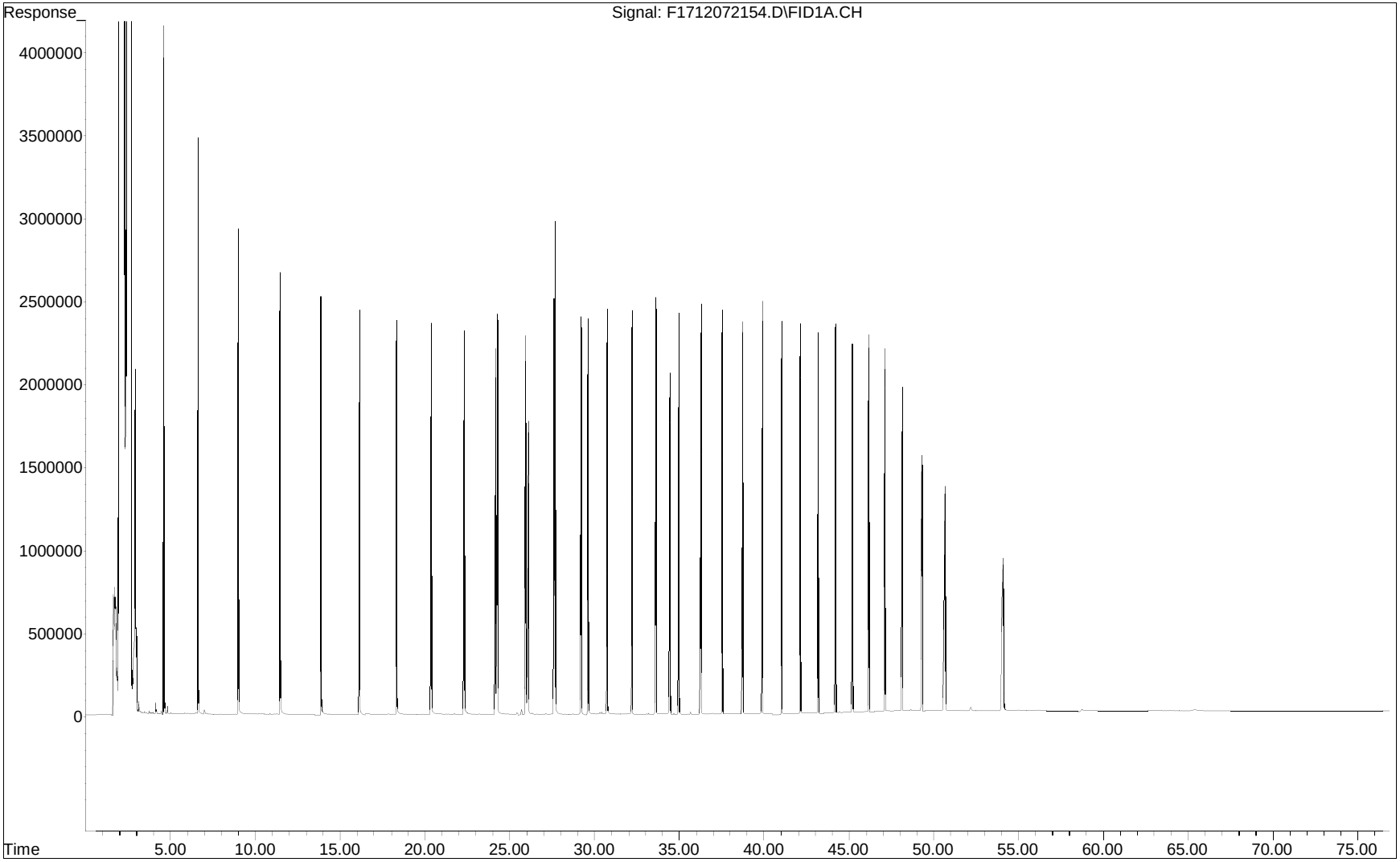
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.132	64352780	50.582 ug/mL M4
32) t	n-Hentriacontane (C31)	43.191	62353740	50.671 ug/mL M4
33) t	n-Dotriacontane (C32)	44.217	65285710	50.544 ug/mL M4
34) t	n-Tritriacontane (C33)	45.209	62914330	50.039 ug/mL M4
35) t	n-tetratriacontane (C34)	46.175	62502357	50.060 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.118	63073065	54.073 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.148	67513614	48.079 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.312	61864088	48.578 ug/mL M4
39) t	n-Octatriacontane (C38)	50.660	63561496	49.368 ug/mL M4
41) t	n-Tetracontane (C40)	54.082	62828109	49.445 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072154.D
Operator : FID17:WR
Acquired : 08 Dec 2021 11:51 pm using AcqMethod FID17A.M
Sample Name: WG1580304-3
Instrument: FID17
Misc Info : WG1580304,FRBE37,ICAL18012
Vial Number: 27
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072152.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 10:22 pm
Operator : FID17:WR
Sample : L2165245-01,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 26 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:26:15 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072102F
Blank File : F1712072140.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.614	62038125	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.656	16107968	11.978	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.96%#		
24) s	d50-Tetracosane	34.412	12135687	11.374	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	22.75%#		
	Target Compounds					
2) t	n-Octane (C8)	4.559	4612446	4.300	ug/mL	M4
3) t	n-Nonane (C9)	6.597	26693629	23.323	ug/mL	M4
4) t	n-Decane (C10)	9.012	120766486	103.074	ug/mL	M4
5) t	n-Undecane (C11)	11.513	273055094	238.540	ug/mL	M4
6) t	n-Dodecane (C12)	13.919	293680913	255.854	ug/mL	M4
7) t	n-Tridecane (C13)	16.200	248461557	215.876	ug/mL	M4
8) t	1380	17.829	35017960	29.530	ug/mL	M4
9) t	n-Tetradecane (C14)	18.352	130460648	110.015	ug/mL	M4
10) t	1470	19.598	31152838	26.240	ug/mL	M4
11) t	n-Pentadecane (C15)	20.376	47100992	39.674	ug/mL	M4
12) t	n-Hexadecane (C16)	22.305	9283504	7.833	ug/mL	M4
13) t	1650	23.205	1273679	1.076	ug/mL	M4
14) t	n-Heptadecane (C17)	24.155	1915914	1.618	ug/mL	M4
15) t	Pristane	24.247	938944	0.765	ug/mL	M4
16) t	n-Octadecane (C18)	25.914	694853	0.577	ug/mL	M4
17) t	Phytane	26.059	209584	0.186	ug/mL	M4
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.208	91485	0.075	ug/mL	M4
21) t	n-Heneicosane (C21)	30.734	29216	0.024	ug/mL	M4
22) t	n-Docosane (C22)	32.200	28975	0.024	ug/mL	M4
23) t	n-Tricosane (C23)	33.590	30140	0.025	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072152.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 10:22 pm
Operator : FID17:WR
Sample : L2165245-01,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 26 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:26:15 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072102F
Blank File : F1712072140.D

Sub List : Default - All compounds listed

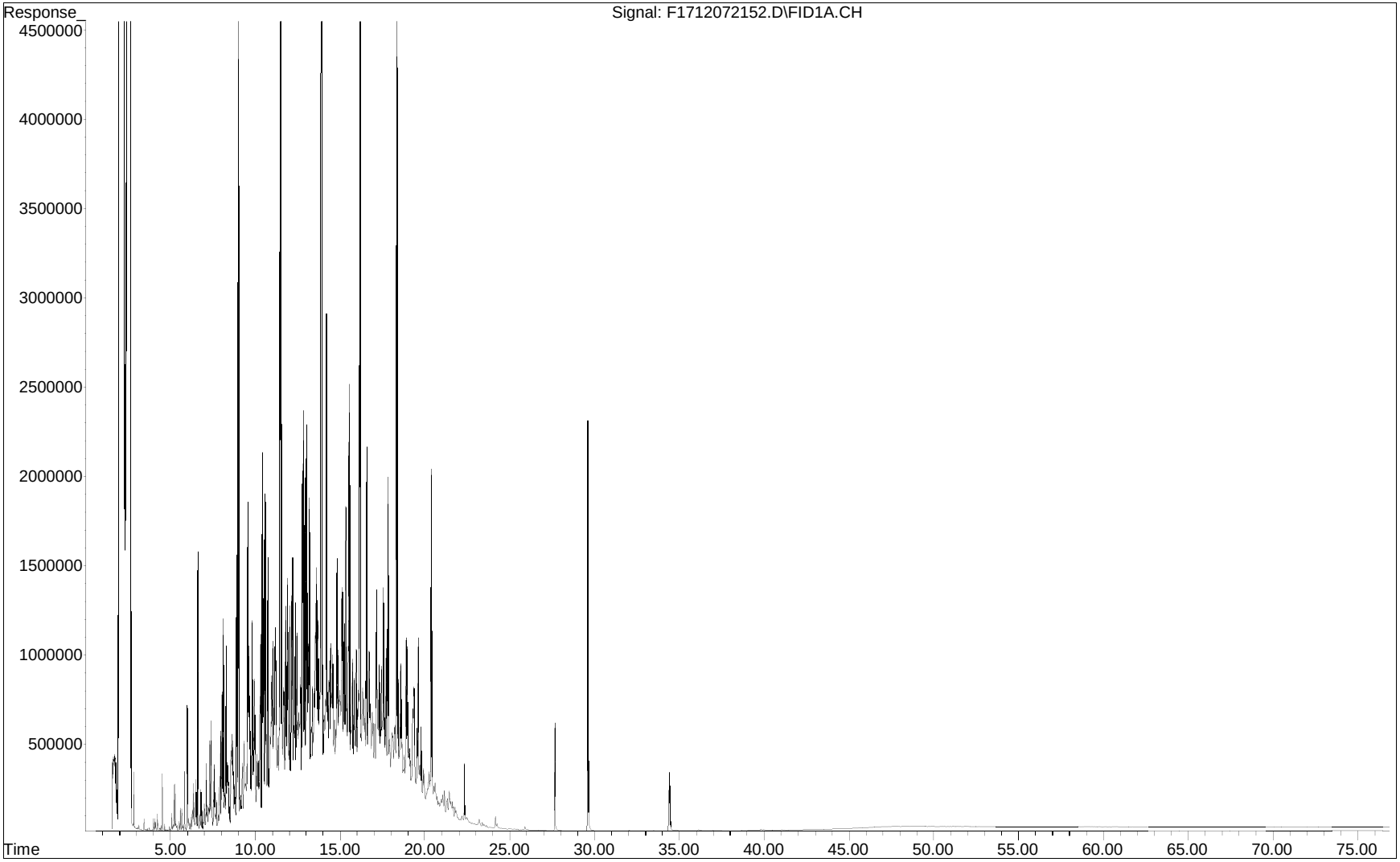
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	d
29) t	n-Octacosane (C28)	39.808	431488	0.339	ug/mL	M4
30) t	n-Nonacosane (C29)	41.047	210724	0.169	ug/mL	M4
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	35.999	6550809885	5399.519	ug/mL	m
42) h	C9-C44 Total Petroleu BS	35.999	6239026755	5142.531	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
43) h	C9-C40 Total Petroleu BS	0.000	-157795286	N.D.	ug/mld	
44) h	C10-C28 DRO	24.438	5919966444	4937.768	ug/mL	m
44) h	C10-C28 DRO BS	24.438	5897909240	4919.370	ug/mLm	
45) h	C28-C40 ORO	46.951	156056624	124.589	ug/mL	m
45) h	C28-C40 ORO BS	46.951	37676202	30.079	ug/mLm	
46) h	Total Resolved Hydroc...	36.038	4529915104	3733.792	ug/mL	m

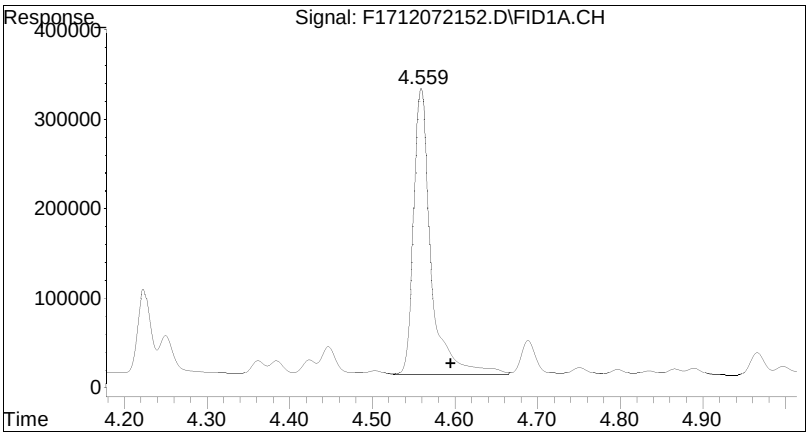
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

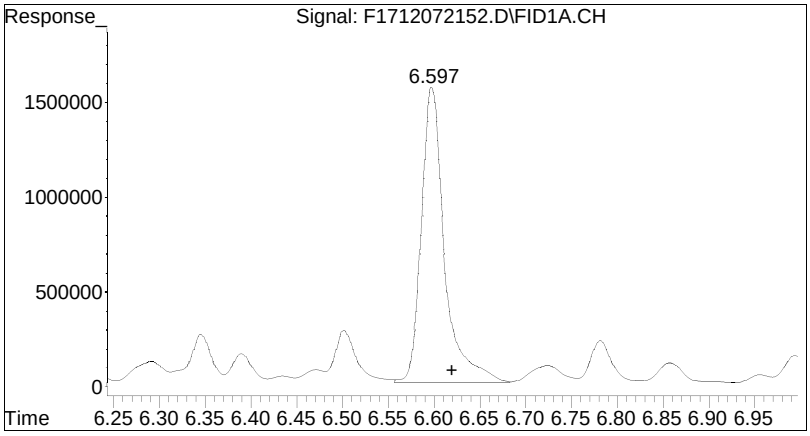
File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072152.D
Operator : FID17:WR
Acquired : 08 Dec 2021 10:22 pm using AcqMethod FID17A.M
Sample Name: L2165245-01,42,,
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 26
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M





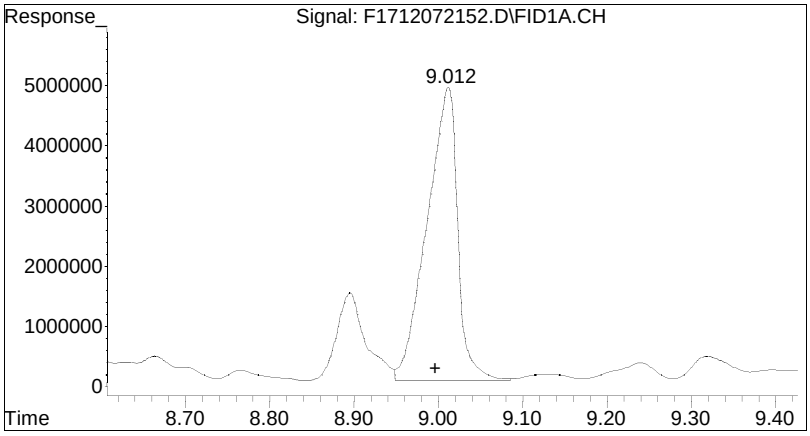
#2 n-Octane (C8)

R.T.:	4.559 min
Delta R.T.:	-0.036 min
Response:	4612446
Conc:	4.30 ug/mL M4



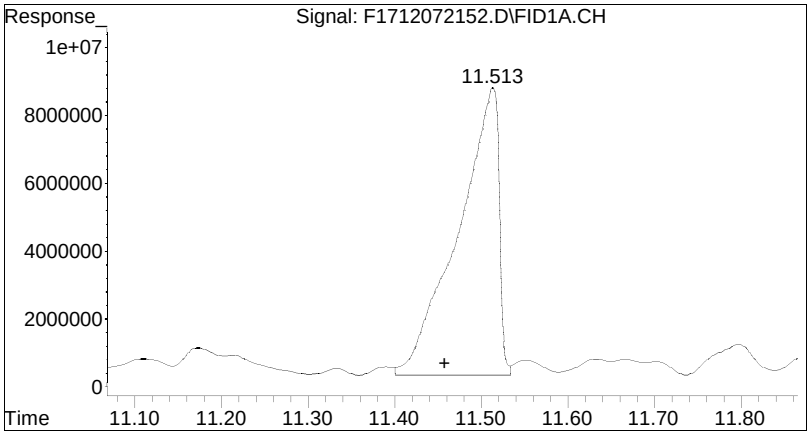
#3 n-Nonane (C9)

R.T.:	6.597 min
Delta R.T.:	-0.022 min
Response:	26693629
Conc:	23.32 ug/mL M4



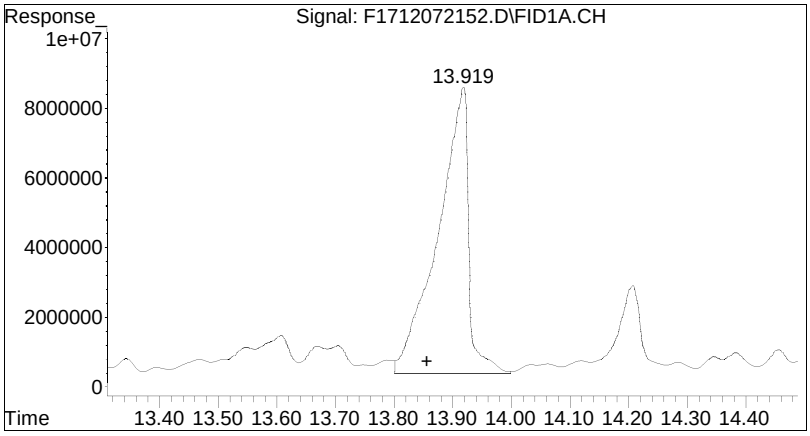
#4 n-Decane (C10)

R.T.: 9.012 min
Delta R.T.: 0.015 min
Response: 120766486
Conc: 103.07 ug/mL M4



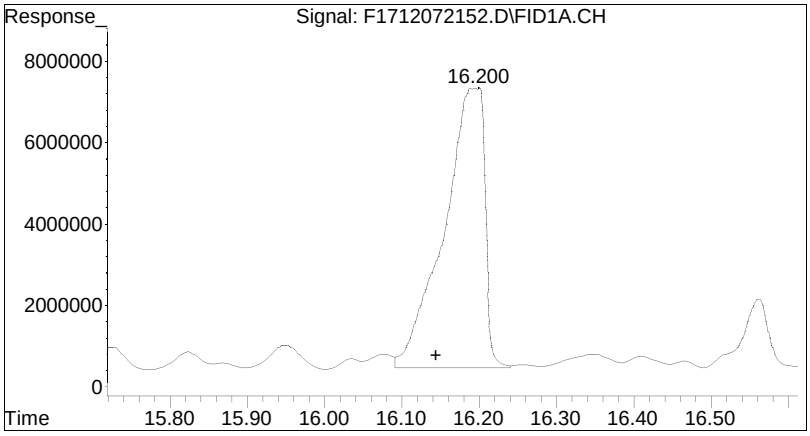
#5 n-Undecane (C11)

R.T.: 11.513 min
Delta R.T.: 0.056 min
Response: 273055094
Conc: 238.54 ug/mL M4



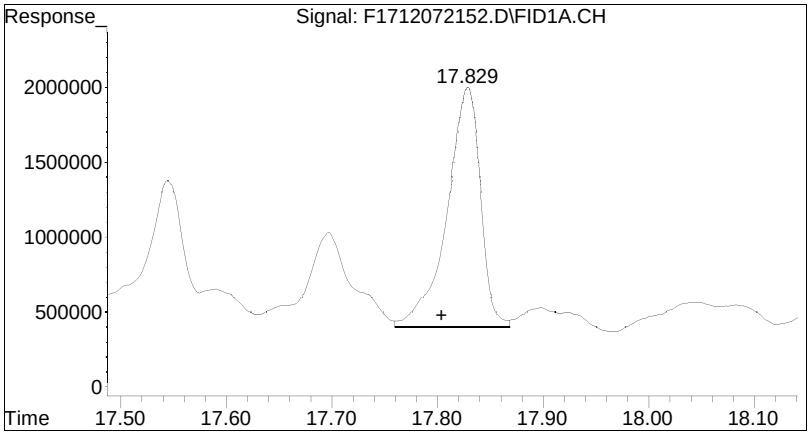
#6 n-Dodecane (C12)

R.T.: 13.919 min
Delta R.T.: 0.062 min
Response: 293680913
Conc: 255.85 ug/mL M4



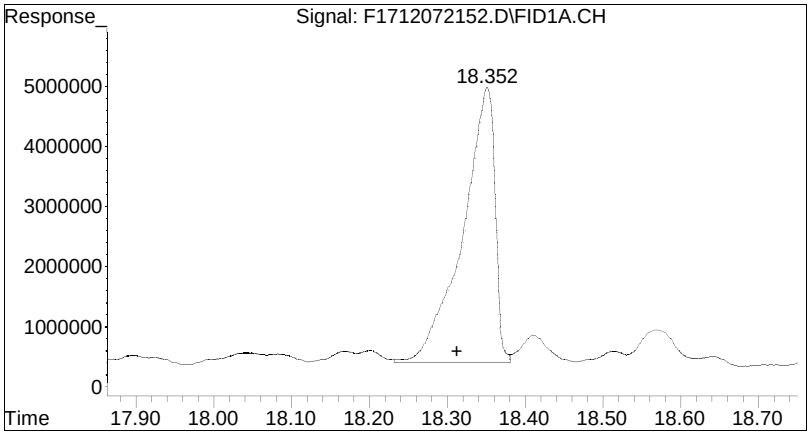
#7 n-Tridecane (C13)

R.T.: 16.200 min
Delta R.T.: 0.055 min
Response: 248461557
Conc: 215.88 ug/mL M4



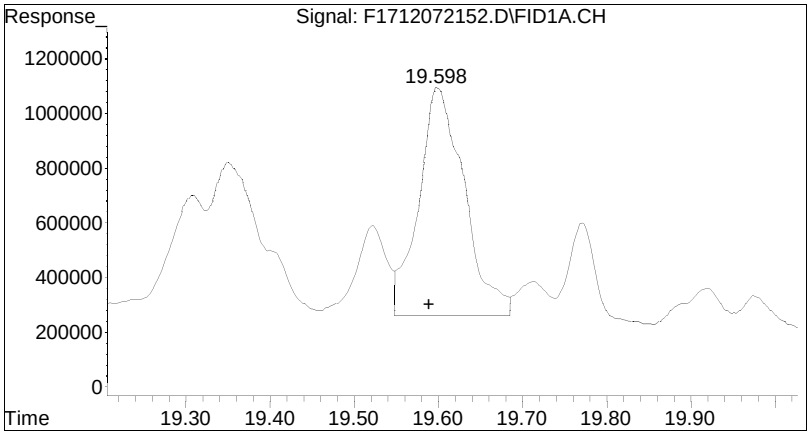
#8 1380

R.T.: 17.829 min
Delta R.T.: 0.025 min
Response: 35017960
Conc: 29.53 ug/mL M4



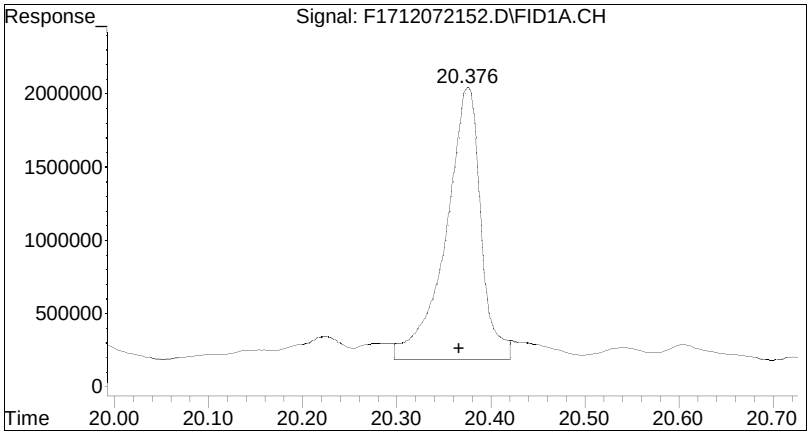
#9 n-Tetradecane (C14)

R.T.: 18.352 min
Delta R.T.: 0.039 min
Response: 130460648
Conc: 110.01 ug/mL M4



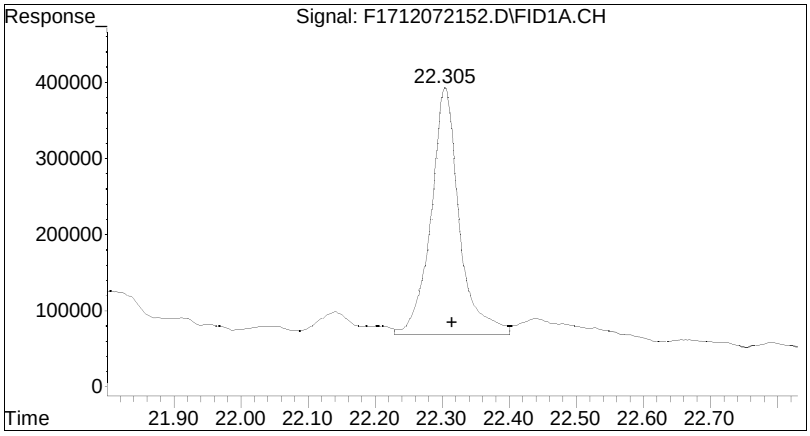
#10 1470

R.T.: 19.598 min
Delta R.T.: 0.009 min
Response: 31152838
Conc: 26.24 ug/mL M4



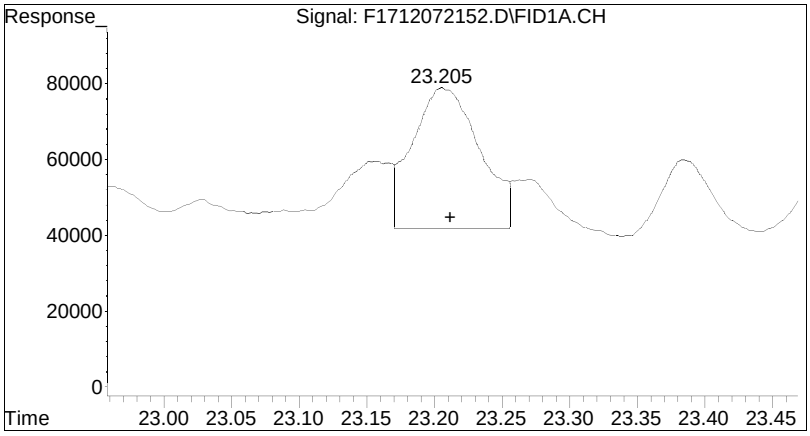
#11 n-Pentadecane (C15)

R.T.:	20.376 min
Delta R.T.:	0.009 min
Response:	47100992
Conc:	39.67 ug/mL M4



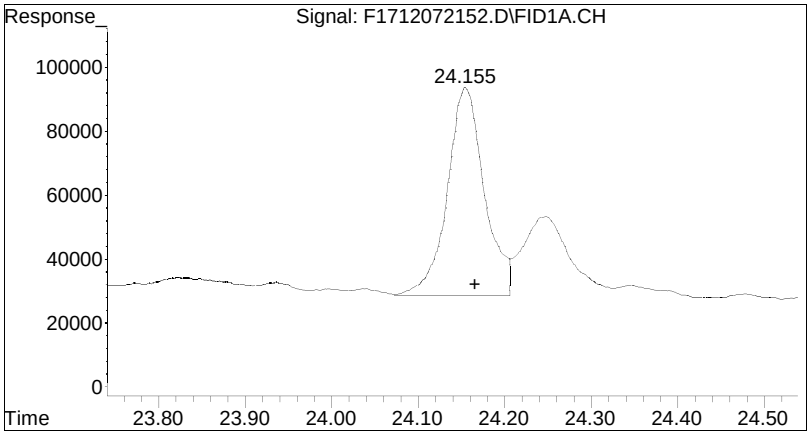
#12 n-Hexadecane (C16)

R.T.:	22.305 min
Delta R.T.:	-0.010 min
Response:	9283504
Conc:	7.83 ug/mL M4



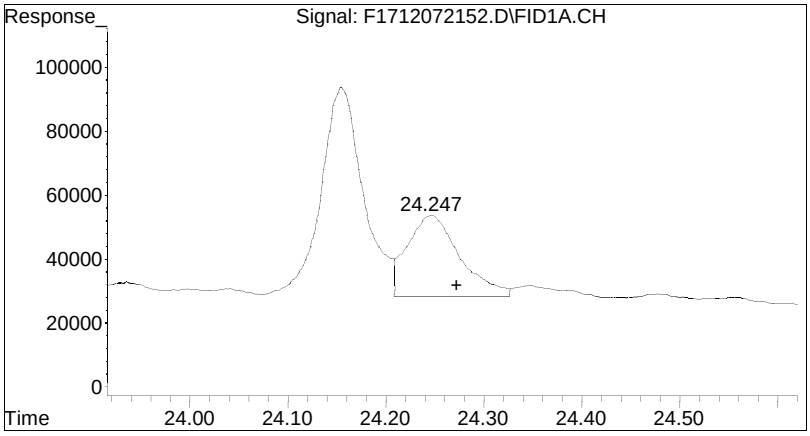
#13 1650

R.T.:	23.205 min
Delta R.T.:	-0.007 min
Response:	1273679
Conc:	1.08 ug/mL M4



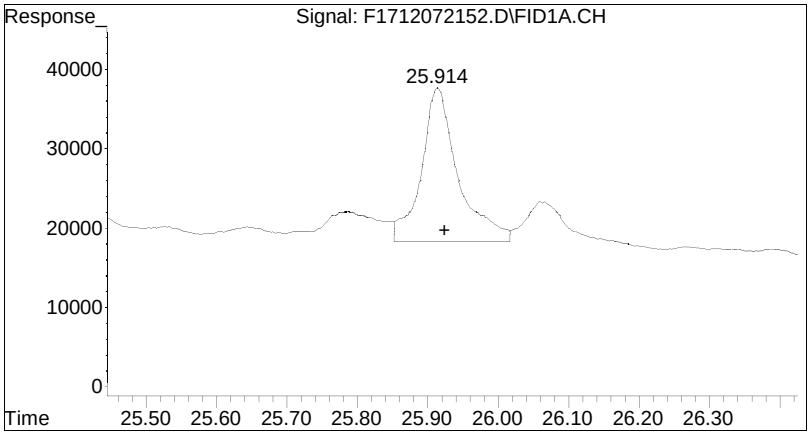
#14 n-Heptadecane (C17)

R.T.:	24.155 min
Delta R.T.:	-0.011 min
Response:	1915914
Conc:	1.62 ug/mL M4



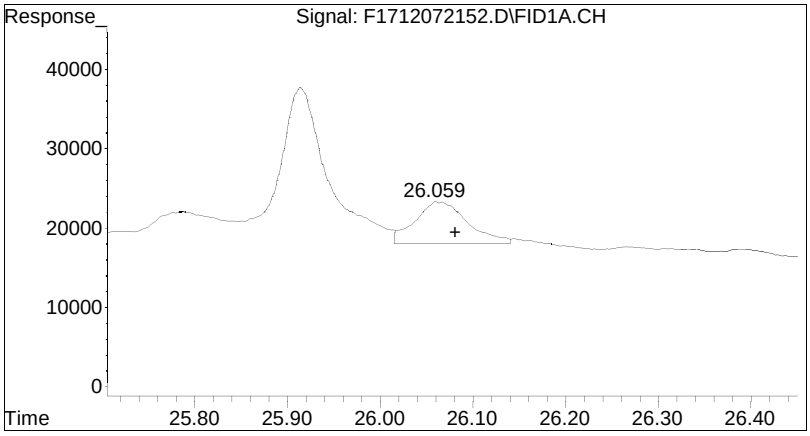
#15 Pristane

R.T.:	24.247 min
Delta R.T.:	-0.026 min
Response:	938944
Conc:	0.76 ug/mL M4



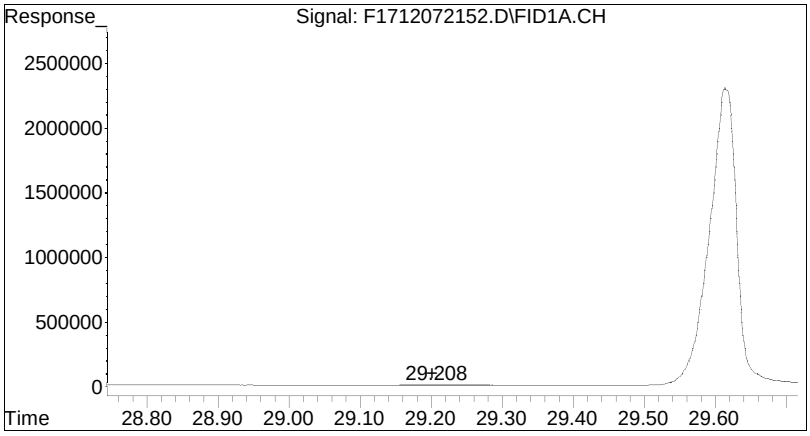
#16 n-Octadecane (C18)

R.T.:	25.914 min
Delta R.T.:	-0.010 min
Response:	694853
Conc:	0.58 ug/mL M4



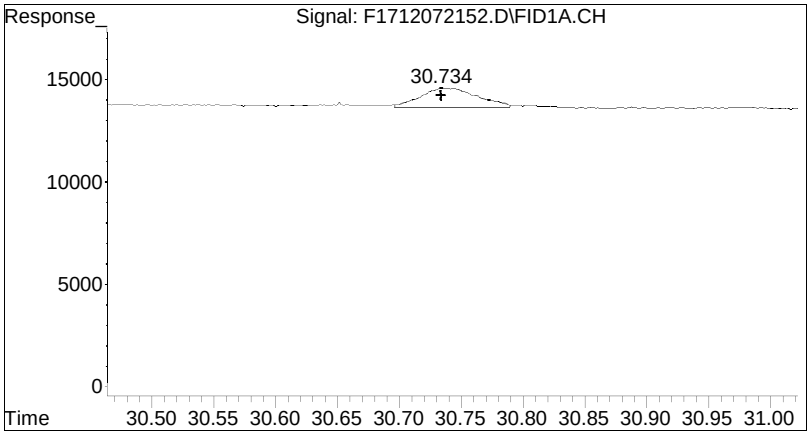
#17 Phytane

R.T.:	26.059 min
Delta R.T.:	-0.022 min
Response:	209584
Conc:	0.19 ug/mL M4



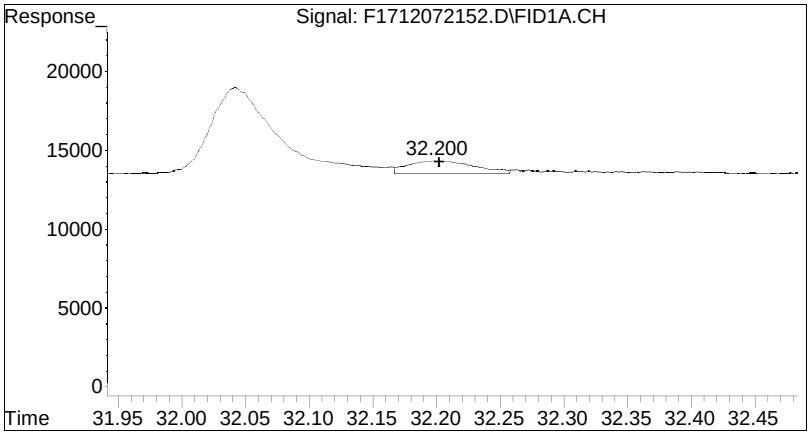
#20 n-Eicosane (C20)

R.T.:	29.208 min
Delta R.T.:	0.006 min
Response:	91485
Conc:	0.08 ug/mL M4



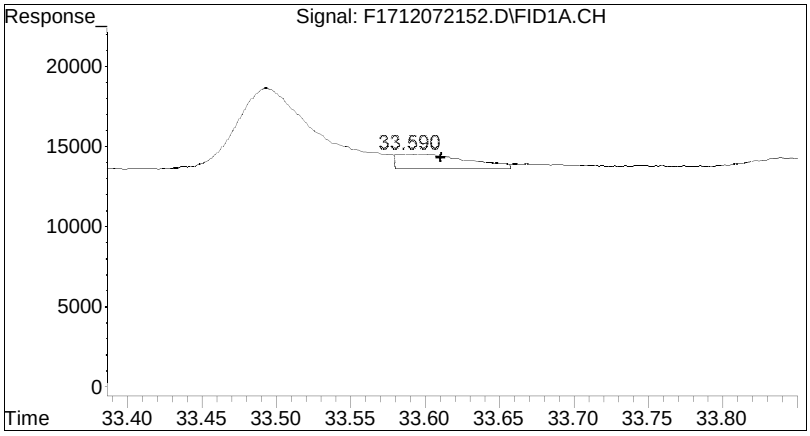
#21 n-Heneicosane (C21)

R.T.:	30.734 min
Delta R.T.:	0.000 min
Response:	29216
Conc:	0.02 ug/mL M4



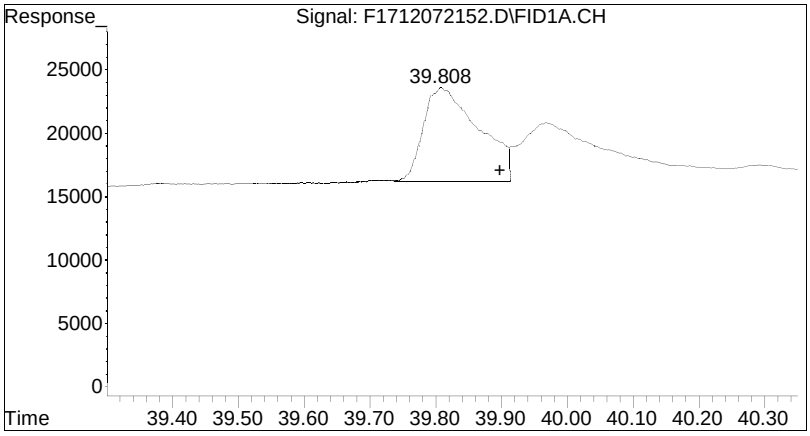
#22 n-Docosane (C22)

R.T.:	32.200 min
Delta R.T.:	-0.001 min
Response:	28975
Conc:	0.02 ug/mL M4



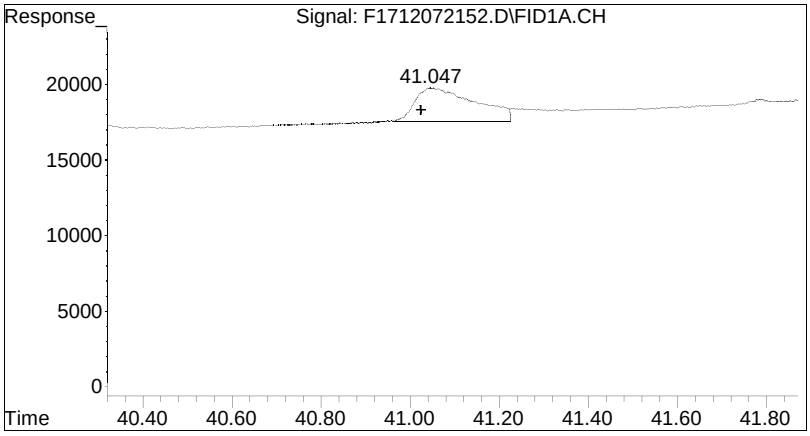
#23 n-Tricosane (C23)

R.T.:	33.590 min
Delta R.T.:	-0.021 min
Response:	30140
Conc:	0.02 ug/mL M4



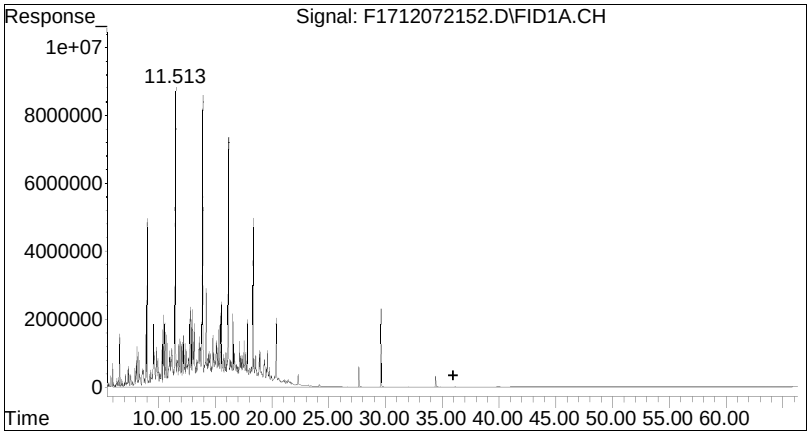
#29 n-Octacosane (C28)

R.T.:	39.808 min
Delta R.T.:	-0.090 min
Response:	431488
Conc:	0.34 ug/mL M4



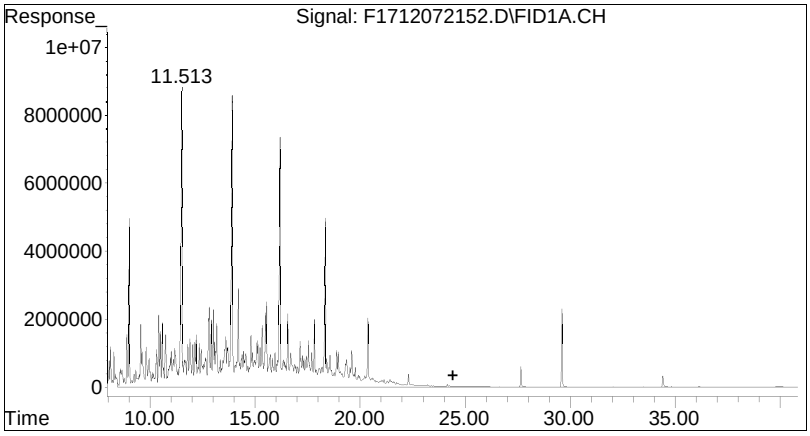
#30 n-Nonacosane (C29)

R.T.:	41.047 min
Delta R.T.:	0.021 min
Response:	210724
Conc:	0.17 ug/mL M4



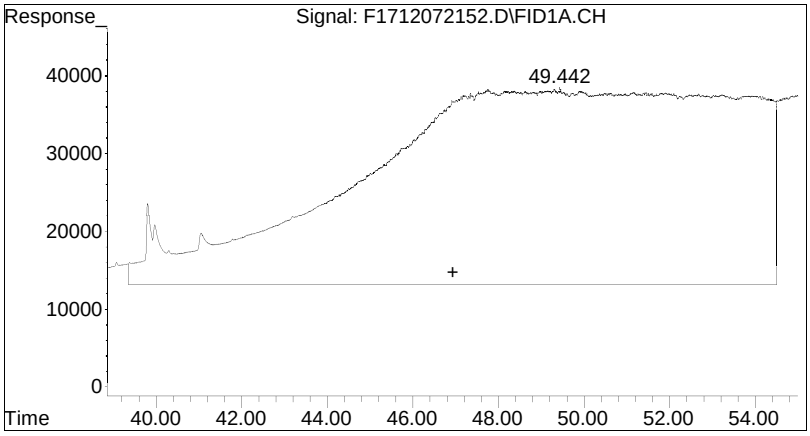
#42 C9-C44 Total Petroleum Hy

R.T.: 35.999 min
Delta R.T.: 0.000 min
Response: 6550809885
Conc: 5399.52 ug/mL m



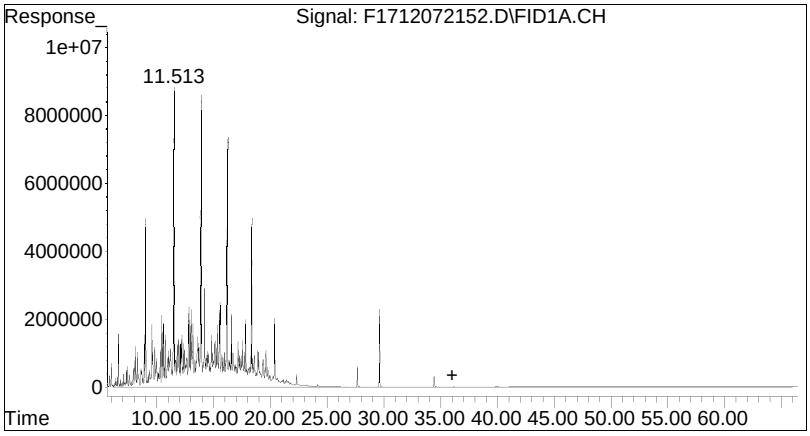
#44 C10-C28 DRO

R.T.: 24.438 min
Delta R.T.: 0.000 min
Response: 5919966444
Conc: 4937.77 ug/mL m



#45 C28-C40 ORO

R.T.: 46.951 min
Delta R.T.: 0.000 min
Response: 156056624
Conc: 124.59 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 4529915104
Conc: 3733.79 ug/mL m

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092106.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 12:30 pm
Operator : FID17:WR
Sample : WG1580304-4
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:04:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	105	0.00
2	t	n-Octane (C8)	0.864	0.873	-1.0	104	0.00
3	t	n-Nonane (C9)	0.922	0.898	2.6	103	0.00
4	t	n-Decane (C10)	0.944	0.915	3.1	100	0.00
5	t	n-Undecane (C11)	0.923	0.947	-2.6	105	0.00
6	t	n-Dodecane (C12)	0.925	0.946	-2.3	104	0.00
7	t	n-Tridecane (C13)	0.928	0.955	-2.9	105	0.00
9	t	n-Tetradecane (C14)	0.956	0.979	-2.4	105	0.00
11	t	n-Pentadecane (C15)	0.957	0.963	-0.6	103	0.00
12	t	n-Hexadecane (C16)	0.955	0.989	-3.6	107	0.00
14	t	n-Heptadecane (C17)	0.954	0.955	-0.1	102	0.00
15	t	Pristane	0.990	1.042	-5.3	109	0.00
16	t	n-Octadecane (C18)	0.970	0.993	-2.4	105	0.00
17	t	Phytane	0.908	0.956	-5.3	109	0.00
18	t	n-Nonadecane (C19)	0.973	1.038	-6.7	110	0.00
19	s	ortho-terphenyl	1.084	1.163	-7.3	111	0.00
20	t	n-Eicosane (C20)	0.979	1.008	-3.0	106	0.00
21	t	n-Heneicosane (C21)	0.982	1.004	-2.2	105	0.00
22	t	n-Docosane (C22)	0.983	1.016	-3.4	107	0.00
23	t	n-Tricosane (C23)	0.985	1.015	-3.0	107	0.00
24	s	d50-Tetracosane	0.860	0.970	-12.8	115	0.00
25	t	n-Tetracosane (C24)	0.982	0.957	2.5	101	0.00
26	t	n-Pentacosane (C25)	0.961	0.993	-3.3	107	0.00
27	t	n-Hexacosane (C26)	0.987	1.021	-3.4	107	0.00
28	t	n-Heptacosane (C27)	0.989	0.982	0.7	103	0.00
29	t	n-Octacosane (C28)	1.026	1.023	0.3	105	0.00
30	t	n-Nonacosane (C29)	1.006	1.016	-1.0	105	0.00
31	t	n-Triacontane (C30)	1.010	1.017	-0.7	105	0.00
32	t	n-Hentriacontane (C31)	0.977	0.986	-0.9	106	0.00
33	t	n-Dotriacontane (C32)	1.025	1.032	-0.7	105	0.00
34	t	n-Tritriacontane (C33)	0.998	0.996	0.2	105	0.00
35	t	n-tetratriacontane (C34)	0.991	0.988	0.3	105	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092106.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 12:30 pm
Operator : FID17:WR
Sample : WG1580304-4
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:04:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.996	-7.6	113	0.00
37 t	n-Hexatriacontane (C36)	1.115	1.068	4.2	100	0.00
38 t	n-Heptatriacontane (C37)	1.011	0.978	3.3	101	0.00
39 t	n-Octatriacontane (C38)	1.022	1.007	1.5	103	-0.02
41 t	n-Tetracontane (C40)	1.009	0.993	1.6	102	-0.01

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.06	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092106.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 12:30 pm
Operator : FID17:WR
Sample : WG1580304-4
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:04:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.612	56010864	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.672	65128154	53.639 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 107.28%	
24) s	d50-Tetracosane	34.417	54304018	56.372 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 112.74%	
	Target Compounds			
2) t	n-Octane (C8)	4.601	48919283	50.518 ug/mL M4
3) t	n-Nonane (C9)	6.623	50274763	48.654 ug/mL M4
4) t	n-Decane (C10)	8.998	51276687	48.474 ug/mL M4
5) t	n-Undecane (C11)	11.457	53032606	51.315 ug/mL M4
6) t	n-Dodecane (C12)	13.855	53003629	51.146 ug/mL M4
7) t	n-Tridecane (C13)	16.144	53477567	51.464 ug/mL M4
9) t	n-Tetradecane (C14)	18.314	54817133	51.200 ug/mL M4
11) t	n-Pentadecane (C15)	20.366	53933133	50.317 ug/mL M4
12) t	n-Hexadecane (C16)	22.313	55392460	51.770 ug/mL M4
14) t	n-Heptadecane (C17)	24.161	53473148	50.024 ug/mL M4
15) t	Pristane	24.272	58385505	52.666 ug/mL M4
16) t	n-Octadecane (C18)	25.922	55597407	51.154 ug/mL M4
17) t	Phytane	26.079	53537390	52.656 ug/mL M4
18) t	n-Nonadecane (C19)	27.602	58153110	53.344 ug/mL M4
20) t	n-Eicosane (C20)	29.201	56453061	51.491 ug/mL M4
21) t	n-Heneicosane (C21)	30.731	56239221	51.131 ug/mL M4
22) t	n-Docosane (C22)	32.200	56934097	51.683 ug/mL M4
23) t	n-Tricosane (C23)	33.607	56833669	51.489 ug/mL M4
25) t	n-Tetracosane (C24)	34.962	53588987	48.702 ug/mL M4
26) t	n-Pentacosane (C25)	36.264	55605793	51.644 ug/mL M4
27) t	n-Hexacosane (C26)	37.519	57160652	51.717 ug/mL M4
28) t	n-Heptacosane (C27)	38.724	55013347	49.641 ug/mL M4
29) t	n-Octacosane (C28)	39.892	57285983	49.862 ug/mL M4
30) t	n-Nonacosane (C29)	41.026	56901094	50.495 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092106.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 12:30 pm
Operator : FID17:WR
Sample : WG1580304-4
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:04:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

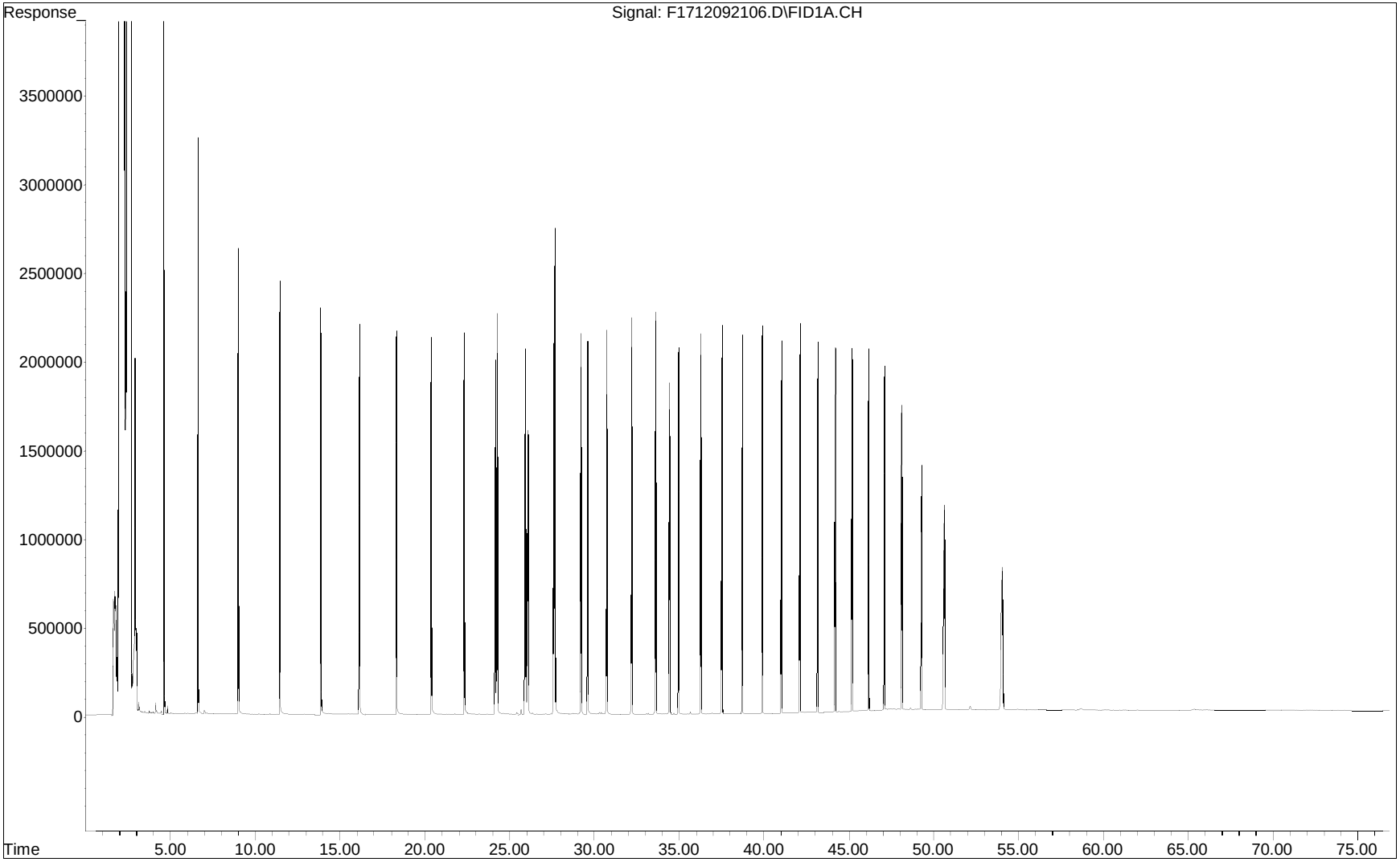
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.113	56962100	50.353 ug/mL M4
32) t	n-Hentriacontane (C31)	43.170	55232777	50.479 ug/mL M4
33) t	n-Dotriacontane (C32)	44.195	57783647	50.312 ug/mL M4
34) t	n-Tritriacontane (C33)	45.190	55774703	49.890 ug/mL M4
35) t	n-tetratriacontane (C34)	46.157	55347703	49.855 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.099	55799415	53.800 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.123	59839698	47.926 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.283	54751402	48.351 ug/mL M4
39) t	n-Octatriacontane (C38)	50.621	56404509	49.269 ug/mL M4
41) t	n-Tetracontane (C40)	54.036	55595982	49.207 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC09\F1712092106.D
Operator : FID17:WR
Acquired : 09 Dec 2021 12:30 pm using AcqMethod FID17A.M
Sample Name: WG1580304-4
Instrument: FID17
Misc Info : WG1580304,FRBE37,ICAL18012
Vial Number: 3
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092114.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 6:24 pm
Operator : FID17:WR
Sample : WG1580304-5
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:27:25 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	105	0.00
2	t	n-Octane (C8)	0.864	0.861	0.3	102	0.00
3	t	n-Nonane (C9)	0.922	0.887	3.8	101	0.00
4	t	n-Decane (C10)	0.944	0.920	2.5	100	0.00
5	t	n-Undecane (C11)	0.923	0.938	-1.6	103	0.00
6	t	n-Dodecane (C12)	0.925	0.937	-1.3	102	0.00
7	t	n-Tridecane (C13)	0.928	0.953	-2.7	104	0.00
9	t	n-Tetradecane (C14)	0.956	0.973	-1.8	104	0.00
11	t	n-Pentadecane (C15)	0.957	0.955	0.2	102	0.00
12	t	n-Hexadecane (C16)	0.955	0.984	-3.0	106	0.00
14	t	n-Heptadecane (C17)	0.954	0.946	0.8	101	0.00
15	t	Pristane	0.990	1.044	-5.5	109	0.00
16	t	n-Octadecane (C18)	0.970	0.985	-1.5	104	0.00
17	t	Phytane	0.908	0.958	-5.5	108	0.00
18	t	n-Nonadecane (C19)	0.973	1.046	-7.5	110	0.00
19	s	ortho-terphenyl	1.084	1.189	-9.7	113	0.00
20	t	n-Eicosane (C20)	0.979	1.008	-3.0	105	0.00
21	t	n-Heneicosane (C21)	0.982	1.004	-2.2	105	0.00
22	t	n-Docosane (C22)	0.983	1.019	-3.7	106	0.00
23	t	n-Tricosane (C23)	0.985	1.019	-3.5	106	0.00
24	s	d50-Tetracosane	0.860	0.973	-13.1	114	0.00
25	t	n-Tetracosane (C24)	0.982	0.962	2.0	101	0.00
26	t	n-Pentacosane (C25)	0.961	0.996	-3.6	107	0.00
27	t	n-Hexacosane (C26)	0.987	1.023	-3.6	107	0.00
28	t	n-Heptacosane (C27)	0.989	0.987	0.2	103	-0.01
29	t	n-Octacosane (C28)	1.026	1.029	-0.3	105	-0.01
30	t	n-Nonacosane (C29)	1.006	1.021	-1.5	105	0.00
31	t	n-Triacontane (C30)	1.010	1.023	-1.3	105	-0.02
32	t	n-Hentriacontane (C31)	0.977	0.992	-1.5	106	-0.01
33	t	n-Dotriacontane (C32)	1.025	1.038	-1.3	106	-0.01
34	t	n-Tritriacontane (C33)	0.998	1.003	-0.5	105	-0.02
35	t	n-tetratriacontane (C34)	0.991	0.995	-0.4	105	-0.01

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092114.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 6:24 pm
Operator : FID17:WR
Sample : WG1580304-5
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:27:25 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	1.004	-8.4	113	-0.01
37 t	n-Hexatriacontane (C36)	1.115	1.074	3.7	101	-0.01
38 t	n-Heptatriacontane (C37)	1.011	0.983	2.8	101	-0.01
39 t	n-Octatriacontane (C38)	1.022	1.008	1.4	102	-0.02
41 t	n-Tetracontane (C40)	1.009	0.991	1.8	102	-0.02

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.07	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092114.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 6:24 pm
Operator : FID17:WR
Sample : WG1580304-5
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:27:25 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	29.605	55716662	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	27.666	66260810	54.860 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 109.72%	
24) s d50-Tetracosane	34.413	54184745	56.545 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 113.09%	
Target Compounds			
2) t n-Octane (C8)	4.597	47971740	49.801 ug/mL M4
3) t n-Nonane (C9)	6.620	49440832	48.100 ug/mL M4
4) t n-Decane (C10)	8.995	51254503	48.709 ug/mL M4
5) t n-Undecane (C11)	11.455	52257009	50.831 ug/mL M4
6) t n-Dodecane (C12)	13.853	52221650	50.657 ug/mL M4
7) t n-Tridecane (C13)	16.141	53072174	51.344 ug/mL M4
9) t n-Tetradecane (C14)	18.310	54222210	50.912 ug/mL M4
11) t n-Pentadecane (C15)	20.364	53183363	49.879 ug/mL M4
12) t n-Hexadecane (C16)	22.310	54851973	51.536 ug/mL M4
14) t n-Heptadecane (C17)	24.161	52704352	49.565 ug/mL M4
15) t Pristane	24.268	58160380	52.740 ug/mL M4
16) t n-Octadecane (C18)	25.919	54888210	50.768 ug/mL M4
17) t Phytane	26.073	53366781	52.766 ug/mL M4
18) t n-Nonadecane (C19)	27.597	58272482	53.736 ug/mL M4
20) t n-Eicosane (C20)	29.196	56150978	51.485 ug/mL M4
21) t n-Heneicosane (C21)	30.727	55956373	51.143 ug/mL M4
22) t n-Docosane (C22)	32.195	56753577	51.791 ug/mL M4
23) t n-Tricosane (C23)	33.603	56787885	51.719 ug/mL M4
25) t n-Tetracosane (C24)	34.957	53592436	48.962 ug/mL M4
26) t n-Pentacosane (C25)	36.258	55467411	51.788 ug/mL M4
27) t n-Hexacosane (C26)	37.512	57017104	51.860 ug/mL M4
28) t n-Heptacosane (C27)	38.718	55000019	49.891 ug/mL M4
29) t n-Octacosane (C28)	39.887	57309279	50.146 ug/mL M4
30) t n-Nonacosane (C29)	41.016	56895871	50.757 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092114.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 6:24 pm
Operator : FID17:WR
Sample : WG1580304-5
Misc : WG1580304,FRBE37,ICAL18012
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:27:25 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

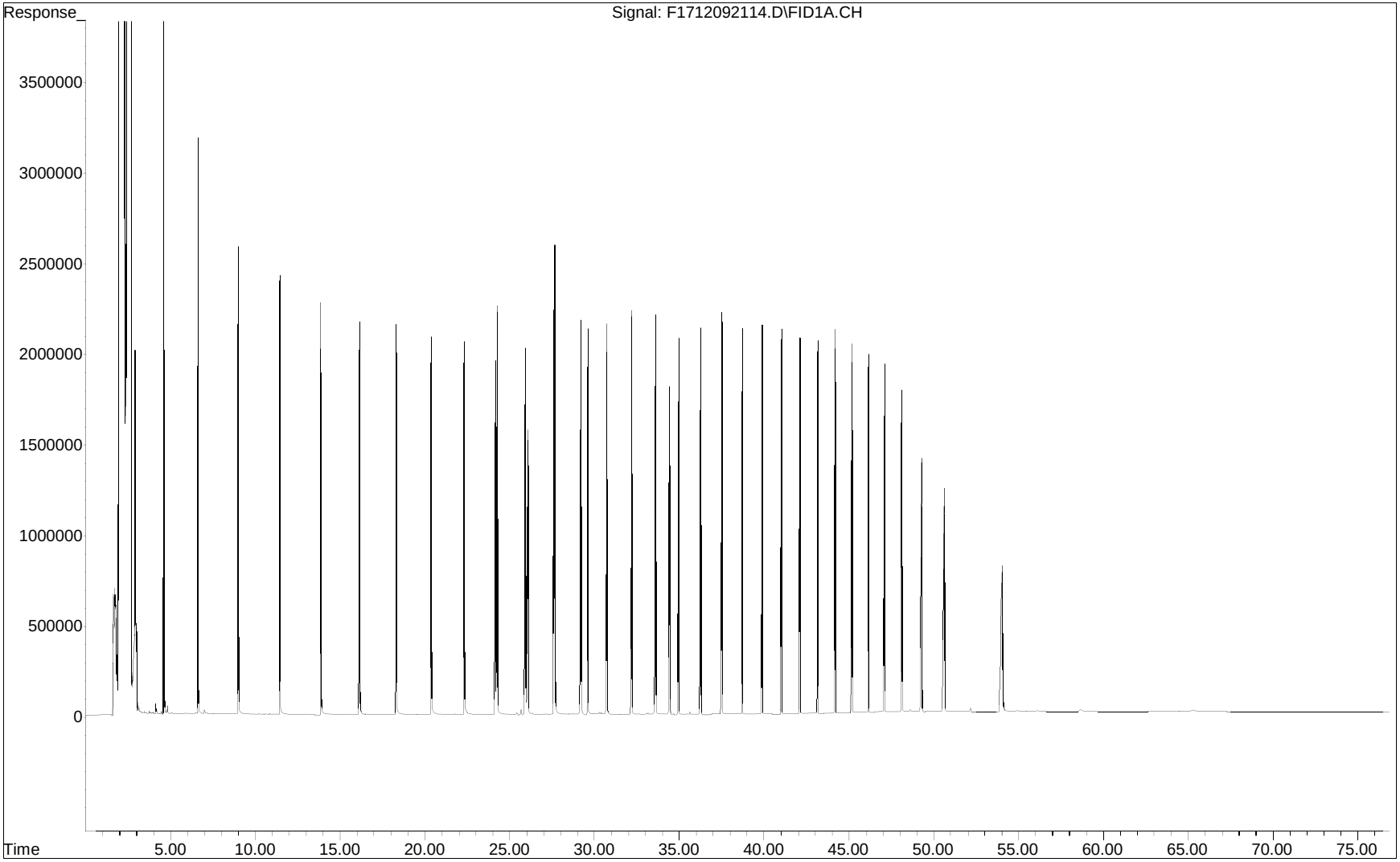
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.105	56997773	50.651 ug/mL M4
32) t	n-Hentriacontane (C31)	43.164	55293254	50.801 ug/mL M4
33) t	n-Dotriacontane (C32)	44.191	57835471	50.623 ug/mL M4
34) t	n-Tritriacontane (C33)	45.181	55867488	50.237 ug/mL M4
35) t	n-tetratriacontane (C34)	46.148	55423807	50.188 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.093	55958611	54.239 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.112	59852706	48.189 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.276	54789631	48.641 ug/mL M4
39) t	n-Octatriacontane (C38)	50.619	56146063	49.303 ug/mL M4
41) t	n-Tetracontane (C40)	54.022	55216911	49.130 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC09\F1712092114.D
Operator : FID17:WR
Acquired : 09 Dec 2021 6:24 pm using AcqMethod FID17A.M
Sample Name: WG1580304-5
Instrument: FID17
Misc Info : WG1580304,FRBE37,ICAL18012
Vial Number: 7
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092112.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 4:56 pm
Operator : FID17:WR
Sample : L2165245-01D,42,2
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:32:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712092101F
Blank File : F1712092110.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.603	59247943	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.640	7573734	5.897	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	11.79%#		
24) s	d50-Tetracosane	34.405	5960826	5.850	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	11.70%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	d
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	d
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	d
5) t	n-Undecane (C11)	11.479	129162125	118.149	ug/mL	M4
6) t	n-Dodecane (C12)	13.880	139897884	127.619	ug/mL	M4
7) t	n-Tridecane (C13)	16.162	118783452	108.065	ug/mL	M4
8) t	1380	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	d
10) t	1470	0.000	0	N.D.	ug/mL	d
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	d
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	d
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092112.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 4:56 pm
Operator : FID17:WR
Sample : L2165245-01D,42,2
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:32:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712092101F
Blank File : F1712092110.D

Sub List : Default - All compounds listed

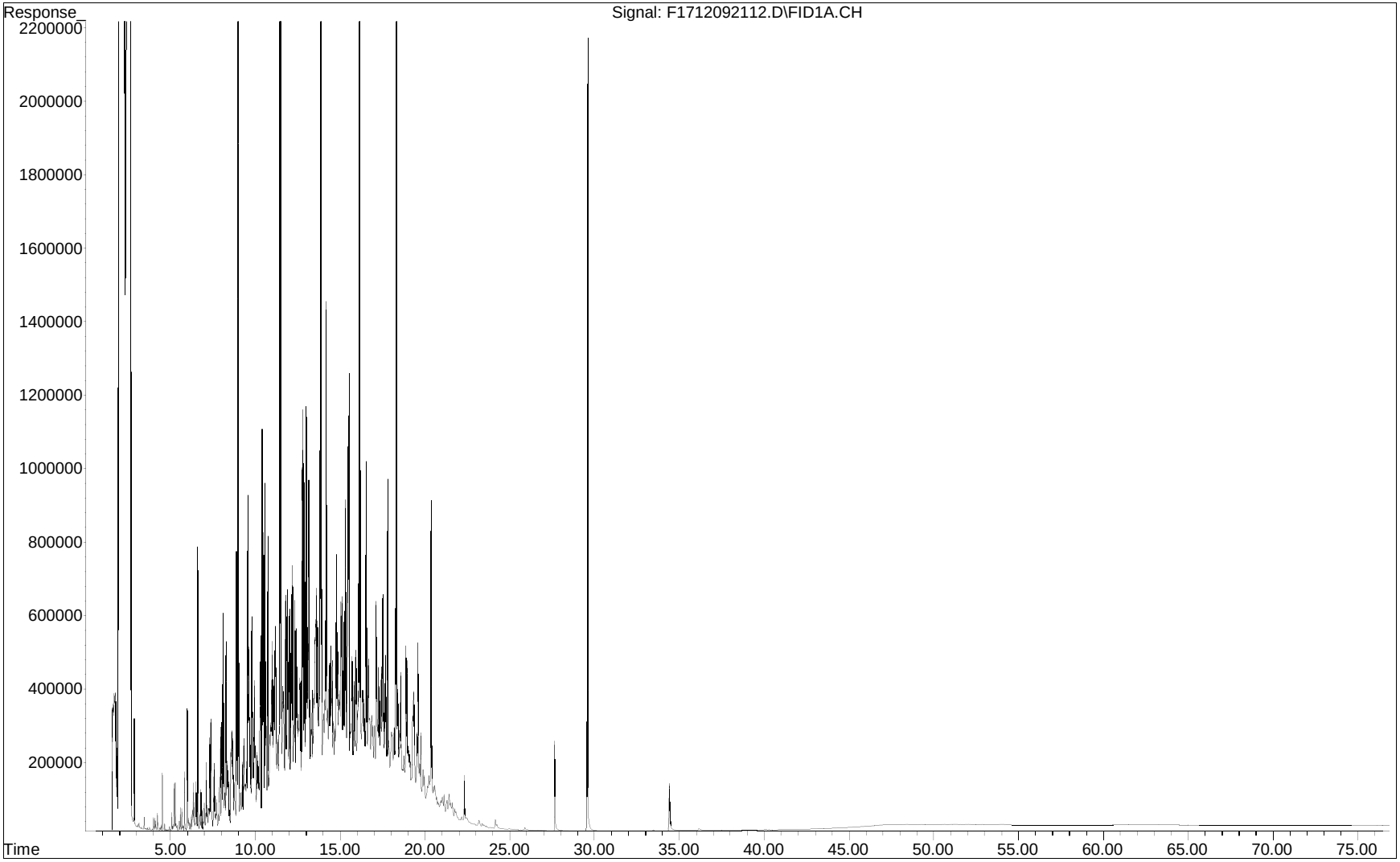
		Compound	R.T.	Response	Conc	Units	
25)	t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26)	t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27)	t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28)	t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29)	t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30)	t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31)	t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32)	t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33)	t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34)	t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35)	t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36)	t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37)	t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38)	t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39)	t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40)	t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41)	t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42)	h	C9-C44 Total Petroleu...	35.983	3246224368	2801.715	ug/mL	m
42)	h	C9-C44 Total Petroleu BS	35.983	2930622487	2529.329	ug/mL	m
43)	h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
43)	h	C9-C40 Total Petroleu BS	0.000	-133701076	N.D.	ug/ml	d
44)	h	C10-C28 DRO	24.437	2844280130	2484.100	ug/mL	m
44)	h	C10-C28 DRO BS	24.437	2821476656	2464.185	ug/mL	m
45)	h	C28-C40 ORO	46.926	99110564	82.852	ug/mL	m
45)	h	C28-C40 ORO BS	46.926	-9487031	N.D.	ug/mL	m
46)	h	Total Resolved Hydroc...	36.038	2144120776	1850.524	ug/mL	m

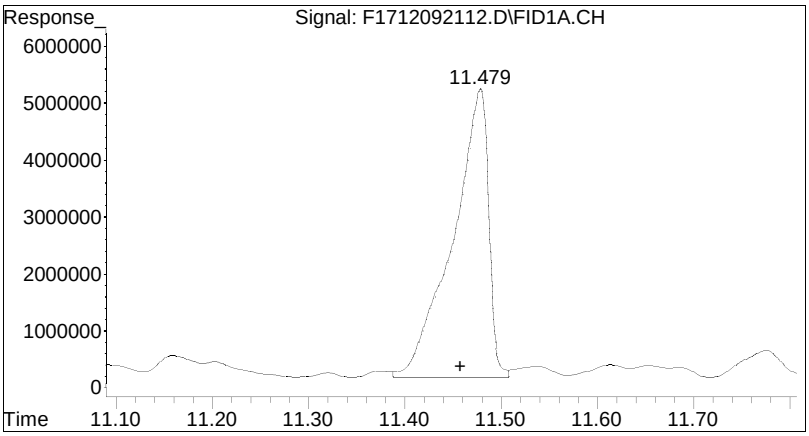
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

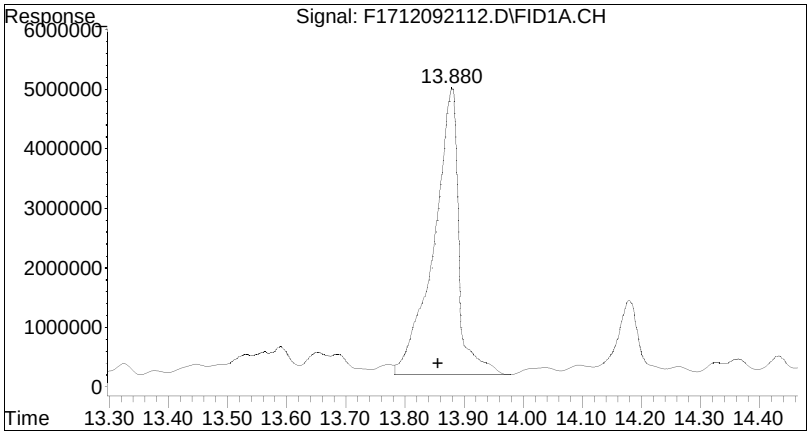
File :O:\Forensics\Data\FID17\2021\DEC\DEC09\F1712092112.D
Operator : FID17:WR
Acquired : 09 Dec 2021 4:56 pm using AcqMethod FID17A.M
Sample Name: L2165245-01D,42,2
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 6
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M





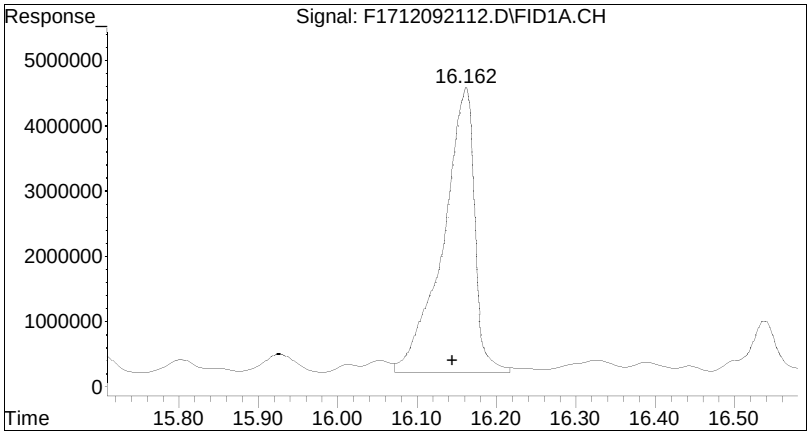
#5 n-Undecane (C11)

R.T.: 11.479 min
Delta R.T.: 0.021 min
Response: 129162125
Conc: 118.15 ug/mL M4



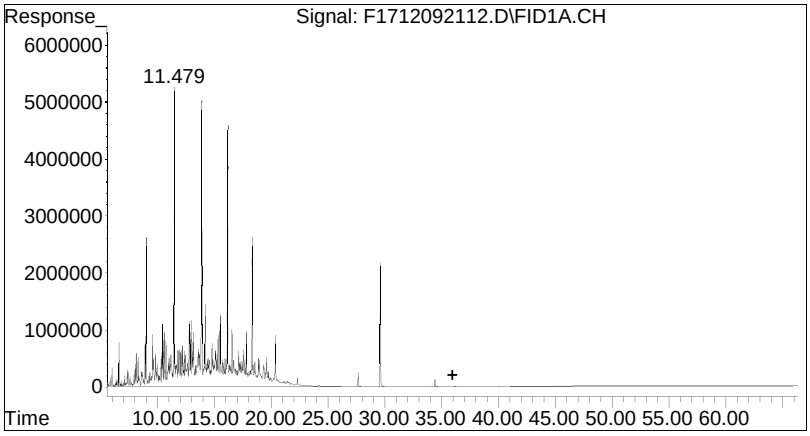
#6 n-Dodecane (C12)

R.T.: 13.880 min
Delta R.T.: 0.023 min
Response: 139897884
Conc: 127.62 ug/mL M4



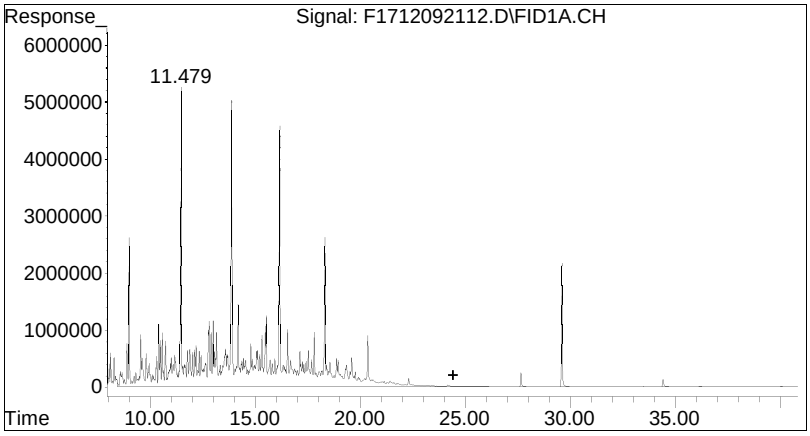
#7 n-Tridecane (C13)

R.T.: 16.162 min
Delta R.T.: 0.018 min
Response: 118783452
Conc: 108.07 ug/mL M4



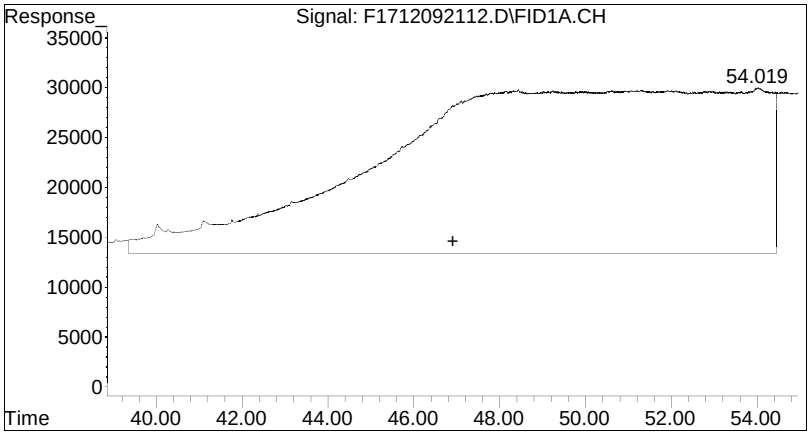
#42 C9-C44 Total Petroleum Hy

R.T.: 35.983 min
Delta R.T.: 0.000 min
Response: 3246224368
Conc: 2801.72 ug/mL m



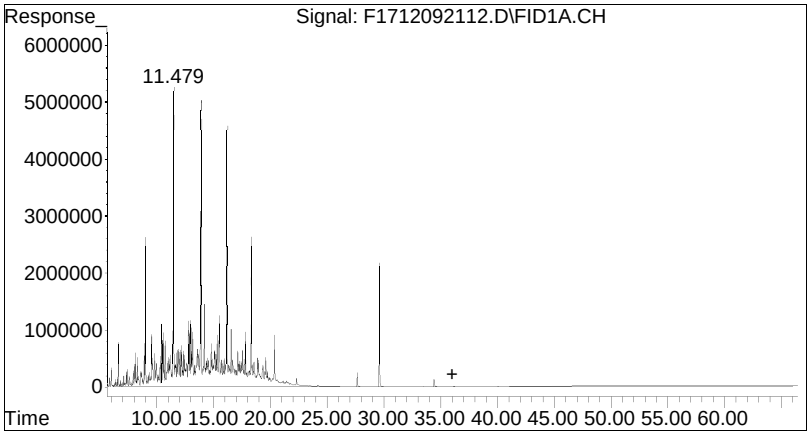
#44 C10-C28 DRO

R.T.: 24.437 min
Delta R.T.: 0.000 min
Response: 2844280130
Conc: 2484.10 ug/mL m



#45 C28-C40 ORO

R.T.: 46.926 min
Delta R.T.: 0.000 min
Response: 99110564
Conc: 82.85 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 2144120776
Conc: 1850.52 ug/mL m

Batch Quality Control

Method Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032112.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 6:07 pm
Operator : FID17:MJS
Sample : WG1577487-1
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 11:56:06 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
Internal Standards						
1) I	5-alpha-androstane	29.625	58081572	50.000	ug/mL	M4
System Monitoring Compounds						
19) s	ortho-terphenyl	27.684	62387429	49.550	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	99.10%		
24) s	d50-Tetracosane	34.429	48556869	48.609	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	97.22%		
Target Compounds						
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	8.988	32393	0.030	ug/mL	M4
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032112.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 6:07 pm
Operator : FID17:MJS
Sample : WG1577487-1
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 11:56:06 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : Default - All compounds listed

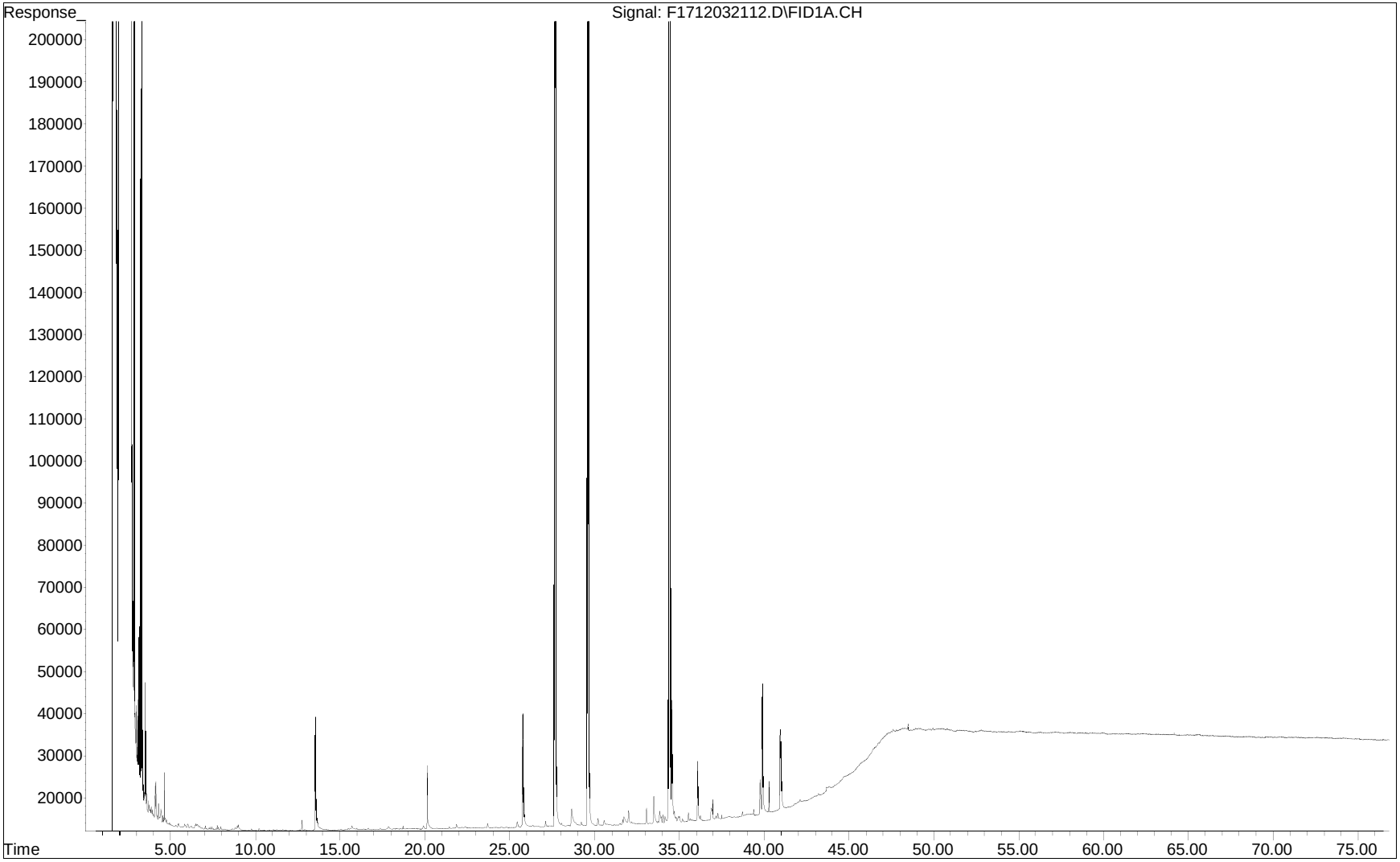
		Compound	R.T.	Response	Conc	Units	
25)	t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26)	t	n-Pentacosane (C25)	36.248	36800	0.033	ug/mL	M4
27)	t	n-Hexacosane (C26)	37.498	22492	0.020	ug/mL	M4
28)	t	n-Heptacosane (C27)	38.711	29302	0.025	ug/mL	M4
29)	t	n-Octacosane (C28)	39.884	1274258C	1.070	ug/mL	M4
30)	t	n-Nonacosane (C29)	40.954	960030C	0.822	ug/mL	M4
31)	t	n-Triacontane (C30)	42.102	17136	0.015	ug/mL	M4
32)	t	n-Hentriacontane (C31)	43.158	15718	0.014	ug/mL	M4
33)	t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34)	t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35)	t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36)	t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37)	t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38)	t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39)	t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40)	t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41)	t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42)	h	C9-C44 Total Petroleu...	36.038	362805540	319.414	ug/mL	m
42)	h	C9-C44 Total Petroleu BS	36.038	-896212	N.D.	ug/mLm	
43)	h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
43)	h	C9-C40 Total Petroleu BS	0.000	-175710583	N.D.	ug/mld	
44)	h	C10-C28 DRO	24.454	40069972	35.699	ug/mL	m
44)	h	C10-C28 DRO BS	24.454	13957932	12.435	ug/mLm	
45)	h	C28-C40 ORO	46.963	132420232	112.920	ug/mL	m
45)	h	C28-C40 ORO BS	46.963	-5466569	N.D.	ug/mLm	
46)	h	Total Resolved Hydroc...	36.038	13809594	12.158	ug/mL	m

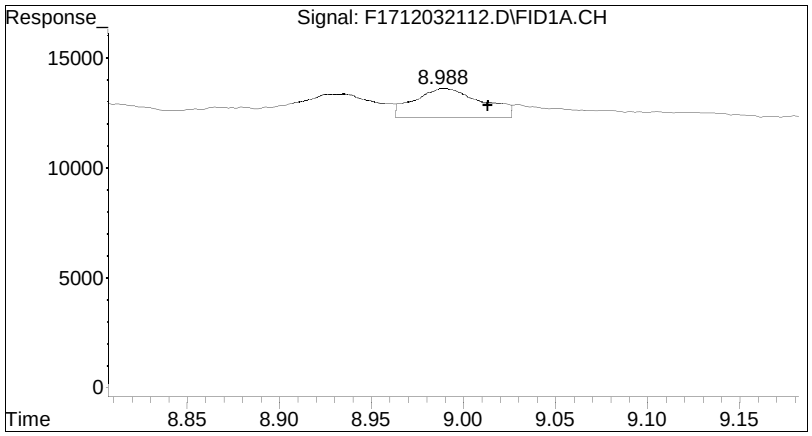
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

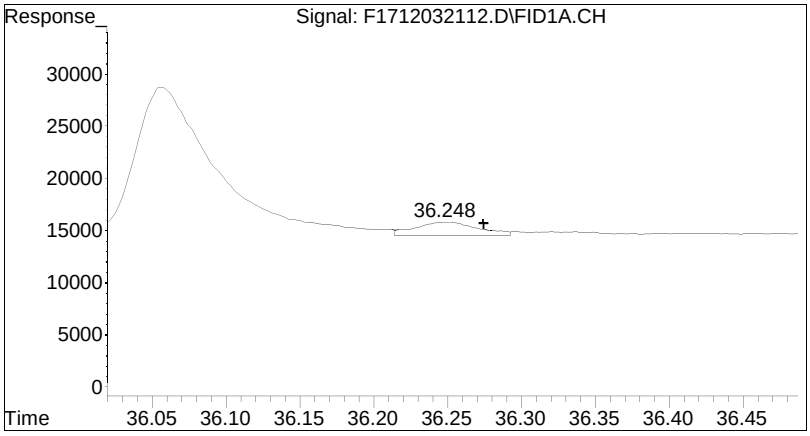
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032112.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 6:07 pm using AcqMethod FID17A.M
Sample Name: WG1577487-1
Instrument: FID17
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 6
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





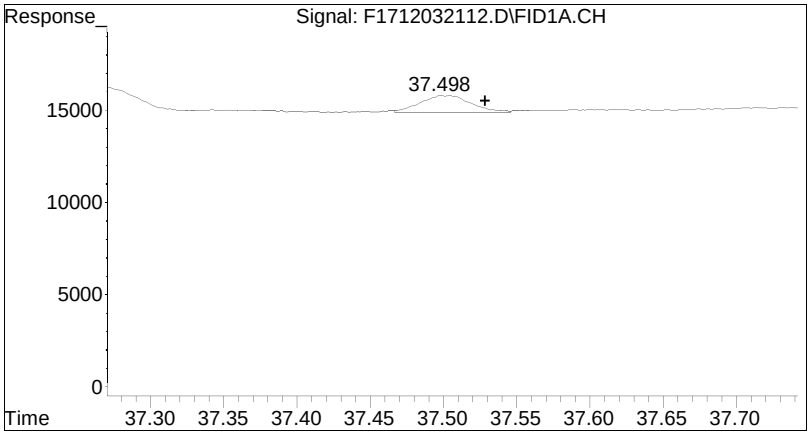
#4 n-Decane (C10)

R.T.:	8.988 min
Delta R.T.:	-0.026 min
Response:	32393
Conc:	0.03 ug/mL M4



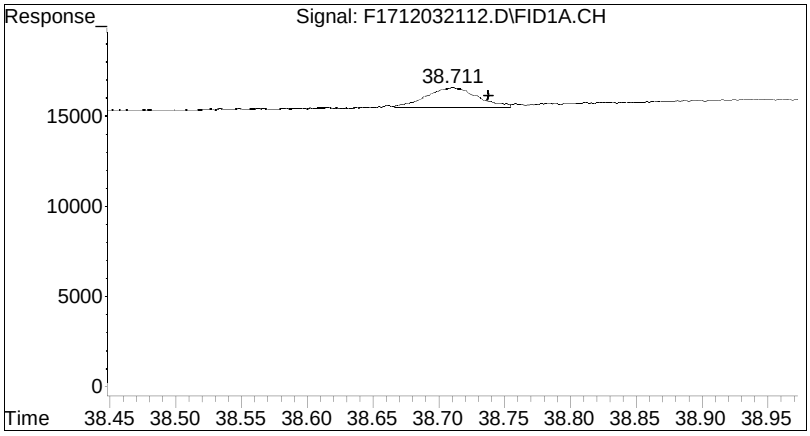
#26 n-Pentacosane (C25)

R.T.:	36.248 min
Delta R.T.:	-0.026 min
Response:	36800
Conc:	0.03 ug/mL M4



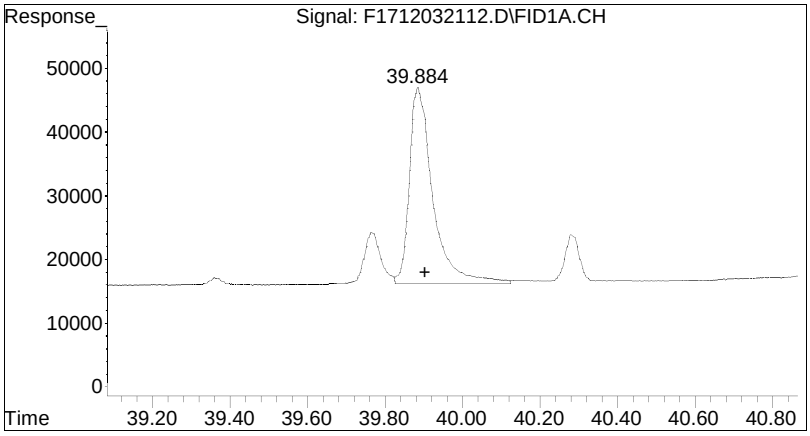
#27 n-Hexacosane (C26)

R.T.:	37.498 min
Delta R.T.:	-0.031 min
Response:	22492
Conc:	0.02 ug/mL M4



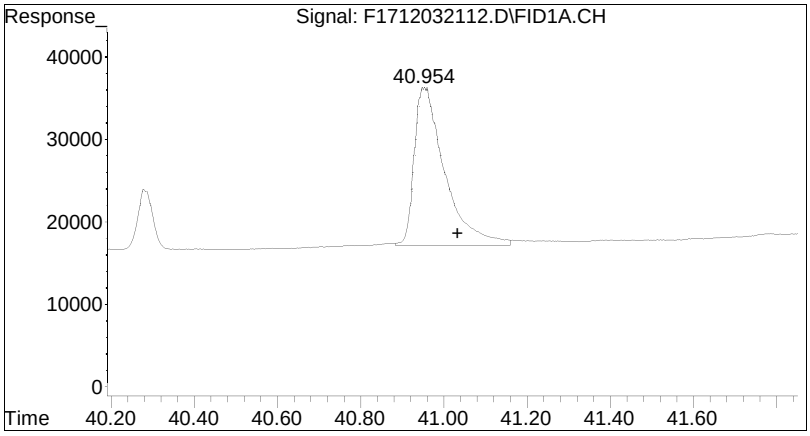
#28 n-Heptacosane (C27)

R.T.:	38.711 min
Delta R.T.:	-0.027 min
Response:	29302
Conc:	0.03 ug/mL M4



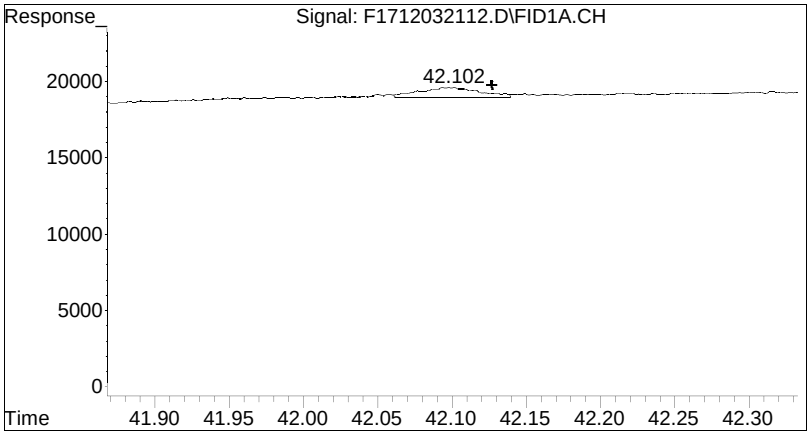
#29 n-Octacosane (C28)

R.T.:	39.884 min
Delta R.T.:	-0.019 min
Response:	1274258
Conc:	1.07 ug/mL M4



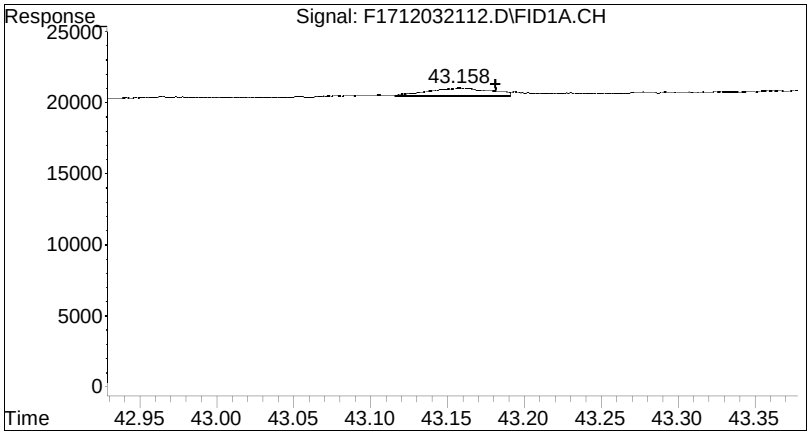
#30 n-Nonacosane (C29)

R.T.:	40.954 min
Delta R.T.:	-0.080 min
Response:	960030
Conc:	0.82 ug/mL M4



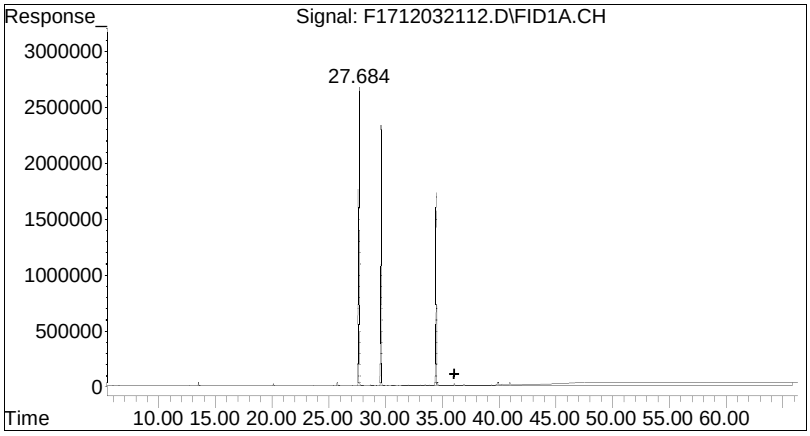
#31 n-Triacontane (C30)

R.T.:	42.102 min
Delta R.T.:	-0.025 min
Response:	17136
Conc:	0.01 ug/mL M4



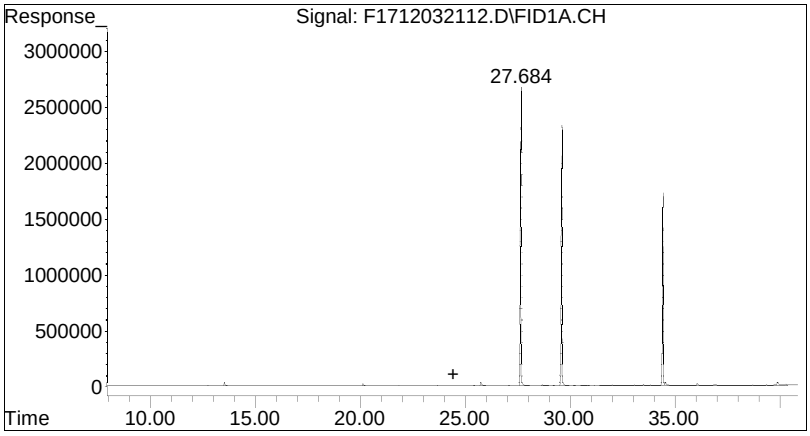
#32 n-Hentriacontane (C31)

R.T.:	43.158 min
Delta R.T.:	-0.024 min
Response:	15718
Conc:	0.01 ug/mL M4



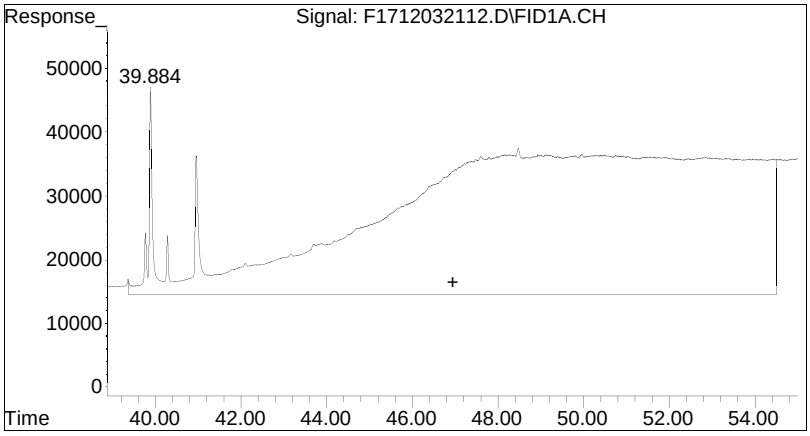
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 362805540
Conc: 319.41 ug/mL m



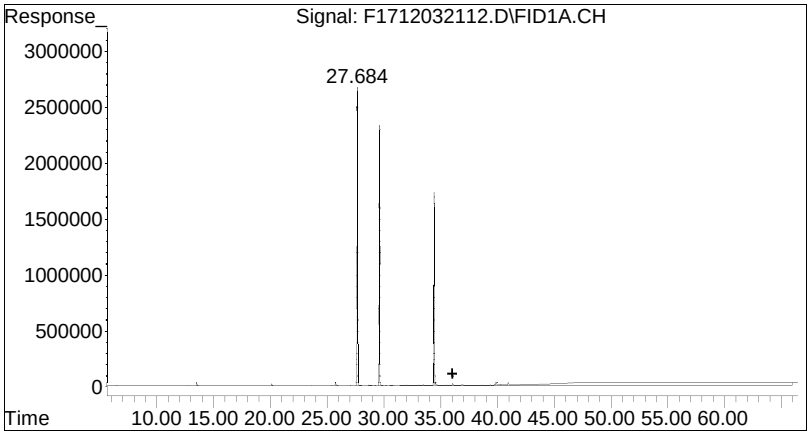
#44 C10-C28 DRO

R.T.:	24.454 min
Delta R.T.:	0.000 min
Response:	40069972
Conc:	35.70 ug/mL m



#45 C28-C40 ORO

R.T.: 46.963 min
Delta R.T.: 0.000 min
Response: 132420232
Conc: 112.92 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 13809594
Conc: 12.16 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032114.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 7:35 pm
Operator : FID17:MJS
Sample : WG1577488-1
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:03:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.620	55444600	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.676	49611921	41.278	ug/mL	M4
Spiked Amount	50.000 Range 50 - 130		Recovery =	82.56%		
24) s	d50-Tetracosane	34.422	39424922	41.344	ug/mL	M4
Spiked Amount	50.000 Range 50 - 130		Recovery =	82.69%		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	6.600	19825	0.019	ug/mL	M4
4) t	n-Decane (C10)	8.990	33174	0.032	ug/mL	M4
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	22.318	59092	0.056	ug/mL	M4
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	25.912	117450	0.109	ug/mL	M4
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.201	64571	0.059	ug/mL	M4
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	32.189	20424	0.019	ug/mL	M4
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032114.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 7:35 pm
Operator : FID17:MJS
Sample : WG1577488-1
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:03:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : Default - All compounds listed

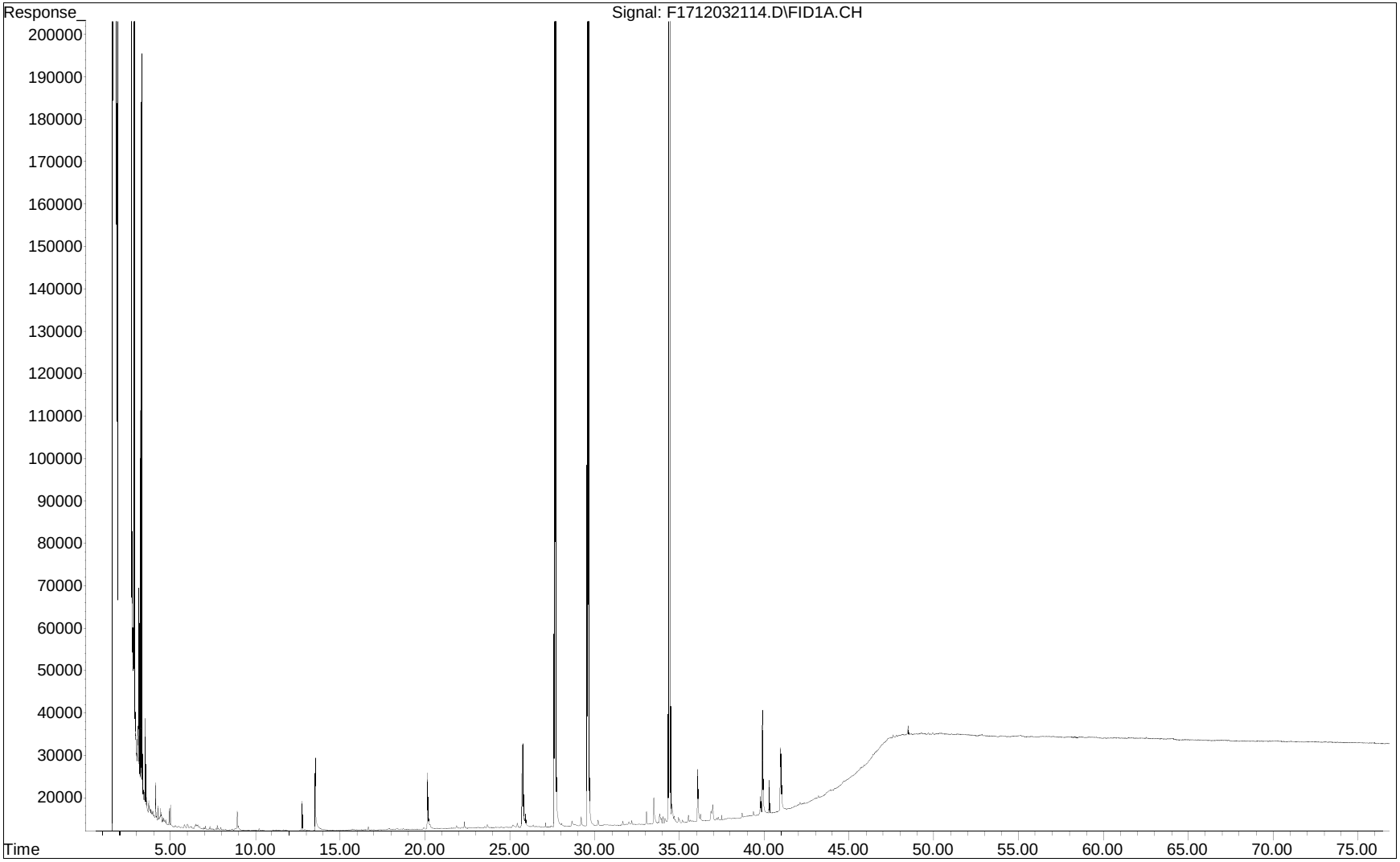
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	34.954	33437	0.031	ug/mL	M4
26) t	n-Pentacosane (C25)	36.251	51422	0.048	ug/mL	M4
27) t	n-Hexacosane (C26)	37.500	26425	0.024	ug/mL	M4
28) t	n-Heptacosane (C27)	38.710	29994	0.027	ug/mL	M4
29) t	n-Octacosane (C28)	39.889	1017038C	0.894	ug/mL	M4
30) t	n-Nonacosane (C29)	40.961	763642C	0.685	ug/mL	M4
31) t	n-Triacontane (C30)	42.091	14854	0.013	ug/mL	M4
32) t	n-Hentriacontane (C31)	43.161	13419	0.012	ug/mL	M4
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.038	341000312	314.495	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.038	-22701440	N.D.	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
43) h	C9-C40 Total Petroleu BS	0.000	-175710583	N.D.	ug/mld	
44) h	C10-C28 DRO	24.454	35109737	32.767	ug/mL	m
44) h	C10-C28 DRO BS	24.454	8997697	8.397	ug/mLm	
45) h	C28-C40 ORO	46.963	122891061	109.778	ug/mL	m
45) h	C28-C40 ORO BS	46.963	-14995740	N.D.	ug/mLm	
46) h	Total Resolved Hydroc...	36.038	9905554	9.136	ug/mL	m

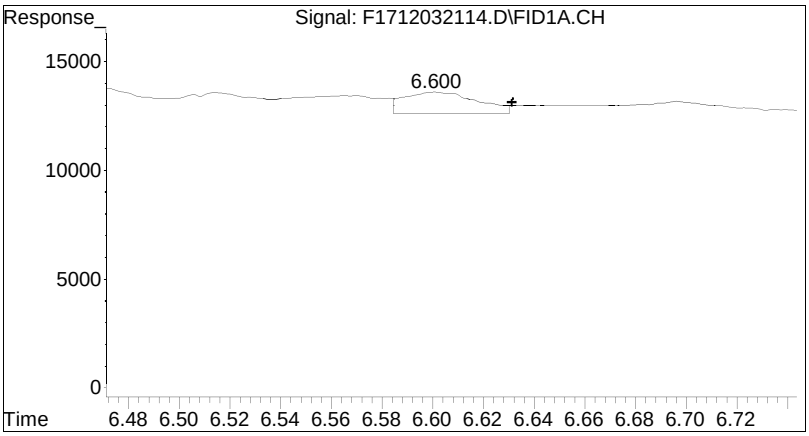
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

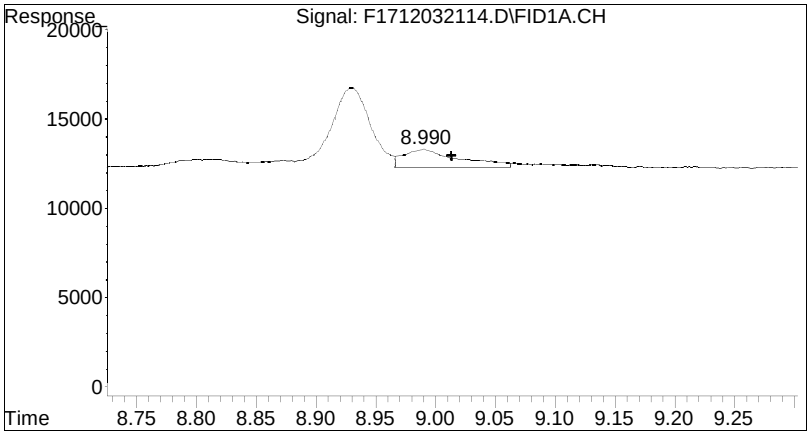
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032114.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 7:35 pm using AcqMethod FID17A.M
Sample Name: WG1577488-1
Instrument: FID17
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 7
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





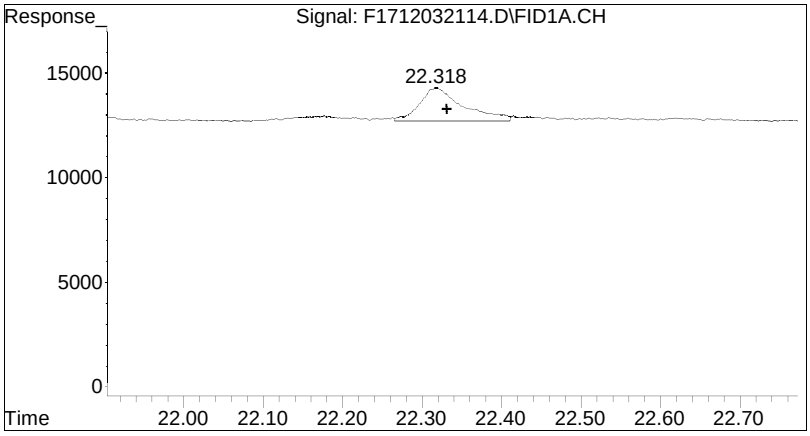
#3 n-Nonane (C9)

R.T.:	6.600 min
Delta R.T.:	-0.031 min
Response:	19825
Conc:	0.02 ug/mL M4



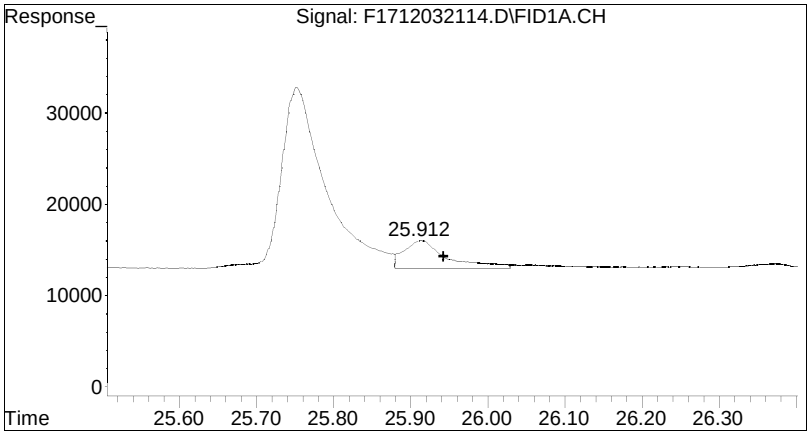
#4 n-Decane (C10)

R.T.:	8.990 min
Delta R.T.:	-0.023 min
Response:	33174
Conc:	0.03 ug/mL M4



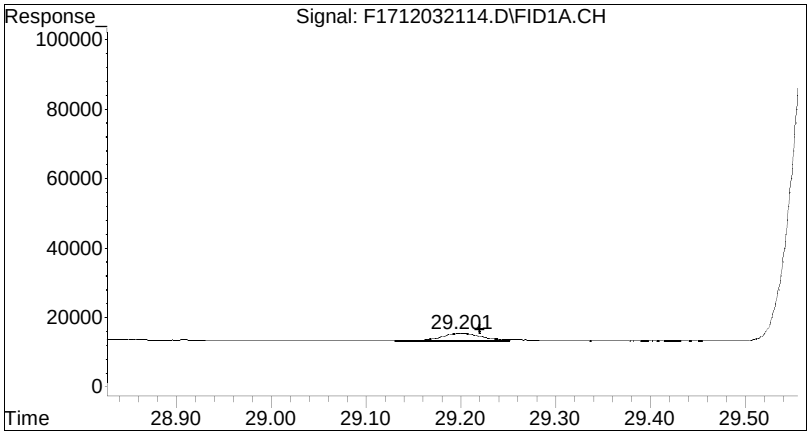
#12 n-Hexadecane (C16)

R.T.:	22.318 min
Delta R.T.:	-0.014 min
Response:	59092
Conc:	0.06 ug/mL M4



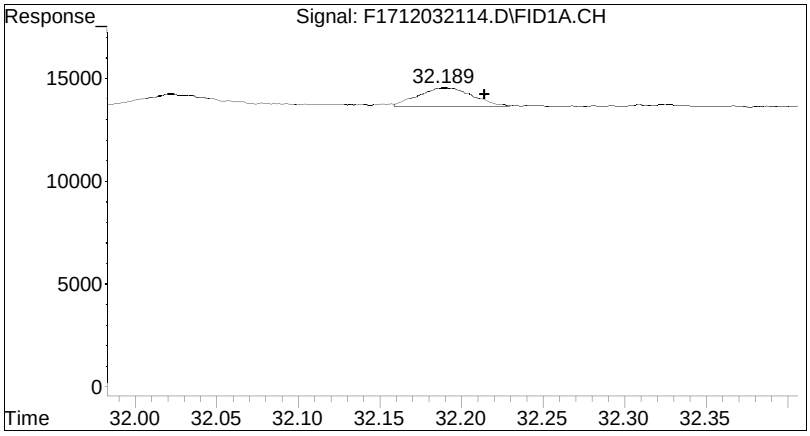
#16 n-Octadecane (C18)

R.T.:	25.912 min
Delta R.T.:	-0.031 min
Response:	117450
Conc:	0.11 ug/mL M4



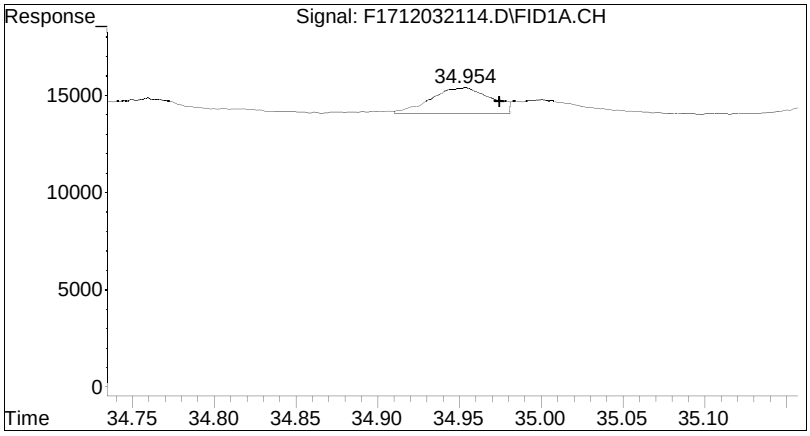
#20 n-Eicosane (C20)

R.T.:	29.201 min
Delta R.T.:	-0.019 min
Response:	64571
Conc:	0.06 ug/mL M4



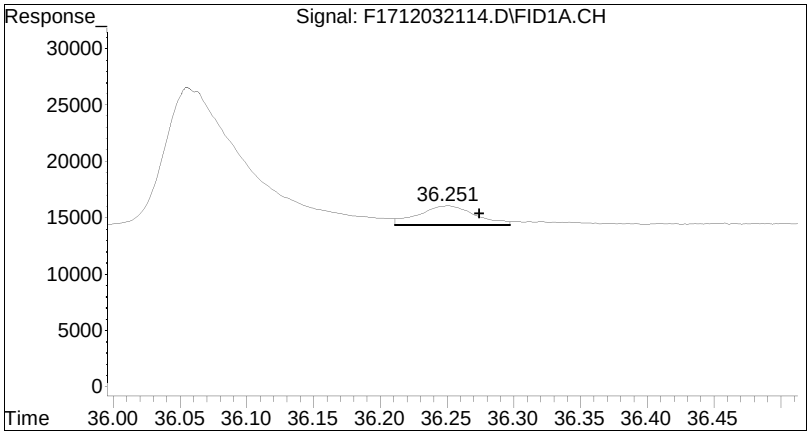
#22 n-Docosane (C22)

R.T.:	32.189 min
Delta R.T.:	-0.025 min
Response:	20424
Conc:	0.02 ug/mL M4



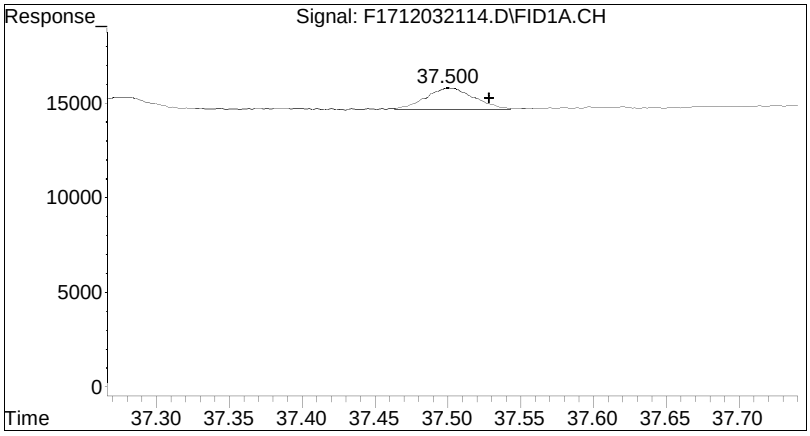
#25 n-Tetracosane (C24)

R.T.:	34.954 min
Delta R.T.:	-0.020 min
Response:	33437
Conc:	0.03 ug/mL M4



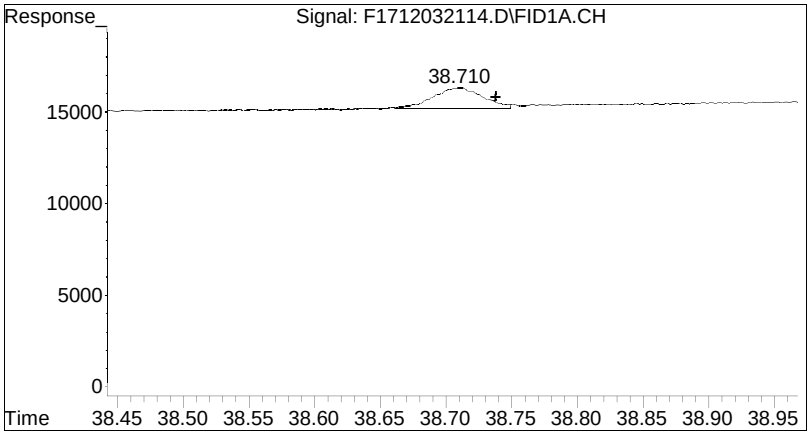
#26 n-Pentacosane (C25)

R.T.:	36.251 min
Delta R.T.:	-0.023 min
Response:	51422
Conc:	0.05 ug/mL M4



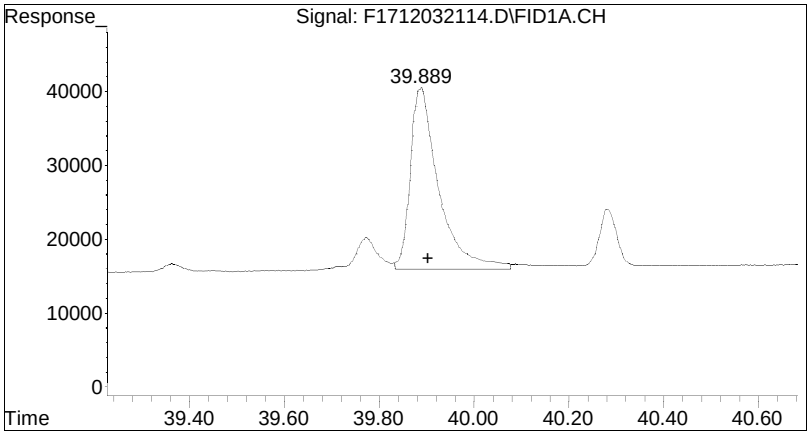
#27 n-Hexacosane (C26)

R.T.:	37.500 min
Delta R.T.:	-0.028 min
Response:	26425
Conc:	0.02 ug/mL M4



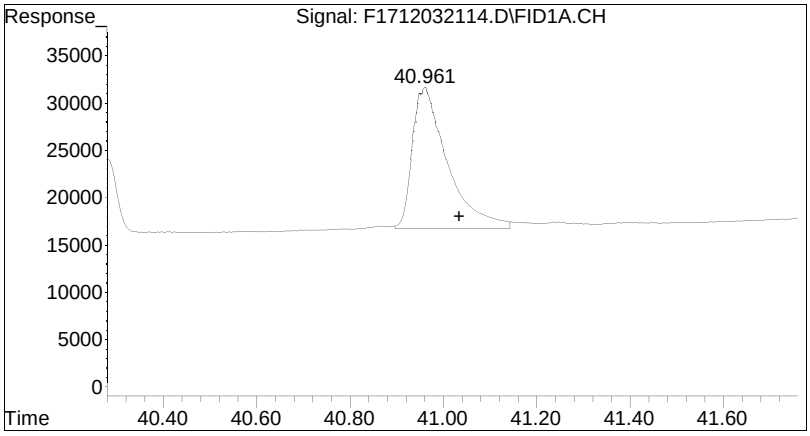
#28 n-Heptacosane (C27)

R.T.:	38.710 min
Delta R.T.:	-0.027 min
Response:	29994
Conc:	0.03 ug/mL M4



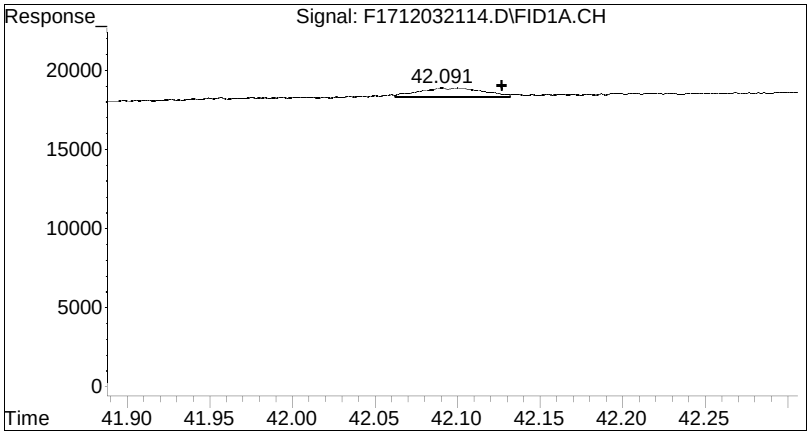
#29 n-Octacosane (C28)

R.T.:	39.889 min
Delta R.T.:	-0.014 min
Response:	1017038
Conc:	0.89 ug/mL M4



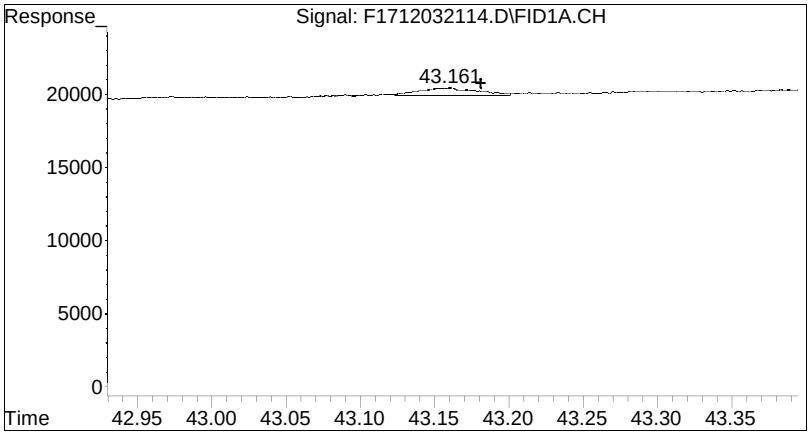
#30 n-Nonacosane (C29)

R.T.:	40.961 min
Delta R.T.:	-0.073 min
Response:	763642
Conc:	0.68 ug/mL M4



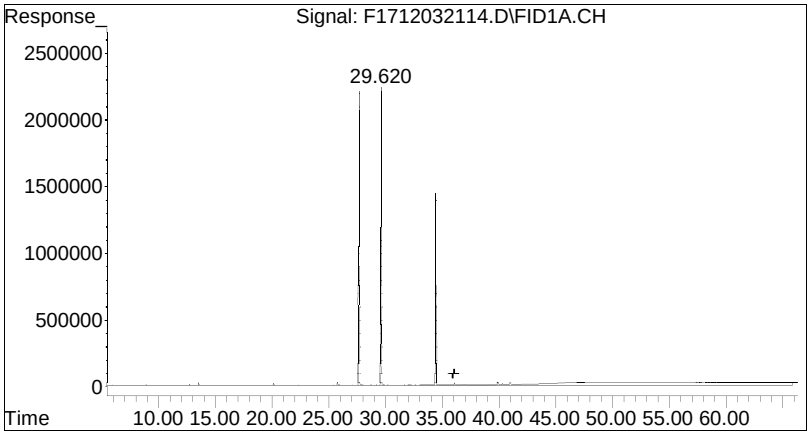
#31 n-Triacontane (C30)

R.T.:	42.091 min
Delta R.T.:	-0.036 min
Response:	14854
Conc:	0.01 ug/mL M4



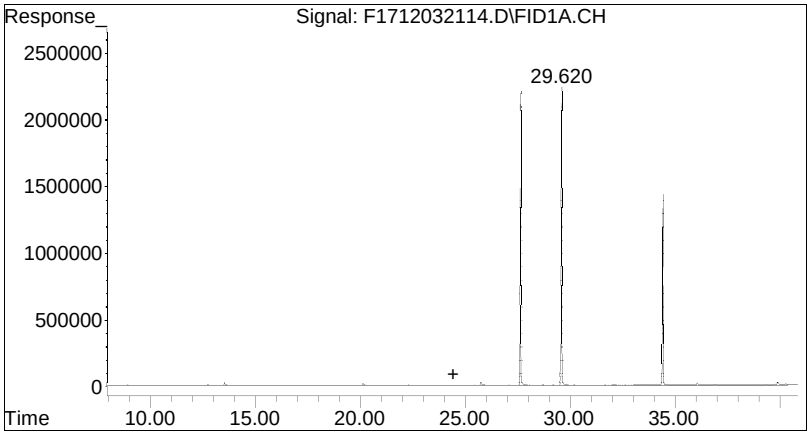
#32 n-Hentriacontane (C31)

R.T.:	43.161 min
Delta R.T.:	-0.021 min
Response:	13419
Conc:	0.01 ug/mL M4



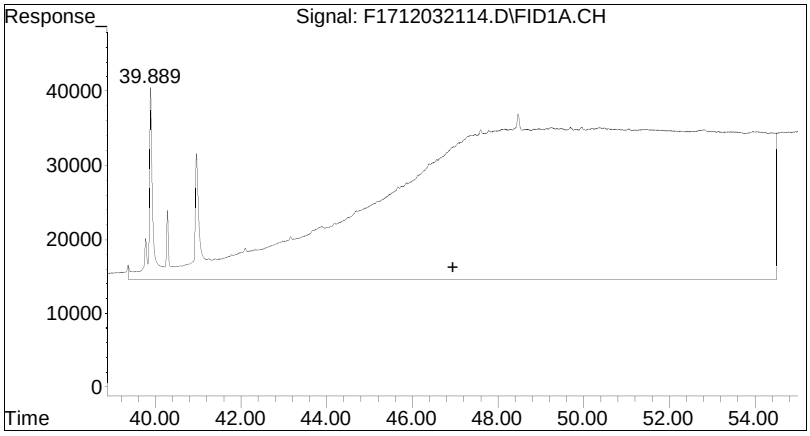
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 341000312
Conc: 314.50 ug/mL m



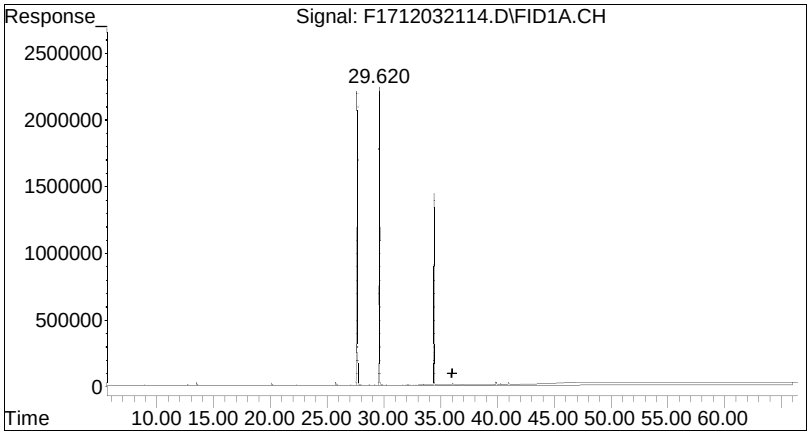
#44 C10-C28 DRO

R.T.:	24.454 min
Delta R.T.:	0.000 min
Response:	35109737
Conc:	32.77 ug/mL m



#45 C28-C40 ORO

R.T.: 46.963 min
Delta R.T.: 0.000 min
Response: 122891061
Conc: 109.78 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	36.038 min
Delta R.T.:	0.000 min
Response:	9905554
Conc:	9.14 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072116.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 7:51 pm
Operator : FID17:WR
Sample : WG1579479-1,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:24:18 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.604	61371340	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.646	15269974	11.478	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	22.96%#		
24) s	d50-Tetracosane	34.400	11158326	10.571	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	21.14%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	25.840	230568C	0.194	ug/mL	M4
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072116.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 7:51 pm
Operator : FID17:WR
Sample : WG1579479-1,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:24:18 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

Sub List : Default - All compounds listed

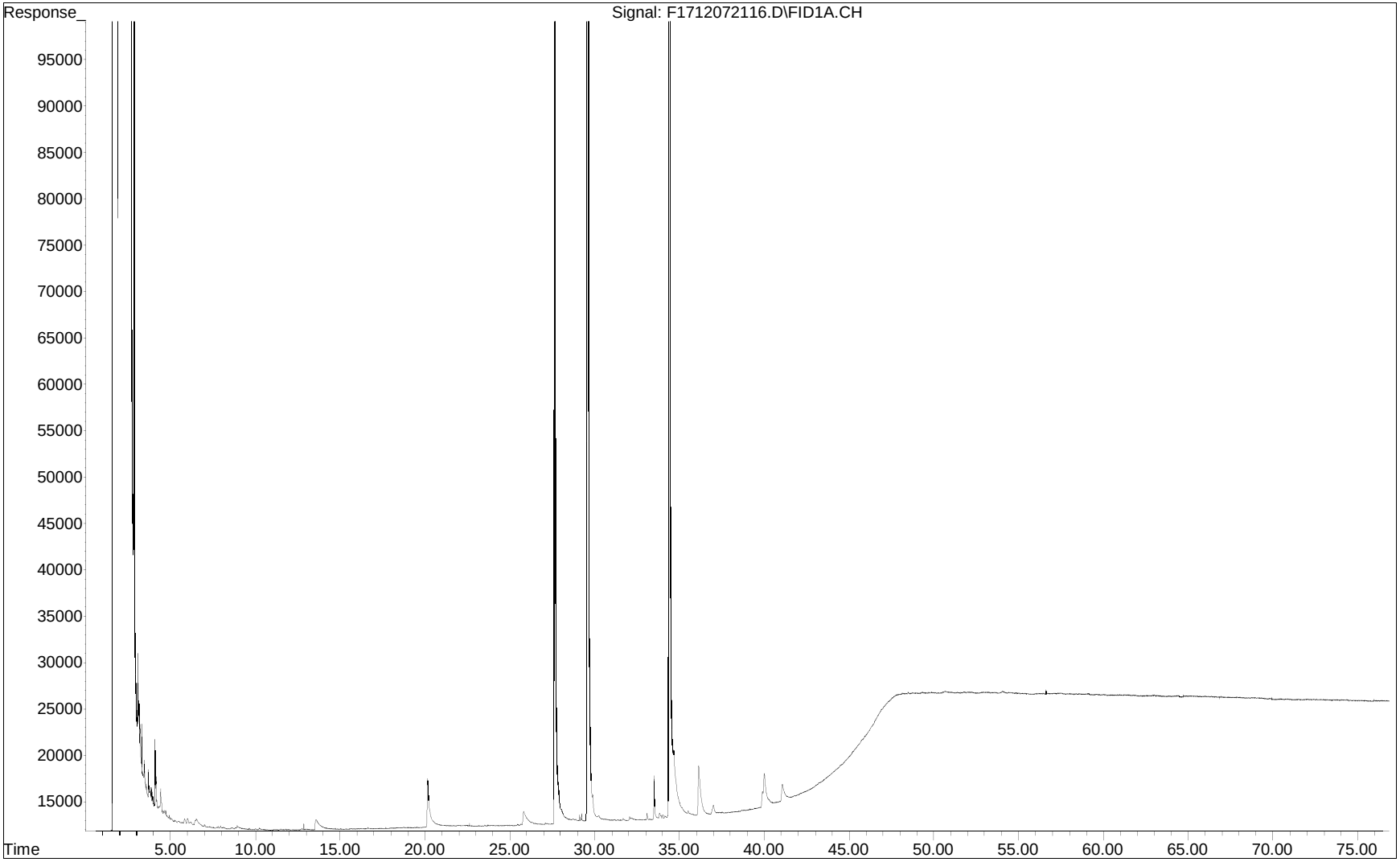
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	36.135f	531759C	0.451	ug/mL	M4
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	39.903	75357	0.060	ug/mL	M4
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	35.999	246213031	205.147	ug/mL	m
42) h	C9-C44 Total Petroleu BS	35.999	-28862190	N.D.	ug/mL	m
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
43) h	C9-C40 Total Petroleu BS	0.000	0	N.D.	ug/ml	d
44) h	C10-C28 DRO	24.438	26207252	22.097	ug/mL	m
44) h	C10-C28 DRO BS	24.438	2713077	2.288	ug/mL	m
45) h	C28-C40 ORO	46.951	82294602	66.414	ug/mL	m
45) h	C28-C40 ORO BS	46.951	-15963565	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	4591974	3.826	ug/mL	m

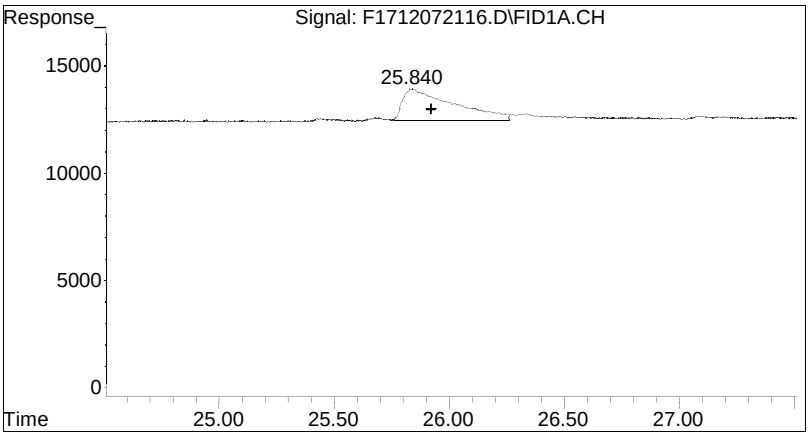
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

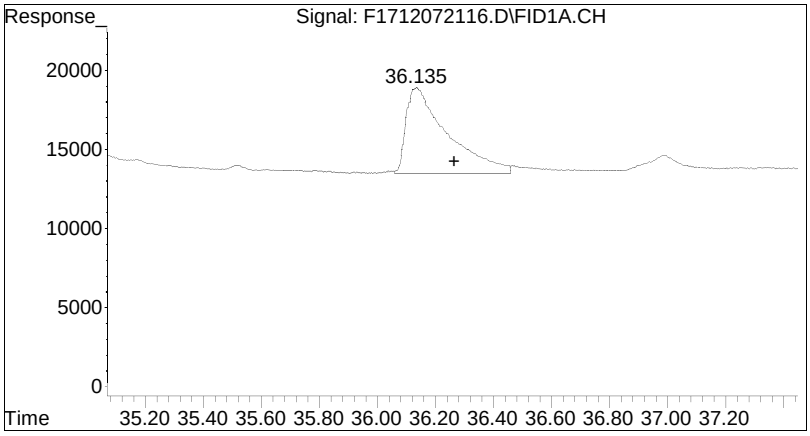
File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072116.D
Operator : FID17:WR
Acquired : 07 Dec 2021 7:51 pm using AcqMethod FID17A.M
Sample Name: WG1579479-1,42,,
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 8
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M





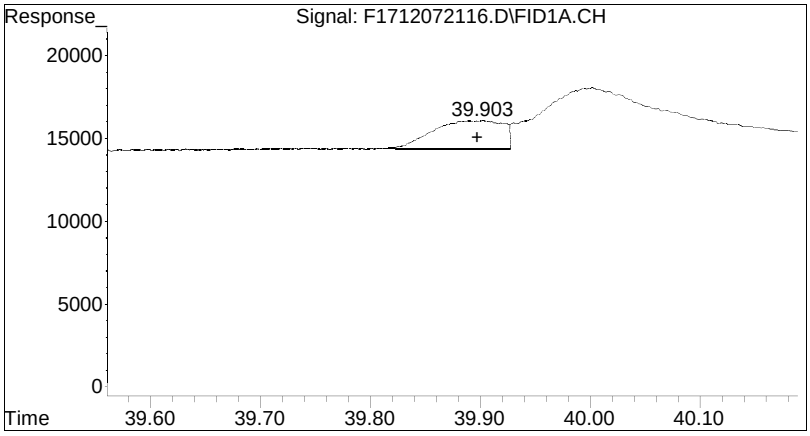
#16 n-Octadecane (C18)

R.T.:	25.840 min
Delta R.T.:	-0.084 min
Response:	230568
Conc:	0.19 ug/mL M4



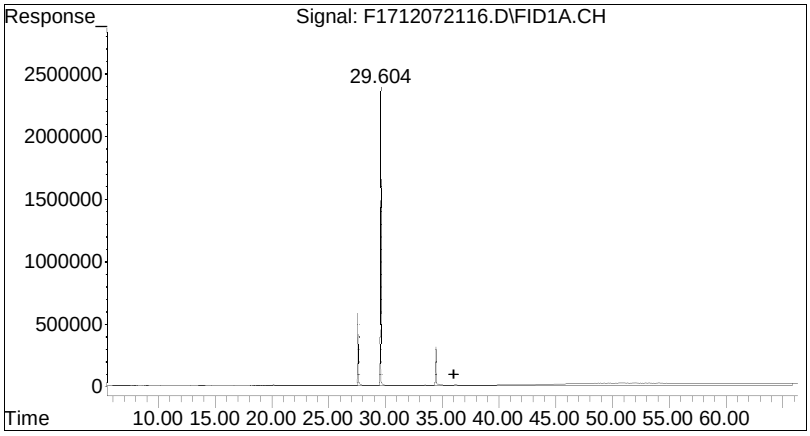
#26 n-Pentacosane (C25)

R.T.:	36.135 min
Delta R.T.:	-0.131 min
Response:	531759
Conc:	0.45 ug/mL M4



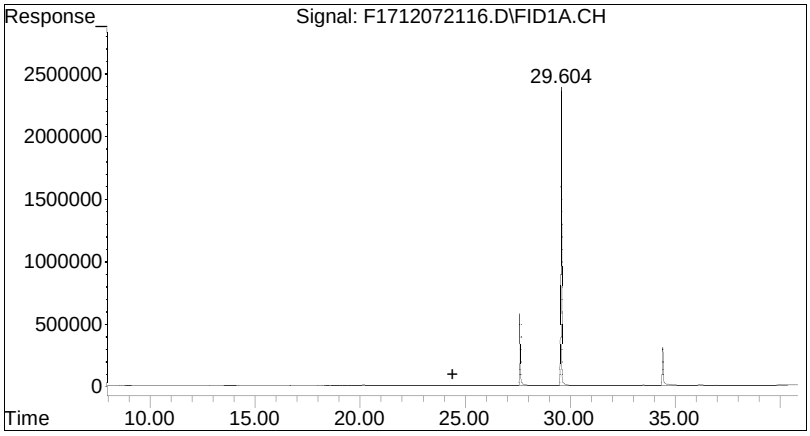
#29 n-Octacosane (C28)

R.T.:	39.903 min
Delta R.T.:	0.005 min
Response:	75357
Conc:	0.06 ug/mL M4



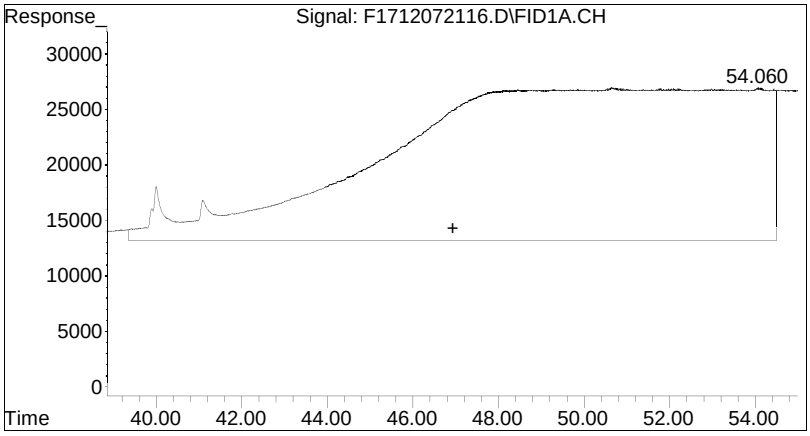
#42 C9-C44 Total Petroleum Hy

R.T.: 35.999 min
Delta R.T.: 0.000 min
Response: 246213031
Conc: 205.15 ug/mL m



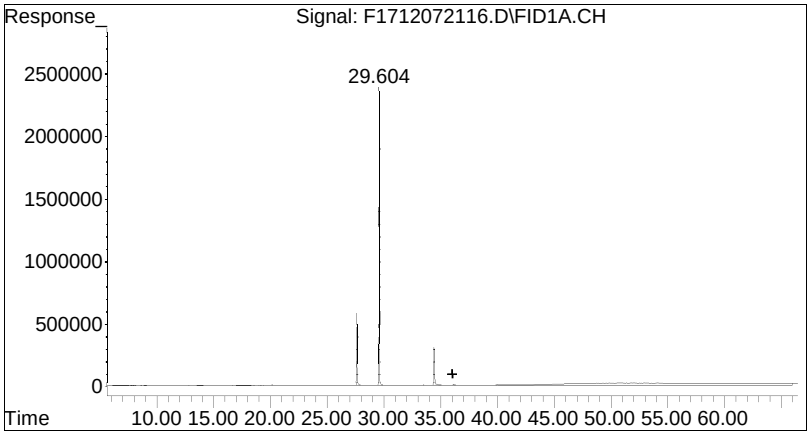
#44 C10-C28 DRO

R.T.: 24.438 min
Delta R.T.: 0.000 min
Response: 26207252
Conc: 22.10 ug/mL m



#45 C28-C40 ORO

R.T.: 46.951 min
Delta R.T.: 0.000 min
Response: 82294602
Conc: 66.41 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	36.038 min
Delta R.T.:	0.000 min
Response:	4591974
Conc:	3.83 ug/mL m

LCS Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032116.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 9:03 pm
Operator : FID17:MJS
Sample : WG1577487-2
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:06:26 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound		R.T.	Response	Conc	Units	
Internal Standards							
1) I	5-alpha-androstane		29.623	56133142	50.000	ug/mL	M4
System Monitoring Compounds							
19) s	ortho-terphenyl		27.684	60202054	49.474	ug/mL	M4
Spiked Amount	50.000	Range	50 - 130	Recovery =	98.95%		
24) s	d50-Tetracosane		34.426	48331158	50.062	ug/mL	M4
Spiked Amount	50.000	Range	50 - 130	Recovery =	100.12%		
Target Compounds							
3) t	n-Nonane (C9)		6.601	16039602	15.489	ug/mL	M4
4) t	n-Decane (C10)		8.990	18649911	17.592	ug/mL	M4
6) t	n-Dodecane (C12)		13.854	20318767	19.564	ug/mL	M4
9) t	n-Tetradecane (C14)		18.312	21698544	20.223	ug/mL	M4
12) t	n-Hexadecane (C16)		22.312	22550381	21.030	ug/mL	M4
16) t	n-Octadecane (C18)		25.920	23476898	21.554	ug/mL	M4
18) t	n-Nonadecane (C19)		27.598	24569152	22.488	ug/mL	M4
20) t	n-Eicosane (C20)		29.199	23613686	21.491	ug/mL	M4
22) t	n-Docosane (C22)		32.192	23646083	21.418	ug/mL	M4
25) t	n-Tetracosane (C24)		34.956	24175967	21.923	ug/mL	M4
27) t	n-Hexacosane (C26)		37.507	24114131	21.770	ug/mL	M4
29) t	n-Octacosane (C28)		39.885	25330808	22.000	ug/mL	M4
31) t	n-Triacontane (C30)		42.106	24040336	21.205	ug/mL	M4
37) t	n-Hexatriacontane (C36)		48.102	22688812	18.132	ug/mL	M4
42) h	C9-C44 Total Petroleu...		36.038	670076778	610.413	ug/mL	m
42) h	C9-C44 Total Petroleu BS		36.038	306375026	279.095	ug/mL	m
46) h	Total Resolved Hydroc...		36.038	345758662	314.972	ug/mL	m
SemiQuant Compounds - Not Calibrated on this Instrument							

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032116.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 9:03 pm
Operator : FID17:MJS
Sample : WG1577487-2
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:06:26 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

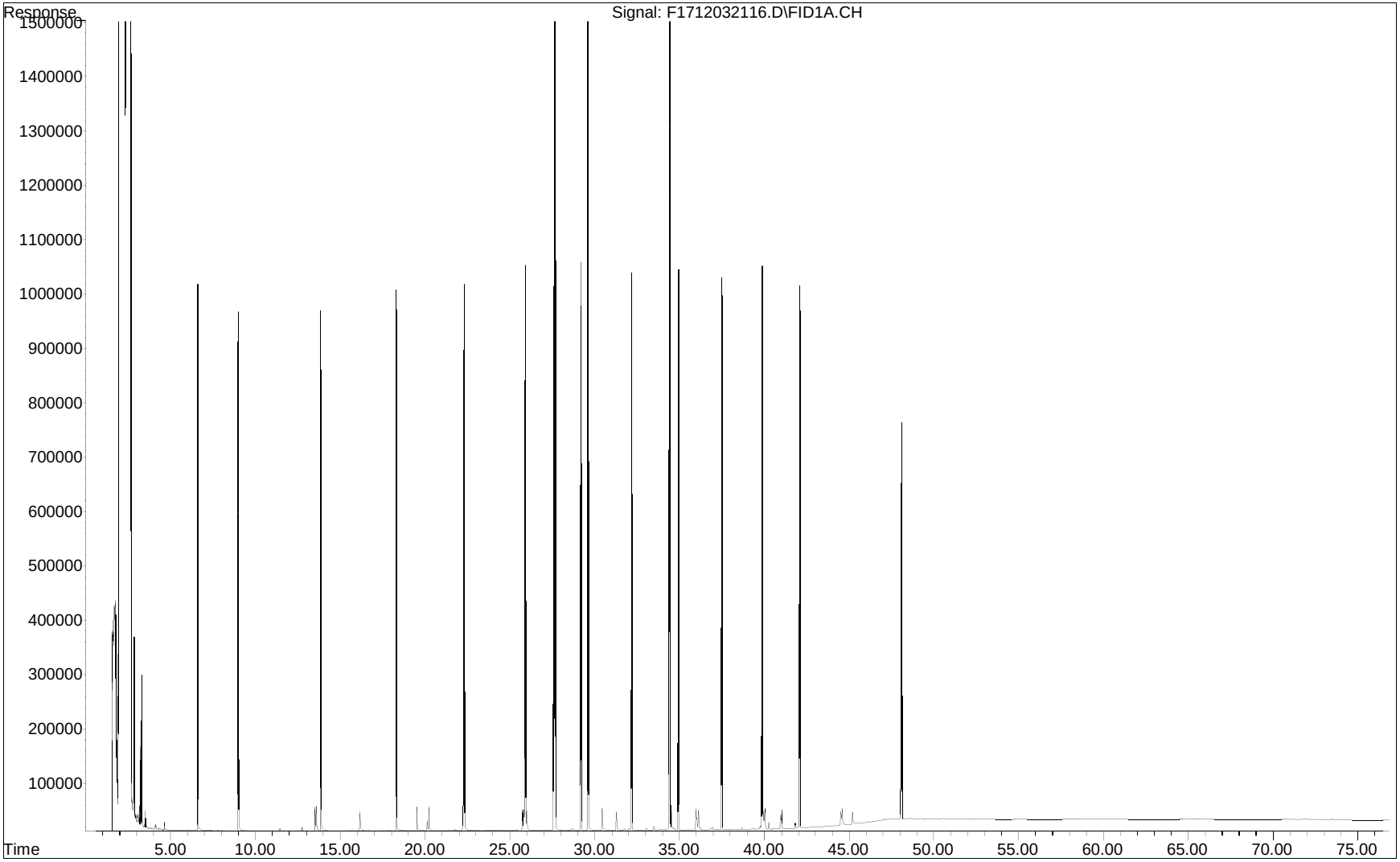
Sub List : SHC_QC_Samples - SHC_QC_Samples

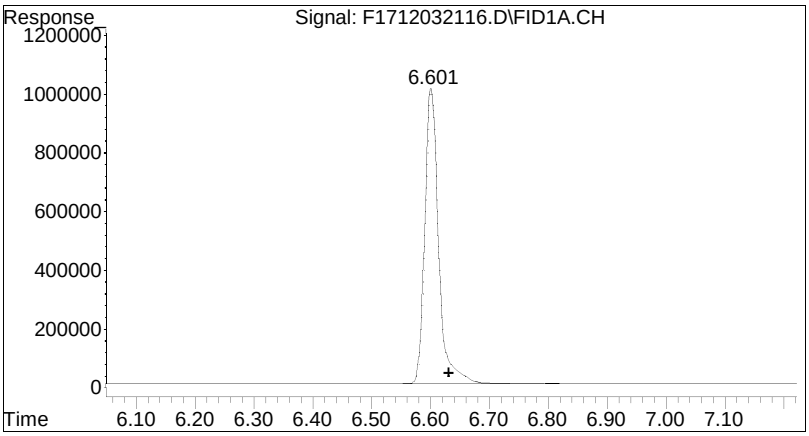
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

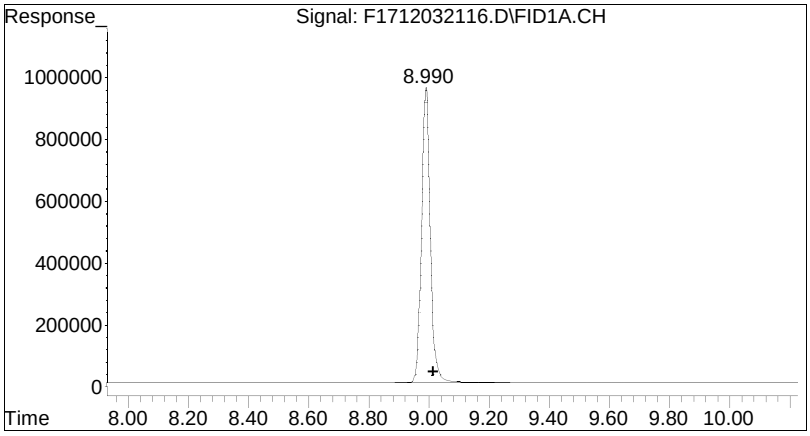
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032116.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 9:03 pm using AcqMethod FID17A.M
Sample Name: WG1577487-2
Instrument: FID17
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 8
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





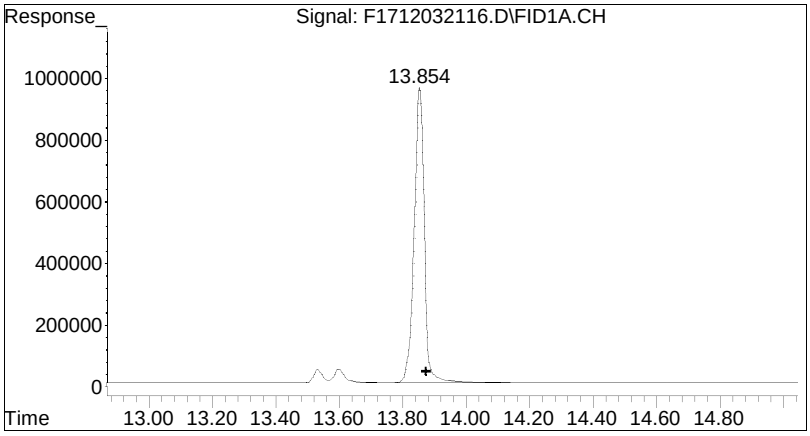
#3 n-Nonane (C9)

R.T.: 6.601 min
Delta R.T.: -0.031 min
Response: 16039602
Conc: 15.49 ug/mL M4



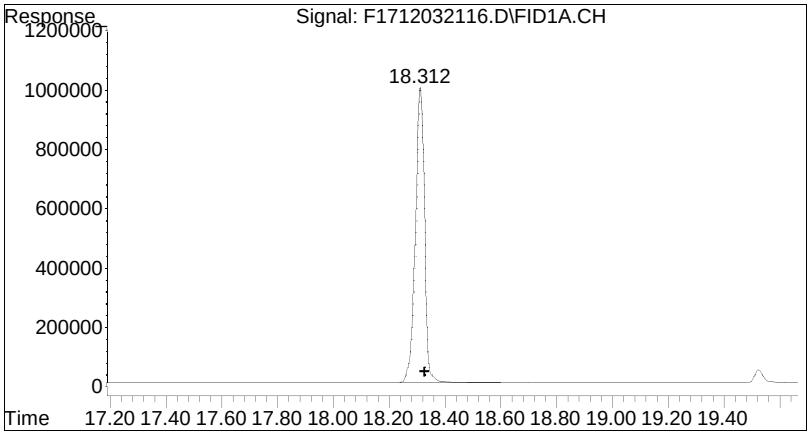
#4 n-Decane (C10)

R.T.: 8.990 min
Delta R.T.: -0.023 min
Response: 18649911
Conc: 17.59 ug/mL M4



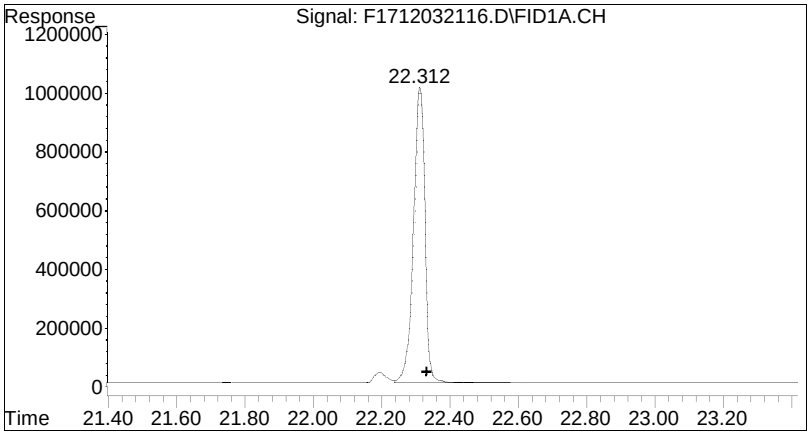
#6 n-Dodecane (C12)

R.T.: 13.854 min
Delta R.T.: -0.019 min
Response: 20318767
Conc: 19.56 ug/mL M4



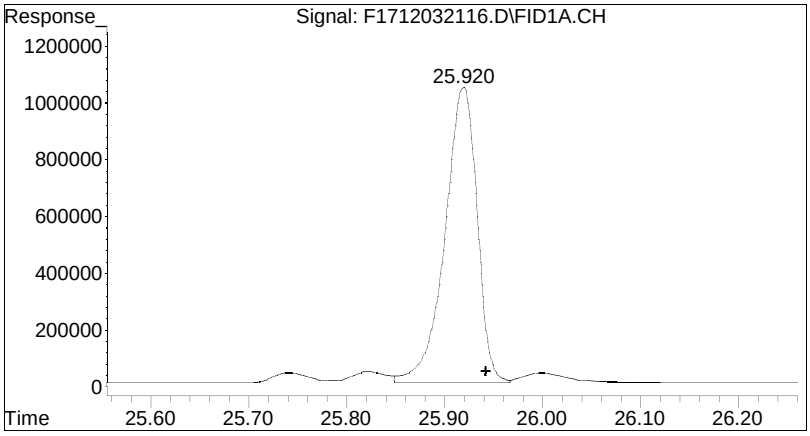
#9 n-Tetradecane (C14)

R.T.: 18.312 min
Delta R.T.: -0.019 min
Response: 21698544
Conc: 20.22 ug/mL M4



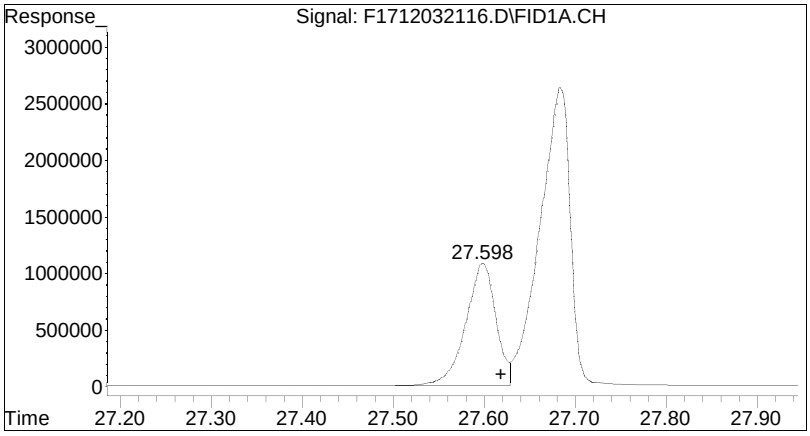
#12 n-Hexadecane (C16)

R.T.: 22.312 min
Delta R.T.: -0.020 min
Response: 22550381
Conc: 21.03 ug/mL M4



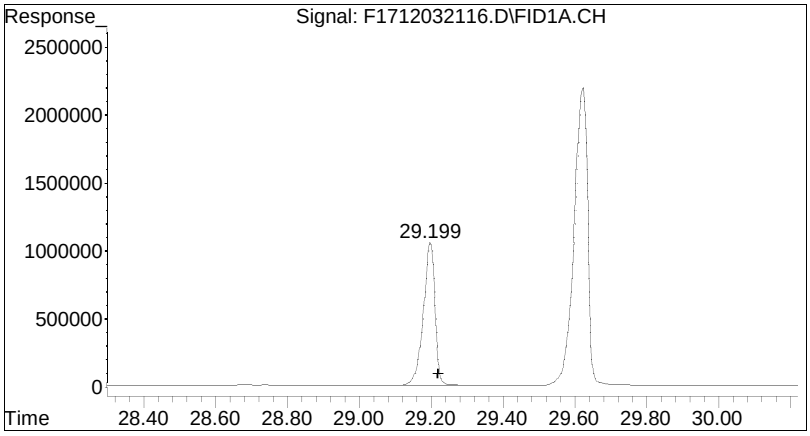
#16 n-Octadecane (C18)

R.T.: 25.920 min
Delta R.T.: -0.022 min
Response: 23476898
Conc: 21.55 ug/mL M4



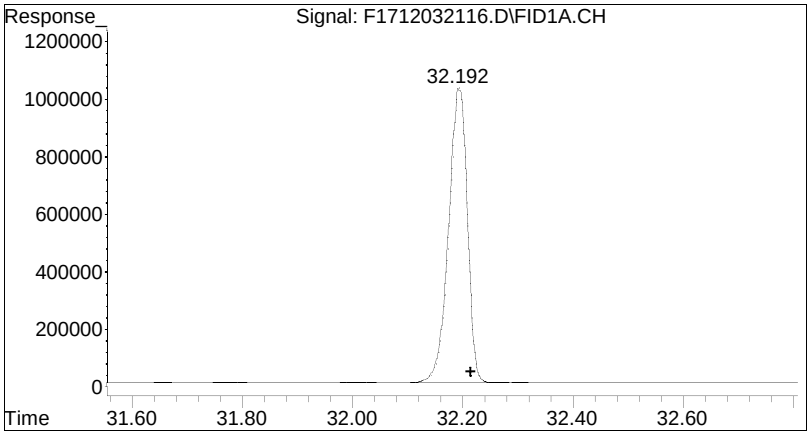
#18 n-Nonadecane (C19)

R.T.: 27.598 min
Delta R.T.: -0.020 min
Response: 24569152
Conc: 22.49 ug/mL M4



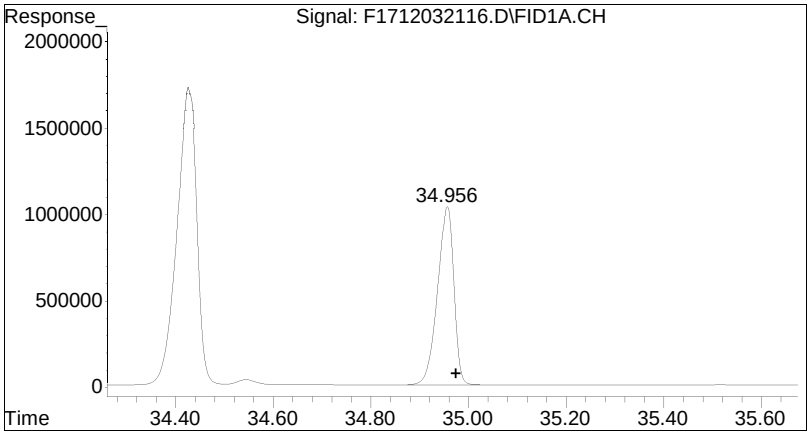
#20 n-Eicosane (C20)

R.T.: 29.199 min
Delta R.T.: -0.022 min
Response: 23613686
Conc: 21.49 ug/mL M4



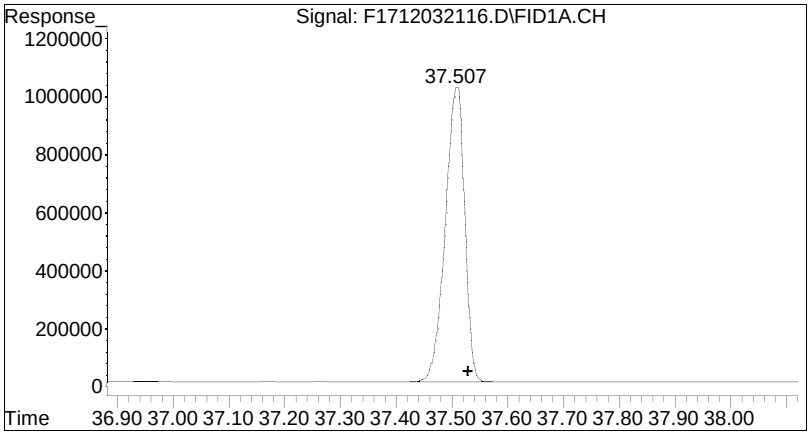
#22 n-Docosane (C22)

R.T.: 32.192 min
Delta R.T.: -0.022 min
Response: 23646083
Conc: 21.42 ug/mL M4



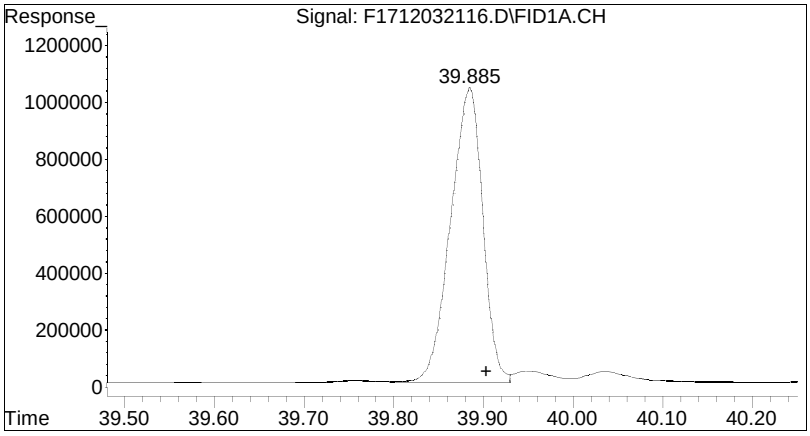
#25 n-Tetracosane (C24)

R.T.: 34.956 min
Delta R.T.: -0.018 min
Response: 24175967
Conc: 21.92 ug/mL M4



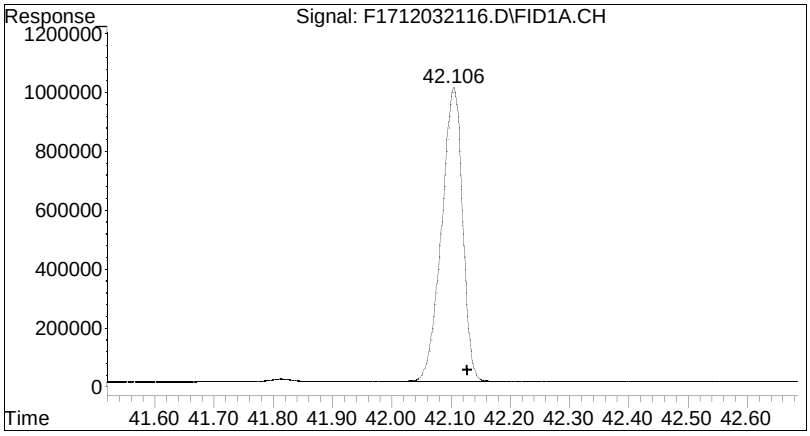
#27 n-Hexacosane (C26)

R.T.: 37.507 min
Delta R.T.: -0.021 min
Response: 24114131
Conc: 21.77 ug/mL M4



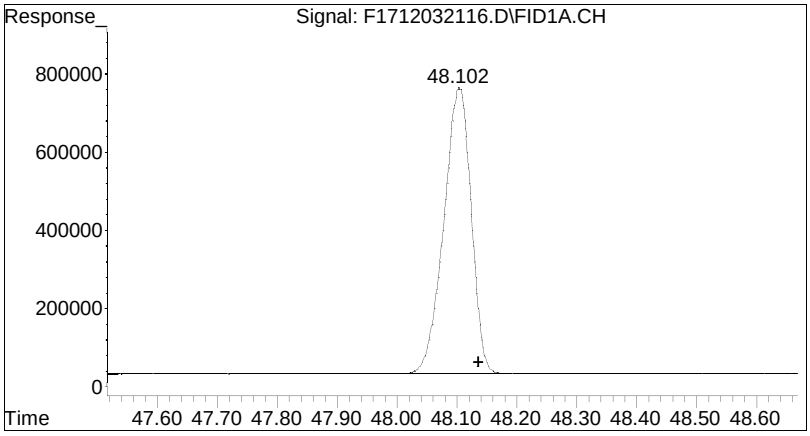
#29 n-Octacosane (C28)

R.T.: 39.885 min
Delta R.T.: -0.018 min
Response: 25330808
Conc: 22.00 ug/mL M4



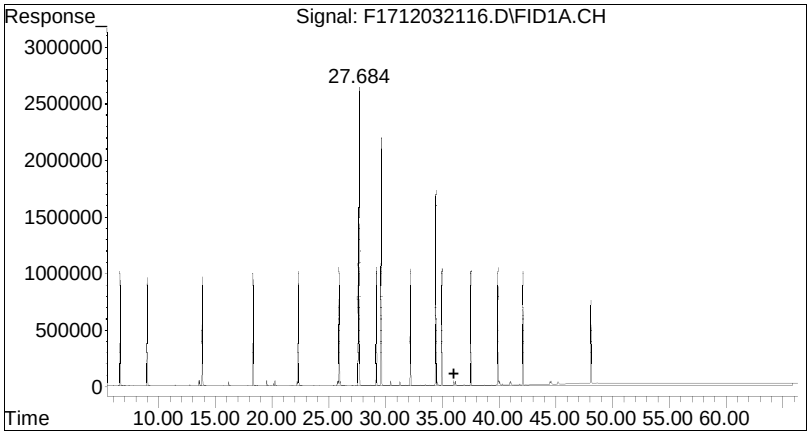
#31 n-Triacontane (C30)

R.T.: 42.106 min
Delta R.T.: -0.022 min
Response: 24040336
Conc: 21.20 ug/mL M4



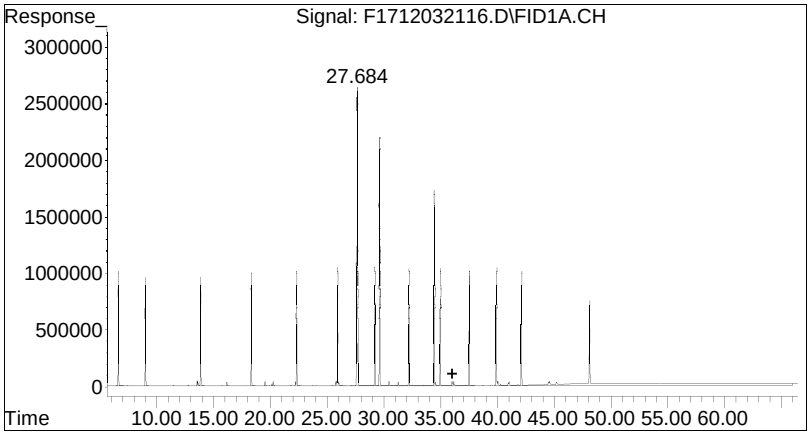
#37 n-Hexatriacontane (C36)

R.T.: 48.102 min
Delta R.T.: -0.033 min
Response: 22688812
Conc: 18.13 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 670076778
Conc: 610.41 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 345758662
Conc: 314.97 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032120.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 12:00 am
Operator : FID17:MJS
Sample : WG1577488-2
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:14:14 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.617	51793438	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.676	50817329	45.261 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	90.52%
24) s	d50-Tetracosane	34.423	41115680	46.157 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	92.31%
	Target Compounds			
3) t	n-Nonane (C9)	6.598	11430005	11.962 ug/mL M4
4) t	n-Decane (C10)	8.986	14301554	14.621 ug/mL M4
6) t	n-Dodecane (C12)	13.851	15953823	16.648 ug/mL M4
9) t	n-Tetradecane (C14)	18.309	17117026	17.290 ug/mL M4
12) t	n-Hexadecane (C16)	22.308	18274276	18.470 ug/mL M4
16) t	n-Octadecane (C18)	25.916	19577477	19.480 ug/mL M4
18) t	n-Nonadecane (C19)	27.594	20584840	20.420 ug/mL M4
20) t	n-Eicosane (C20)	29.196	19996489	19.724 ug/mL M4
22) t	n-Docosane (C22)	32.190	20109276	19.741 ug/mL M4
25) t	n-Tetracosane (C24)	34.951	20509355	20.157 ug/mL M4
27) t	n-Hexacosane (C26)	37.505	20545999	20.103 ug/mL M4
29) t	n-Octacosane (C28)	39.881	21546497	20.281 ug/mL M4
31) t	n-Triacontane (C30)	42.100	20475621	19.574 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.098	19520730	16.907 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	598432535	590.825 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	234730783	231.747 ug/mLm
46) h	Total Resolved Hydroc...	36.038	288536765	284.869 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032120.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 12:00 am
Operator : FID17:MJS
Sample : WG1577488-2
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:14:14 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

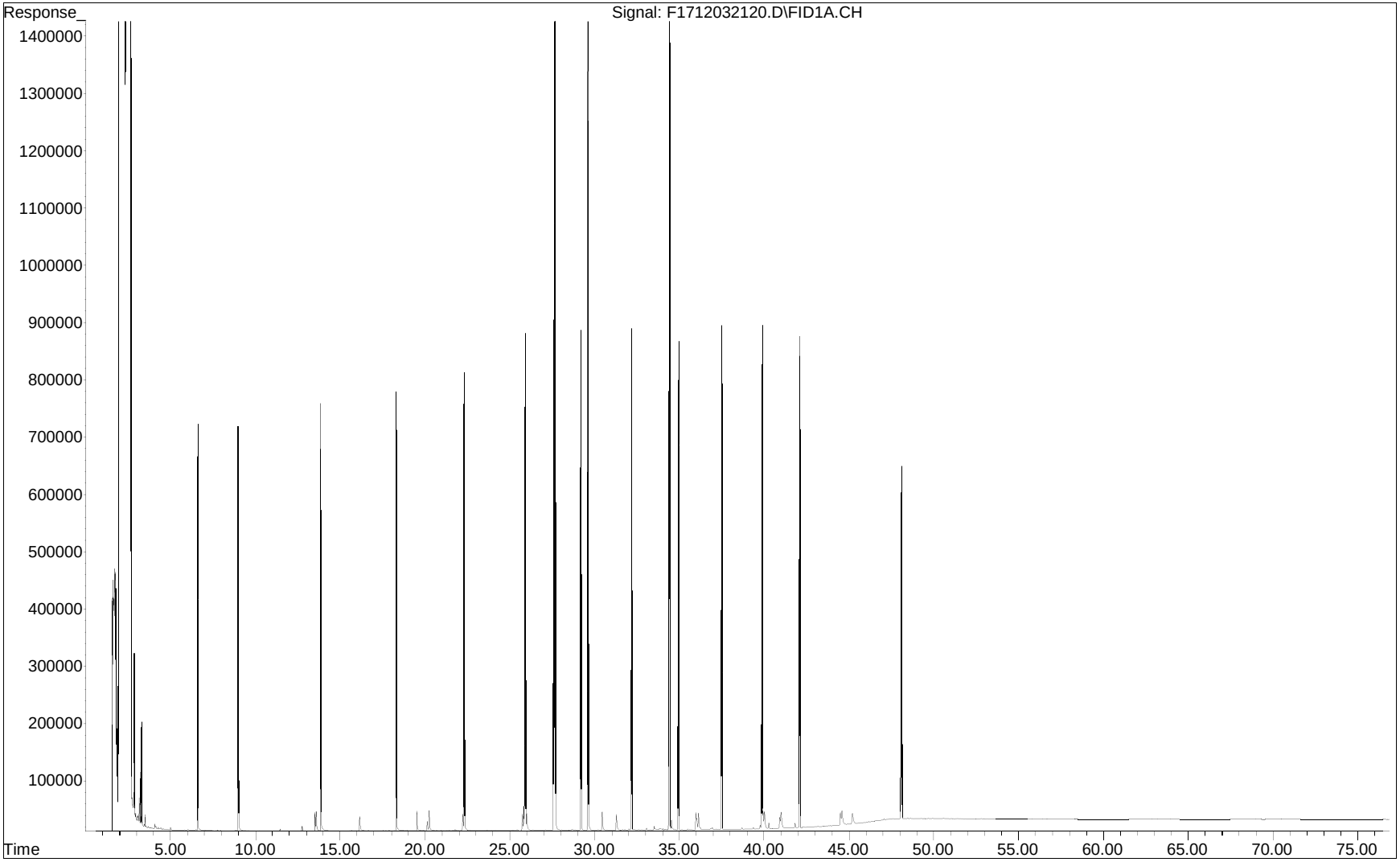
Sub List : SHC_QC_Samples - SHC_QC_Samples

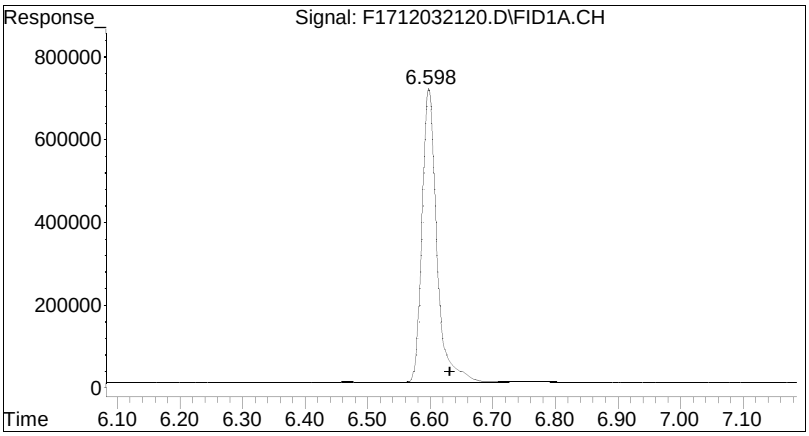
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

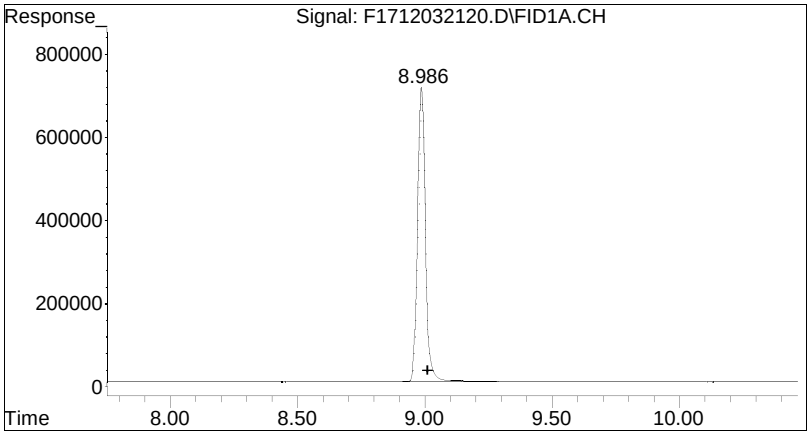
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032120.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 12:00 am using AcqMethod FID17A.M
Sample Name: WG1577488-2
Instrument: FID17
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 10
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





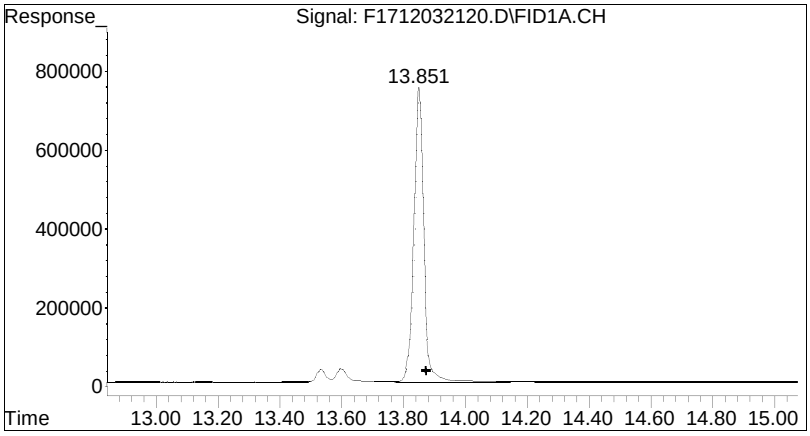
#3 n-Nonane (C9)

R.T.:	6.598 min
Delta R.T.:	-0.034 min
Response:	11430005
Conc:	11.96 ug/mL M4



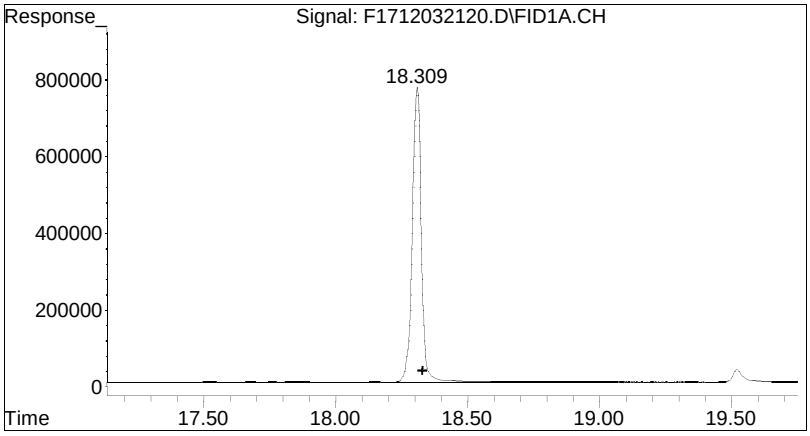
#4 n-Decane (C10)

R.T.:	8.986 min
Delta R.T.:	-0.027 min
Response:	14301554
Conc:	14.62 ug/mL M4



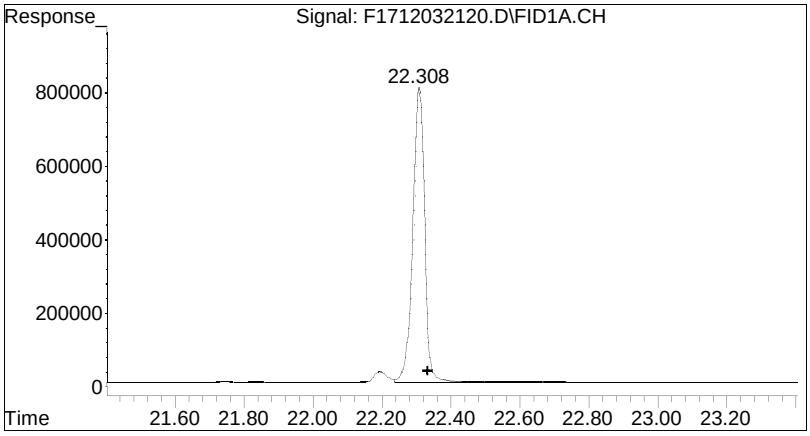
#6 n-Dodecane (C12)

R.T.: 13.851 min
Delta R.T.: -0.022 min
Response: 15953823
Conc: 16.65 ug/mL M4



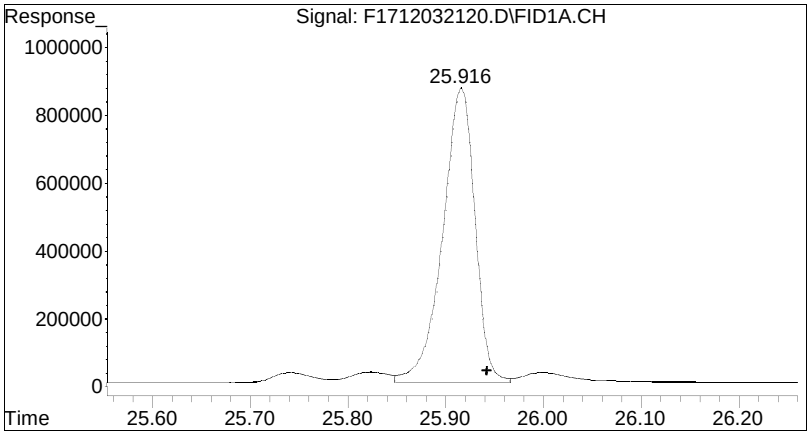
#9 n-Tetradecane (C14)

R.T.: 18.309 min
Delta R.T.: -0.021 min
Response: 17117026
Conc: 17.29 ug/mL M4



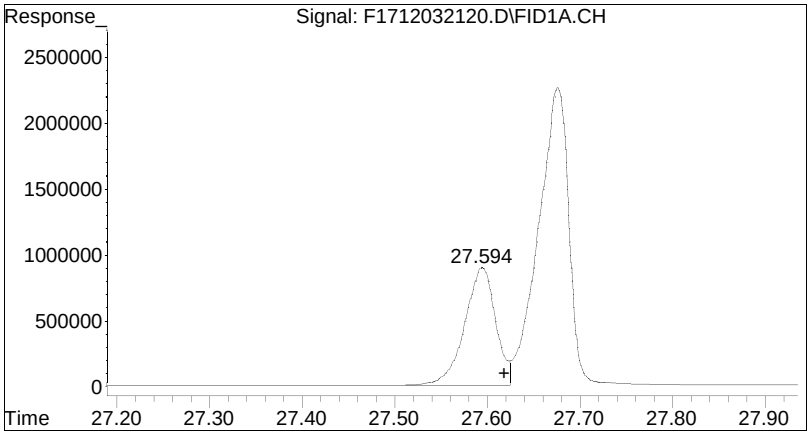
#12 n-Hexadecane (C16)

R.T.: 22.308 min
Delta R.T.: -0.024 min
Response: 18274276
Conc: 18.47 ug/mL M4



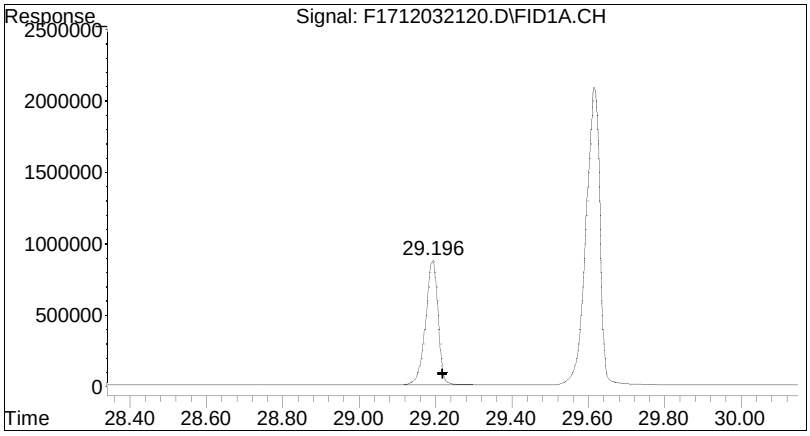
#16 n-Octadecane (C18)

R.T.: 25.916 min
Delta R.T.: -0.026 min
Response: 19577477
Conc: 19.48 ug/mL M4



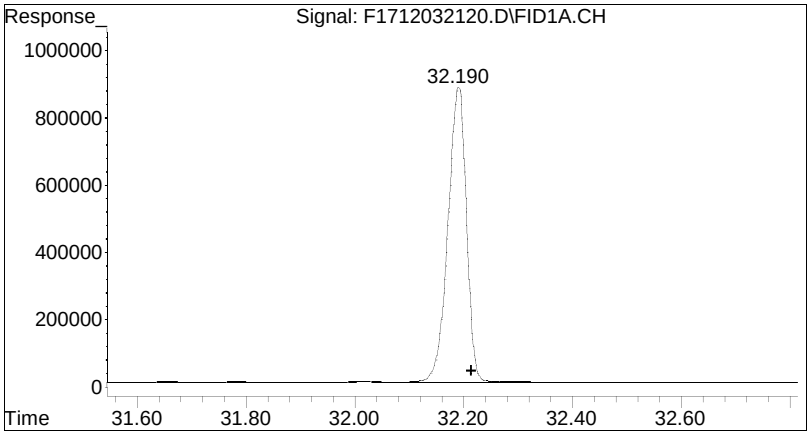
#18 n-Nonadecane (C19)

R.T.: 27.594 min
Delta R.T.: -0.024 min
Response: 20584840
Conc: 20.42 ug/mL M4



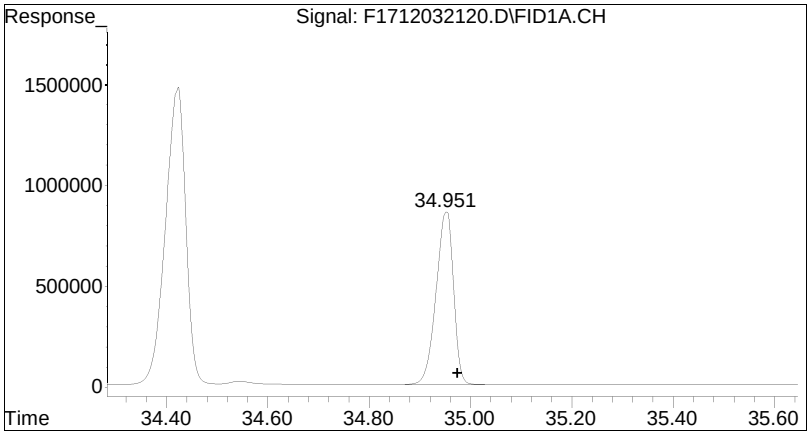
#20 n-Eicosane (C20)

R.T.: 29.196 min
Delta R.T.: -0.025 min
Response: 19996489
Conc: 19.72 ug/mL M4



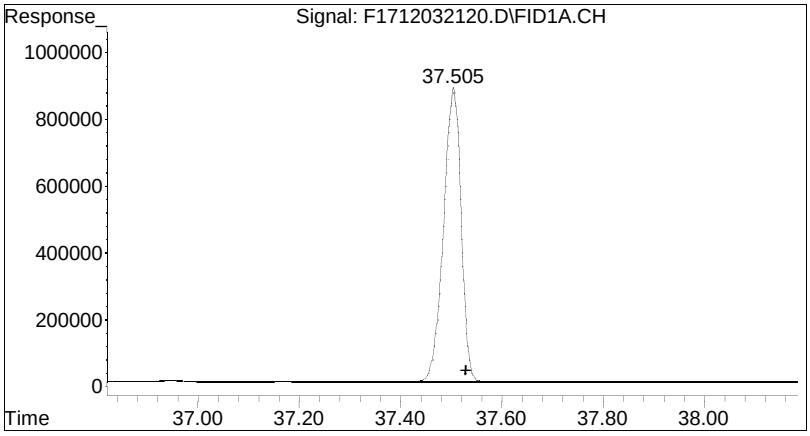
#22 n-Docosane (C22)

R.T.: 32.190 min
Delta R.T.: -0.024 min
Response: 20109276
Conc: 19.74 ug/mL M4



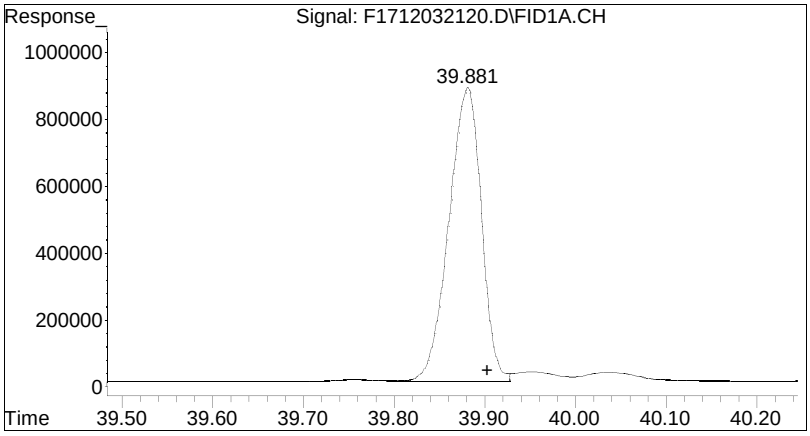
#25 n-Tetracosane (C24)

R.T.: 34.951 min
Delta R.T.: -0.023 min
Response: 20509355
Conc: 20.16 ug/mL M4



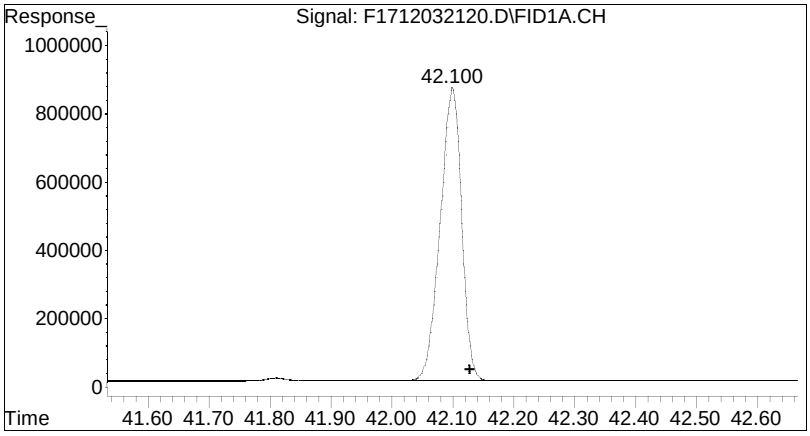
#27 n-Hexacosane (C26)

R.T.: 37.505 min
Delta R.T.: -0.024 min
Response: 20545999
Conc: 20.10 ug/mL M4



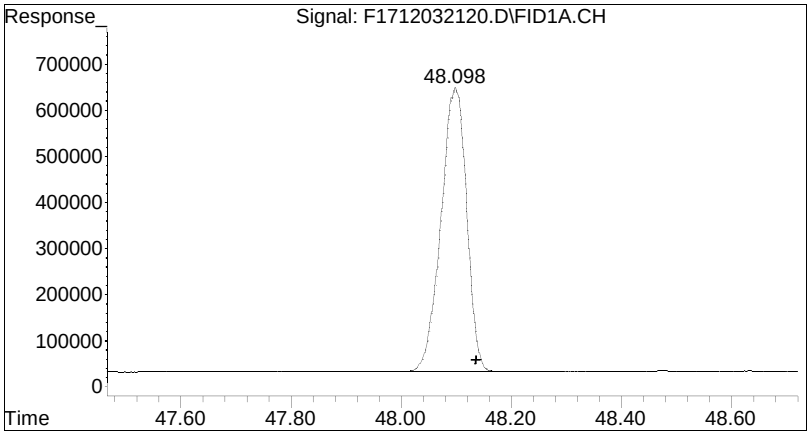
#29 n-Octacosane (C28)

R.T.: 39.881 min
Delta R.T.: -0.022 min
Response: 21546497
Conc: 20.28 ug/mL M4



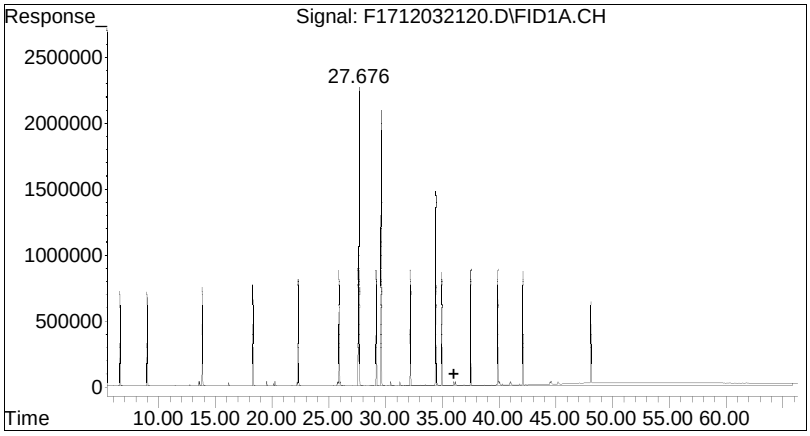
#31 n-Triacontane (C30)

R.T.: 42.100 min
Delta R.T.: -0.028 min
Response: 20475621
Conc: 19.57 ug/mL M4



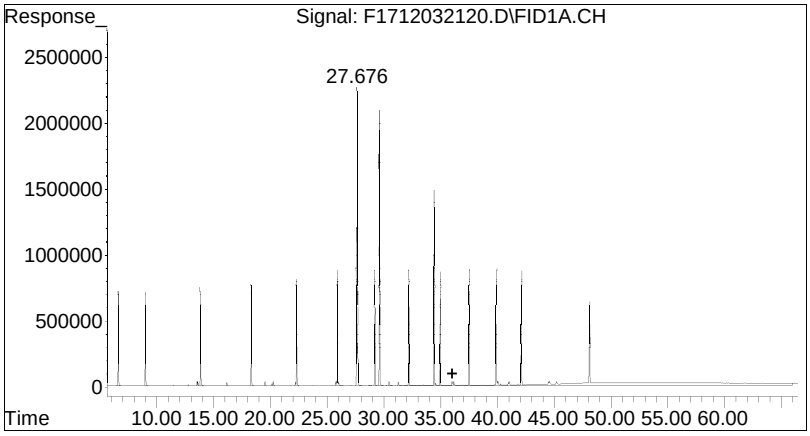
#37 n-Hexatriacontane (C36)

R.T.: 48.098 min
Delta R.T.: -0.037 min
Response: 19520730
Conc: 16.91 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 598432535
Conc: 590.83 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 288536765
Conc: 284.87 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072122.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 12:16 am
Operator : FID17:WR
Sample : WG1579479-2,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:22:11 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.607	62237681	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.647	16812688	12.462	ug/mL	M4
Spiked Amount	50.000 Range 50 - 130		Recovery =	24.92%#		
24) s	d50-Tetracosane	34.400	11763397	10.990	ug/mL	M4
Spiked Amount	50.000 Range 50 - 130		Recovery =	21.98%#		
	Target Compounds					
3) t	n-Nonane (C9)	6.595	4937726	4.300	ug/mL	M4
4) t	n-Decane (C10)	8.978	4666467	3.970	ug/mL	M4
6) t	n-Dodecane (C12)	13.843	4638278	4.028	ug/mL	M4
9) t	n-Tetradecane (C14)	18.303	5425237	4.560	ug/mL	M4
12) t	n-Hexadecane (C16)	22.303	5843333	4.915	ug/mL	M4
16) t	n-Octadecane (C18)	25.904	6275018	5.196	ug/mL	M4
18) t	n-Nonadecane (C19)	27.583	4527952	3.738	ug/mL	M4
20) t	n-Eicosane (C20)	29.184	5579498	4.580	ug/mL	M4
22) t	n-Docosane (C22)	32.181	5694365	4.652	ug/mL	M4
25) t	n-Tetracosane (C24)	34.941	6020854	4.924	ug/mL	M4
27) t	n-Hexacosane (C26)	37.499	5813426	4.734	ug/mL	M4
29) t	n-Octacosane (C28)	39.871	5553705	4.350	ug/mL	M4
31) t	n-Triacontane (C30)	42.091	5670668	4.511	ug/mL	M4
37) t	n-Hexatriacontane (C36)	48.094	5292736	3.815	ug/mL	M4
42) h	C9-C44 Total Petroleu...	35.999	321922075	264.494	ug/mL	m
42) h	C9-C44 Total Petroleu BS	35.999	46846854	38.490	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	81914950	67.302	ug/mL	m
	SemiQuant Compounds - Not Calibrated on this Instrument					

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072122.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 12:16 am
Operator : FID17:WR
Sample : WG1579479-2,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:22:11 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

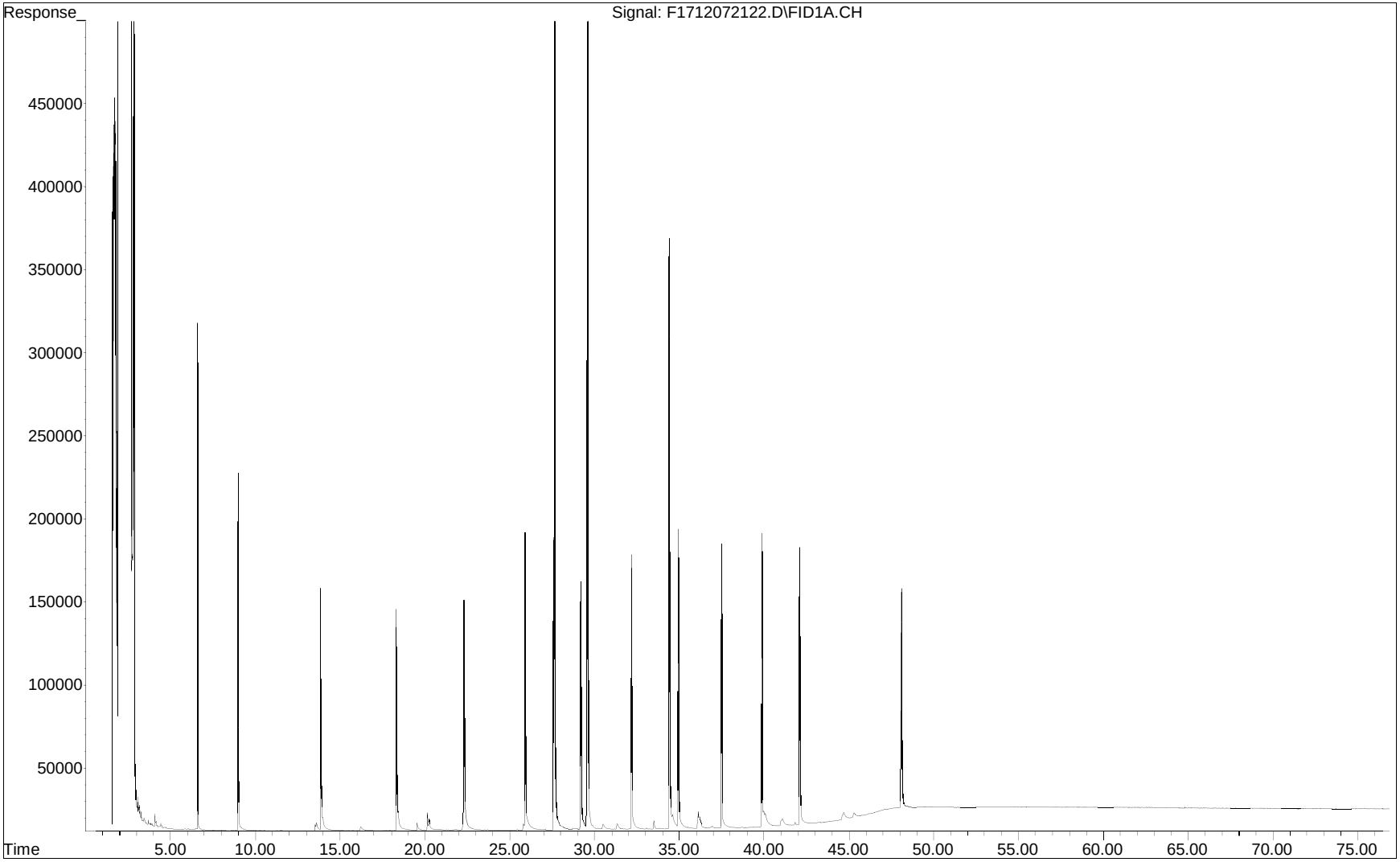
Sub List : SHC_QC_Samples - SHC_QC_Samples

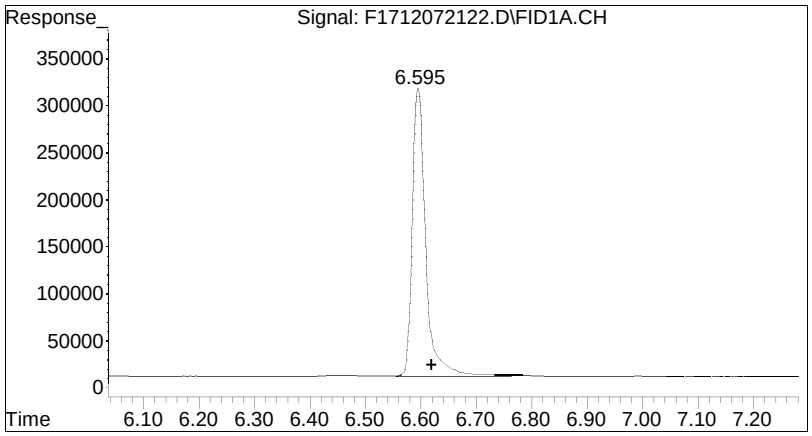
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

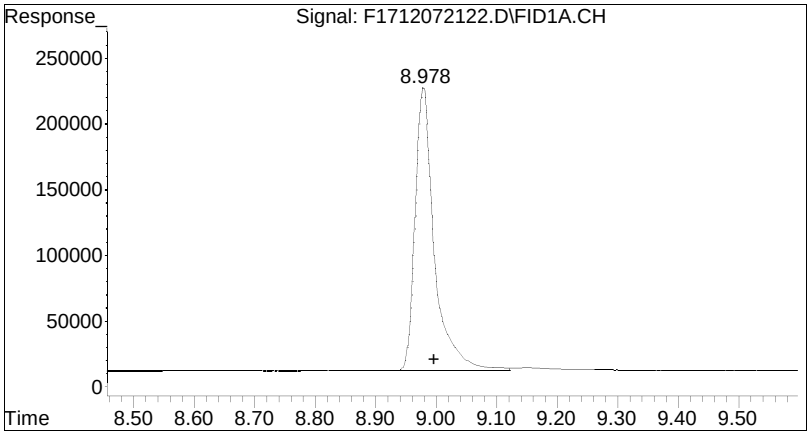
File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072122.D
Operator : FID17:WR
Acquired : 08 Dec 2021 12:16 am using AcqMethod FID17A.M
Sample Name: WG1579479-2,42,,
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M





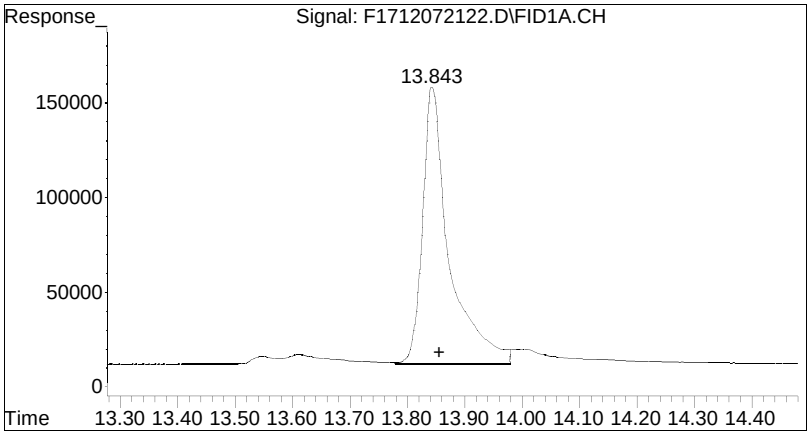
#3 n-Nonane (C9)

R.T.:	6.595 min
Delta R.T.:	-0.025 min
Response:	4937726
Conc:	4.30 ug/mL M4



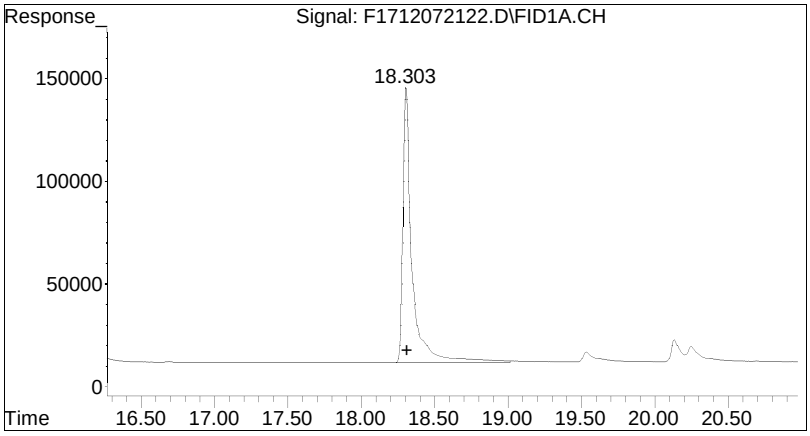
#4 n-Decane (C10)

R.T.:	8.978 min
Delta R.T.:	-0.018 min
Response:	4666467
Conc:	3.97 ug/mL M4



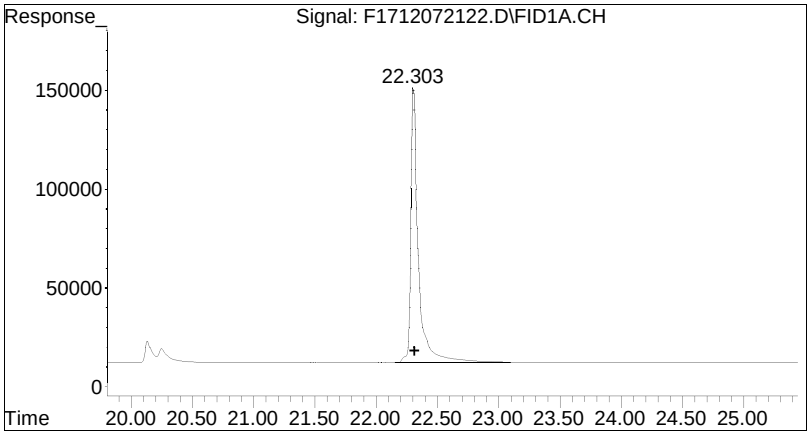
#6 n-Dodecane (C12)

R.T.:	13.843 min
Delta R.T.:	-0.013 min
Response:	4638278
Conc:	4.03 ug/mL M4



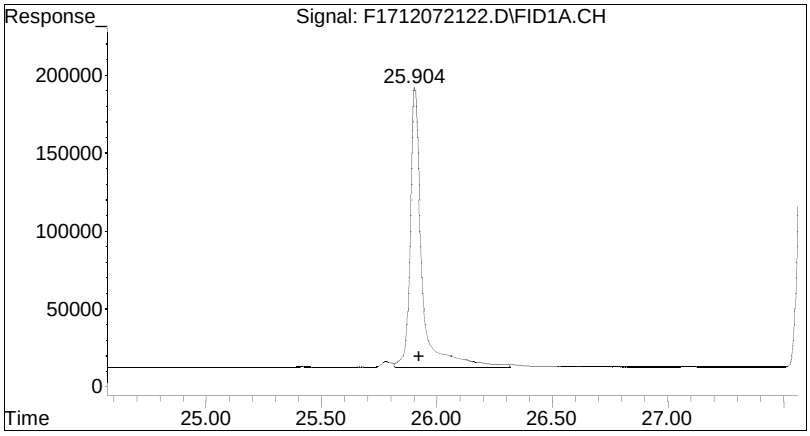
#9 n-Tetradecane (C14)

R.T.:	18.303 min
Delta R.T.:	-0.010 min
Response:	5425237
Conc:	4.56 ug/mL M4



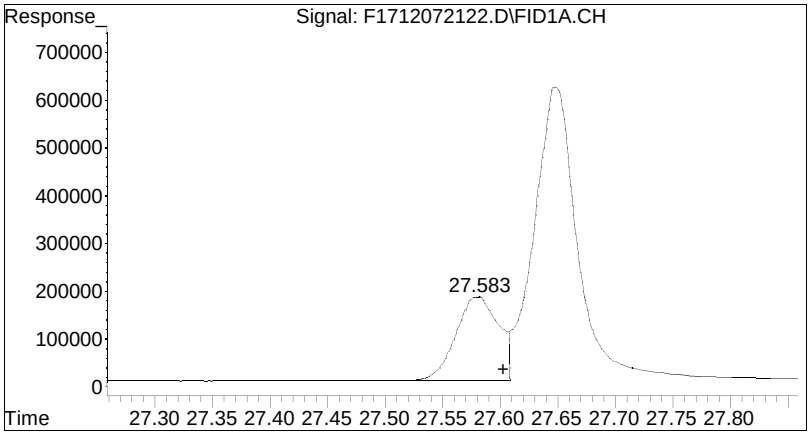
#12 n-Hexadecane (C16)

R.T.:	22.303 min
Delta R.T.:	-0.012 min
Response:	5843333
Conc:	4.91 ug/mL M4



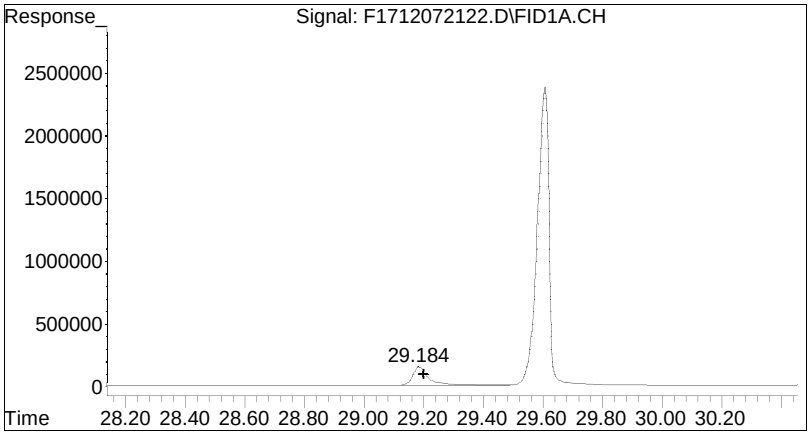
#16 n-Octadecane (C18)

R.T.:	25.904 min
Delta R.T.:	-0.020 min
Response:	6275018
Conc:	5.20 ug/mL M4



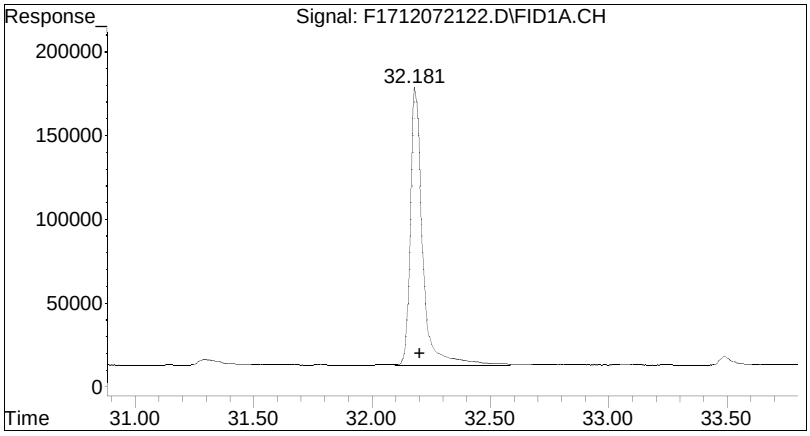
#18 n-Nonadecane (C19)

R.T.:	27.583 min
Delta R.T.:	-0.020 min
Response:	4527952
Conc:	3.74 ug/mL M4



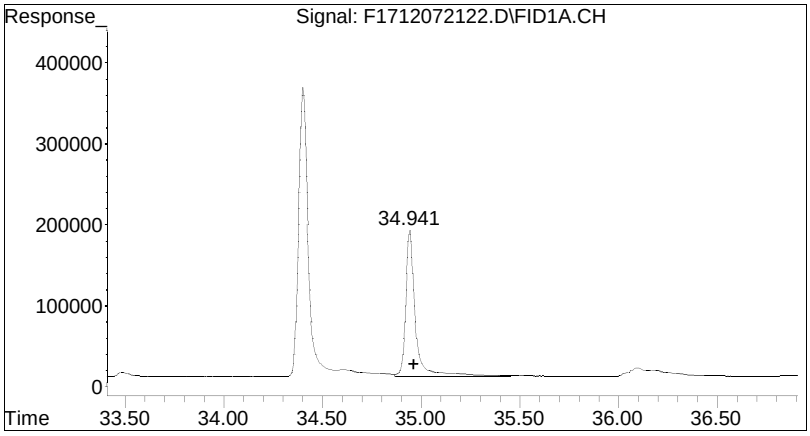
#20 n-Eicosane (C20)

R.T.:	29.184 min
Delta R.T.:	-0.018 min
Response:	5579498
Conc:	4.58 ug/mL M4



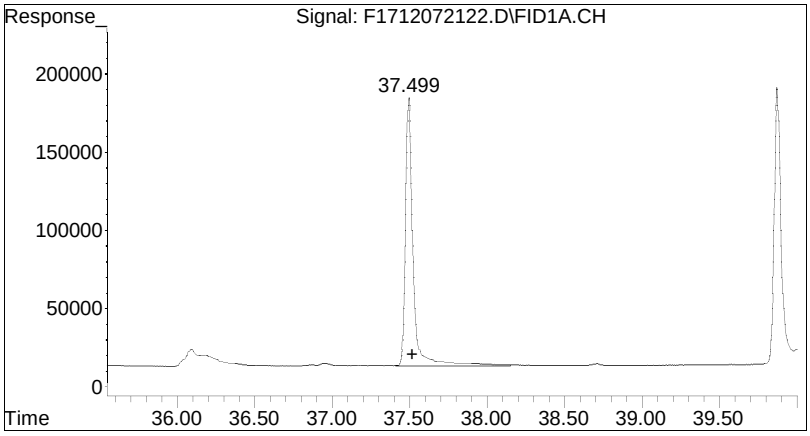
#22 n-Docosane (C22)

R.T.:	32.181 min
Delta R.T.:	-0.021 min
Response:	5694365
Conc:	4.65 ug/mL M4



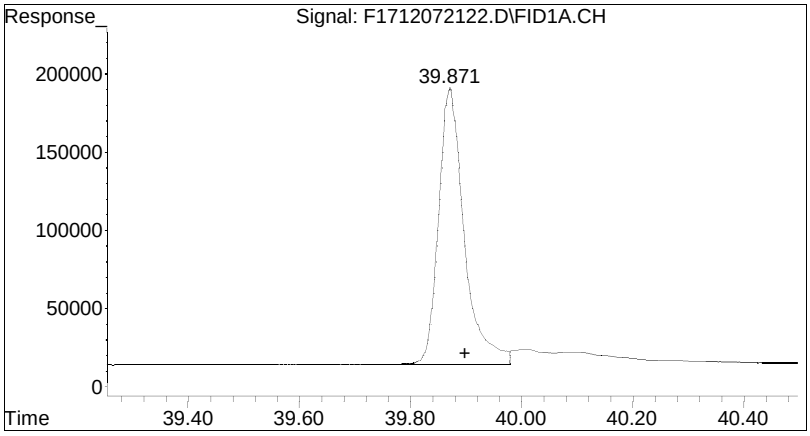
#25 n-Tetracosane (C24)

R.T.:	34.941 min
Delta R.T.:	-0.022 min
Response:	6020854
Conc:	4.92 ug/mL M4



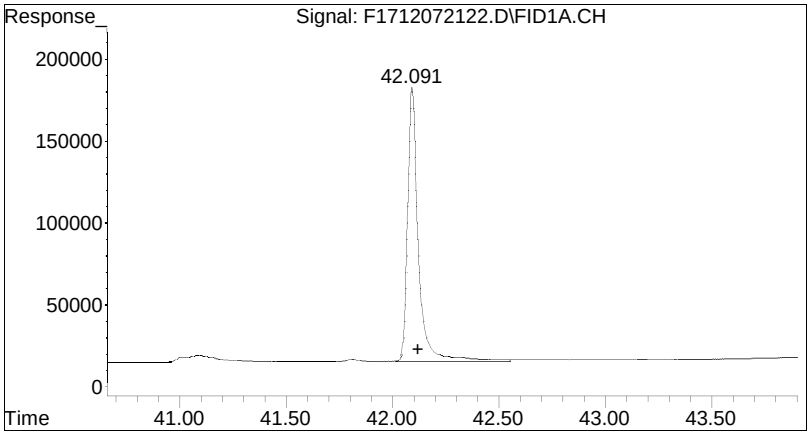
#27 n-Hexacosane (C26)

R.T.:	37.499 min
Delta R.T.:	-0.021 min
Response:	5813426
Conc:	4.73 ug/mL M4



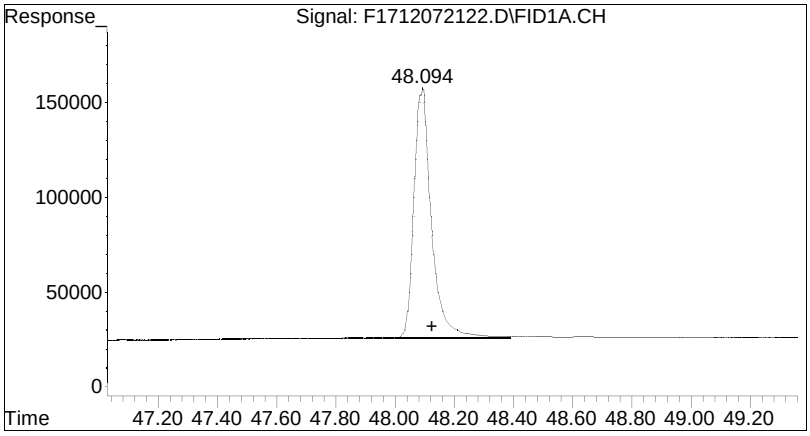
#29 n-Octacosane (C28)

R.T.:	39.871 min
Delta R.T.:	-0.027 min
Response:	5553705
Conc:	4.35 ug/mL M4



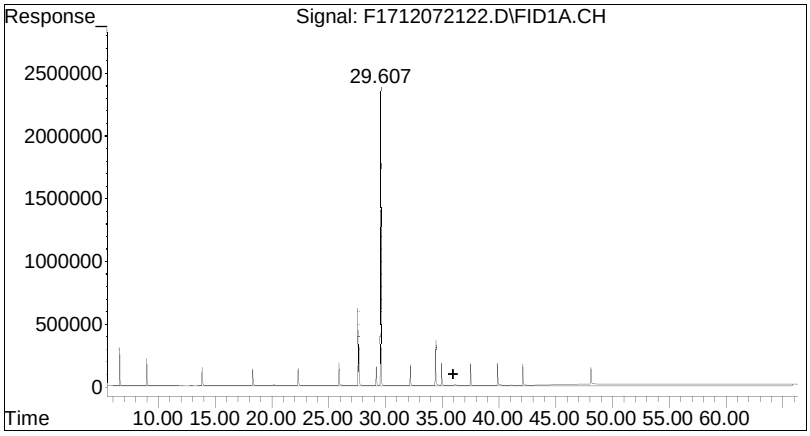
#31 n-Triacontane (C30)

R.T.:	42.091 min
Delta R.T.:	-0.031 min
Response:	5670668
Conc:	4.51 ug/mL M4



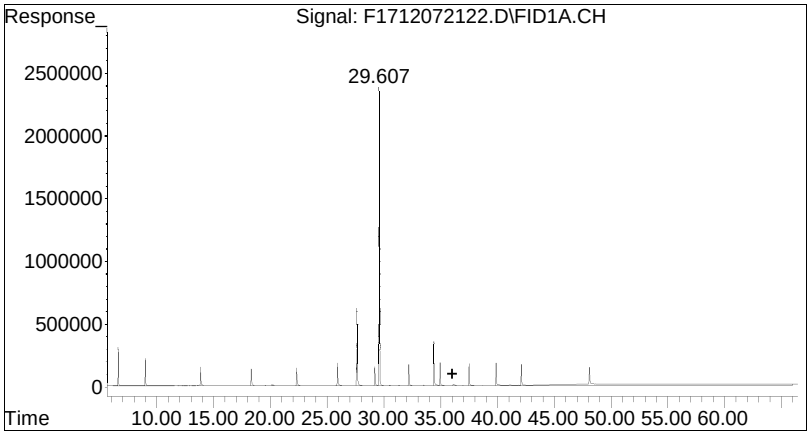
#37 n-Hexatriacontane (C36)

R.T.:	48.094 min
Delta R.T.:	-0.031 min
Response:	5292736
Conc:	3.81 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 35.999 min
Delta R.T.: 0.000 min
Response: 321922075
Conc: 264.49 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 81914950
Conc: 67.30 ug/mL m

LCS Duplicate Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032118.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 10:32 pm
Operator : FID17:MJS
Sample : WG1577487-3
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:10:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.622	56455297	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.682	60958191	49.810 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	99.62%
24) s	d50-Tetracosane	34.426	49129061	50.598 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	101.20%
	Target Compounds			
3) t	n-Nonane (C9)	6.601	16086750	15.446 ug/mL M4
4) t	n-Decane (C10)	8.989	19030623	17.849 ug/mL M4
6) t	n-Dodecane (C12)	13.854	20816678	19.929 ug/mL M4
9) t	n-Tetradecane (C14)	18.311	22156793	20.532 ug/mL M4
12) t	n-Hexadecane (C16)	22.311	23140506	21.457 ug/mL M4
16) t	n-Octadecane (C18)	25.918	23877059	21.796 ug/mL M4
18) t	n-Nonadecane (C19)	27.599	25441841	23.154 ug/mL M4
20) t	n-Eicosane (C20)	29.196	23908674	21.635 ug/mL M4
22) t	n-Docosane (C22)	32.192	23922591	21.545 ug/mL M4
25) t	n-Tetracosane (C24)	34.955	24436765	22.033 ug/mL M4
27) t	n-Hexacosane (C26)	37.508	24373333	21.879 ug/mL M4
29) t	n-Octacosane (C28)	39.881	25606089	22.112 ug/mL M4
31) t	n-Triacontane (C30)	42.104	24460021	21.452 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.101	24465195	19.440 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	674466700	610.906 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	310764948	281.479 ug/mLm
46) h	Total Resolved Hydroc...	36.038	357504983	323.814 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032118.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 10:32 pm
Operator : FID17:MJS
Sample : WG1577487-3
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:10:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

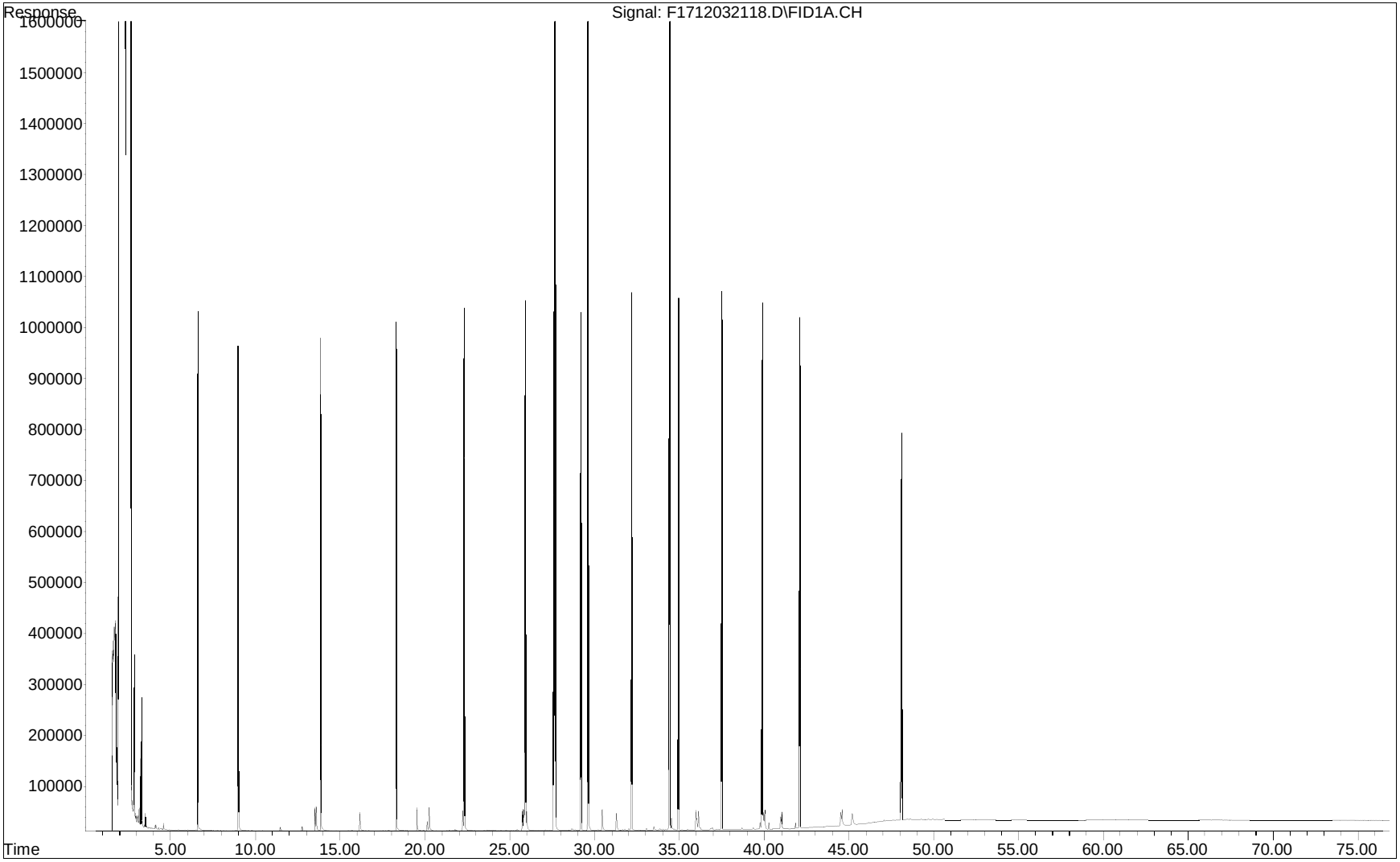
Sub List : SHC_QC_Samples - SHC_QC_Samples

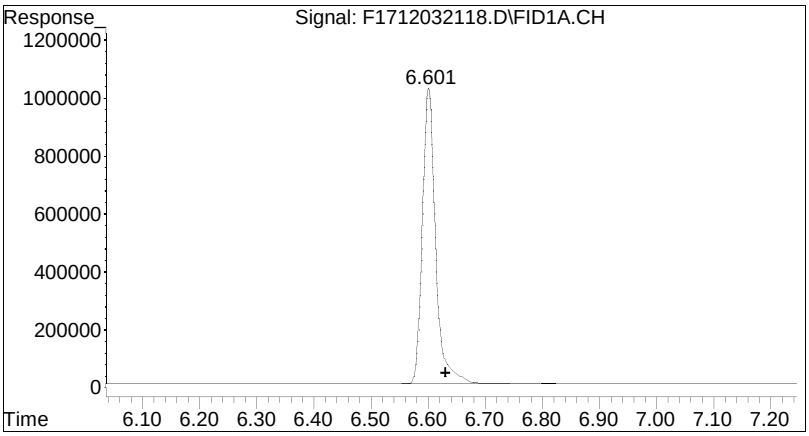
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

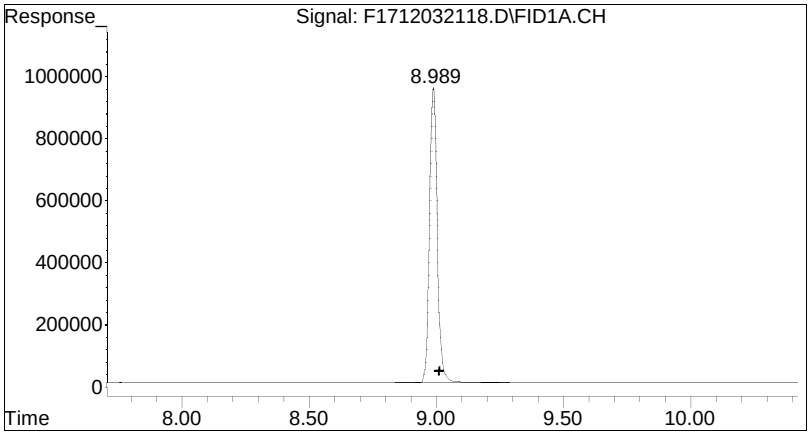
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032118.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 10:32 pm using AcqMethod FID17A.M
Sample Name: WG1577487-3
Instrument: FID17
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 9
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





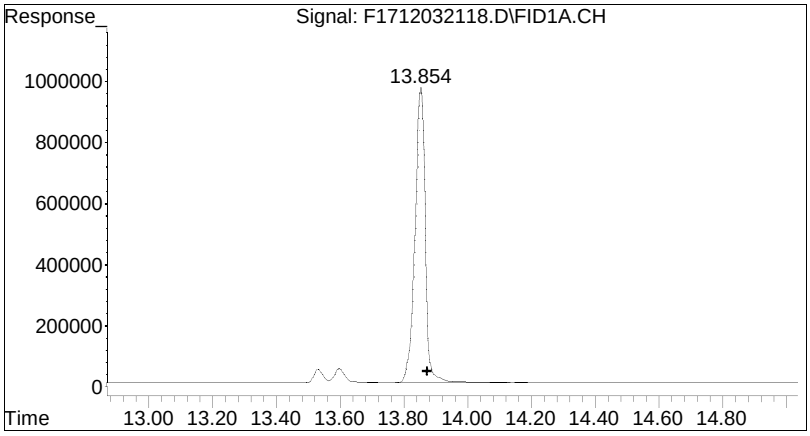
#3 n-Nonane (C9)

R.T.: 6.601 min
Delta R.T.: -0.031 min
Response: 16086750
Conc: 15.45 ug/mL M4



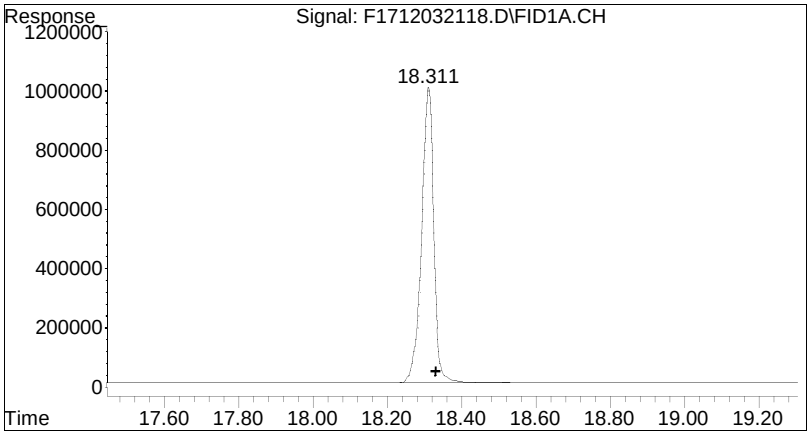
#4 n-Decane (C10)

R.T.: 8.989 min
Delta R.T.: -0.024 min
Response: 19030623
Conc: 17.85 ug/mL M4



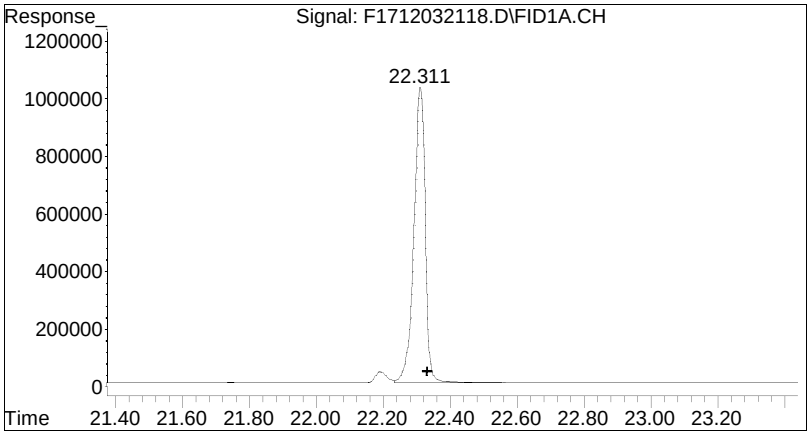
#6 n-Dodecane (C12)

R.T.: 13.854 min
Delta R.T.: -0.019 min
Response: 20816678
Conc: 19.93 ug/mL M4



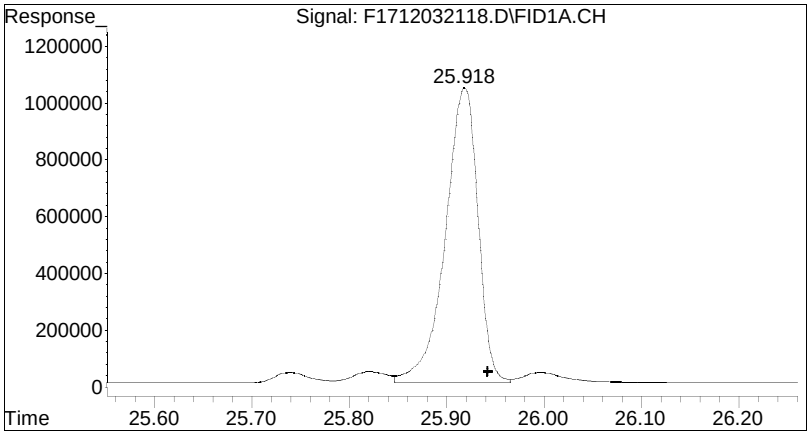
#9 n-Tetradecane (C14)

R.T.:	18.311 min
Delta R.T.:	-0.019 min
Response:	22156793
Conc:	20.53 ug/mL M4



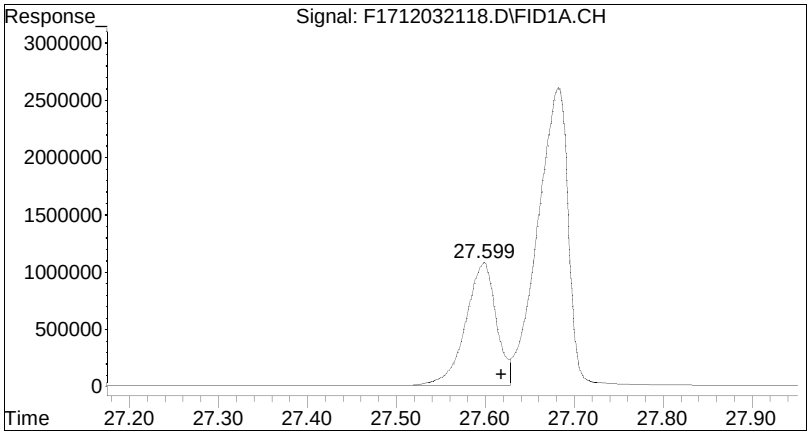
#12 n-Hexadecane (C16)

R.T.: 22.311 min
Delta R.T.: -0.021 min
Response: 23140506
Conc: 21.46 ug/mL M4



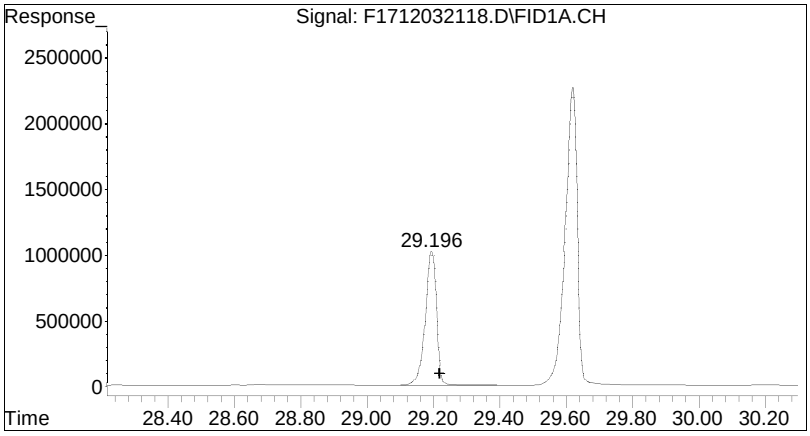
#16 n-Octadecane (C18)

R.T.: 25.918 min
Delta R.T.: -0.024 min
Response: 23877059
Conc: 21.80 ug/mL M4



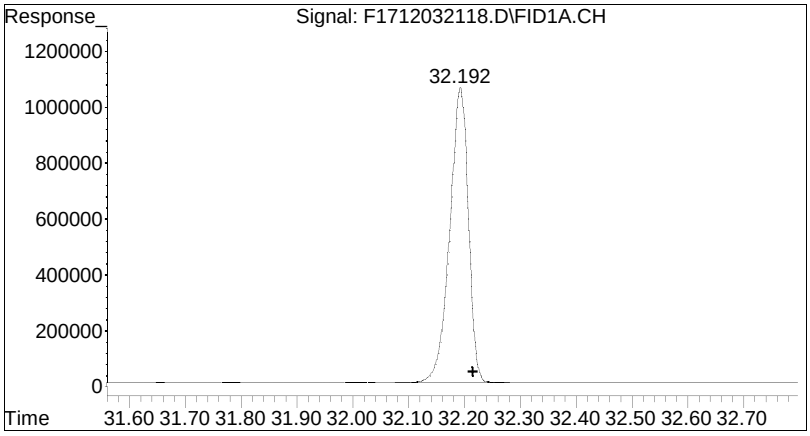
#18 n-Nonadecane (C19)

R.T.: 27.599 min
Delta R.T.: -0.019 min
Response: 25441841
Conc: 23.15 ug/mL M4



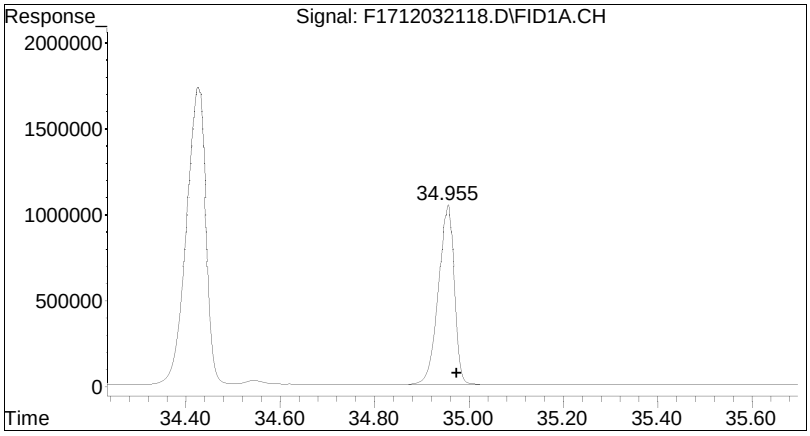
#20 n-Eicosane (C20)

R.T.: 29.196 min
Delta R.T.: -0.025 min
Response: 23908674
Conc: 21.64 ug/mL M4



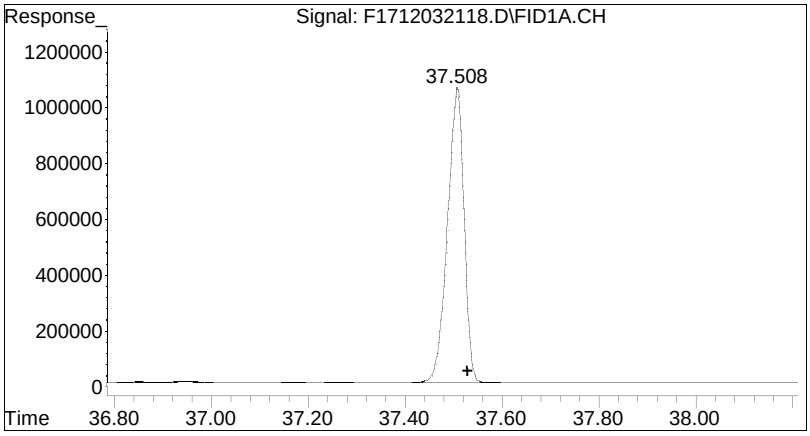
#22 n-Docosane (C22)

R.T.:	32.192 min
Delta R.T.:	-0.022 min
Response:	23922591
Conc:	21.55 ug/mL M4



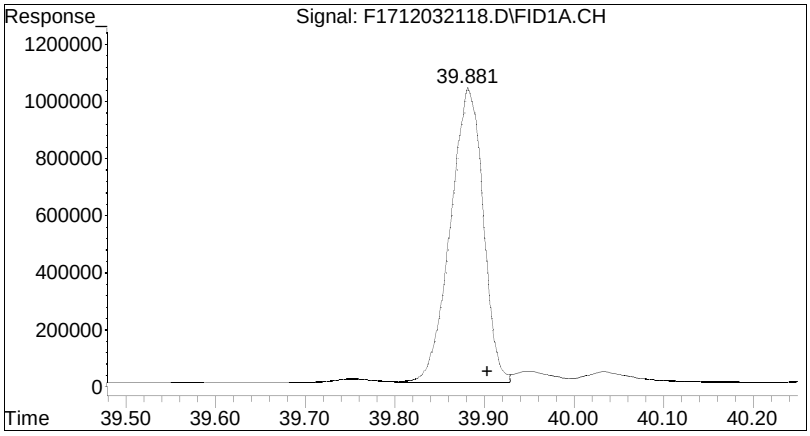
#25 n-Tetracosane (C24)

R.T.:	34.955 min
Delta R.T.:	-0.019 min
Response:	24436765
Conc:	22.03 ug/mL M4



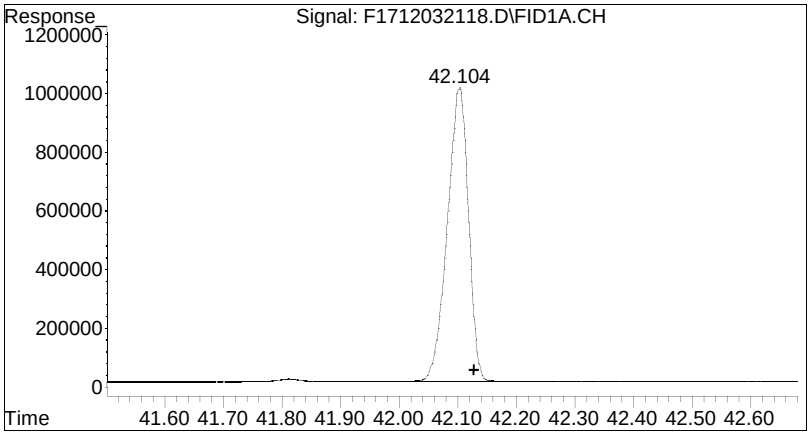
#27 n-Hexacosane (C26)

R.T.: 37.508 min
Delta R.T.: -0.021 min
Response: 24373333
Conc: 21.88 ug/mL M4



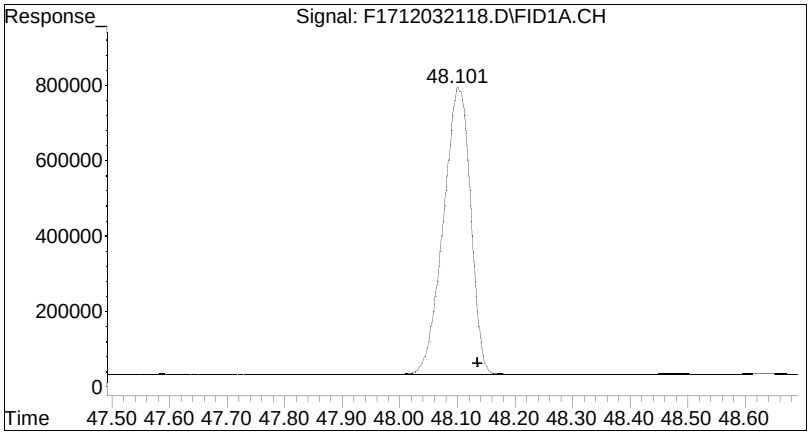
#29 n-Octacosane (C28)

R.T.: 39.881 min
Delta R.T.: -0.022 min
Response: 25606089
Conc: 22.11 ug/mL M4



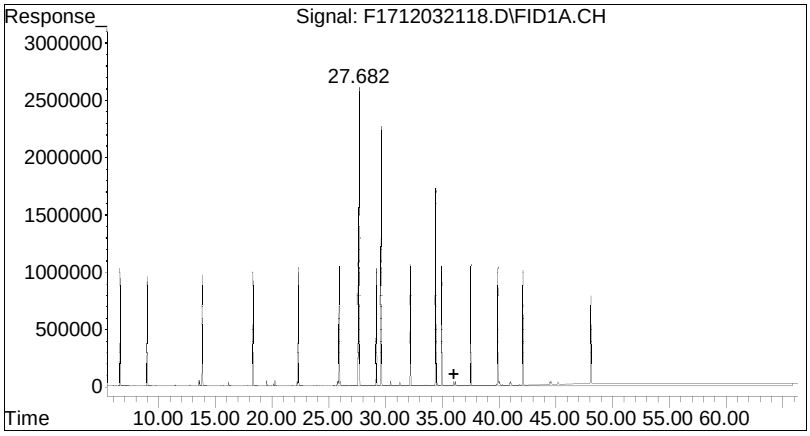
#31 n-Triacontane (C30)

R.T.: 42.104 min
Delta R.T.: -0.023 min
Response: 24460021
Conc: 21.45 ug/mL M4



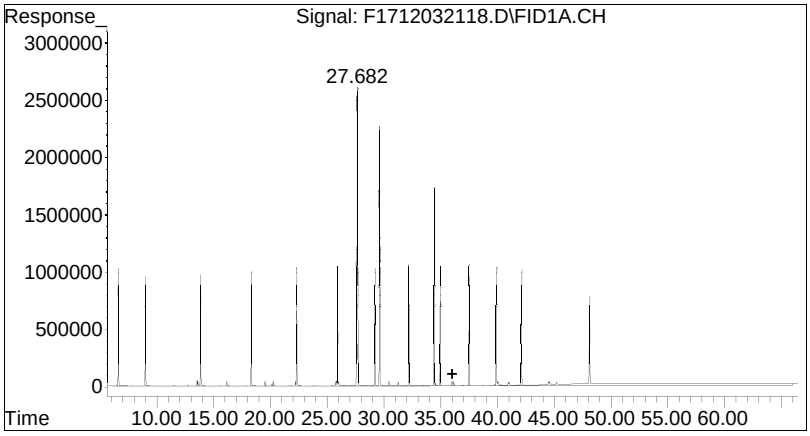
#37 n-Hexatriacontane (C36)

R.T.: 48.101 min
Delta R.T.: -0.035 min
Response: 24465195
Conc: 19.44 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 674466700
Conc: 610.91 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 357504983
Conc: 323.81 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032122.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 1:28 am
Operator : FID17:MJS
Sample : WG1577488-3
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:17:54 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.618	55554887	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.678	51023288	42.368 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	84.74%
24) s	d50-Tetracosane	34.420	41442245	43.373 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	86.75%
	Target Compounds			
3) t	n-Nonane (C9)	6.600	11159175	10.888 ug/mL M4
4) t	n-Decane (C10)	8.988	14385749	13.711 ug/mL M4
6) t	n-Dodecane (C12)	13.851	16265945	15.825 ug/mL M4
9) t	n-Tetradecane (C14)	18.309	17469601	16.451 ug/mL M4
12) t	n-Hexadecane (C16)	22.308	18564327	17.493 ug/mL M4
16) t	n-Octadecane (C18)	25.916	19724803	18.297 ug/mL M4
18) t	n-Nonadecane (C19)	27.594	20761306	19.201 ug/mL M4
20) t	n-Eicosane (C20)	29.193	20010568	18.401 ug/mL M4
22) t	n-Docosane (C22)	32.191	20145839	18.438 ug/mL M4
25) t	n-Tetracosane (C24)	34.950	20572572	18.850 ug/mL M4
27) t	n-Hexacosane (C26)	37.505	20619379	18.809 ug/mL M4
29) t	n-Octacosane (C28)	39.880	21673816	19.020 ug/mL M4
31) t	n-Triacontane (C30)	42.099	20734144	18.479 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.097	20706555	16.720 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	604458501	556.369 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	240756749	221.603 ug/mLm
46) h	Total Resolved Hydroc...	36.038	290687453	267.561 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032122.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 1:28 am
Operator : FID17:MJS
Sample : WG1577488-3
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:17:54 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

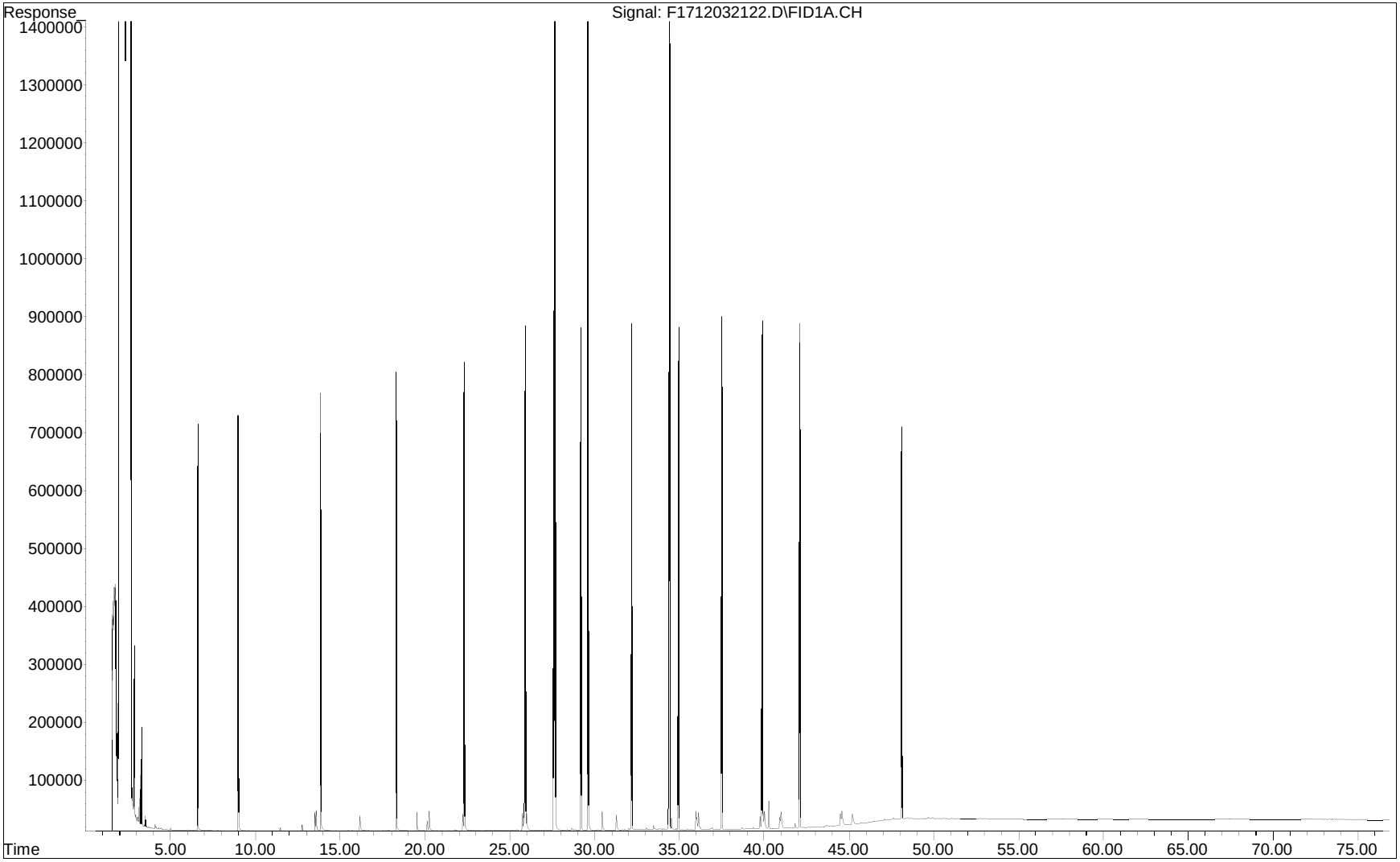
Sub List : SHC_QC_Samples - SHC_QC_Samples

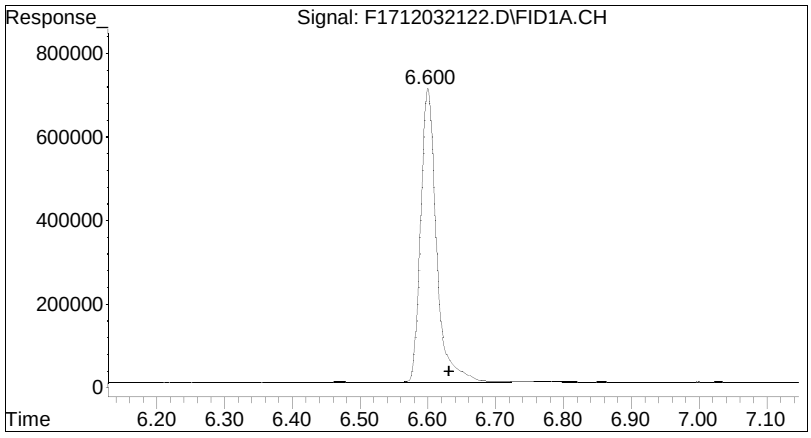
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

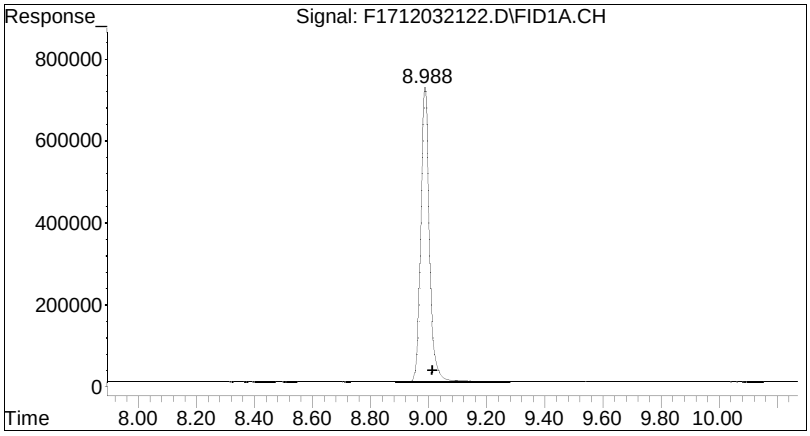
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032122.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 1:28 am using AcqMethod FID17A.M
Sample Name: WG1577488-3
Instrument: FID17
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





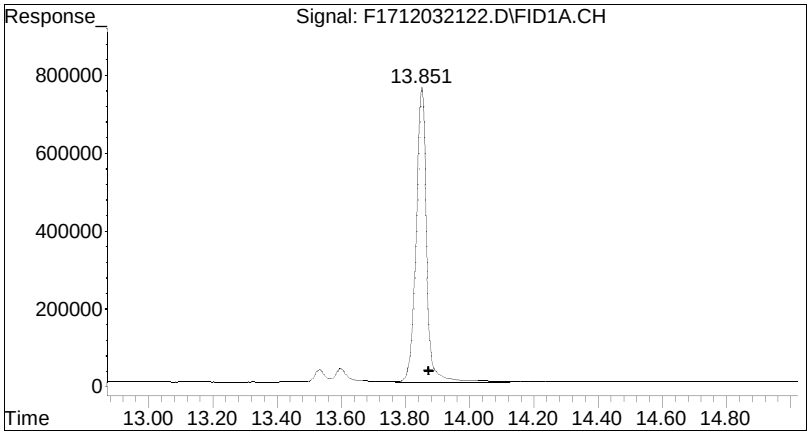
#3 n-Nonane (C9)

R.T.: 6.600 min
Delta R.T.: -0.032 min
Response: 11159175
Conc: 10.89 ug/mL M4



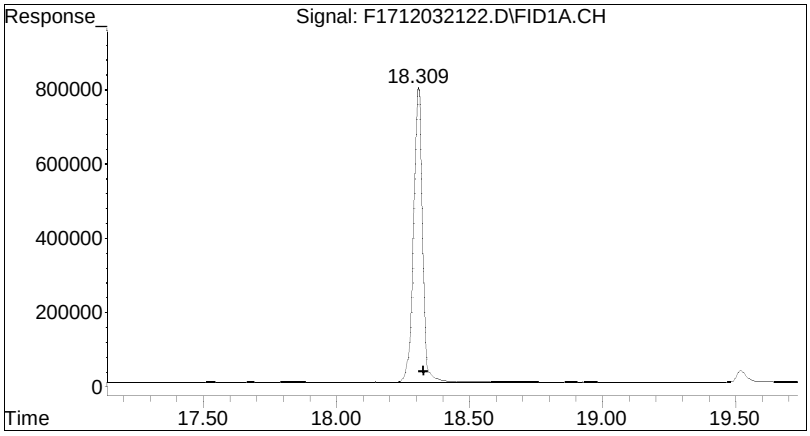
#4 n-Decane (C10)

R.T.:	8.988 min
Delta R.T.:	-0.025 min
Response:	14385749
Conc:	13.71 ug/mL M4



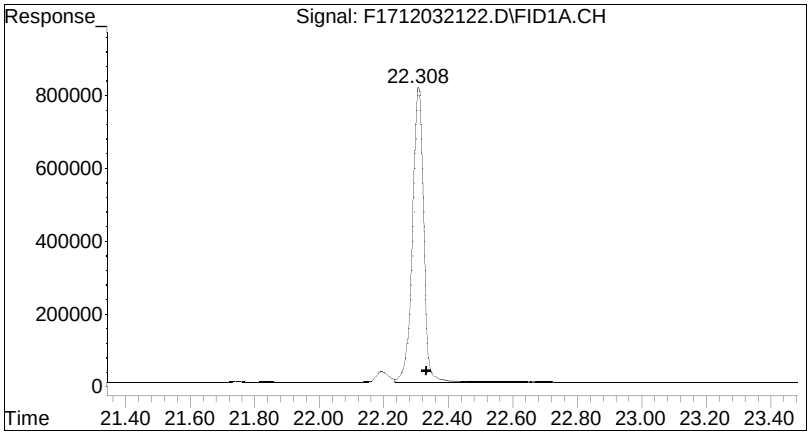
#6 n-Dodecane (C12)

R.T.: 13.851 min
Delta R.T.: -0.022 min
Response: 16265945
Conc: 15.82 ug/mL M4



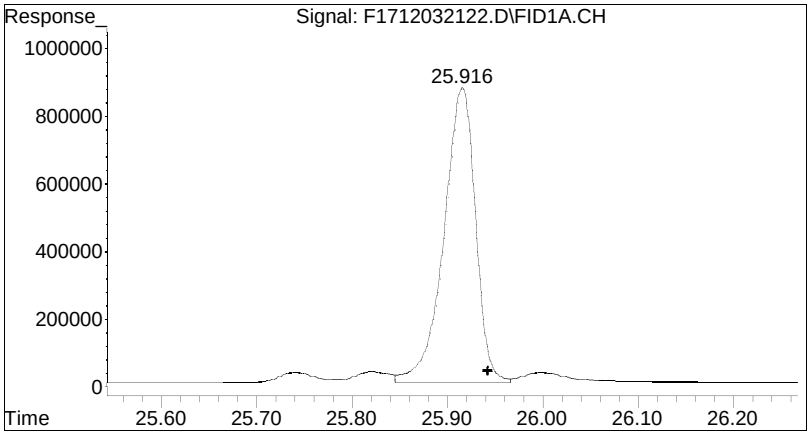
#9 n-Tetradecane (C14)

R.T.: 18.309 min
Delta R.T.: -0.021 min
Response: 17469601
Conc: 16.45 ug/mL M4



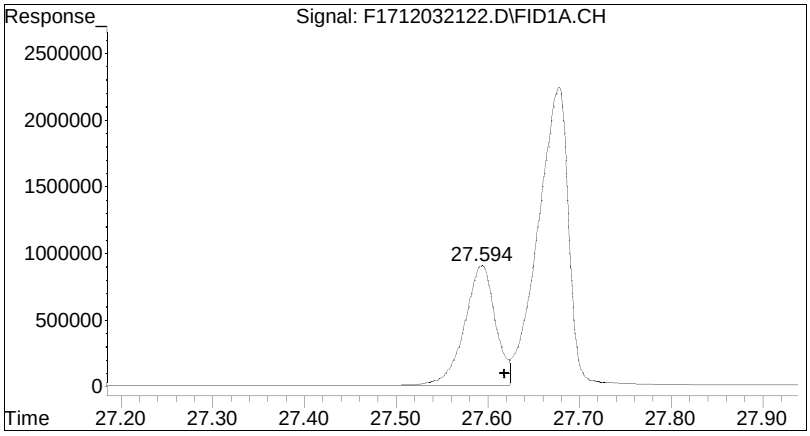
#12 n-Hexadecane (C16)

R.T.: 22.308 min
Delta R.T.: -0.024 min
Response: 18564327
Conc: 17.49 ug/mL M4



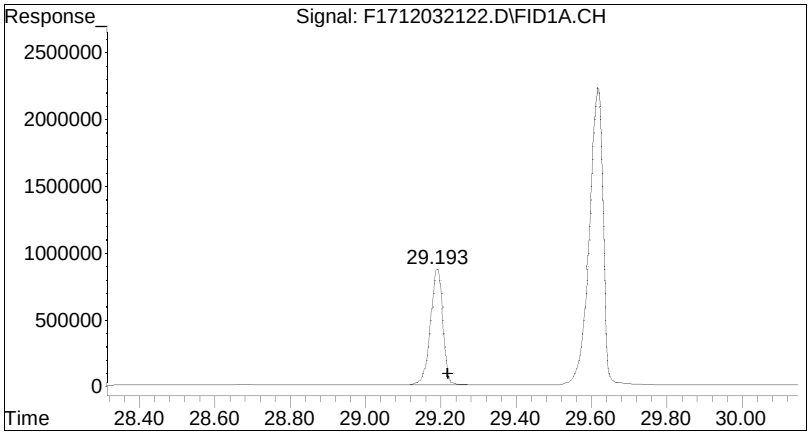
#16 n-Octadecane (C18)

R.T.:	25.916 min
Delta R.T.:	-0.027 min
Response:	19724803
Conc:	18.30 ug/mL M4



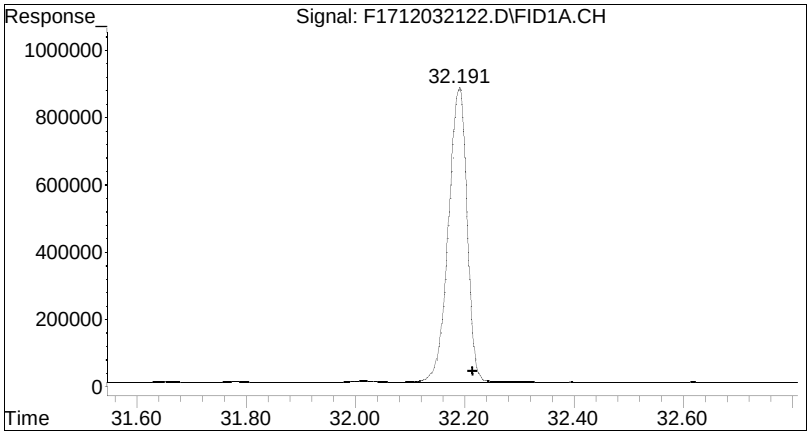
#18 n-Nonadecane (C19)

R.T.: 27.594 min
Delta R.T.: -0.024 min
Response: 20761306
Conc: 19.20 ug/mL M4



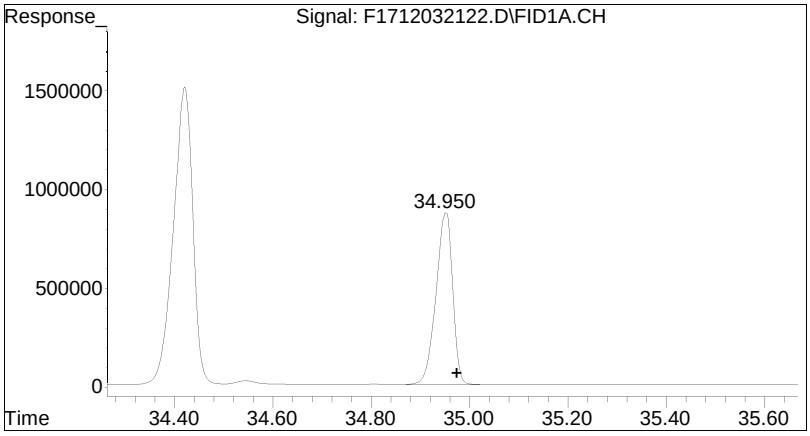
#20 n-Eicosane (C20)

R.T.: 29.193 min
Delta R.T.: -0.028 min
Response: 20010568
Conc: 18.40 ug/mL M4



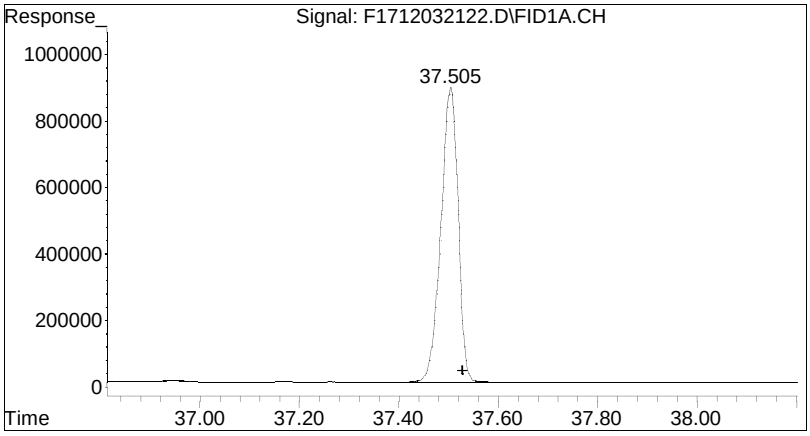
#22 n-Docosane (C22)

R.T.: 32.191 min
Delta R.T.: -0.023 min
Response: 20145839
Conc: 18.44 ug/mL M4



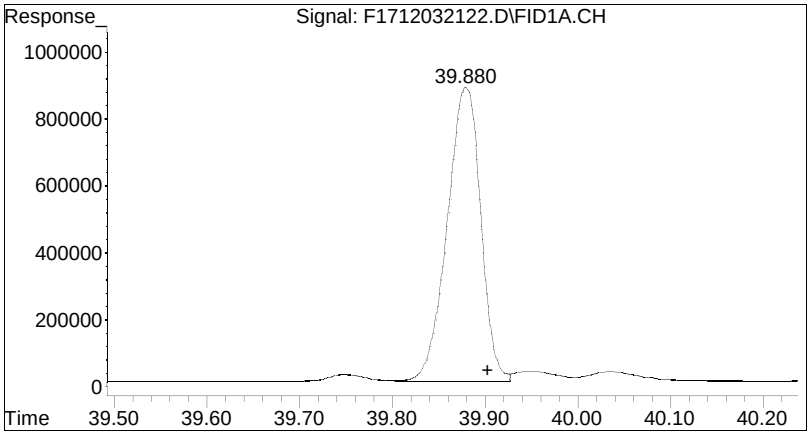
#25 n-Tetracosane (C24)

R.T.: 34.950 min
Delta R.T.: -0.024 min
Response: 20572572
Conc: 18.85 ug/mL M4



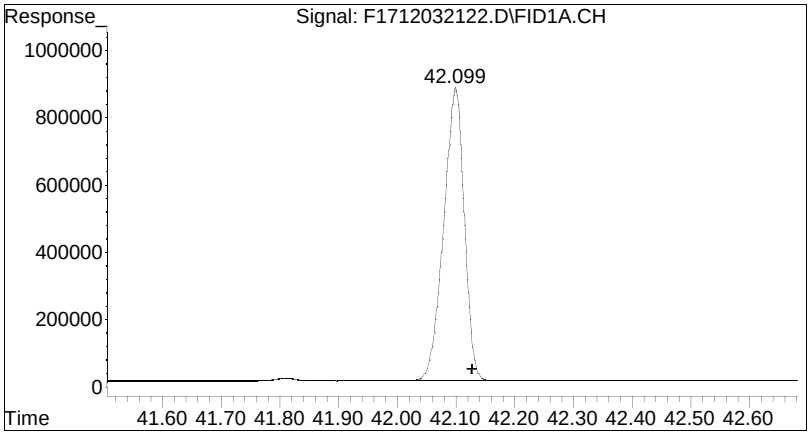
#27 n-Hexacosane (C26)

R.T.:	37.505 min
Delta R.T.:	-0.024 min
Response:	20619379
Conc:	18.81 ug/mL M4



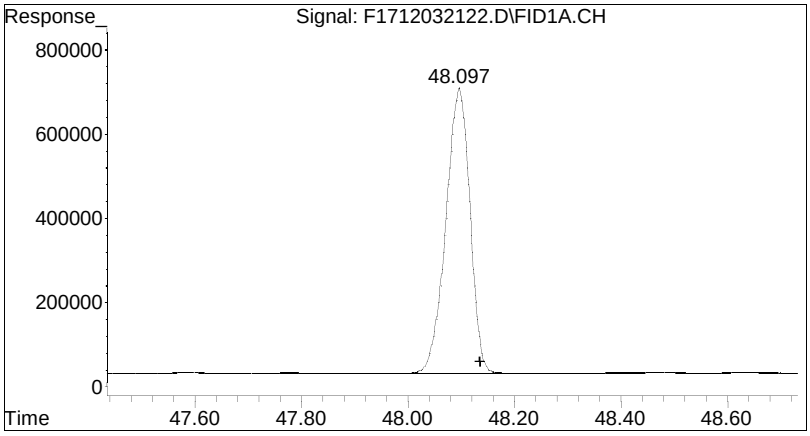
#29 n-Octacosane (C28)

R.T.: 39.880 min
Delta R.T.: -0.024 min
Response: 21673816
Conc: 19.02 ug/mL M4



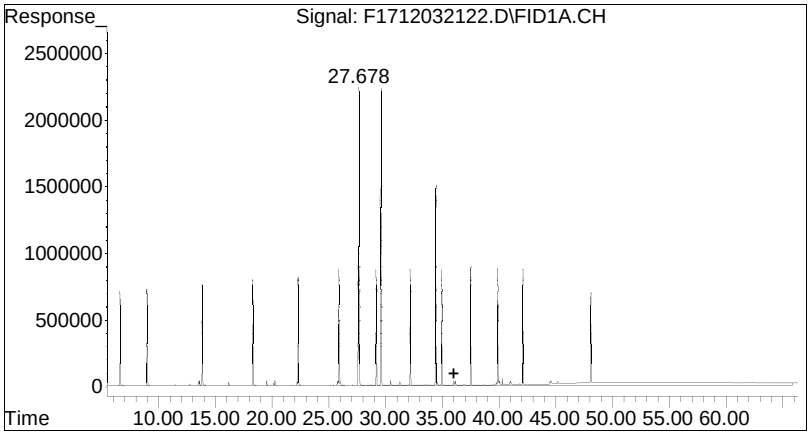
#31 n-Triacontane (C30)

R.T.:	42.099 min
Delta R.T.:	-0.028 min
Response:	20734144
Conc:	18.48 ug/mL M4



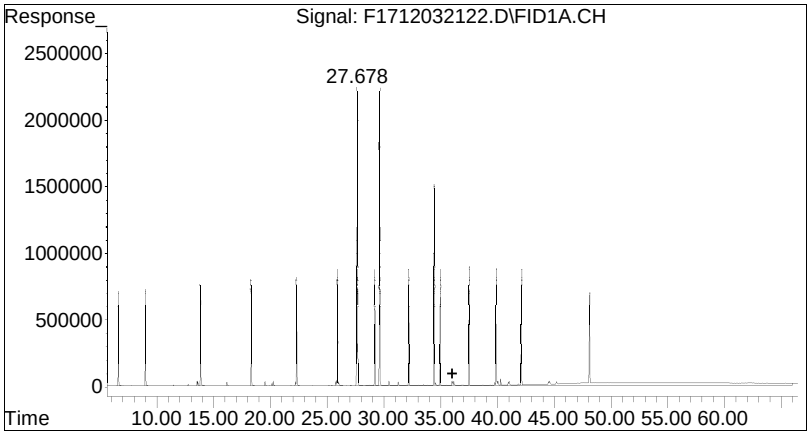
#37 n-Hexatriacontane (C36)

R.T.: 48.097 min
Delta R.T.: -0.039 min
Response: 20706555
Conc: 16.72 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 604458501
Conc: 556.37 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 290687453
Conc: 267.56 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072124.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 1:44 am
Operator : FID17:WR
Sample : WG1579479-3,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 12 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:22:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.607	61433288	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.648	17621588	13.232 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	26.46%#
24) s	d50-Tetracosane	34.399	12078598	11.432 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	22.86%#
	Target Compounds			
3) t	n-Nonane (C9)	6.596	5066435	4.470 ug/mL M4
4) t	n-Decane (C10)	8.979	4825703	4.159 ug/mL M4
6) t	n-Dodecane (C12)	13.844	4840491	4.259 ug/mL M4
9) t	n-Tetradecane (C14)	18.301	5663065	4.823 ug/mL M4
12) t	n-Hexadecane (C16)	22.304	6043050	5.149 ug/mL M4
16) t	n-Octadecane (C18)	25.906	6494563	5.448 ug/mL M4
18) t	n-Nonadecane (C19)	27.581	4711071	3.940 ug/mL M4
20) t	n-Eicosane (C20)	29.183	5790247	4.815 ug/mL M4
22) t	n-Docosane (C22)	32.184	5915217	4.896 ug/mL M4
25) t	n-Tetracosane (C24)	34.940	6215167	5.150 ug/mL M4
27) t	n-Hexacosane (C26)	37.494	6006189	4.955 ug/mL M4
29) t	n-Octacosane (C28)	39.872	5687301	4.513 ug/mL M4
31) t	n-Triacontane (C30)	42.094	5836660	4.704 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.096	5460819	3.988 ug/mL M4
42) h	C9-C44 Total Petroleu...	35.999	323661402	269.405 ug/mL m
42) h	C9-C44 Total Petroleu BS	35.999	48586181	40.442 ug/mLm
46) h	Total Resolved Hydroc...	36.038	83069243	69.144 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072124.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 1:44 am
Operator : FID17:WR
Sample : WG1579479-3,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 12 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:22:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

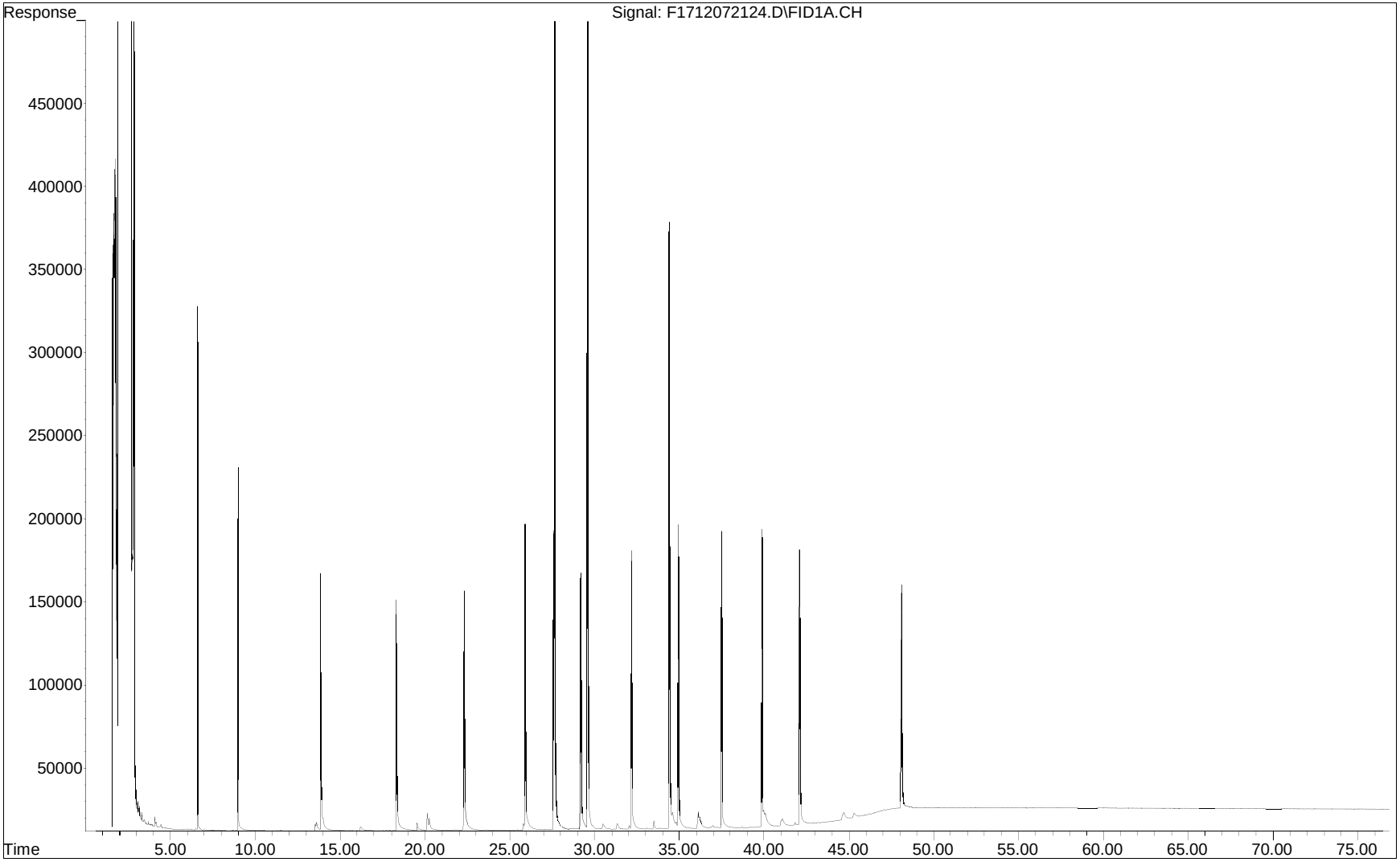
Sub List : SHC_QC_Samples - SHC_QC_Samples

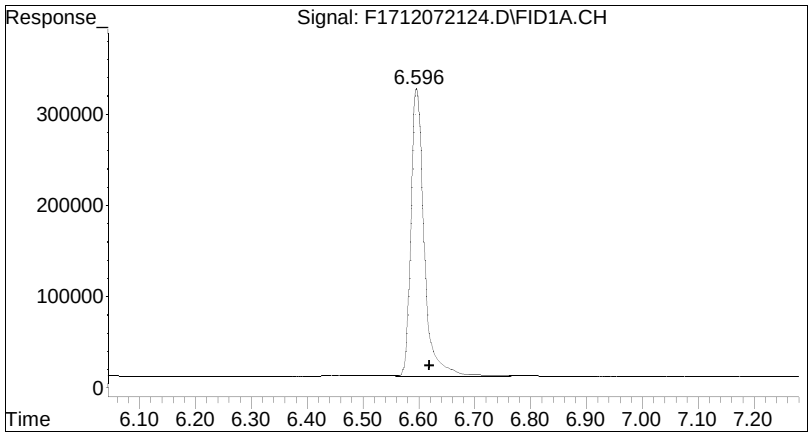
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

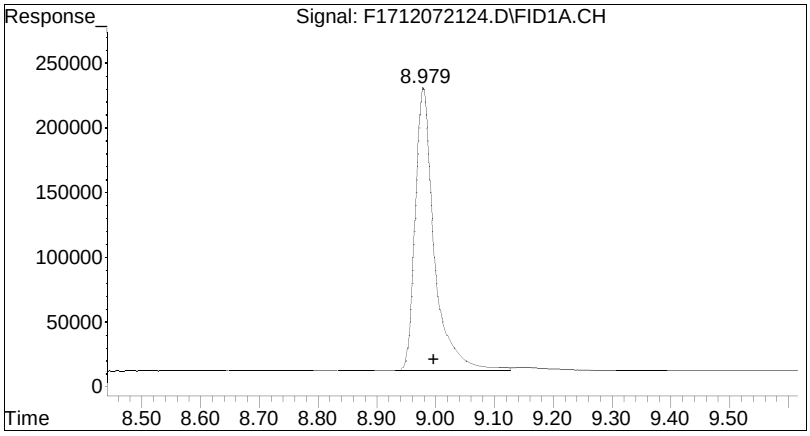
File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072124.D
Operator : FID17:WR
Acquired : 08 Dec 2021 1:44 am using AcqMethod FID17A.M
Sample Name: WG1579479-3,42,,
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 12
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M





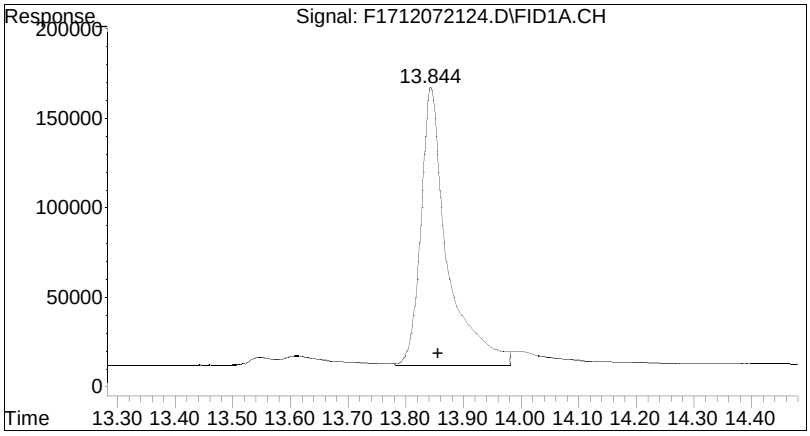
#3 n-Nonane (C9)

R.T.:	6.596 min
Delta R.T.:	-0.024 min
Response:	5066435
Conc:	4.47 ug/mL M4



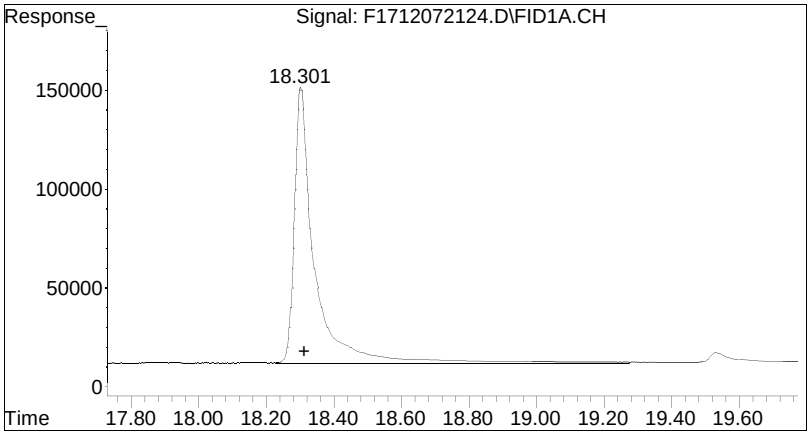
#4 n-Decane (C10)

R.T.:	8.979 min
Delta R.T.:	-0.018 min
Response:	4825703
Conc:	4.16 ug/mL M4



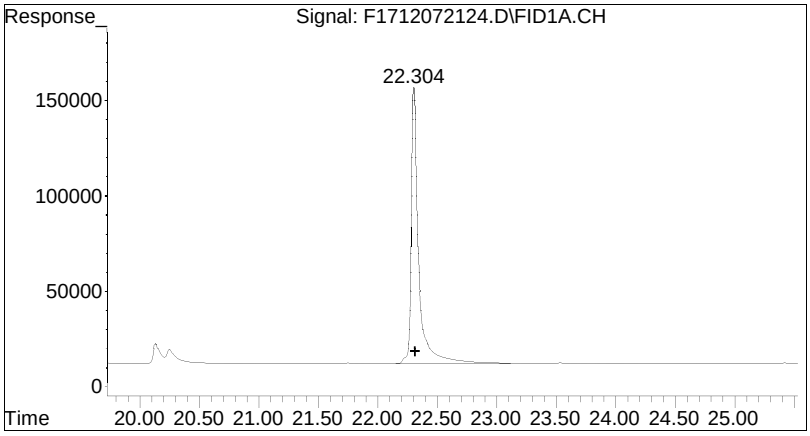
#6 n-Dodecane (C12)

R.T.:	13.844 min
Delta R.T.:	-0.013 min
Response:	4840491
Conc:	4.26 ug/mL M4



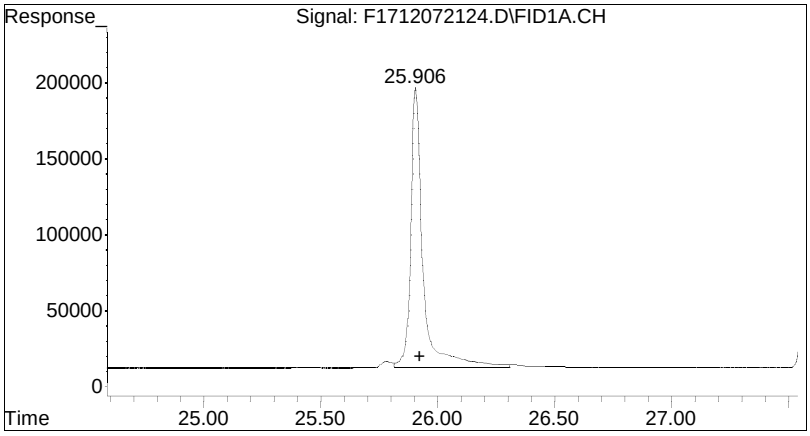
#9 n-Tetradecane (C14)

R.T.:	18.301 min
Delta R.T.:	-0.012 min
Response:	5663065
Conc:	4.82 ug/mL M4



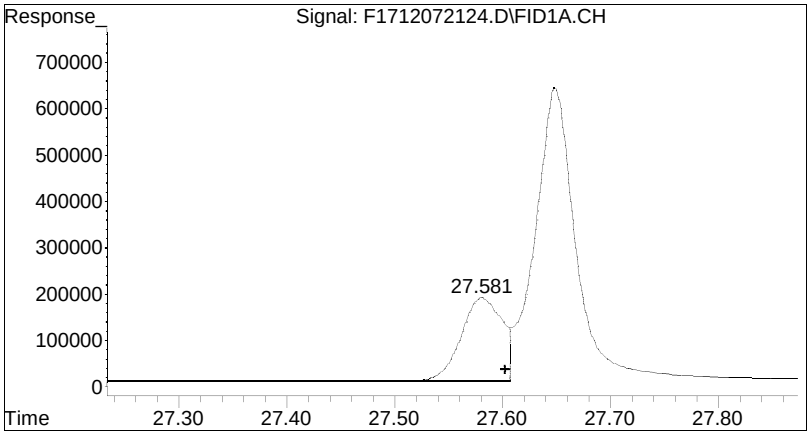
#12 n-Hexadecane (C16)

R.T.:	22.304 min
Delta R.T.:	-0.011 min
Response:	6043050
Conc:	5.15 ug/mL M4



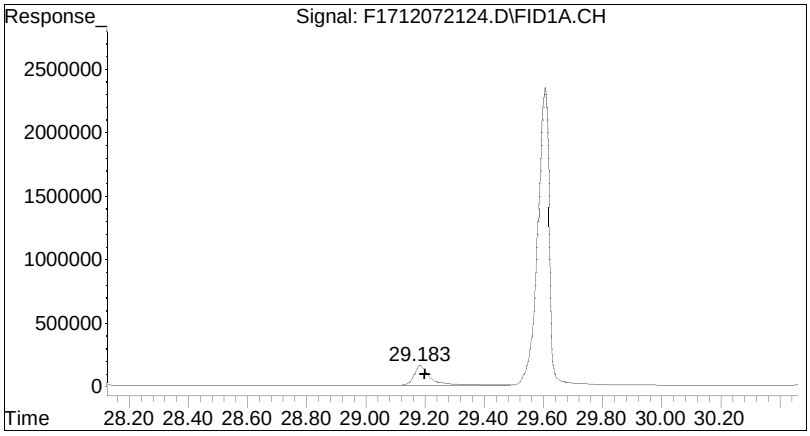
#16 n-Octadecane (C18)

R.T.:	25.906 min
Delta R.T.:	-0.018 min
Response:	6494563
Conc:	5.45 ug/mL M4



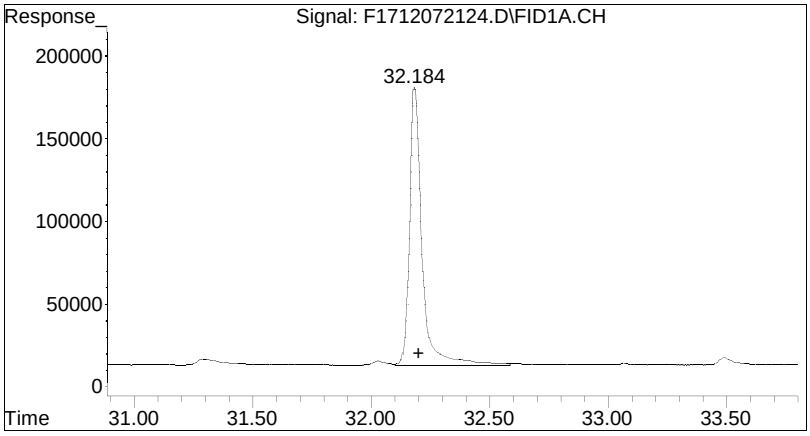
#18 n-Nonadecane (C19)

R.T.:	27.581 min
Delta R.T.:	-0.022 min
Response:	4711071
Conc:	3.94 ug/mL M4



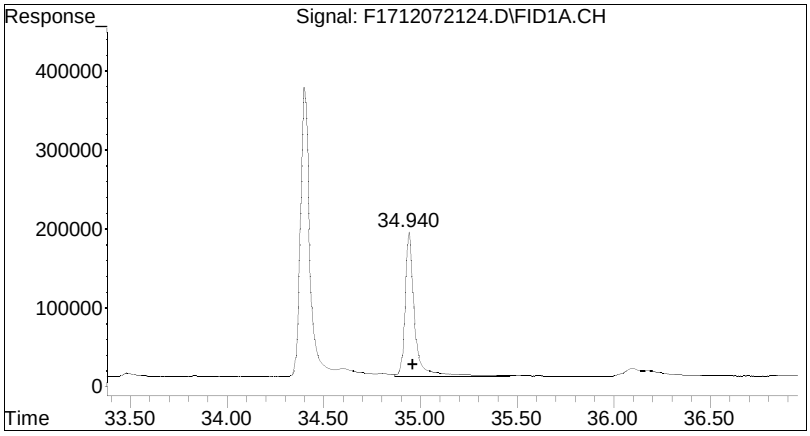
#20 n-Eicosane (C20)

R.T.:	29.183 min
Delta R.T.:	-0.019 min
Response:	5790247
Conc:	4.82 ug/mL M4



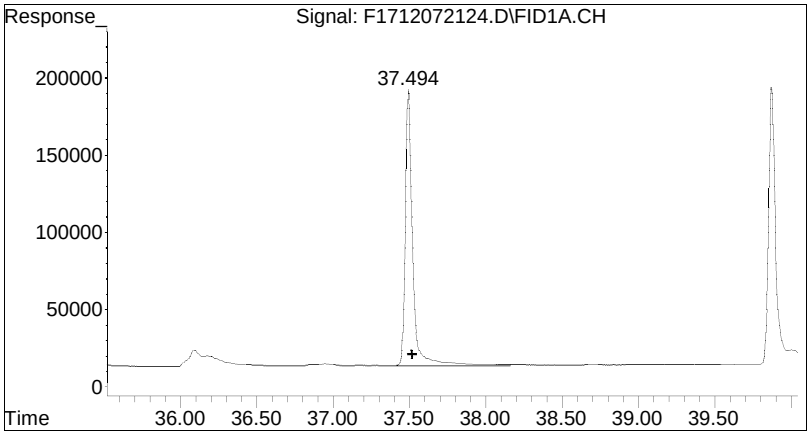
#22 n-Docosane (C22)

R.T.:	32.184 min
Delta R.T.:	-0.018 min
Response:	5915217
Conc:	4.90 ug/mL M4



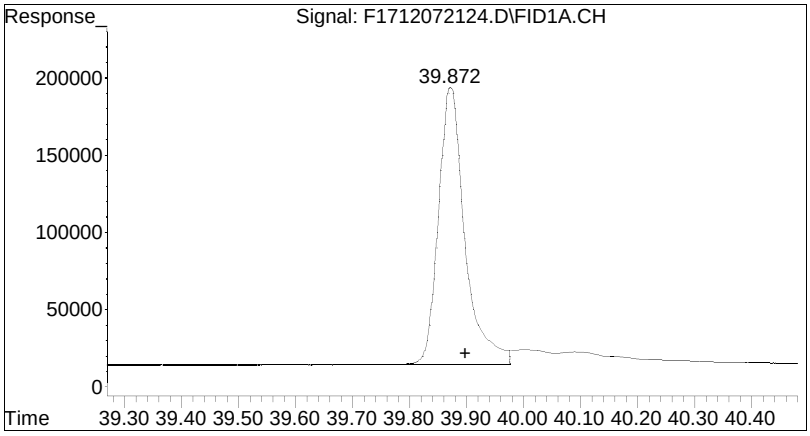
#25 n-Tetracosane (C24)

R.T.:	34.940 min
Delta R.T.:	-0.023 min
Response:	6215167
Conc:	5.15 ug/mL M4



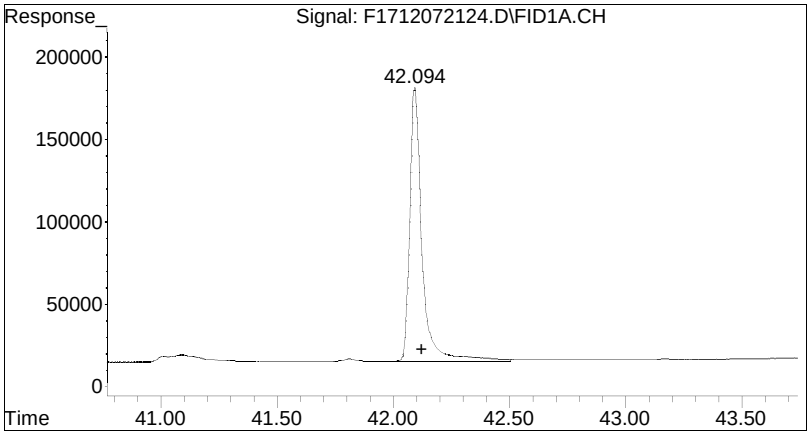
#27 n-Hexacosane (C26)

R.T.:	37.494 min
Delta R.T.:	-0.026 min
Response:	6006189
Conc:	4.95 ug/mL M4



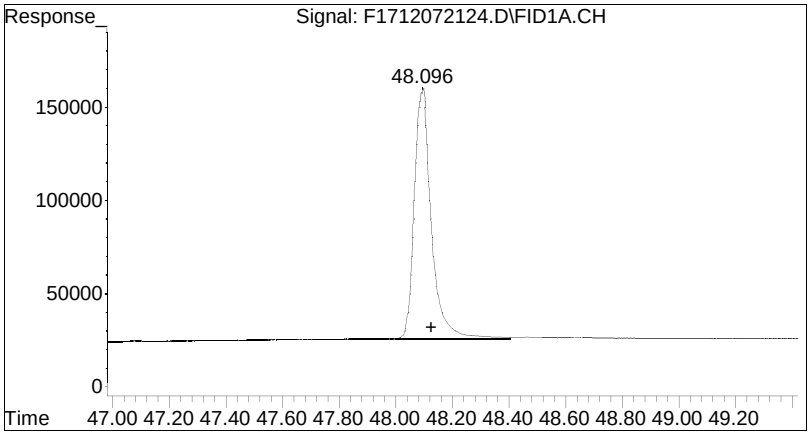
#29 n-Octacosane (C28)

R.T.:	39.872 min
Delta R.T.:	-0.026 min
Response:	5687301
Conc:	4.51 ug/mL M4



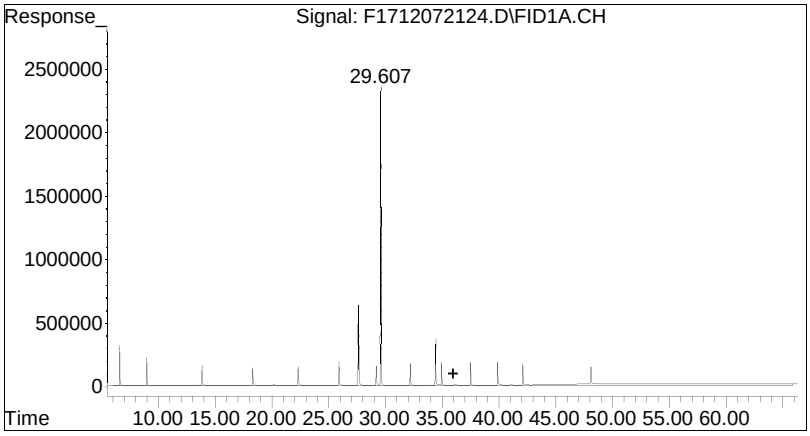
#31 n-Triacontane (C30)

R.T.:	42.094 min
Delta R.T.:	-0.028 min
Response:	5836660
Conc:	4.70 ug/mL M4



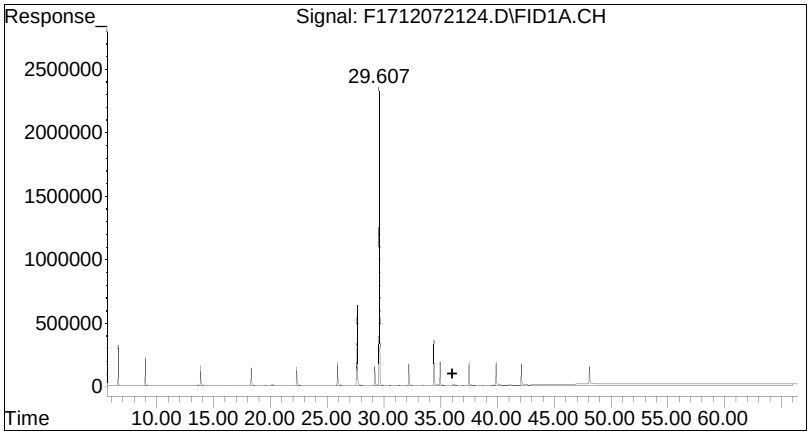
#37 n-Hexatriacontane (C36)

R.T.:	48.096 min
Delta R.T.:	-0.029 min
Response:	5460819
Conc:	3.99 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 35.999 min
Delta R.T.: 0.000 min
Response: 323661402
Conc: 269.41 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	36.038 min
Delta R.T.:	0.000 min
Response:	83069243
Conc:	69.14 ug/mL m

Instrument Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032110.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 4:38 pm
Operator : FID17:WR
Sample : IB1712032101
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:47:48 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : TPH_DRO_ORO - IS,SURR & RANGES

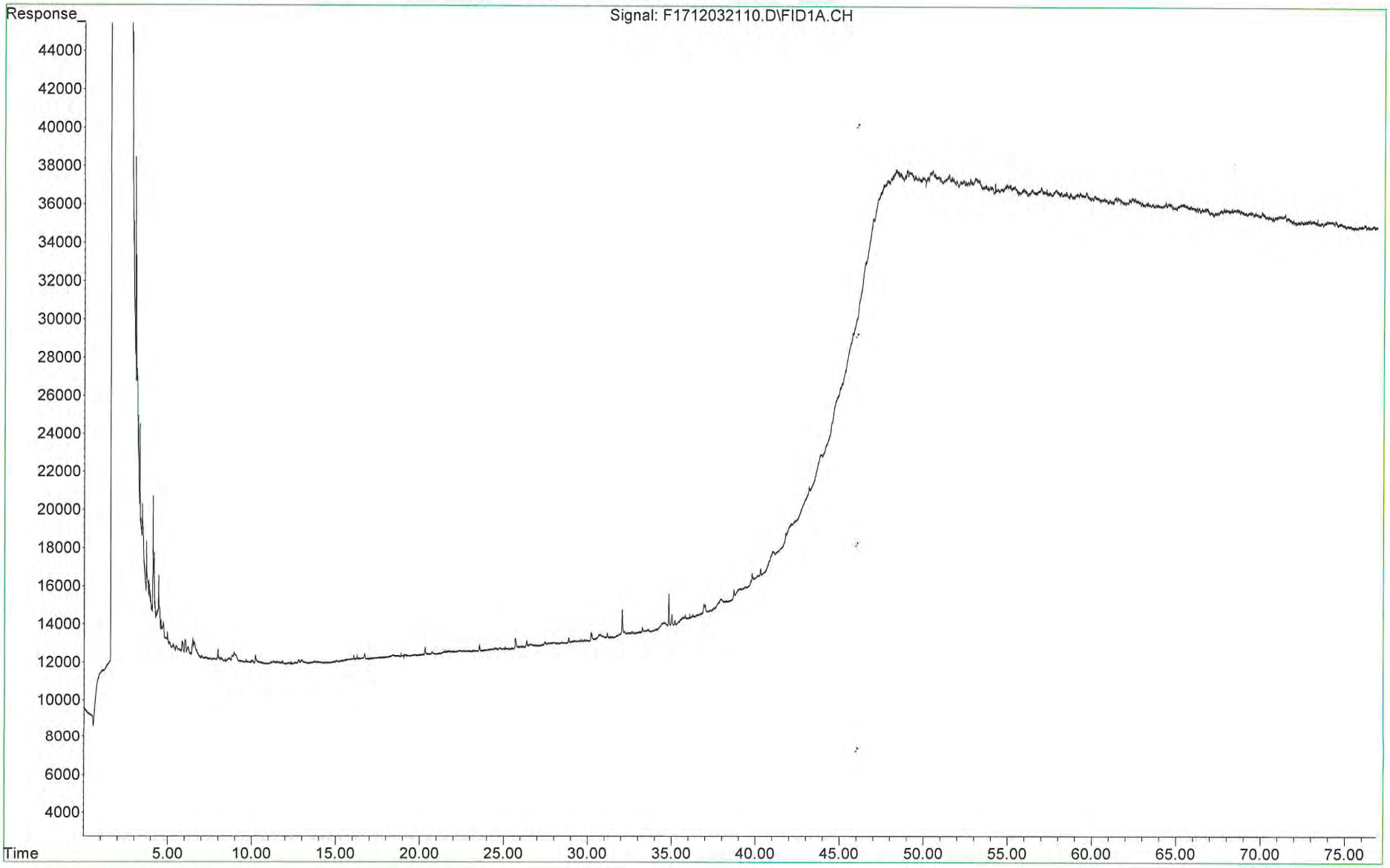
	Compound	R.T.	Response	Conc	Units	
Internal Standards						
1) I	5-alpha-androstane	29.788f	2294	50.000	ug/mL	M4
System Monitoring Compounds						
19) s	ortho-terphenyl	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
24) s	d50-Tetracosane	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
Target Compounds						
42) h	C9-C44 Total Petroleu...	36.038	363701752	8108329.399	ug/mL	M5
44) h	C10-C28 DRO	24.454	26112040	589085.217	ug/mL	M5
45) h	C28-C40 ORO	46.963	137886801	2977458.439	ug/mL	M5
46) h	Total Resolved Hydroc...	36.038	3793127	84563.582	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032110.D
Operator : FID17:WR
Acquired : 03 Dec 2021 4:38 pm using AcqMethod FID17A.M
Sample Name: IB1712032101
Instrument: FID17
Misc Info :
Vial Number: 5
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032150.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 10:02 pm
Operator : FID17:WR
Sample : IB1712032103
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:58:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

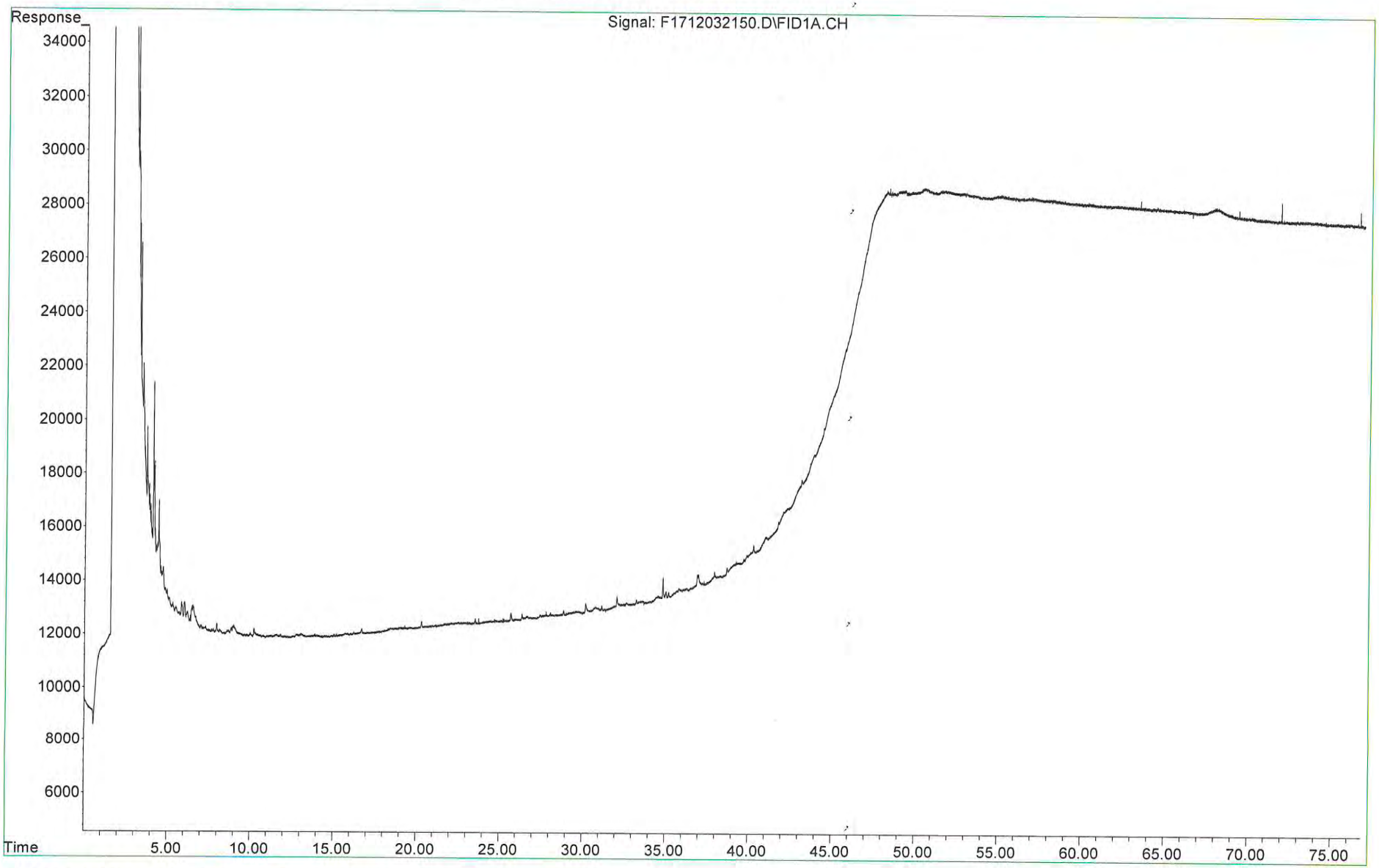
Sub List : TPH_DRO_ORO - IS,SURR & RANGES

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.651	3544	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
24) s	d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
	Target Compounds			
42) h	C9-C44 Total Petroleu...	36.038	245858064	3546985.917 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	-38454640	N.D. ug/mLm
44) h	C10-C28 DRO	24.454	19952746	291292.295 ug/mL m
44) h	C10-C28 DRO BS	24.454	-8102035	N.D. ug/mLm
45) h	C28-C40 ORO	46.963	81603877	1140309.704 ug/mL M5
45) h	C28-C40 ORO BS	46.963	-14444119	N.D. ug/mLM5
46) h	Total Resolved Hydroc...	36.038	1577508	22758.656 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032150.D
Operator : FID17:WR
Acquired : 04 Dec 2021 10:02 pm using AcqMethod FID17A.M
Sample Name: IB1712032103
Instrument: FID17
Misc Info :
Vial Number: 25
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072110.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 3:26 pm
Operator : FID17:WR
Sample : IB1712072101F
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 10:24:52 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

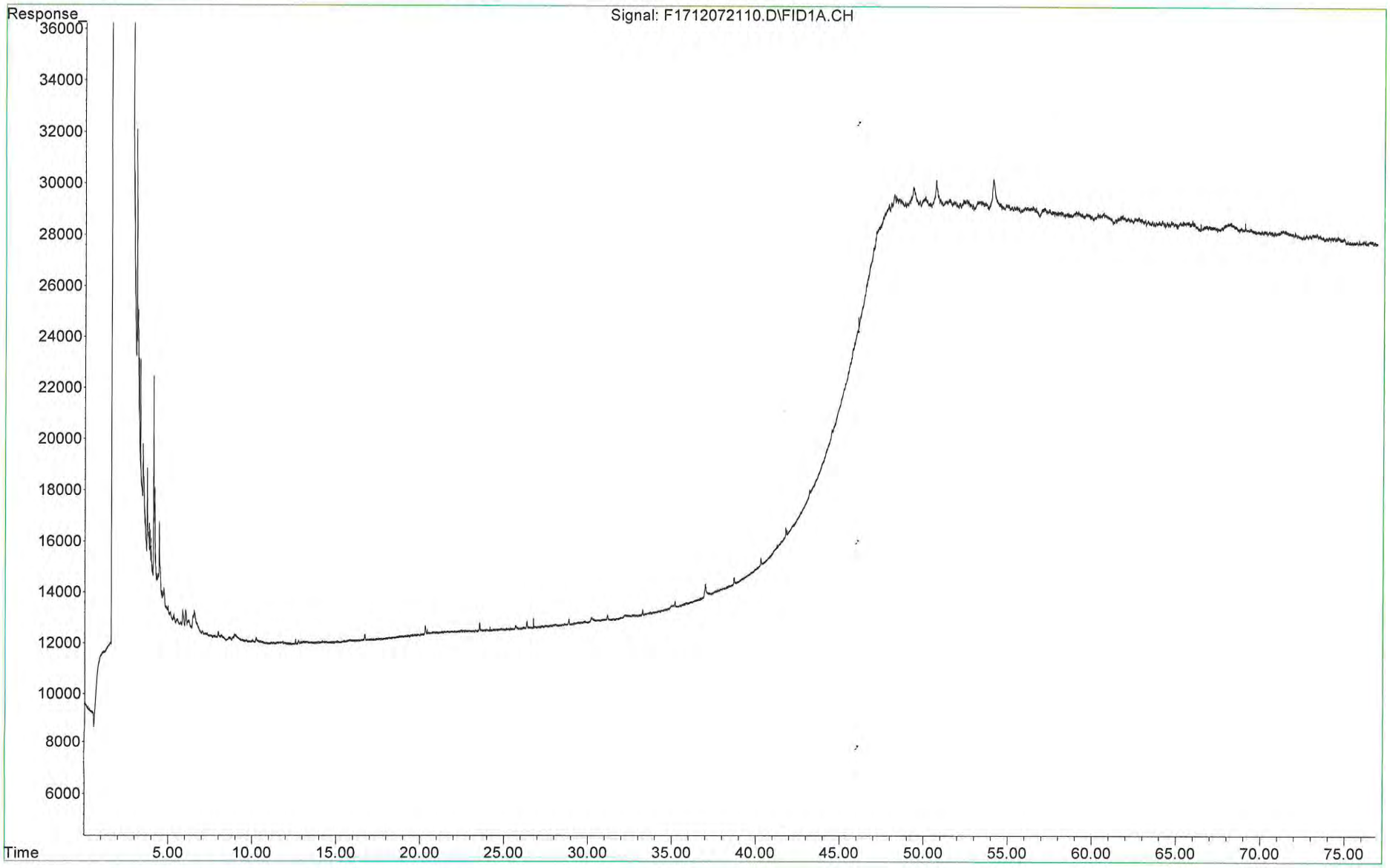
Sub List : TPH - TPH

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.677	3649	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
24) s	d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
	Target Compounds			
42) h	C9-C44 Total Petroleu...	35.999	275075221	3855234.676 ug/mL M5
46) h	Total Resolved Hydroc...	36.038	1965639	27548.822 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072110.D
Operator : FID17:WR
Acquired : 07 Dec 2021 3:26 pm using AcqMethod FID17A.M
Sample Name: IB1712072101F
Instrument: FID17
Misc Info :
Vial Number: 5
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072140.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 1:31 pm
Operator : FID17:WR
Sample : IB1712072102F
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 11:00:55 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

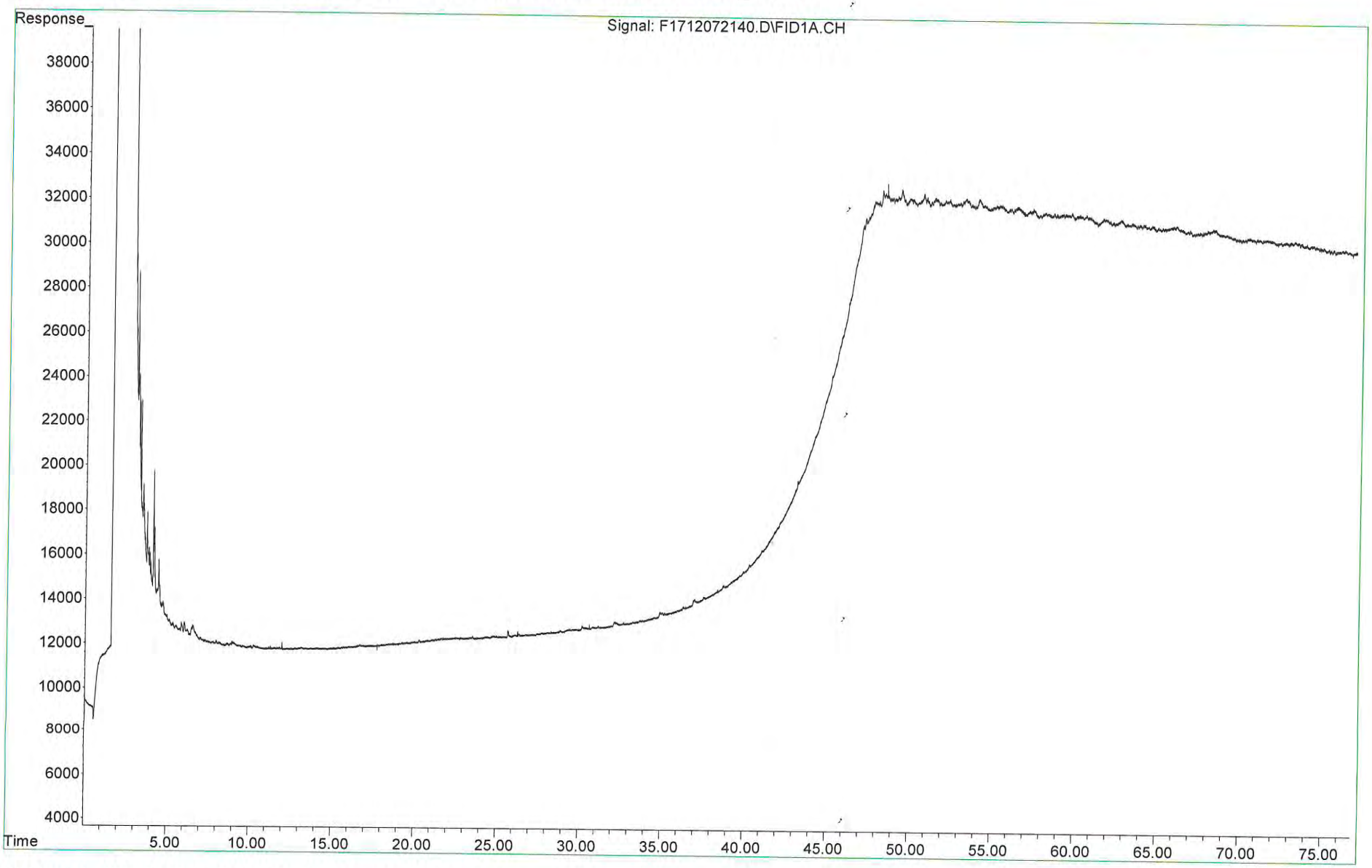
Sub List : TPH - TPH

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	29.718f	6384	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount 50.000	Range 50 - 130	Recovery =	0.00%#
24) s d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount 50.000	Range 50 - 130	Recovery =	0.00%#
Target Compounds			
42) h C9-C44 Total Petroleu...	35.999	311789514	2497329.836 ug/mL m
42) h C9-C44 Total Petroleu BS	35.999	36714293	294069.223 ug/mLm
46) h Total Resolved Hydroc...	36.038	1882913	15081.507 ug/mL m
SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072140.D
Operator : FID17:WR
Acquired : 08 Dec 2021 1:31 pm using AcqMethod FID17A.M
Sample Name: IB1712072102F
Instrument: FID17
Misc Info :
Vial Number: 20
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092110.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 3:27 pm
Operator : FID17:WR
Sample : IB1712092101F
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 11:15:51 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:54 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

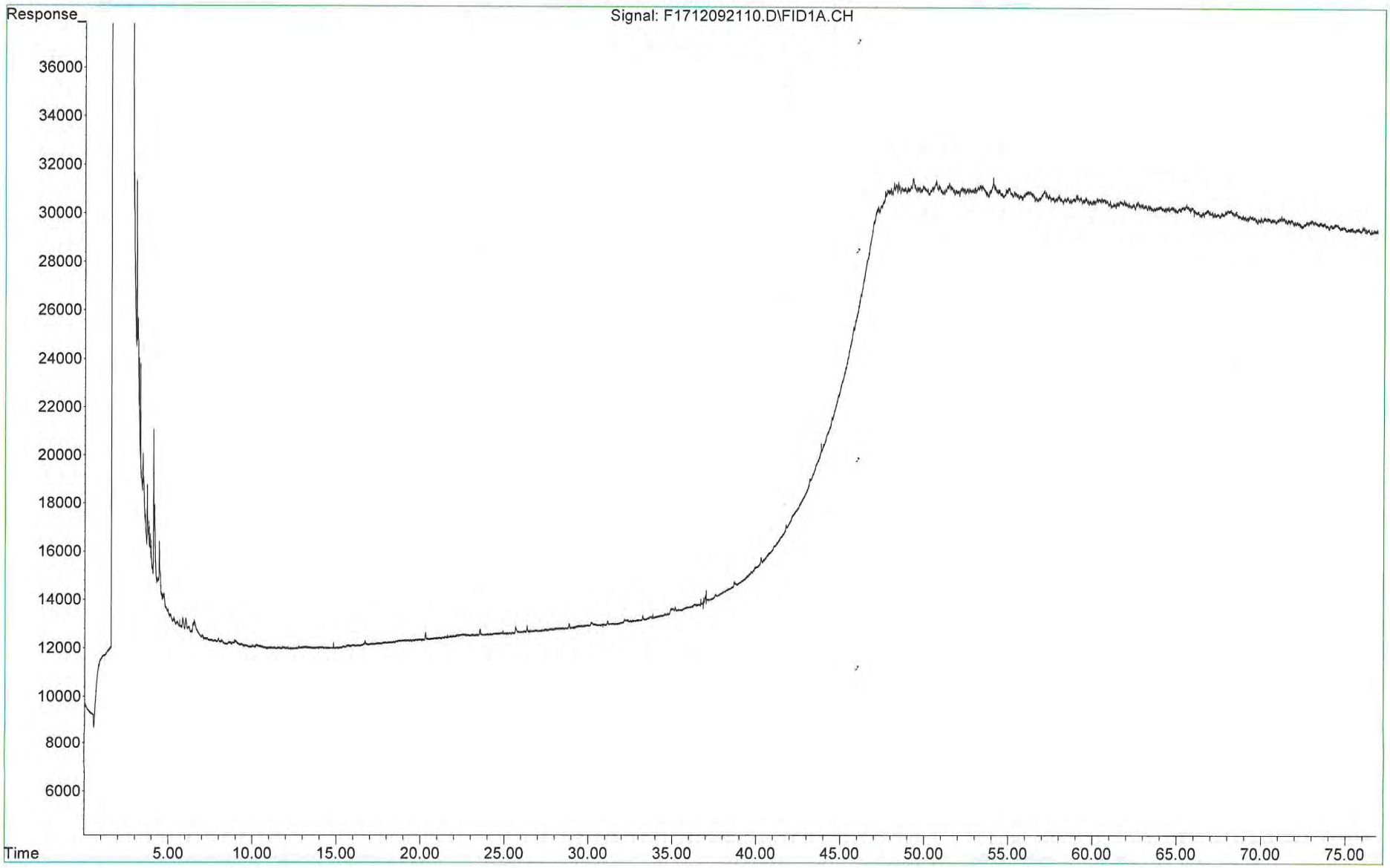
Sub List : TPH_DRO - TPH (C9-C44) & DRO (C10-C28)

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	5-alpha-androstane	29.565	3084	50.000	ug/mL M4
	System Monitoring Compounds				
19) s	ortho-terphenyl	0.000	0	N.D.	ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#	
24) s	d50-Tetracosane	0.000	0	N.D.	ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#	
	Target Compounds				
42) h	C9-C44 Total Petroleu...	35.983	315601881	5233099.852	ug/mL M5
44) h	C10-C28 DRO	24.454	10932345	183435.804	ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC09\F1712092110.D
Operator : FID17:WR
Acquired : 09 Dec 2021 3:27 pm using AcqMethod FID17A.M
Sample Name: IB1712092101F
Instrument: FID17
Misc Info :
Vial Number: 5
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M



Sample Preparation

ORGANIC ELN REPORT

Workgroup: WG1579479

Prep Method: EPA 3580A
Solvent Type: DCM **Lot #:** EC757-US
Surrogate Type: A2-PAH/SHC **Lot #:** FRBE39
Spike Type: A2-PAH/SHC **Lot #:** FRBE40
Spike Verify by: CSP
Lims Spikelot: A2-PAH/SHC

Additional Reagents/Stds

RIS	FRBE38

Conc.Method:
Solvent Type:
Lot #:

Additional Reagents/Stds

Cleanup 1

Cleanup Method 1:
Cleanup Method 2:
Solvent Type: **Lot #:**

Additional Reagents/Stds

Sample/ Type	Extraction: Extract Date	Analyst	Sample Weight g	Balance Id	Extract Vol ml	Split Vol ml	Surr Amt ml	Spike Amt ml	Is Amt ml	Final Vol ml	Concentration
L2165245-01 OIL	12/06/21 09:00	Brian Anderson	.1116	BAL23	10	10	.5		.1	20	
WG1579479-1 BLANK	12/06/21 09:00	Brian Anderson	.1	BAL23	10	10	.5		.1	20	
	SHARED QC WITH WG1579478. BA 12/6/21										
WG1579479-2 LCS	12/06/21 09:00	Brian Anderson	.1	BAL23	10	10	.5	.5	.1	20	
WG1579479-3 LCSD	12/06/21 09:00	Brian Anderson	.1	BAL23	10	10	.5	.5	.1	20	

Reported: 10-DEC-21 03:29 PM

ORGANIC ELN REPORT

Workgroup: WG1577488

Prep Method: EPA 3510C
Solvent Type: DCM **Lot #:** EC757-US
Surrogate Type: A2-PAH/SHC **Lot #:** FRBE39
Spike Type: A2-PAH/SHC **Lot #:** FRBD90
Spike Verify by: NA
Lims Spikelot: A2-PAH/SHC

Additional Reagents/Stds

Glass Wool	06521999
Na2SO4	21J1161019

Conc.Method: S-EVAP/N-EVAP
Solvent Type: DCM
Lot #: EC757-US

Additional Reagents/Stds

Cleanup 1

Cleanup Method 1: EPA 3630(M)
Cleanup Method 2:
Solvent Type: DCM **Lot #:** EC757-US

Additional Reagents/Stds

Glass Wool	06521999
Silica Gel	BCCG0836
Na2SO4	21J1161019
RIS	FRBE38

Sample/ Type	Extraction: Extract Date	Analyst	Sample Vol ml	Surr Amt ml	Spike Amt ml	Concentration: Conc Date	Analyst	Final Vol ml	Conc Unit
L2165245-03 WATER	12/01/21 06:00	Brian Anderson	970	.5		12/01/21 09:00	Brian Anderson	4	SEVAP 3/NEV AP2
WG1577488-1 BLANK	12/01/21 06:00	Brian Anderson	1000	.1		12/01/21 09:00	Brian Anderson	1	SEVAP 3/NEV AP2
	Shared QC with WG1577487. BA 12/1/21								
WG1577488-2 LCS	12/01/21 06:00	Brian Anderson	1000	.1	.1	12/01/21 09:00	Brian Anderson	1	SEVAP 3/NEV AP2
WG1577488-3 LCSD	12/01/21 06:00	Brian Anderson	1000	.1	.1	12/01/21 09:00	Brian Anderson	1	SEVAP 3/NEV AP2

Reported: 10-DEC-21 03:29 PM

ORGANIC ELN REPORT

Workgroup: WG1577488

Sample/ Type	Cleanup 1						Cleanup 2					
	Cleanup Date	Cleanup Vol **ml**	Conc Date	Analyst	Conc Method	Final Cleanup Vol	Cleanup Date	Frac Cleanup Vol	Conc Date	Analyst	Conc Method	Final Frac Cleanup Vol
L2165245-03 WATER	12/01/21 10:00	.1	12/01/21 11:00	BRIAN ANDERSON	SEVAP3/ NEVAP2	1						
WG1577488-1 BLANK	12/01/21 10:00	.5	12/01/21 11:00	BRIAN ANDERSON	SEVAP3/ NEVAP2	.5						
WG1577488-2 LCS	12/01/21 10:00	.5	12/01/21 11:00	BRIAN ANDERSON	SEVAP3/ NEVAP2	.5						
WG1577488-3 LCSD	12/01/21 10:00	.5	12/01/21 11:00	BRIAN ANDERSON	SEVAP3/ NEVAP2	.5						

Reported: 10-DEC-21 03:29 PM

ORGANIC ELN REPORT

Workgroup: WG1577487

Prep Method: EPA 3510C
Solvent Type: DCM **Lot #:** EC757-US
Surrogate Type: A2-PAH/SHC **Lot #:** FRBE39
Spike Type: A2-PAH/SHC **Lot #:** FRBD90
Spike Verify by: NA
Lims Spikelot: A2-PAH/SHC

Additional Reagents/Stds

Glass Wool	06521999
Na2SO4	21J1161019

Conc.Method: S-EVAP/N-EVAP
Solvent Type: DCM
Lot #: EC757-US

Additional Reagents/Stds

RIS	FRBE38

Cleanup 1

Cleanup Method 1:
Cleanup Method 2:
Solvent Type: **Lot #:**

Additional Reagents/Stds

Sample/ Type	Extraction: Extract Date	Analyst	Sample Vol ml	Surr Amt ml	Spike Amt ml	Concentration: Conc Date	Analyst	Final Vol ml	Conc Unit
L2165245-02 WATER	12/01/21 06:00	Brian Anderson	970	.5		12/01/21 09:00	Brian Anderson	80	SEVAP 3/NEV AP2
WG1577487-1 BLANK	12/01/21 06:00	Brian Anderson	1000	.1		12/01/21 09:00	Brian Anderson	1	SEVAP 3/NEV AP2
	Shared QC with WG1577488. BA 12/1/21								
WG1577487-2 LCS	12/01/21 06:00	Brian Anderson	1000	.1	.1	12/01/21 09:00	Brian Anderson	1	SEVAP 3/NEV AP2
WG1577487-3 LCSD	12/01/21 06:00	Brian Anderson	1000	.1	.1	12/01/21 09:00	Brian Anderson	1	SEVAP 3/NEV AP2

Reported: 10-DEC-21 03:29 PM

Supporting Documentation

ETR L2165245

Alpha Analytical

- ☐ Pre-Alumina
- ☐ Post-Alumina
- ☑ Pre-Silica
- ☐ Oily Material Prep.
- ☐ Other

Analyst BA

Date 12/01/2021

.

ETR	Lab ID	QC	Extract Volume (µL)	Aliquot Removed (µL)	Aliquot Weight (mg)	Total Extract Weight (mg)	Volume Removed for Column (µl)	Extract Weight to Column (mg)	Split Factor	QC (%R)
	FRBD95	**Gravimetric Standard**	10000	50	0.246	49.20	N/A	N/A	N/A	98%
L2165245	2		4000	50	11.518	921.44	50	11.52	80.00	
L2165245	3		4000	50	11.518	921.44	100	23.04	40.00	

Note: Sample 3 is pre silica

Total Extract Weight (mg) = (Extract Volume ÷ Aliquot Removed) (Aliquot Weight)

Gravimetric Standard = 5 mg/mL

LCS Acceptance Criteria: 95% - 105%

Verified by: _____

Date: _____

Alpha Report

ANALYTICAL REPORT

Lab Number:	L2165245
Client:	GSI Environmental Inc. 2211 Norfolk Suite 1000 Houston, TX 77098
ATTN:	Ileana Rhodes
Phone:	(713) 522-6300
Project Name:	Not Specified
Project Number:	Not Specified
Report Date:	12/10/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2165245-01	ERH1967	OIL	Not Specified	11/24/21 00:00	11/29/21
L2165245-02	ERH1968	WATER	Not Specified	11/24/21 14:15	11/29/21
L2165245-03	ERH1968 - SGC	WATER	Not Specified	11/24/21 14:15	11/29/21

Project Name:	Not Specified	**Lab Number:**	L2165245
Project Number:	Not Specified	**Report Date:**	12/10/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	Not Specified	**Lab Number:**	L2165245
Project Number:	Not Specified	**Report Date:**	12/10/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Saturated Hydrocarbons

L2165245-01, -02D, and -03D: The sample was extracted and then analyzed using a gas chromatograph equipped with a flame ionization detector (GC/FID). The temperature program and associated experimental conditions were optimized to obtain maximum resolution in an eighty minute chromatographic run representative of hydrocarbons in the n-Octane (C8) to n-Tetracontane (C40) range. Qualitative evaluation of the sample was conducted by reviewing the sample chromatogram in conjunction with a chromatogram of a normal alkane series generated with the same chromatographic conditions. Chromatograms of hydrocarbon reference materials obtained from our library of 82 reference standards were also utilized to provide the best possible sample match. Quantitative determination of the sample's hydrocarbon concentration was performed in accordance with EPA Method 8015M. The sample's total hydrocarbon concentration and all associated quality control data are included in the report.

The following qualitative information is based on a tentative interpretation of chromatographic pattern recognition and boiling point ranges:

Total Petroleum Hydrocarbon Identification

L2165245-01, -02D, and -03D contain hydrocarbons eluting in the range of n-Octane (C8) to after the elution of n-Eicosane (C20).

Based on the data generated, L2165245-01, -02D and -03D contain material eluting in the low to mid weight ranges of the chromatogram which is similar to a JP-5 Jet Fuel/Kerosene type product.

L2165245-01: Alkane summation from n-Decane (C10) to n-Tetracosane (C24) resulted in 174,000 mg/kg. Summation of alkanes from n-Pentacosane (C25) to n-Tetracontane (C40) resulted in 60.8 mg/kg.

L2165245-02D: Alkane summation from n-Decane (C10) to n-Tetracosane (C24) resulted in (241 mg/L). Summation of alkanes from n-Pentacosane (C25) to n-Tetracontane (C40) resulted in non-detect.

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Case Narrative (continued)

L2165245-03D: Alkane summation from n-Decane (C10) to n-Tetracosane (C24) resulted in (208mg/L).
Summation of alkanes from n-Pentacosane (C25) to n-Tetracontane (C40) resulted in (non-detect).
The WG1577487-1 Method Blank, associated with L2165245-02D and -03D, has concentrations above the reporting limit for n-Octacosane(C28), however, this compound is "C" qualified. Associated field samples are non-detect for this compound so no action was required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 12/10/21

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2165245-01
Client ID: ERH1967
Sample Location: Not Specified

Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8015D(M)
Analytical Date: 12/08/21 22:22
Analyst: WR
Percent Solids:

Extraction Method: EPA 3580A
Extraction Date: 12/06/21 09:00

Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	4180		mg/kg	179	53.2	1
n-Decane (C10)	18500		mg/kg	179	57.2	1
n-Undecane (C11)	42700	E	mg/kg	179	53.5	1
n-Dodecane (C12)	45800	E	mg/kg	179	39.0	1
n-Tridecane (C13)	38700	E	mg/kg	179	49.2	1
2,6,10-Trimethyldodecane (1380)	5290		mg/kg	179	27.0	1
n-Tetradecane (C14)	19700		mg/kg	179	27.0	1
2,6,10-Trimethyltridecane (1470)	4700		mg/kg	179	21.4	1
n-Pentadecane (C15)	7110		mg/kg	179	21.4	1
n-Hexadecane (C16)	1400		mg/kg	179	27.0	1
Norpristane (1650)	193		mg/kg	179	59.1	1
n-Heptadecane (C17)	290		mg/kg	179	59.1	1
Pristane	137	J	mg/kg	179	38.3	1
n-Octadecane (C18)	103	J	mg/kg	179	36.0	1
Phytane	33.3	J	mg/kg	179	22.5	1
n-Nonadecane (C19)	ND		mg/kg	179	46.0	1
n-Eicosane (C20)	ND		mg/kg	179	25.4	1
n-Heneicosane (C21)	ND		mg/kg	179	21.4	1
n-Docosane (C22)	ND		mg/kg	179	18.7	1
n-Tricosane (C23)	ND		mg/kg	179	22.8	1
n-Tetracosane (C24)	ND		mg/kg	179	30.0	1
n-Pentacosane (C25)	ND		mg/kg	179	94.8	1
n-Hexacosane (C26)	ND		mg/kg	179	26.3	1
n-Heptacosane (C27)	ND		mg/kg	179	21.6	1
n-Octacosane (C28)	60.8	J	mg/kg	179	38.4	1
n-Nonacosane (C29)	ND		mg/kg	179	119.	1
n-Triacontane (C30)	ND		mg/kg	179	20.6	1
n-Hentriacontane (C31)	ND		mg/kg	179	25.4	1

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L2165245
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2165245-01
Client ID: ERH1967
Sample Location: Not Specified
Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	179	22.6	1
n-Tritriacontane (C33)	ND		mg/kg	179	25.2	1
n-Tetratriacontane (C34)	ND		mg/kg	179	28.5	1
n-Pentatriacontane (C35)	ND		mg/kg	179	31.3	1
n-Hexatriacontane (C36)	ND		mg/kg	179	35.6	1
n-Heptatriacontane (C37)	ND		mg/kg	179	39.8	1
n-Octatriacontane (C38)	ND		mg/kg	179	41.8	1
n-Nonatriacontane (C39)	ND		mg/kg	179	58.2	1
n-Tetracontane (C40)	ND		mg/kg	179	58.2	1
C9-C44 Total Petroleu	922000		mg/kg	5910	1300	1
C10-C28 DRO	882000		mg/kg	3760	776.	1
C28-C40 ORO	5390		mg/kg	1970	448.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	96		50-130
d50-Tetracosane	91		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2165245-01 D
Client ID: ERH1967
Sample Location: Not Specified

Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8015D(M)
Analytical Date: 12/09/21 16:56
Analyst: WR
Percent Solids:

Extraction Method: EPA 3580A
Extraction Date: 12/06/21 09:00

Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Undecane (C11)	42300		mg/kg	358	107.	2
n-Dodecane (C12)	45700		mg/kg	358	78.1	2
n-Tridecane (C13)	38700		mg/kg	358	98.4	2
Total Saturated Hydrocarbons	127000		mg/kg	179	18.7	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	94		50-130
d50-Tetracosane	94		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2165245-02 D
Client ID: ERH1968
Sample Location: Not Specified

Date Collected: 11/24/21 14:15
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8015D(M)
Analytical Date: 12/05/21 05:23
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/01/21 06:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	4.26		mg/l	0.825	0.263	10
n-Decane (C10)	23.2		mg/l	0.825	0.097	10
n-Undecane (C11)	58.5		mg/l	0.825	0.078	10
n-Dodecane (C12)	61.1		mg/l	0.825	0.109	10
n-Tridecane (C13)	56.1		mg/l	4.12	0.730	10
2,6,10-Trimethyldodecane (1380)	7.55		mg/l	0.825	0.081	10
n-Tetradecane (C14)	29.0		mg/l	0.825	0.081	10
2,6,10-Trimethyltridecane (1470)	6.58		mg/l	0.825	0.119	10
n-Pentadecane (C15)	10.7		mg/l	0.825	0.119	10
n-Hexadecane (C16)	2.10		mg/l	0.825	0.123	10
Norpristane (1650)	0.275	J	mg/l	0.825	0.112	10
n-Heptadecane (C17)	0.447	J	mg/l	0.825	0.112	10
Pristane	0.193	J	mg/l	0.825	0.144	10
n-Octadecane (C18)	0.143	J	mg/l	0.825	0.066	10
Phytane	ND		mg/l	0.825	0.072	10
n-Nonadecane (C19)	ND		mg/l	0.825	0.139	10
n-Eicosane (C20)	ND		mg/l	0.825	0.049	10
n-Heneicosane (C21)	ND		mg/l	0.825	0.064	10
n-Docosane (C22)	ND		mg/l	0.825	0.035	10
n-Tricosane (C23)	ND		mg/l	0.825	0.061	10
n-Tetracosane (C24)	ND		mg/l	0.825	0.063	10
n-Pentacosane (C25)	ND		mg/l	4.12	0.488	10
n-Hexacosane (C26)	ND		mg/l	0.825	0.092	10
n-Heptacosane (C27)	ND		mg/l	0.825	0.085	10
n-Octacosane (C28)	ND		mg/l	0.825	0.172	10
n-Nonacosane (C29)	ND		mg/l	0.825	0.097	10
n-Triacontane (C30)	ND		mg/l	0.825	0.102	10
n-Hentriacontane (C31)	ND		mg/l	0.825	0.107	10

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L2165245
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2165245-02 D
Client ID: ERH1968
Sample Location: Not Specified
Date Collected: 11/24/21 14:15
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/l	0.825	0.104	10
n-Tritriacontane (C33)	ND		mg/l	0.825	0.109	10
n-Tetratriacontane (C34)	ND		mg/l	0.825	0.136	10
n-Pentatriacontane (C35)	ND		mg/l	0.825	0.128	10
n-Hexatriacontane (C36)	ND		mg/l	0.825	0.114	10
n-Heptatriacontane (C37)	ND		mg/l	0.825	0.151	10
n-Octatriacontane (C38)	ND		mg/l	0.825	0.149	10
n-Nonatriacontane (C39)	ND		mg/l	0.825	0.144	10
n-Tetracontane (C40)	ND		mg/l	0.825	0.144	10
C9-C44 Total Petroleu	1260		mg/l	27.2	4.58	10
C10-C28 DRO	1230		mg/l	17.3	2.98	10
C28-C40 ORO	ND		mg/l	9.07	1.34	10
Total Saturated Hydrocarbons	260	J	mg/l	0.825	0.035	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	117		50-130
d50-Tetracosane	109		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2165245-03 D
Client ID: ERH1968 - SGC
Sample Location: Not Specified

Date Collected: 11/24/21 14:15
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8015D(M)
Analytical Date: 12/05/21 06:51
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/01/21 06:00
Cleanup Method: EPA 3630(M)
Cleanup Date: 12/01/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	3.31		mg/l	0.825	0.263	20
n-Decane (C10)	19.5		mg/l	0.825	0.097	20
n-Undecane (C11)	50.3		mg/l	0.825	0.078	20
n-Dodecane (C12)	52.8		mg/l	0.825	0.109	20
n-Tridecane (C13)	48.6		mg/l	4.12	0.730	20
2,6,10-Trimethyldodecane (1380)	6.49		mg/l	0.825	0.081	20
n-Tetradecane (C14)	25.2		mg/l	0.825	0.081	20
2,6,10-Trimethyltridecane (1470)	5.84		mg/l	0.825	0.119	20
n-Pentadecane (C15)	9.37		mg/l	0.825	0.119	20
n-Hexadecane (C16)	1.80		mg/l	0.825	0.123	20
Norpristane (1650)	0.238	J	mg/l	0.825	0.112	20
n-Heptadecane (C17)	0.389	J	mg/l	0.825	0.112	20
Pristane	0.167	J	mg/l	0.825	0.144	20
n-Octadecane (C18)	0.123	J	mg/l	0.825	0.066	20
Phytane	ND		mg/l	0.825	0.072	20
n-Nonadecane (C19)	ND		mg/l	0.825	0.139	20
n-Eicosane (C20)	ND		mg/l	0.825	0.049	20
n-Heneicosane (C21)	ND		mg/l	0.825	0.064	20
n-Docosane (C22)	ND		mg/l	0.825	0.035	20
n-Tricosane (C23)	ND		mg/l	0.825	0.061	20
n-Tetracosane (C24)	ND		mg/l	0.825	0.063	20
n-Pentacosane (C25)	ND		mg/l	4.12	0.488	20
n-Hexacosane (C26)	ND		mg/l	0.825	0.092	20
n-Heptacosane (C27)	ND		mg/l	0.825	0.085	20
n-Octacosane (C28)	ND		mg/l	0.825	0.172	20
n-Nonacosane (C29)	ND		mg/l	0.825	0.097	20
n-Triacontane (C30)	ND		mg/l	0.825	0.102	20
n-Hentriacontane (C31)	ND		mg/l	0.825	0.107	20

Project Name: Not Specified **Lab Number:** L2165245

Project Number: Not Specified **Report Date:** 12/10/21

SAMPLE RESULTS

Lab ID: L2165245-03 D
Client ID: ERH1968 - SGC
Sample Location: Not Specified

Date Collected: 11/24/21 14:15
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/l	0.825	0.104	20
n-Tritriacontane (C33)	ND		mg/l	0.825	0.109	20
n-Tetratriacontane (C34)	ND		mg/l	0.825	0.136	20
n-Pentatriacontane (C35)	ND		mg/l	0.825	0.128	20
n-Hexatriacontane (C36)	ND		mg/l	0.825	0.114	20
n-Heptatriacontane (C37)	ND		mg/l	0.825	0.151	20
n-Octatriacontane (C38)	ND		mg/l	0.825	0.149	20
n-Nonatriacontane (C39)	ND		mg/l	0.825	0.144	20
n-Tetracontane (C40)	ND		mg/l	0.825	0.144	20
C9-C44 Total Petroleu	1090		mg/l	27.2	4.58	20
C10-C28 DRO	1070		mg/l	17.3	2.98	20
C28-C40 ORO	ND		mg/l	9.07	1.34	20
Total Saturated Hydrocarbons	224	J	mg/l	0.825	0.035	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	94		50-130
d50-Tetracosane	88		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/03/21 18:07
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/01/21 06:00

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 02 Batch: WG1577487-1					
n-Nonane (C9)	ND		mg/l	0.001	0.0003
n-Decane (C10)	ND		mg/l	0.001	0.0001
n-Undecane (C11)	ND		mg/l	0.001	0.0001
n-Dodecane (C12)	ND		mg/l	0.001	0.0001
n-Tridecane (C13)	ND		mg/l	0.005	0.001
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.001	0.0001
n-Tetradecane (C14)	ND		mg/l	0.001	0.0001
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.001	0.0001
n-Pentadecane (C15)	ND		mg/l	0.001	0.0001
n-Hexadecane (C16)	ND		mg/l	0.001	0.0001
Norpristane (1650)	ND		mg/l	0.001	0.0001
n-Heptadecane (C17)	ND		mg/l	0.001	0.0001
Pristane	ND		mg/l	0.001	0.0002
n-Octadecane (C18)	ND		mg/l	0.001	0.0001
Phytane	ND		mg/l	0.001	0.0001
n-Nonadecane (C19)	ND		mg/l	0.001	0.0002
n-Eicosane (C20)	ND		mg/l	0.001	0.0001
n-Heneicosane (C21)	ND		mg/l	0.001	0.0001
n-Docosane (C22)	ND		mg/l	0.001	0.00004
n-Tricosane (C23)	ND		mg/l	0.001	0.0001
n-Tetracosane (C24)	ND		mg/l	0.001	0.0001
n-Pentacosane (C25)	ND		mg/l	0.005	0.001
n-Hexacosane (C26)	ND		mg/l	0.001	0.0001
n-Heptacosane (C27)	ND		mg/l	0.001	0.0001
n-Octacosane (C28)	0.001	C	mg/l	0.001	0.0002
n-Nonacosane (C29)	0.001	JC	mg/l	0.001	0.0001
n-Triacontane (C30)	ND		mg/l	0.001	0.0001
n-Hentriacontane (C31)	ND		mg/l	0.001	0.0001
n-Dotriacontane (C32)	ND		mg/l	0.001	0.0001

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/03/21 18:07
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/01/21 06:00

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 02 Batch: WG1577487-1					
n-Tritriacontane (C33)	ND		mg/l	0.001	0.0001
n-Tetratriacontane (C34)	ND		mg/l	0.001	0.0002
n-Pentatriacontane (C35)	ND		mg/l	0.001	0.0002
n-Hexatriacontane (C36)	ND		mg/l	0.001	0.0001
n-Heptatriacontane (C37)	ND		mg/l	0.001	0.0002
n-Octatriacontane (C38)	ND		mg/l	0.001	0.0002
n-Nonatriacontane (C39)	ND		mg/l	0.001	0.0002
n-Tetracontane (C40)	ND		mg/l	0.001	0.0002
C9-C44 Total Petroleu	ND		mg/l	0.033	0.006
C10-C28 DRO	0.012	J	mg/l	0.021	0.004
C28-C40 ORO	ND		mg/l	0.011	0.002
Total Saturated Hydrocarbons	0.002	J	mg/l	0.001	0.00004

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	99		50-130
d50-Tetracosane	97		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/03/21 19:35
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/01/21 06:00
Cleanup Method: EPA 3630(M)
Cleanup Date: 12/01/21

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 03 Batch: WG1577488-1					
n-Nonane (C9)	ND		mg/l	0.001	0.0003
n-Decane (C10)	ND		mg/l	0.001	0.0001
n-Undecane (C11)	ND		mg/l	0.001	0.0001
n-Dodecane (C12)	ND		mg/l	0.001	0.0001
n-Tridecane (C13)	ND		mg/l	0.005	0.001
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.001	0.0001
n-Tetradecane (C14)	ND		mg/l	0.001	0.0001
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.001	0.0001
n-Pentadecane (C15)	ND		mg/l	0.001	0.0001
n-Hexadecane (C16)	ND		mg/l	0.001	0.0001
Norpristane (1650)	ND		mg/l	0.001	0.0001
n-Heptadecane (C17)	ND		mg/l	0.001	0.0001
Pristane	ND		mg/l	0.001	0.0002
n-Octadecane (C18)	0.0001	J	mg/l	0.0010	0.0001
Phytane	ND		mg/l	0.001	0.0001
n-Nonadecane (C19)	ND		mg/l	0.001	0.0002
n-Eicosane (C20)	0.0001	J	mg/l	0.0010	0.0001
n-Heneicosane (C21)	ND		mg/l	0.001	0.0001
n-Docosane (C22)	ND		mg/l	0.001	0.00004
n-Tricosane (C23)	ND		mg/l	0.001	0.0001
n-Tetracosane (C24)	ND		mg/l	0.001	0.0001
n-Pentacosane (C25)	ND		mg/l	0.005	0.001
n-Hexacosane (C26)	ND		mg/l	0.001	0.0001
n-Heptacosane (C27)	ND		mg/l	0.001	0.0001
n-Octacosane (C28)	0.001	JC	mg/l	0.001	0.0002
n-Nonacosane (C29)	0.001	JC	mg/l	0.001	0.0001
n-Triacontane (C30)	ND		mg/l	0.001	0.0001
n-Hentriacontane (C31)	ND		mg/l	0.001	0.0001
n-Dotriacontane (C32)	ND		mg/l	0.001	0.0001

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/03/21 19:35
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/01/21 06:00
Cleanup Method: EPA 3630(M)
Cleanup Date: 12/01/21

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 03 Batch: WG1577488-1					
n-Tritriacontane (C33)	ND		mg/l	0.001	0.0001
n-Tetratriacontane (C34)	ND		mg/l	0.001	0.0002
n-Pentatriacontane (C35)	ND		mg/l	0.001	0.0002
n-Hexatriacontane (C36)	ND		mg/l	0.001	0.0001
n-Heptatriacontane (C37)	ND		mg/l	0.001	0.0002
n-Octatriacontane (C38)	ND		mg/l	0.001	0.0002
n-Nonatriacontane (C39)	ND		mg/l	0.001	0.0002
n-Tetracontane (C40)	ND		mg/l	0.001	0.0002
C9-C44 Total Petroleu	ND		mg/l	0.033	0.006
C10-C28 DRO	0.008	J	mg/l	0.021	0.004
C28-C40 ORO	ND		mg/l	0.011	0.002
Total Saturated Hydrocarbons	0.002	J	mg/l	0.001	0.00004

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	83		50-130
d50-Tetracosane	83		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/07/21 19:51
Analyst: WR

Extraction Method: EPA 3580A
Extraction Date: 12/06/21 09:00

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01 Batch: WG1579479-1					
n-Nonane (C9)	ND		mg/kg	200	59.3
n-Decane (C10)	ND		mg/kg	200	63.8
n-Undecane (C11)	ND		mg/kg	200	59.7
n-Dodecane (C12)	ND		mg/kg	200	43.6
n-Tridecane (C13)	ND		mg/kg	200	54.9
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	200	30.1
n-Tetradecane (C14)	ND		mg/kg	200	30.1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	200	23.9
n-Pentadecane (C15)	ND		mg/kg	200	23.9
n-Hexadecane (C16)	ND		mg/kg	200	30.1
Norpristane (1650)	ND		mg/kg	200	66.0
n-Heptadecane (C17)	ND		mg/kg	200	66.0
Pristane	ND		mg/kg	200	42.7
n-Octadecane (C18)	ND		mg/kg	200	40.1
Phytane	ND		mg/kg	200	25.1
n-Nonadecane (C19)	ND		mg/kg	200	51.4
n-Eicosane (C20)	ND		mg/kg	200	28.3
n-Heneicosane (C21)	ND		mg/kg	200	23.9
n-Docosane (C22)	ND		mg/kg	200	20.9
n-Tricosane (C23)	ND		mg/kg	200	25.4
n-Tetracosane (C24)	ND		mg/kg	200	33.5
n-Pentacosane (C25)	ND		mg/kg	200	106.
n-Hexacosane (C26)	ND		mg/kg	200	29.4
n-Heptacosane (C27)	ND		mg/kg	200	24.1
n-Octacosane (C28)	ND		mg/kg	200	42.9
n-Nonacosane (C29)	ND		mg/kg	200	133.
n-Triacontane (C30)	ND		mg/kg	200	22.9
n-Hentriacontane (C31)	ND		mg/kg	200	28.3
n-Dotriacontane (C32)	ND		mg/kg	200	25.2

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/07/21 19:51
Analyst: WR

Extraction Method: EPA 3580A
Extraction Date: 12/06/21 09:00

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01 Batch: WG1579479-1					
n-Tritriacontane (C33)	ND		mg/kg	200	28.1
n-Tetratriacontane (C34)	ND		mg/kg	200	31.8
n-Pentatriacontane (C35)	ND		mg/kg	200	34.9
n-Hexatriacontane (C36)	ND		mg/kg	200	39.8
n-Heptatriacontane (C37)	ND		mg/kg	200	44.4
n-Octatriacontane (C38)	ND		mg/kg	200	46.6
n-Nonatriacontane (C39)	ND		mg/kg	200	64.9
n-Tetracontane (C40)	ND		mg/kg	200	64.9
C9-C44 Total Petroleu	ND		mg/kg	6600	1450
C10-C28 DRO	ND		mg/kg	4200	866.
C28-C40 ORO	ND		mg/kg	2200	500.
Total Saturated Hydrocarbons	ND		mg/kg	200	20.9

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	92		50-130
d50-Tetracosane	85		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2165245

Report Date: 12/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 02 Batch: WG1577487-2 WG1577487-3								
Nonane (C9)	77		77		50-130	0		30
n-Decane (C10)	88		89		50-130	1		30
n-Dodecane (C12)	98		100		50-130	2		30
n-Tetradecane (C14)	101		103		50-130	2		30
n-Hexadecane (C16)	105		107		50-130	2		30
n-Octadecane (C18)	108		109		50-130	1		30
n-Nonadecane (C19)	112		116		50-130	4		30
n-Eicosane (C20)	107		108		50-130	1		30
n-Docosane (C22)	107		108		50-130	1		30
n-Tetracosane (C24)	110		110		50-130	0		30
n-Hexacosane (C26)	109		109		50-130	0		30
n-Octacosane (C28)	110		110		50-130	0		30
n-Triacontane (C30)	106		107		50-130	1		30
n-Hexatriacontane (C36)	91		97		50-130	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	99		100		50-130
d50-Tetracosane	100		101		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2165245

Report Date: 12/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 03 Batch: WG1577488-2 WG1577488-3								
Nonane (C9)	60		54		50-130	11		30
n-Decane (C10)	73		68		50-130	7		30
n-Dodecane (C12)	83		79		50-130	5		30
n-Tetradecane (C14)	86		82		50-130	5		30
n-Hexadecane (C16)	92		87		50-130	6		30
n-Octadecane (C18)	97		91		50-130	6		30
n-Nonadecane (C19)	102		96		50-130	6		30
n-Eicosane (C20)	99		92		50-130	7		30
n-Docosane (C22)	99		92		50-130	7		30
n-Tetracosane (C24)	101		94		50-130	7		30
n-Hexacosane (C26)	100		94		50-130	6		30
n-Octacosane (C28)	101		95		50-130	6		30
n-Triacontane (C30)	98		92		50-130	6		30
n-Hexatriacontane (C36)	84		84		50-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	91		85		50-130
d50-Tetracosane	92		87		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2165245

Report Date: 12/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 01 Batch: WG1579479-2 WG1579479-3								
Nonane (C9)	86		89		50-130	3		30
n-Decane (C10)	79		83		50-130	5		30
n-Dodecane (C12)	80		85		50-130	6		30
n-Tetradecane (C14)	91		96		50-130	5		30
n-Hexadecane (C16)	98		103		50-130	5		30
n-Octadecane (C18)	104		109		50-130	5		30
n-Nonadecane (C19)	75		79		50-130	5		30
n-Eicosane (C20)	92		96		50-130	4		30
n-Docosane (C22)	93		98		50-130	5		30
n-Tetracosane (C24)	98		103		50-130	5		30
n-Hexacosane (C26)	95		99		50-130	4		30
n-Octacosane (C28)	87		90		50-130	3		30
n-Triacontane (C30)	90		94		50-130	4		30
n-Hexatriacontane (C36)	76		80		50-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	100		106		50-130
d50-Tetracosane	88		91		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2165245
Report Date: 12/10/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2165245-01A	Vial unpreserved	A	NA		1.6	Y	Absent		A2-SHC(365)
L2165245-01B	Vial unpreserved	A	NA		1.6	Y	Absent		A2-SHC(365)
L2165245-01C	Vial unpreserved	A	NA		1.6	Y	Absent		A2-SHC(365)
L2165245-01D	Vial unpreserved	A	NA		1.6	Y	Absent		A2-SHC(365)
L2165245-01E	Vial unpreserved	A	NA		1.6	Y	Absent		A2-SHC(365)
L2165245-02A	Amber 1000ml unpreserved	B	7	7	.9	Y	Absent		A2-SHC(7)
L2165245-02B	Amber 1000ml unpreserved	B	7	7	.9	Y	Absent		A2-SHC(7)
L2165245-02C	Amber 1000ml unpreserved	B	7	7	.9	Y	Absent		A2-SHC(7)
L2165245-02D	Amber 1000ml unpreserved	B	NA		.9	Y	Absent		ARCHIVE()
L2165245-03A	Amber 1000ml unpreserved	A	NA		1.6	Y	Absent		A2-SHC(7)
L2165245-03B	Amber 1000ml unpreserved	A	NA		1.6	Y	Absent		A2-SHC(7)
L2165245-03C	Amber 1000ml unpreserved	A	NA		1.6	Y	Absent		A2-SHC(7)

Container Comments

L2165245-02D	Do not use, preserved with sulfirc acid

*Values in parentheses indicate holding time in days

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L2165245
Report Date: 12/10/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	Not Specified	**Lab Number:**	L2165245
Project Number:	Not Specified	**Report Date:**	12/10/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	Not Specified	**Lab Number:**	L2165245
Project Number:	Not Specified	**Report Date:**	12/10/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L2165245
Report Date: 12/10/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CoC ID: 202111-26 MATRL

CHAIN OF CUSTODY

PAGE 1 OF 2

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/29/21

ALPHA Job #: L2165245

Client Information

Client: Ileana Rhodes GSI Environmental Inc.
Address: 2211 Norfolk Suite 1000
Houston, TX 77098-5669
Phone: 281-703-5669
Fax:
Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:
Project Location:
Project #:
Project Manager: Susan O'Neil
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C-10 to 24, C-24 to 40.
Include carbon marker and sample surrogate for TPH-d/o and w/SGC.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☒ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	EPA 8270D - Full Scan w/TICs	PHI w/ Qualitative Narrative	EPA 8015D(M) SHC+SGC	Sample Specific Comments	TOTAL # BOTTLES
	ERH1967	11/24/21	N/A	Product	Client	☒	☐	☒	☒		0
165245-03	ERH1968	11/24/21	1415	GW	DM, JK	☒	☒	☒	☒		4

FF 11/26/21

Container Type	V/A	A	V/A	V/A	
Preservative	A/D	A	A/D	A/D	

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Yim	11/26/21 1200	Fedex	
Fedex			11/29/21 1010

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Col ID: 211129NOI-FSS

CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd in Lab: 11/29/21

ALPHA Job #: L2165245

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Ileana Rhodes GSI Environmental Inc.
Address: 2211 Norfolk Suite 1000
Houston, TX 77098-5669
Phone: 281-703-5669
Fax:
Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:
Project Location:
Project #:
Project Manager: Susan O'Neil
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C-10 to 24, C-24 to 40.
Include carbon marker and sample surrogate for TPH-d/o and w/SGC.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☒ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	EPA 8270D - Full Scan w/TICs	PHI w/ Qualitative Narrative	EPA 8015D(M) SHC+SGC	Sample Specific Comments	TOTAL # BOTTLES
L2165245-01	ERH1967	11/24/21	N/A	Product	Client	☒	☐	☒	☒		5
	ERH1968	11/24/21	1415	GW	DM, JK	☒	☒	☒	☒		0
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
						☐	☐	☐	☐		
Container Type						V/A	A	V/A	V/A		
Preservative						A/D	A	A/D	A/D		

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Yim Fedex	11/26/21 1200	Fedex	11/29/21 1010

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



ORIGIN ID:HNLA (808) 349-4738
MATTHEW YIM
AECOM
1001 BISHOP ST STE 1600

HONOLULU, HI 96813
UNITED STATES US

SHIP DATE: 26NOV21
ACTWGT: 11.05 LB
CAD: 6994242/SSFE2220
DIMS: 13x10x9 IN

BILL THIRD PARTY

Part # 156297-435 RRDW2 EXP 09/22

TO **ATTN: SUSAN O'NEIL**
ALPHA ANALYTICAL
320 FORBES BLVD

MANSFIELD MA 02048
(508) 822-9300 REF:
INV:
PO: DEPT:

FedEx
Express

E

2 of 2
MPS# 0263 **2866 3674 7017**
Mstr# 2866 3674 7006 0201

SE PYMA

MON - 29 NOV 11:30A
PRIORITY OVERNIGHT
DSR
02048
MA-US **BOS**

B-1.6 Ice
9849 Seal
Intact

Serial_No:12102118:09

Site Name: CV18F0126, RHSF, Alpha
Sample Identification No.: ERH1967
Date: 11/24/21 Time: 12:15
Analyses: EPA 8015D(M)-SHC
Collected By: DM, AM, JK
Preservative: None Container: 5 x 40 mL VOA

Site Name: CV18F0126, RHSF, Alpha
Sample Identification No.: ERH1967
Date: 11/24/21 Time: 12:15
Analyses: EPA 8015D(M)-SHC
Collected By: DM, AM, JK
Preservative: None Container: 5 x 40 mL VOA

Serial_No:12102118:09

CUSTOD
AECOM
Initials DM

Sample Identification No.: ERH1968

Date: 11/24/21 Time: 14:15
Analyses: EPA 8270D Full Scan w/ TICs
Collected By: DM, AM, JK
Preservative: None Container: 2 x 1L amber

Site Name: CV18F0126, RHSF, Alpha, Water sample

Sample Identification No.: ERH1968

Date: 11/24/21 Time: 14:15
Analyses: EPA 8270D Full Scan w/ TICs
Collected By: DM, AM, JK
Preservative: None Container: 2 x 1L amber

Site Name: CV18F0126, RHSF, Alpha, Water sample

TEMPE
BL

Sample Identification No.: ERH1968

Date: 11/24/21 Time: 14:15
Analyses: SVOCs (full list) by 8270
Collected By: DM, AM, JK
Preservative: None Container: 2 x 1L amber

Site Name: CV18F0126, RHSF, [redacted], Water sample

CONTAINER # 007257

E

Sample ID: ERH1968
Date Collected: 11/24/21
Time Collected: 1415
☐ Filtered ☐ Non-Filtered
SULFURIC ACID (H_2SO_4) PRESERVED

ELI is required to provide preservative traceability; if preservatives supplied with this bottle order were NOT used, attach your preservative information with the CoC.

BO# 158221

158221



ORIGIN ID:HNLA (808) 349-4738
MATTHEW YIM
AECOM
1001 BISHOP ST STE 1600

HONOLULU, HI 96813
UNITED STATES US

SHIP DATE: 26NOV21
ACTWGT: 57.20 LB
CAD: 6994242/SSFE2220
DIMS: 24x14x13 IN

BILL THIRD PARTY

Part # 156297-435 FRDW2 EXP 09/22

TO ATTN: SUSAN O'NEIL
ALPHA ANALYTICAL
320 FORBES BLVD

MANSFIELD MA 02048

(508) 822-9300 REF: 60571032.02.20.01
INV: DEPT:
PO:

FedEx Express

E

1 of 2

TRK# 0201 2866 3674 7006

MASTER

SE PYMA

MON - 29 NOV 11:30A
PRIORITY OVERNIGHT
DSR
02048
MA-US BOS

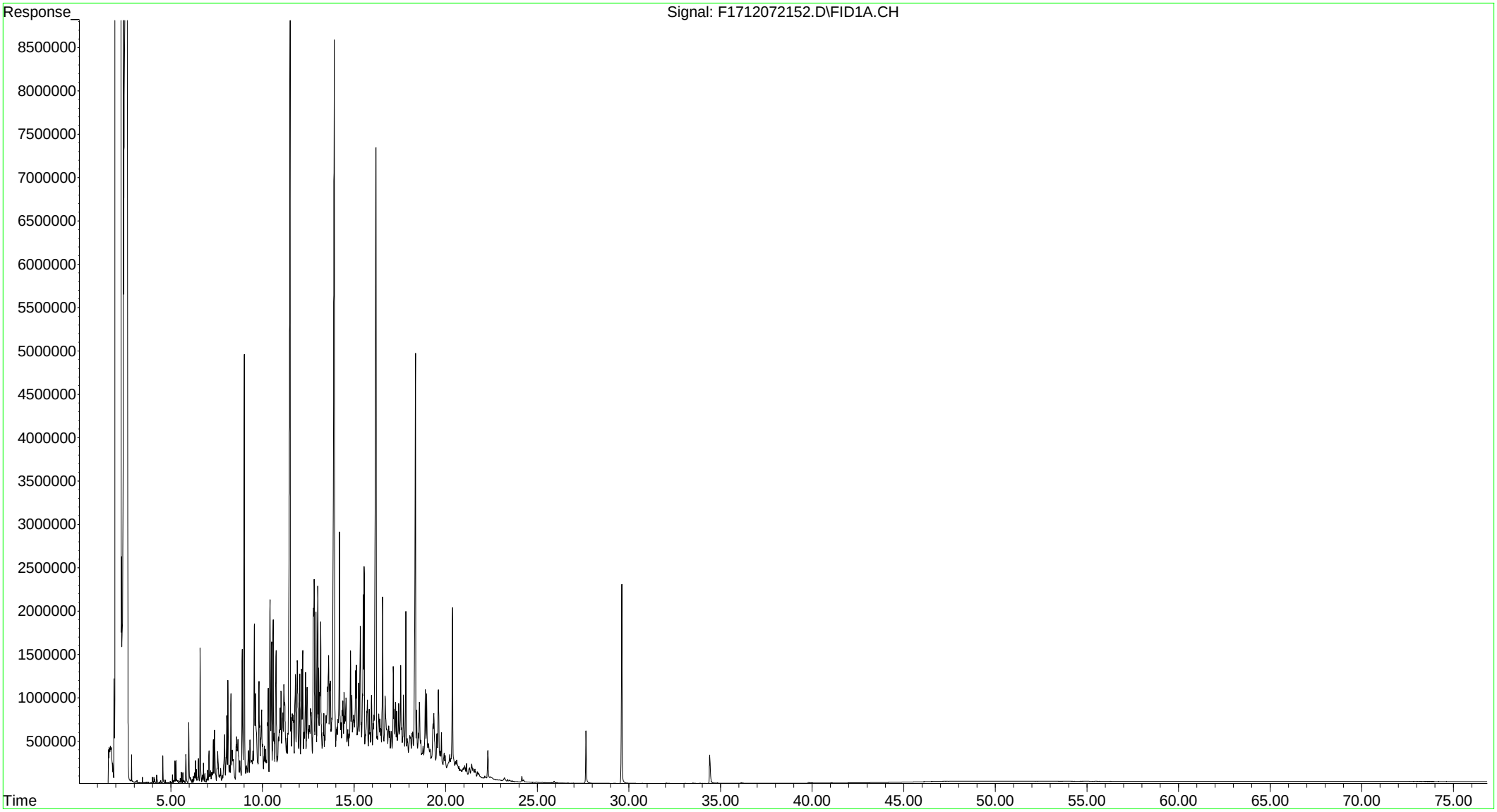
A -0.9

9849

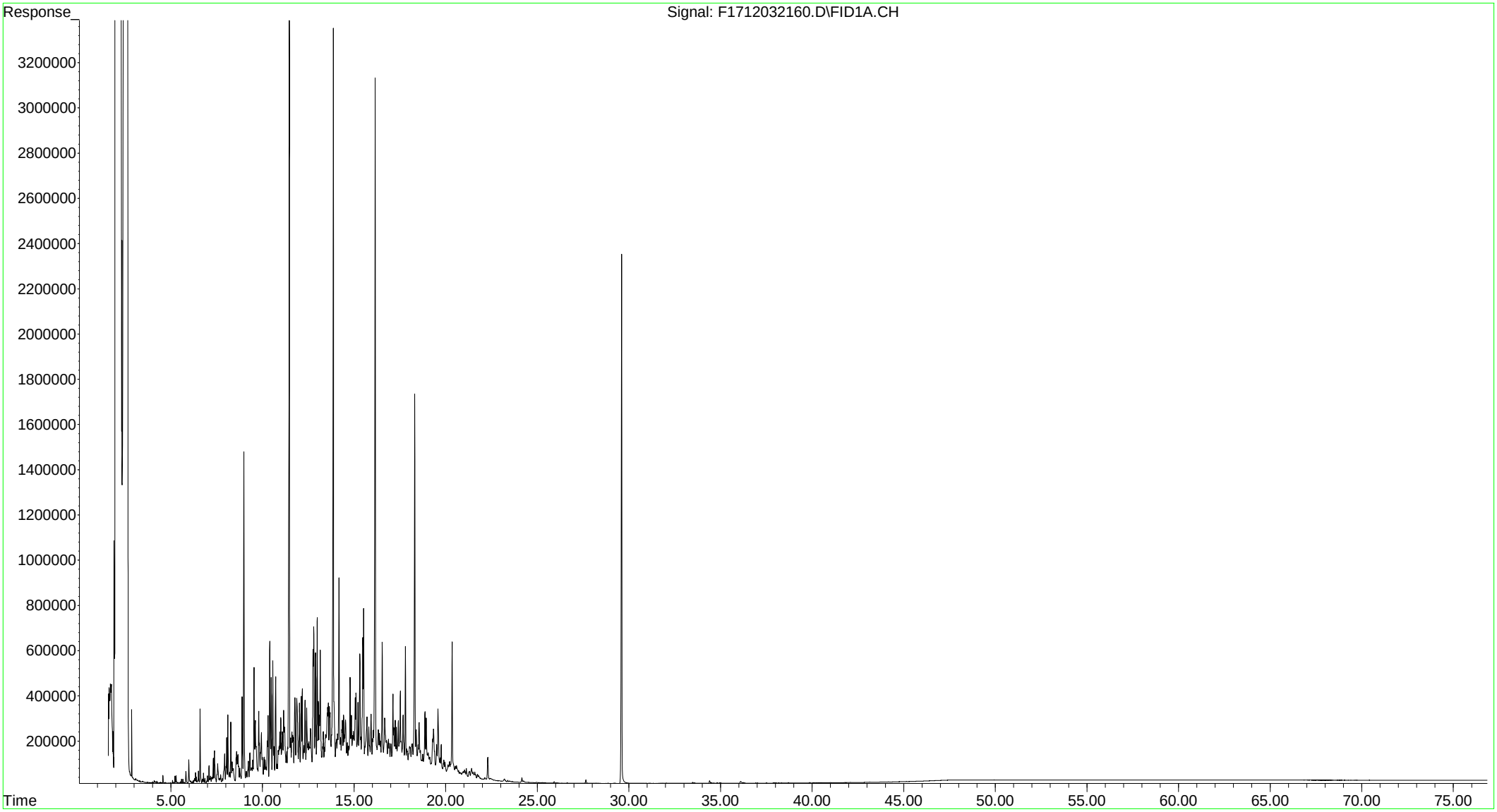
Ice
Seal
Intact

GC-FID Chromatogram

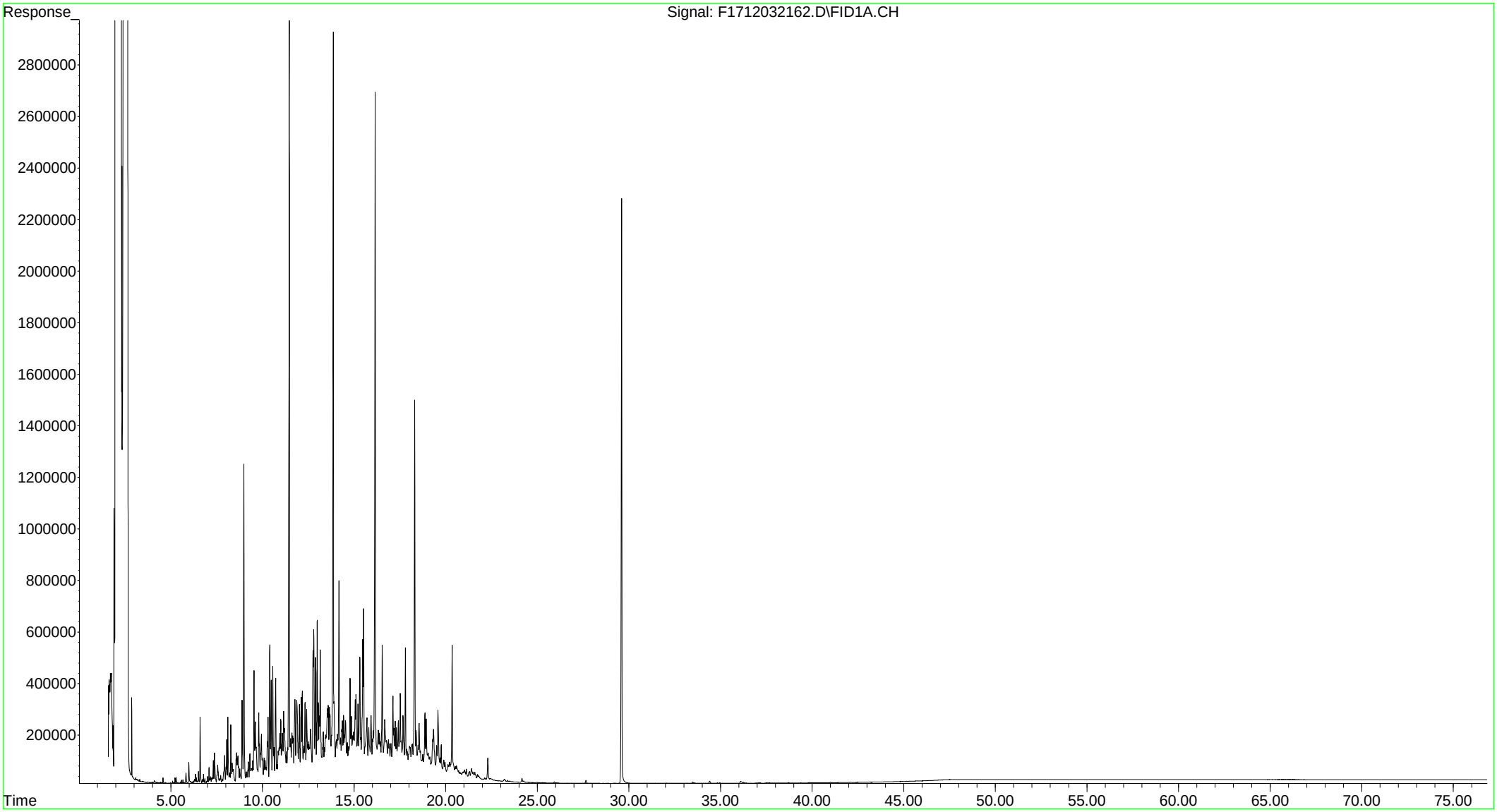
File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072152.D
Operator : FID17:WR
Acquired : 08 Dec 2021 10:22 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: L2165245-01,42,,
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 26



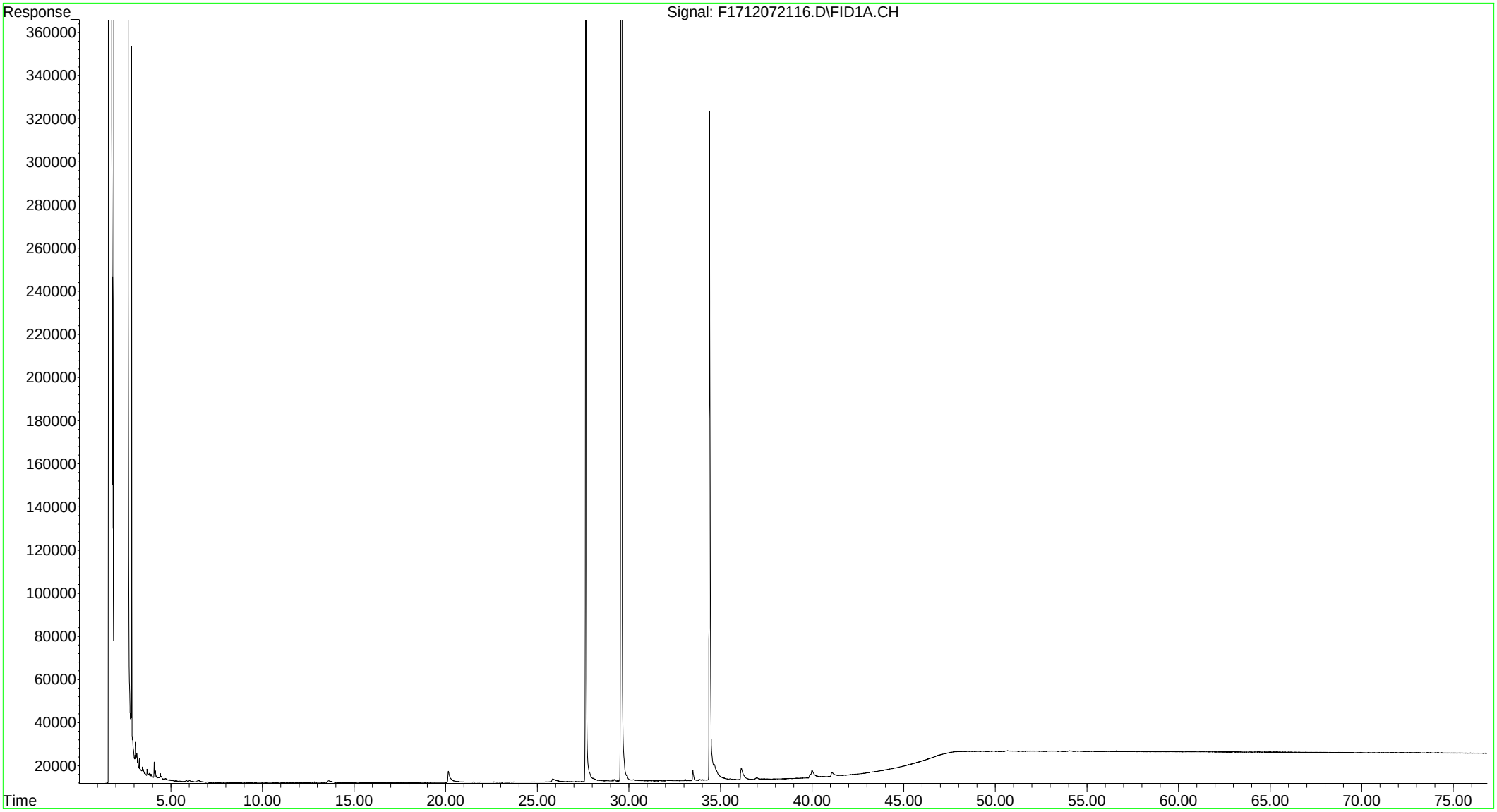
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032160.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 5:23 am using AcqMethod FID17A.M
Instrument : FID17
Sample Name: L2165245-02D,42,10
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 30



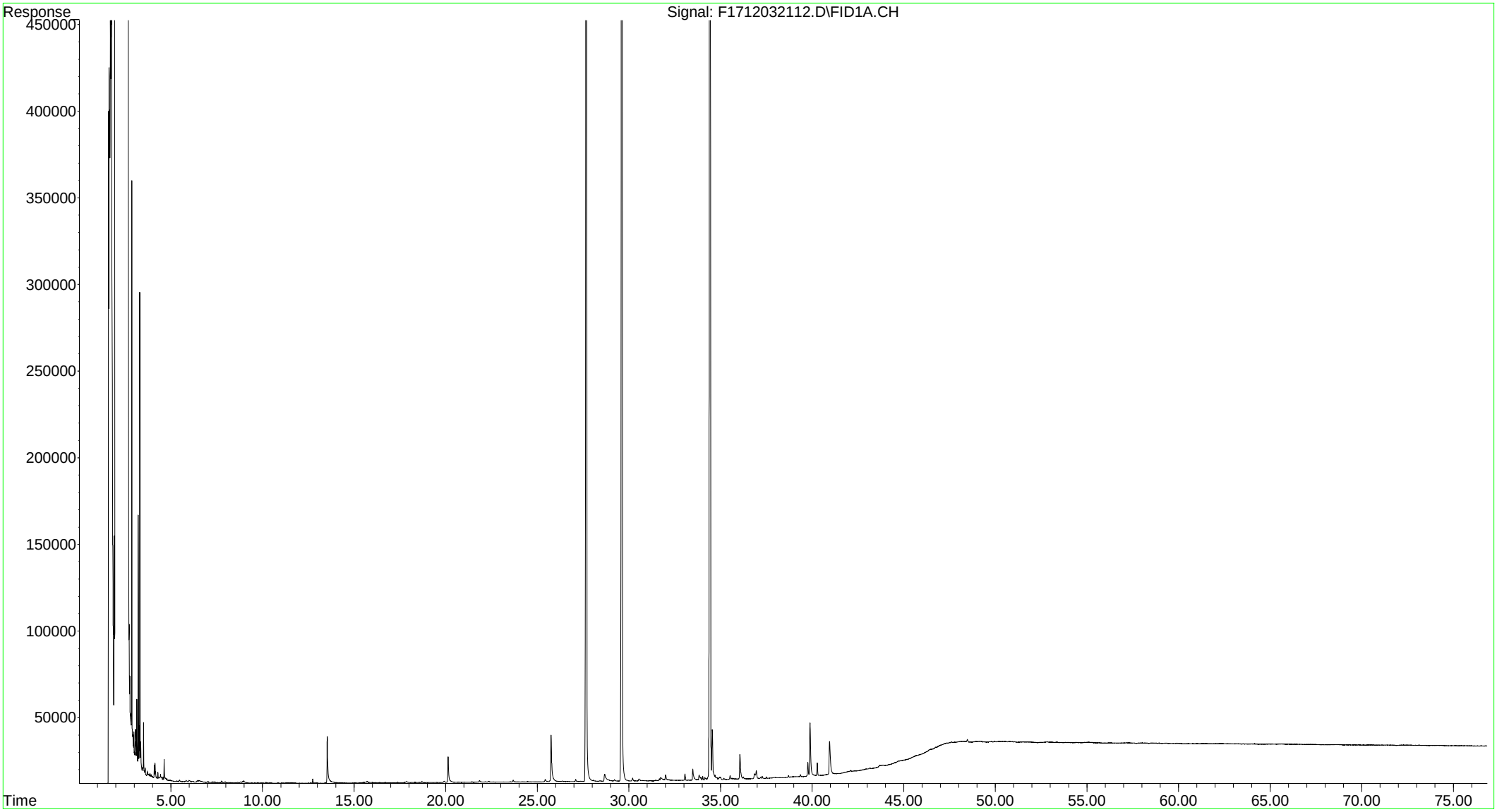
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032162.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 6:51 am using AcqMethod FID17A.M
Instrument : FID17
Sample Name: L2165245-03D,42,20
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 31



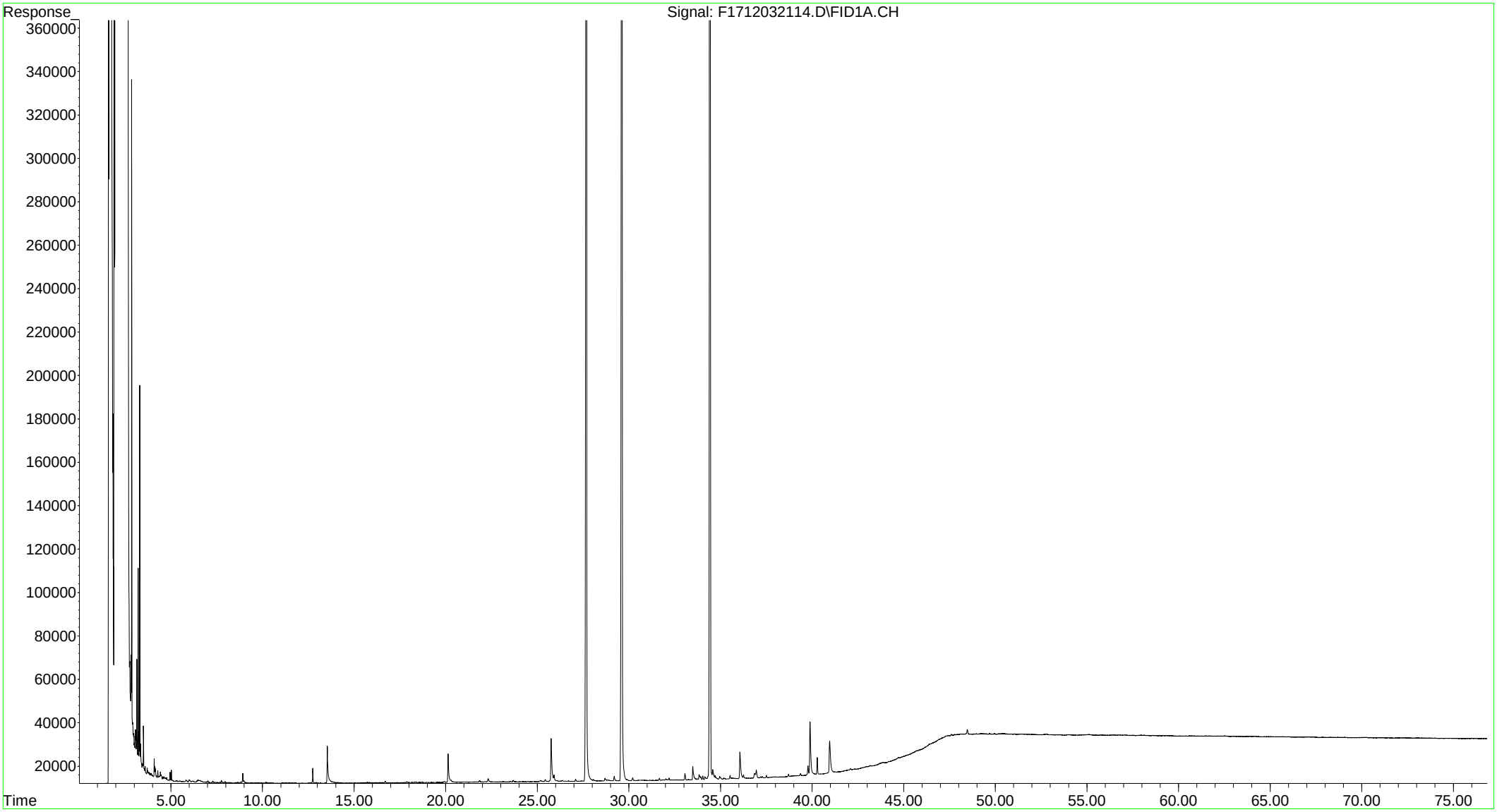
File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072116.D
Operator : FID17:WR
Acquired : 07 Dec 2021 7:51 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1579479-1,42,,
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 8



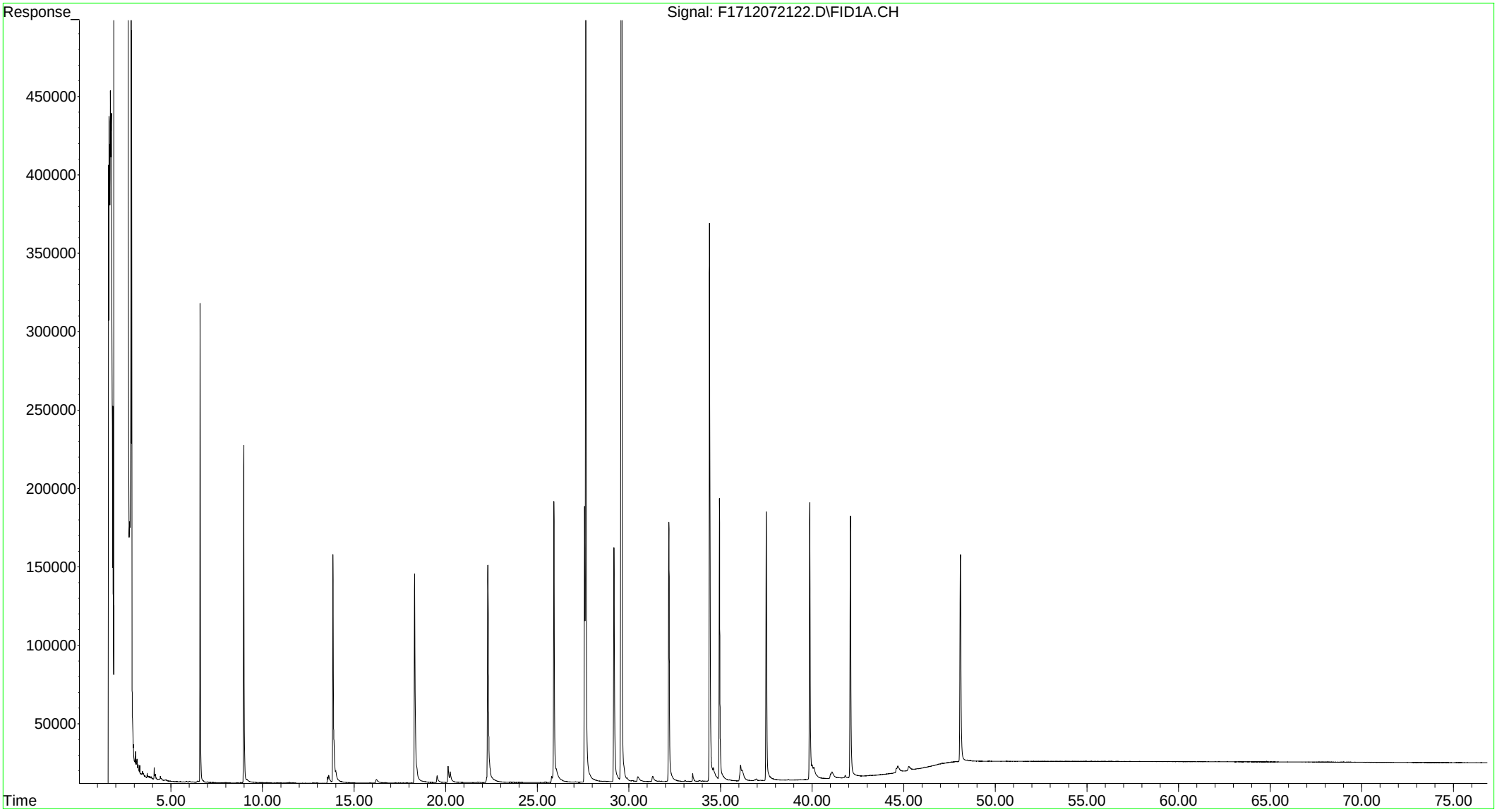
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032112.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 6:07 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1577487-1
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 6



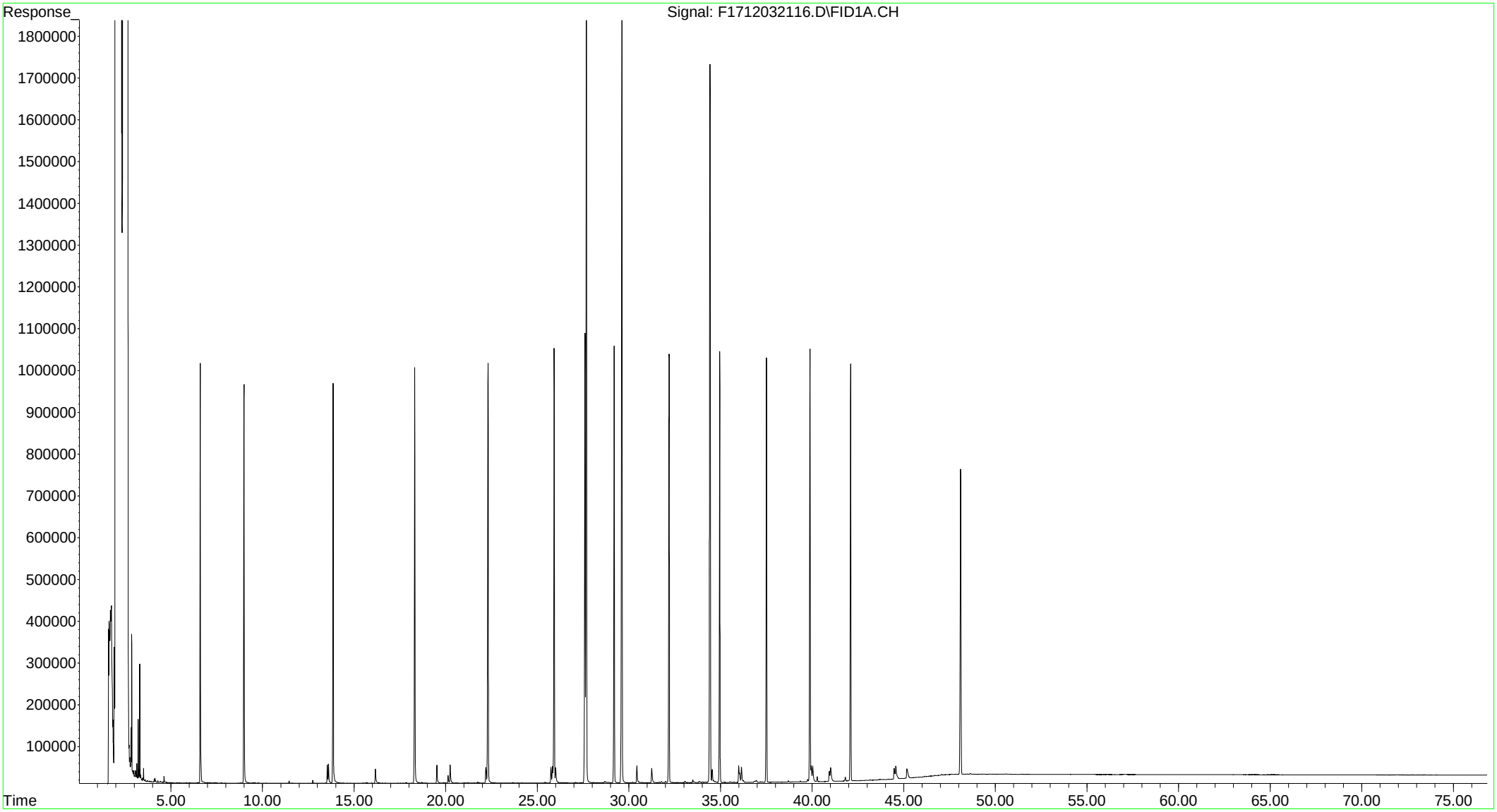
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032114.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 7:35 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1577488-1
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 7



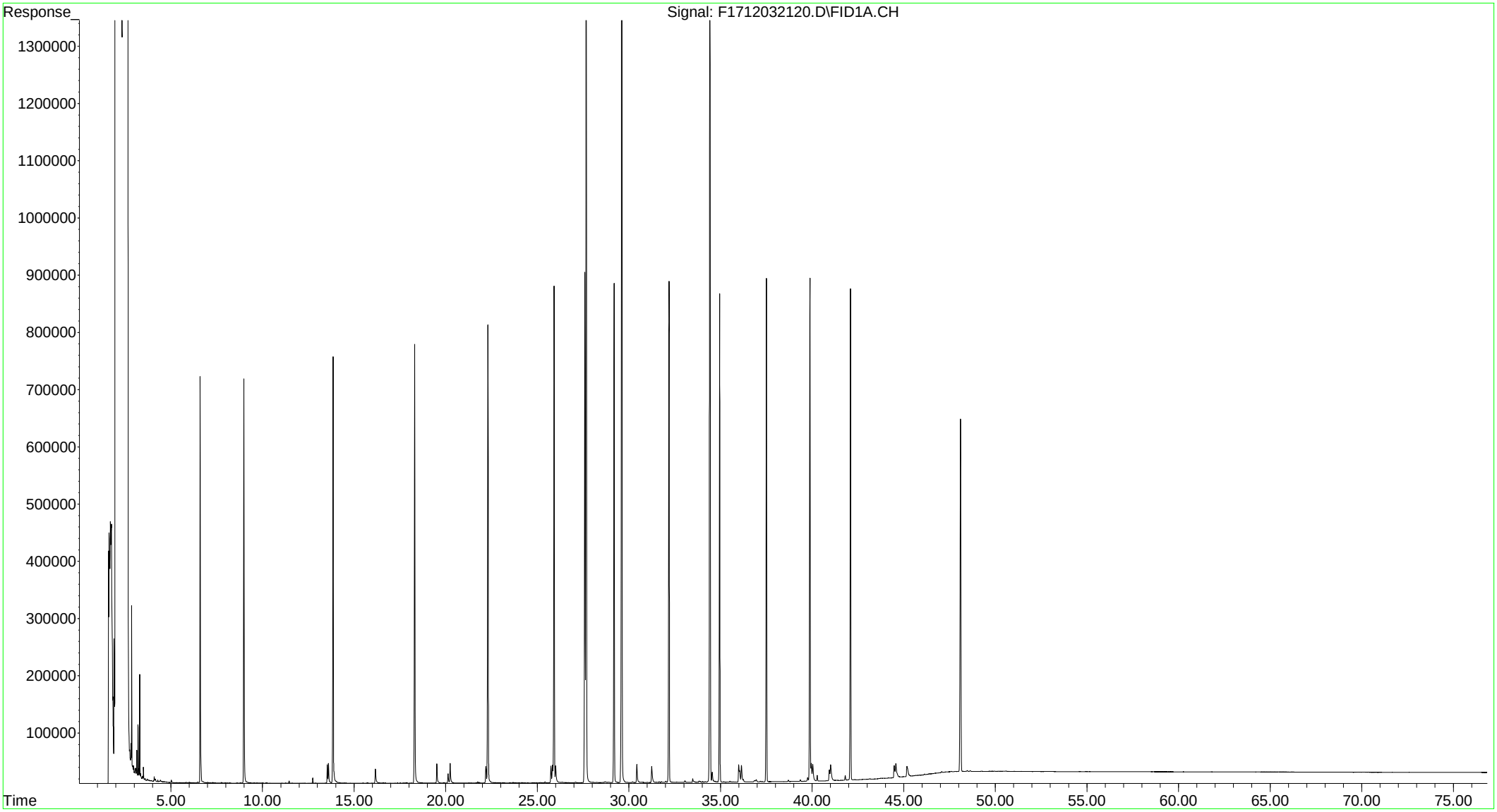
File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072122.D
Operator : FID17:WR
Acquired : 08 Dec 2021 12:16 am using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1579479-2,42,,
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 11



File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032116.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 9:03 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1577487-2
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 8

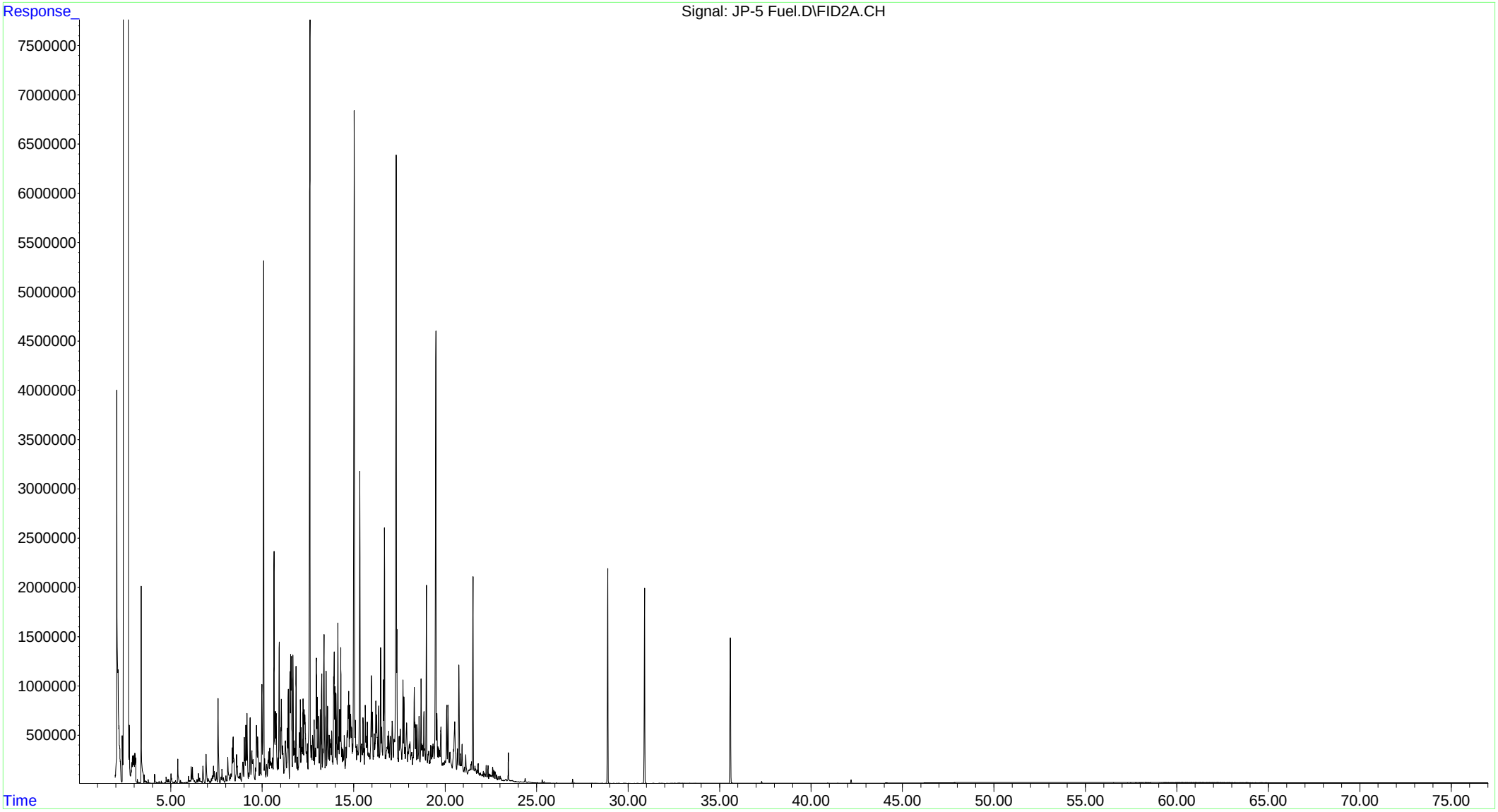


File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032120.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 12:00 am using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1577488-2
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 10

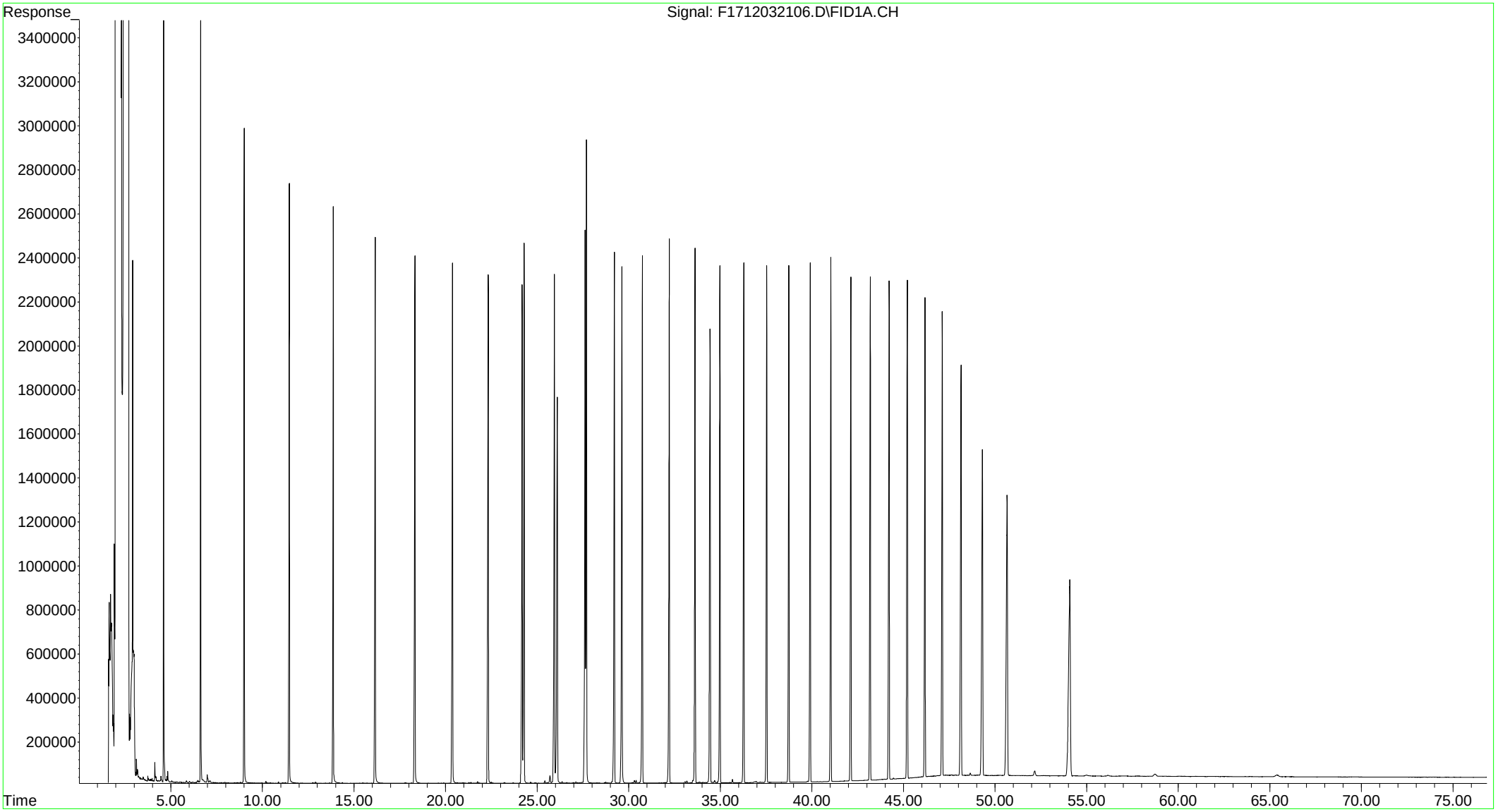


Petroleum Reference Standards

```
File       :O:\Forensics\LIBRARY\Hydrocarbon Reference Standards\JP-5 Fu
...         el.D
Operator  : PAH2:AC
Instrument :   PAH 2
Acquired  : 19 Nov 2011   4:22 pm using AcqMethod FRNC2AF.M
Sample    : JP-5 FUEL
Misc Info : F042710P
```



File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032106.D
Operator : FID17:CC
Acquired : 03 Dec 2021 1:41 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1579117-1
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 3



Total Saturated Hydrocarbons by GC/FID

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072152.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 10:22 pm
Operator : FID17:WR
Sample : L2165245-01,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 26 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:26:15 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072102F
Blank File : F1712072140.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.614	62038125	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.656	16107968	11.978	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.96%#		
24) s	d50-Tetracosane	34.412	12135687	11.374	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	22.75%#		
	Target Compounds					
2) t	n-Octane (C8)	4.559	4612446	4.300	ug/mL	M4
3) t	n-Nonane (C9)	6.597	26693629	23.323	ug/mL	M4
4) t	n-Decane (C10)	9.012	120766486	103.074	ug/mL	M4
5) t	n-Undecane (C11)	11.513	273055094	238.540	ug/mL	M4
6) t	n-Dodecane (C12)	13.919	293680913	255.854	ug/mL	M4
7) t	n-Tridecane (C13)	16.200	248461557	215.876	ug/mL	M4
8) t	1380	17.829	35017960	29.530	ug/mL	M4
9) t	n-Tetradecane (C14)	18.352	130460648	110.015	ug/mL	M4
10) t	1470	19.598	31152838	26.240	ug/mL	M4
11) t	n-Pentadecane (C15)	20.376	47100992	39.674	ug/mL	M4
12) t	n-Hexadecane (C16)	22.305	9283504	7.833	ug/mL	M4
13) t	1650	23.205	1273679	1.076	ug/mL	M4
14) t	n-Heptadecane (C17)	24.155	1915914	1.618	ug/mL	M4
15) t	Pristane	24.247	938944	0.765	ug/mL	M4
16) t	n-Octadecane (C18)	25.914	694853	0.577	ug/mL	M4
17) t	Phytane	26.059	209584	0.186	ug/mL	M4
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.208	91485	0.075	ug/mL	M4
21) t	n-Heneicosane (C21)	30.734	29216	0.024	ug/mL	M4
22) t	n-Docosane (C22)	32.200	28975	0.024	ug/mL	M4
23) t	n-Tricosane (C23)	33.590	30140	0.025	ug/mL	M4
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	d
29) t	n-Octacosane (C28)	39.808	431488	0.339	ug/mL	M4
30) t	n-Nonacosane (C29)	41.047	210724	0.169	ug/mL	M4
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	35.999	6550809885	5399.519	ug/mL	m
42) h	C9-C44 Total Petroleu BS	35.999	6239026755	5142.531	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072152.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 10:22 pm
Operator : FID17:WR
Sample : L2165245-01,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 26 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:26:15 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072102F
Blank File : F1712072140.D

Sub List : Default - All compounds listed

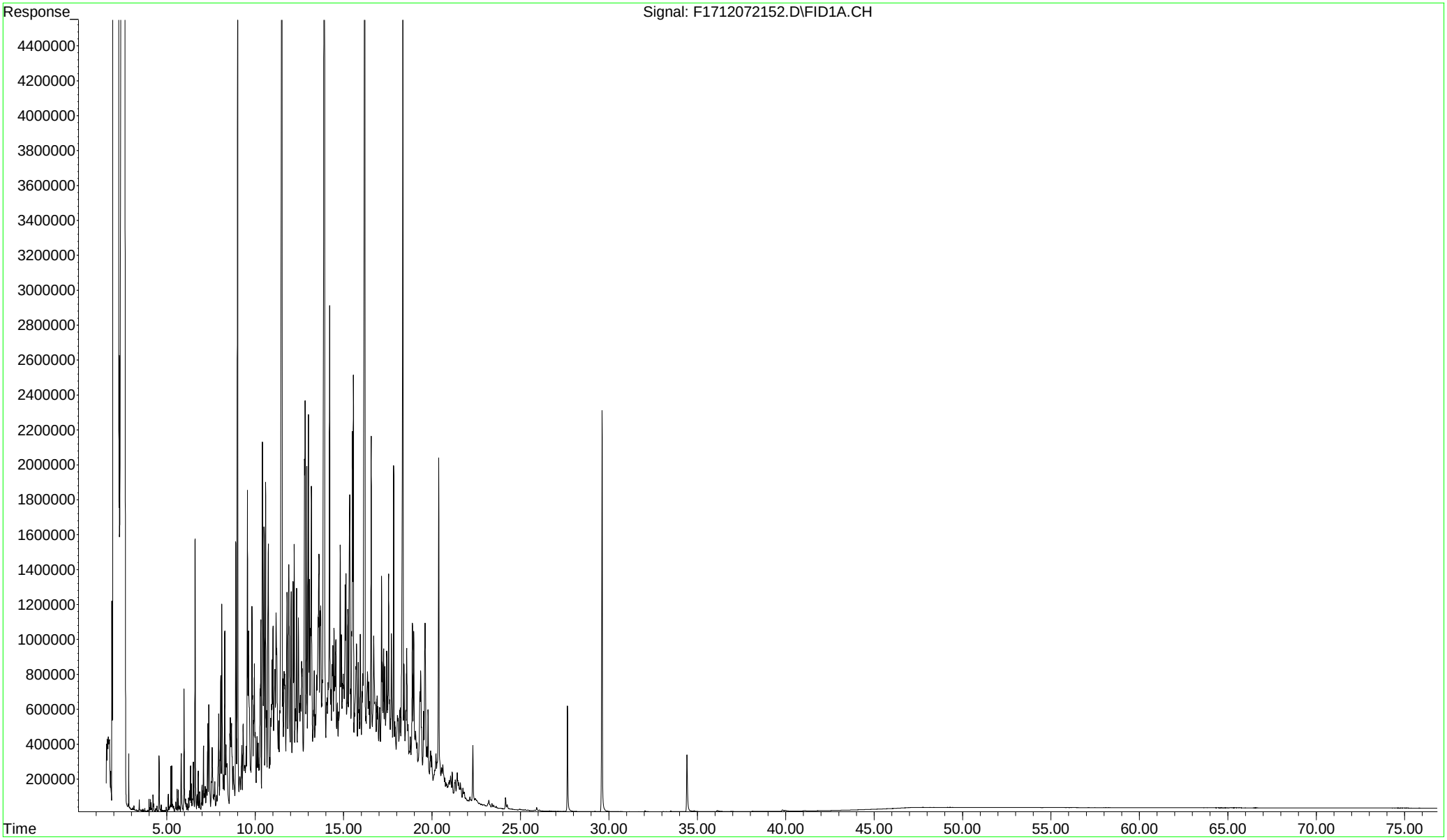
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	24.438	5919966444	4937.768	ug/mL	m
44) h	C10-C28 DRO BS	24.438	5897909240	4919.370	ug/mL	m
45) h	C28-C40 ORO	46.951	156056624	124.589	ug/mL	m
45) h	C28-C40 ORO BS	46.951	37676202	30.079	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	4529915104	3733.792	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072152.D
Operator : FID17:WR
Acquired : 08 Dec 2021 10:22 pm using AcqMethod FID17A.M
Sample Name: L2165245-01,42,,
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 26
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092112.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 4:56 pm
Operator : FID17:WR
Sample : L2165245-01D,42,2
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:32:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712092101F
Blank File : F1712092110.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.603	59247943	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.640	7573734	5.897	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	11.79%#		
24) s	d50-Tetracosane	34.405	5960826	5.850	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	11.70%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	d
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	d
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	d
5) t	n-Undecane (C11)	11.479	129162125	118.149	ug/mL	M4
6) t	n-Dodecane (C12)	13.880	139897884	127.619	ug/mL	M4
7) t	n-Tridecane (C13)	16.162	118783452	108.065	ug/mL	M4
8) t	1380	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	d
10) t	1470	0.000	0	N.D.	ug/mL	d
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	d
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	d
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	35.983	3246224368	2801.715	ug/mL	m
42) h	C9-C44 Total Petroleu BS	35.983	2930622487	2529.329	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC09\
Data File : F1712092112.D
Signal(s) : FID1A.CH
Acq On : 09 Dec 2021 4:56 pm
Operator : FID17:WR
Sample : L2165245-01D,42,2
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:32:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712092101F
Blank File : F1712092110.D

Sub List : Default - All compounds listed

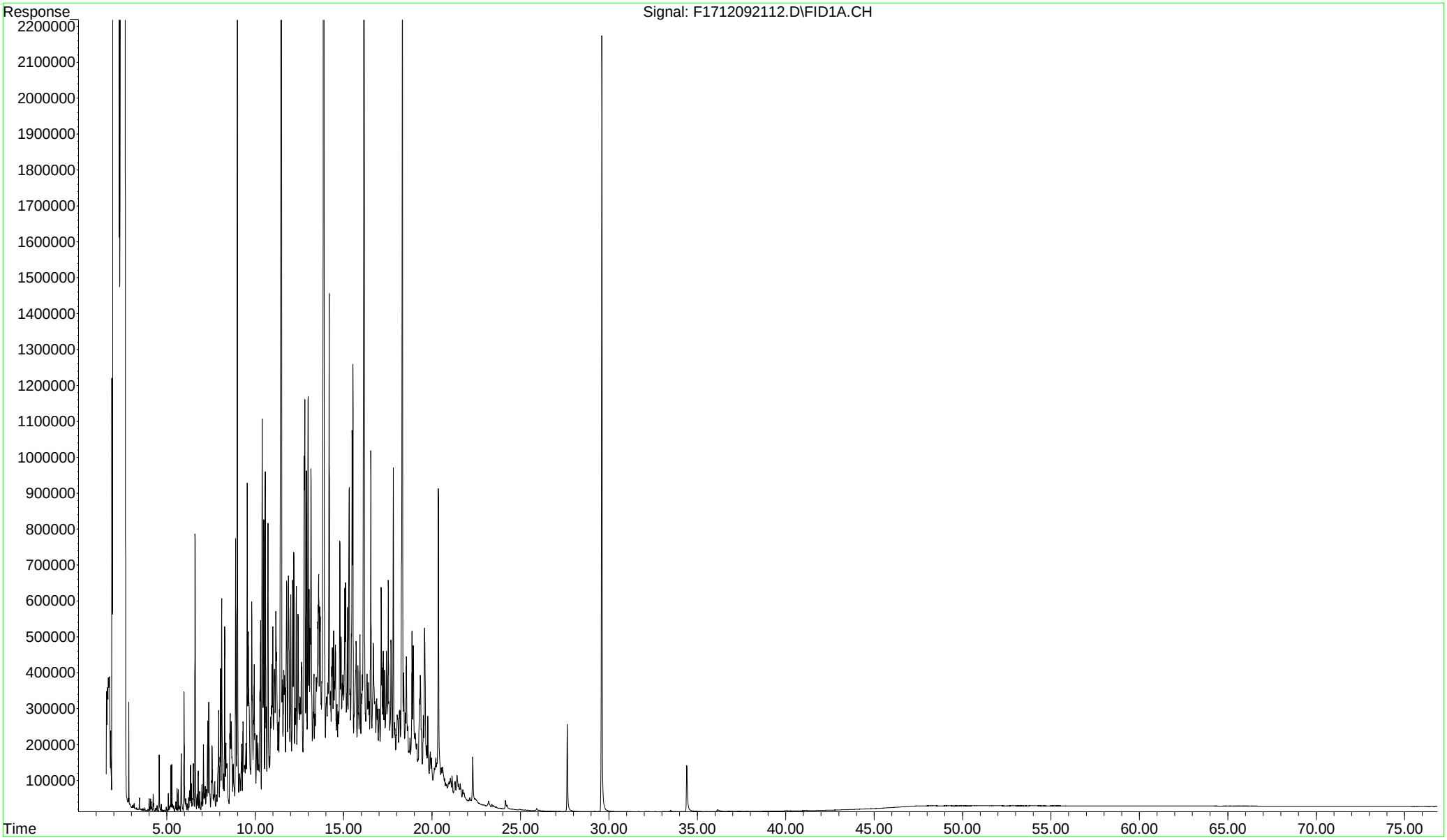
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	24.437	2844280130	2484.100	ug/mL	m
44) h	C10-C28 DRO BS	24.437	2821476656	2464.185	ug/mL	m
45) h	C28-C40 ORO	46.926	99110564	82.852	ug/mL	m
45) h	C28-C40 ORO BS	46.926	-9487031	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	2144120776	1850.524	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC09\F1712092112.D
Operator : FID17:WR
Acquired : 09 Dec 2021 4:56 pm using AcqMethod FID17A.M
Sample Name: L2165245-01D,42,2
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 6
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC09\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032160.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 5:23 am
Operator : FID17:MJS
Sample : L2165245-02D,42,10
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 30 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 13:35:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.606	57786466	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.651	456969	0.365	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.73%#		
24) s	d50-Tetracosane	34.407	337735	0.340	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.68%#		
	Target Compounds					
2) t	n-Octane (C8)	4.566	480393	0.481	ug/mL	M4
3) t	n-Nonane (C9)	6.594	5507811	5.166	ug/mL	M4
4) t	n-Decane (C10)	8.989	30758891	28.184	ug/mL	M4
5) t	n-Undecane (C11)	11.466	75633457	70.934	ug/mL	M4
6) t	n-Dodecane (C12)	13.868	79161810	74.040	ug/mL	M4
7) t	n-Tridecane (C13)	16.152	72921205	68.019	ug/mL	M4
8) t	1380	17.803	10118326	9.160	ug/mL	M4
9) t	n-Tetradecane (C14)	18.312	38906407	35.223	ug/mL	M4
10) t	1470	19.582	8821739	7.977	ug/mL	M4
11) t	n-Pentadecane (C15)	20.356	14394917	13.017	ug/mL	M4
12) t	n-Hexadecane (C16)	22.300	2817665	2.552	ug/mL	M4
13) t	1650	23.207	368167	0.334	ug/mL	M4
14) t	n-Heptadecane (C17)	24.156	597477	0.542	ug/mL	M4
15) t	Pristane	24.244	267911	0.234	ug/mL	M4
16) t	n-Octadecane (C18)	25.919	193847	0.173	ug/mL	M4
17) t	Phytane	26.062	52266	0.050	ug/mL	M4
18) t	n-Nonadecane (C19)	27.603	34014	0.030	ug/mL	M4
20) t	n-Eicosane (C20)	29.207	43516	0.038	ug/mL	M4
21) t	n-Heneicosane (C21)	30.742	13278	0.012	ug/mL	M4
22) t	n-Docosane (C22)	32.201	18244	0.016	ug/mL	M4
23) t	n-Tricosane (C23)	33.598	59165	0.052	ug/mL	M4
25) t	n-Tetracosane (C24)	34.952	46277	0.041	ug/mL	M4
26) t	n-Pentacosane (C25)	36.250	131242	0.118	ug/mL	M4
27) t	n-Hexacosane (C26)	37.506	55238	0.048	ug/mL	M4
28) t	n-Heptacosane (C27)	38.713	61721	0.054	ug/mL	M4
29) t	n-Octacosane (C28)	39.875	52789	0.045	ug/mL	M4
30) t	n-Nonacosane (C29)	41.002	45341	0.039	ug/mL	M4
31) t	n-Triacontane (C30)	42.088	33257	0.028	ug/mL	M4
32) t	n-Hentriacontane (C31)	43.146	32880	0.029	ug/mL	M4
33) t	n-Dotriacontane (C32)	44.168	23816	0.020	ug/mL	M4
34) t	n-Tritriacontane (C33)	45.157	16609	0.014	ug/mL	M4
35) t	n-tetratriacontane (C34)	46.131	13127	0.011	ug/mL	M4
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.038	1972877555	1745.793	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.038	1727019491	1528.234	ug/mL	m
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032160.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 5:23 am
Operator : FID17:MJS
Sample : L2165245-02D,42,10
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 30 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 13:35:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

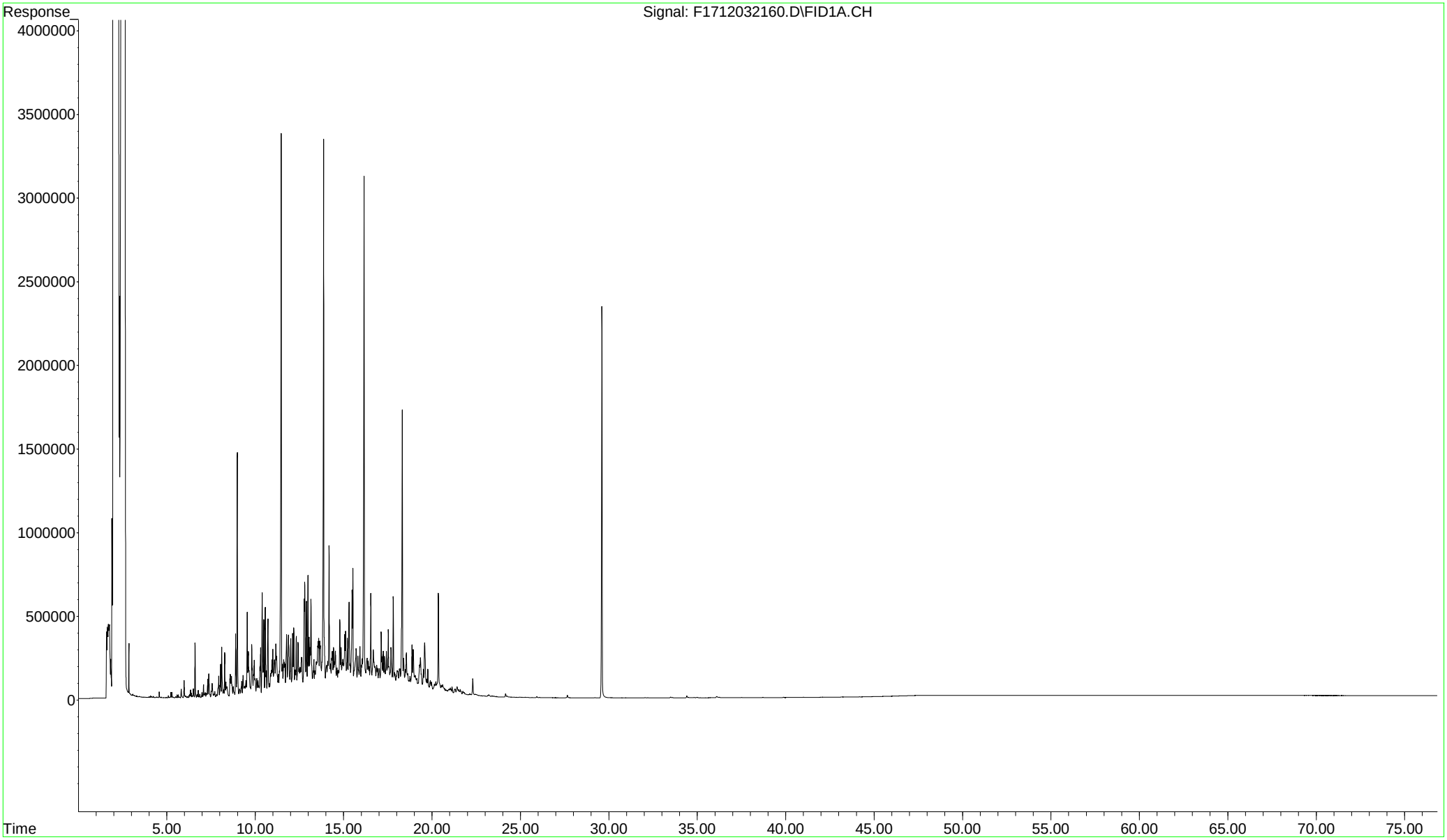
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	24.454	1691753548	1514.890	ug/mL	m
44) h	C10-C28 DRO BS	24.454	1671800802	1497.023	ug/mL	m
45) h	C28-C40 ORO	46.963	79497262	68.137	ug/mL	m
45) h	C28-C40 ORO BS	46.963	-2106615	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	1256471539	1111.848	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032160.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 5:23 am using AcqMethod FID17A.M
Sample Name: L2165245-02D,42,10
Instrument: FID17
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 30
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032162.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 6:51 am
Operator : FID17:MJS
Sample : L2165245-03D,42,20
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 31 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 13:37:48 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.606	57794619	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.651	367259	0.293	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.59%#		
24) s	d50-Tetracosane	34.410	273297	0.275	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.55%#		
	Target Compounds					
2) t	n-Octane (C8)	4.568	293747	0.294	ug/mL	M4
3) t	n-Nonane (C9)	6.596	4283196	4.017	ug/mL	M4
4) t	n-Decane (C10)	8.988	25847036	23.680	ug/mL	M4
5) t	n-Undecane (C11)	11.464	65029431	60.981	ug/mL	M4
6) t	n-Dodecane (C12)	13.865	68492010	64.051	ug/mL	M4
7) t	n-Tridecane (C13)	16.149	63257568	58.997	ug/mL	M4
8) t	1380	17.802	8690557	7.867	ug/mL	M4
9) t	n-Tetradecane (C14)	18.311	33719467	30.523	ug/mL	M4
10) t	1470	19.580	7839341	7.088	ug/mL	M4
11) t	n-Pentadecane (C15)	20.355	12565433	11.361	ug/mL	M4
12) t	n-Hexadecane (C16)	22.301	2416275	2.189	ug/mL	M4
13) t	1650	23.208	318389	0.289	ug/mL	M4
14) t	n-Heptadecane (C17)	24.160	520063	0.472	ug/mL	M4
15) t	Pristane	24.247	232045	0.203	ug/mL	M4
16) t	n-Octadecane (C18)	25.923	167041	0.149	ug/mL	M4
17) t	Phytane	26.064	51647	0.049	ug/mL	M4
18) t	n-Nonadecane (C19)	27.594	19260	0.017	ug/mL	M4
20) t	n-Eicosane (C20)	29.203	38817	0.034	ug/mL	M4
21) t	n-Heneicosane (C21)	30.751	11329	0.010	ug/mL	M4
22) t	n-Docosane (C22)	32.204	14545	0.013	ug/mL	M4
23) t	n-Tricosane (C23)	33.603	57498	0.050	ug/mL	M4
25) t	n-Tetracosane (C24)	34.954	54133	0.048	ug/mL	M4
26) t	n-Pentacosane (C25)	36.261	131795	0.119	ug/mL	M4
27) t	n-Hexacosane (C26)	37.511	49357	0.043	ug/mL	M4
28) t	n-Heptacosane (C27)	38.714	59292	0.052	ug/mL	M4
29) t	n-Octacosane (C28)	39.878	46861	0.040	ug/mL	M4
30) t	n-Nonacosane (C29)	41.004	37455	0.032	ug/mL	M4
31) t	n-Triacontane (C30)	42.090	31225	0.027	ug/mL	M4
32) t	n-Hentriacontane (C31)	43.150	28724	0.025	ug/mL	M4
33) t	n-Dotriacontane (C32)	44.171	19114	0.016	ug/mL	M4
34) t	n-Tritriacontane (C33)	45.162	13876	0.012	ug/mL	M4
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.038	1737961458	1537.700	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.038	1492103394	1320.171	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032162.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 6:51 am
Operator : FID17:MJS
Sample : L2165245-03D,42,20
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 31 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 13:37:48 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

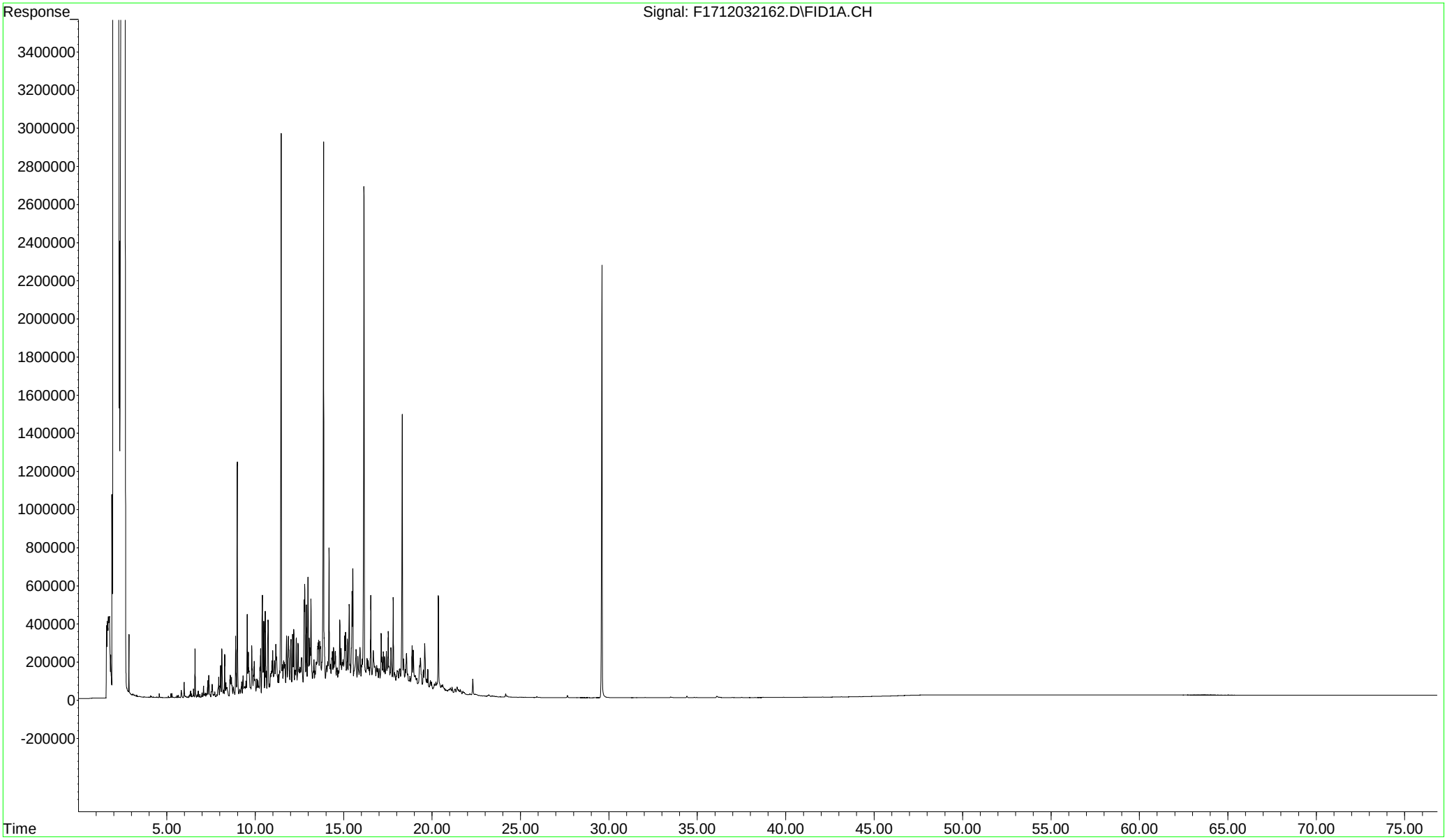
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	24.454	1472642252	1318.499	ug/mL	m
44) h	C10-C28 DRO BS	24.454	1452689506	1300.635	ug/mL	m
45) h	C28-C40 ORO	46.963	76932667	65.929	ug/mL	m
45) h	C28-C40 ORO BS	46.963	-4671210	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	1058070931	936.151	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032162.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 6:51 am using AcqMethod FID17A.M
Sample Name: L2165245-03D,42,20
Instrument: FID17
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 31
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072116.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 7:51 pm
Operator : FID17:WR
Sample : WG1579479-1,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:24:18 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.604	61371340	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.646	15269974	11.478	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	22.96%#		
24) s	d50-Tetracosane	34.400	11158326	10.571	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	21.14%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	25.840	230568C	0.194	ug/mL	M4
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	36.135f	531759C	0.451	ug/mL	M4
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	39.903	75357	0.060	ug/mL	M4
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	35.999	246213031	205.147	ug/mL	m
42) h	C9-C44 Total Petroleu BS	35.999	-28862190	N.D.	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072116.D
Signal(s) : FID1A.CH
Acq On : 07 Dec 2021 7:51 pm
Operator : FID17:WR
Sample : WG1579479-1,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:24:18 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

Sub List : Default - All compounds listed

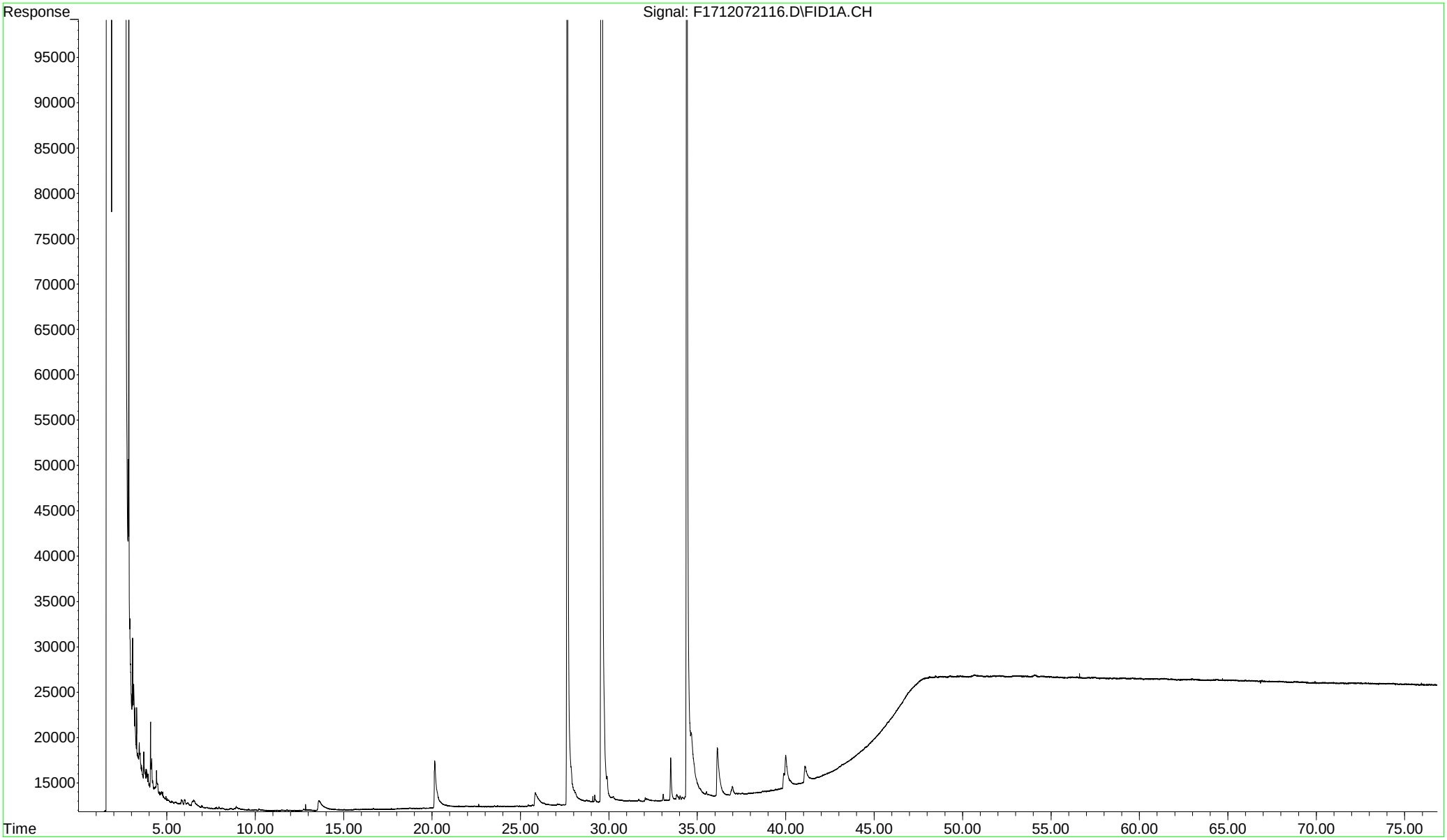
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	24.438	26207252	22.097	ug/mL	m
44) h	C10-C28 DRO BS	24.438	2713077	2.288	ug/mL	m
45) h	C28-C40 ORO	46.951	82294602	66.414	ug/mL	m
45) h	C28-C40 ORO BS	46.951	-15963565	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	4591974	3.826	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072116.D
Operator : FID17:WR
Acquired : 07 Dec 2021 7:51 pm using AcqMethod FID17A.M
Sample Name: WG1579479-1,42,,
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 8
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032112.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 6:07 pm
Operator : FID17:MJS
Sample : WG1577487-1
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 11:56:06 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.625	58081572	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.684	62387429	49.550	ug/mL	M4
Spiked Amount	50.000 Range 50 - 130		Recovery =	99.10%		
24) s	d50-Tetracosane	34.429	48556869	48.609	ug/mL	
Spiked Amount	50.000 Range 50 - 130		Recovery =	97.22%		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	8.988	32393	0.030	ug/mL	M4
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	36.248	36800	0.033	ug/mL	M4
27) t	n-Hexacosane (C26)	37.498	22492	0.020	ug/mL	M4
28) t	n-Heptacosane (C27)	38.711	29302	0.025	ug/mL	M4
29) t	n-Octacosane (C28)	39.884	1274258C	1.070	ug/mL	M4
30) t	n-Nonacosane (C29)	40.954	960030C	0.822	ug/mL	M4
31) t	n-Triacontane (C30)	42.102	17136	0.015	ug/mL	M4
32) t	n-Hentriacontane (C31)	43.158	15718	0.014	ug/mL	M4
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.038	362805540	319.414	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.038	-896212	N.D.	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032112.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 6:07 pm
Operator : FID17:MJS
Sample : WG1577487-1
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 11:56:06 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : Default - All compounds listed

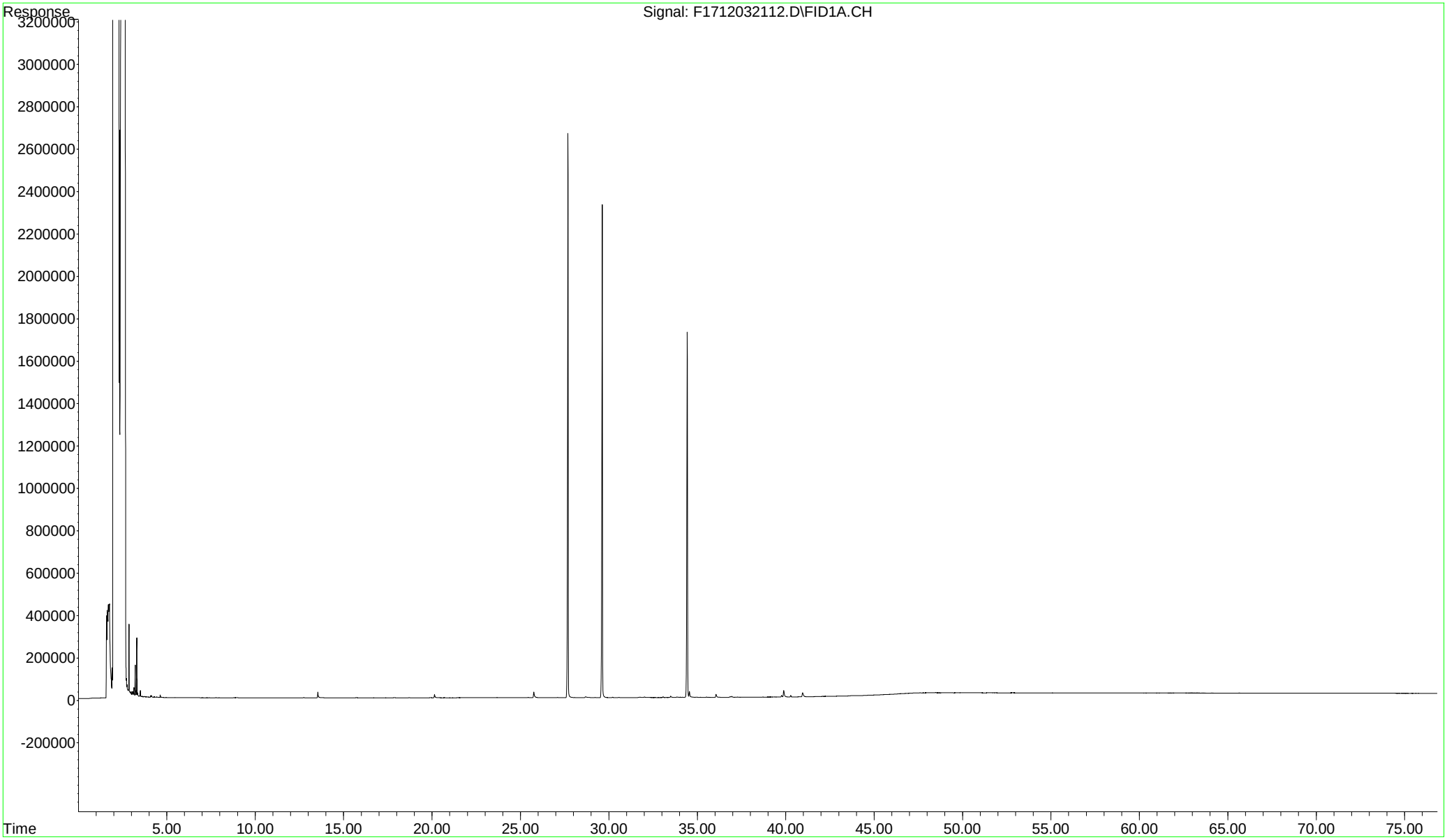
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	24.454	40069972	35.699	ug/mL	m
44) h	C10-C28 DRO BS	24.454	13957932	12.435	ug/mL	m
45) h	C28-C40 ORO	46.963	132420232	112.920	ug/mL	m
45) h	C28-C40 ORO BS	46.963	-5466569	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	13809594	12.158	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032112.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 6:07 pm using AcqMethod FID17A.M
Sample Name: WG1577487-1
Instrument: FID17
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 6
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032114.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 7:35 pm
Operator : FID17:MJS
Sample : WG1577488-1
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:03:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.620	55444600	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.676	49611921	41.278	ug/mL	M4
Spiked Amount	50.000 Range 50 - 130		Recovery =	82.56%		
24) s	d50-Tetracosane	34.422	39424922	41.344	ug/mL	M4
Spiked Amount	50.000 Range 50 - 130		Recovery =	82.69%		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	6.600	19825	0.019	ug/mL	M4
4) t	n-Decane (C10)	8.990	33174	0.032	ug/mL	M4
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	22.318	59092	0.056	ug/mL	M4
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	25.912	117450	0.109	ug/mL	M4
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.201	64571	0.059	ug/mL	M4
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	32.189	20424	0.019	ug/mL	M4
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	34.954	33437	0.031	ug/mL	M4
26) t	n-Pentacosane (C25)	36.251	51422	0.048	ug/mL	M4
27) t	n-Hexacosane (C26)	37.500	26425	0.024	ug/mL	M4
28) t	n-Heptacosane (C27)	38.710	29994	0.027	ug/mL	M4
29) t	n-Octacosane (C28)	39.889	1017038C	0.894	ug/mL	M4
30) t	n-Nonacosane (C29)	40.961	763642C	0.685	ug/mL	M4
31) t	n-Triacontane (C30)	42.091	14854	0.013	ug/mL	M4
32) t	n-Hentriacontane (C31)	43.161	13419	0.012	ug/mL	M4
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.038	341000312	314.495	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.038	-22701440	N.D.	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032114.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 7:35 pm
Operator : FID17:MJS
Sample : WG1577488-1
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:03:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

Sub List : Default - All compounds listed

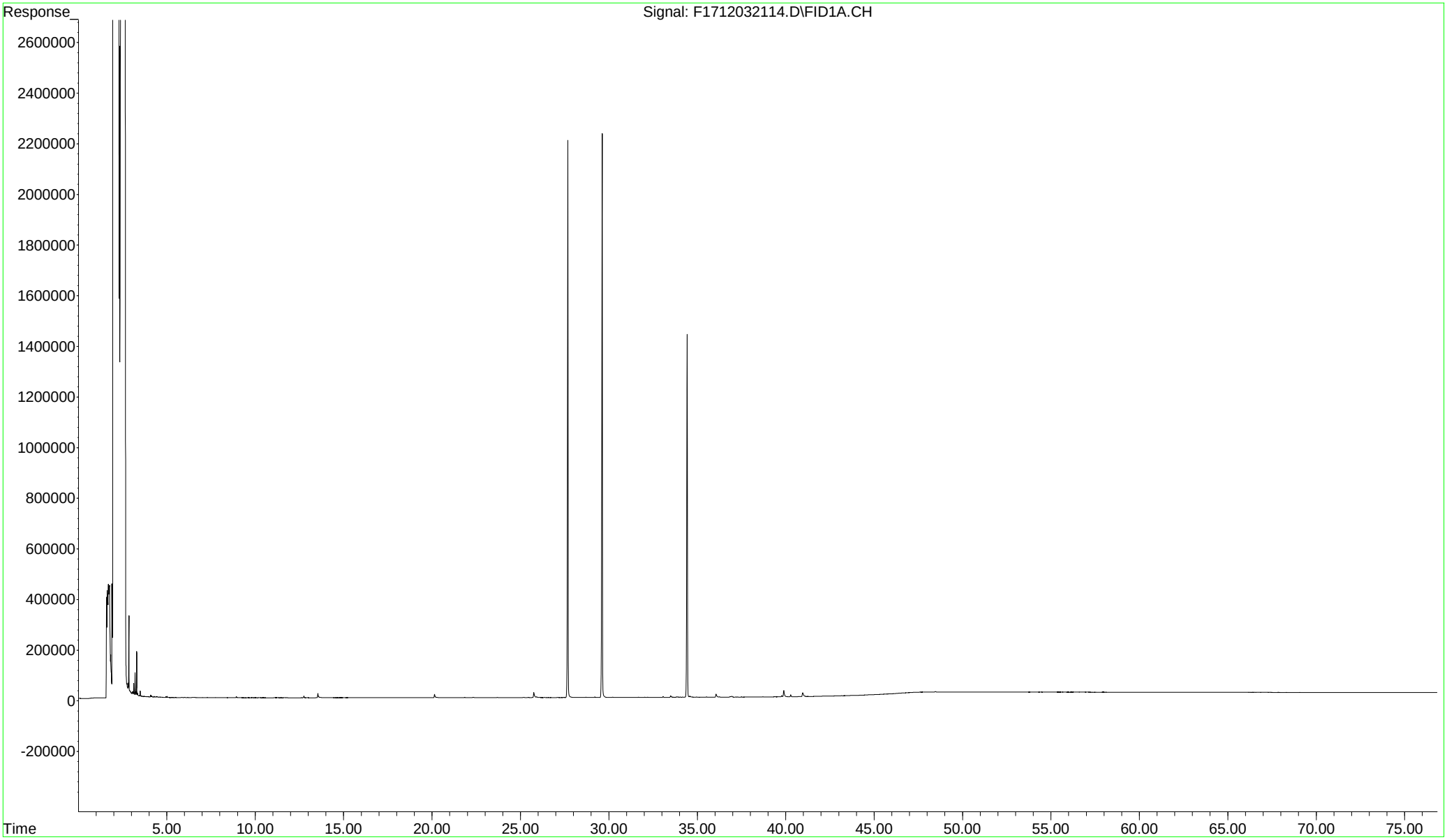
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	24.454	35109737	32.767	ug/mL	m
44) h	C10-C28 DRO BS	24.454	8997697	8.397	ug/mL	m
45) h	C28-C40 ORO	46.963	122891061	109.778	ug/mL	m
45) h	C28-C40 ORO BS	46.963	-14995740	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	9905554	9.136	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032114.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 7:35 pm using AcqMethod FID17A.M
Sample Name: WG1577488-1
Instrument: FID17
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 7
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072122.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 12:16 am
Operator : FID17:WR
Sample : WG1579479-2,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:22:11 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

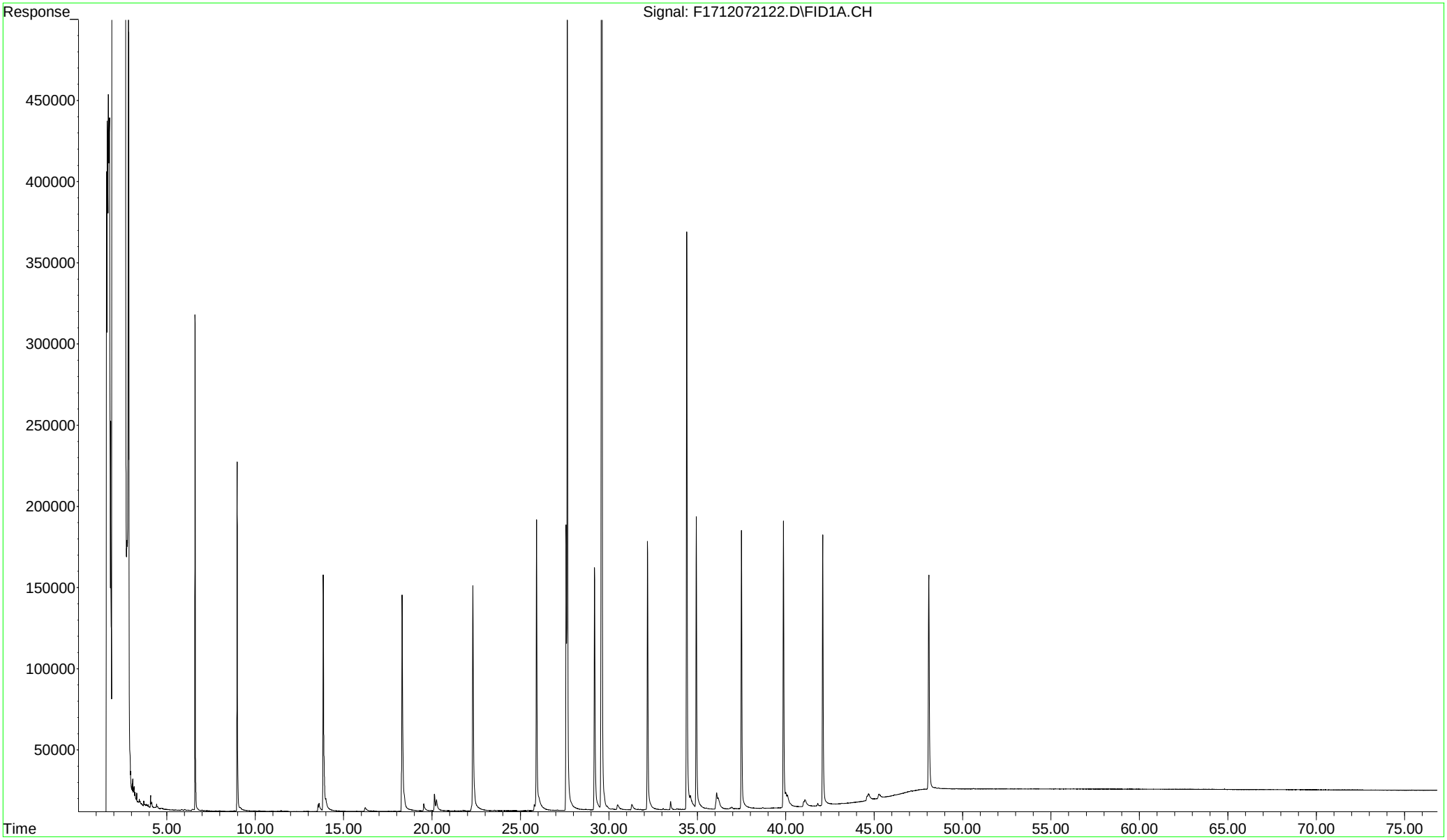
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.607	62237681	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.647	16812688	12.462 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	24.92%#
24) s	d50-Tetracosane	34.400	11763397	10.990 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	21.98%#
	Target Compounds			
3) t	n-Nonane (C9)	6.595	4937726	4.300 ug/mL M4
4) t	n-Decane (C10)	8.978	4666467	3.970 ug/mL M4
6) t	n-Dodecane (C12)	13.843	4638278	4.028 ug/mL M4
9) t	n-Tetradecane (C14)	18.303	5425237	4.560 ug/mL M4
12) t	n-Hexadecane (C16)	22.303	5843333	4.915 ug/mL M4
16) t	n-Octadecane (C18)	25.904	6275018	5.196 ug/mL M4
18) t	n-Nonadecane (C19)	27.583	4527952	3.738 ug/mL M4
20) t	n-Eicosane (C20)	29.184	5579498	4.580 ug/mL M4
22) t	n-Docosane (C22)	32.181	5694365	4.652 ug/mL M4
25) t	n-Tetracosane (C24)	34.941	6020854	4.924 ug/mL M4
27) t	n-Hexacosane (C26)	37.499	5813426	4.734 ug/mL M4
29) t	n-Octacosane (C28)	39.871	5553705	4.350 ug/mL M4
31) t	n-Triacontane (C30)	42.091	5670668	4.511 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.094	5292736	3.815 ug/mL M4
42) h	C9-C44 Total Petroleu...	35.999	321922075	264.494 ug/mL m
42) h	C9-C44 Total Petroleu BS	35.999	46846854	38.490 ug/mLm
46) h	Total Resolved Hydroc...	36.038	81914950	67.302 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072122.D
Operator : FID17:WR
Acquired : 08 Dec 2021 12:16 am using AcqMethod FID17A.M
Sample Name: WG1579479-2,42,,
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07\
Data File : F1712072124.D
Signal(s) : FID1A.CH
Acq On : 08 Dec 2021 1:44 am
Operator : FID17:WR
Sample : WG1579479-3,42,,
Misc : WG1580304,WG1579479,ICAL18012
ALS Vial : 12 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 13:22:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 10:12:55 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712072101F
Blank File : F1712072110.D

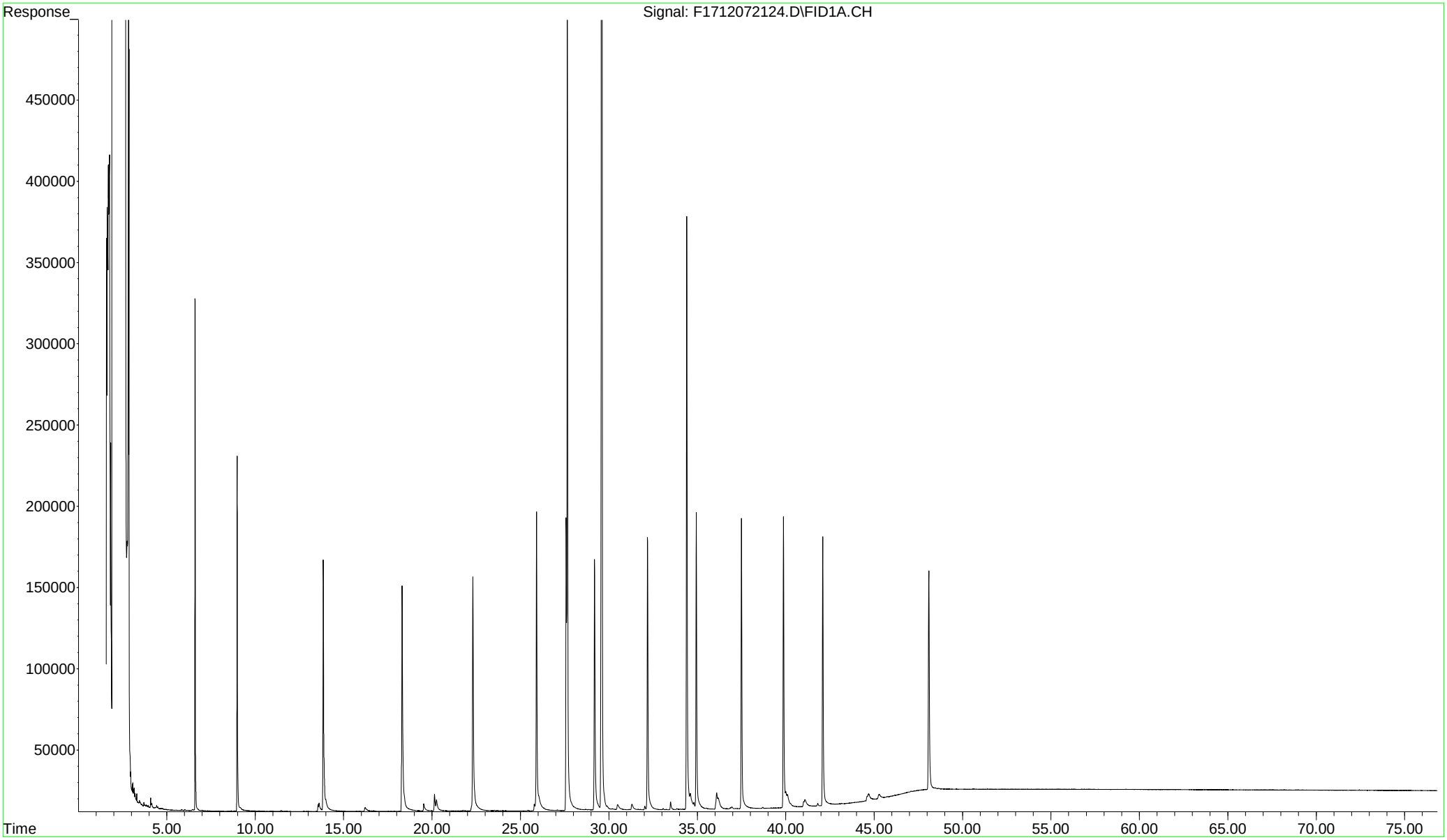
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.607	61433288	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.648	17621588	13.232 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	26.46%#
24) s	d50-Tetracosane	34.399	12078598	11.432 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	22.86%#
	Target Compounds			
3) t	n-Nonane (C9)	6.596	5066435	4.470 ug/mL M4
4) t	n-Decane (C10)	8.979	4825703	4.159 ug/mL M4
6) t	n-Dodecane (C12)	13.844	4840491	4.259 ug/mL M4
9) t	n-Tetradecane (C14)	18.301	5663065	4.823 ug/mL M4
12) t	n-Hexadecane (C16)	22.304	6043050	5.149 ug/mL M4
16) t	n-Octadecane (C18)	25.906	6494563	5.448 ug/mL M4
18) t	n-Nonadecane (C19)	27.581	4711071	3.940 ug/mL M4
20) t	n-Eicosane (C20)	29.183	5790247	4.815 ug/mL M4
22) t	n-Docosane (C22)	32.184	5915217	4.896 ug/mL M4
25) t	n-Tetracosane (C24)	34.940	6215167	5.150 ug/mL M4
27) t	n-Hexacosane (C26)	37.494	6006189	4.955 ug/mL M4
29) t	n-Octacosane (C28)	39.872	5687301	4.513 ug/mL M4
31) t	n-Triacontane (C30)	42.094	5836660	4.704 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.096	5460819	3.988 ug/mL M4
42) h	C9-C44 Total Petroleu...	35.999	323661402	269.405 ug/mL m
42) h	C9-C44 Total Petroleu BS	35.999	48586181	40.442 ug/mLm
46) h	Total Resolved Hydroc...	36.038	83069243	69.144 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07\F1712072124.D
Operator : FID17:WR
Acquired : 08 Dec 2021 1:44 am using AcqMethod FID17A.M
Sample Name: WG1579479-3,42,,
Instrument: FID17
Misc Info : WG1580304,WG1579479,ICAL18012
Vial Number: 12
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032116.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 9:03 pm
Operator : FID17:MJS
Sample : WG1577487-2
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:06:26 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

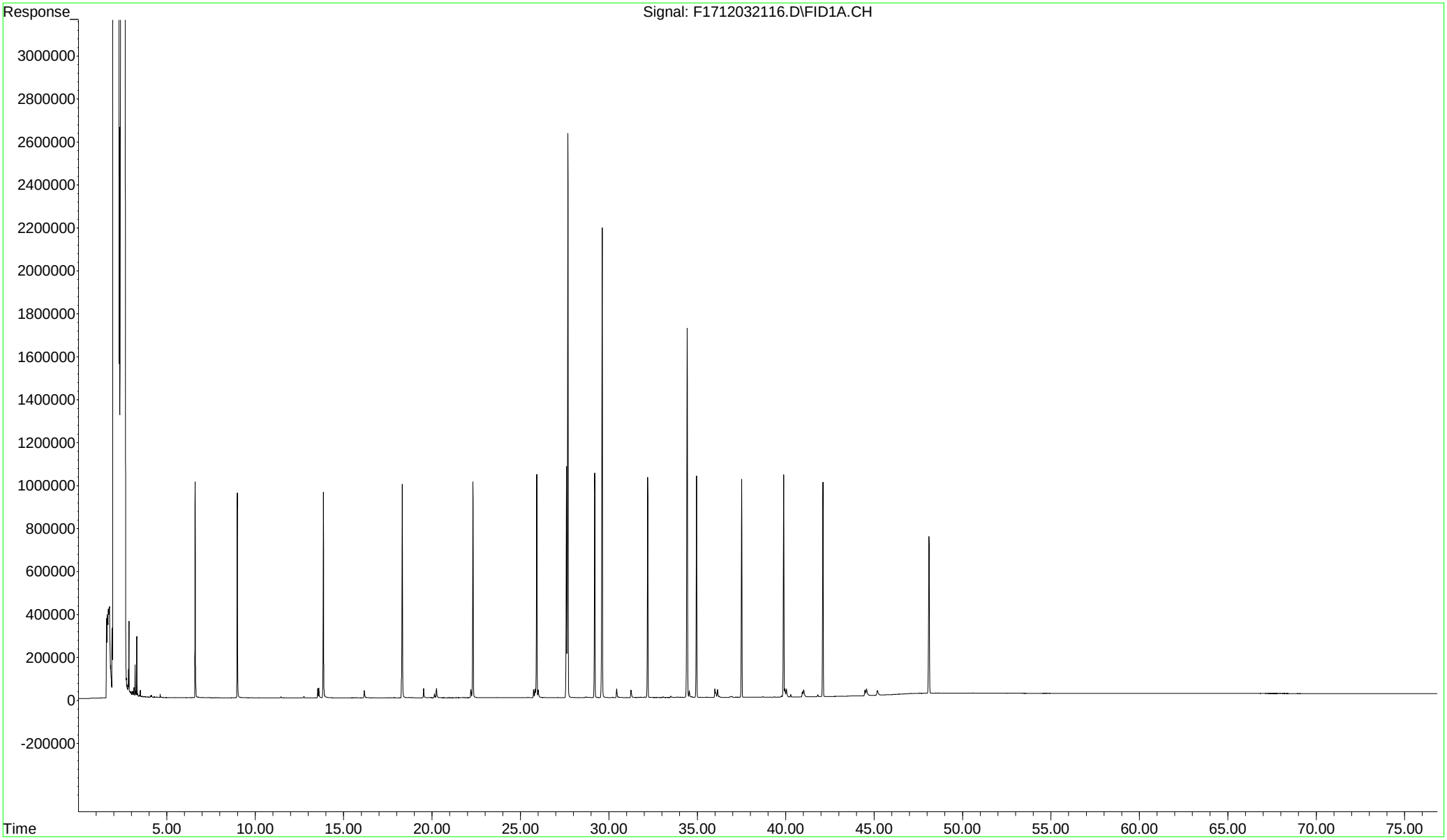
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.623	56133142	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.684	60202054	49.474 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	98.95%
24) s	d50-Tetracosane	34.426	48331158	50.062 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	100.12%
	Target Compounds			
3) t	n-Nonane (C9)	6.601	16039602	15.489 ug/mL M4
4) t	n-Decane (C10)	8.990	18649911	17.592 ug/mL M4
6) t	n-Dodecane (C12)	13.854	20318767	19.564 ug/mL M4
9) t	n-Tetradecane (C14)	18.312	21698544	20.223 ug/mL M4
12) t	n-Hexadecane (C16)	22.312	22550381	21.030 ug/mL M4
16) t	n-Octadecane (C18)	25.920	23476898	21.554 ug/mL M4
18) t	n-Nonadecane (C19)	27.598	24569152	22.488 ug/mL M4
20) t	n-Eicosane (C20)	29.199	23613686	21.491 ug/mL M4
22) t	n-Docosane (C22)	32.192	23646083	21.418 ug/mL M4
25) t	n-Tetracosane (C24)	34.956	24175967	21.923 ug/mL M4
27) t	n-Hexacosane (C26)	37.507	24114131	21.770 ug/mL M4
29) t	n-Octacosane (C28)	39.885	25330808	22.000 ug/mL M4
31) t	n-Triacontane (C30)	42.106	24040336	21.205 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.102	22688812	18.132 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	670076778	610.413 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	306375026	279.095 ug/mLm
46) h	Total Resolved Hydroc...	36.038	345758662	314.972 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032116.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 9:03 pm using AcqMethod FID17A.M
Sample Name: WG1577487-2
Instrument: FID17
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 8
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032118.D
Signal(s) : FID1A.CH
Acq On : 03 Dec 2021 10:32 pm
Operator : FID17:MJS
Sample : WG1577487-3
Misc : WG1579117,WG1577487,ICAL18012
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:10:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

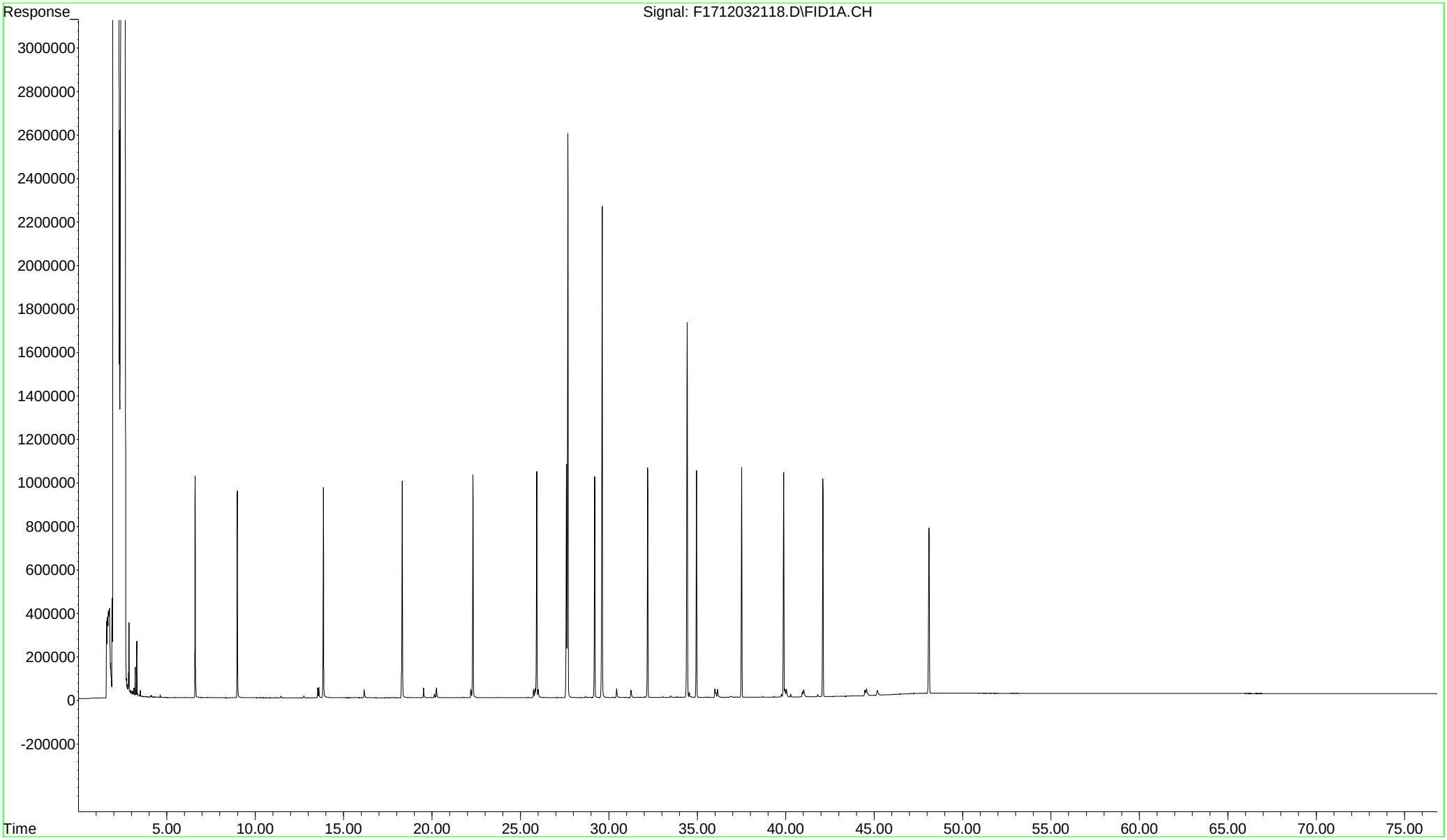
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.622	56455297	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.682	60958191	49.810 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	99.62%
24) s	d50-Tetracosane	34.426	49129061	50.598 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	101.20%
	Target Compounds			
3) t	n-Nonane (C9)	6.601	16086750	15.446 ug/mL M4
4) t	n-Decane (C10)	8.989	19030623	17.849 ug/mL M4
6) t	n-Dodecane (C12)	13.854	20816678	19.929 ug/mL M4
9) t	n-Tetradecane (C14)	18.311	22156793	20.532 ug/mL M4
12) t	n-Hexadecane (C16)	22.311	23140506	21.457 ug/mL M4
16) t	n-Octadecane (C18)	25.918	23877059	21.796 ug/mL M4
18) t	n-Nonadecane (C19)	27.599	25441841	23.154 ug/mL M4
20) t	n-Eicosane (C20)	29.196	23908674	21.635 ug/mL M4
22) t	n-Docosane (C22)	32.192	23922591	21.545 ug/mL M4
25) t	n-Tetracosane (C24)	34.955	24436765	22.033 ug/mL M4
27) t	n-Hexacosane (C26)	37.508	24373333	21.879 ug/mL M4
29) t	n-Octacosane (C28)	39.881	25606089	22.112 ug/mL M4
31) t	n-Triacontane (C30)	42.104	24460021	21.452 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.101	24465195	19.440 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	674466700	610.906 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	310764948	281.479 ug/mLm
46) h	Total Resolved Hydroc...	36.038	357504983	323.814 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032118.D
Operator : FID17:MJS
Acquired : 03 Dec 2021 10:32 pm using AcqMethod FID17A.M
Sample Name: WG1577487-3
Instrument: FID17
Misc Info : WG1579117,WG1577487,ICAL18012
Vial Number: 9
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032120.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 12:00 am
Operator : FID17:MJS
Sample : WG1577488-2
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:14:14 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

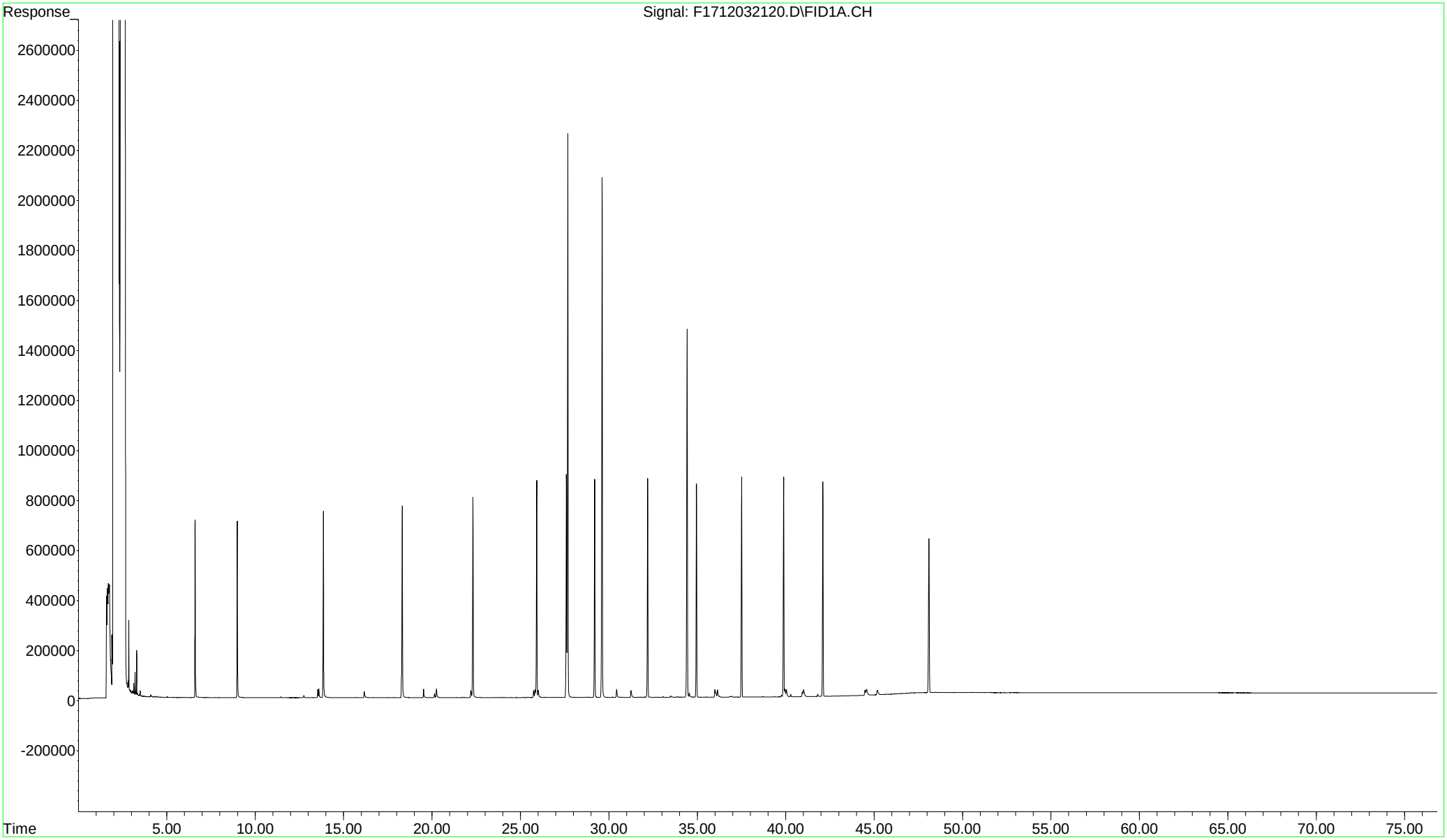
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.617	51793438	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.676	50817329	45.261 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	90.52%
24) s	d50-Tetracosane	34.423	41115680	46.157 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	92.31%
	Target Compounds			
3) t	n-Nonane (C9)	6.598	11430005	11.962 ug/mL M4
4) t	n-Decane (C10)	8.986	14301554	14.621 ug/mL M4
6) t	n-Dodecane (C12)	13.851	15953823	16.648 ug/mL M4
9) t	n-Tetradecane (C14)	18.309	17117026	17.290 ug/mL M4
12) t	n-Hexadecane (C16)	22.308	18274276	18.470 ug/mL M4
16) t	n-Octadecane (C18)	25.916	19577477	19.480 ug/mL M4
18) t	n-Nonadecane (C19)	27.594	20584840	20.420 ug/mL M4
20) t	n-Eicosane (C20)	29.196	19996489	19.724 ug/mL M4
22) t	n-Docosane (C22)	32.190	20109276	19.741 ug/mL M4
25) t	n-Tetracosane (C24)	34.951	20509355	20.157 ug/mL M4
27) t	n-Hexacosane (C26)	37.505	20545999	20.103 ug/mL M4
29) t	n-Octacosane (C28)	39.881	21546497	20.281 ug/mL M4
31) t	n-Triacontane (C30)	42.100	20475621	19.574 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.098	19520730	16.907 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	598432535	590.825 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	234730783	231.747 ug/mLm
46) h	Total Resolved Hydroc...	36.038	288536765	284.869 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032120.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 12:00 am using AcqMethod FID17A.M
Sample Name: WG1577488-2
Instrument: FID17
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 10
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032122.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 1:28 am
Operator : FID17:MJS
Sample : WG1577488-3
Misc : WG1579117,WG1577488,ICAL18012
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 07 12:17:54 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

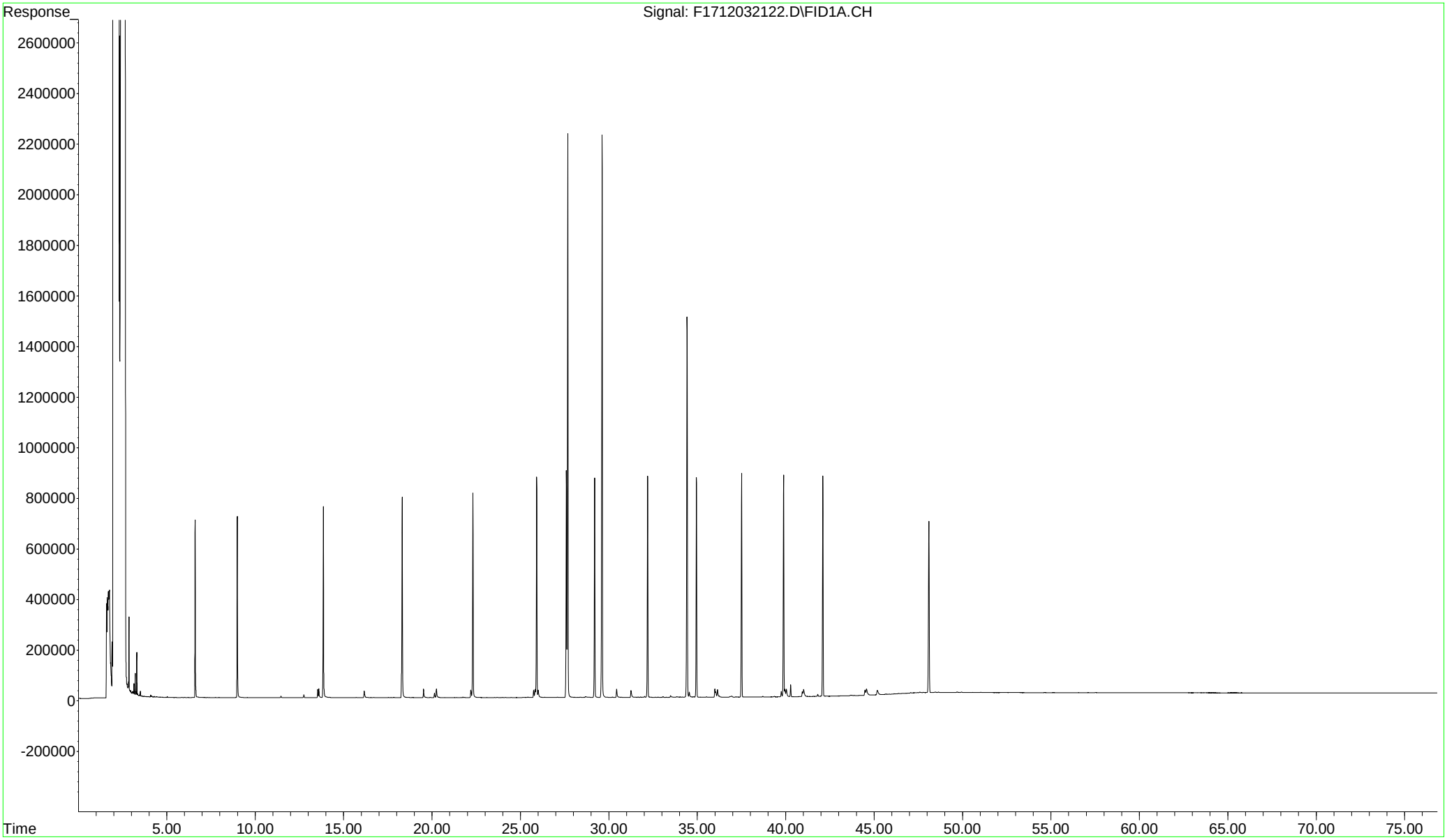
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.618	55554887	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.678	51023288	42.368 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	84.74%
24) s	d50-Tetracosane	34.420	41442245	43.373 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	86.75%
	Target Compounds			
3) t	n-Nonane (C9)	6.600	11159175	10.888 ug/mL M4
4) t	n-Decane (C10)	8.988	14385749	13.711 ug/mL M4
6) t	n-Dodecane (C12)	13.851	16265945	15.825 ug/mL M4
9) t	n-Tetradecane (C14)	18.309	17469601	16.451 ug/mL M4
12) t	n-Hexadecane (C16)	22.308	18564327	17.493 ug/mL M4
16) t	n-Octadecane (C18)	25.916	19724803	18.297 ug/mL M4
18) t	n-Nonadecane (C19)	27.594	20761306	19.201 ug/mL M4
20) t	n-Eicosane (C20)	29.193	20010568	18.401 ug/mL M4
22) t	n-Docosane (C22)	32.191	20145839	18.438 ug/mL M4
25) t	n-Tetracosane (C24)	34.950	20572572	18.850 ug/mL M4
27) t	n-Hexacosane (C26)	37.505	20619379	18.809 ug/mL M4
29) t	n-Octacosane (C28)	39.880	21673816	19.020 ug/mL M4
31) t	n-Triacontane (C30)	42.099	20734144	18.479 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.097	20706555	16.720 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	604458501	556.369 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	240756749	221.603 ug/mLm
46) h	Total Resolved Hydroc...	36.038	290687453	267.561 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

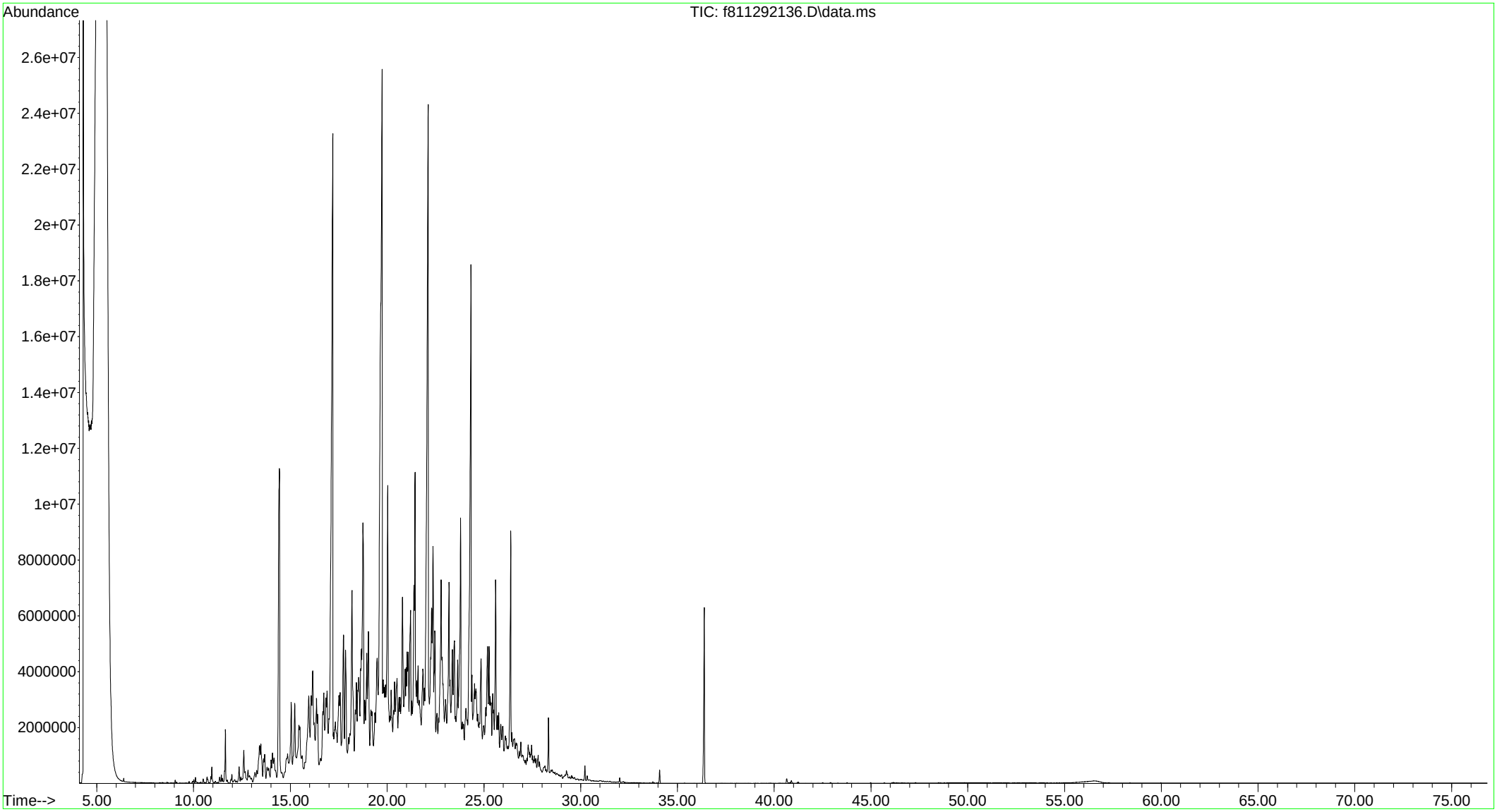
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032122.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 1:28 am using AcqMethod FID17A.M
Sample Name: WG1577488-3
Instrument: FID17
Misc Info : WG1579117,WG1577488,ICAL18012
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Library Search

Reports

File :O:\Forensics\Data\PAH8\2021\NOV21\NOV29\f811292136.D
Operator :
Acquired : 1 Dec 2021 4:19 pm using AcqMethod FRNC8AF.M
Instrument : PAH8
Sample Name: l2165245-02,42,,
Misc Info : FULL SCAN
Vial Number: 36



Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Title : Decalins & Alkylated PAH's

Signal : TIC: f811292136.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.393	387	392	400	rVB	125995	209785	0.42%	0.197%
2	8.245	703	707	711	rBV3	13922	23913	0.05%	0.022%
3	8.381	725	730	734	rBV	23823	39605	0.08%	0.037%
4	8.634	767	773	792	rVB2	34560	101476	0.20%	0.095%
5	8.851	804	810	815	rBV6	11971	23566	0.05%	0.022%
6	9.045	836	843	850	rBV	114443	211700	0.42%	0.198%
7	9.116	850	855	873	rVB3	40283	93434	0.19%	0.088%
8	9.287	879	884	893	rBV5	16740	34627	0.07%	0.032%
9	9.445	907	911	916	rVB6	5179	8260	0.02%	0.008%
10	9.610	933	939	948	rVB4	15227	32858	0.07%	0.031%
11	9.769	960	966	974	rBV2	64428	126021	0.25%	0.118%
12	9.945	985	996	1001	rBV5	69937	182318	0.36%	0.171%
13	10.016	1001	1008	1016	rVB	123054	263537	0.53%	0.247%
14	10.098	1016	1022	1028	rBV	200720	405130	0.81%	0.380%
15	10.369	1059	1068	1077	rVB3	42884	116321	0.23%	0.109%
16	10.498	1080	1090	1099	rBV5	154767	453953	0.91%	0.426%
17	10.587	1100	1105	1114	rVB9	27795	83003	0.17%	0.078%
18	10.698	1114	1124	1128	rBV5	223726	616988	1.23%	0.578%
19	10.892	1149	1157	1160	rBV	231034	451986	0.90%	0.424%
20	10.939	1160	1165	1179	rVB	561182	1407903	2.81%	1.320%
21	11.122	1190	1196	1206	rVB4	64835	176038	0.35%	0.165%
22	11.245	1212	1217	1224	rVB7	28522	60955	0.12%	0.057%
23	11.345	1224	1234	1243	rBV3	217166	679937	1.36%	0.637%
24	11.434	1243	1249	1255	rVV	269429	543133	1.08%	0.509%
25	11.498	1255	1260	1269	rVV	142732	306132	0.61%	0.287%
26	11.645	1270	1285	1297	rVV2	1875025	4502198	8.99%	4.221%
27	11.928	1321	1333	1336	rBV2	135671	343114	0.69%	0.322%
28	11.975	1336	1341	1350	rVB	288682	660442	1.32%	0.619%
29	12.057	1351	1355	1357	rBV3	31077	52123	0.10%	0.049%
30	12.210	1376	1381	1389	rVB6	50180	110058	0.22%	0.103%
31	12.351	1391	1405	1414	rBV4	553852	1744241	3.48%	1.635%
32	12.439	1415	1420	1426	rBV3	151026	345174	0.69%	0.324%
33	12.592	1437	1446	1455	rBV5	1013333	3201018	6.39%	3.001%
34	12.810	1476	1483	1490	rBV3	361789	989392	1.98%	0.928%
35	13.169	1526	1544	1553	rBV6	341285	1846525	3.69%	1.731%
36	13.257	1555	1559	1566	rBV	209696	551751	1.10%	0.517%
37	13.410	1569	1585	1591	rBV7	954385	4659913	9.31%	4.369%
38	13.616	1613	1620	1624	rBV2	606328	1660434	3.32%	1.557%
39	13.798	1642	1651	1659	rBV7	391891	1641595	3.28%	1.539%
40	14.004	1679	1686	1691	rBV	588318	1533000	3.06%	1.437%
41	14.433	1739	1759	1777	rBV2	11013040	50078032	100.00%	46.950%
42	28.338	4115	4123	4135	rVB	1971351	4449131	8.88%	4.171%
43	30.221	4435	4443	4454	rVB	531872	1251669	2.50%	1.173%
44	30.332	4457	4462	4473	rVB2	165005	407429	0.81%	0.382%
45	32.015	4742	4748	4757	rVB	165041	359131	0.72%	0.337%

Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Title : Decalins & Alkylated PAH's

46	33.732	5033	5040	5049	rVB	46154	118660	0.24%	0.111%
47	34.079	5088	5099	5110	rVB	475459	1130958	2.26%	1.060%
48	34.685	5194	5202	5207	rBV10	3974	13072	0.03%	0.012%
49	35.350	5307	5315	5330	rBV5	13455	42820	0.09%	0.040%
50	35.479	5335	5337	5339	rBV2	1785	1527	0.00%	0.001%
51	35.932	5411	5414	5416	rBV3	1641	2272	0.00%	0.002%
52	36.144	5445	5450	5452	rVB3	1513	2045	0.00%	0.002%
53	36.185	5452	5457	5458	rBV4	1403	2277	0.00%	0.002%
54	36.385	5469	5491	5514	rBV	6291859	16539679	33.03%	15.507%
55	36.908	5574	5580	5588	rBV7	7000	16541	0.03%	0.016%
56	37.449	5667	5672	5674	rVB4	1158	1873	0.00%	0.002%
57	37.685	5709	5712	5714	rBV3	1617	1867	0.00%	0.002%
58	37.802	5728	5732	5734	rBV4	1843	2477	0.00%	0.002%
59	37.961	5757	5759	5762	rVV3	1381	1362	0.00%	0.001%
60	38.020	5763	5769	5772	rVB5	1835	3625	0.01%	0.003%
61	38.208	5794	5801	5808	rVB8	4300	11717	0.02%	0.011%
62	38.402	5824	5834	5842	rBV6	7364	17499	0.03%	0.016%
63	38.614	5869	5870	5875	rVB5	1038	1555	0.00%	0.001%
64	38.702	5881	5885	5886	rBV2	1358	1618	0.00%	0.002%
65	38.920	5920	5922	5924	rBV2	1664	1821	0.00%	0.002%
66	39.108	5950	5954	5957	rBV4	1610	2616	0.01%	0.002%
67	39.179	5964	5966	5970	rVB4	1373	1567	0.00%	0.001%
68	39.255	5975	5979	5982	rBV3	1261	1482	0.00%	0.001%
69	39.308	5985	5988	5990	rBV3	1330	2035	0.00%	0.002%
70	39.491	6017	6019	6022	rVV4	1439	1723	0.00%	0.002%
71	39.520	6022	6024	6027	rVV3	1575	1444	0.00%	0.001%
72	39.549	6027	6029	6035	rVV5	1430	2045	0.00%	0.002%
73	39.620	6038	6041	6044	rVB2	1472	1971	0.00%	0.002%
74	39.726	6057	6059	6061	rBV2	1772	1293	0.00%	0.001%
75	39.826	6067	6076	6087	rBV4	16237	38019	0.08%	0.036%
76	40.020	6107	6109	6113	rVB5	1167	1455	0.00%	0.001%
77	40.055	6113	6115	6118	rBV3	2185	1478	0.00%	0.001%
78	40.120	6125	6126	6129	rVB2	1808	1302	0.00%	0.001%
79	40.155	6129	6132	6134	rBV2	1862	1608	0.00%	0.002%
80	40.290	6149	6155	6170	rBV9	14046	39134	0.08%	0.037%
81	40.538	6193	6197	6199	rVB2	1416	1473	0.00%	0.001%
82	40.649	6202	6216	6238	rBV3	165634	619435	1.24%	0.581%
83	40.826	6240	6246	6250	rVV5	34437	82018	0.16%	0.077%
84	40.885	6250	6256	6277	rVB2	93594	271746	0.54%	0.255%
85	41.196	6301	6309	6311	rBV4	22427	45436	0.09%	0.043%
86	41.237	6311	6316	6344	rVB2	47255	145718	0.29%	0.137%
87	41.620	6380	6381	6383	rBV2	1389	1434	0.00%	0.001%
88	41.661	6386	6388	6392	rVV4	2239	2228	0.00%	0.002%
89	41.943	6435	6436	6441	rVB2	1290	1400	0.00%	0.001%
90	42.308	6496	6498	6501	rBV2	1720	1610	0.00%	0.002%
91	42.373	6506	6509	6513	rBV3	2197	3799	0.01%	0.004%
92	42.508	6523	6532	6540	rBV3	23724	54785	0.11%	0.051%
93	42.637	6551	6554	6558	rBV5	2470	4203	0.01%	0.004%

Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Title : Decalins & Alkylated PAH's

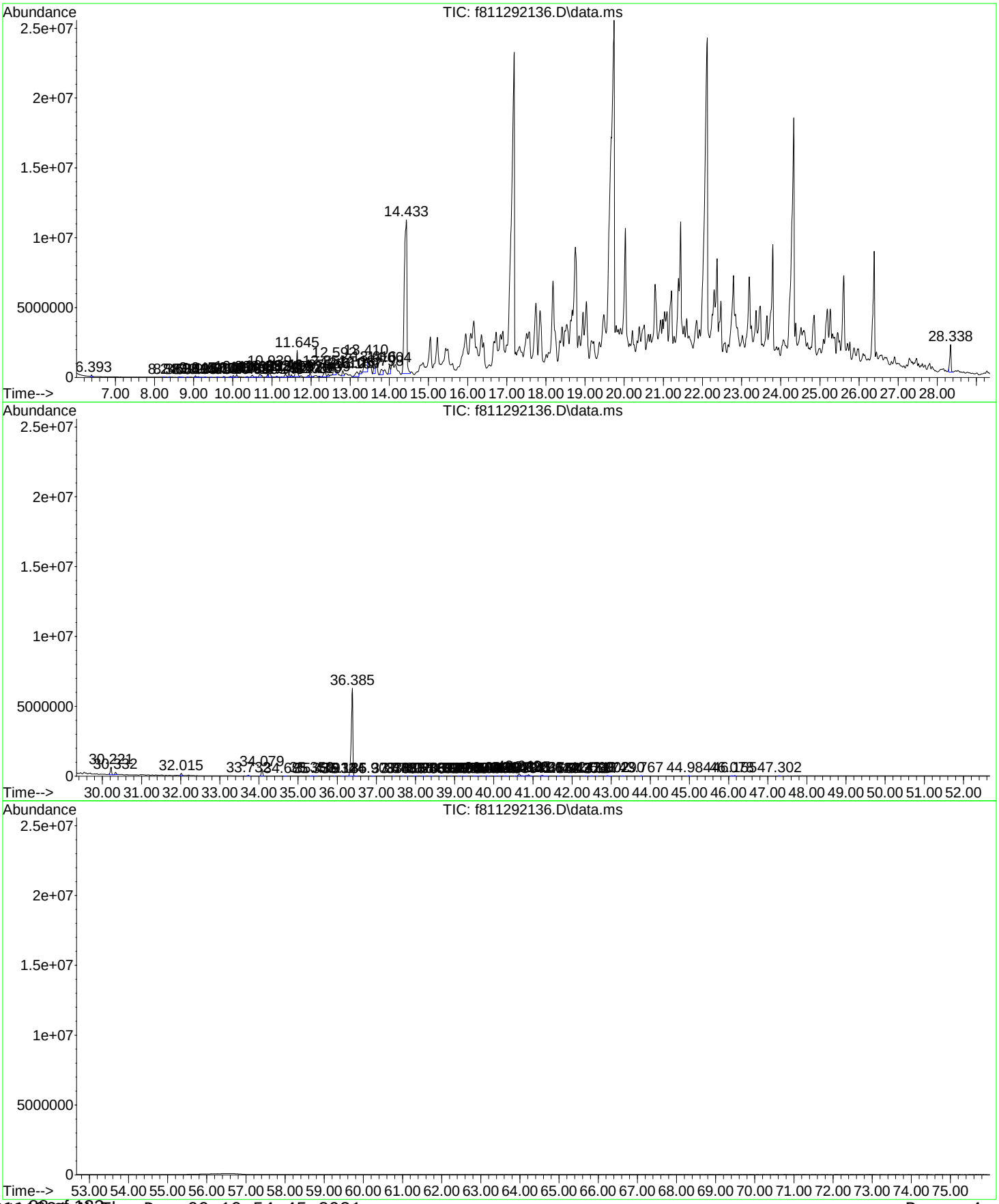
94	42.902	6591	6599	6620	rVB2	28717	88867	0.18%	0.083%
95	43.290	6659	6665	6674	rVB2	13276	29661	0.06%	0.028%
96	43.767	6738	6746	6755	rVB2	23131	51120	0.10%	0.048%
97	44.984	6946	6953	6963	rVB4	25175	54017	0.11%	0.051%
98	46.078	7134	7139	7145	rBV6	15625	33585	0.07%	0.031%
99	46.155	7146	7152	7162	rVB4	33415	76223	0.15%	0.071%
100	47.302	7342	7347	7354	rVB4	17960	40055	0.08%	0.038%

Sum of corrected areas: 106662199

Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P



Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
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Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

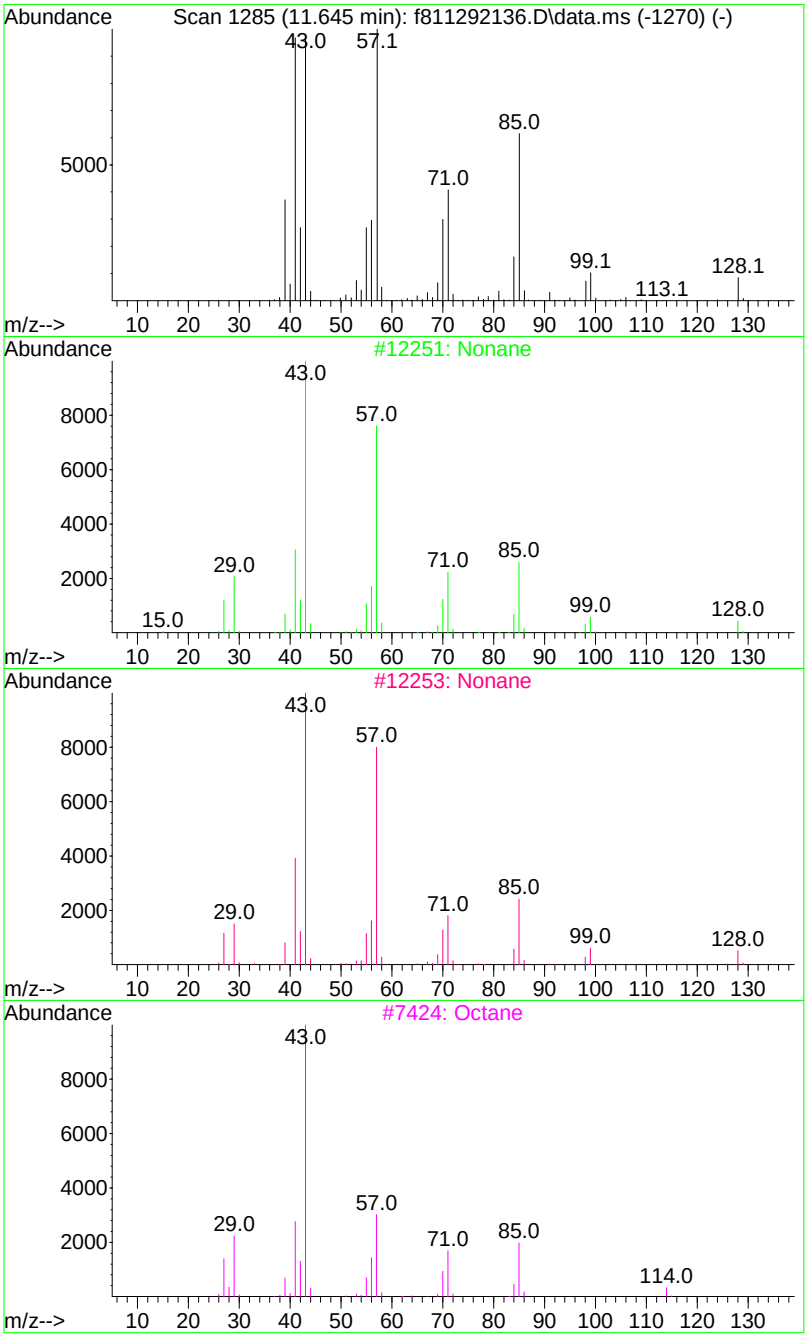
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

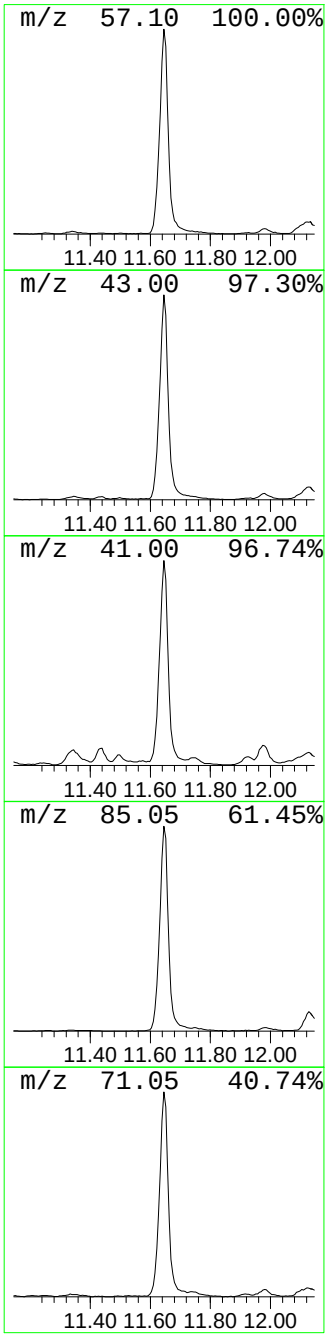
****

Peak Number 1 Nonane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.645	505.96 ng/mL	4502200	Acenaphthene-d10	26.503

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonane	128	C9H20	000111-84-2	90
2	Nonane	128	C9H20	000111-84-2	86
3	Octane	114	C8H18	000111-65-9	59
4	Heptane, 2,4-dimethyl-	128	C9H20	002213-23-2	59
5	Octane	114	C8H18	000111-65-9	59





Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

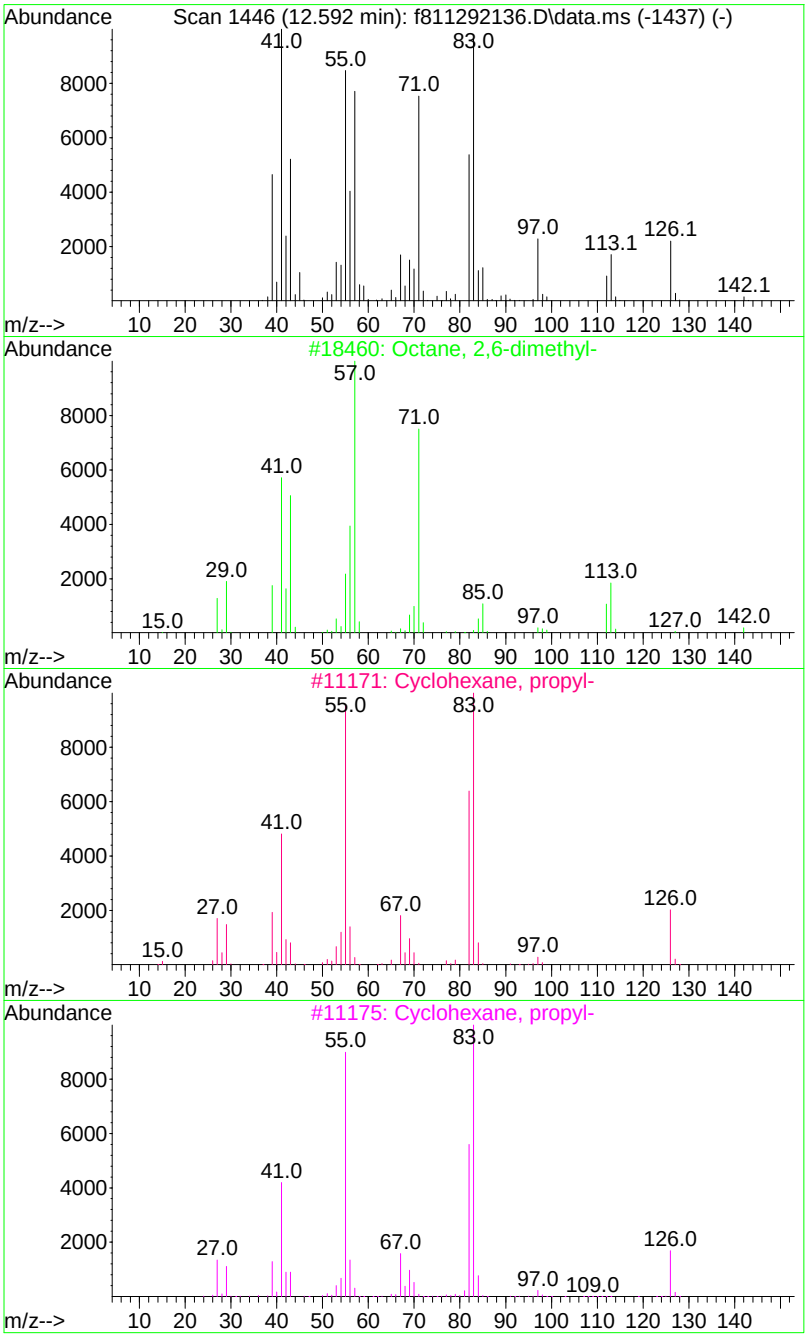
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

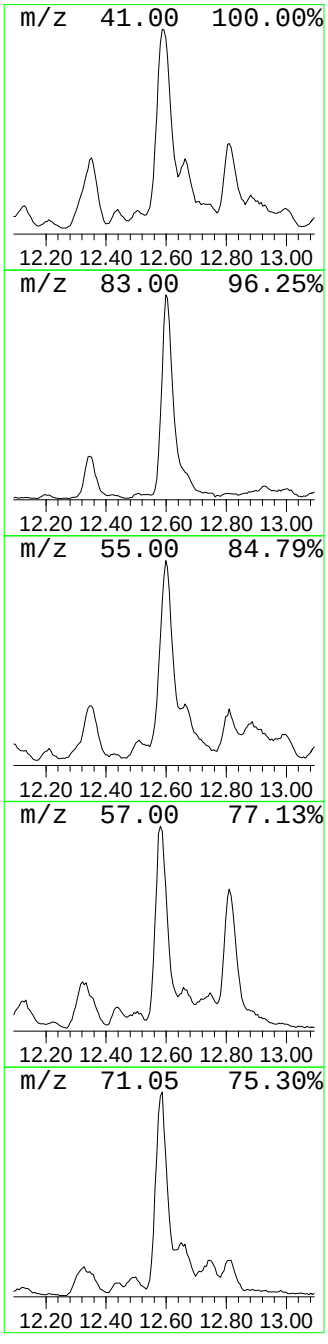
****

Peak Number 2 Octane, 2,6-dimethyl- Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.592	359.74 ng/mL	3201020	Acenaphthene-d10	26.503

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 2,6-dimethyl-	142	C10H22	002051-30-1	83
2	Cyclohexane, propyl-	126	C9H18	001678-92-8	50
3	Cyclohexane, propyl-	126	C9H18	001678-92-8	45
4	Cyclohexane, propyl-	126	C9H18	001678-92-8	43
5	Nonane, 3-methyl-	142	C10H22	005911-04-6	41





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Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

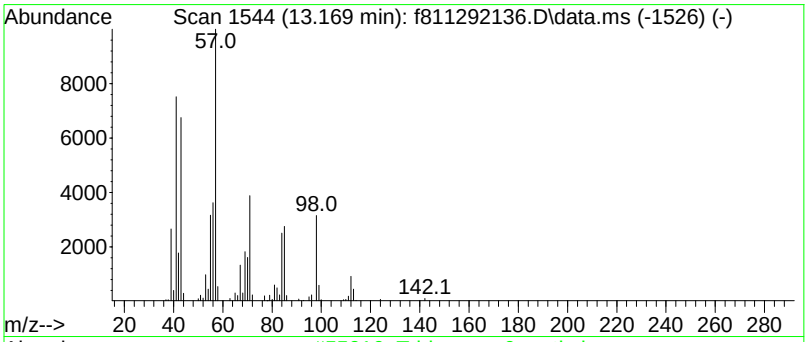
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

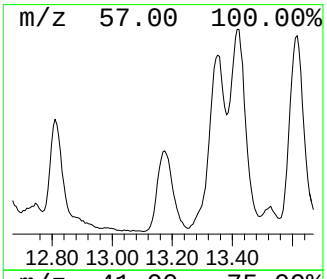
****

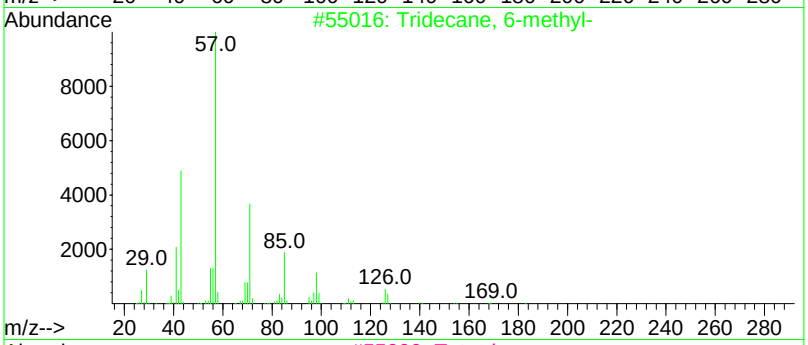
Peak Number 3 Tridecane, 6-methyl- Concentration Rank 20

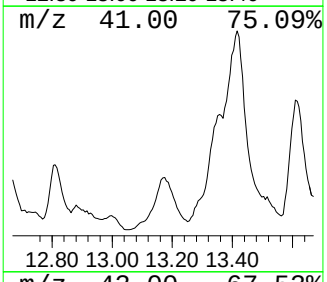
R.T.	EstConc	Area	Relative to ISTD	R.T.
13.169	207.51 ng/mL	1846530	Acenaphthene-d10	26.503

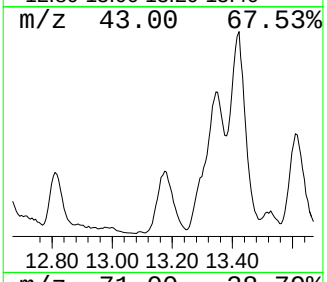
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tridecane, 6-methyl-	198	C14H30	013287-21-3	53
2	Tetradecane	198	C14H30	000629-59-4	50
3	Eicosane	282	C20H42	000112-95-8	50
4	Undecane, 3-methyl-	170	C12H26	001002-43-3	50
5	Decane, 3,8-dimethyl-	170	C12H26	017312-55-9	50

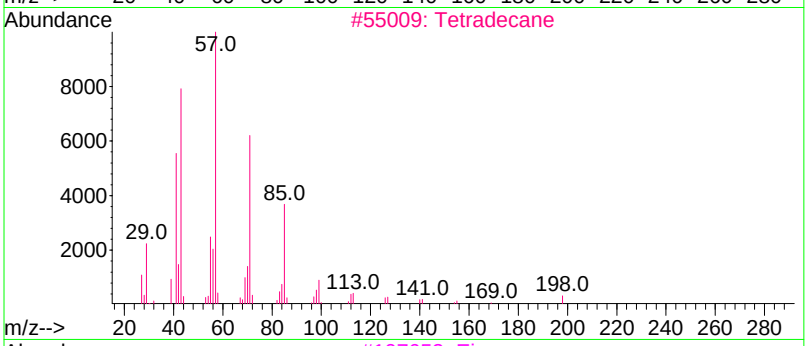


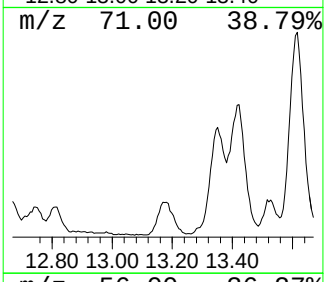


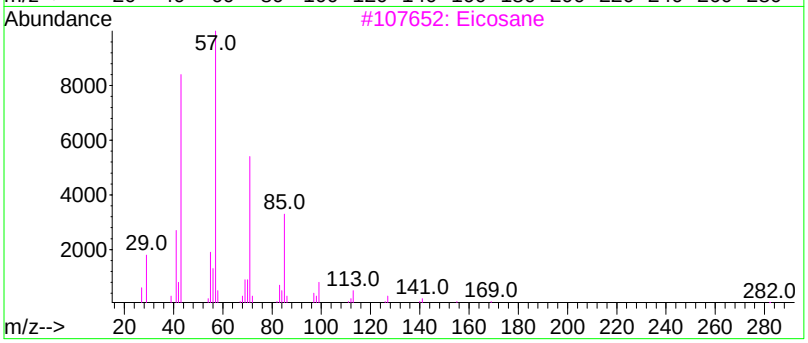


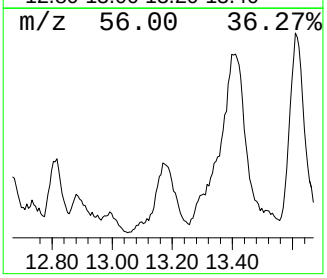












Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

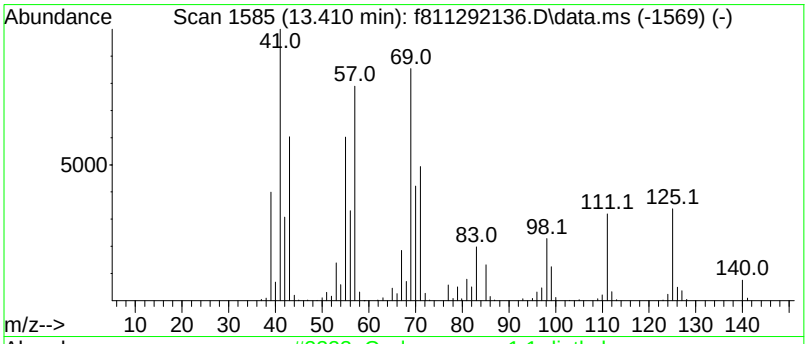
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

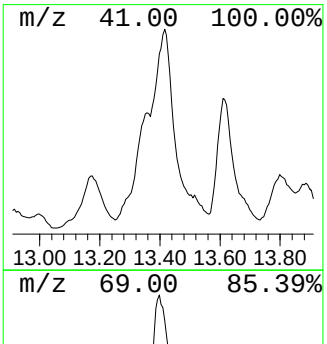
****

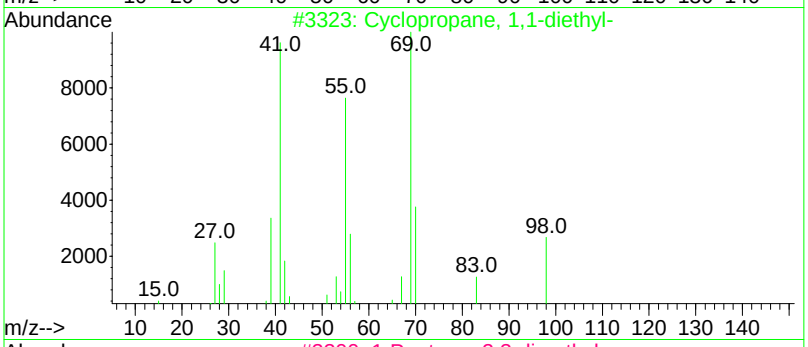
Peak Number 4 Cyclopropane, 1,1-diethyl- Concentration Rank 6

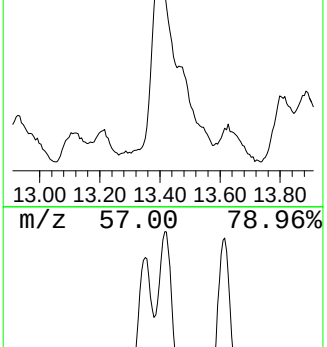
R.T.	EstConc	Area	Relative to ISTD	R.T.
13.410	523.69 ng/mL	4659910	Acenaphthene-d10	26.503

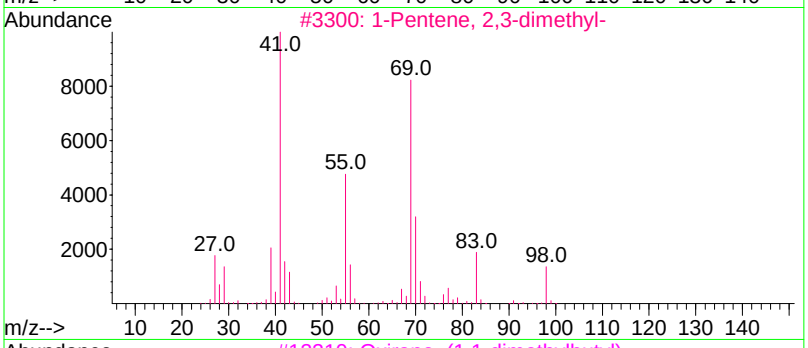
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, 1,1-diethyl-	98	C7H14	001003-19-6	46
2	1-Pentene, 2,3-dimethyl-	98	C7H14	003404-72-6	43
3	Oxirane, (1,1-dimethylbutyl)-	128	C8H16O	053907-76-9	43
4	2-Octene, 2,6-dimethyl-	140	C10H20	004057-42-5	43
5	4-Nonene, 3-methyl-, (Z)-	140	C10H20	063830-69-3	38

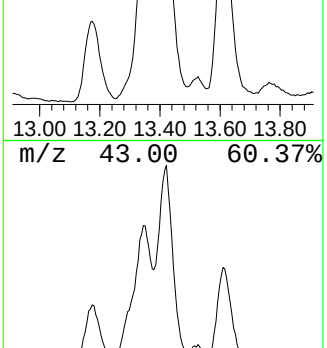


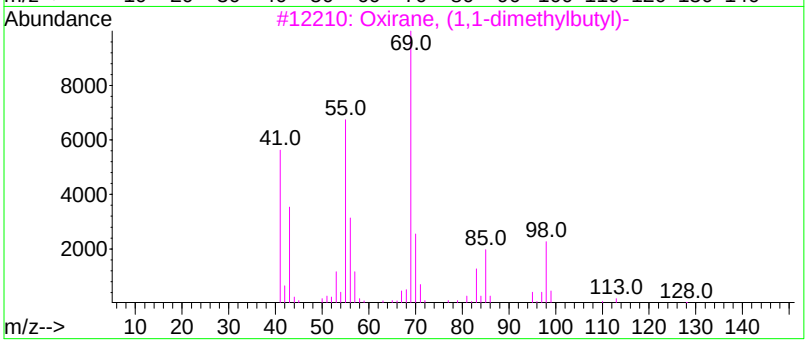


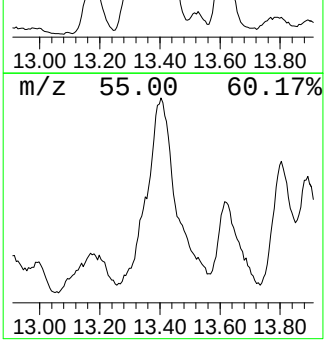












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Acq On    :  1 Dec 2021   4:19 pm
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Sample    : l2165245-02,42,,
Misc      : FULL SCAN
ALS Vial  : 36   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number  5  Decane                          Concentration Rank  2

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 14.433 5627.84 ng/mL    50078000   Acenaphthene-d10           26.503

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 Decane                                142 C10H22        000124-18-5 93
 2 Decane                                142 C10H22        000124-18-5 90
 3 Heptane, 2,4-dimethyl-                128 C9H20         002213-23-2 76
 4 Tetradecane                           198 C14H30        000629-59-4 72
 5 Decane                                142 C10H22        000124-18-5 70
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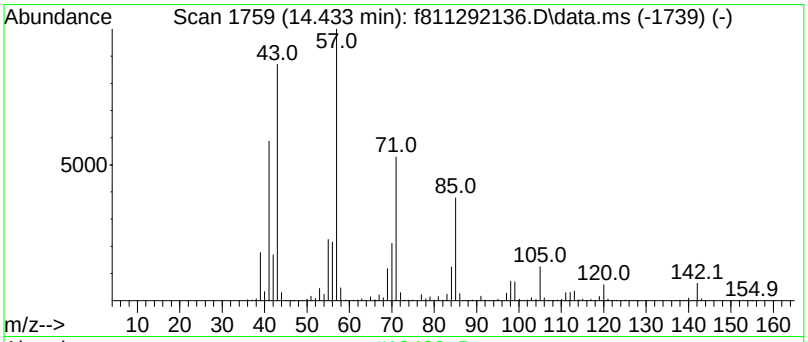

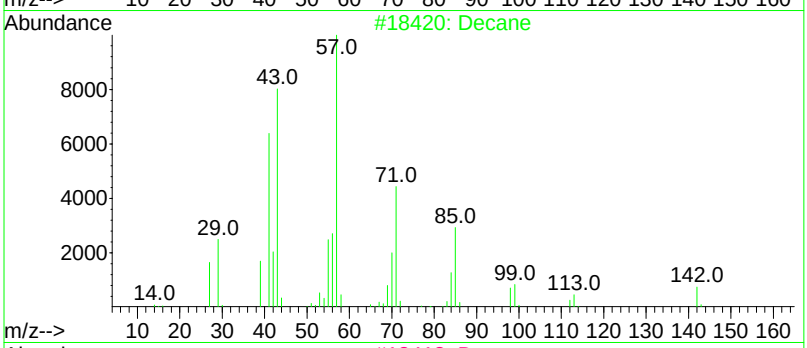

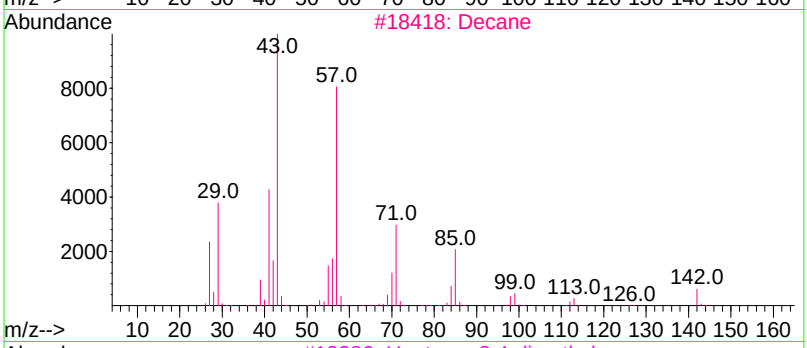

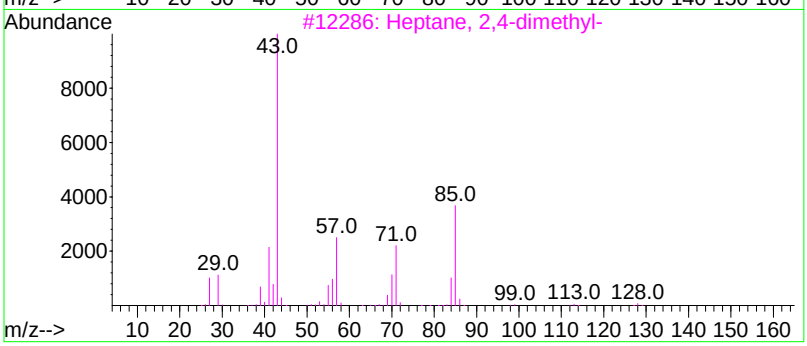

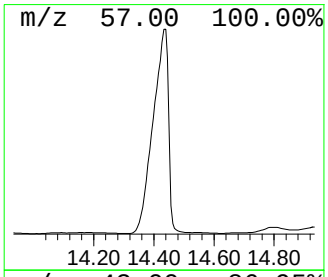

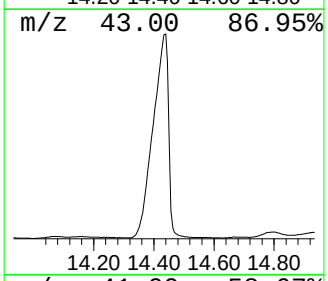

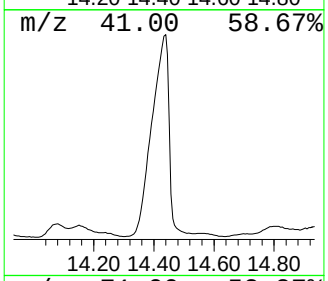

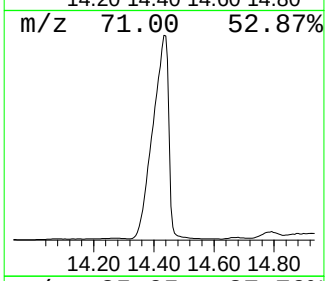

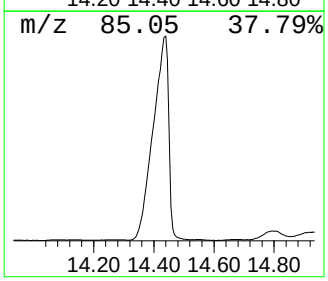

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Acq On    :  1 Dec 2021   4:19 pm
Operator  :
Sample    : l2165245-02,42,,
Misc      : FULL SCAN
ALS Vial  : 36   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number  6  Hexadecane                      Concentration Rank  8

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 28.338  500.00 ng/mL     4449130   Acenaphthene-d10           26.503

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 Hexadecane                            226 C16H34        000544-76-3 94
 2 Dodecane, 4-methyl-                   184 C13H28        006117-97-1 90
 3 Hexadecane                            226 C16H34        000544-76-3 90
 4 Tetradecane                           198 C14H30        000629-59-4 90
 5 Dodecane, 4-methyl-                   184 C13H28        006117-97-1 87
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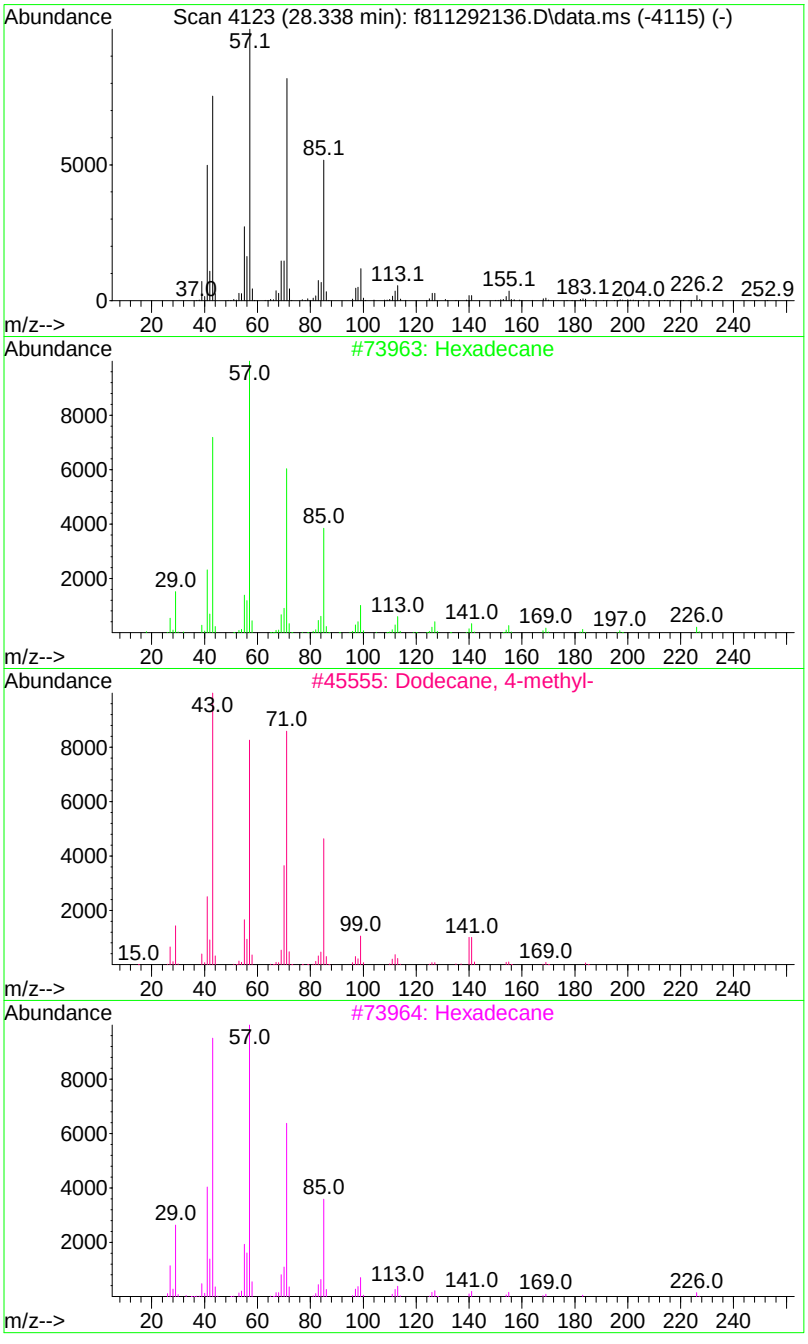

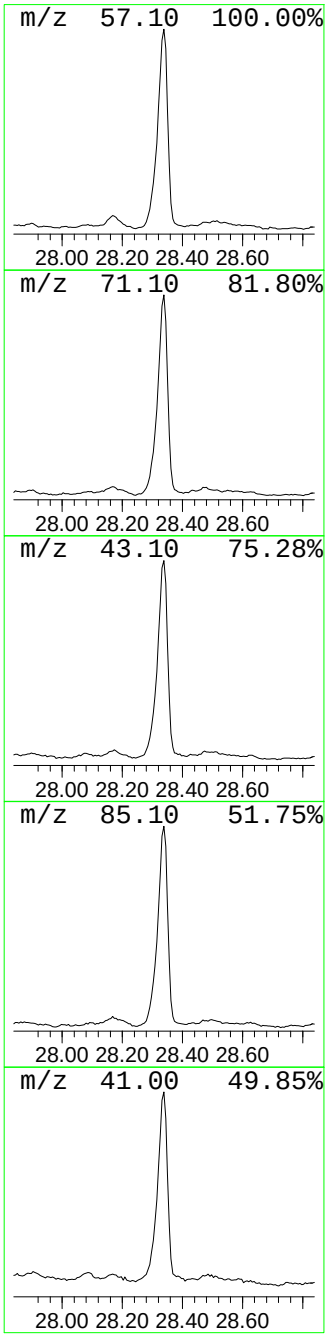

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Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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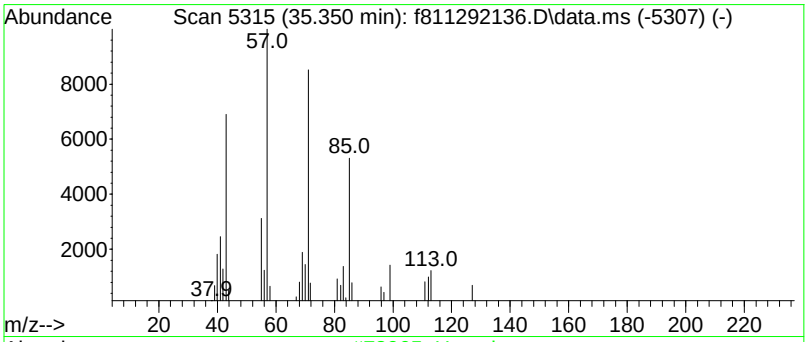
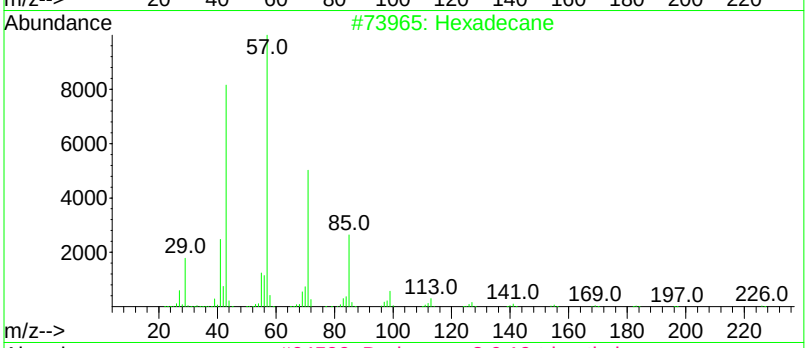
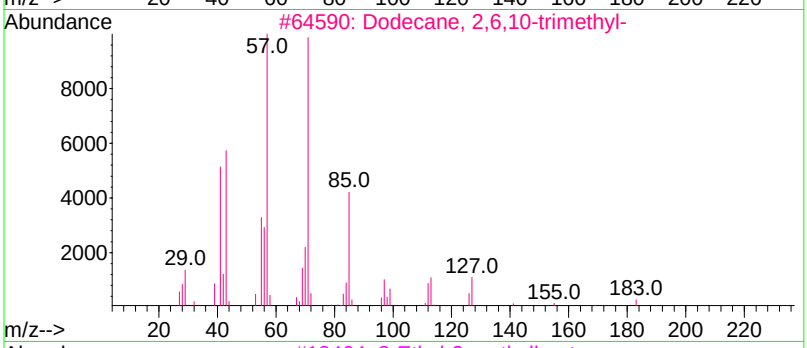
Peak Number 7 Hexadecane Concentration Rank 16

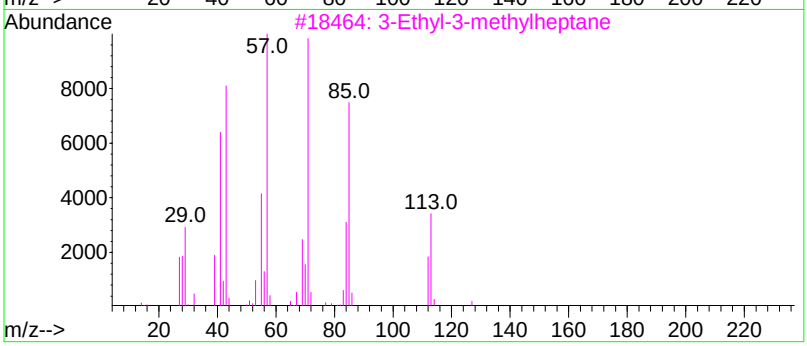
R.T.	EstConc	Area	Relative to ISTD	R.T.
35.350	240.92 ng/mL	42820	Chrysene-d12	42.902

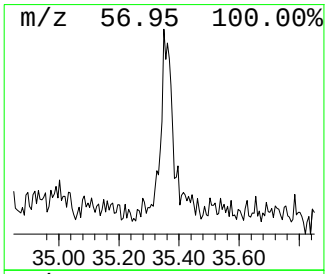
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecane	226	C16H34	000544-76-3	78
2	Dodecane, 2,6,10-trimethyl-	212	C15H32	003891-98-3	78
3	3-Ethyl-3-methylheptane	142	C10H22	017302-01-1	72
4	Dodecane, 2,7,10-trimethyl-	212	C15H32	074645-98-0	64
5	Undecane, 4,7-dimethyl-	184	C13H28	017301-32-5	64

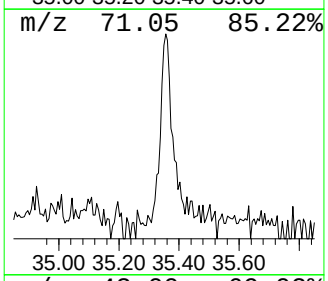


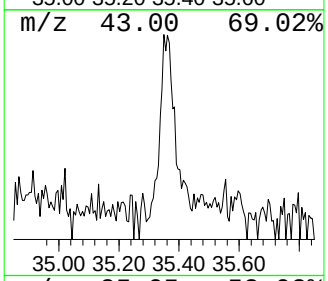


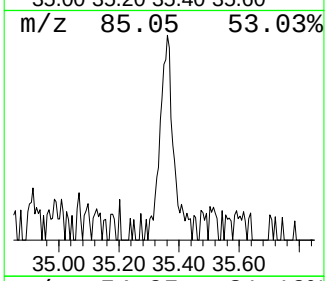


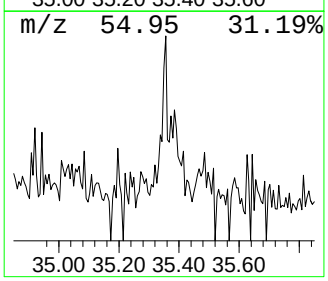












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Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

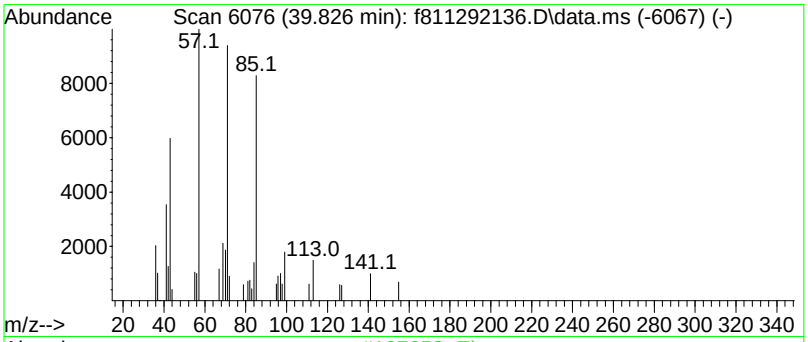
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

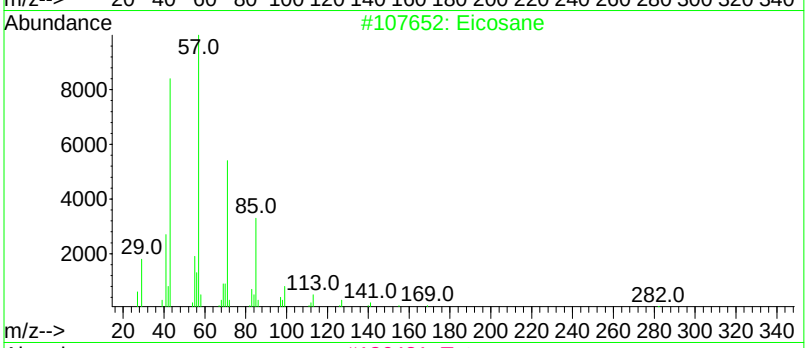
****

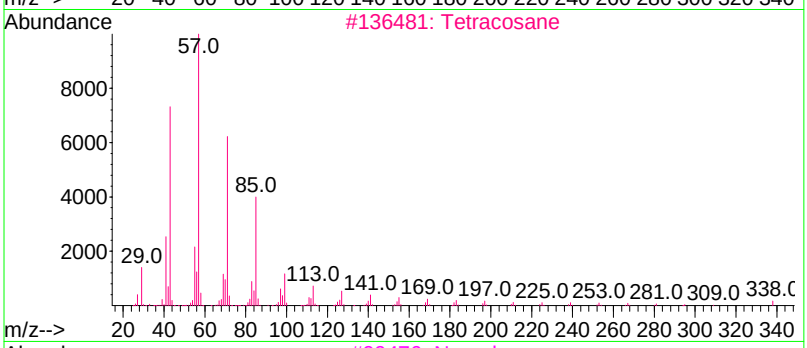
Peak Number 9 Eicosane Concentration Rank 19

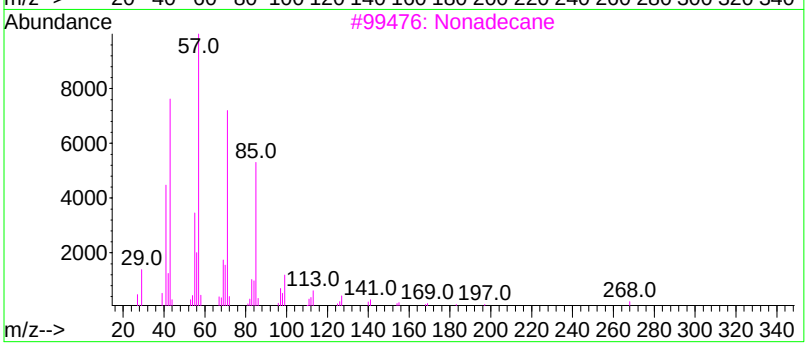
R.T.	EstConc	Area	Relative to ISTD	R.T.
39.826	213.91 ng/mL	38019	Chrysene-d12	42.902

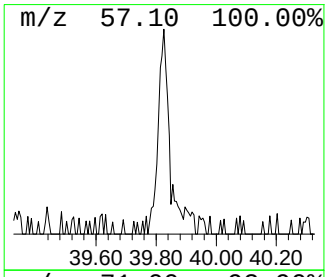
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane	282	C20H42	000112-95-8	64
2	Tetracosane	338	C24H50	000646-31-1	64
3	Nonadecane	268	C19H40	000629-92-5	59
4	1-Iodo-2-methylundecane	296	C12H25I	073105-67-6	59
5	4,4-Dipropylheptane	184	C13H28	017312-72-0	53

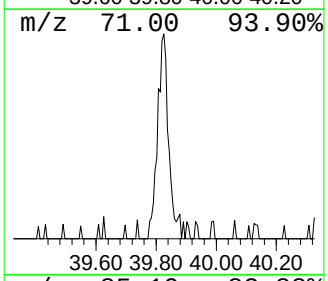


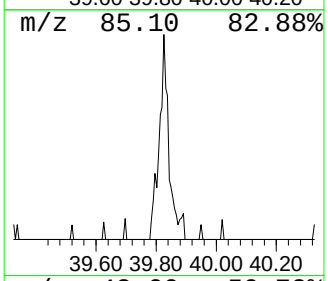


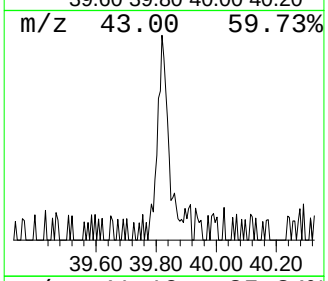


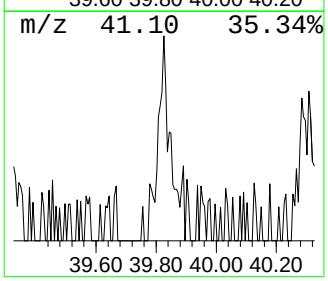












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Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

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Quant Title : Decalins & Alkylated PAH's

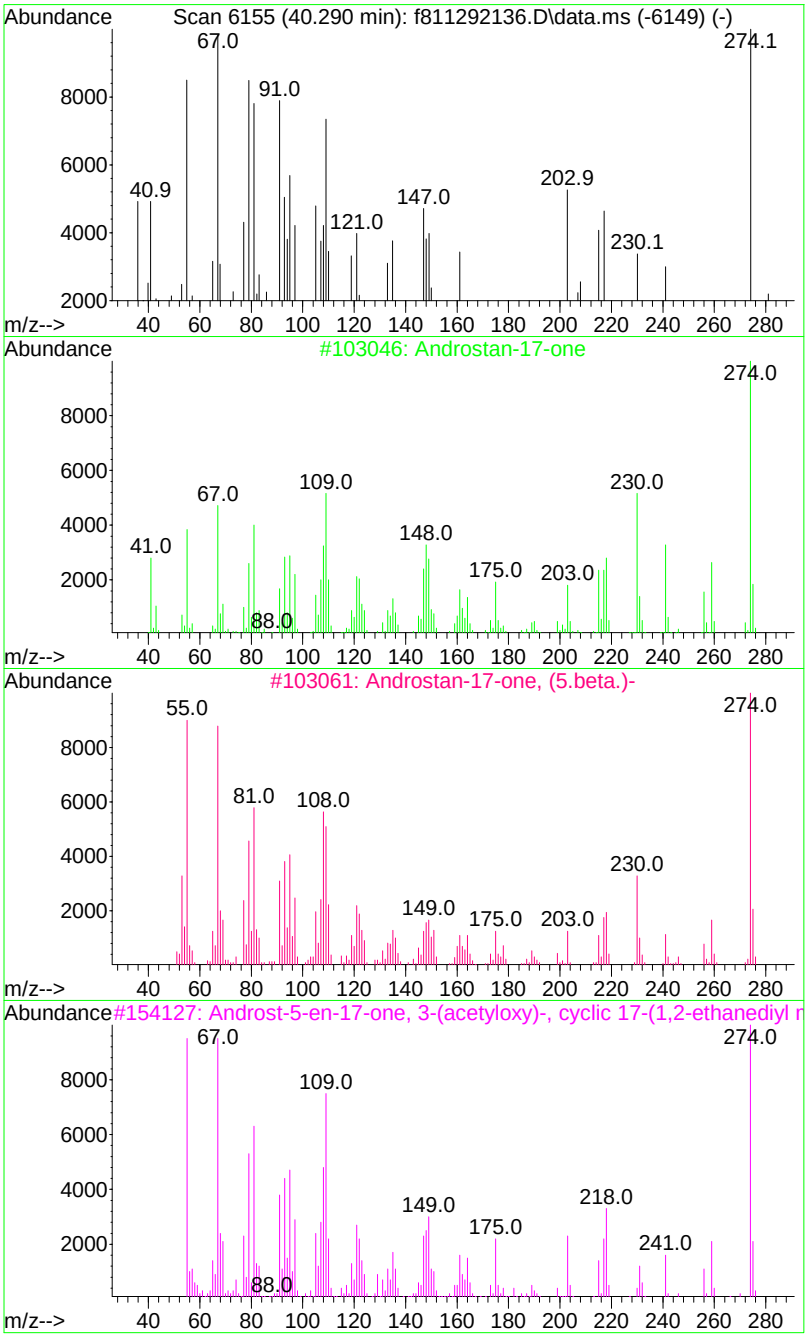
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

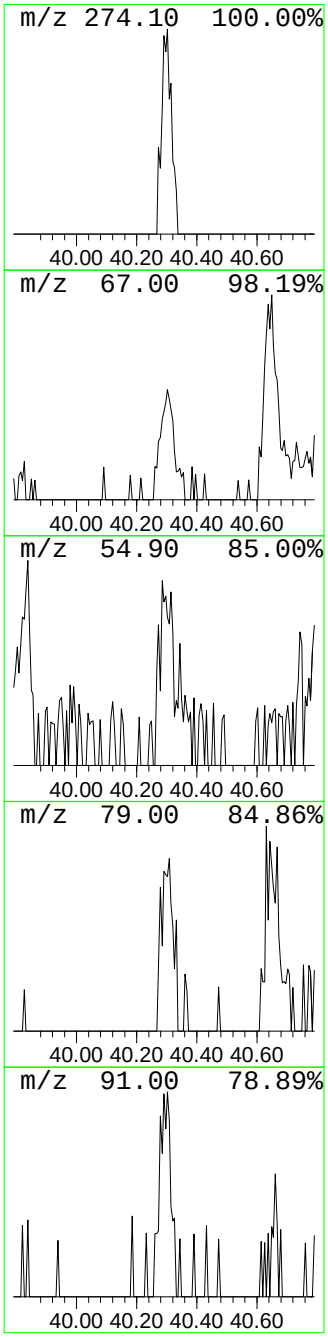
****

Peak Number 10 Androstan-17-one Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
40.291	220.18 ng/mL	39134	Chrysene-d12	42.902

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Androstan-17-one	274	C19H30O	036378-49-1	52
2	Androstan-17-one, (5.beta.)-	274	C19H30O	001912-61-4	49
3	Androst-5-en-17-one, 3-(acetylox...	390	C23H34O3S	054498-67-8	43
4	Androstan-17-one, (5.alpha.)-	274	C19H30O	000963-74-6	38
5	Androstan-17-one, (5.alpha.)-	274	C19H30O	000963-74-6	38





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Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

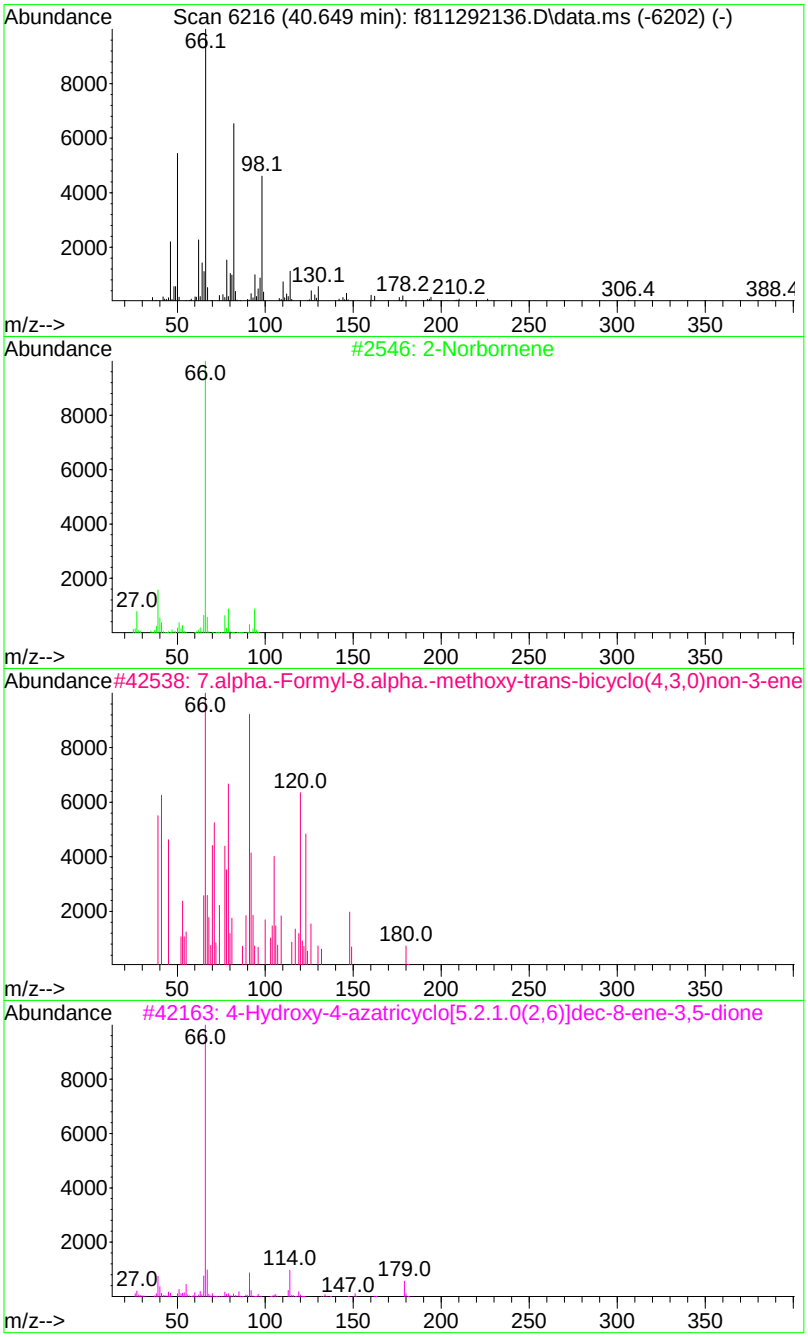
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

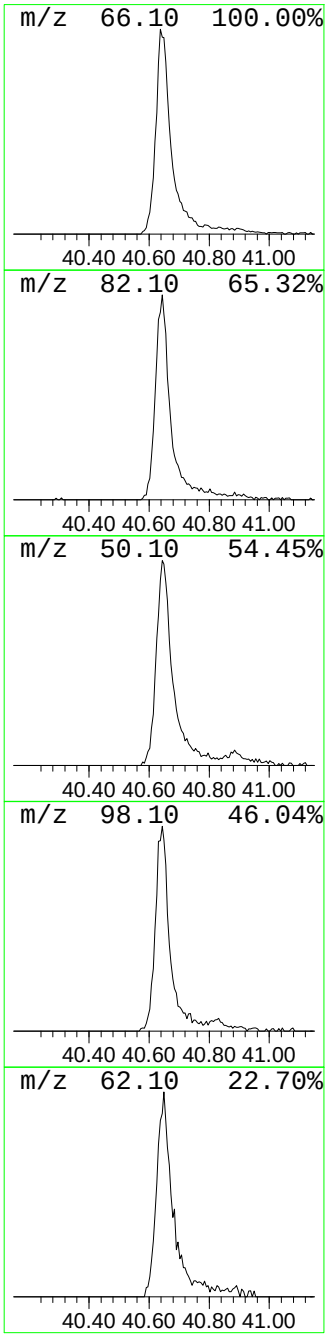
****

Peak Number 11 2-Norbornene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
40.649	3485.18 ng/mL	619435	Chrysene-d12	42.902

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Norbornene	94	C7H10	000498-66-8	38
2	7.alpha.-Formyl-8.alpha.-methoxy...	180	C11H16O2	1000144-03-5	38
3	4-Hydroxy-4-azatricyclo[5.2.1.0(...	179	C9H9NO3	1000210-21-2	25
4	2-Norbornene	94	C7H10	000498-66-8	25
5	Bicyclo[2.2.1]hept-5-ene-2-carbo...	152	C9H12O2	000769-85-7	25





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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : Decalins & Alkylated PAH's

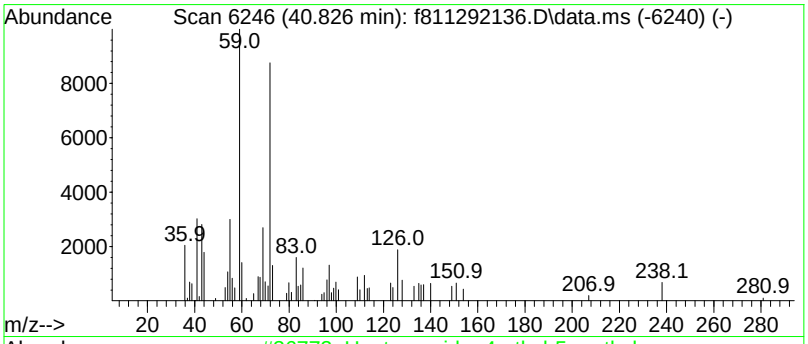
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

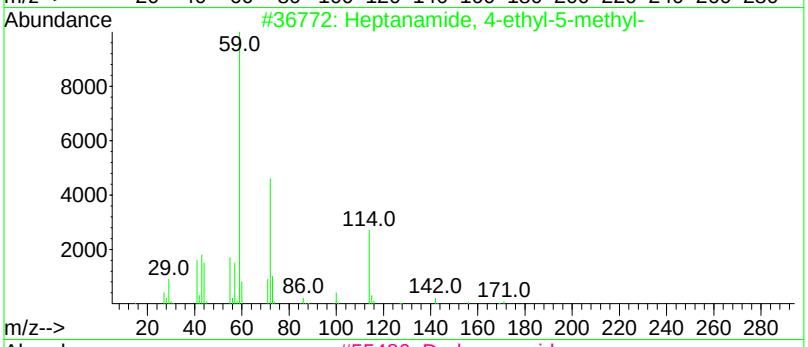
****

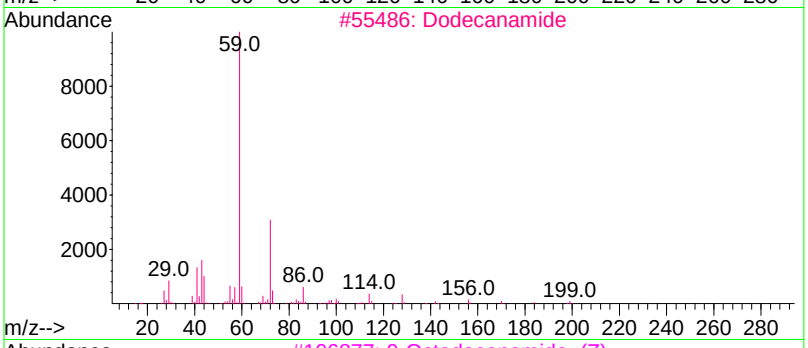
Peak Number 12 Heptanamide, 4-ethyl-5-methyl- Concentration Rank 9

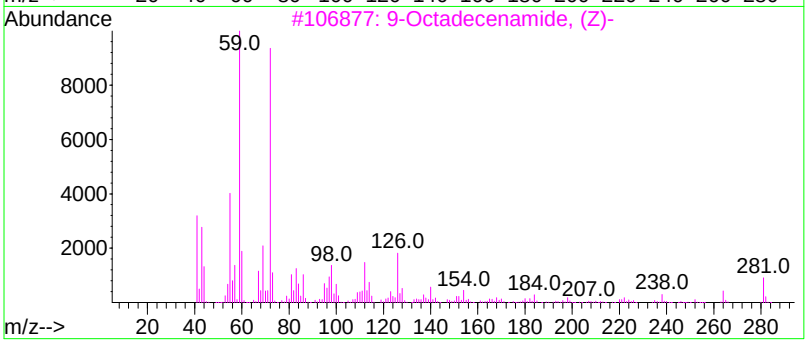
R.T.	EstConc	Area	Relative to ISTD	R.T.
40.826	461.46 ng/mL	82018	Chrysene-d12	42.902

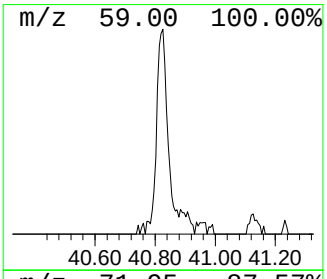
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptanamide, 4-ethyl-5-methyl-	171	C10H21NO	054789-40-1	64
2	Dodecanamide	199	C12H25NO	001120-16-7	50
3	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	50
4	Tetradecanamide	227	C14H29NO	000638-58-4	43
5	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	42

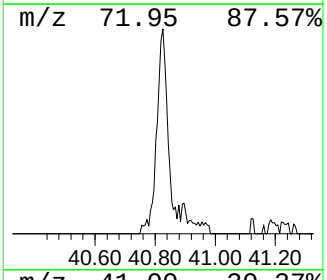


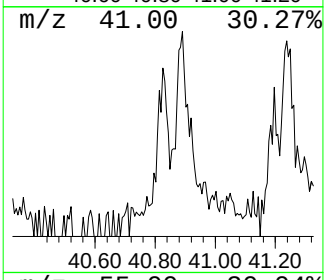


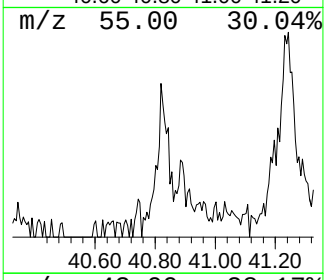


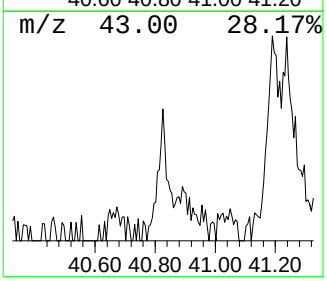












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ALS Vial : 36 Sample Multiplier: 1

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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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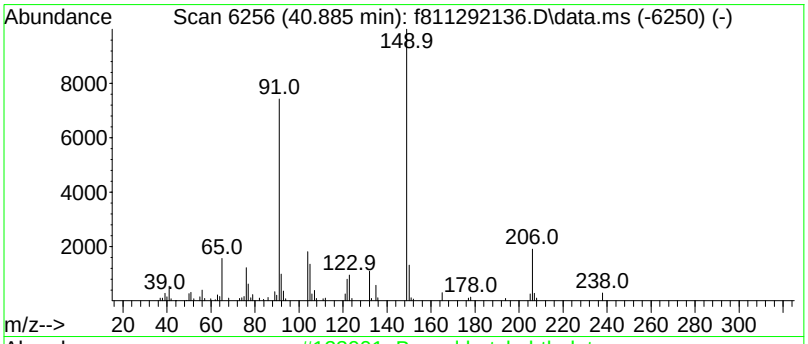
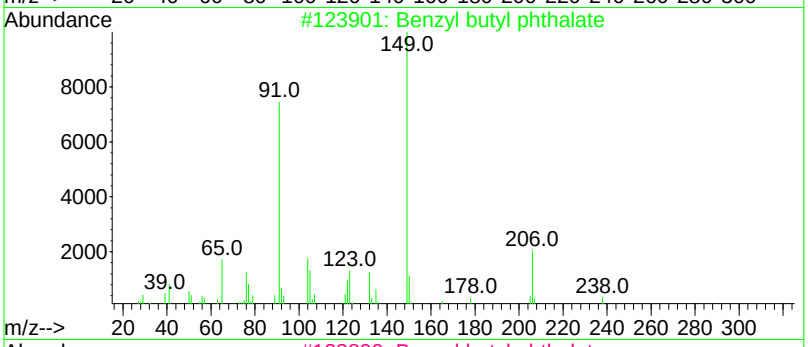
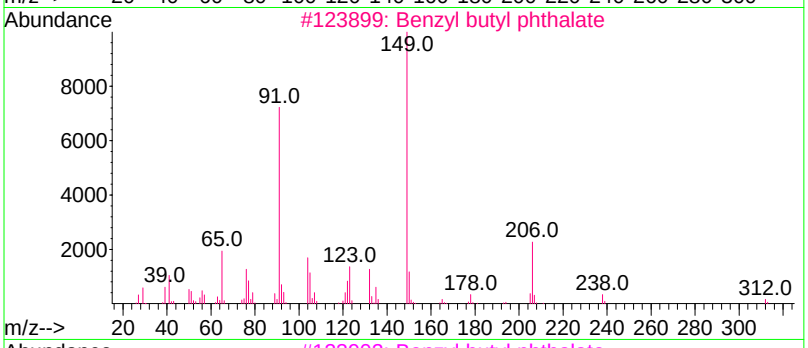
Peak Number 13 Benzyl butyl phthalate Concentration Rank 4

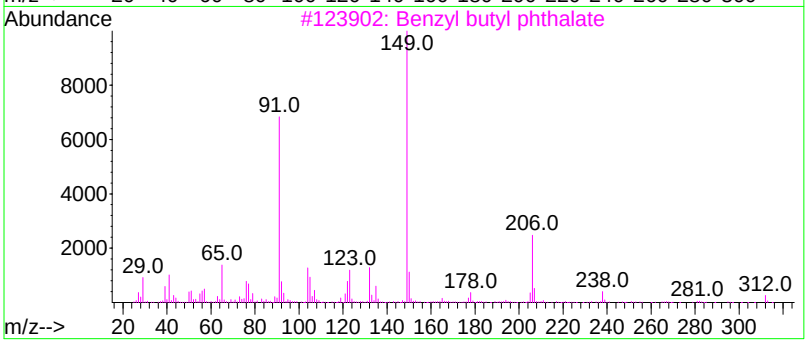
R.T.	EstConc	Area	Relative to ISTD	R.T.
40.885	1528.95 ng/mL	271746	Chrysene-d12	42.902

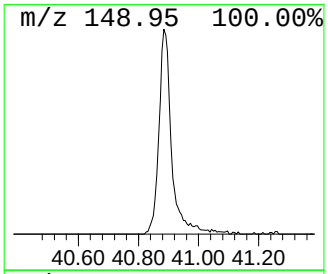
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzyl butyl phthalate	312	C19H20O4	000085-68-7	91
2	Benzyl butyl phthalate	312	C19H20O4	000085-68-7	91
3	Benzyl butyl phthalate	312	C19H20O4	000085-68-7	91
4	Benzyl butyl phthalate	312	C19H20O4	000085-68-7	74
5	O-Nitroacetophenone oxime	180	C8H8N2O3	010342-62-8	59

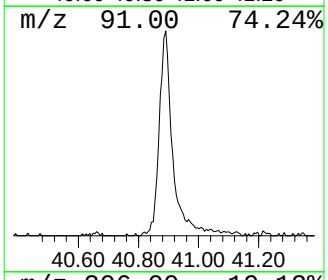


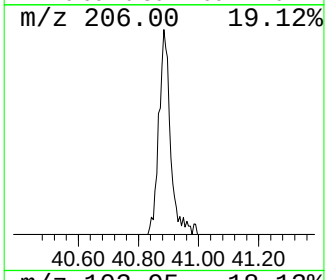


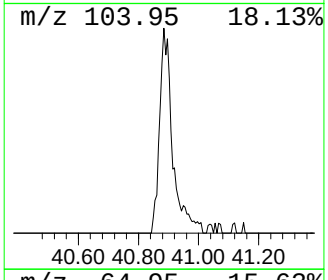


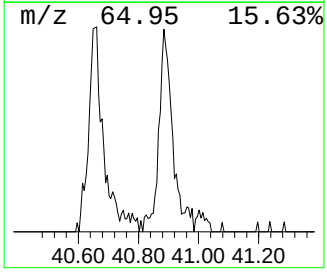












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Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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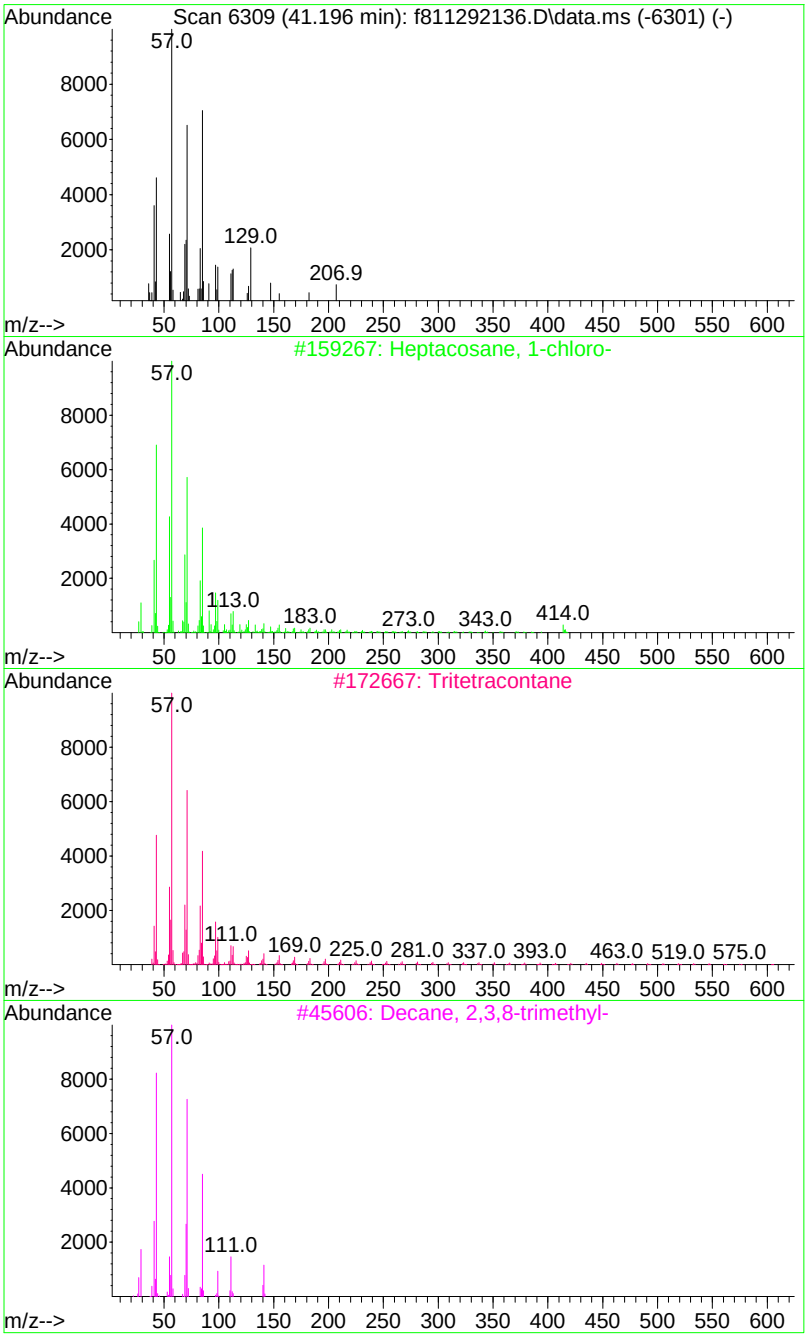
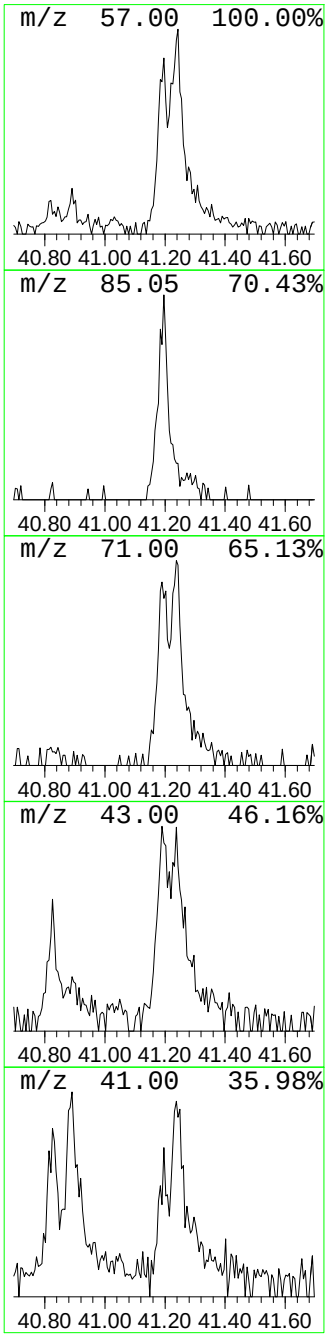
Peak Number 14 Heptacosane, 1-chloro- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
41.196	255.64 ng/mL	45436	Chrysene-d12	42.902

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptacosane, 1-chloro-	414	C27H55Cl	062016-79-9	50
2	Tritetracontane	605	C43H88	007098-21-7	50
3	Decane, 2,3,8-trimethyl-	184	C13H28	062238-14-6	50
4	Tetratriacontane	479	C34H70	014167-59-0	49
5	Heptacosane	380	C27H56	000593-49-7	49





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ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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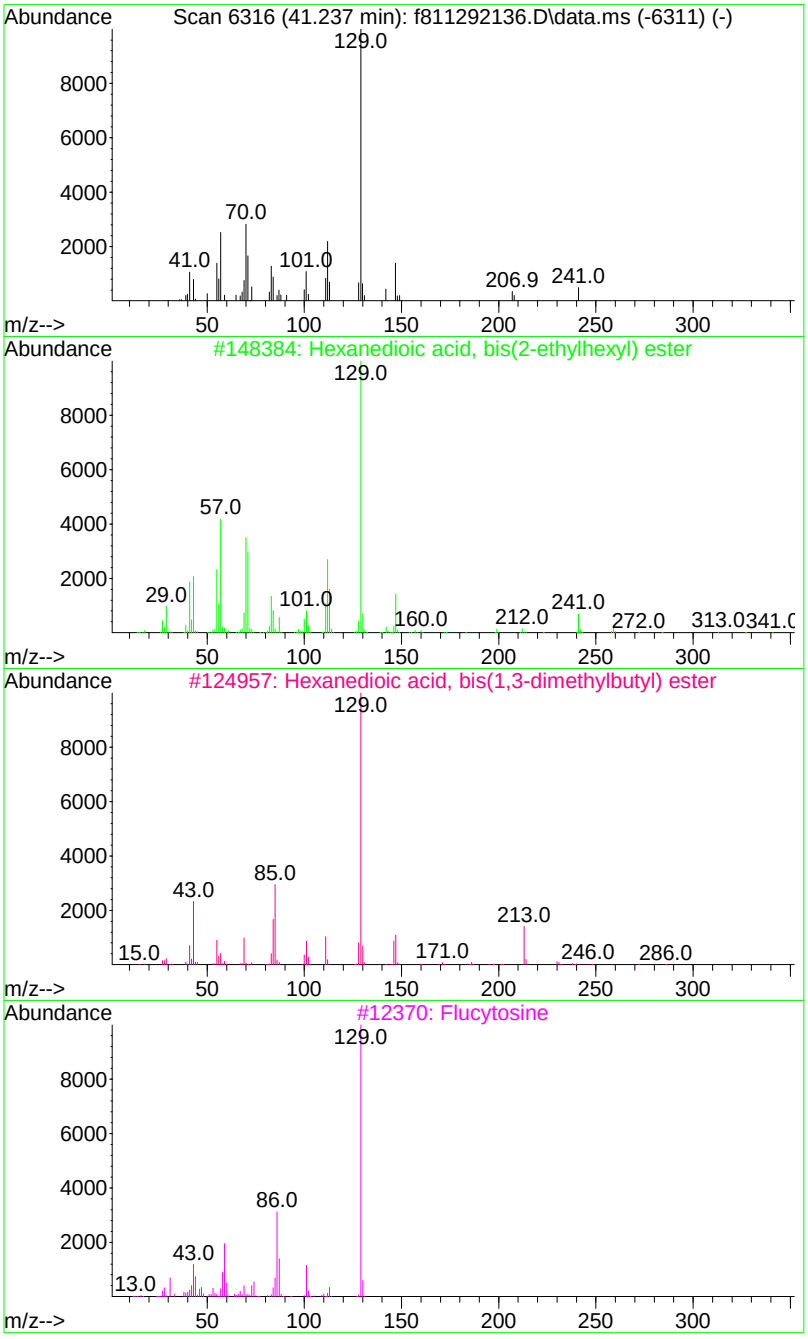
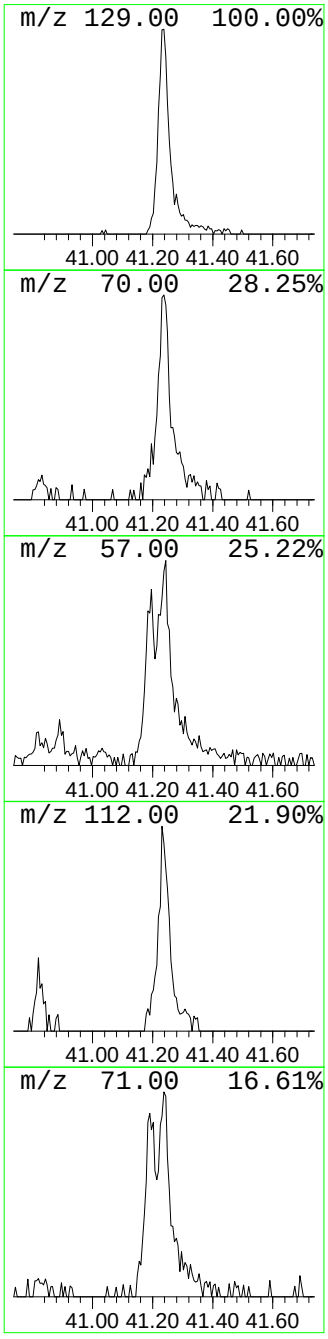
Peak Number 15 Hexanedioic acid, bis(2-eth... Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
41.237	819.87 ng/mL	145718	Chrysene-d12	42.902

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexanedioic acid, bis(2-ethylhex...	370	C22H42O4	000103-23-1	78
2	Hexanedioic acid, bis(1,3-dimeth...	314	C18H34O4	055125-22-9	50
3	Flucytosine	129	C4H4FN3O	002022-85-7	47
4	Hexanedioic acid, dihexyl ester	314	C18H34O4	000110-33-8	40
5	Thiophene, 2-nitro-	129	C4H3NO2S	000609-40-5	38





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ALS Vial  : 36   Sample Multiplier: 1

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Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number 16  Heptadecane, 2,6,10,15-tetr...  Concentration Rank 12
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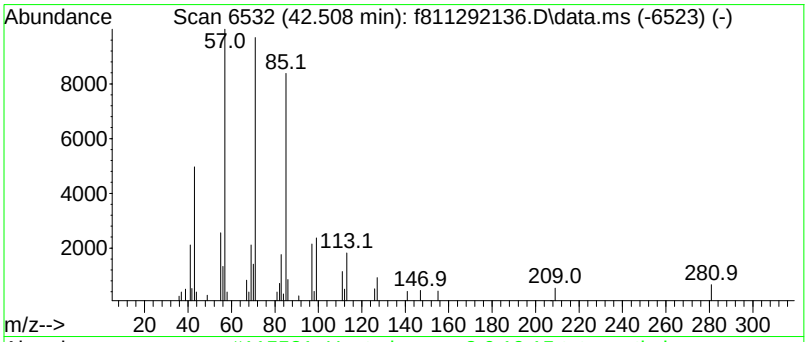
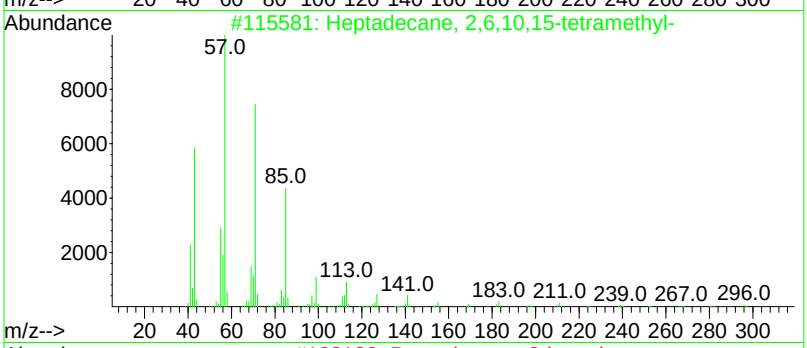
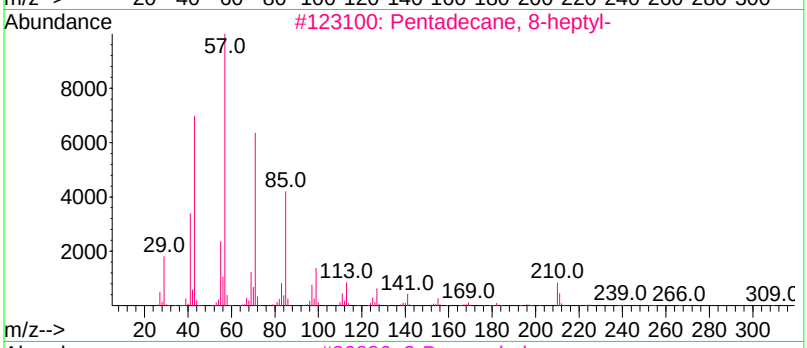
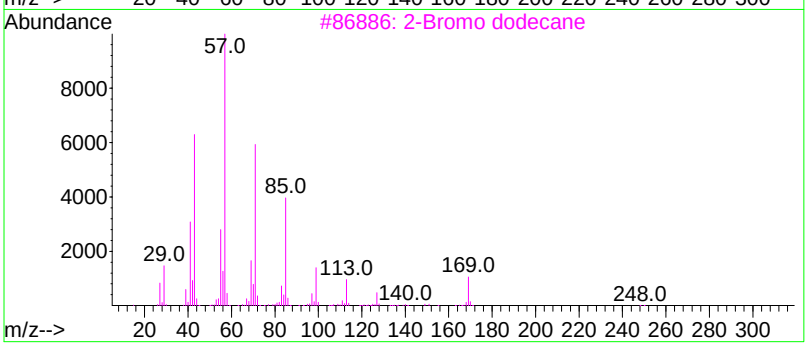
R.T.	EstConc	Area	Relative to ISTD	R.T.
42.508	308.24 ng/mL	54785	Chrysene-d12	42.902

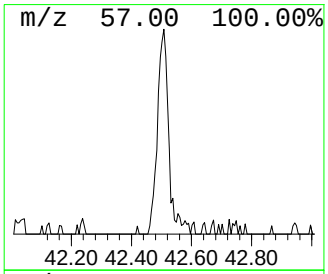
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptadecane, 2,6,10,15-tetramethyl-	296	C21H44	054833-48-6	78
2	Pentadecane, 8-heptyl-	310	C22H46	071005-15-7	72
3	2-Bromo dodecane	248	C12H25Br	013187-99-0	72
4	Eicosane, 7-hexyl-	366	C26H54	055333-99-8	72
5	Tridecane, 1-iodo-	310	C13H27I	035599-77-0	72

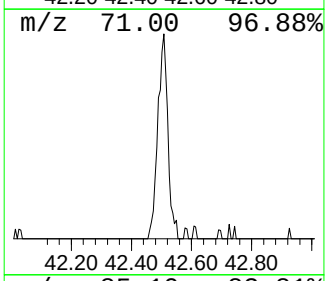


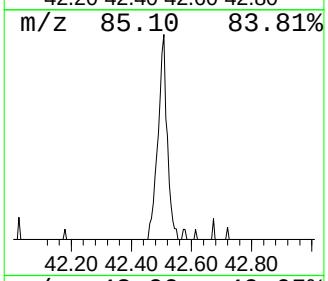


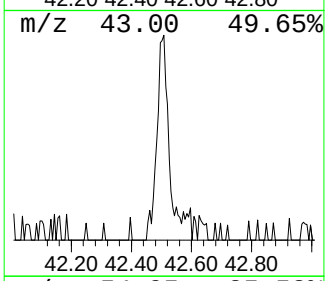


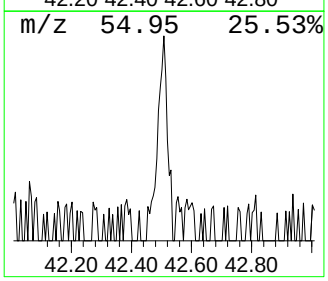












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Sample : l2165245-02,42,,
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ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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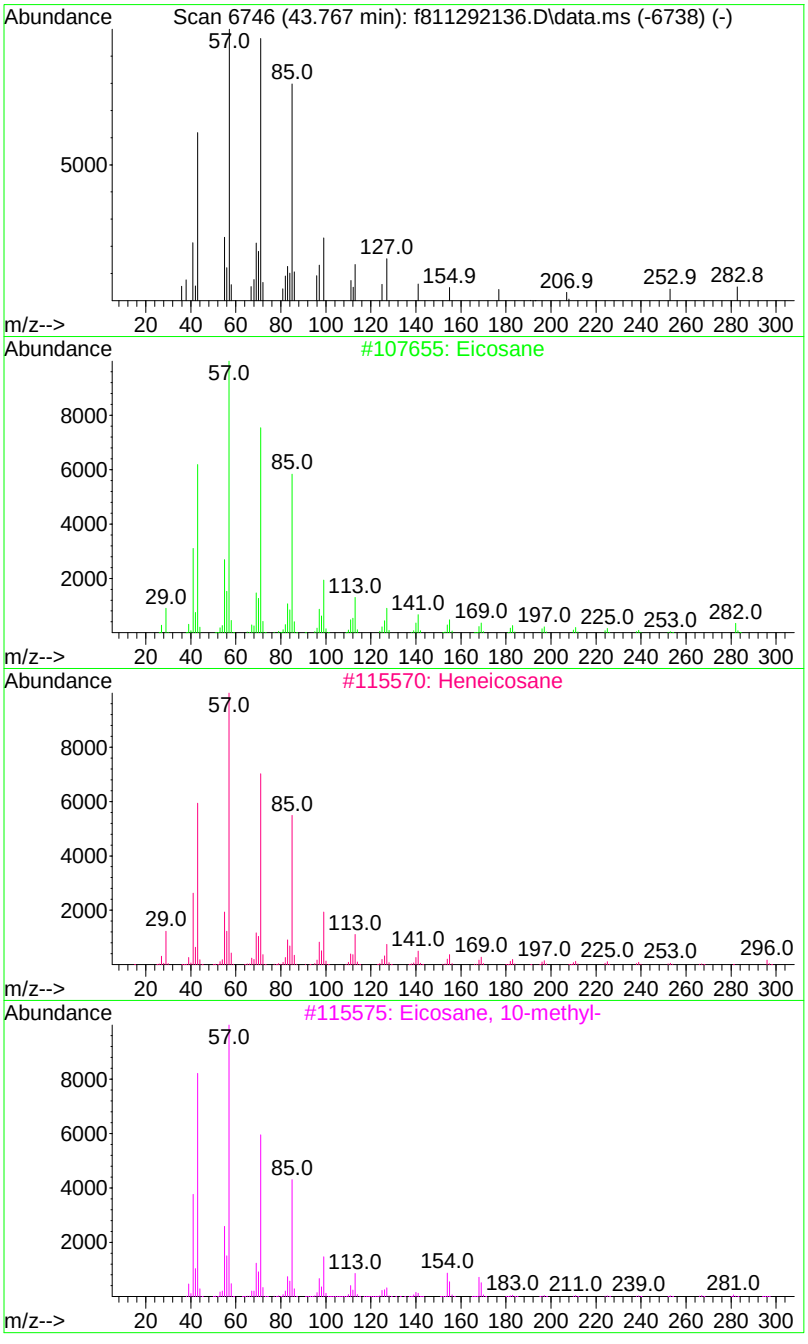
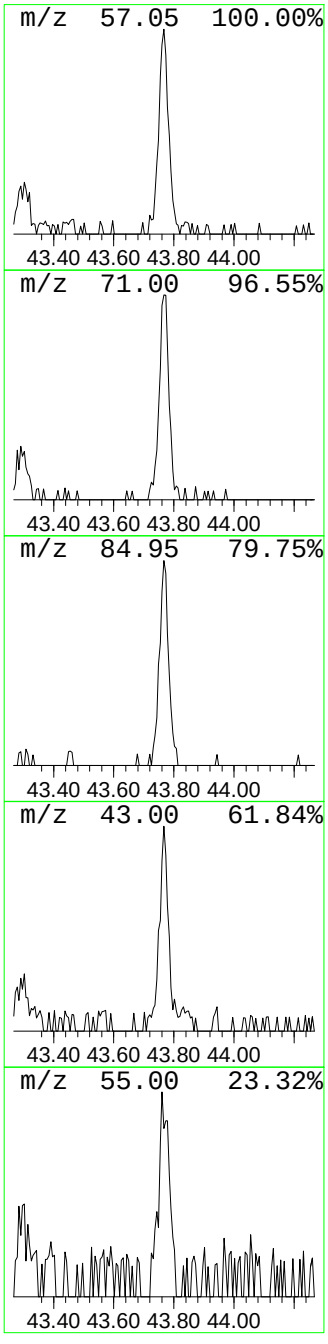
Peak Number 17 Eicosane Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
43.767	287.62 ng/mL	51120	Chrysene-d12	42.902

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane	282	C20H42	000112-95-8	90
2	Heneicosane	296	C21H44	000629-94-7	87
3	Eicosane, 10-methyl-	296	C21H44	054833-23-7	80
4	Pentadecane, 8-heptyl-	310	C22H46	071005-15-7	72
5	Hexadecane	226	C16H34	000544-76-3	72





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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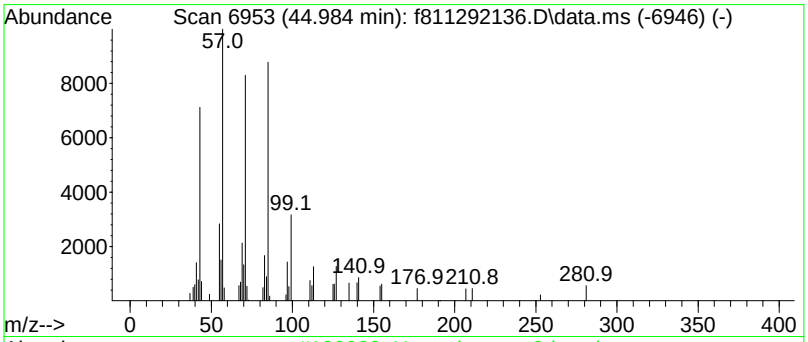
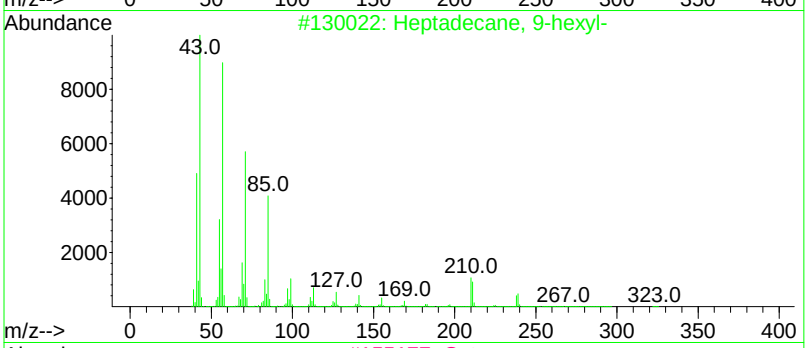
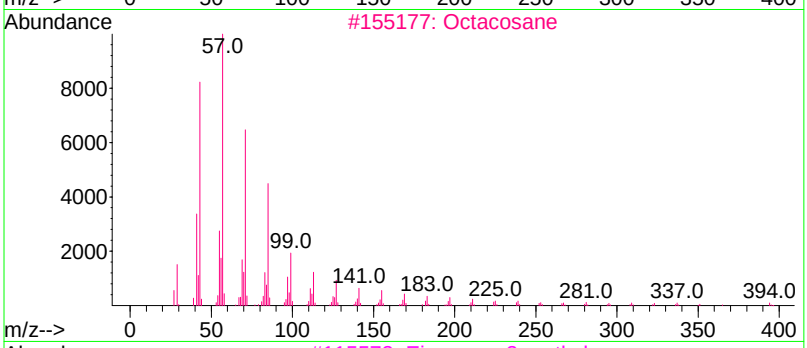
Peak Number 18 Heptadecane, 9-hexyl- Concentration Rank 13

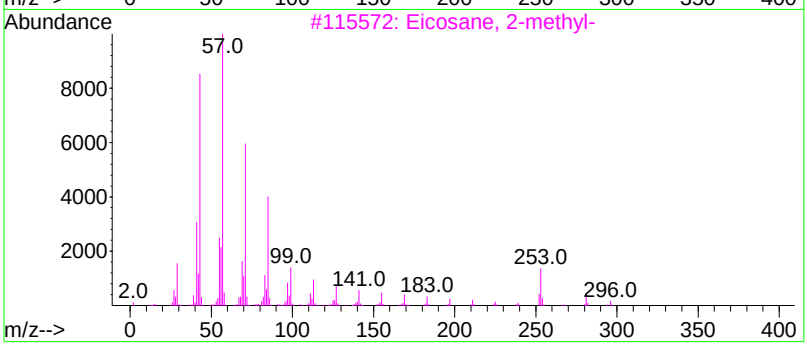
R.T.	EstConc	Area	Relative to ISTD	R.T.
44.984	303.92 ng/mL	54017	Chrysene-d12	42.902

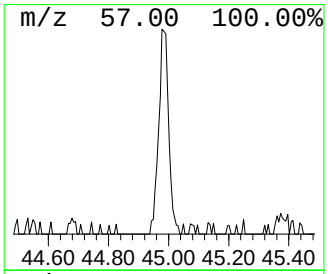
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptadecane, 9-hexyl-	324	C23H48	055124-79-3	86
2	Octacosane	394	C28H58	000630-02-4	68
3	Eicosane, 2-methyl-	296	C21H44	001560-84-5	64
4	Hexacosane	366	C26H54	000630-01-3	64
5	Heneicosane	296	C21H44	000629-94-7	64

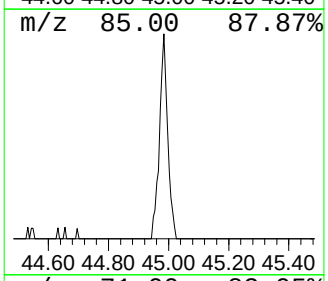


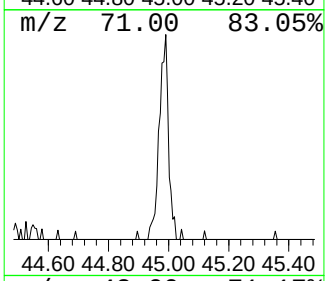


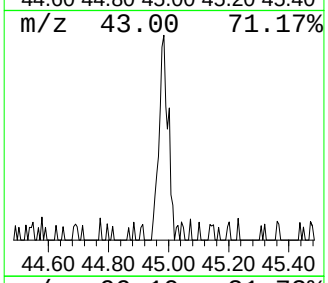


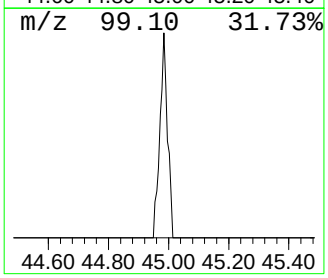












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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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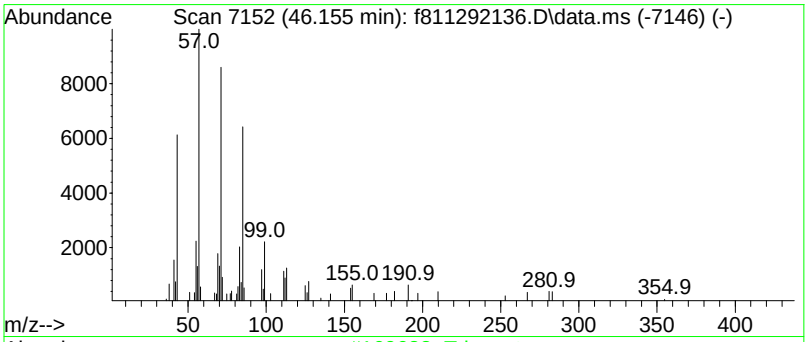
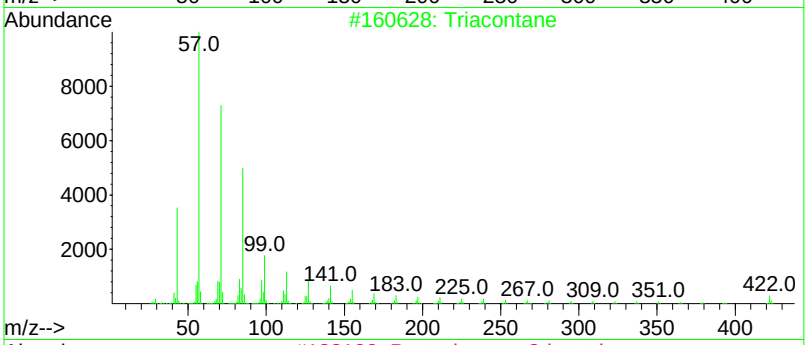
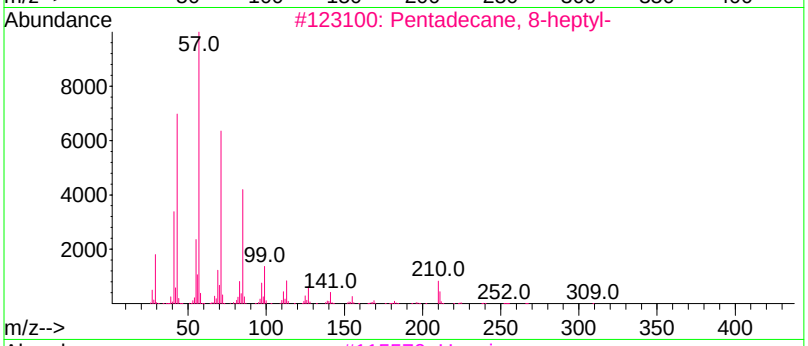
Peak Number 19 Triacontane Concentration Rank 10

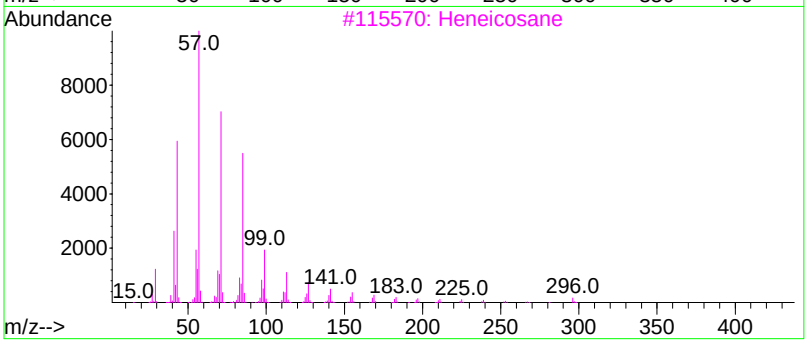
R.T.	EstConc	Area	Relative to ISTD	R.T.
46.155	428.86 ng/mL	76223	Chrysene-d12	42.902

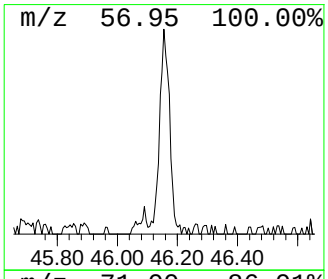
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Triacontane	422	C30H62	000638-68-6	72
2	Pentadecane, 8-heptyl-	310	C22H46	071005-15-7	72
3	Heneicosane	296	C21H44	000629-94-7	72
4	Octacosane	394	C28H58	000630-02-4	72
5	Eicosane	282	C20H42	000112-95-8	68

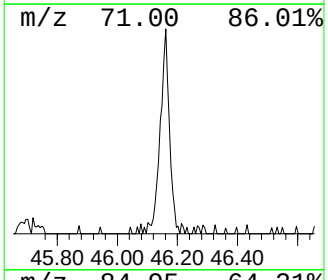


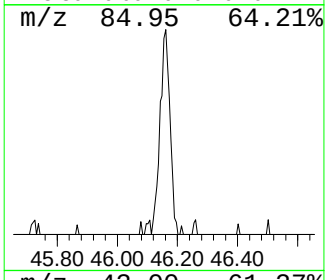


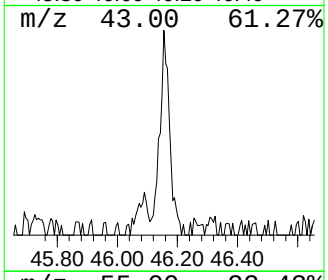


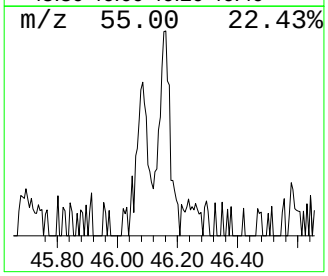












Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

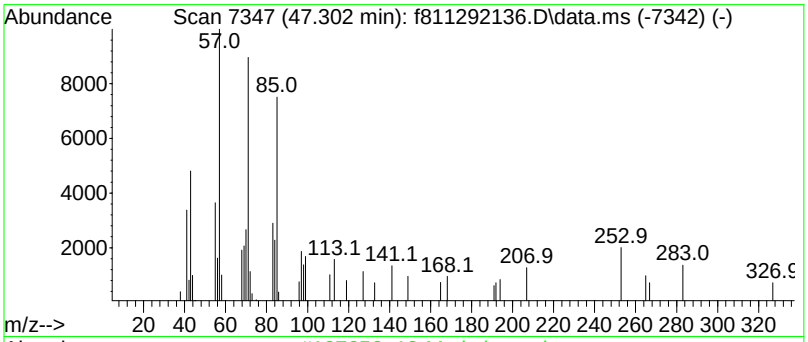
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

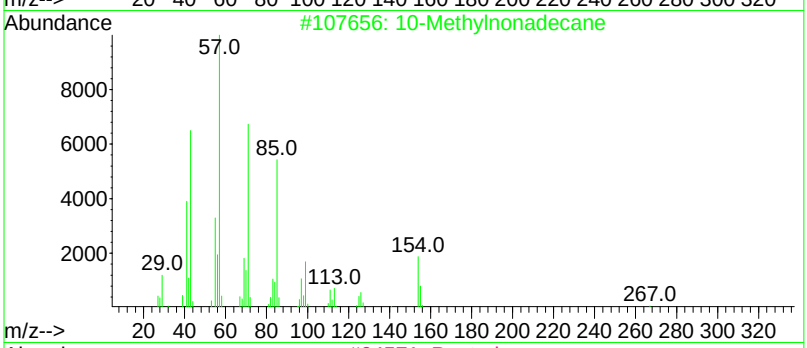
****

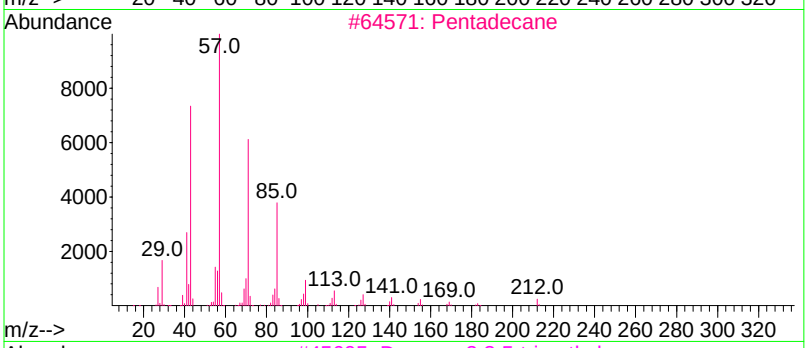
Peak Number 20 10-Methylnonadecane Concentration Rank 17

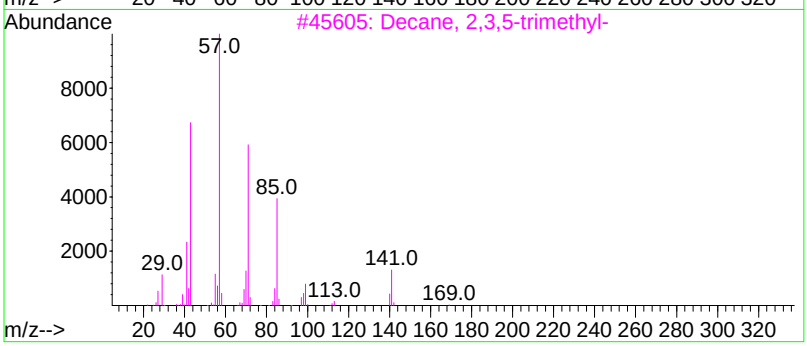
R.T.	EstConc	Area	Relative to ISTD	R.T.
47.302	225.37 ng/mL	40055	Chrysene-d12	42.902

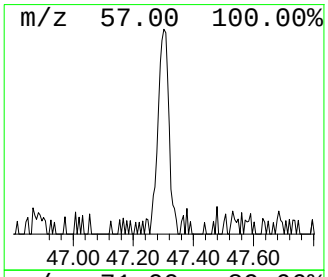
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	10-Methylnonadecane	282	C20H42	056862-62-5	53
2	Pentadecane	212	C15H32	000629-62-9	53
3	Decane, 2,3,5-trimethyl-	184	C13H28	062238-11-3	53
4	Hexadecane, 7,9-dimethyl-	254	C18H38	021164-95-4	53
5	Dodecane	170	C12H26	000112-40-3	53

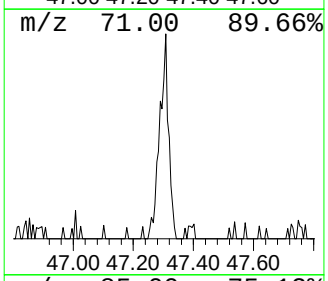


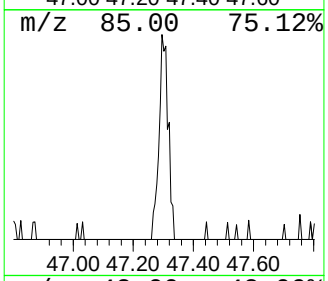


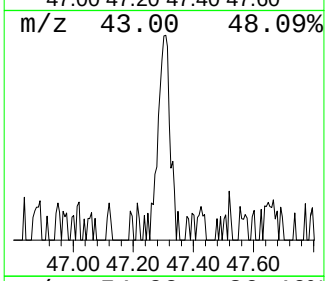


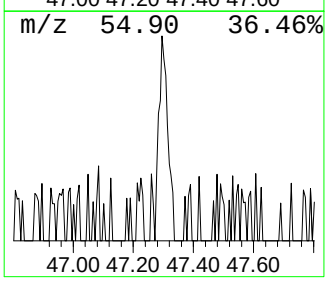












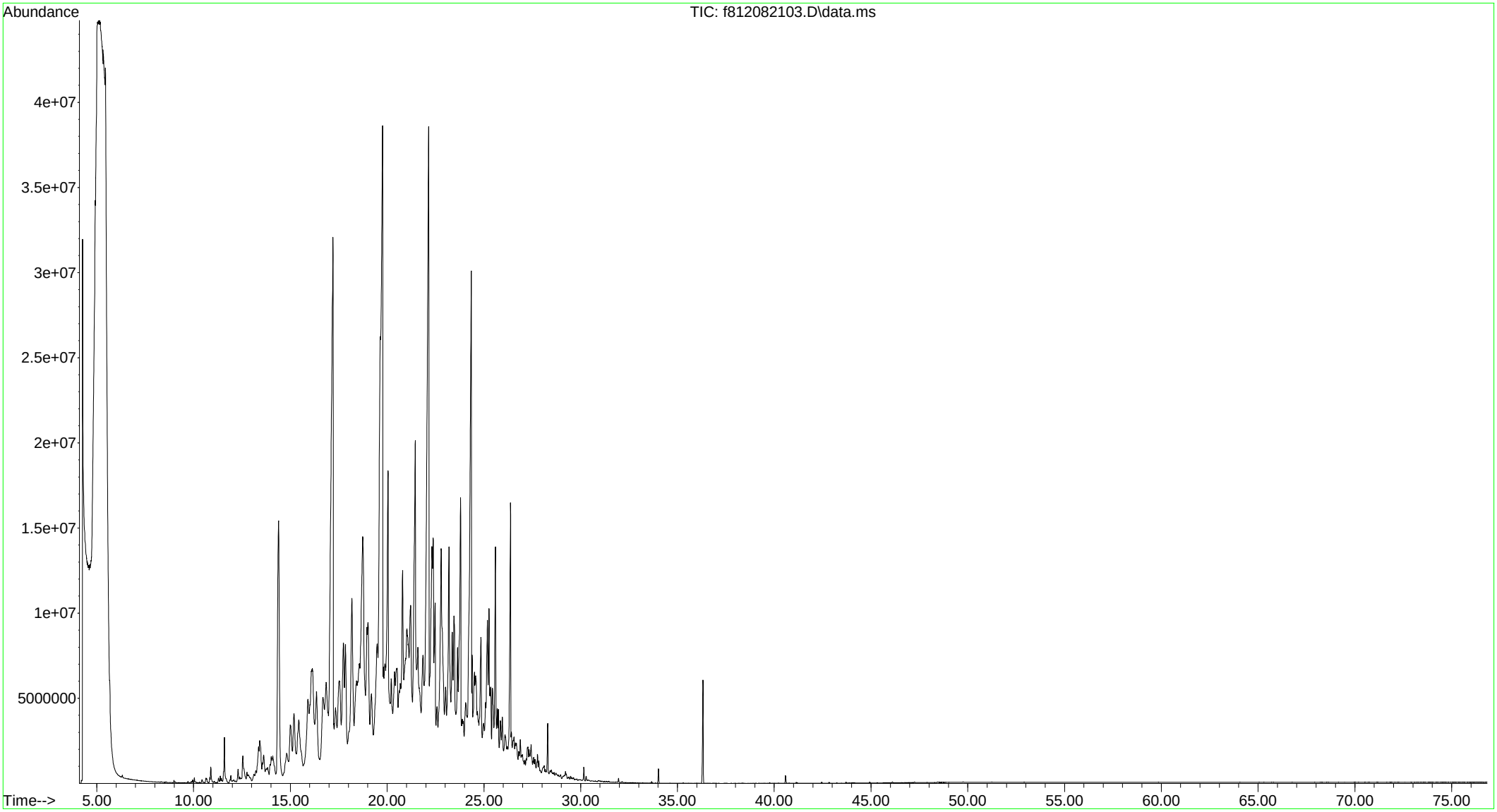
Data Path : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\
Data File : f811292136.D
Acq On : 1 Dec 2021 4:19 pm
Operator :
Sample : l2165245-02,42,,
Misc : FULL SCAN
ALS Vial : 36 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\NOV21\NOV29\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Nonane	11.645	506.0	ng/mL	4502200	1	26.503	4449130	500.0
Octane, 2,6-dim...	12.592	359.7	ng/mL	3201020	1	26.503	4449130	500.0
Tridecane, 6-me...	13.169	207.5	ng/mL	1846530	1	26.503	4449130	500.0
Cyclopropane, 1...	13.410	523.7	ng/mL	4659910	1	26.503	4449130	500.0
Decane	14.433	5627.8	ng/mL	50078000	1	26.503	4449130	500.0
Hexadecane	28.338	500.0	ng/mL	4449130	1	26.503	4449130	500.0
Hexadecane	35.350	240.9	ng/mL	42820	2	42.902	88867	500.0
Eicosane	39.826	213.9	ng/mL	38019	2	42.902	88867	500.0
Androstan-17-one	40.291	220.2	ng/mL	39134	2	42.902	88867	500.0
2-Norbornene	40.649	3485.2	ng/mL	619435	2	42.902	88867	500.0
Heptanamide, 4-...	40.826	461.5	ng/mL	82018	2	42.902	88867	500.0
Benzyl butyl ph...	40.885	1529.0	ng/mL	271746	2	42.902	88867	500.0
Heptacosane, 1-...	41.196	255.6	ng/mL	45436	2	42.902	88867	500.0
Hexanedioic aci...	41.237	819.9	ng/mL	145718	2	42.902	88867	500.0
Heptadecane, 2,...	42.508	308.2	ng/mL	54785	2	42.902	88867	500.0
Eicosane	43.767	287.6	ng/mL	51120	2	42.902	88867	500.0
Heptadecane, 9-...	44.984	303.9	ng/mL	54017	2	42.902	88867	500.0
Triacontane	46.155	428.9	ng/mL	76223	2	42.902	88867	500.0
10-Methylnonade...	47.302	225.4	ng/mL	40055	2	42.902	88867	500.0

File :O:\Forensics\Data\PAH8\2021\DEC21\DEC08\f812082103.D
Operator :
Acquired : 8 Dec 2021 1:12 pm using AcqMethod FRNC8AF.M
Instrument : PAH8
Sample Name: L2165245-03,42,,
Misc Info : full scan
Vial Number: 2



Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC08\
Data File : f812082103.D
Acq On : 8 Dec 2021 1:12 pm
Operator :
Sample : L2165245-03,42,,
Misc : full scan
ALS Vial : 2 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC03\PAH8111821.M
Title : Decalins & Alkylated PAH's

Signal : TIC: f812082103.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	8.322	716	720	725	rVB	29580	46078	0.02%	0.003%
2	8.569	757	762	767	rBV3	36566	68788	0.03%	0.005%
3	8.986	827	833	839	rBV	138005	246794	0.12%	0.017%
4	9.057	840	845	862	rVB5	51977	130464	0.06%	0.009%
5	9.228	870	874	881	rVB4	23046	45130	0.02%	0.003%
6	9.545	924	928	939	rVB4	19021	37602	0.02%	0.003%
7	9.710	949	956	966	rBV3	86780	172504	0.08%	0.012%
8	9.886	975	986	991	rBV5	95362	242015	0.11%	0.017%
9	9.951	991	997	1005	rVB	170952	351176	0.17%	0.025%
10	10.039	1005	1012	1018	rBV	285821	575787	0.27%	0.040%
11	10.310	1049	1058	1069	rVB2	60424	152354	0.07%	0.011%
12	10.433	1069	1079	1090	rBV5	202699	648201	0.30%	0.046%
13	10.528	1090	1095	1104	rVB6	37201	115506	0.05%	0.008%
14	10.645	1104	1115	1118	rBV4	289199	800028	0.38%	0.056%
15	10.839	1139	1148	1151	rBV	308389	648739	0.31%	0.046%
16	10.886	1151	1156	1180	rVB	918821	2647836	1.24%	0.186%
17	11.063	1180	1186	1198	rVB5	86167	253807	0.12%	0.018%
18	11.186	1202	1207	1214	rVB7	34817	78999	0.04%	0.006%
19	11.286	1214	1224	1234	rBV4	283914	985104	0.46%	0.069%
20	11.380	1234	1240	1245	rVV	351227	752673	0.35%	0.053%
21	11.439	1245	1250	1260	rVV	215105	559938	0.26%	0.039%
22	11.592	1261	1276	1314	rVB2	2671093	9166877	4.31%	0.644%
23	11.875	1314	1324	1326	rBV5	171647	391710	0.18%	0.028%
24	11.922	1326	1332	1341	rVB	346246	815135	0.38%	0.057%
25	12.075	1349	1358	1365	rVB5	100278	336286	0.16%	0.024%
26	12.298	1382	1396	1406	rBV5	744399	2611171	1.23%	0.183%
27	12.386	1406	1411	1417	rVV2	141370	344288	0.16%	0.024%
28	12.539	1428	1437	1467	rVB5	1347475	6704159	3.15%	0.471%
29	12.757	1468	1474	1482	rBV2	395773	1146839	0.54%	0.081%
30	13.116	1518	1535	1543	rBV7	385846	2000919	0.94%	0.141%
31	13.210	1545	1551	1558	rBV	263008	876110	0.41%	0.062%
32	13.357	1559	1576	1581	rBV6	1524211	6962895	3.27%	0.489%
33	13.557	1605	1610	1613	rBV2	378350	819377	0.39%	0.058%
34	13.621	1615	1621	1634	rVB3	978776	3582409	1.68%	0.252%
35	13.951	1670	1677	1681	rBV	595666	1706950	0.80%	0.120%
36	14.010	1683	1687	1695	rVV4	482601	1614720	0.76%	0.113%
37	14.392	1732	1752	1789	rVB2	14970947	94843548	44.59%	6.660%
38	14.810	1803	1823	1841	rBV8	1065295	9041976	4.25%	0.635%
39	14.998	1843	1855	1874	rVV5	2193524	14978350	7.04%	1.052%
40	15.186	1876	1887	1909	rVB2	2443469	14288960	6.72%	1.003%
41	15.433	1914	1929	1967	rVB7	2722952	25826548	12.14%	1.814%
42	16.680	2126	2141	2154	rBV2	2816364	19972202	9.39%	1.402%
43	17.204	2193	2230	2240	rVB	28903283	212694185	100.00%	14.936%
44	18.180	2382	2396	2415	rVB10	7488823	42163458	19.82%	2.961%
45	19.645	2628	2645	2647	rBV	18036067	74014145	34.80%	5.197%

Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC08\
Data File : f812082103.D
Acq On : 8 Dec 2021 1:12 pm
Operator :
Sample : L2165245-03,42,,
Misc : full scan
ALS Vial : 2 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC03\PAH8111821.M
Title : Decalins & Alkylated PAH's

46	20.045	2704	2713	2732	rVB2	13685655	47079716	22.13%	3.306%
47	20.797	2833	2841	2852	rVB4	6429593	21651446	10.18%	1.520%
48	21.456	2931	2953	2964	rBV4	14803085	73155356	34.39%	5.137%
49	22.144	3039	3070	3076	rVB	32863943	195260647	91.80%	13.711%
50	22.315	3085	3099	3105	rBV6	7033181	32664248	15.36%	2.294%
51	22.791	3168	3180	3208	rVB4	9740589	62756425	29.51%	4.407%
52	23.197	3240	3249	3265	rVB6	9122033	33100951	15.56%	2.324%
53	23.450	3287	3292	3309	rVB4	5793440	22488687	10.57%	1.579%
54	23.638	3318	3324	3330	rBV	3030045	7006959	3.29%	0.492%
55	23.797	3343	3351	3358	rVB2	13396900	38134335	17.93%	2.678%
56	24.350	3413	3445	3449	rBV	26134533	139250062	65.47%	9.778%
57	24.391	3449	3452	3457	rVB	3637154	5297208	2.49%	0.372%
58	24.509	3465	3472	3477	rBV4	1794166	5381015	2.53%	0.378%
59	24.844	3519	3529	3540	rVB	5899345	22011561	10.35%	1.546%
60	25.185	3575	3587	3593	rBV3	5027882	17938232	8.43%	1.260%
61	25.262	3595	3600	3606	rVB2	5095424	10039521	4.72%	0.705%
62	25.438	3623	3630	3643	rBV5	2955062	12944274	6.09%	0.909%
63	25.597	3645	3657	3666	rVB3	10735013	33591580	15.79%	2.359%
64	25.750	3679	3683	3689	rVB2	2254205	4061446	1.91%	0.285%
65	25.850	3693	3700	3709	rVV9	1329800	4300577	2.02%	0.302%
66	26.374	3773	3789	3794	rBV	13997765	40915724	19.24%	2.873%
67	26.879	3871	3875	3882	rVB2	1048067	2242412	1.05%	0.157%
68	27.250	3932	3938	3940	rBV6	664685	1476593	0.69%	0.104%
69	27.768	4016	4026	4032	rVV3	773005	2199931	1.03%	0.154%
70	27.832	4034	4037	4048	rVB3	603128	1453019	0.68%	0.102%
71	28.297	4106	4116	4127	rVB	2970798	6660052	3.13%	0.468%
72	29.215	4267	4272	4278	rBV2	218224	457363	0.22%	0.032%
73	29.479	4311	4317	4321	rBV4	176095	367649	0.17%	0.026%
74	30.162	4425	4433	4444	rVB	802529	1847159	0.87%	0.130%
75	30.285	4446	4454	4463	rBV	266245	692351	0.33%	0.049%
76	30.909	4556	4560	4565	rBV2	47485	91663	0.04%	0.006%
77	31.103	4588	4593	4605	rVB2	59455	208773	0.10%	0.015%
78	31.214	4607	4612	4621	rVB6	49535	113108	0.05%	0.008%
79	31.309	4623	4628	4633	rBV3	40991	78129	0.04%	0.005%
80	31.956	4731	4738	4748	rVB	256149	562221	0.26%	0.039%
81	32.144	4764	4770	4779	rVB4	54233	140260	0.07%	0.010%
82	32.573	4839	4843	4854	rVB4	15527	41054	0.02%	0.003%
83	32.691	4857	4863	4871	rBV10	14270	38665	0.02%	0.003%
84	33.667	5019	5029	5038	rVB2	82398	192348	0.09%	0.014%
85	34.020	5077	5089	5100	rVB	846496	1874154	0.88%	0.132%
86	35.297	5297	5306	5314	rVV3	34158	74365	0.03%	0.005%
87	36.320	5454	5480	5493	rBV	6068337	15356824	7.22%	1.078%
88	38.343	5816	5824	5831	rBV4	21598	48851	0.02%	0.003%
89	39.767	6057	6066	6078	rBV2	42812	95416	0.04%	0.007%
90	40.226	6138	6144	6154	rBV9	19554	44636	0.02%	0.003%
91	40.584	6190	6205	6225	rBV	456020	1143555	0.54%	0.080%
92	40.767	6230	6236	6242	rVV4	22376	51906	0.02%	0.004%
93	41.137	6291	6299	6303	rBV2	62426	140234	0.07%	0.010%

Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC08\
Data File : f812082103.D
Acq On : 8 Dec 2021 1:12 pm
Operator :
Sample : L2165245-03,42,,
Misc : full scan
ALS Vial : 2 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC03\PAH8111821.M
Title : Decalins & Alkylated PAH's

94	42.455	6514	6523	6534	rVV2	65158	154555	0.07%	0.011%
95	42.843	6582	6589	6601	rBV	52842	131280	0.06%	0.009%
96	43.243	6650	6657	6664	rBV4	23470	53224	0.03%	0.004%
97	43.714	6729	6737	6752	rVB2	65108	168041	0.08%	0.012%
98	44.931	6936	6944	6954	rBV2	58258	158940	0.07%	0.011%
99	46.108	7137	7144	7153	rVB2	52258	122279	0.06%	0.009%
100	47.243	7331	7337	7347	rBV5	38570	100926	0.05%	0.007%

Sum of corrected areas: 1424074646

Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC08\
Data File : f812082103.D
Acq On : 8 Dec 2021 1:12 pm
Operator :
Sample : L2165245-03,42,,
Misc : full scan
ALS Vial : 2 Sample Multiplier: 1

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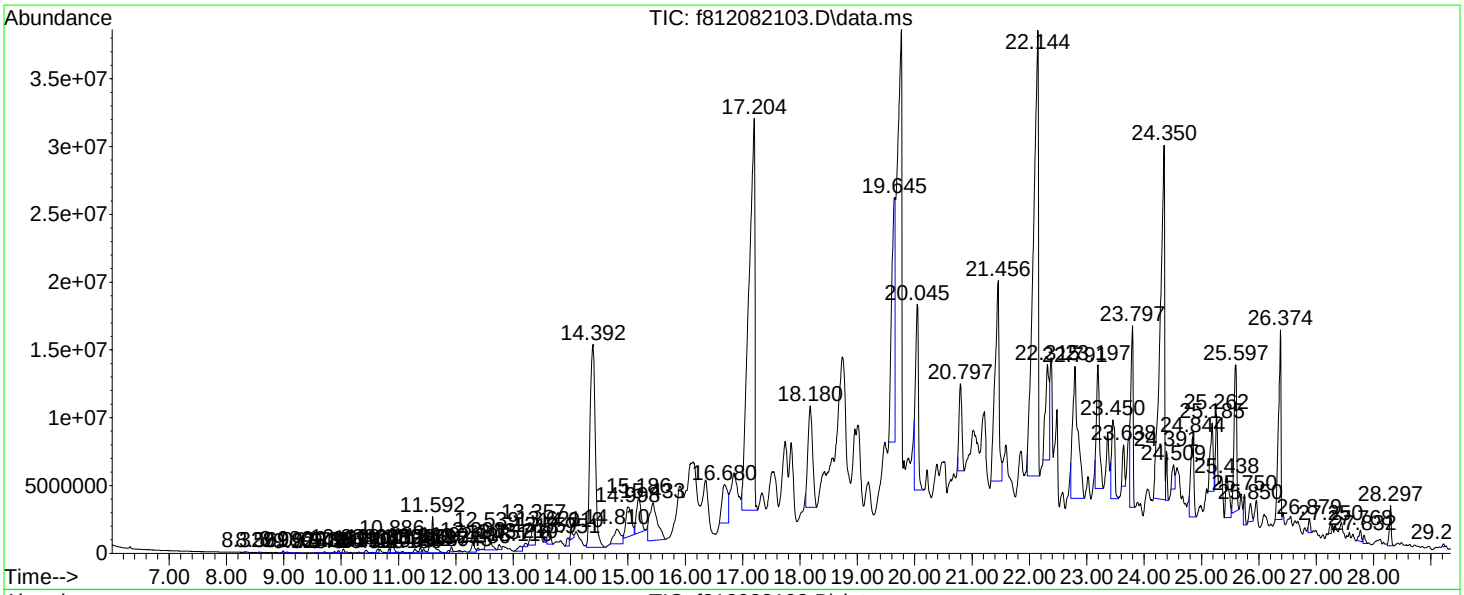
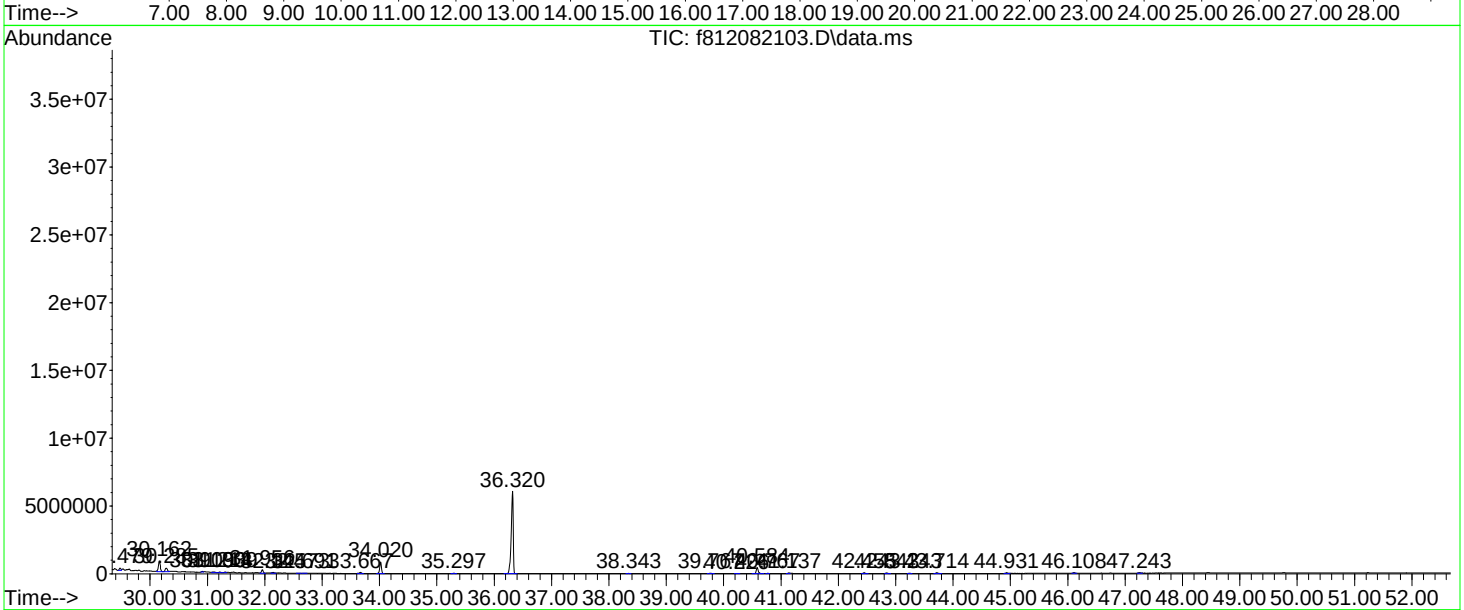
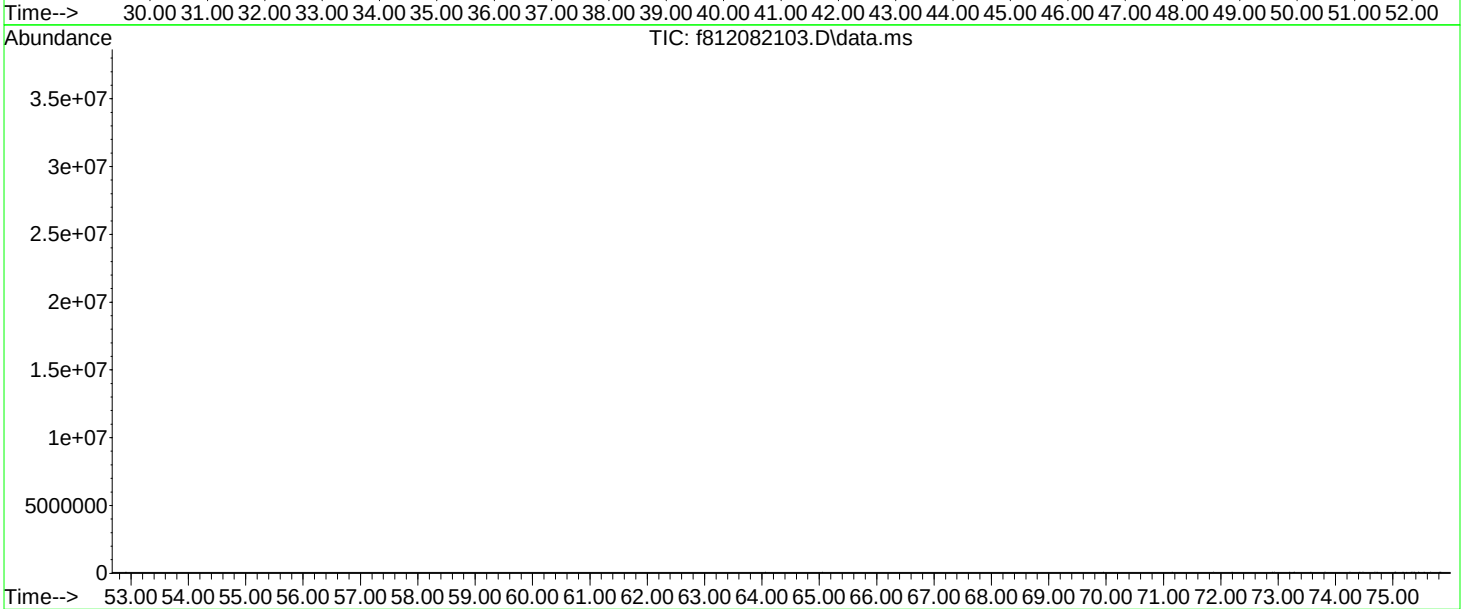
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P







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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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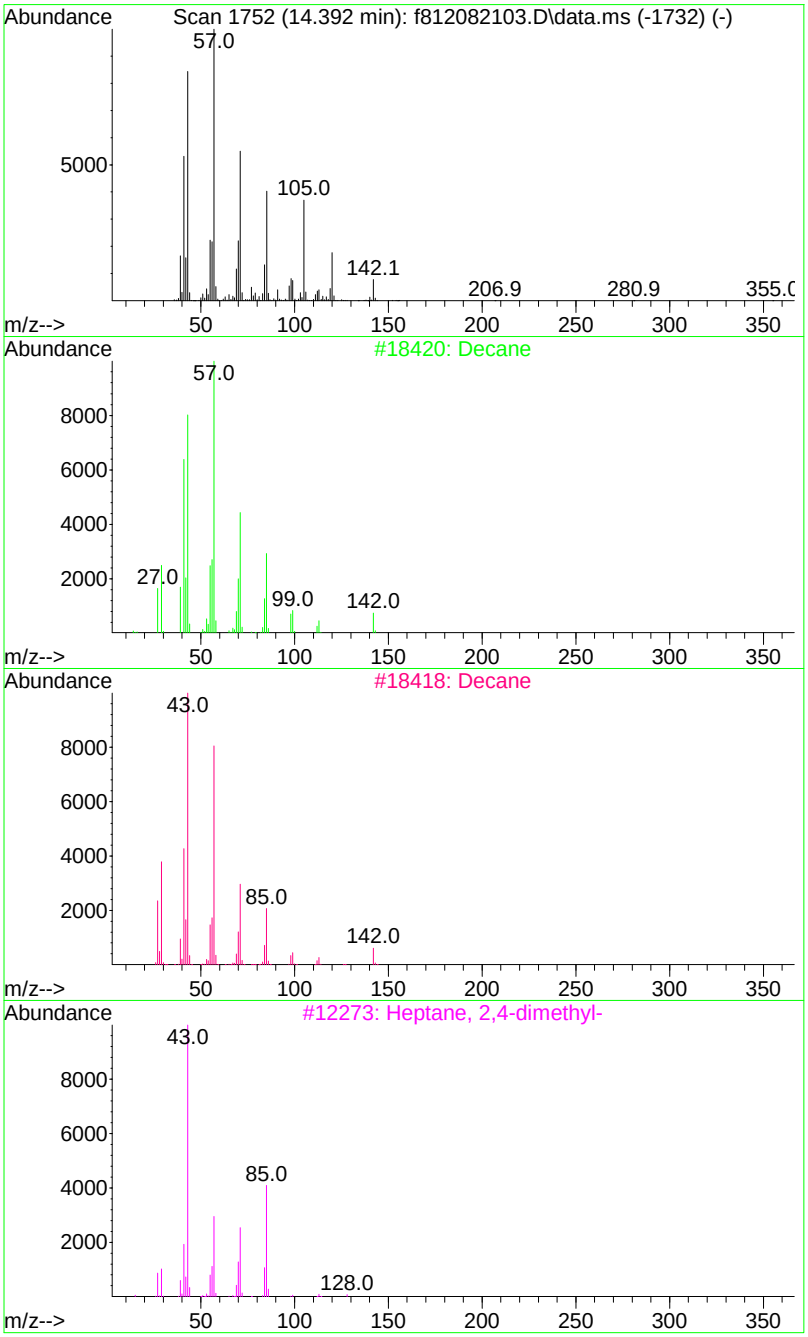
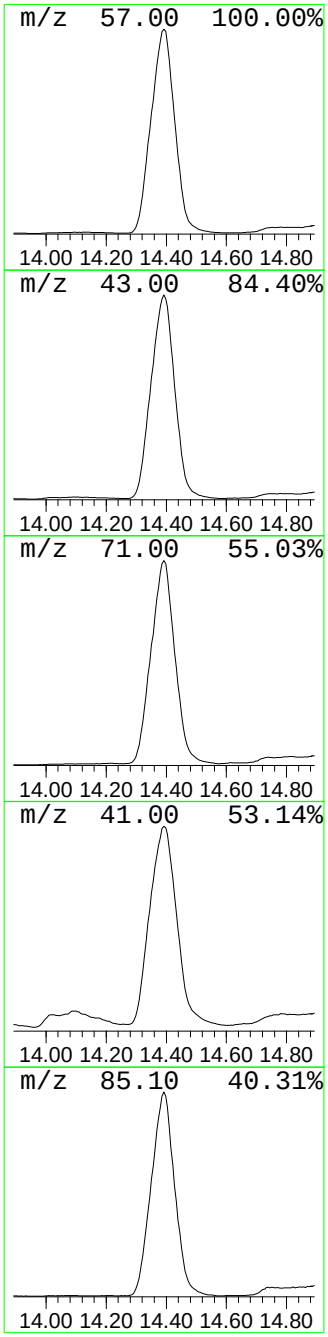
Peak Number 1 Decane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.392	1159.01 ng/mL	94843500	Acenaphthene-d10	26.474

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Decane	142	C10H22	000124-18-5	90
2	Decane	142	C10H22	000124-18-5	81
3	Heptane, 2,4-dimethyl-	128	C9H20	002213-23-2	58
4	Heptane, 2,4-dimethyl-	128	C9H20	002213-23-2	58
5	Tetradecane	198	C14H30	000629-59-4	58





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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Peak Number 2 Undecane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.204	2599.17 ng/mL	212694000	Acenaphthene-d10	26.474

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Undecane	156	C11H24	001120-21-4	90
2	Undecane	156	C11H24	001120-21-4	81
3	Undecane	156	C11H24	001120-21-4	76
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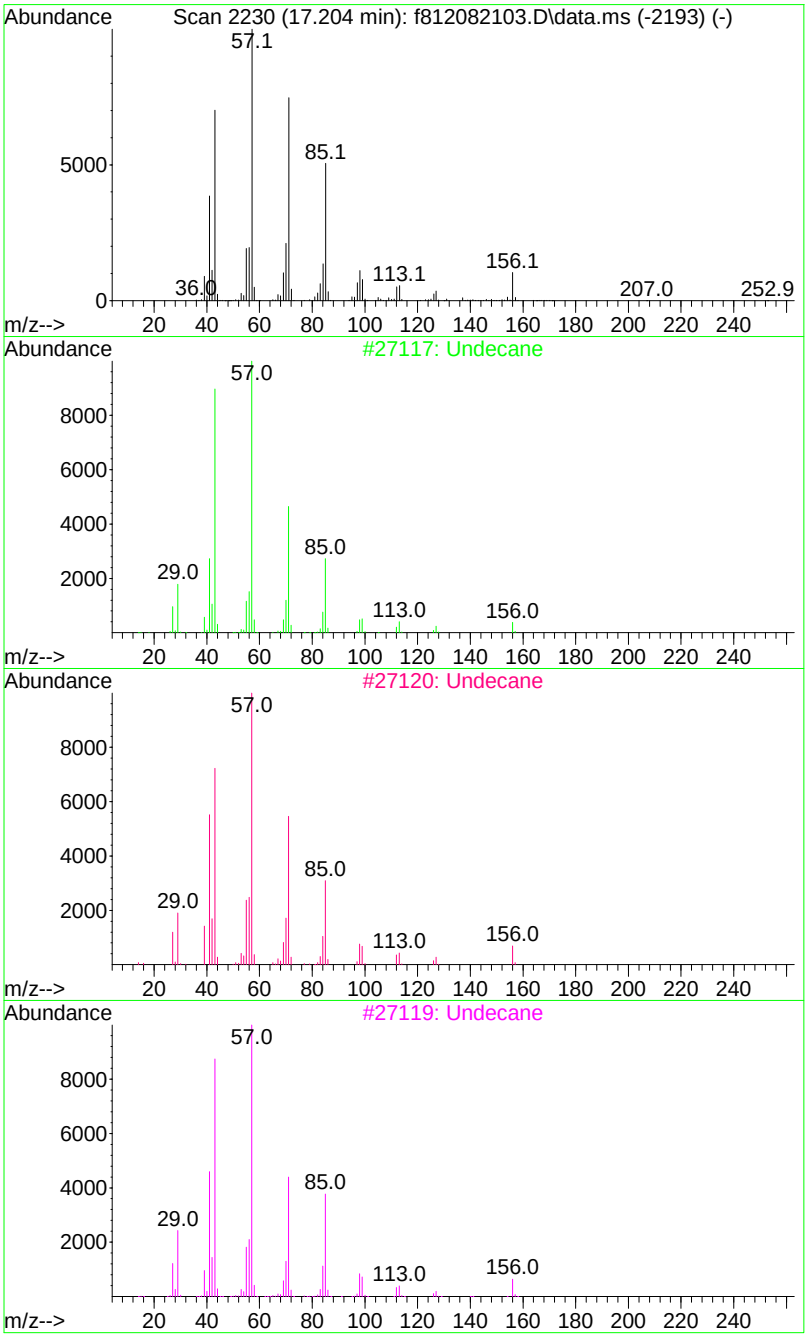
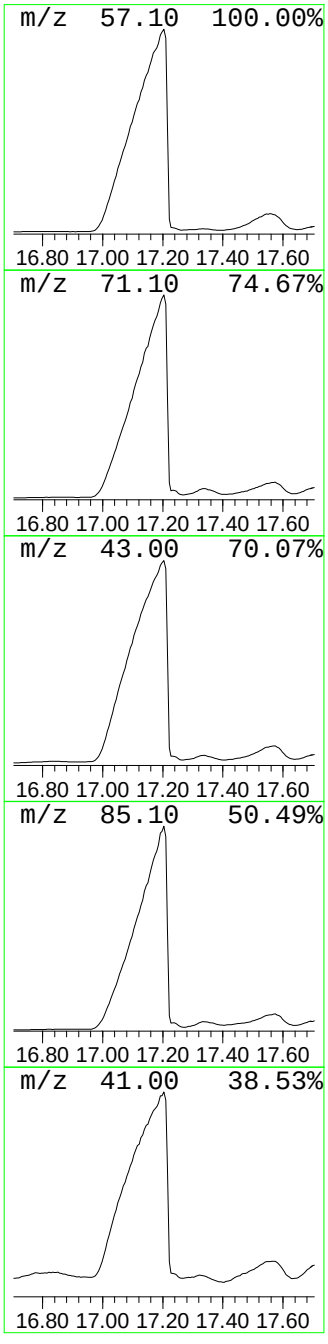
5	Undecane	156	C11H24	001120-21-4	74





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Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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Peak Number  3  Cyclohexane, (1-methylbutyl)-   Concentration Rank 15
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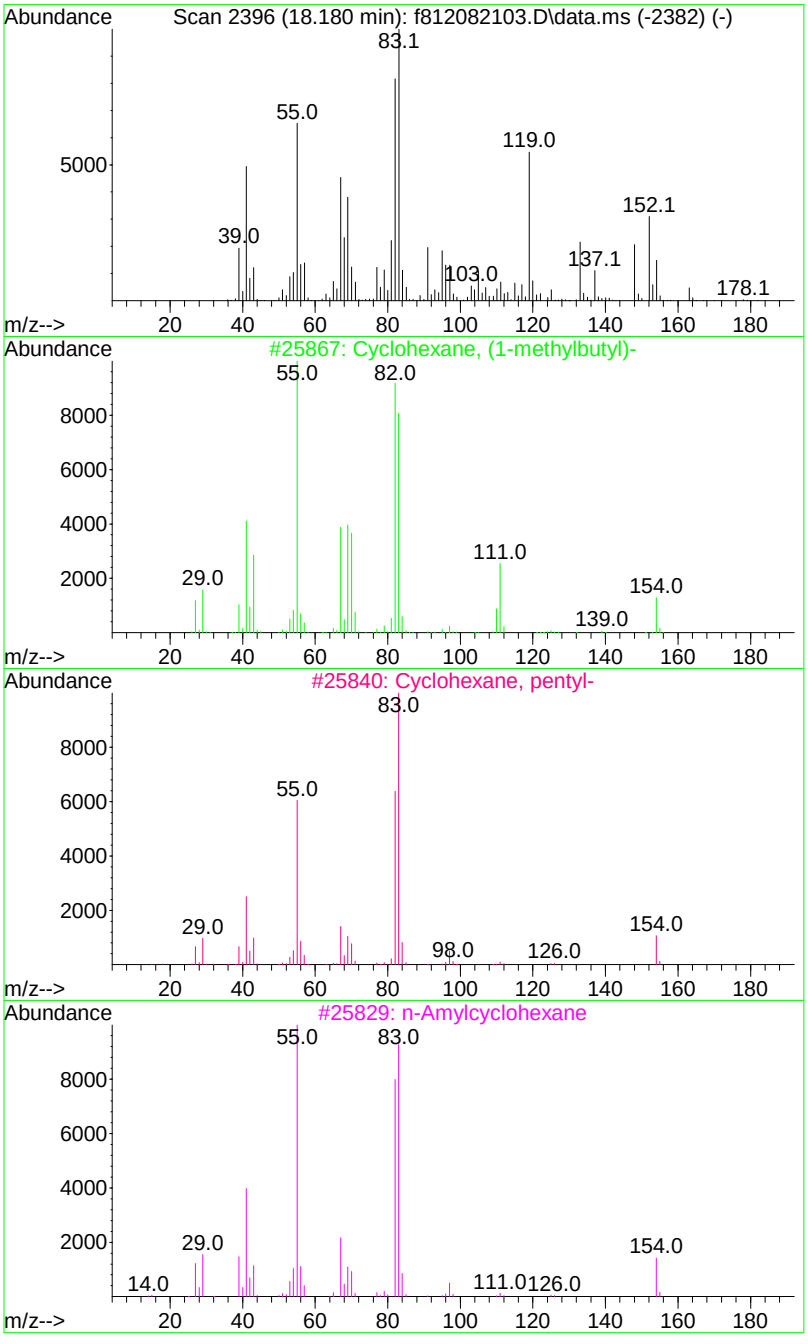
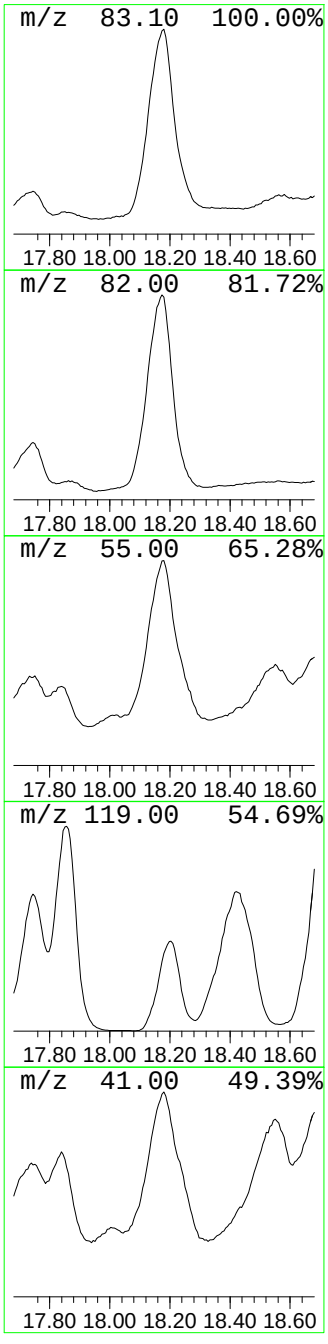
R.T.	EstConc	Area	Relative to ISTD	R.T.
18.180	515.25 ng/mL	42163500	Acenaphthene-d10	26.474

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, (1-methylbutyl)-	154	C11H22	061208-94-4	58
2	Cyclohexane, pentyl-	154	C11H22	004292-92-6	55
3	n-Amylcyclohexane	154	C11H22	029949-27-7	49
4	Cyclohexane, pentyl-	154	C11H22	004292-92-6	49
5	Cyclohexane, pentyl-	154	C11H22	004292-92-6	49





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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Peak Number 4 Naphthalene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.645	904.47 ng/mL	74014100	Acenaphthene-d10	26.474

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	70
2	3-Hexanone, 2,2-dimethyl-	128	C8H16O	005405-79-8	50
3	1H-Indene, 1-methylene-	128	C10H8	002471-84-3	38
4	Naphthalene	128	C10H8	000091-20-3	38
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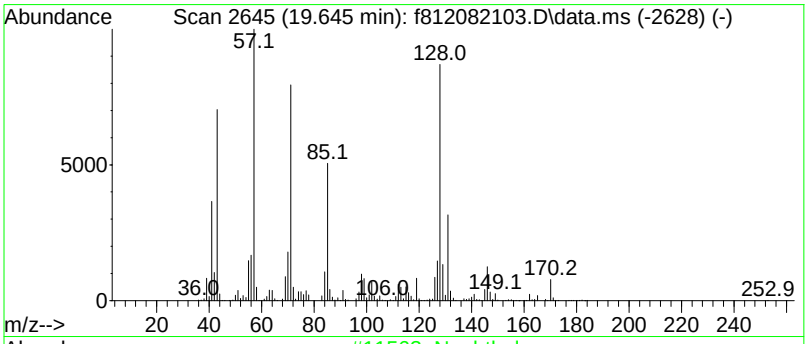

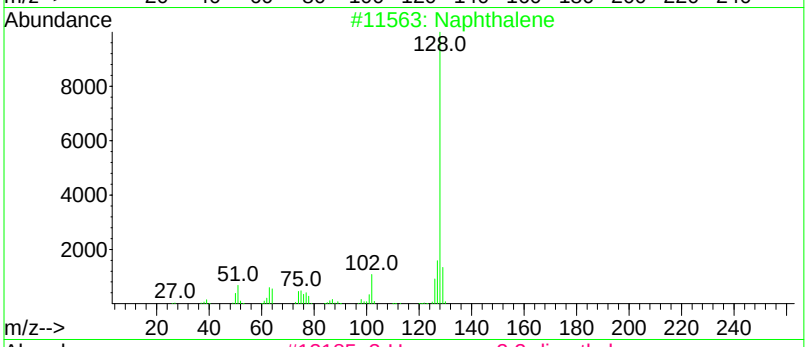

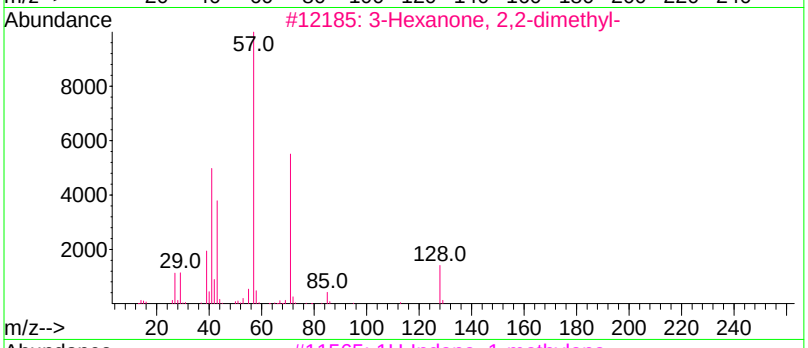

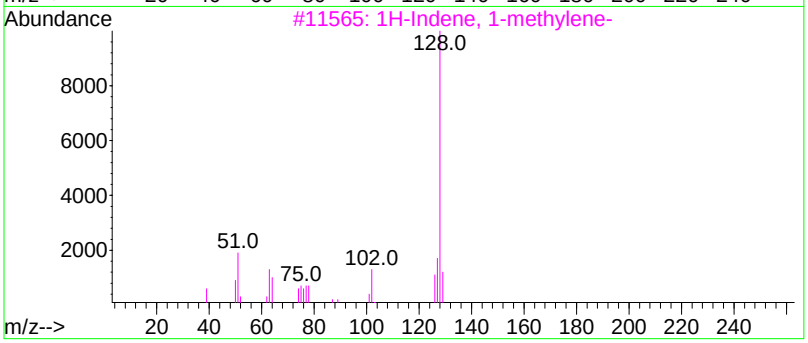

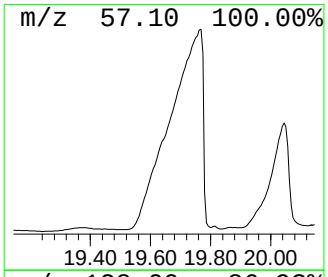

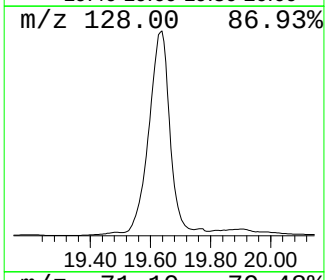

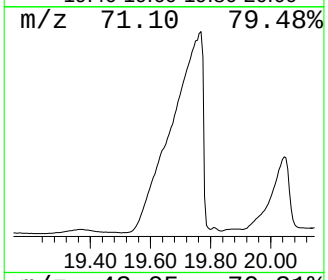

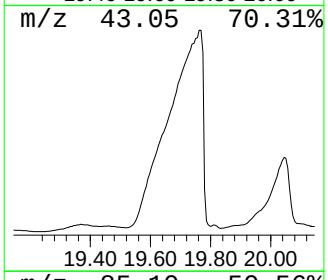

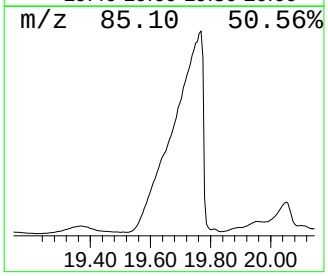

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Misc : full scan
ALS Vial : 2 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

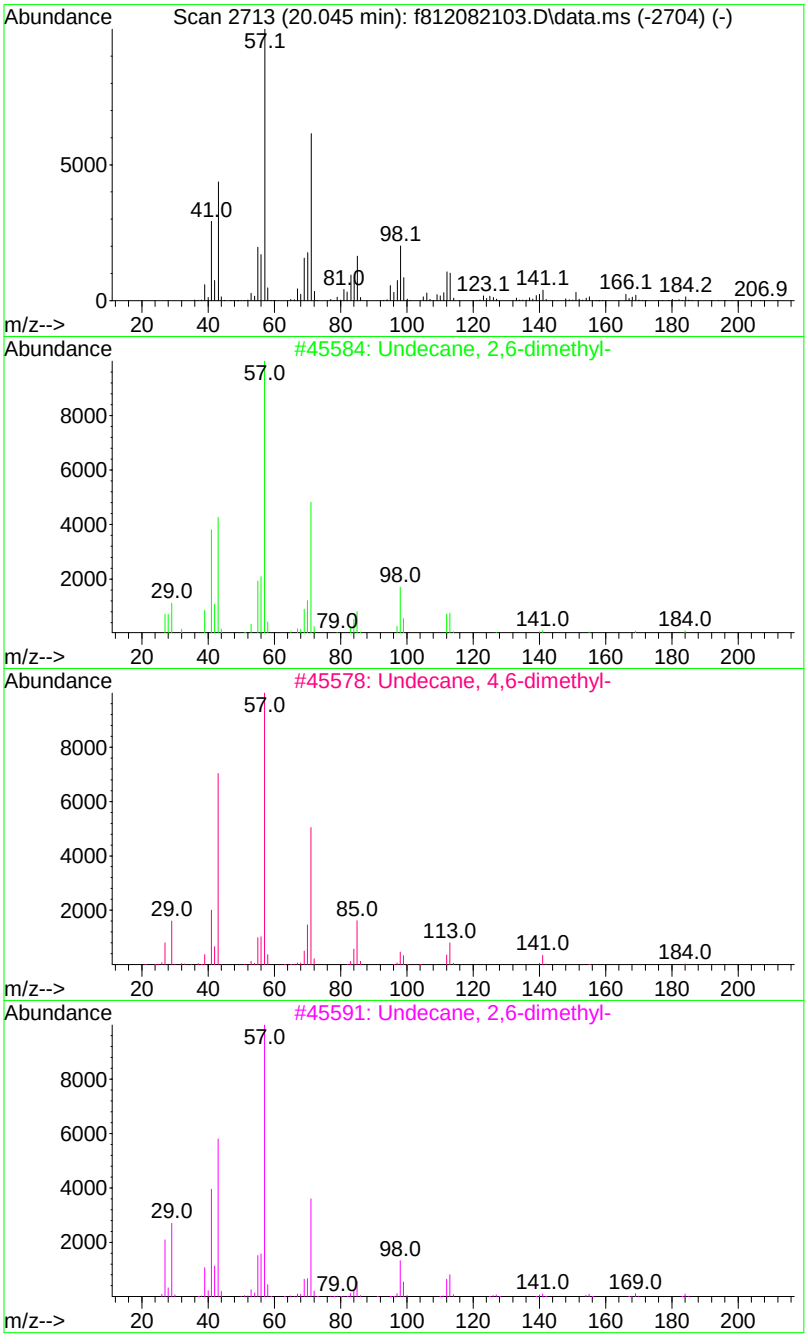
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

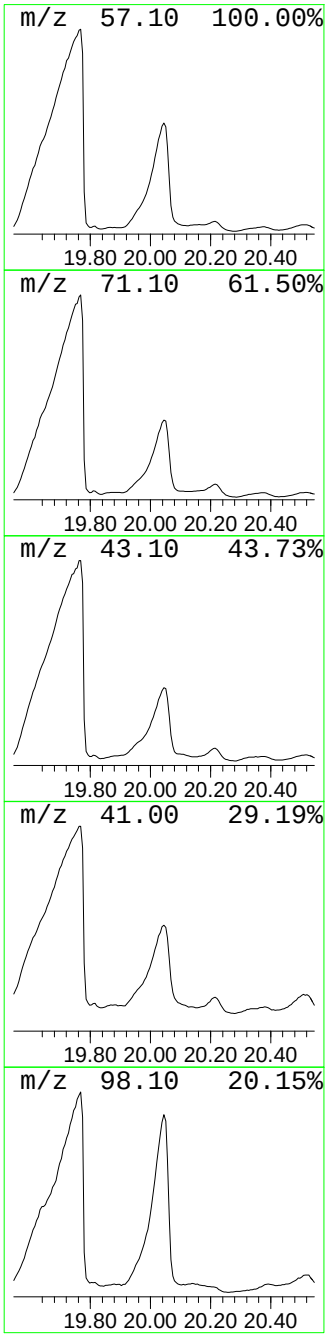
****

Peak Number 5 Undecane, 2,6-dimethyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
20.045	575.33 ng/mL	47079700	Acenaphthene-d10	26.474

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Undecane, 2,6-dimethyl-	184	C13H28	017301-23-4	91
2	Undecane, 4,6-dimethyl-	184	C13H28	017312-82-2	59
3	Undecane, 2,6-dimethyl-	184	C13H28	017301-23-4	58
4	Nonane, 3-methyl-	142	C10H22	005911-04-6	58
5	Undecane, 3,6-dimethyl-	184	C13H28	017301-28-9	58





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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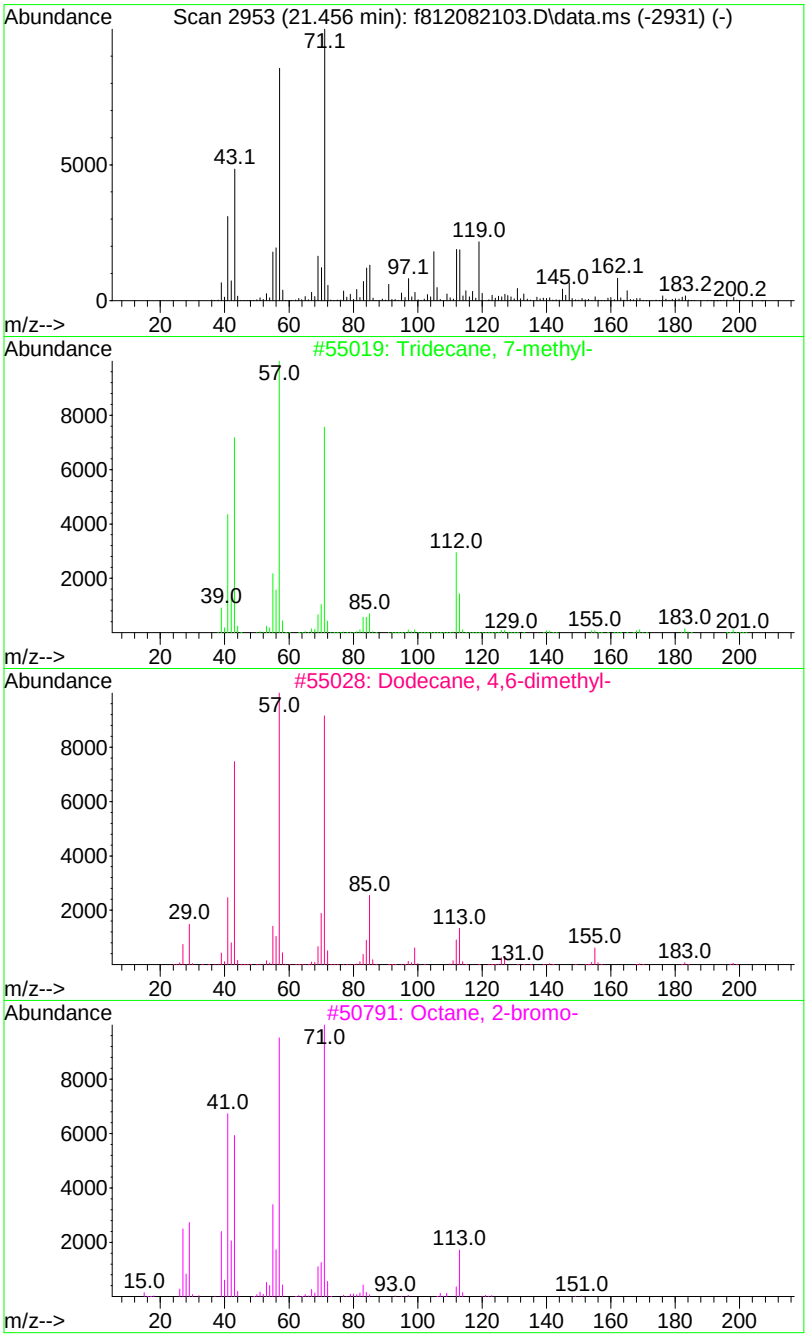
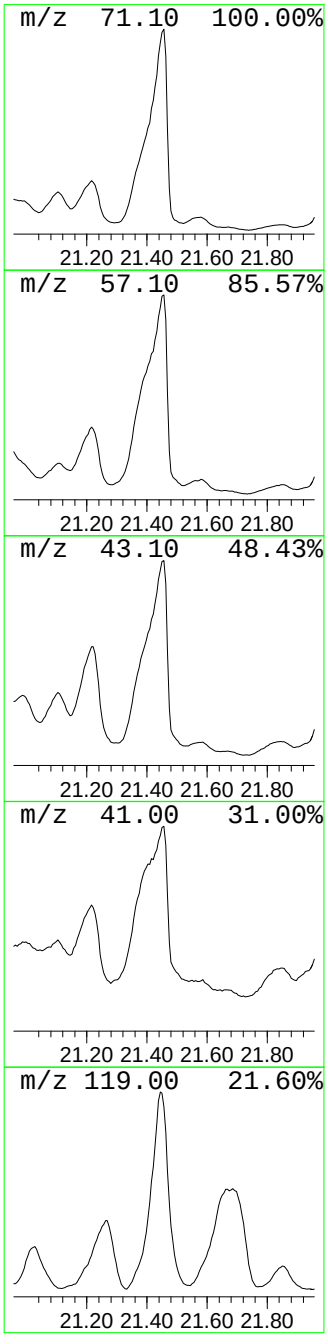
Peak Number 6 Tridecane, 7-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.456	893.98 ng/mL	73155400	Acenaphthene-d10	26.474

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tridecane, 7-methyl-	198	C14H30	026730-14-3	70
2	Dodecane, 4,6-dimethyl-	198	C14H30	061141-72-8	53
3	Octane, 2-bromo-	192	C8H17Br	000557-35-7	53
4	Hexadecane, 7-methyl-	240	C17H36	026730-20-1	53
5	Heptane, 3,3,5-trimethyl-	142	C10H22	007154-80-5	50





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Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number  7  Tridecane                        Concentration Rank  4

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 22.144 2386.13 ng/mL   195261000   Acenaphthene-d10           26.474

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 Tridecane                             184 C13H28        000629-50-5 91
 2 Tridecane                             184 C13H28        000629-50-5 87
 3 Tridecane                             184 C13H28        000629-50-5 87
 4 Decane, 2,3,5-trimethyl-              184 C13H28        062238-11-3 86
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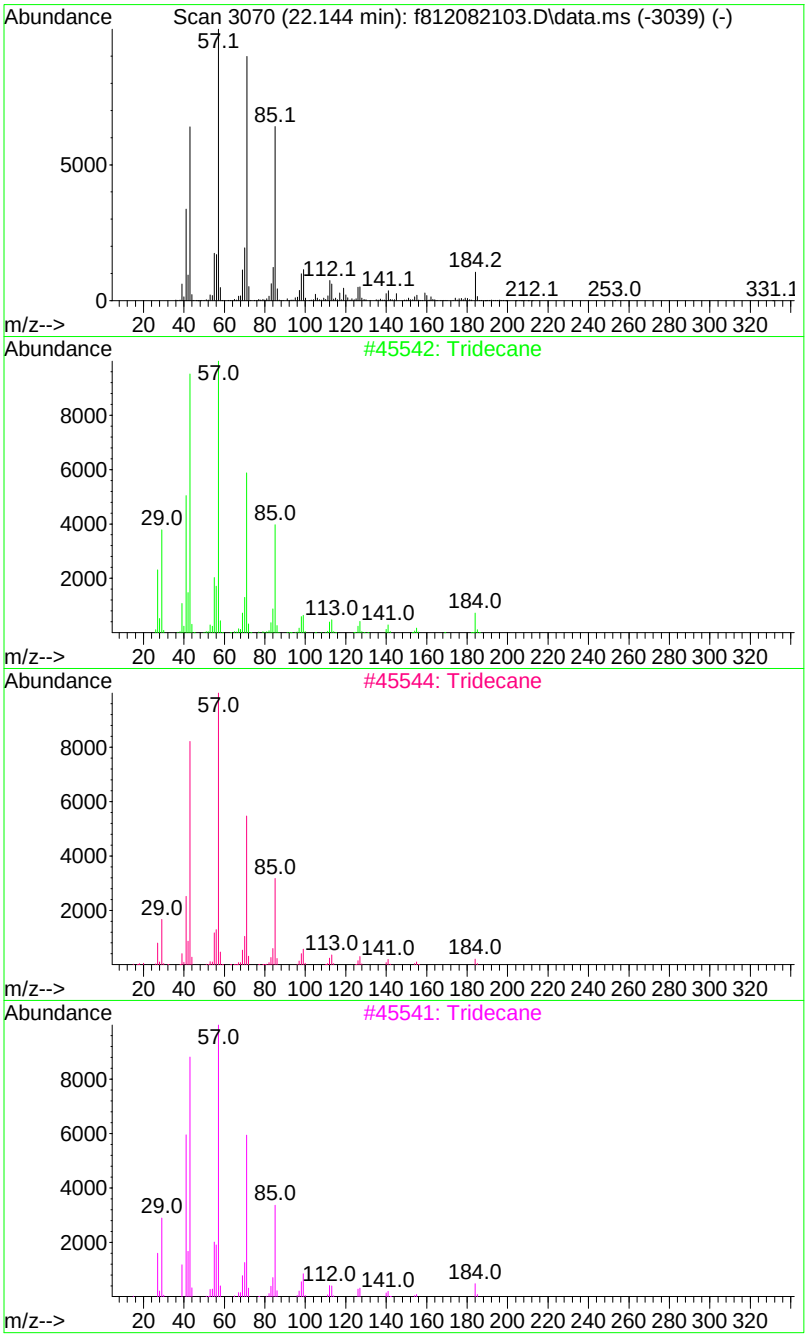

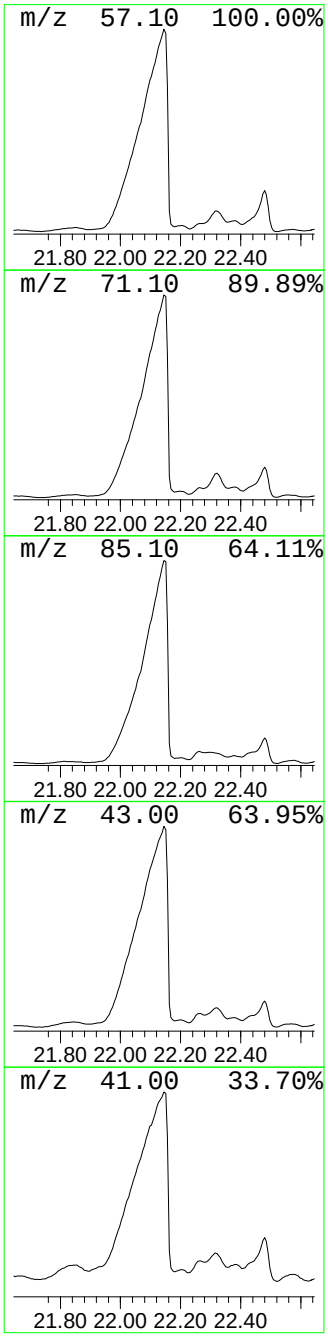

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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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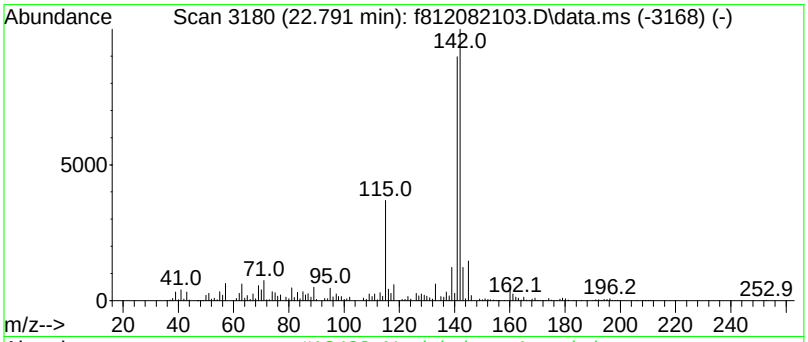
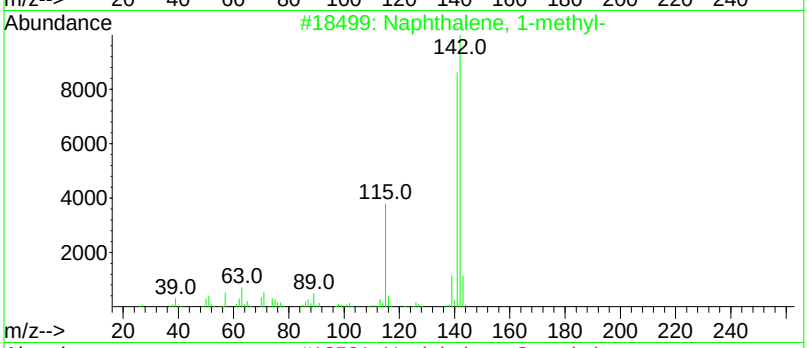
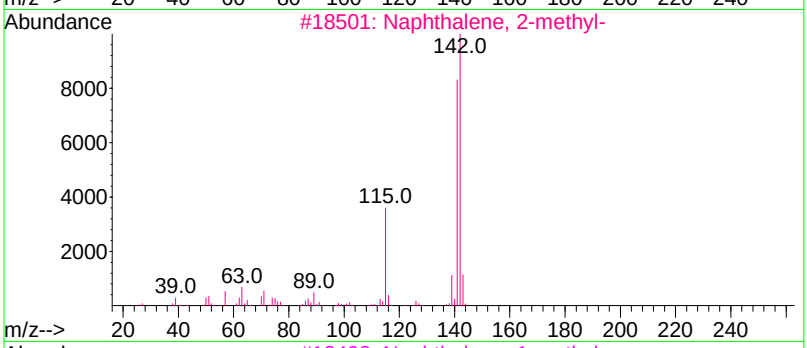
Peak Number 8 Naphthalene, 1-methyl- Concentration Rank 9

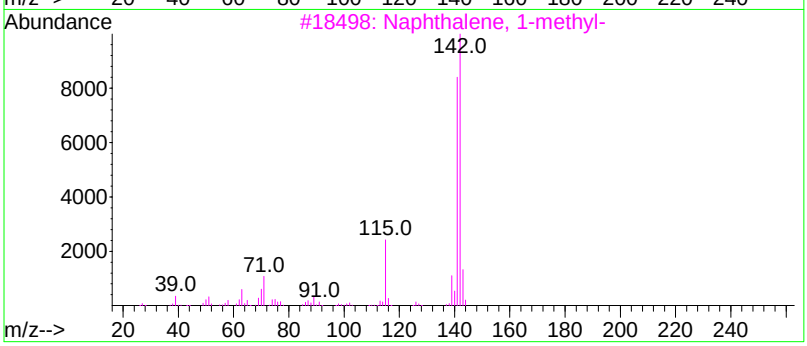
R.T.	EstConc	Area	Relative to ISTD	R.T.
22.791	766.90 ng/mL	62756400	Acenaphthene-d10	26.474

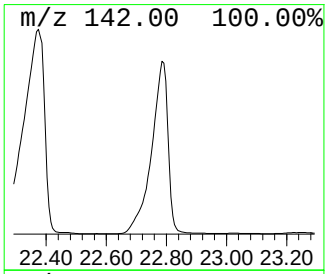
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	96
2	Naphthalene, 2-methyl-	142	C11H10	000091-57-6	96
3	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	93
4	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	90
5	Bicyclo[4.4.1]undeca-1,3,5,7,9-p...	142	C11H10	002443-46-1	90

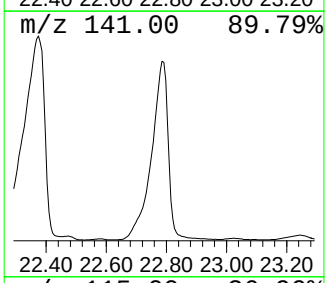


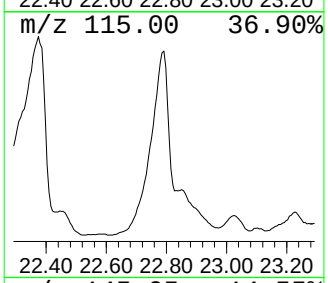


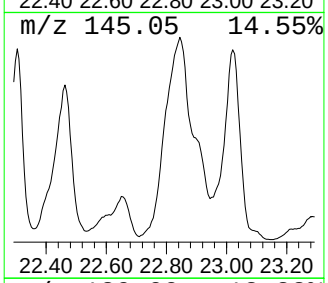


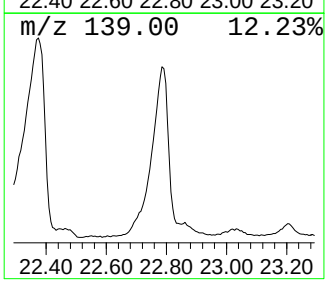












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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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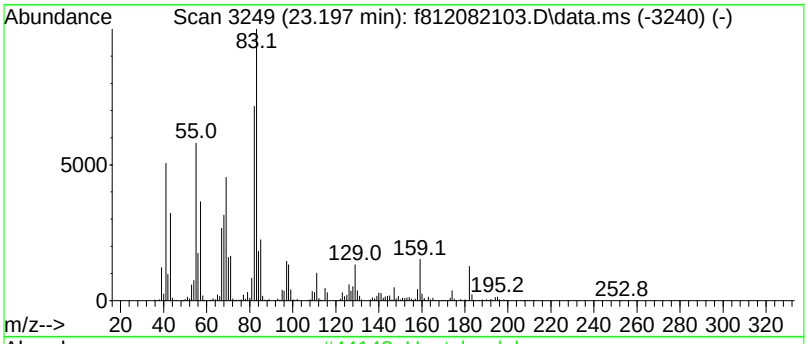
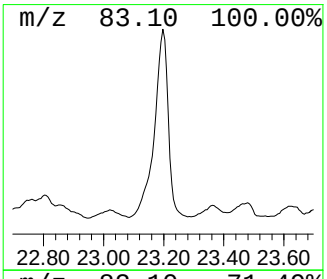
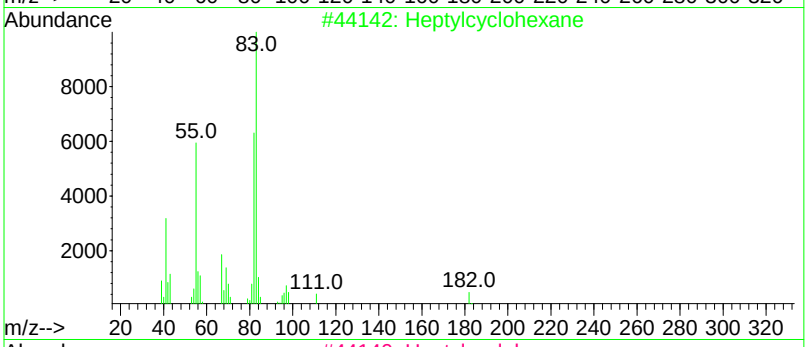
Peak Number 9 Heptylcyclohexane Concentration Rank 20

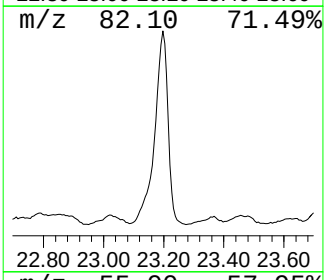
R.T.	EstConc	Area	Relative to ISTD	R.T.
23.197	404.50 ng/mL	33101000	Acenaphthene-d10	26.474

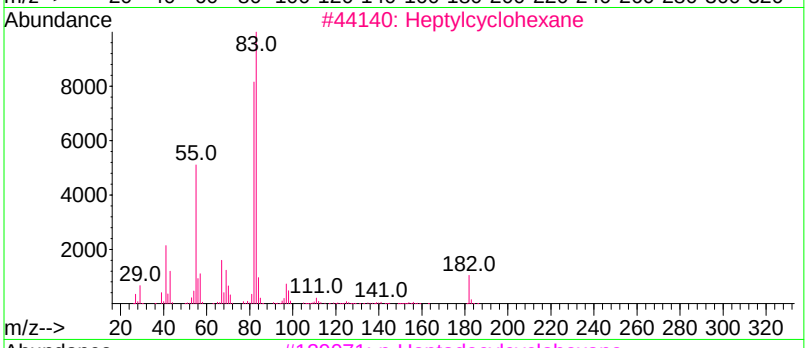
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptylcyclohexane	182	C13H26	005617-41-4	59
2	Heptylcyclohexane	182	C13H26	005617-41-4	58
3	n-Heptadecylcyclohexane	322	C23H46	019781-73-8	50
4	Cyclohexane, decyl-	224	C16H32	001795-16-0	50
5	Cyclohexane, pentyl-	154	C11H22	004292-92-6	47

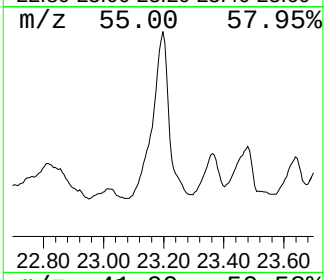


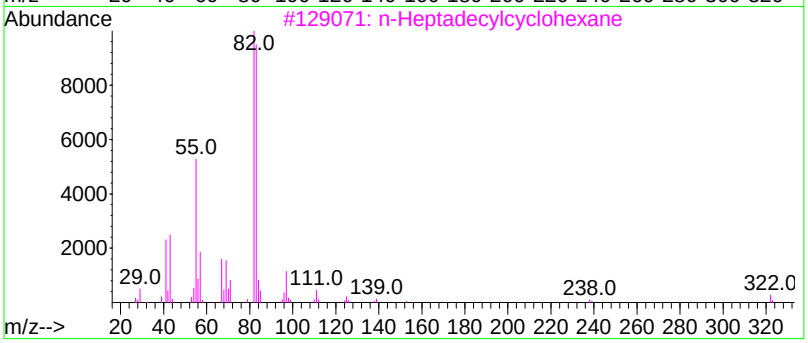


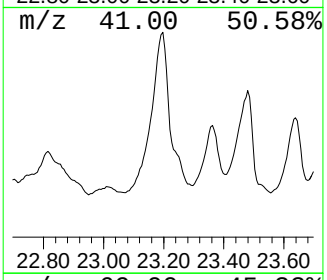


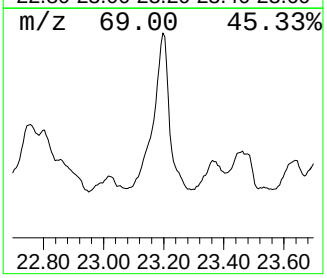












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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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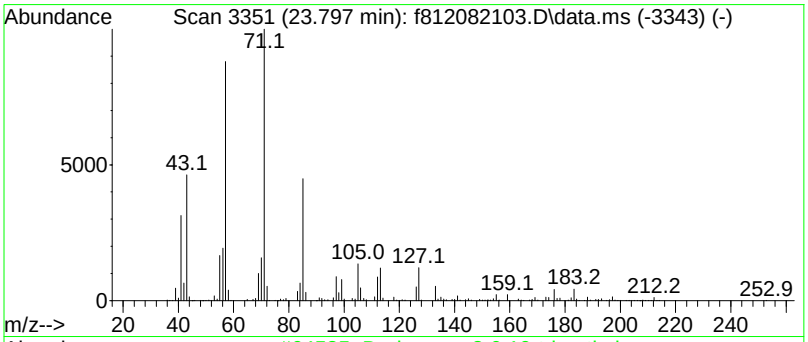
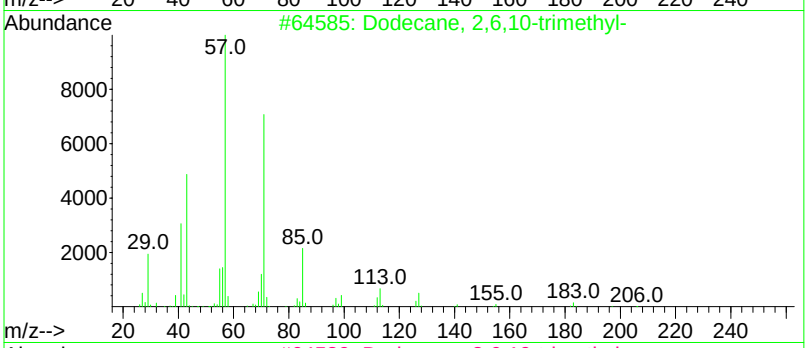
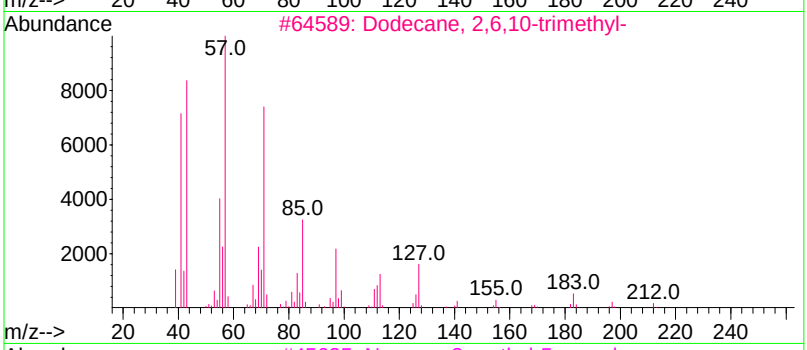
Peak Number 10 Dodecane, 2,6,10-trimethyl- Concentration Rank 17

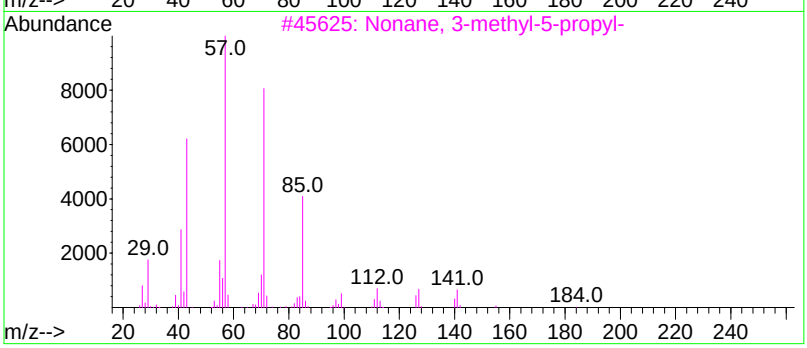
R.T.	EstConc	Area	Relative to ISTD	R.T.
23.797	466.01 ng/mL	38134300	Acenaphthene-d10	26.474

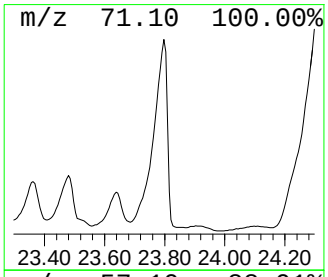
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dodecane, 2,6,10-trimethyl-	212	C15H32	003891-98-3	72
2	Dodecane, 2,6,10-trimethyl-	212	C15H32	003891-98-3	64
3	Nonane, 3-methyl-5-propyl-	184	C13H28	031081-18-2	64
4	Pentadecane, 7-methyl-	226	C16H34	006165-40-8	59
5	Dodecane, 4,6-dimethyl-	198	C14H30	061141-72-8	58

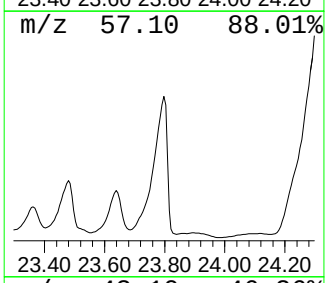


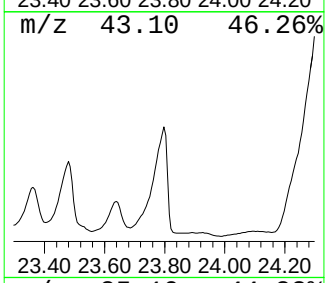


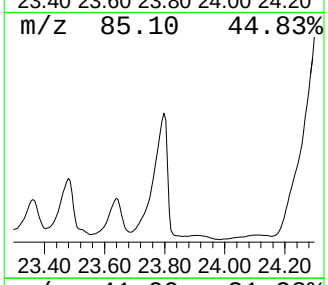


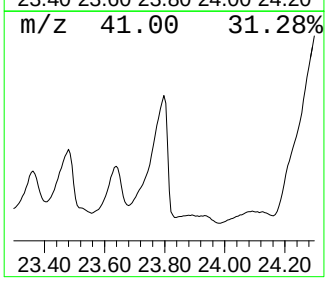












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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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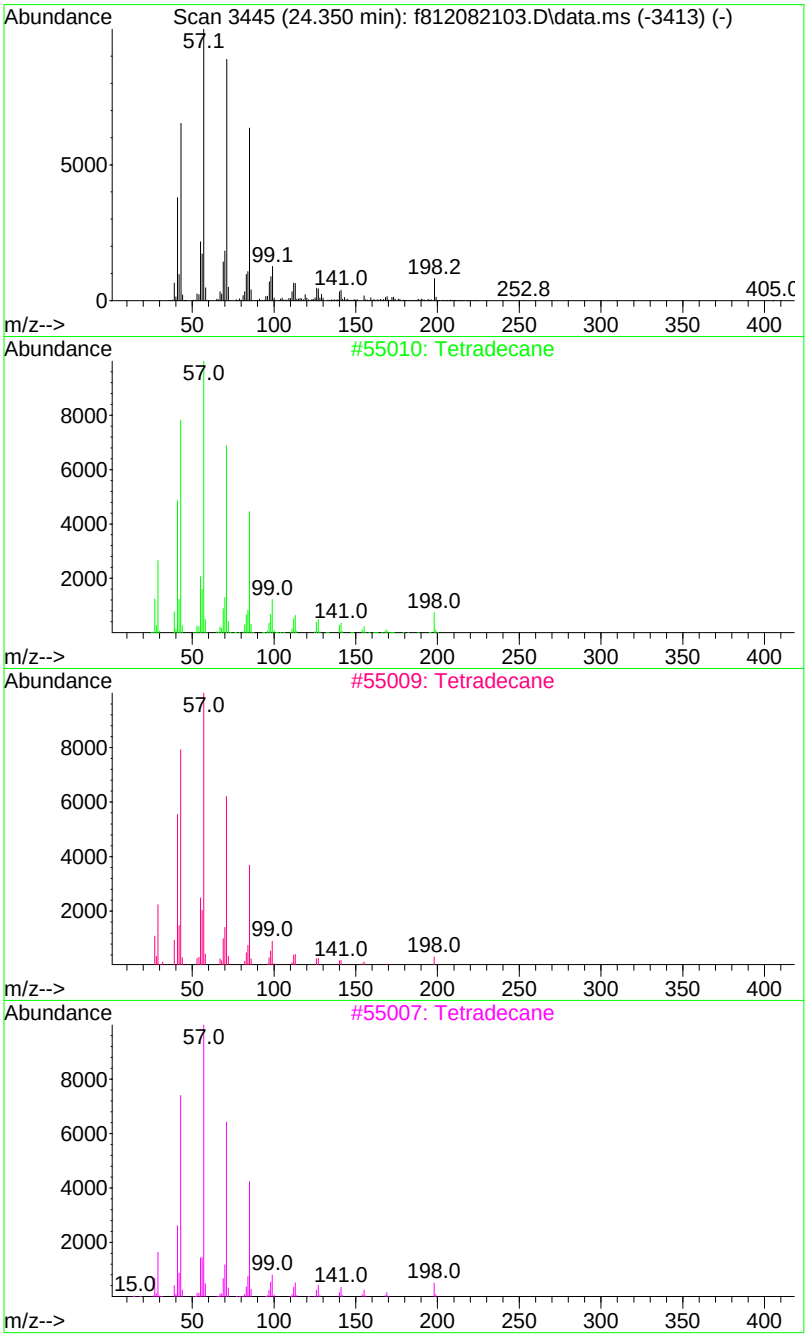
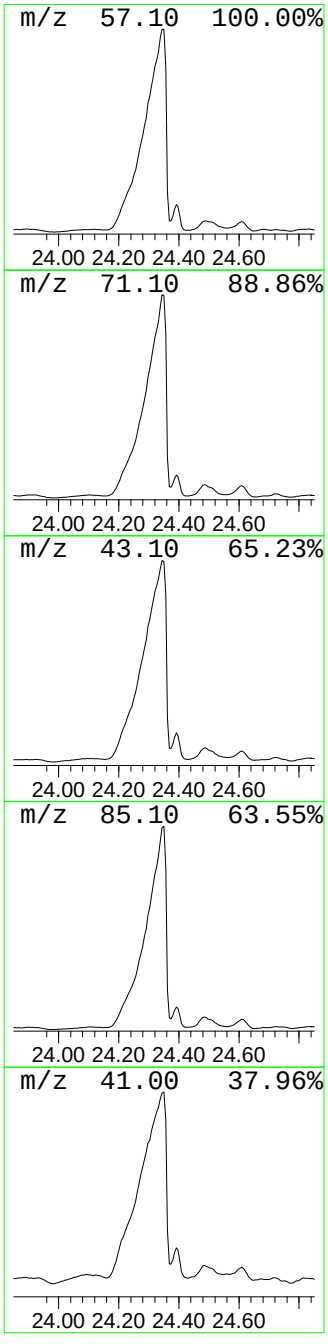
Peak Number 11 Tetradecane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.350	1701.67 ng/mL	139250000	Acenaphthene-d10	26.474

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetradecane	198	C14H30	000629-59-4	95
2	Tetradecane	198	C14H30	000629-59-4	93
3	Tetradecane	198	C14H30	000629-59-4	91
4	Tetradecane	198	C14H30	000629-59-4	91
5	Hexadecane	226	C16H34	000544-76-3	87





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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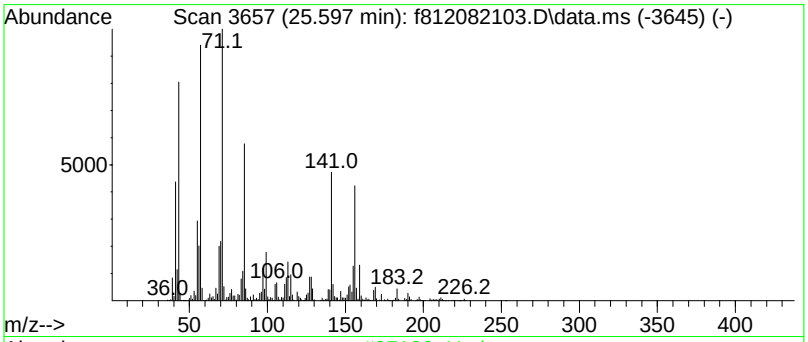
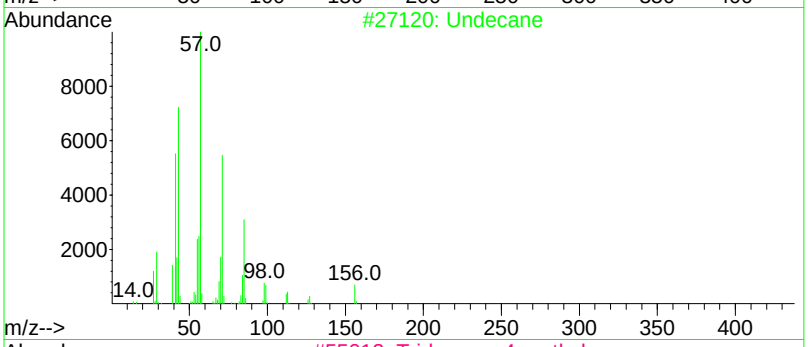
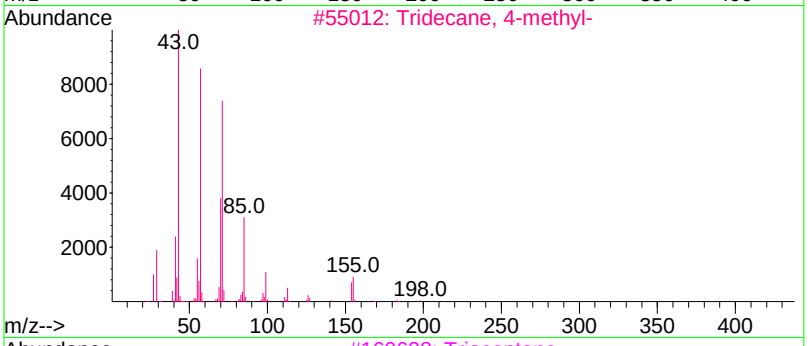
Peak Number 12 Undecane Concentration Rank 19

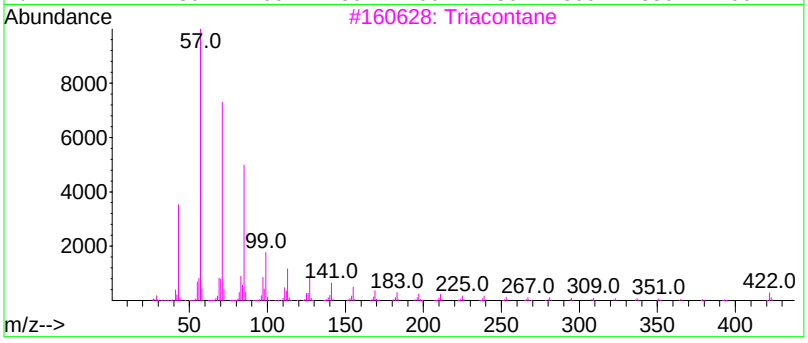
R.T.	EstConc	Area	Relative to ISTD	R.T.
25.597	410.50 ng/mL	33591600	Acenaphthene-d10	26.474

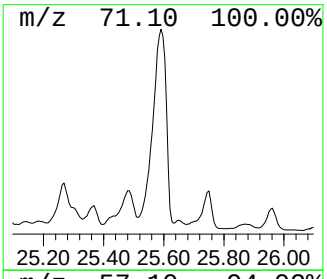
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Undecane	156	C11H24	001120-21-4	58
2	Tridecane, 4-methyl-	198	C14H30	026730-12-1	53
3	Triacontane	422	C30H62	000638-68-6	52
4	Heptacosane	380	C27H56	000593-49-7	52
5	Eicosane	282	C20H42	000112-95-8	52

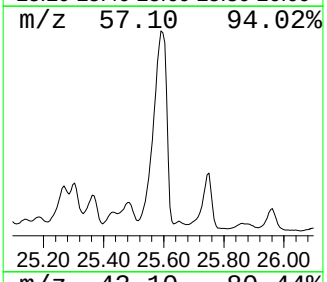


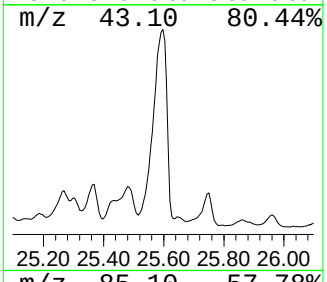


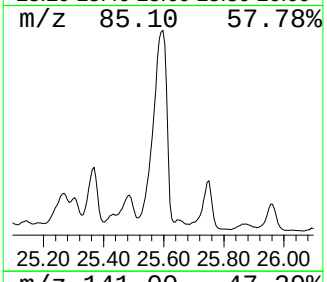


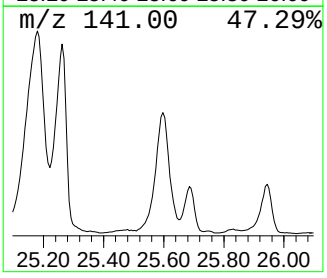












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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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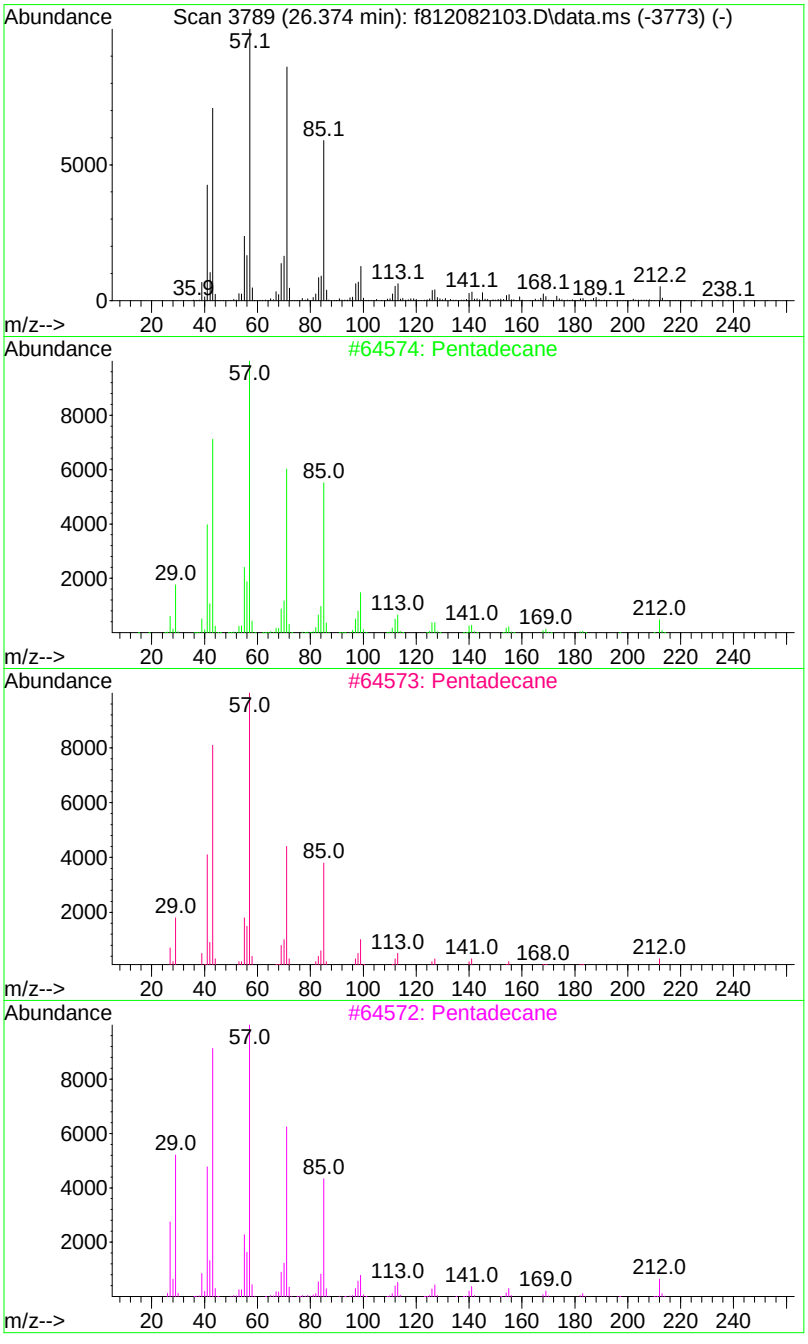
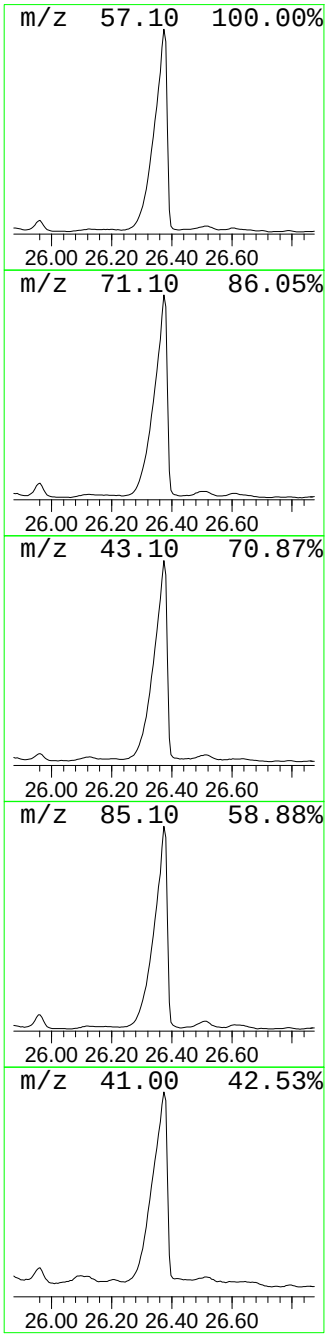
Peak Number 13 Pentadecane Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.374	500.00 ng/mL	40915700	Acenaphthene-d10	26.474

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentadecane	212	C15H32	000629-62-9	96
2	Pentadecane	212	C15H32	000629-62-9	92
3	Pentadecane	212	C15H32	000629-62-9	90
4	Pentadecane	212	C15H32	000629-62-9	87
5	Tetradecane	198	C14H30	000629-59-4	87





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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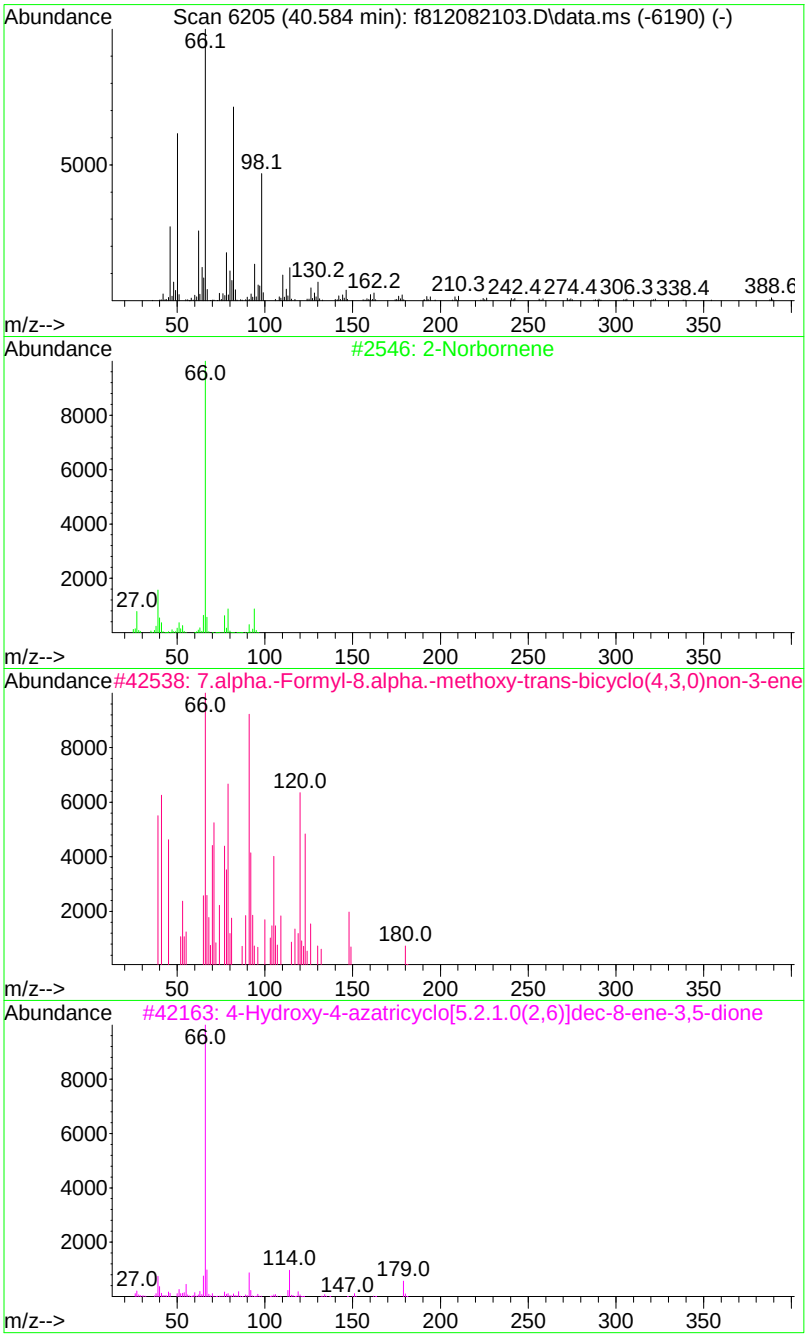
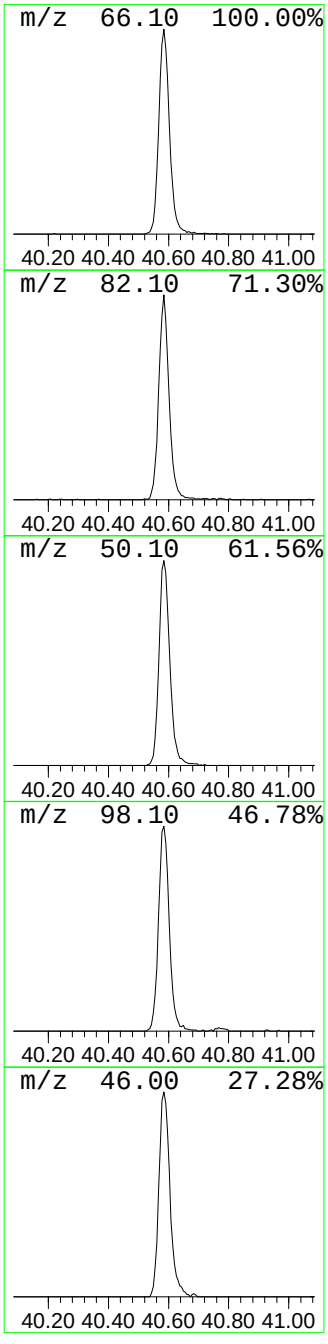
Peak Number 15 2-Norbornene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
40.584	4355.40 ng/mL	1143560	Chrysene-d12	42.843

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Norbornene	94	C7H10	000498-66-8	35
2	7.alpha.-Formyl-8.alpha.-methoxy...	180	C11H16O2	1000144-03-5	35
3	4-Hydroxy-4-azatricyclo[5.2.1.0(...	179	C9H9NO3	1000210-21-2	25
4	1,4:5,8-Dimethanoanthracene-9,10...	240	C16H16O2	005439-22-5	25
5	1,2,4-Metheno-1H-cyclobuta[cd]pe...	148	C10H12O	015776-05-3	23





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Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number 16  Heneicosane                    Concentration Rank 14

  R.T.     EstConc          Area       Relative to ISTD         R.T.
-----------------------------------------------------------------------
 41.137  534.10 ng/mL      140234   Chrysene-d12               42.843

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
-----------------------------------------------------------------------
 1 Heneicosane                           296 C21H44        000629-94-7 91
 2 Triacontane                           422 C30H62        000638-68-6 90
 3 Heptadecane                           240 C17H36        000629-78-7 90
 4 Heneicosane, 11-(1-ethylpropyl)-      366 C26H54        055282-11-6 90
 5 Octacosane                            394 C28H58        000630-02-4 90
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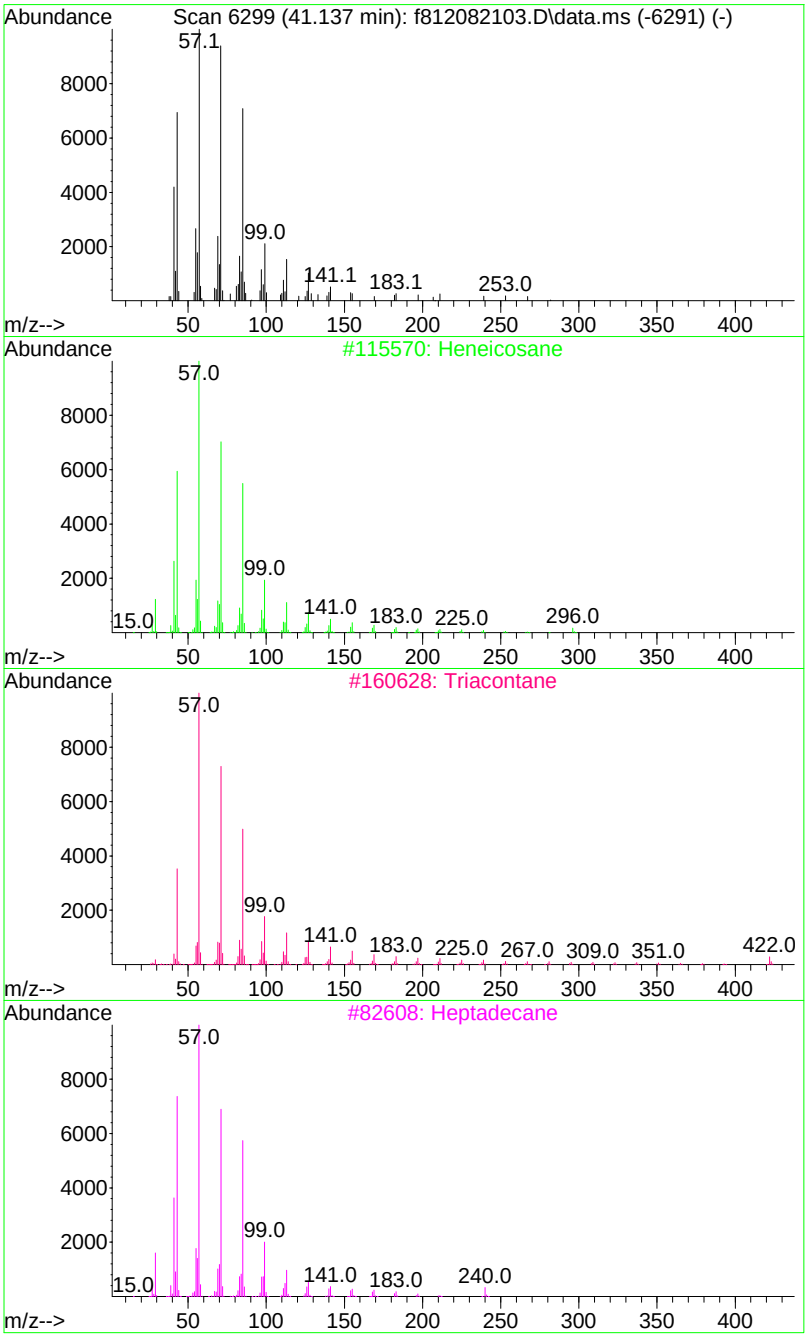

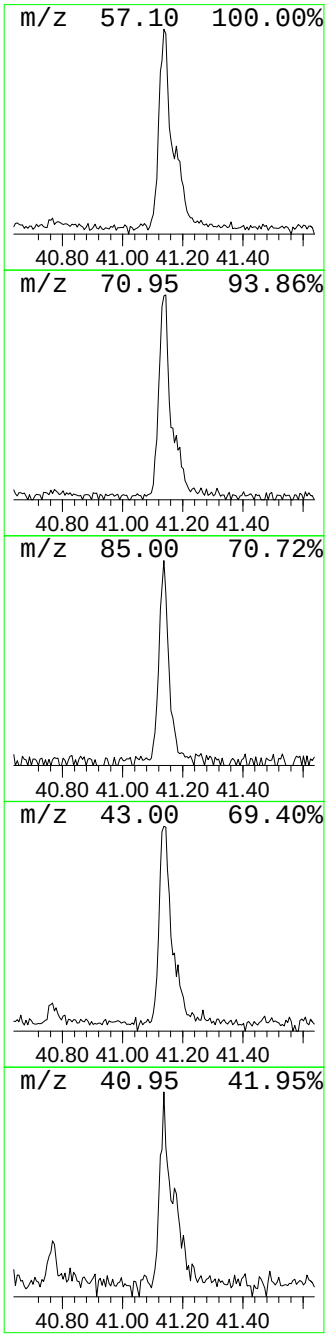

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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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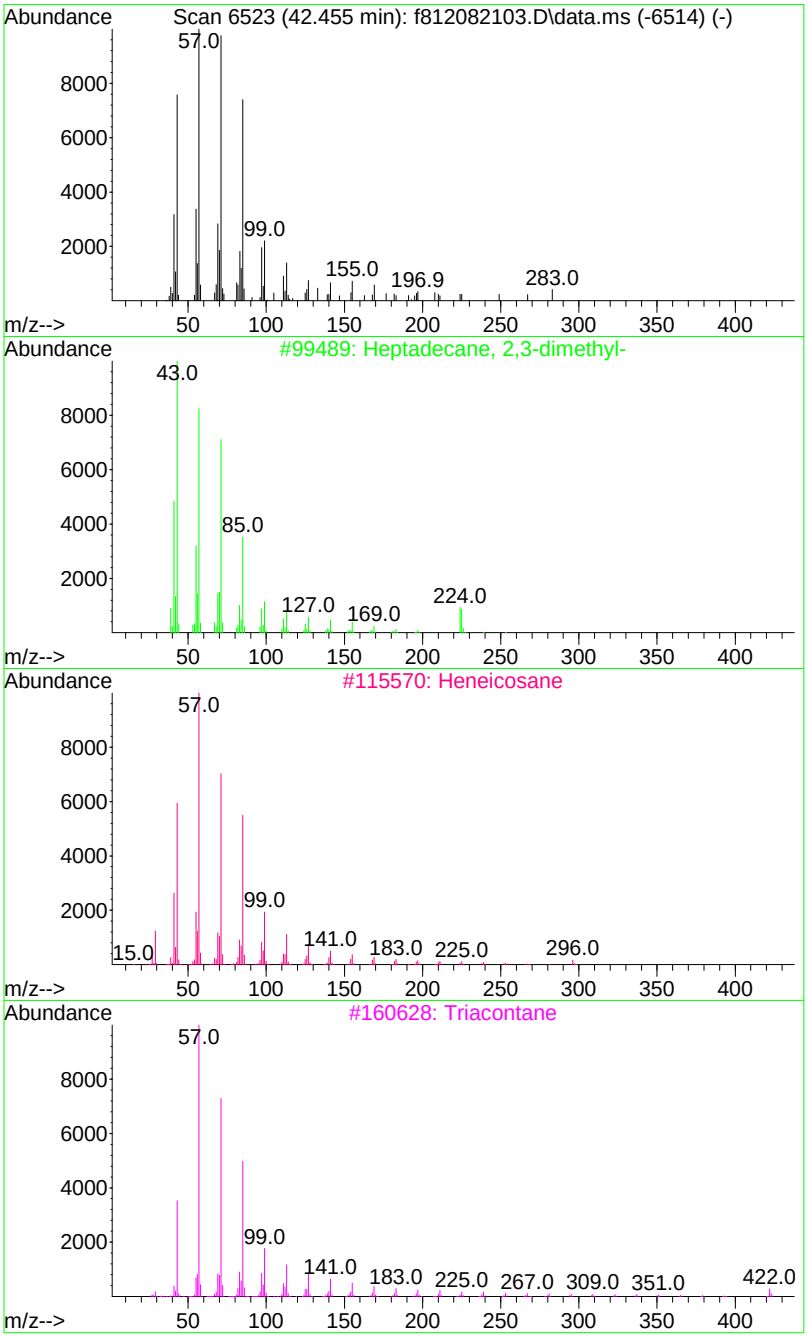
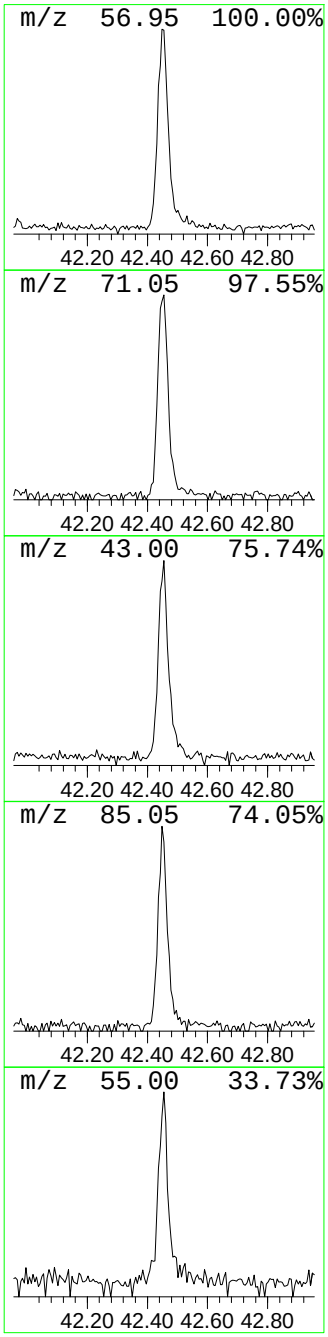
Peak Number 17 Heptadecane, 2,3-dimethyl- Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
42.455	588.65 ng/mL	154555	Chrysene-d12	42.843

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptadecane, 2,3-dimethyl-	268	C19H40	061868-03-9	90
2	Heneicosane	296	C21H44	000629-94-7	87
3	Triacontane	422	C30H62	000638-68-6	87
4	Tetratetracontane	619	C44H90	007098-22-8	87
5	Pentadecane, 8-hexyl-	296	C21H44	013475-75-7	86





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TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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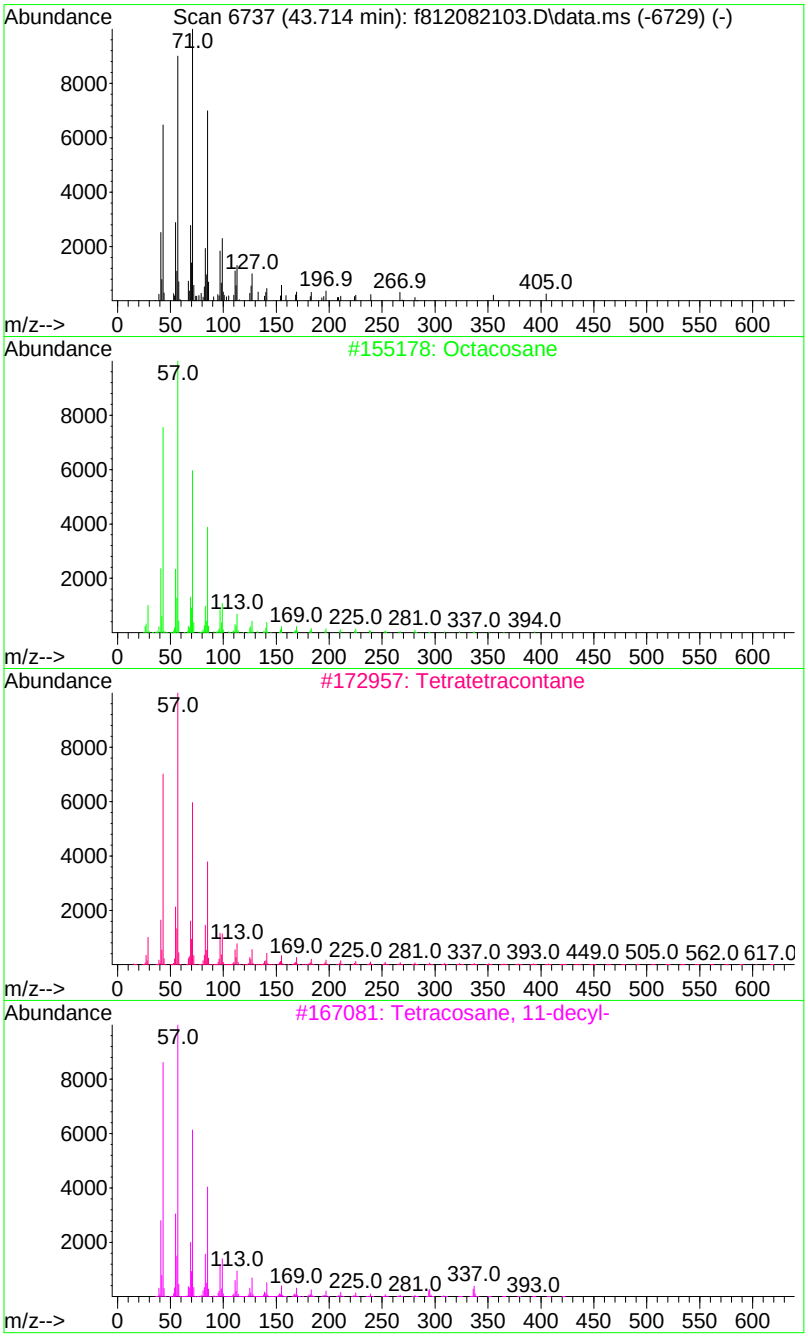
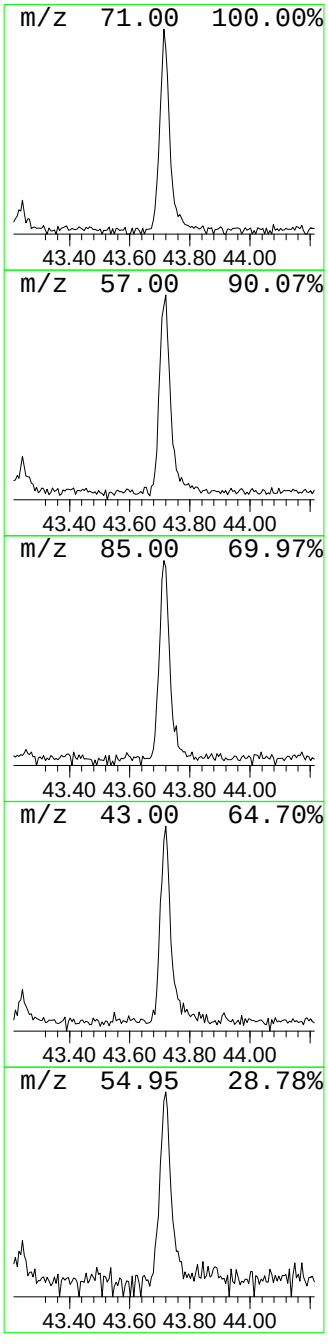
Peak Number 18 Octacosane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
43.714	640.01 ng/mL	168041	Chrysene-d12	42.843

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octacosane	394	C28H58	000630-02-4	91
2	Tetratetracontane	619	C44H90	007098-22-8	91
3	Tetracosane, 11-decyl-	479	C34H70	055429-84-0	91
4	Docosane, 11-decyl-	451	C32H66	055401-55-3	90
5	Hexatriacontane	507	C36H74	000630-06-8	90





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Data File : f812082103.D
Acq On : 8 Dec 2021 1:12 pm
Operator :
Sample : L2165245-03,42,,
Misc : full scan
ALS Vial : 2 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

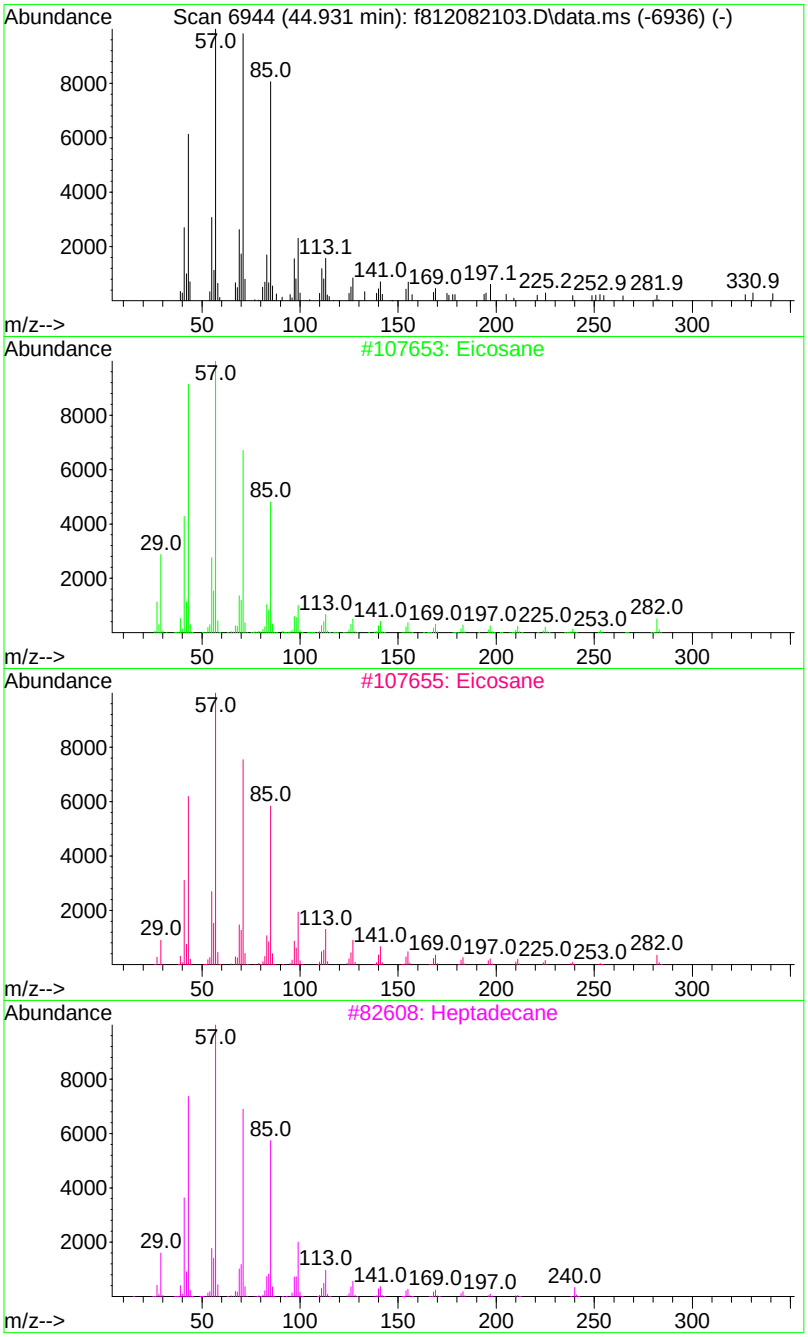
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

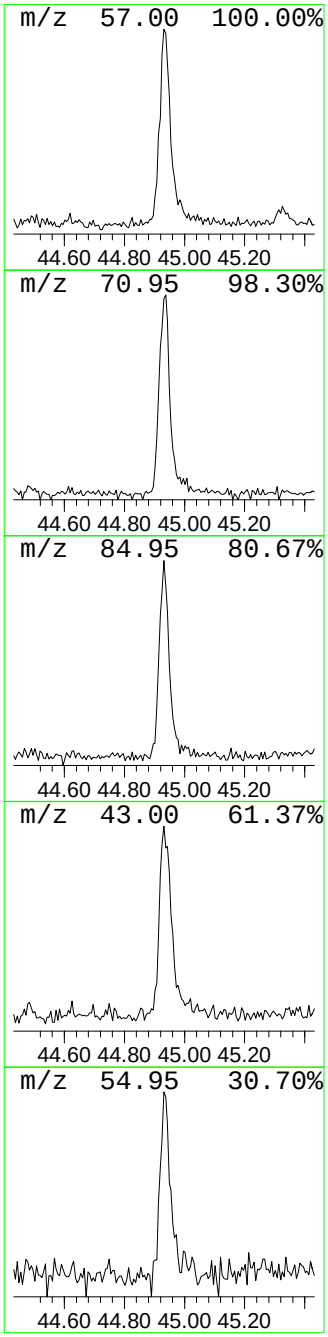
****

Peak Number 19 Eicosane Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
44.931	605.35 ng/mL	158940	Chrysene-d12	42.843

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane	282	C20H42	000112-95-8	91
2	Eicosane	282	C20H42	000112-95-8	91
3	Heptadecane	240	C17H36	000629-78-7	86
4	Octacosane	394	C28H58	000630-02-4	83
5	Nonacosane	408	C29H60	000630-03-5	83





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Data File : f812082103.D
Acq On : 8 Dec 2021 1:12 pm
Operator :
Sample : L2165245-03,42,,
Misc : full scan
ALS Vial : 2 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

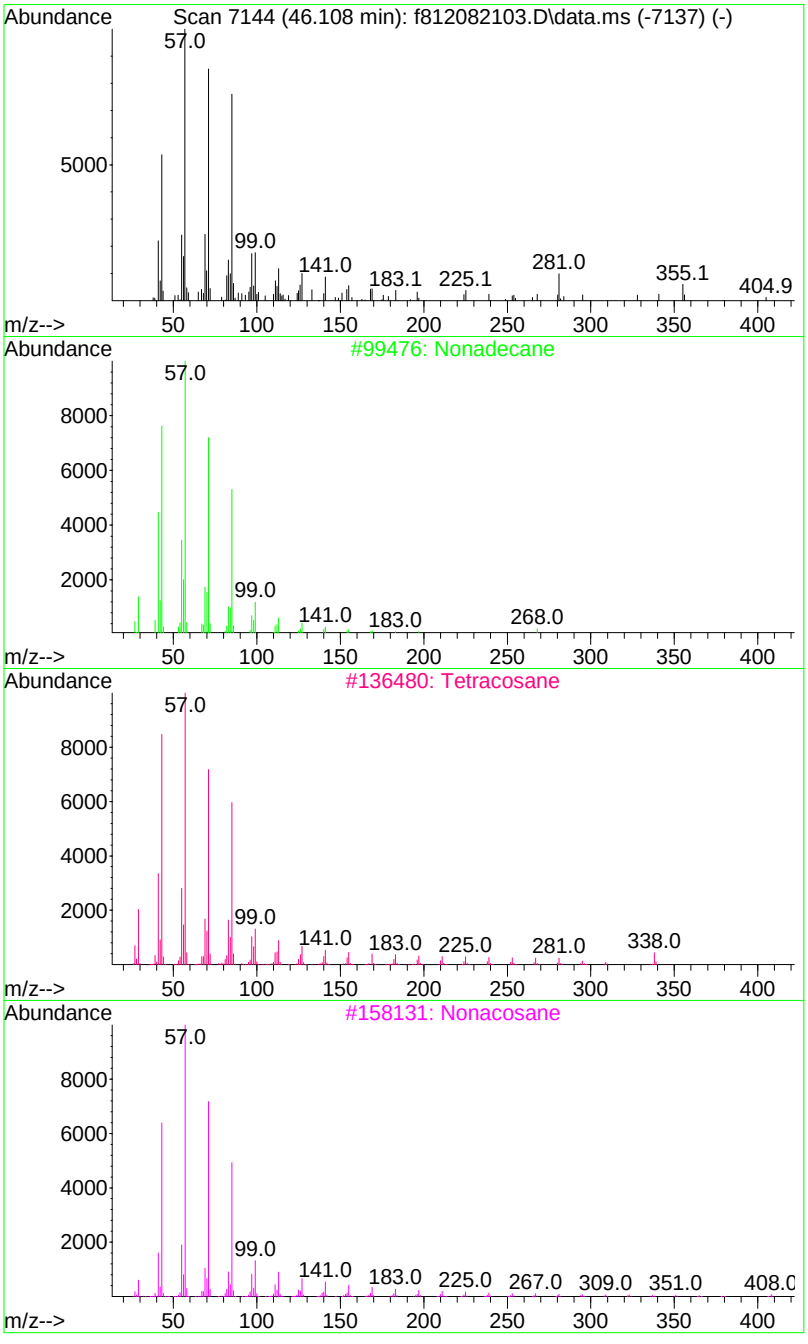
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

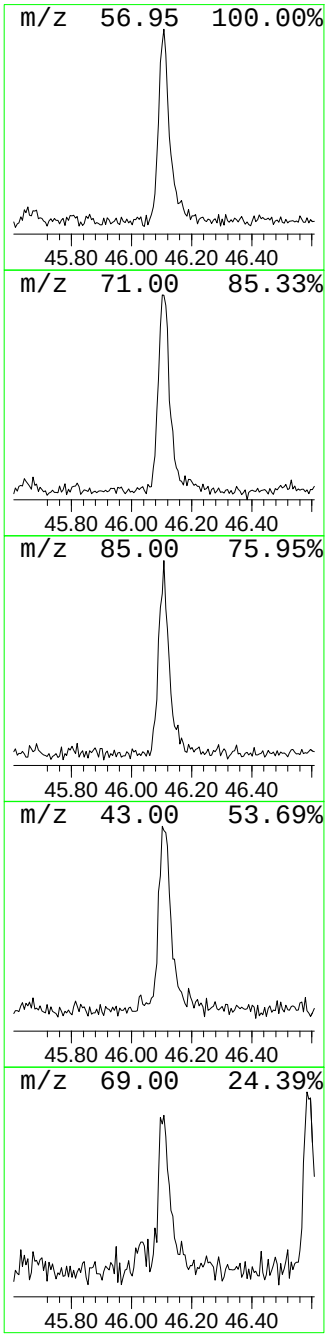
****

Peak Number 20 Nonadecane Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
46.108	465.72 ng/mL	122279	Chrysene-d12	42.843

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonadecane	268	C19H40	000629-92-5	93
2	Tetracosane	338	C24H50	000646-31-1	87
3	Nonacosane	408	C29H60	000630-03-5	87
4	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	87
5	Octadecane	254	C18H38	000593-45-3	80





Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC08\
Data File : f812082103.D
Acq On : 8 Dec 2021 1:12 pm
Operator :
Sample : L2165245-03,42,,
Misc : full scan
ALS Vial : 2 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Decane	14.392	1159.0	ng/mL	94843500	1	26.474	40915700	500.0
Undecane	17.204	2599.2	ng/mL	212694000	1	26.474	40915700	500.0
Cyclohexane, (1...	18.180	515.3	ng/mL	42163500	1	26.474	40915700	500.0
Naphthalene	19.645	904.5	ng/mL	74014100	1	26.474	40915700	500.0
Undecane, 2,6-d...	20.045	575.3	ng/mL	47079700	1	26.474	40915700	500.0
Tridecane, 7-me...	21.456	894.0	ng/mL	73155400	1	26.474	40915700	500.0
Tridecane	22.144	2386.1	ng/mL	195261000	1	26.474	40915700	500.0
Naphthalene, 1-...	22.791	766.9	ng/mL	62756400	1	26.474	40915700	500.0
Heptylcyclohexane	23.197	404.5	ng/mL	33101000	1	26.474	40915700	500.0
Dodecane, 2,6,1...	23.797	466.0	ng/mL	38134300	1	26.474	40915700	500.0
Tetradecane	24.350	1701.7	ng/mL	139250000	1	26.474	40915700	500.0
Undecane	25.597	410.5	ng/mL	33591600	1	26.474	40915700	500.0
Pentadecane	26.374	500.0	ng/mL	40915700	1	26.474	40915700	500.0
2-Norbornene	40.584	4355.4	ng/mL	1143560	2	42.843	131280	500.0
Heneicosane	41.137	534.1	ng/mL	140234	2	42.843	131280	500.0
Heptadecane, 2,...	42.455	588.6	ng/mL	154555	2	42.843	131280	500.0
Octacosane	43.714	640.0	ng/mL	168041	2	42.843	131280	500.0
Eicosane	44.931	605.4	ng/mL	158940	2	42.843	131280	500.0
Nonadecane	46.108	465.7	ng/mL	122279	2	42.843	131280	500.0

Alpha
Summary Forms

Organic Summary Forms

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: L2165245-01	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	:	**Date Analyzed**	: 12/08/21 22:22
Sample Matrix	: OIL	**Date Extracted**	: 12/06/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712072152	**Analyst**	: WR
Sample Amount	: 0.1116 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	4180	179	53.2	
124-18-5	n-Decane (C10)	18500	179	57.2	
1120-21-4	n-Undecane (C11)	42700	179	53.5	E
112-40-3	n-Dodecane (C12)	45800	179	39.0	E
629-50-5	n-Tridecane (C13)	38700	179	49.2	E
3891-98-3	2,6,10-Trimethyldodecane (1380)	5290	179	27.0	
629-59-4	n-Tetradecane (C14)	19700	179	27.0	
TMTD1470	2,6,10-Trimethyltridecane (1470)	4700	179	21.4	
629-62-9	n-Pentadecane (C15)	7110	179	21.4	
544-76-3	n-Hexadecane (C16)	1400	179	27.0	
3892-00-0	Norpristane (1650)	193	179	59.1	
629-78-7	n-Heptadecane (C17)	290	179	59.1	
1921-70-6	Pristane	137	179	38.3	J
593-45-3	n-Octadecane (C18)	103	179	36.0	J
638-36-8	Phytane	33.3	179	22.5	J
629-92-5	n-Nonadecane (C19)	ND	179	46.0	U
112-95-8	n-Eicosane (C20)	ND	179	25.4	U
629-94-7	n-Heneicosane (C21)	ND	179	21.4	U
629-97-0	n-Docosane (C22)	ND	179	18.7	U
638-67-5	n-Tricosane (C23)	ND	179	22.8	U
646-31-1	n-Tetracosane (C24)	ND	179	30.0	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: L2165245-01	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	:	**Date Analyzed**	: 12/08/21 22:22
Sample Matrix	: OIL	**Date Extracted**	: 12/06/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712072152	**Analyst**	: WR
Sample Amount	: 0.1116 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	179	94.8	U
630-01-3	n-Hexacosane (C26)	ND	179	26.3	U
593-49-7	n-Heptacosane (C27)	ND	179	21.6	U
630-02-4	n-Octacosane (C28)	60.8	179	38.4	J
630-03-5	n-Nonacosane (C29)	ND	179	119.	U
638-68-6	n-Triacontane (C30)	ND	179	20.6	U
630-04-6	n-Hentriacontane (C31)	ND	179	25.4	U
544-85-4	n-Dotriacontane (C32)	ND	179	22.6	U
630-05-7	n-Tritriacontane (C33)	ND	179	25.2	U
14167-59-0	n-Tetratriacontane (C34)	ND	179	28.5	U
630-07-9	n-Pentatriacontane (C35)	ND	179	31.3	U
630-06-8	n-Hexatriacontane (C36)	ND	179	35.6	U
7194-84-5	n-Heptatriacontane (C37)	ND	179	39.8	U
7194-85-6	n-Octatriacontane (C38)	ND	179	41.8	U
7194-86-7	n-Nonatriacontane (C39)	ND	179	58.2	U
4181-95-7	n-Tetracontane (C40)	ND	179	58.2	U
NONE	C9-C44 Total Petroleu	922000	5910	1300	
NONE	C10-C28 DRO	882000	3760	776.	
NONE	C28-C40 ORO	5390	1970	448.	

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: L2165245-01D	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	:	**Date Analyzed**	: 12/09/21 16:56
Sample Matrix	: OIL	**Date Extracted**	: 12/06/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 2
Lab File ID	: F1712092112	**Analyst**	: WR
Sample Amount	: 0.1116 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1120-21-4	n-Undecane (C11)	42300	358	107.	
112-40-3	n-Dodecane (C12)	45700	358	78.1	
629-50-5	n-Tridecane (C13)	38700	358	98.4	
TSATHC	Total Saturated Hydrocarbons	127000	179	18.7	

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: L2165245-02D	**Date Collected**	: 11/24/21 14:15
Client ID	: ERH1968	**Date Received**	: 11/29/21
Sample Location	:	**Date Analyzed**	: 12/05/21 05:23
Sample Matrix	: WATER	**Date Extracted**	: 12/01/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 10
Lab File ID	: F1712032160	**Analyst**	: MJS
Sample Amount	: 970 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 80000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	4.26	0.825	0.263	
124-18-5	n-Decane (C10)	23.2	0.825	0.097	
1120-21-4	n-Undecane (C11)	58.5	0.825	0.078	
112-40-3	n-Dodecane (C12)	61.1	0.825	0.109	
629-50-5	n-Tridecane (C13)	56.1	4.12	0.730	
3891-98-3	2,6,10-Trimethyldodecane (1380)	7.55	0.825	0.081	
629-59-4	n-Tetradecane (C14)	29.0	0.825	0.081	
TMTD1470	2,6,10-Trimethyltridecane (1470)	6.58	0.825	0.119	
629-62-9	n-Pentadecane (C15)	10.7	0.825	0.119	
544-76-3	n-Hexadecane (C16)	2.10	0.825	0.123	
3892-00-0	Norpristane (1650)	0.275	0.825	0.112	J
629-78-7	n-Heptadecane (C17)	0.447	0.825	0.112	J
1921-70-6	Pristane	0.193	0.825	0.144	J
593-45-3	n-Octadecane (C18)	0.143	0.825	0.066	J
638-36-8	Phytane	ND	0.825	0.072	U
629-92-5	n-Nonadecane (C19)	ND	0.825	0.139	U
112-95-8	n-Eicosane (C20)	ND	0.825	0.049	U
629-94-7	n-Heneicosane (C21)	ND	0.825	0.064	U
629-97-0	n-Docosane (C22)	ND	0.825	0.035	U
638-67-5	n-Tricosane (C23)	ND	0.825	0.061	U
646-31-1	n-Tetracosane (C24)	ND	0.825	0.063	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: L2165245-02D	**Date Collected**	: 11/24/21 14:15
Client ID	: ERH1968	**Date Received**	: 11/29/21
Sample Location	:	**Date Analyzed**	: 12/05/21 05:23
Sample Matrix	: WATER	**Date Extracted**	: 12/01/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 10
Lab File ID	: F1712032160	**Analyst**	: MJS
Sample Amount	: 970 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 80000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	4.12	0.488	U
630-01-3	n-Hexacosane (C26)	ND	0.825	0.092	U
593-49-7	n-Heptacosane (C27)	ND	0.825	0.085	U
630-02-4	n-Octacosane (C28)	ND	0.825	0.172	U
630-03-5	n-Nonacosane (C29)	ND	0.825	0.097	U
638-68-6	n-Triacontane (C30)	ND	0.825	0.102	U
630-04-6	n-Hentriacontane (C31)	ND	0.825	0.107	U
544-85-4	n-Dotriacontane (C32)	ND	0.825	0.104	U
630-05-7	n-Tritriacontane (C33)	ND	0.825	0.109	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.825	0.136	U
630-07-9	n-Pentatriacontane (C35)	ND	0.825	0.128	U
630-06-8	n-Hexatriacontane (C36)	ND	0.825	0.114	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.825	0.151	U
7194-85-6	n-Octatriacontane (C38)	ND	0.825	0.149	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.825	0.144	U
4181-95-7	n-Tetracontane (C40)	ND	0.825	0.144	U
NONE	C9-C44 Total Petroleu	1260	27.2	4.58	
NONE	C10-C28 DRO	1230	17.3	2.98	
NONE	C28-C40 ORO	ND	9.07	1.34	U
TSATHC	Total Saturated Hydrocarbons	260	0.825	0.035	J

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: L2165245-03D	**Date Collected**	: 11/24/21 14:15
Client ID	: ERH1968 - SGC	**Date Received**	: 11/29/21
Sample Location	:	**Date Analyzed**	: 12/05/21 06:51
Sample Matrix	: WATER	**Date Extracted**	: 12/01/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 20
Lab File ID	: F1712032162	**Analyst**	: MJS
Sample Amount	: 970 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	3.31	0.825	0.263	
124-18-5	n-Decane (C10)	19.5	0.825	0.097	
1120-21-4	n-Undecane (C11)	50.3	0.825	0.078	
112-40-3	n-Dodecane (C12)	52.8	0.825	0.109	
629-50-5	n-Tridecane (C13)	48.6	4.12	0.730	
3891-98-3	2,6,10-Trimethyldodecane (1380)	6.49	0.825	0.081	
629-59-4	n-Tetradecane (C14)	25.2	0.825	0.081	
TMTD1470	2,6,10-Trimethyltridecane (1470)	5.84	0.825	0.119	
629-62-9	n-Pentadecane (C15)	9.37	0.825	0.119	
544-76-3	n-Hexadecane (C16)	1.80	0.825	0.123	
3892-00-0	Norpristane (1650)	0.238	0.825	0.112	J
629-78-7	n-Heptadecane (C17)	0.389	0.825	0.112	J
1921-70-6	Pristane	0.167	0.825	0.144	J
593-45-3	n-Octadecane (C18)	0.123	0.825	0.066	J
638-36-8	Phytane	ND	0.825	0.072	U
629-92-5	n-Nonadecane (C19)	ND	0.825	0.139	U
112-95-8	n-Eicosane (C20)	ND	0.825	0.049	U
629-94-7	n-Heneicosane (C21)	ND	0.825	0.064	U
629-97-0	n-Docosane (C22)	ND	0.825	0.035	U
638-67-5	n-Tricosane (C23)	ND	0.825	0.061	U
646-31-1	n-Tetracosane (C24)	ND	0.825	0.063	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: L2165245-03D	**Date Collected**	: 11/24/21 14:15
Client ID	: ERH1968 - SGC	**Date Received**	: 11/29/21
Sample Location	:	**Date Analyzed**	: 12/05/21 06:51
Sample Matrix	: WATER	**Date Extracted**	: 12/01/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 20
Lab File ID	: F1712032162	**Analyst**	: MJS
Sample Amount	: 970 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	4.12	0.488	U
630-01-3	n-Hexacosane (C26)	ND	0.825	0.092	U
593-49-7	n-Heptacosane (C27)	ND	0.825	0.085	U
630-02-4	n-Octacosane (C28)	ND	0.825	0.172	U
630-03-5	n-Nonacosane (C29)	ND	0.825	0.097	U
638-68-6	n-Triacontane (C30)	ND	0.825	0.102	U
630-04-6	n-Hentriacontane (C31)	ND	0.825	0.107	U
544-85-4	n-Dotriacontane (C32)	ND	0.825	0.104	U
630-05-7	n-Tritriacontane (C33)	ND	0.825	0.109	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.825	0.136	U
630-07-9	n-Pentatriacontane (C35)	ND	0.825	0.128	U
630-06-8	n-Hexatriacontane (C36)	ND	0.825	0.114	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.825	0.151	U
7194-85-6	n-Octatriacontane (C38)	ND	0.825	0.149	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.825	0.144	U
4181-95-7	n-Tetracontane (C40)	ND	0.825	0.144	U
NONE	C9-C44 Total Petroleu	1090	27.2	4.58	
NONE	C10-C28 DRO	1070	17.3	2.98	
NONE	C28-C40 ORO	ND	9.07	1.34	U
TSATHC	Total Saturated Hydrocarbons	224	0.825	0.035	J

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: WG1577487-1	**Date Collected**	: NA
Client ID	: WG1577487-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/03/21 18:07
Sample Matrix	: WATER	**Date Extracted**	: 12/01/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032112	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	0.001	0.0003	U
124-18-5	n-Decane (C10)	ND	0.001	0.0001	U
1120-21-4	n-Undecane (C11)	ND	0.001	0.0001	U
112-40-3	n-Dodecane (C12)	ND	0.001	0.0001	U
629-50-5	n-Tridecane (C13)	ND	0.005	0.001	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	0.001	0.0001	U
629-59-4	n-Tetradecane (C14)	ND	0.001	0.0001	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	0.001	0.0001	U
629-62-9	n-Pentadecane (C15)	ND	0.001	0.0001	U
544-76-3	n-Hexadecane (C16)	ND	0.001	0.0001	U
3892-00-0	Norpristane (1650)	ND	0.001	0.0001	U
629-78-7	n-Heptadecane (C17)	ND	0.001	0.0001	U
1921-70-6	Pristane	ND	0.001	0.0002	U
593-45-3	n-Octadecane (C18)	ND	0.001	0.0001	U
638-36-8	Phytane	ND	0.001	0.0001	U
629-92-5	n-Nonadecane (C19)	ND	0.001	0.0002	U
112-95-8	n-Eicosane (C20)	ND	0.001	0.0001	U
629-94-7	n-Heneicosane (C21)	ND	0.001	0.0001	U
629-97-0	n-Docosane (C22)	ND	0.001	0.00004	U
638-67-5	n-Tricosane (C23)	ND	0.001	0.0001	U
646-31-1	n-Tetracosane (C24)	ND	0.001	0.0001	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: WG1577487-1	**Date Collected**	: NA
Client ID	: WG1577487-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/03/21 18:07
Sample Matrix	: WATER	**Date Extracted**	: 12/01/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032112	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	0.005	0.001	U
630-01-3	n-Hexacosane (C26)	ND	0.001	0.0001	U
593-49-7	n-Heptacosane (C27)	ND	0.001	0.0001	U
630-02-4	n-Octacosane (C28)	0.001	0.001	0.0002	C
630-03-5	n-Nonacosane (C29)	0.001	0.001	0.0001	JC
638-68-6	n-Triacontane (C30)	ND	0.001	0.0001	U
630-04-6	n-Hentriacontane (C31)	ND	0.001	0.0001	U
544-85-4	n-Dotriacontane (C32)	ND	0.001	0.0001	U
630-05-7	n-Tritriacontane (C33)	ND	0.001	0.0001	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.001	0.0002	U
630-07-9	n-Pentatriacontane (C35)	ND	0.001	0.0002	U
630-06-8	n-Hexatriacontane (C36)	ND	0.001	0.0001	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.001	0.0002	U
7194-85-6	n-Octatriacontane (C38)	ND	0.001	0.0002	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.001	0.0002	U
4181-95-7	n-Tetracontane (C40)	ND	0.001	0.0002	U
NONE	C9-C44 Total Petroleu	ND	0.033	0.006	U
NONE	C10-C28 DRO	0.012	0.021	0.004	J
NONE	C28-C40 ORO	ND	0.011	0.002	U
TSATHC	Total Saturated Hydrocarbons	0.002	0.001	0.00004	J

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: WG1577488-1	**Date Collected**	: NA
Client ID	: WG1577488-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/03/21 19:35
Sample Matrix	: WATER	**Date Extracted**	: 12/01/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032114	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	0.001	0.0003	U
124-18-5	n-Decane (C10)	ND	0.001	0.0001	U
1120-21-4	n-Undecane (C11)	ND	0.001	0.0001	U
112-40-3	n-Dodecane (C12)	ND	0.001	0.0001	U
629-50-5	n-Tridecane (C13)	ND	0.005	0.001	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	0.001	0.0001	U
629-59-4	n-Tetradecane (C14)	ND	0.001	0.0001	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	0.001	0.0001	U
629-62-9	n-Pentadecane (C15)	ND	0.001	0.0001	U
544-76-3	n-Hexadecane (C16)	ND	0.001	0.0001	U
3892-00-0	Norpristane (1650)	ND	0.001	0.0001	U
629-78-7	n-Heptadecane (C17)	ND	0.001	0.0001	U
1921-70-6	Pristane	ND	0.001	0.0002	U
593-45-3	n-Octadecane (C18)	0.0001	0.0010	0.0001	J
638-36-8	Phytane	ND	0.001	0.0001	U
629-92-5	n-Nonadecane (C19)	ND	0.001	0.0002	U
112-95-8	n-Eicosane (C20)	0.0001	0.0010	0.0001	J
629-94-7	n-Heneicosane (C21)	ND	0.001	0.0001	U
629-97-0	n-Docosane (C22)	ND	0.001	0.00004	U
638-67-5	n-Tricosane (C23)	ND	0.001	0.0001	U
646-31-1	n-Tetracosane (C24)	ND	0.001	0.0001	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: WG1577488-1	**Date Collected**	: NA
Client ID	: WG1577488-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/03/21 19:35
Sample Matrix	: WATER	**Date Extracted**	: 12/01/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032114	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	0.005	0.001	U
630-01-3	n-Hexacosane (C26)	ND	0.001	0.0001	U
593-49-7	n-Heptacosane (C27)	ND	0.001	0.0001	U
630-02-4	n-Octacosane (C28)	0.001	0.001	0.0002	JC
630-03-5	n-Nonacosane (C29)	0.001	0.001	0.0001	JC
638-68-6	n-Triacontane (C30)	ND	0.001	0.0001	U
630-04-6	n-Hentriacontane (C31)	ND	0.001	0.0001	U
544-85-4	n-Dotriacontane (C32)	ND	0.001	0.0001	U
630-05-7	n-Tritriacontane (C33)	ND	0.001	0.0001	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.001	0.0002	U
630-07-9	n-Pentatriacontane (C35)	ND	0.001	0.0002	U
630-06-8	n-Hexatriacontane (C36)	ND	0.001	0.0001	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.001	0.0002	U
7194-85-6	n-Octatriacontane (C38)	ND	0.001	0.0002	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.001	0.0002	U
4181-95-7	n-Tetracontane (C40)	ND	0.001	0.0002	U
NONE	C9-C44 Total Petroleu	ND	0.033	0.006	U
NONE	C10-C28 DRO	0.008	0.021	0.004	J
NONE	C28-C40 ORO	ND	0.011	0.002	U
TSATHC	Total Saturated Hydrocarbons	0.002	0.001	0.00004	J

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: WG1579479-1	**Date Collected**	: NA
Client ID	: WG1579479-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/07/21 19:51
Sample Matrix	: OIL	**Date Extracted**	: 12/06/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712072116	**Analyst**	: WR
Sample Amount	: 0.1 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: NA
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	200	59.3	U
124-18-5	n-Decane (C10)	ND	200	63.8	U
1120-21-4	n-Undecane (C11)	ND	200	59.7	U
112-40-3	n-Dodecane (C12)	ND	200	43.6	U
629-50-5	n-Tridecane (C13)	ND	200	54.9	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	200	30.1	U
629-59-4	n-Tetradecane (C14)	ND	200	30.1	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	200	23.9	U
629-62-9	n-Pentadecane (C15)	ND	200	23.9	U
544-76-3	n-Hexadecane (C16)	ND	200	30.1	U
3892-00-0	Norpristane (1650)	ND	200	66.0	U
629-78-7	n-Heptadecane (C17)	ND	200	66.0	U
1921-70-6	Pristane	ND	200	42.7	U
593-45-3	n-Octadecane (C18)	ND	200	40.1	U
638-36-8	Phytane	ND	200	25.1	U
629-92-5	n-Nonadecane (C19)	ND	200	51.4	U
112-95-8	n-Eicosane (C20)	ND	200	28.3	U
629-94-7	n-Heneicosane (C21)	ND	200	23.9	U
629-97-0	n-Docosane (C22)	ND	200	20.9	U
638-67-5	n-Tricosane (C23)	ND	200	25.4	U
646-31-1	n-Tetracosane (C24)	ND	200	33.5	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab ID	: WG1579479-1	**Date Collected**	: NA
Client ID	: WG1579479-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/07/21 19:51
Sample Matrix	: OIL	**Date Extracted**	: 12/06/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712072116	**Analyst**	: WR
Sample Amount	: 0.1 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: NA
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	200	106.	U
630-01-3	n-Hexacosane (C26)	ND	200	29.4	U
593-49-7	n-Heptacosane (C27)	ND	200	24.1	U
630-02-4	n-Octacosane (C28)	ND	200	42.9	U
630-03-5	n-Nonacosane (C29)	ND	200	133.	U
638-68-6	n-Triacontane (C30)	ND	200	22.9	U
630-04-6	n-Hentriacontane (C31)	ND	200	28.3	U
544-85-4	n-Dotriacontane (C32)	ND	200	25.2	U
630-05-7	n-Tritriacontane (C33)	ND	200	28.1	U
14167-59-0	n-Tetratriacontane (C34)	ND	200	31.8	U
630-07-9	n-Pentatriacontane (C35)	ND	200	34.9	U
630-06-8	n-Hexatriacontane (C36)	ND	200	39.8	U
7194-84-5	n-Heptatriacontane (C37)	ND	200	44.4	U
7194-85-6	n-Octatriacontane (C38)	ND	200	46.6	U
7194-86-7	n-Nonatriacontane (C39)	ND	200	64.9	U
4181-95-7	n-Tetracontane (C40)	ND	200	64.9	U
NONE	C9-C44 Total Petroleu	ND	6600	1450	U
NONE	C10-C28 DRO	ND	4200	866.	U
NONE	C28-C40 ORO	ND	2200	500.	U
TSATHC	Total Saturated Hydrocarbons	ND	200	20.9	U

Surrogate Recovery Summary
Form 2
Petroleum

Client: GSI Environmental Inc.
Project Name:

Lab Number: L2165245
Project Number:
Matrix: Water

GC Column 1: RTX-5

CLIENT ID (LAB SAMPLE NO.)	d50 %REC	OTP %REC	%REC	%REC	OTHER (1)	OTHER (2)	TOT OUT
ERH1968 (L2165245-02D)	109	117	--	--			0
ERH1968 - SGC (L2165245-03D)	88	94	--	--			0
WG1577487-1BLANK	97	99	--	--			0
WG1577487-2LCS	100	99	--	--			0
WG1577487-3LCSD	101	100	--	--			0
WG1577488-1BLANK	83	83	--	--			0
WG1577488-2LCS	92	91	--	--			0
WG1577488-3LCSD	87	85	--	--			0

QC LIMITS
(50-130) d50- = D50-TETRACOSANE
(50-130) OTP = O-TERPHENYL

*** Values outside of QC limits**

FORM II A2-SHC

Surrogate Recovery Summary
Form 2
Petroleum

Client: GSI Environmental Inc.
Project Name:

Lab Number: L2165245
Project Number:
Matrix: Oil

GC Column 1: RTX-5

CLIENT ID (LAB SAMPLE NO.)	d50 %REC	OTP %REC	%REC	%REC	OTHER (1)	OTHER (2)	TOT OUT
ERH1967 (L2165245-01)	91	96	--	--			0
ERH1967 (L2165245-01D)	94	94	--	--			0
WG1579479-1BLANK	85	92	--	--			0
WG1579479-2LCS	88	100	--	--			0
WG1579479-3LCSD	91	106	--	--			0

QC LIMITS
(50-130) d50- = D50-TETRACOSANE
(50-130) OTP = O-TERPHENYL

*** Values outside of QC limits**

FORM II A2-SHC

Laboratory Control Sample Summary
Form 3
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Matrix	: WATER		
LCS Sample ID	: WG1577487-2	**Analysis Date** : 12/03/21 21:03	**File ID** : F1712032116
LCSD Sample ID	: WG1577487-3	**Analysis Date** : 12/03/21 22:32	**File ID** : F1712032118

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/l)	Found (mg/l)	%R	True (mg/l)	Found (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Nonane (C9)	0.02	0.016	77	0.02	0.015	77	0	50-130	30
n-Decane (C10)	0.02	0.018	88	0.02	0.018	89	1	50-130	30
n-Dodecane (C12)	0.02	0.020	98	0.02	0.020	100	2	50-130	30
n-Tetradecane (C14)	0.02	0.020	101	0.02	0.021	103	2	50-130	30
n-Hexadecane (C16)	0.02	0.021	105	0.02	0.021	107	2	50-130	30
n-Octadecane (C18)	0.02	0.022	108	0.02	0.022	109	1	50-130	30
n-Nonadecane (C19)	0.02	0.023	112	0.02	0.023	116	4	50-130	30
n-Eicosane (C20)	0.02	0.022	107	0.02	0.022	108	1	50-130	30
n-Docosane (C22)	0.02	0.021	107	0.02	0.022	108	1	50-130	30
n-Tetracosane (C24)	0.02	0.022	110	0.02	0.022	110	0	50-130	30
n-Hexacosane (C26)	0.02	0.022	109	0.02	0.022	109	0	50-130	30
n-Octacosane (C28)	0.02	0.022	110	0.02	0.022	110	0	50-130	30
n-Triacontane (C30)	0.02	0.021	106	0.02	0.021	107	1	50-130	30
n-Hexatriacontane (C36)	0.02	0.018	91	0.02	0.019	97	6	50-130	30

Laboratory Control Sample Summary
Form 3
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Matrix	: WATER		
LCS Sample ID	: WG1577488-2	**Analysis Date** : 12/04/21 00:00	**File ID** : F1712032120
LCSD Sample ID	: WG1577488-3	**Analysis Date** : 12/04/21 01:28	**File ID** : F1712032122

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/l)	Found (mg/l)	%R	True (mg/l)	Found (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Nonane (C9)	0.02	0.012	60	0.02	0.011	54	11	50-130	30
n-Decane (C10)	0.02	0.015	73	0.02	0.014	68	7	50-130	30
n-Dodecane (C12)	0.02	0.017	83	0.02	0.016	79	5	50-130	30
n-Tetradecane (C14)	0.02	0.017	86	0.02	0.016	82	5	50-130	30
n-Hexadecane (C16)	0.02	0.019	92	0.02	0.018	87	6	50-130	30
n-Octadecane (C18)	0.02	0.020	97	0.02	0.018	91	6	50-130	30
n-Nonadecane (C19)	0.02	0.020	102	0.02	0.019	96	6	50-130	30
n-Eicosane (C20)	0.02	0.020	99	0.02	0.018	92	7	50-130	30
n-Docosane (C22)	0.02	0.020	99	0.02	0.018	92	7	50-130	30
n-Tetracosane (C24)	0.02	0.020	101	0.02	0.019	94	7	50-130	30
n-Hexacosane (C26)	0.02	0.020	100	0.02	0.019	94	6	50-130	30
n-Octacosane (C28)	0.02	0.020	101	0.02	0.019	95	6	50-130	30
n-Triacontane (C30)	0.02	0.020	98	0.02	0.019	92	6	50-130	30
n-Hexatriacontane (C36)	0.02	0.017	84	0.02	0.017	84	0	50-130	30

Laboratory Control Sample Summary
Form 3
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Matrix	: OIL		
LCS Sample ID	: WG1579479-2	**Analysis Date** : 12/08/21 00:16	**File ID** : F1712072122
LCSD Sample ID	: WG1579479-3	**Analysis Date** : 12/08/21 01:44	**File ID** : F1712072124

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/kg)	Found (mg/kg)	%R	True (mg/kg)	Found (mg/kg)	%R	RPD	Recovery Limits	RPD Limit
Nonane (C9)	1000	860	86	1000	894	89	3	50-130	30
n-Decane (C10)	1000	794	79	1000	832	83	5	50-130	30
n-Dodecane (C12)	1000	806	80	1000	852	85	6	50-130	30
n-Tetradecane (C14)	1000	912	91	1000	965	96	5	50-130	30
n-Hexadecane (C16)	1000	983	98	1000	1030	103	5	50-130	30
n-Octadecane (C18)	1000	1040	104	1000	1090	109	5	50-130	30
n-Nonadecane (C19)	1000	748	75	1000	788	79	5	50-130	30
n-Eicosane (C20)	1000	916	92	1000	963	96	4	50-130	30
n-Docosane (C22)	1000	930	93	1000	979	98	5	50-130	30
n-Tetracosane (C24)	1000	985	98	1000	1030	103	5	50-130	30
n-Hexacosane (C26)	1000	947	95	1000	991	99	4	50-130	30
n-Octacosane (C28)	1000	870	87	1000	903	90	3	50-130	30
n-Triacontane (C30)	1000	902	90	1000	941	94	4	50-130	30
n-Hexatriacontane (C36)	1000	763	76	1000	798	80	5	50-130	30

Method Blank Summary
Form 4
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab Sample ID	: WG1577487-1	**Lab File ID**	: F1712032112
Instrument ID	: FID17	**Extraction Date**	: 12/01/21
Matrix	: WATER	**Analysis Date**	: 12/03/21 18:07
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1577487-2LCS	WG1577487-2	12/03/21 21:03
WG1577487-3LCSD	WG1577487-3	12/03/21 22:32
ERH1968	L2165245-02D	12/05/21 05:23

Method Blank Summary
Form 4
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab Sample ID	: WG1577488-1	**Lab File ID**	: F1712032114
Instrument ID	: FID17	**Extraction Date**	: 12/01/21
Matrix	: WATER	**Analysis Date**	: 12/03/21 19:35
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1577488-2LCS	WG1577488-2	12/04/21 00:00
WG1577488-3LCSD	WG1577488-3	12/04/21 01:28
ERH1968 - SGC	L2165245-03D	12/05/21 06:51

Method Blank Summary
Form 4
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Lab Sample ID	: WG1579479-1	**Lab File ID**	: F1712072116
Instrument ID	: FID17	**Extraction Date**	: 12/06/21
Matrix	: OIL	**Analysis Date**	: 12/07/21 19:51
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1579479-2LCS	WG1579479-2	12/08/21 00:16
WG1579479-3LCSD	WG1579479-3	12/08/21 01:44
ERH1967	L2165245-01	12/08/21 22:22
ERH1967	L2165245-01D	12/09/21 16:56

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2165245**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: FID17**	**Ical Ref**	**: ICAL18012**
Calibration dates	**: 05/20/21 20:50 05/21/21 04:13**		

Calibration Files
1 =F1705202112.D 10 =F1705202114.D 50 =F1705202116.D 100 =F1705202118.D 200 =F1705202120.D
500 =F1705202122.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.919	0.879	0.879	0.852	0.792		0.864	5.42
3)	t	n-Nonane (C9)	1.068	0.920	0.915	0.880	0.829		0.922	9.67
4)	t	n-Decane (C10)	1.011	0.959	0.958	0.923	0.870		0.944	5.53
5)	t	n-Undecane (C11)	0.934	0.945	0.951	0.917	0.867		0.923	3.64
6)	t	n-Dodecane (C12)	0.921	0.950	0.956	0.924	0.875		0.925	3.47
7)	t	n-Tridecane (C13)	0.936	0.949	0.954	0.924	0.875		0.928	3.39
8)	t	1380	0.984	0.973	0.977	0.947	0.898		0.956	3.70
9)	t	n-Tetradecane (C14)	0.984	0.973	0.977	0.947	0.898		0.956	3.70
10)	t	1470	0.975	0.976	0.980	0.951	0.902		0.957	3.40
11)	t	n-Pentadecane (C15)	0.975	0.976	0.980	0.951	0.902		0.957	3.40
12)	t	n-Hexadecane (C16)	1.001	0.968	0.971	0.943	0.893		0.955	4.21
13)	t	1650	0.951	0.975	0.981	0.953	0.911		0.954	2.87
14)	t	n-Heptadecane (C17)	0.951	0.975	0.981	0.953	0.911		0.954	2.87
15)	t	Pristane	1.054	1.003	1.003	0.973	0.915		0.990	5.13
16)	t	n-Octadecane (C18)	0.999	0.985	0.989	0.962	0.915		0.970	3.45
17)	t	Phytane	0.941	0.925	0.923	0.894	0.854		0.908	3.79
18)	t	n-Nonadecane (C19)	1.000	0.988	0.994	0.966	0.918		0.973	3.44
19)	s	ortho-terphenyl	1.120	1.096	1.100	1.069	1.025	1.093	1.084	3.03
20)	t	n-Eicosane (C20)	1.009	0.993	0.999	0.971	0.922		0.979	3.53
21)	t	n-Heneicosane (C21)	1.009	0.996	1.002	0.976	0.926		0.982	3.43
22)	t	n-Docosane (C22)	1.019	0.997	1.001	0.975	0.925		0.983	3.68
23)	t	n-Tricosane (C23)	1.025	0.998	1.001	0.977	0.926		0.985	3.79
24)	s	d50-Tetracosane	0.879	0.860	0.888	0.854	0.819	0.860	0.860	2.80
25)	t	n-Tetracosane (C24)	1.025	0.990	0.998	0.976	0.923		0.982	3.84
26)	t	n-Pentacosane (C25)	0.990	0.970	0.977	0.960	0.908		0.961	3.32
27)	t	n-Hexacosane (C26)	1.013	0.996	1.002	0.989	0.933		0.987	3.17
28)	t	n-Heptacosane (C27)	1.023	0.995	1.001	0.992	0.934		0.989	3.34
29)	t	n-Octacosane (C28)	1.105	1.026	1.022	1.018	0.957		1.026	5.13
30)	t	n-Nonacosane (C29)	1.030	1.010	1.016	1.019	0.955		1.006	2.95
31)	t	n-Triacontane (C30)	1.033	1.012	1.018	1.027	0.960		1.010	2.90
32)	t	n-Hentriacontane (C31)	1.005	0.975	0.981	0.996	0.927		0.977	3.10
33)	t	n-Dotriacontane (C32)	1.052	1.022	1.028	1.050	0.974		1.025	3.09
34)	t	n-Tritriacontane (C33)	1.030	0.993	0.998	1.024	0.945		0.998	3.39
35)	t	n-tetratriacontane (C34	1.013	0.986	0.993	1.023	0.940		0.991	3.26
36)	t	n-Pentatriacontane (C35	0.951	0.919	0.927	0.958	0.875		0.926	3.55

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2165245**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: FID17**	**Ical Ref**	**: ICAL18012**
Calibration dates	**: 05/20/21 20:50 05/21/21 04:13**		

Calibration Files
1 =F1705202112.D 10 =F1705202114.D 50 =F1705202116.D 100 =F1705202118.D 200 =F1705202120.D
500 =F1705202122.D

	Compound	1	10	50	100	200	500	Avg	%RSD
37) t	n-Hexatriacontane (C36)	1.140	1.107	1.117	1.158	1.051		1.115	3.63
38) t	n-Heptatriacontane (C37	1.023	1.004	1.018	1.056	0.953		1.011	3.71
39) t	n-Octatriacontane (C38)	1.032	1.019	1.030	1.069	0.960		1.022	3.88
40) t	n-Nonatriacon	1.026	1.003	1.018	1.058	0.939		1.009	4.35
41) t	n-Tetracontane (C40)	1.026	1.003	1.018	1.058	0.939		1.009	4.35
42) h	C9-C44 Total	1.010	0.986	0.991	0.983	0.920		0.978	3.49
43) h	C9-C40 Total	1.010	0.986	0.991	0.983	0.920		0.978	3.49
44) h	C10-C28 DRO	0.996	0.981	0.985	0.960	0.909		0.966	3.56
45) h	C28-C40 ORO	1.037	1.006	1.014	1.038	0.953		1.010	3.43
46) h	Total Resolve	1.010	0.986	0.991	0.983	0.920		0.978	3.49

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2165245	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/03/21 13:41	
Lab File ID	: F1712032106		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1579117-1		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	113	0
n-Octane (C8)	0.864	0.859	.05	0.6	25	111	0
n-Nonane (C9)	0.922	0.882	.05	4.3	25	109	0
n-Decane (C10)	0.944	0.939	.05	0.5	25	111	0
n-Undecane (C11)	0.923	0.95	.05	-2.9	25	113	0
n-Dodecane (C12)	0.925	0.951	.05	-2.8	25	113	0
n-Tridecane (C13)	0.928	0.961	.05	-3.6	25	114	0
n-Tetradecane (C14)	0.956	0.977	.05	-2.2	25	113	0
n-Pentadecane (C15)	0.957	0.969	.05	-1.3	25	112	0
n-Hexadecane (C16)	0.955	0.983	.05	-2.9	25	115	0
n-Heptadecane (C17)	0.954	0.987	.05	-3.5	25	114	0
Pristane	0.99	1.007	.05	-1.7	25	114	0
n-Octadecane (C18)	0.97	0.994	.05	-2.5	25	114	0
Phytane	0.908	0.938	.05	-3.3	25	115	0
n-Nonadecane (C19)	0.973	1.07	.05	-10	25	122	0
ortho-terphenyl	1.084	1.133	.05	-4.5	25	117	0
n-Eicosane (C20)	0.979	1.007	.05	-2.9	25	114	0
n-Heneicosane (C21)	0.982	1.002	.05	-2	25	113	0
n-Docosane (C22)	0.983	1.013	.05	-3.1	25	115	0
n-Tricosane (C23)	0.985	1.015	.05	-3	25	115	0
d50-Tetracosane	0.86	0.971	.05	-12.9	25	124	0
n-Tetracosane (C24)	0.982	0.96	.05	2.2	25	109	0
n-Pentacosane (C25)	0.961	0.992	.05	-3.2	25	115	0
n-Hexacosane (C26)	0.987	1.02	.05	-3.3	25	115	0
n-Heptacosane (C27)	0.989	0.983	.05	0.6	25	111	0
n-Octacosane (C28)	1.026	1.024	.05	0.2	25	114	0
n-Nonacosane (C29)	1.006	1.019	.05	-1.3	25	114	0
n-Triacontane (C30)	1.01	1.02	.05	-1	25	113	0
n-Hentriacontane (C31)	0.977	0.989	.05	-1.2	25	114	0
n-Dotriacontane (C32)	1.025	1.037	.05	-1.2	25	114	0
n-Tritriacontane (C33)	0.998	1.001	.05	-0.3	25	114	0
n-tetratriacontane (C34)	0.991	0.996	.05	-0.5	25	114	0
n-Pentatriacontane (C35)	0.926	1.006	.05	-8.6	25	123	0
n-Hexatriacontane (C36)	1.115	1.078	.05	3.3	25	109	.01
n-Heptatriacontane (C37)	1.011	0.992	.05	1.9	25	110	.01
n-Octatriacontane (C38)	1.022	1.021	.05	0.1	25	112	.01
n-Tetracontane (C40)	1.009	1.016	.05	-0.7	25	113	.01

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2165245	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/04/21 07:20	
Lab File ID	: F1712032130		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1579117-2		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	112	-.01
n-Octane (C8)	0.864	0.837	.05	3.1	25	107	-.01
n-Nonane (C9)	0.922	0.866	.05	6.1	25	106	0
n-Decane (C10)	0.944	0.932	.05	1.3	25	109	0
n-Undecane (C11)	0.923	0.945	.05	-2.4	25	112	-.01
n-Dodecane (C12)	0.925	0.949	.05	-2.6	25	112	-.01
n-Tridecane (C13)	0.928	0.959	.05	-3.3	25	113	-.01
n-Tetradecane (C14)	0.956	0.977	.05	-2.2	25	113	0
n-Pentadecane (C15)	0.957	0.971	.05	-1.5	25	111	-.01
n-Hexadecane (C16)	0.955	0.984	.05	-3	25	114	0
n-Heptadecane (C17)	0.954	0.987	.05	-3.5	25	113	-.01
Pristane	0.99	1.014	.05	-2.4	25	114	-.01
n-Octadecane (C18)	0.97	1.001	.05	-3.2	25	114	0
Phytane	0.908	0.945	.05	-4.1	25	115	-.01
n-Nonadecane (C19)	0.973	1.069	.05	-9.9	25	121	0
ortho-terphenyl	1.084	1.155	.05	-6.5	25	118	-.01
n-Eicosane (C20)	0.979	1.008	.05	-3	25	114	-.01
n-Heneicosane (C21)	0.982	1.004	.05	-2.2	25	113	0
n-Docosane (C22)	0.983	1.016	.05	-3.4	25	114	0
n-Tricosane (C23)	0.985	1.017	.05	-3.2	25	114	-.01
d50-Tetracosane	0.86	0.973	.05	-13.1	25	123	0
n-Tetracosane (C24)	0.982	0.959	.05	2.3	25	108	0
n-Pentacosane (C25)	0.961	0.992	.05	-3.2	25	114	0
n-Hexacosane (C26)	0.987	1.02	.05	-3.3	25	114	0
n-Heptacosane (C27)	0.989	0.984	.05	0.5	25	111	0
n-Octacosane (C28)	1.026	1.024	.05	0.2	25	113	0
n-Nonacosane (C29)	1.006	1.017	.05	-1.1	25	113	0
n-Triacontane (C30)	1.01	1.018	.05	-0.8	25	113	0
n-Hentriacontane (C31)	0.977	0.986	.05	-0.9	25	113	0
n-Dotriacontane (C32)	1.025	1.032	.05	-0.7	25	113	0
n-Tritriacontane (C33)	0.998	0.993	.05	0.5	25	112	0
n-tetratriacontane (C34)	0.991	0.986	.05	0.5	25	112	0
n-Pentatriacontane (C35)	0.926	0.992	.05	-7.1	25	120	0
n-Hexatriacontane (C36)	1.115	1.06	.05	4.9	25	107	-.01
n-Heptatriacontane (C37)	1.011	0.971	.05	4	25	107	0
n-Octatriacontane (C38)	1.022	0.997	.05	2.4	25	109	-.01
n-Tetracontane (C40)	1.009	0.99	.05	1.9	25	109	-.02

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2165245	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/04/21 19:06	
Lab File ID	: F1712032146		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1579117-3		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	110	-.02
n-Octane (C8)	0.864	0.847	.05	2	25	106	0
n-Nonane (C9)	0.922	0.866	.05	6.1	25	105	-.01
n-Decane (C10)	0.944	0.938	.05	0.6	25	108	-.01
n-Undecane (C11)	0.923	0.955	.05	-3.5	25	111	-.01
n-Dodecane (C12)	0.925	0.953	.05	-3	25	110	-.01
n-Tridecane (C13)	0.928	0.966	.05	-4.1	25	112	-.01
n-Tetradecane (C14)	0.956	0.984	.05	-2.9	25	111	-.01
n-Pentadecane (C15)	0.957	0.976	.05	-2	25	110	-.01
n-Hexadecane (C16)	0.955	0.988	.05	-3.5	25	112	-.01
n-Heptadecane (C17)	0.954	0.992	.05	-4	25	112	-.01
Pristane	0.99	1.019	.05	-2.9	25	112	-.01
n-Octadecane (C18)	0.97	1.004	.05	-3.5	25	112	-.01
Phytane	0.908	0.945	.05	-4.1	25	113	-.01
n-Nonadecane (C19)	0.973	1.055	.05	-8.4	25	117	-.01
ortho-terphenyl	1.084	1.162	.05	-7.2	25	117	-.01
n-Eicosane (C20)	0.979	1.007	.05	-2.9	25	111	-.02
n-Heneicosane (C21)	0.982	1.002	.05	-2	25	110	-.01
n-Docosane (C22)	0.983	1.014	.05	-3.2	25	112	0
n-Tricosane (C23)	0.985	1.014	.05	-2.9	25	112	-.01
d50-Tetracosane	0.86	0.969	.05	-12.7	25	121	-.01
n-Tetracosane (C24)	0.982	0.957	.05	2.5	25	106	0
n-Pentacosane (C25)	0.961	0.99	.05	-3	25	112	-.01
n-Hexacosane (C26)	0.987	1.017	.05	-3	25	112	0
n-Heptacosane (C27)	0.989	0.98	.05	0.9	25	108	-.01
n-Octacosane (C28)	1.026	1.021	.05	0.5	25	110	0
n-Nonacosane (C29)	1.006	1.014	.05	-0.8	25	110	0
n-Triacontane (C30)	1.01	1.015	.05	-0.5	25	110	-.01
n-Hentriacontane (C31)	0.977	0.983	.05	-0.6	25	111	0
n-Dotriacontane (C32)	1.025	1.029	.05	-0.4	25	111	-.01
n-Tritriacontane (C33)	0.998	0.991	.05	0.7	25	110	0
n-tetratriacontane (C34)	0.991	0.986	.05	0.5	25	110	-.01
n-Pentatriacontane (C35)	0.926	0.995	.05	-7.5	25	119	-.01
n-Hexatriacontane (C36)	1.115	1.067	.05	4.3	25	106	-.02
n-Heptatriacontane (C37)	1.011	0.981	.05	3	25	106	-.01
n-Octatriacontane (C38)	1.022	1.011	.05	1.1	25	108	-.01
n-Tetracontane (C40)	1.009	1.007	.05	0.2	25	109	-.02

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2165245	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/05/21 08:19	
Lab File ID	: F1712032164		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1579117-4		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	110	-.02
n-Octane (C8)	0.864	0.845	.05	2.2	25	105	0
n-Nonane (C9)	0.922	0.878	.05	4.8	25	105	-.01
n-Decane (C10)	0.944	0.926	.05	1.9	25	106	-.01
n-Undecane (C11)	0.923	0.943	.05	-2.2	25	109	-.01
n-Dodecane (C12)	0.925	0.948	.05	-2.5	25	109	-.02
n-Tridecane (C13)	0.928	0.955	.05	-2.9	25	110	-.02
n-Tetradecane (C14)	0.956	0.972	.05	-1.7	25	109	-.02
n-Pentadecane (C15)	0.957	0.967	.05	-1	25	108	-.02
n-Hexadecane (C16)	0.955	0.979	.05	-2.5	25	111	-.02
n-Heptadecane (C17)	0.954	0.981	.05	-2.8	25	110	-.02
Pristane	0.99	1.02	.05	-3	25	112	-.02
n-Octadecane (C18)	0.97	0.998	.05	-2.9	25	111	-.02
Phytane	0.908	0.943	.05	-3.9	25	112	-.02
n-Nonadecane (C19)	0.973	1.063	.05	-9.2	25	117	-.02
ortho-terphenyl	1.084	1.139	.05	-5.1	25	114	-.02
n-Eicosane (C20)	0.979	1.004	.05	-2.6	25	110	-.02
n-Heneicosane (C21)	0.982	1.001	.05	-1.9	25	110	-.02
n-Docosane (C22)	0.983	1.013	.05	-3.1	25	111	-.02
n-Tricosane (C23)	0.985	1.014	.05	-2.9	25	111	-.02
d50-Tetracosane	0.86	0.97	.05	-12.8	25	120	-.02
n-Tetracosane (C24)	0.982	0.956	.05	2.6	25	105	-.02
n-Pentacosane (C25)	0.961	0.99	.05	-3	25	111	-.02
n-Hexacosane (C26)	0.987	1.019	.05	-3.2	25	112	-.02
n-Heptacosane (C27)	0.989	0.982	.05	0.7	25	108	-.02
n-Octacosane (C28)	1.026	1.023	.05	0.3	25	110	-.02
n-Nonacosane (C29)	1.006	1.016	.05	-1	25	110	-.02
n-Triacontane (C30)	1.01	1.018	.05	-0.8	25	110	-.02
n-Hentriacontane (C31)	0.977	0.986	.05	-0.9	25	110	-.02
n-Dotriacontane (C32)	1.025	1.032	.05	-0.7	25	110	-.02
n-Tritriacontane (C33)	0.998	0.994	.05	0.4	25	109	-.02
n-tetratriacontane (C34)	0.991	0.99	.05	0.1	25	109	-.02
n-Pentatriacontane (C35)	0.926	0.998	.05	-7.8	25	118	-.02
n-Hexatriacontane (C36)	1.115	1.071	.05	3.9	25	105	-.03
n-Heptatriacontane (C37)	1.011	0.985	.05	2.6	25	106	-.03
n-Octatriacontane (C38)	1.022	1.016	.05	0.6	25	108	-.03
n-Tetracontane (C40)	1.009	1.015	.05	-0.6	25	109	-.05

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245		
Project Name	:	**Project Number**	:		
Instrument ID	: FID17	**Calibration Date**	: 12/07/21 12:29		
Lab File ID	: F1712072106	**Init. Calib. Date(s)**	: 05/20/21	05/21/21	
Sample No	: WG1580304-1	**Init. Calib. Times**	: 20:50	04:13	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	107	0
n-Octane (C8)	0.864	0.867	.05	-0.3	25	105	0
n-Nonane (C9)	0.922	0.894	.05	3	25	104	0
n-Decane (C10)	0.944	0.929	.05	1.6	25	103	0
n-Undecane (C11)	0.923	0.946	.05	-2.5	25	106	0
n-Dodecane (C12)	0.925	0.945	.05	-2.2	25	105	0
n-Tridecane (C13)	0.928	0.96	.05	-3.4	25	107	0
n-Tetradecane (C14)	0.956	0.979	.05	-2.4	25	107	0
n-Pentadecane (C15)	0.957	0.966	.05	-0.9	25	105	0
n-Hexadecane (C16)	0.955	0.989	.05	-3.6	25	109	0
n-Heptadecane (C17)	0.954	0.963	.05	-0.9	25	105	0
Pristane	0.99	1.039	.05	-4.9	25	110	0
n-Octadecane (C18)	0.97	0.997	.05	-2.8	25	107	0
Phytane	0.908	0.952	.05	-4.8	25	110	0
n-Nonadecane (C19)	0.973	1.06	.05	-8.9	25	114	0
ortho-terphenyl	1.084	1.151	.05	-6.2	25	112	0
n-Eicosane (C20)	0.979	1.008	.05	-3	25	108	0
n-Heneicosane (C21)	0.982	1.002	.05	-2	25	107	0
n-Docosane (C22)	0.983	1.014	.05	-3.2	25	108	0
n-Tricosane (C23)	0.985	1.013	.05	-2.8	25	108	0
d50-Tetracosane	0.86	0.968	.05	-12.6	25	116	0
n-Tetracosane (C24)	0.982	0.955	.05	2.7	25	102	0
n-Pentacosane (C25)	0.961	0.989	.05	-2.9	25	108	0
n-Hexacosane (C26)	0.987	1.017	.05	-3	25	108	0
n-Heptacosane (C27)	0.989	0.979	.05	1	25	104	0
n-Octacosane (C28)	1.026	1.02	.05	0.6	25	106	0
n-Nonacosane (C29)	1.006	1.011	.05	-0.5	25	106	0
n-Triacontane (C30)	1.01	1.012	.05	-0.2	25	106	0
n-Hentriacontane (C31)	0.977	0.978	.05	-0.1	25	106	0
n-Dotriacontane (C32)	1.025	1.022	.05	0.3	25	106	0
n-Tritriacontane (C33)	0.998	0.983	.05	1.5	25	105	0
n-tetratriacontane (C34)	0.991	0.972	.05	1.9	25	104	0
n-Pentatriacontane (C35)	0.926	0.977	.05	-5.5	25	112	0
n-Hexatriacontane (C36)	1.115	1.043	.05	6.5	25	100	0
n-Heptatriacontane (C37)	1.011	0.955	.05	5.5	25	100	0
n-Octatriacontane (C38)	1.022	0.981	.05	4	25	102	0
n-Tetracontane (C40)	1.009	0.968	.05	4.1	25	101	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2165245	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/08/21 10:33	
Lab File ID	: F1712072136		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1580304-2		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	108	0
n-Octane (C8)	0.864	0.84	.05	2.8	25	103	0
n-Nonane (C9)	0.922	0.875	.05	5.1	25	103	0
n-Decane (C10)	0.944	0.916	.05	3	25	103	0
n-Undecane (C11)	0.923	0.943	.05	-2.2	25	107	0
n-Dodecane (C12)	0.925	0.945	.05	-2.2	25	107	0
n-Tridecane (C13)	0.928	0.959	.05	-3.3	25	109	0
n-Tetradecane (C14)	0.956	0.977	.05	-2.2	25	108	0
n-Pentadecane (C15)	0.957	0.963	.05	-0.6	25	106	0
n-Hexadecane (C16)	0.955	0.971	.05	-1.7	25	108	0
n-Heptadecane (C17)	0.954	0.959	.05	-0.5	25	106	0
Pristane	0.99	1.037	.05	-4.7	25	112	0
n-Octadecane (C18)	0.97	0.992	.05	-2.3	25	108	0
Phytane	0.908	0.953	.05	-5	25	112	0
n-Nonadecane (C19)	0.973	1.056	.05	-8.5	25	115	0
ortho-terphenyl	1.084	1.166	.05	-7.6	25	115	0
n-Eicosane (C20)	0.979	1.006	.05	-2.8	25	109	0
n-Heneicosane (C21)	0.982	1.002	.05	-2	25	108	0
n-Docosane (C22)	0.983	1.016	.05	-3.4	25	110	0
n-Tricosane (C23)	0.985	1.01	.05	-2.5	25	109	0
d50-Tetracosane	0.86	0.968	.05	-12.6	25	118	0
n-Tetracosane (C24)	0.982	0.956	.05	2.6	25	104	0
n-Pentacosane (C25)	0.961	0.991	.05	-3.1	25	110	0
n-Hexacosane (C26)	0.987	1.018	.05	-3.1	25	110	0
n-Heptacosane (C27)	0.989	0.979	.05	1	25	106	0
n-Octacosane (C28)	1.026	1.02	.05	0.6	25	108	0
n-Nonacosane (C29)	1.006	1.011	.05	-0.5	25	108	0
n-Triacontane (C30)	1.01	1.011	.05	-0.1	25	107	0
n-Hentriacontane (C31)	0.977	0.979	.05	-0.2	25	108	0
n-Dotriacontane (C32)	1.025	1.02	.05	0.5	25	107	0
n-Tritriacontane (C33)	0.998	0.983	.05	1.5	25	107	0
n-tetratriacontane (C34)	0.991	0.976	.05	1.5	25	106	0
n-Pentatriacontane (C35)	0.926	0.984	.05	-6.3	25	115	0
n-Hexatriacontane (C36)	1.115	1.053	.05	5.6	25	102	0
n-Heptatriacontane (C37)	1.011	0.967	.05	4.4	25	103	0
n-Octatriacontane (C38)	1.022	0.995	.05	2.6	25	104	0
n-Tetracontane (C40)	1.009	0.986	.05	2.3	25	105	.02

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2165245	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/08/21 23:51	
Lab File ID	: F1712072154		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1580304-3		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	118	0
n-Octane (C8)	0.864	0.796	.05	7.9	25	107	0
n-Nonane (C9)	0.922	0.865	.05	6.2	25	112	0
n-Decane (C10)	0.944	0.905	.05	4.1	25	112	0
n-Undecane (C11)	0.923	0.941	.05	-2	25	117	0
n-Dodecane (C12)	0.925	0.942	.05	-1.8	25	116	0
n-Tridecane (C13)	0.928	0.95	.05	-2.4	25	118	0
n-Tetradecane (C14)	0.956	0.974	.05	-1.9	25	118	0
n-Pentadecane (C15)	0.957	0.959	.05	-0.2	25	116	0
n-Hexadecane (C16)	0.955	0.967	.05	-1.3	25	118	0
n-Heptadecane (C17)	0.954	0.958	.05	-0.4	25	115	0
Pristane	0.99	1.035	.05	-4.5	25	122	0
n-Octadecane (C18)	0.97	0.99	.05	-2.1	25	118	0
Phytane	0.908	0.954	.05	-5.1	25	122	0
n-Nonadecane (C19)	0.973	1.073	.05	-10.3	25	128	0
ortho-terphenyl	1.084	1.15	.05	-6.1	25	124	0
n-Eicosane (C20)	0.979	1.008	.05	-3	25	119	0
n-Heneicosane (C21)	0.982	1.004	.05	-2.2	25	118	0
n-Docosane (C22)	0.983	1.018	.05	-3.6	25	120	0
n-Tricosane (C23)	0.985	1.017	.05	-3.2	25	120	.01
d50-Tetracosane	0.86	0.972	.05	-13	25	129	.01
n-Tetracosane (C24)	0.982	0.961	.05	2.1	25	114	.01
n-Pentacosane (C25)	0.961	0.995	.05	-3.5	25	120	.01
n-Hexacosane (C26)	0.987	1.023	.05	-3.6	25	121	.01
n-Heptacosane (C27)	0.989	0.987	.05	0.2	25	116	0
n-Octacosane (C28)	1.026	1.028	.05	-0.2	25	119	.01
n-Nonacosane (C29)	1.006	1.02	.05	-1.4	25	119	0
n-Triacontane (C30)	1.01	1.022	.05	-1.2	25	119	0
n-Hentriacontane (C31)	0.977	0.99	.05	-1.3	25	119	.01
n-Dotriacontane (C32)	1.025	1.036	.05	-1.1	25	119	.01
n-Tritriacontane (C33)	0.998	0.999	.05	-0.1	25	118	.01
n-tetratriacontane (C34)	0.991	0.992	.05	-0.1	25	118	.01
n-Pentatriacontane (C35)	0.926	1.001	.05	-8.1	25	128	.01
n-Hexatriacontane (C36)	1.115	1.072	.05	3.9	25	113	.02
n-Heptatriacontane (C37)	1.011	0.982	.05	2.9	25	114	.02
n-Octatriacontane (C38)	1.022	1.009	.05	1.3	25	116	.02
n-Tetracontane (C40)	1.009	0.997	.05	1.2	25	116	.04

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2165245	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/09/21 12:30	
Lab File ID	: F1712092106		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1580304-4		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	105	0
n-Octane (C8)	0.864	0.873	.05	-1	25	104	0
n-Nonane (C9)	0.922	0.898	.05	2.6	25	103	0
n-Decane (C10)	0.944	0.915	.05	3.1	25	100	0
n-Undecane (C11)	0.923	0.947	.05	-2.6	25	105	0
n-Dodecane (C12)	0.925	0.946	.05	-2.3	25	104	0
n-Tridecane (C13)	0.928	0.955	.05	-2.9	25	105	0
n-Tetradecane (C14)	0.956	0.979	.05	-2.4	25	105	0
n-Pentadecane (C15)	0.957	0.963	.05	-0.6	25	103	0
n-Hexadecane (C16)	0.955	0.989	.05	-3.6	25	107	0
n-Heptadecane (C17)	0.954	0.955	.05	-0.1	25	102	0
Pristane	0.99	1.042	.05	-5.3	25	109	0
n-Octadecane (C18)	0.97	0.993	.05	-2.4	25	105	0
Phytane	0.908	0.956	.05	-5.3	25	109	0
n-Nonadecane (C19)	0.973	1.038	.05	-6.7	25	110	0
ortho-terphenyl	1.084	1.163	.05	-7.3	25	111	0
n-Eicosane (C20)	0.979	1.008	.05	-3	25	106	0
n-Heneicosane (C21)	0.982	1.004	.05	-2.2	25	105	0
n-Docosane (C22)	0.983	1.016	.05	-3.4	25	107	0
n-Tricosane (C23)	0.985	1.015	.05	-3	25	107	0
d50-Tetracosane	0.86	0.97	.05	-12.8	25	115	0
n-Tetracosane (C24)	0.982	0.957	.05	2.5	25	101	0
n-Pentacosane (C25)	0.961	0.993	.05	-3.3	25	107	0
n-Hexacosane (C26)	0.987	1.021	.05	-3.4	25	107	0
n-Heptacosane (C27)	0.989	0.982	.05	0.7	25	103	0
n-Octacosane (C28)	1.026	1.023	.05	0.3	25	105	0
n-Nonacosane (C29)	1.006	1.016	.05	-1	25	105	0
n-Triacontane (C30)	1.01	1.017	.05	-0.7	25	105	0
n-Hentriacontane (C31)	0.977	0.986	.05	-0.9	25	106	0
n-Dotriacontane (C32)	1.025	1.032	.05	-0.7	25	105	0
n-Tritriacontane (C33)	0.998	0.996	.05	0.2	25	105	0
n-tetratriacontane (C34)	0.991	0.988	.05	0.3	25	105	0
n-Pentatriacontane (C35)	0.926	0.996	.05	-7.6	25	113	0
n-Hexatriacontane (C36)	1.115	1.068	.05	4.2	25	100	0
n-Heptatriacontane (C37)	1.011	0.978	.05	3.3	25	101	0
n-Octatriacontane (C38)	1.022	1.007	.05	1.5	25	103	-.02
n-Tetracontane (C40)	1.009	0.993	.05	1.6	25	102	-.01

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2165245	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/09/21 18:24	
Lab File ID	: F1712092114		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1580304-5		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	105	0
n-Octane (C8)	0.864	0.861	.05	0.3	25	102	0
n-Nonane (C9)	0.922	0.887	.05	3.8	25	101	0
n-Decane (C10)	0.944	0.92	.05	2.5	25	100	0
n-Undecane (C11)	0.923	0.938	.05	-1.6	25	103	0
n-Dodecane (C12)	0.925	0.937	.05	-1.3	25	102	0
n-Tridecane (C13)	0.928	0.953	.05	-2.7	25	104	0
n-Tetradecane (C14)	0.956	0.973	.05	-1.8	25	104	0
n-Pentadecane (C15)	0.957	0.955	.05	0.2	25	102	0
n-Hexadecane (C16)	0.955	0.984	.05	-3	25	106	0
n-Heptadecane (C17)	0.954	0.946	.05	0.8	25	101	0
Pristane	0.99	1.044	.05	-5.5	25	109	0
n-Octadecane (C18)	0.97	0.985	.05	-1.5	25	104	0
Phytane	0.908	0.958	.05	-5.5	25	108	0
n-Nonadecane (C19)	0.973	1.046	.05	-7.5	25	110	0
ortho-terphenyl	1.084	1.189	.05	-9.7	25	113	0
n-Eicosane (C20)	0.979	1.008	.05	-3	25	105	0
n-Heneicosane (C21)	0.982	1.004	.05	-2.2	25	105	0
n-Docosane (C22)	0.983	1.019	.05	-3.7	25	106	0
n-Tricosane (C23)	0.985	1.019	.05	-3.5	25	106	0
d50-Tetracosane	0.86	0.973	.05	-13.1	25	114	0
n-Tetracosane (C24)	0.982	0.962	.05	2	25	101	0
n-Pentacosane (C25)	0.961	0.996	.05	-3.6	25	107	0
n-Hexacosane (C26)	0.987	1.023	.05	-3.6	25	107	0
n-Heptacosane (C27)	0.989	0.987	.05	0.2	25	103	-.01
n-Octacosane (C28)	1.026	1.029	.05	-0.3	25	105	-.01
n-Nonacosane (C29)	1.006	1.021	.05	-1.5	25	105	0
n-Triacontane (C30)	1.01	1.023	.05	-1.3	25	105	-.02
n-Hentriacontane (C31)	0.977	0.992	.05	-1.5	25	106	-.01
n-Dotriacontane (C32)	1.025	1.038	.05	-1.3	25	106	-.01
n-Tritriacontane (C33)	0.998	1.003	.05	-0.5	25	105	-.02
n-tetratriacontane (C34)	0.991	0.995	.05	-0.4	25	105	-.01
n-Pentatriacontane (C35)	0.926	1.004	.05	-8.4	25	113	-.01
n-Hexatriacontane (C36)	1.115	1.074	.05	3.7	25	101	-.01
n-Heptatriacontane (C37)	1.011	0.983	.05	2.8	25	101	-.01
n-Octatriacontane (C38)	1.022	1.008	.05	1.4	25	102	-.02
n-Tetracontane (C40)	1.009	0.991	.05	1.8	25	102	-.02

* Value outside of QC limits.

Analytical Sequence
Form 8b
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2165245
Project Name	:	**Project Number**	:
Instrument ID	: FID17	**Initial Calib. Date(s)**	: 05/20/21 05/21/21

Client ID	Lab ID	Date/Time Analyzed
STD1	R1439434-1	05/20/21 20:50
STD10	R1439434-3	05/20/21 22:19
STD50	R1439434-2	05/20/21 23:47
STD100	R1439434-4	05/21/21 01:16
STD200	R1439434-5	05/21/21 02:44
STD500	R1439434-6	05/21/21 04:13
R1439434-7 ICV	R1439434-7	05/21/21 07:10
WG1505003-1 ANS	WG1505003-1	05/21/21 10:07
WG1579117-1 CCAL	WG1579117-1	12/03/21 13:41
WG1577487-1 BLANK	WG1577487-1	12/03/21 18:07
WG1577488-1 BLANK	WG1577488-1	12/03/21 19:35
WG1577487-2 LCS	WG1577487-2	12/03/21 21:03
WG1577487-3 LCSD	WG1577487-3	12/03/21 22:32
WG1577488-2 LCS	WG1577488-2	12/04/21 00:00
WG1577488-3 LCSD	WG1577488-3	12/04/21 01:28
WG1579117-2 CCAL	WG1579117-2	12/04/21 07:20
WG1579117-3 CCAL	WG1579117-3	12/04/21 19:06
ERH1968	L2165245-02 D	12/05/21 05:23
ERH1968 - SGC	L2165245-03 D	12/05/21 06:51
WG1579117-4 CCAL	WG1579117-4	12/05/21 08:19
WG1580304-1 CCAL	WG1580304-1	12/07/21 12:29
WG1579479-1 BLANK	WG1579479-1	12/07/21 19:51
WG1579479-2 LCS	WG1579479-2	12/08/21 00:16
WG1579479-3 LCSD	WG1579479-3	12/08/21 01:44
WG1580304-2 CCAL	WG1580304-2	12/08/21 10:33
ERH1967	L2165245-01	12/08/21 22:22
WG1580304-3 CCAL	WG1580304-3	12/08/21 23:51
WG1580304-4 CCAL	WG1580304-4	12/09/21 12:30
ERH1967	L2165245-01 D	12/09/21 16:56
WG1580304-5 CCAL	WG1580304-5	12/09/21 18:24

ALPHA ANALYTICAL

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Lab Number: L2166503

Client: GSI Environmental Inc.

ATTN: Ileana Rhodes

Project Name: RED HILL

Project Number:

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Laboratory Method Bl (WG1579126-1) Analyzed: 12/04/21 23:30 1956
Laboratory Method Bl (WG1582496-1) Analyzed: 12/14/21 17:05 1976
Laboratory Method Bl (WG1590340-1) Analyzed: 01/04/22 18:47 1986
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Laboratory Control S (WG1579102-2) Analyzed: 12/04/21 13:13 1993
Laboratory Control S (WG1579126-2) Analyzed: 12/05/21 00:59 2012
Laboratory Control S (WG1582496-2) Analyzed: 12/14/21 19:57 2031
Laboratory Control S (WG1590340-2) Analyzed: 01/04/22 20:14 2050
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LCS Duplicate (WG1579126-3) Analyzed: 12/05/21 02:27 2089
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Sample Delivery Group Information

Sample Delivery Group Summary

Alpha Job Number : L2166503

Account Name : GSI Environmental Inc.
Project Number :
Project Name : RED HILL

Received : 29-NOV-2021
Reviewer : Sue ONeil

Delivery Information

Samples Delivered By : Client, Express Ship (286636747006)

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	1.6	
B	Present/Intact/N/A	Ice	1.2	

Condition Information

1) All samples on COC received? **YES**

2) Extra samples received? **YES**
Following additional samples were received: -04

3) Are there any sample container discrepancies? **NO**

4) Are there any discrepancies between sample labels & COC? **YES**
L2166503-03: ERH2052 vs. (No Sample ID Listed on Container; 03-DEC-21 13:15 vs. 03-DEC-21 00:00

5) Are samples in appropriate containers for requested analysis? **YES**

6) Are samples properly preserved for requested analysis? **YES**

7) Are samples within holding time for requested analysis? **YES**

8) All sampling equipment returned? **NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client? **NO**

Comments

L2166503-04B Vial has Headspace

LIMS Chain of Custody

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Jan 05 2022, 04:32 pm

Login Number: L2166503
Account: GSI GSI Environmental Inc.
Received: 29NOV21 Due Date: 07JAN22

Sample #	Client ID	Mat	PR	Collected
L2166503-01	ERH1967	6	2A	24NOV21 00:00

include the SHC quant report in the report possibly JP-5 SHC, DRO and ORO - with PHI narration - compare -01 to -02 A2-DPKG-FULL Package Due Date: 01/07/22

A2-DPKG-FULL,A2-PIANO8260,A2-SHC,TS100

L2166503-02	ERH2051	1	2A	02DEC21 17:00

water/sheen include the SHC quant report in the report SHC, DRO and ORO - with PHI narration - compare -01 to -02 Package Due Date: 01/07/22

A2-ARCHIVE,A2-PIANO8260,A2-SHC

L2166503-03	ERH2052	2	2A	03DEC21 13:15

Simple Green - see Nate for prep prep transfer an aliquot for GC/MS Full Scan w/library search Package Due Date: 01/07/22

A2-SHC,SPECFEE

L2166503-04	ERH2049	8	2A	02DEC21 16:50

Simple Green - HOLD 12/3/21 Package Due Date: 01/07/22

A2-ARCHIVE

L2166503-06	ERH2052 PRE SILICA	2	2A	03DEC21 13:15

Simple Green - see Nate for prep prep transfer an aliquot for GC/MS Full Scan w/library search Package Due Date: 01/07/22

A2-SHC,SPECFEE

Logged By: Sue ONeil

Container Tracking

ALPHA ANALYTICAL LABORATORIES
Container Tracking Report

Container ID	Type	Status	Transaction Date	From Response	From Location	From Operator	To Response	To Location	To Operator
L2166503-01A	Vial-A	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-ORGANIC PREP	Amanda Luiz	A2-CUSTODY-REFRIG-E1-S2	A2-CUSTODY-REFRIG-E1-S2	Amanda Luiz
L2166503-01A	Vial-A	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIG-E1-S2	Amanda Luiz	A2-ORGANIC PREP	A2-ORGANIC PREP	Amanda Luiz
L2166503-01A	Vial-A	INTACT	03-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sam Oldrid	A2-CUSTODY-REFRIG-E1-S2	A2-CUSTODY-REFRIG-E1-S2	Sam Oldrid
L2166503-01A	Vial-A-20	INTACT	03-DEC-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2166503-02A	Amber-A1	EMPTY	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-ORGANIC PREP	Nolan Bradley	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Nolan Bradley
L2166503-02A	Amber-A1	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Nolan Bradley	A2-ORGANIC PREP	A2-ORGANIC PREP	Nolan Bradley
L2166503-02A	Amber-A1	INTACT	03-DEC-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2166503-02B	Amber-A1	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-H1-S6	A2-CUSTODY-REFRIG-H1-S6	Dylan Snook
L2166503-02B	Amber-A1	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02C	Vial-A	INTACT	08-DEC-21	A2-CUSTODY-REFRIDGE	A2-GC/MS	John Trimble	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	John Trimble
L2166503-02C	Vial-A	INTACT	08-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-VOA8	John Trimble	A2-GC/MS	A2-GC/MS	John Trimble
L2166503-02C	Vial-A	INTACT	06-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Dylan Snook
L2166503-02C	Vial-A	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-02C	Vial-A	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02D	Vial-A	INTACT	06-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Dylan Snook
L2166503-02D	Vial-A	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-02D	Vial-A	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02E	Vial-A	INTACT	06-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook	A2-CUSTODY-VOA8	A2-CUSTODY-VOA8	Dylan Snook
L2166503-02E	Vial-A	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-02E	Vial-A	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02F	Vial-D	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-02F	Vial-D	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02G	Vial-D	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-02G	Vial-D	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02H	Vial-D	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook

Container ID	Type	Status	Transaction Date	From Response	From Location	From Operator	To Response	To Location	To Operator
L2166503-02H	Vial-D	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02I	Vial-D	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-02I	Vial-D	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02J	Amber-B1	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-02J	Amber-B1	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-02K	Amber-B1	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-02K	Amber-B1	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-03A	Glass-A.25	INTACT	13-DEC-21	A2-CUSTODY-REFRIDGE	A2-ORGANIC PREP	Brian Anderson	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Brian Anderson
L2166503-03A	Glass-A.25	INTACT	13-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIG-D3-S2	Brian Anderson	A2-ORGANIC PREP	A2-ORGANIC PREP	Brian Anderson
L2166503-03A	Glass-A.25	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-03A	Glass-A.25	INTACT	03-DEC-21	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2166503-04A	Vial-B	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-04A	Vial-B	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-04B	Vial-B	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
Comments: Vial has Headspace									
L2166503-04B	Vial-B	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-04C	Vial-B	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-04C	Vial-B	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-04D	Vial-D	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-04D	Vial-D	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook
L2166503-04E	Vial-D	INTACT	04-DEC-21	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-D3-S2	A2-CUSTODY-REFRIG-D3-S2	Dylan Snook
L2166503-04E	Vial-D	INTACT	04-DEC-21	A2-LOGIN	A2-LOGIN	Dylan Snook	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook

Chain of Custody

L2166503 12/3/21

COC ID 248111-27-1401-KS

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd In Lab: 11/29/21

ALPHA Job #: L2166503

Client Information

Client: Ileana Rhodes GSI Environmental Inc.
Address: 2211 Norfolk Suite 1000
Houston, TX 77098-5669
Phone: 281-703-5669
Fax:
Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:
Project Location:
Project #:
Project Manager: Susan O'Neil
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C-10 to 24, C-24 to 40.
Include carbon marker and sample surrogate for TPH-d/o and w/SGC.

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☒ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	EPA 8270D - Full Scan w/TICs	PHI w/ Qualitative Narrative	EPA 8015D(M) SHC+SGC	Sample Specific Comments	TOTAL # BOTTLES
L2166503-01	ERH1967	11/24/21	N/A	Product	Client	☒	☐	☒	☒	L2166503-01	5
	ERH1968	11/24/21	1415	GW	DM, JK	☒	☒	☒	☒		0

Container Type	V/A	A	V/A	V/A	
Preservative	A/D	A	A/D	A/D	

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Yim	11/26/21 1200	Fedex	
Fedex			11/29/21 1010

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

MANSFIELD CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL
World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 12-4-21

ALPHA Job #: L2166503

Project Information

Project Name: Red Hill

Project Location: Hawaii

Project #:

Project Manager:

ALPHA Quote #:

Report Information

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Client Information

Client: Ileana Rhodes - GSI

Address:

Phone: 281-703-5669

Fax:

Email: llrhodes@gsi-net.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☐ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: 12/6/2021 Time: 18:00 EST

Other Project Specific Requirements/Comments/Detection Limits:

Alpha PM - Susan O'Neil

☐ MS/MSD (at unit cost) will be omitted unless you check here

ANALYSIS

SHC by 8015 w/ PHI narration

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	SHC by 8015 w/ PHI narration	Sample Specific Comments
66503-02	ERH2051	12/02/21	17:00	GW	KL,CF	☒	
-03	ERH2052	12/03/21	13:15	SimpGrn	KL,CF	☐	Hold

Container Type

Preservative

Relinquished By:	Date/Time	Received By:	Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 101-093-RJ
(rev. 3-JAN-12)

L21066503

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

Date Rec'd in Lab: 12-4-21

ALPHA Job #: L2112-01 AOI-FUS

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Ileana Rhodes GSI Environmental Inc.
Address: 2211 Norfolk Suite 1000
Houston, TX 77098-5669
Phone: 281-703-5669
Fax:
Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Red Hill
Project Location: Hawaii
Project #:
Project Manager: Susan O'Neil
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ Rush (ONLY IF PRE-APPROVED)

Due Date: 48 hr TAT
Time:

Report Information — Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C-10 to 24, C-24 to 40.
Include carbon marker and sample surrogate for TPH-d/o and w/SGC.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	EPA 8270D - Full Scan w/TICs	PHI (as needed)	EPA 8015D(M) SHC+SGC	Hold analyzed with the EPA 8260 BTEX, naphthalene, TPH-g by this	EPA 8260 BTEX, naphthalene, TPH-g by this						Sample Specific Comments	TOTAL # BOTTLES
66503-04	ERH2049	12/03/21	1650	WQ	KL, CF	☒	☒	☐	☐	☐	☒	☐	☐	☐	☐	☐		5
-02	ERH2051	12/03/21	1700	GW	KL, CF	☒	☒	☒	☒	☐	☒	☐	☐	☐	☐	☐		11
-03	ERH2052	12/04/21	1315	AQ	MY, TN	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐		1
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

MY 12/3/21

Container Type	A	AB	A	A	A	A	-	-	-	-	-	-	
Preservative	B	A	A	B	A	B	-	-	-	-	-	-	

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Yim	12/3/21 1400	AM	12/4/21 1005

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO. 01-01(R-NJ) (REV. 5-JAN-12)

Organics

GC/MS 8260
Analysis

Initial Calibration

Response Factor Report VOA9

Method Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Method File : P9102921W.M
Title : PIANO VOLATILES
Last Update : Mon Nov 01 10:11:47 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	----------ISTD----------							
2)		3-Methyl-1-butene	0.310	0.337	0.379	0.306	0.327	0.365	0.3375	8.71
3)		Isopentane	0.174	0.200	0.210	0.168	0.176	0.198	0.1878	9.08
4)		1-Pentene	0.198	0.220	0.242	0.198	0.211	0.232	0.2169	8.29
5)		2-Methyl-1-butene	0.300	0.351	0.389	0.326	0.341	0.368	0.3458	9.06
6)		Pentane	0.303	0.346	0.348	0.280	0.298	0.335	0.3183	8.89
7)		trans-2-Pentene	0.347	0.372	0.422	0.355	0.378	0.404	0.3797	7.56
8)		2-Methyl-1,3-butadiene	0.218	0.245	0.295	0.254	0.263	0.276	0.2584	10.24
9)		cis-2-Pentene	0.315	0.361	0.388	0.333	0.345	0.377	0.3532	7.78
10)		Tertiary butanol		0.051	0.065	0.063	0.060	0.058	0.0594#	8.64
11)		2,2-Dimethylbutane	0.210	0.236	0.238	0.204	0.211	0.229	0.2215	6.68
12)		4-Methyl-1-pentene	0.260	0.276	0.314	0.270	0.275	0.297	0.2821	7.06
13)		Cyclopentane	0.133	0.156	0.177	0.151	0.154	0.166	0.1561	9.46
14)		2,3-Dimethylbutane	0.110	0.108	0.129	0.110	0.112	0.122	0.1152	7.41
15)		2-Methylpentane	0.358	0.373	0.434	0.374	0.371	0.412	0.3868	7.62
16)		MTBE	0.538	0.588	0.688	0.659	0.642	0.640	0.6256	8.63
17)		3-Methylpentane	0.314	0.354	0.407	0.354	0.355	0.385	0.3613	8.80
18)		1-Hexene	0.197	0.205	0.254	0.214	0.213	0.224	0.2179	9.18
19)		Hexane	0.287	0.312	0.355	0.313	0.314	0.338	0.3198	7.44
20)		Diisopropyl ether	0.540	0.566	0.686	0.652	0.627	0.636	0.6179	8.87
21)		trans-2-Hexene	0.320	0.344	0.406	0.362	0.360	0.382	0.3623	8.15
22)		2-Methyl-2-pentene	0.335	0.364	0.428	0.386	0.377	0.402	0.3819	8.36
23)		cis-2-Hexene	0.288	0.314	0.364	0.329	0.321	0.342	0.3262	7.91
24)	S	Dibromofluoromethane (surr)	0.259	0.259	0.259	0.260	0.252	0.254	0.2573	1.19
25)		Ethyl tertiary butyl ether	0.570	0.608	0.718	0.688	0.656	0.667	0.6511	8.28
26)		2,2-Dimethylpentane	0.379	0.445	0.510	0.454	0.451	0.493	0.4552	9.98
27)		Methylcyclopentane	0.361	0.406	0.453	0.405	0.403	0.433	0.4101	7.68
28)		2,4-Dimethylpentane	0.337	0.327	0.407	0.353	0.350	0.379	0.3588	8.17
29)		2,2,3-Trimethylbutane	0.359	0.403	0.462	0.419	0.407	0.442	0.4154	8.53
30)		1,2-Dichloroethane	0.234	0.267	0.310	0.299	0.280	0.286	0.2793	9.62
31)		3,3-Dimethylpentane	0.420	0.451	0.520	0.472	0.451	0.490	0.4674	7.49
32)		Cyclohexane	0.305	0.327	0.383	0.346	0.332	0.362	0.3425	8.03

Response Factor Report VOA9

Method Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Method File : P9102921W.M
Title : PIANO VOLATILES
Last Update : Mon Nov 01 10:11:47 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

		Compound	2	5	50	100	200	20	Avg	%RSD
33)		2-Methylhexane	0.359	0.387	0.453	0.408	0.384	0.425	0.4027	8.24
34)	M	Benzene	0.839	0.833	0.964	0.909	0.870	0.906	0.8868	5.60
35)		2,3-Dimethylpentane	0.292	0.321	0.382	0.342	0.333	0.362	0.3386	9.33
36)		Thiophene	0.396	0.439	0.526	0.504	0.484	0.492	0.4736	10.06
37)		1,1-Dimethylcyclopentane	0.186	0.201	0.263	0.245	0.225	0.247	0.2279	12.93
38)		3-Methylhexane	0.314	0.307	0.387	0.354	0.326	0.380	0.3446	9.96
39)		TAME	0.852	0.703	0.714	0.689	0.657	0.702	0.7197	9.41
40)		cis-1,3-Dimethylcyclopentane	0.231	0.281	0.335	0.315	0.296	0.311	0.2948	12.34
41)		3-Ethylpentane	0.422	0.446	0.520	0.472	0.443	0.489	0.4653	7.61
43)		1-Heptene/trans-1,2-DMCP	0.156	0.164	0.197	0.184	0.165	0.187	0.1752	9.23
44)		Isooctane	0.745	0.845	0.962	0.909	0.820	0.936	0.8697	9.34
45)		trans-3-Heptene	0.276	0.261	0.297	0.278	0.255	0.292	0.2764	5.97
46)		Heptane	0.268	0.300	0.339	0.313	0.282	0.323	0.3039	8.60
48)		trans-2-Heptene	0.223	0.246	0.291	0.279	0.256	0.278	0.2624	9.66
49)		cis-2-Heptene	0.203	0.232	0.266	0.255	0.233	0.252	0.2403	9.36
50)		2,2-Dimethylhexane	0.727	0.843	0.943	0.899	0.820	0.916	0.8580	9.20
51)		Methylcyclohexane	0.352	0.381	0.441	0.420	0.385	0.420	0.3997	8.20
52)		2,5-Dimethylhexane	0.365	0.424	0.478	0.459	0.417	0.459	0.4337	9.43
53)		2,4-Dimethylhexane	0.318	0.319	0.391	0.362	0.316	0.367	0.3454	9.29
54)		Ethylcyclopentane	0.277	0.315	0.360	0.345	0.314	0.343	0.3256	9.16
55)		2,2,3-Trimethylpentane	0.597	0.652	0.759	0.742	0.639	0.748	0.6894	9.96
57)		2,3,4-Trimethylpentane	0.436	0.461	0.522	0.508	0.461	0.508	0.4825	7.17
58)		2,3,3-Trimethylpentane	0.359	0.381	0.435	0.424	0.386	0.425	0.4016	7.54
59)		2,3-Dimethylhexane	0.404	0.404	0.449	0.466	0.457	0.460	0.4400	6.45
60)		2-Methylheptane	0.347	0.389	0.436	0.435	0.395	0.422	0.4039	8.51
61)		4-Methylheptane	0.425	0.445	0.476	0.505	0.512	0.502	0.4776	7.47
62)	S	Toluene-d8 (surr)	1.065	1.071	1.086	1.067	1.071	1.064	1.0706	0.77
63)		3-Methylheptane	0.431	0.355	0.375	0.380	0.331	0.363	0.3728	8.98
64)	S	2-Bromo-1-chloropropane (...	0.283	0.291	0.347	0.357	0.353	0.343	0.3290	10.09
65)		3-Ethylhexane	0.462	0.479	0.594	0.534	0.560	0.532	0.5270	9.35
66)	M	Toluene	0.843	0.932	1.088	1.025	1.012	1.014	0.9855	8.68
67)		2-Methylthiophene	0.674	0.717	0.861	0.826	0.820	0.808	0.7843	9.18
68)		trans-1,4-Dimethylcyclohe...	0.416	0.461	0.514	0.509	0.495	0.490	0.4807	7.62

Method Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Method File : P9102921W.M
Title : PIANO VOLATILES
Last Update : Mon Nov 01 10:11:47 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

		Compound	2	5	50	100	200	20	Avg	%RSD
69)		3-Methylthiophene	0.667	0.708	0.862	0.842	0.834	0.825	0.7897	10.29
70)		1-Octene	0.152	0.184	0.215	0.207	0.200	0.198	0.1928	11.70
71)		Octane	0.376	0.399	0.464	0.441	0.429	0.422	0.4217	7.35
72)		trans-1,2-Dimethylcyclohe...	0.287	0.326	0.365	0.356	0.335	0.349	0.3364	8.36
73)		1,2-Dibromoethane	0.194	0.210	0.256	0.256	0.253	0.244	0.2355	11.45
75)		cis-2-Octene	0.236	0.268	0.315	0.320	0.292	0.294	0.2874	10.91
76)		Isopropylcyclopentane	0.337	0.381	0.454	0.433	0.419	0.400	0.4039	10.21
77)		cis-1,2-Dimethylcyclohexane	0.310	0.322	0.381	0.367	0.356	0.348	0.3474	7.70
78)		2,5-Dimethylheptane	0.487	0.534	0.637	0.687	0.601	0.606	0.5920	12.10
79)		3,5-Dimethylheptane	0.697	0.639	0.847	0.801	0.770	0.679	0.7388	10.79
80)		3,3-Dimethylheptane	0.408	0.457	0.523	0.511	0.498	0.477	0.4791	8.73
81)		1,1,4-Trimethylcyclohexane	0.379	0.402	0.460	0.455	0.443	0.420	0.4266	7.52
82)		2,3-Dimethylheptane	0.455	0.490	0.577	0.568	0.550	0.516	0.5261	9.12
83)		3,4-Dimethylheptane	0.284	0.328	0.361	0.363	0.343	0.334	0.3355	8.59
84)		4-Methyloctane	0.457	0.435	0.509	0.557	0.520	0.485	0.4937	9.00
85)		2-Methyloctane	0.374	0.396	0.537	0.482	0.484	0.436	0.4514	13.54
86)		Ethylbenzene	0.993	1.073	1.265	1.236	1.200	1.172	1.1563	8.99
87)	S	1-Chloro-2-fluorobenzene ...	0.556	0.565	0.666	0.660	0.640	0.632	0.6199	7.69
88)		2-Ethylthiophene	0.721	0.782	0.940	0.923	0.897	0.881	0.8573	10.11
89)		3-Methyloctane	0.651	0.729	0.883	0.882	0.856	0.771	0.7954	11.89
90)		3,3-Diethylpentane	0.815	0.852	1.014	1.009	0.975	0.898	0.9272	9.08
91)		p/m-Xylene	0.780	0.818	0.964	0.950	0.919	0.895	0.8877	8.32
92)		1-Nonene	0.158	0.179	0.232	0.241	0.236	0.193	0.2064	16.91
93)		trans-3-Nonene	0.240	0.260	0.331	0.337	0.327	0.285	0.2968	13.77
94)		cis-3-Nonene	0.242	0.299	0.376	0.374	0.364	0.321	0.3293	16.03
95)		Nonane	0.366	0.399	0.489	0.487	0.479	0.421	0.4400	11.92
96)		Styrene	0.611	0.654	0.813	0.816	0.787	0.767	0.7413	11.74
97)	S	1,4-Dichlorobutane (H/surr)	0.355	0.326	0.394	0.394	0.377	0.395	0.3732	7.53
98)		o-Xylene	0.791	0.833	0.980	0.967	0.930	0.933	0.9057	8.40
99)		2-Nonene	0.248	0.259	0.330	0.335	0.323	0.284	0.2964	12.84
100)		Isopropylcyclohexane	0.364	0.388	0.477	0.481	0.466	0.415	0.4318	11.59
101)	S	4-Bromofluorobenzene (surr)	0.536	0.536	0.532	0.548	0.536	0.541	0.5382	1.06
102)		Isopropylbenzene	1.013	1.098	1.260	1.272	1.220	1.187	1.1749	8.61

Method Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Method File : P9102921W.M
Title : PIANO VOLATILES
Last Update : Mon Nov 01 10:11:47 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

	Compound	2	5	50	100	200	20	Avg	%RSD
103)	3,3-Dimethyloctane	0.532	0.585	0.747	0.766	0.730	0.612	0.6619	14.78
104)	n-Propylbenzene	1.137	1.244	1.501	1.538	1.465	1.410	1.3825	11.45
105)	2-Methylnonane	0.309	0.338	0.443	0.452	0.420	0.367	0.3882	15.24
106)	3-Methylnonane	0.390	0.424	0.565	0.585	0.542	0.457	0.4940	16.41
107)	1-Methyl-3-ethylbenzene	0.985	1.031	1.270	1.307	1.234	1.195	1.1702	11.27
108)	1-Methyl-4-ethylbenzene	0.947	0.997	1.211	1.248	1.183	1.132	1.1194	10.85
109)	1,3,5-Trimethylbenzene	0.818	0.857	1.058	1.109	1.043	0.986	0.9785	11.91
110)	1-Decene	0.171	0.183	0.250	0.260	0.244	0.207	0.2193	16.97
111)	Isobutylcyclohexane	0.383	0.407	0.521	0.539	0.513	0.442	0.4677	13.99
112)	1-Methyl-2-ethylbenzene	0.991	1.046	1.255	1.291	1.217	1.195	1.1656	10.29
113)	Decane	0.303	0.331	0.427	0.435	0.391	0.360	0.3742	14.13
114)	tert-Butylbenzene	0.739	0.787	0.939	0.967	0.909	0.904	0.8740	10.33
115)	1,2,4-Trimethylbenzene	0.882	0.911	1.104	1.153	1.087	1.044	1.0302	10.65
116)	Isobutylbenzene	0.952	1.006	1.227	1.275	1.170	1.159	1.1315	11.20
117)	sec-Butylbenzene	1.099	1.136	1.368	1.419	1.324	1.309	1.2758	10.12
118)	1-Methyl-3-isopropylbenzene	0.910	0.953	1.175	1.241	1.159	1.110	1.0912	12.01
119)	1-Methyl-4-isopropylbenzene	0.910	0.961	1.177	1.244	1.155	1.111	1.0930	11.91
120)	1,2,3-Trimethylbenzene	0.886	0.921	1.110	1.172	1.084	1.080	1.0423	10.82
121)	1-Methyl-2-isopropylbenzene	0.916	0.960	1.175	1.240	1.143	1.126	1.0936	11.64
122)	Indan	0.849	0.879	1.052	1.097	1.014	1.022	0.9855	10.06
123)	1,3-Diethylbenzene	0.582	0.591	0.744	0.792	0.731	0.706	0.6909	12.41
124)	1-Methyl-3-propylbenzene	1.084	1.130	1.394	1.491	1.371	1.323	1.2989	12.24
125)	Indene	0.774	0.815	1.000	1.069	0.978	0.994	0.9385	12.40
126)	1-Methyl-4-propylbenzene	1.302	1.326	1.637	1.744	1.617	1.558	1.5307	11.66
127)	n-Butylbenzene	1.005	1.055	1.278	1.364	1.254	1.228	1.1973	11.55
128)	1,2-Dimethyl-4-ethylbenzene	0.956	0.980	1.212	1.294	1.190	1.174	1.1343	11.95
129)	1,2-Diethylbenzene	0.467	0.482	0.584	0.623	0.574	0.568	0.5498	11.17
130)	1-Methyl-2-propylbenzene	1.138	1.205	1.474	1.574	1.437	1.426	1.3759	12.20
131)	1,4-Dimethyl-2-ethylbenzene	0.894	0.919	1.142	1.229	1.118	1.107	1.0681	12.40
132)	Undecane	0.390	0.426	0.552	0.542	0.426	0.497	0.4722	14.34
133)	1,3-Dimethyl-4-ethylbenzene	1.073	1.128	1.363	1.463	1.331	1.335	1.2819	11.67
134)	1,3-Dimethyl-5-ethylbenzene	1.008	1.019	1.245	1.345	1.220	1.215	1.1750	11.39
135)	1,3-Dimethyl-2-ethylbenzene	1.083	1.115	1.347	1.452	1.314	1.335	1.2744	11.32

Method Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Method File : P9102921W.M
Title : PIANO VOLATILES
Last Update : Mon Nov 01 10:11:47 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

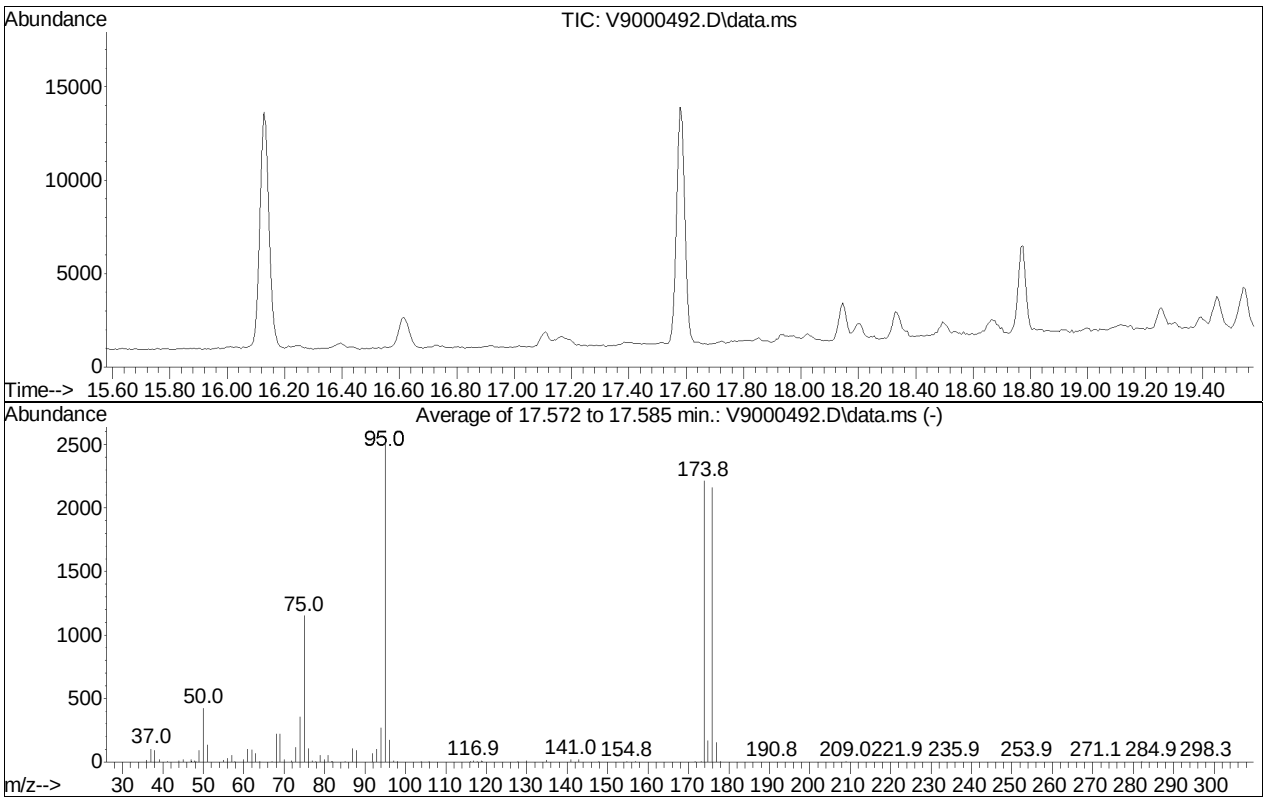
	Compound	2	5	50	100	200	20	Avg	%RSD
136)	1,2-Dimethyl-3-ethylbenzene	0.967	1.002	1.216	1.316	1.182	1.207	1.1482	11.79
137)	1,2,4,5-Tetramethylbenzene	1.026	1.049	1.302	1.416	1.266	1.297	1.2261	12.62
138)	1,2,3,5-Tetramethylbenzene	0.949	0.958	1.169	1.261	1.132	1.165	1.1059	11.33
139)	Pentylbenzene	0.837	0.873	1.117	1.212	1.084	1.082	1.0343	14.21
140)	1,2,3,4-Tetramethylbenzene	1.226	1.261	1.550	1.690	1.511	1.562	1.4669	12.51
141)	1,3-DM-5-tert-Butylbenzene	0.816	0.844	1.090	1.200	1.074	1.048	1.0119	14.89
142)	Dodecane	0.303	0.338	0.345	0.298	0.241	0.384	0.3182	15.42
143)	1,3,5-Triethylbenzene	0.492	0.535	0.698	0.772	0.692	0.673	0.6437	16.66
144)	Naphthalene	1.184	1.190	1.356	1.481	1.301	1.443	1.3257	9.42
145)	Benzothiophene	0.714	0.712	0.820	0.898	0.791	0.871	0.8009	9.70
146)	1,2,4-Triethylbenzene	0.565	0.492	0.640	0.707	0.636	0.627	0.6112	12.09
147)	Hexylbenzene	0.714	0.769	1.013	1.090	0.979	0.970	0.9227	15.98
148)	MMT	0.439	0.435	0.496	0.558	0.487	0.536	0.4918	10.13
149)	Tridecane	0.409	0.450	0.331	0.283	0.262	0.429	0.3607	22.05
150)	2-Methylnaphthalene	0.762	0.774	0.916	1.039	0.914	0.977	0.8968	12.28
151)	1-Methylnaphthalene	0.680	0.698	0.802	0.913	0.797	0.861	0.7919	11.40
152)	Tetradecane	0.363	0.410	0.234	0.217	0.224	0.293	0.2902	27.82#
153)	Pentadecane	0.294	0.288	0.153	0.139		0.183	0.2113	35.18#

(#) = Out of Range

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000492.D
Acq On : 29 Oct 2021 08:56 pm
Operator : VOA9:RY
Sample : WG1565572-1,31
Misc : WG1565572
ALS Vial : 3 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Title : PIANO VOLATILES
Last Update : Mon Nov 01 10:11:47 2021



Spectrum Information: Average of 17.572 to 17.585 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	423	PASS
75	95	30	60	45.8	1151	PASS
95	95	100	100	100.0	2513	PASS
96	95	5	9	6.9	173	PASS
173	174	0.00	2	0.4	8	PASS
174	95	50	100	88.1	2213	PASS
175	174	5	9	7.6	169	PASS
176	174	95	101	97.6	2160	PASS
177	176	5	9	7.1	153	PASS

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000493.D
Acq On : 29 Oct 2021 09:26 pm
Operator : VOA9:RY
Sample : I910292101
Misc : WG1565572
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 01 10:10:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	333968	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.13	113	86428	49.939	ug/L	-0.06
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.88%			
62) Toluene-d8 (surr)	31.24	98	355535	49.000	ug/L	-0.03
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.00%			
64) 2-Bromo-1-chloropropan...	31.47	77	3775M4	1.628	ug/L	-0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.26%#			
87) 1-Chloro-2-fluorobenze...	40.71	130	7430	1.671	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.34%#			
97) 1,4-Dichlorobutane (H/...	43.97	55	4736M4	1.801	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.60%#			
101) 4-Bromofluorobenzene (...	46.54	95	179100	50.405	ug/L	-0.02
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.81%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.64	55	4143	1.635	ug/L	93
3) Isopentane	8.18	43	2327	1.659	ug/L	95
4) 1-Pentene	8.87	42	2647M3	1.636	ug/L	
5) 2-Methyl-1-butene	9.18	55	4008	1.544	ug/L	97
6) Pentane	9.24	43	4050	1.742	ug/L	87
7) trans-2-Pentene	9.70	55	4630	1.643	ug/L	97
8) 2-Methyl-1,3-butadiene	9.88	67	2909	1.477	ug/L	92
9) cis-2-Pentene	10.09	55	4204M3	1.624	ug/L	
10) Tertiary butanol	10.74	59	2840M4	6.591	ug/L	
11) 2,2-Dimethylbutane	11.14	43	2806M4	1.762	ug/L	
12) 4-Methyl-1-pentene	12.48	43	3469	1.654	ug/L	92
13) Cyclopentane	12.96	70	1781	1.508	ug/L #	84
14) 2,3-Dimethylbutane	12.94	71	1463M4	1.694	ug/L	
15) 2-Methylpentane	13.20	43	4778M3	1.648	ug/L	
16) MTBE	13.52	73	7186	1.565	ug/L	96
17) 3-Methylpentane	14.16	57	4189	1.541	ug/L	92
18) 1-Hexene	14.77	56	2638	1.553	ug/L	96
19) Hexane	15.38	57	3834	1.615	ug/L	95
20) Diisopropyl ether	15.69	45	7213	1.574	ug/L	100
21) trans-2-Hexene	15.88	55	4280	1.579	ug/L	96
22) 2-Methyl-2-pentene	16.07	69	4475	1.565	ug/L	93

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000493.D
Acq On : 29 Oct 2021 09:26 pm
Operator : VOA9:RY
Sample : I910292101
Misc : WG1565572
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 01 10:10:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) cis-2-Hexene	16.63	55	3847	1.582	ug/L		94
25) Ethyl tertiary butyl e...	17.18	59	7615	1.588	ug/L		93
26) 2,2-Dimethylpentane	17.46	57	5063	1.487	ug/L		95
27) Methylcyclopentane	17.72	56	4817	1.591	ug/L		98
28) 2,4-Dimethylpentane	17.89	43	4498M4	1.655	ug/L		
29) 2,2,3-Trimethylbutane	18.52	57	4801	1.556	ug/L		96
30) 1,2-Dichloroethane	19.20	62	3122	1.508	ug/L		92
31) 3,3-Dimethylpentane	20.18	43	5607	1.613	ug/L		89
32) Cyclohexane	20.65	56	4074	1.592	ug/L		93
33) 2-Methylhexane	21.10	43	4801	1.587	ug/L		92
34) Benzene	21.27	78	11206	1.741	ug/L		98
35) 2,3-Dimethylpentane	21.40	56	3896	1.526	ug/L		94
36) Thiophene	21.74	84	5291	1.505	ug/L		90
37) 1,1-Dimethylcyclopentane	21.84	83	2489	1.417	ug/L	#	79
38) 3-Methylhexane	21.90	43	4191	1.621	ug/L		96
39) TAME	22.29	73	11383	2.386	ug/L		86
40) cis-1,3-Dimethylcyclop...	22.69	70	3080	1.375	ug/L		95
41) 3-Ethylpentane	22.86	43	5640	1.625	ug/L		94
43) 1-Heptene/trans-1,2-DMCP	23.27	70	4155M4	3.165	ug/L		
44) Isooctane	23.35	57	9955	1.550	ug/L		95
45) trans-3-Heptene	23.96	41	3685	1.858	ug/L		88
46) Heptane	24.10	43	3582	1.584	ug/L		90
48) trans-2-Heptene	24.74	56	2985	1.533	ug/L		87
49) cis-2-Heptene	25.55	56	2714	1.527	ug/L		93
50) 2,2-Dimethylhexane	26.30	57	9714	1.541	ug/L		97
51) Methylcyclohexane	26.53	83	4699	1.596	ug/L		92
52) 2,5-Dimethylhexane	27.20	57	4876	1.527	ug/L		95
53) 2,4-Dimethylhexane	27.47	57	4242	1.625	ug/L		95
54) Ethylcyclopentane	27.49	69	3700	1.539	ug/L		94
55) 2,2,3-Trimethylpentane	27.73	57	7970	1.571	ug/L		92
57) 2,3,4-Trimethylpentane	29.27	43	5820	1.669	ug/L		88
58) 2,3,3-Trimethylpentane	29.83	43	4800	1.652	ug/L		95
59) 2,3-Dimethylhexane	30.11	43	5391M4	1.797	ug/L		
60) 2-Methylheptane	30.55	57	4629	1.590	ug/L		97
61) 4-Methylheptane	30.70	43	5683M4	1.789	ug/L		
63) 3-Methylheptane	31.28	43	5763M4	2.299	ug/L		
65) 3-Ethylhexane	31.42	43	6176M4	1.557	ug/L		
66) Toluene	31.61	91	11266	1.551	ug/L		99
67) 2-Methylthiophene	31.78	97	9010	1.567	ug/L		98
68) trans-1,4-Dimethylcycl...	32.25	97	5563	1.620	ug/L		95
69) 3-Methylthiophene	32.53	97	8912	1.547	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000493.D
Acq On : 29 Oct 2021 09:26 pm
Operator : VOA9:RY
Sample : I910292101
Misc : WG1565572
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 01 10:10:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
70) 1-Octene	32.98	55	2028	1.412 ug/L #	77
71) Octane	33.81	43	5020	1.620 ug/L	97
72) trans-1,2-Dimethylcycl...	34.09	55	3830	1.569 ug/L	95
73) 1,2-Dibromoethane	34.32	107	2587	1.514 ug/L	93
75) cis-2-Octene	35.18	55	3153	1.499 ug/L	97
76) Isopropylcyclopentane	35.33	68	4508	1.488 ug/L	81
77) cis-1,2-Dimethylcycloh...	37.09	55	4144M4	1.629 ug/L	
78) 2,5-Dimethylheptane	37.42	57	6509	1.530 ug/L	95
79) 3,5-Dimethylheptane	37.59	57	9317M3	1.647 ug/L	
80) 3,3-Dimethylheptane	37.81	57	5457	1.563 ug/L	89
81) 1,1,4-Trimethylcyclohe...	38.36	69	5066M4	1.649 ug/L	
82) 2,3-Dimethylheptane	39.50	43	6076	1.576 ug/L	91
83) 3,4-Dimethylheptane	39.82	43	3793	1.574 ug/L	91
84) 4-Methyloctane	40.11	43	6106M4	1.796 ug/L	
85) 2-Methyloctane	40.19	43	4992M6	1.392 ug/L	
86) Ethylbenzene	40.71	91	13263	1.569 ug/L	100
88) 2-Ethylthiophene	40.87	97	9631	1.534 ug/L	89
89) 3-Methyloctane	40.85	57	8696	1.474 ug/L	97
90) 3,3-Diethylpentane	41.85	57	10893	1.609 ug/L	95
91) p/m-Xylene	41.97	91	20828	3.234 ug/L	95
92) 1-Nonene	42.63	56	2105	1.356 ug/L	92
93) trans-3-Nonene	43.04	55	3212	1.454 ug/L	99
94) cis-3-Nonene	43.32	55	3234	1.289 ug/L	92
95) Nonane	43.41	43	4885M6	1.496 ug/L	
96) Styrene	43.84	104	8166	1.504 ug/L	95
98) o-Xylene	44.26	91	10568	1.615 ug/L	90
99) 2-Nonene	44.68	55	3314M4	1.504 ug/L	
100) Isopropylcyclohexane	45.96	83	4857	1.526 ug/L	93
102) Isopropylbenzene	46.57	105	13527	1.608 ug/L	90
103) 3,3-Dimethyloctane	47.07	71	7106	1.424 ug/L	97
104) n-Propylbenzene	49.00	91	15193	1.515 ug/L	99
105) 2-Methylnonane	49.04	43	4126	1.393 ug/L	92
106) 3-Methylnonane	49.45	57	5215	1.381 ug/L	92
107) 1-Methyl-3-ethylbenzene	49.58	105	13161	1.552 ug/L	97
108) 1-Methyl-4-ethylbenzene	49.74	105	12648	1.564 ug/L	100
109) 1,3,5-Trimethylbenzene	50.29	105	10931	1.547 ug/L	96
110) 1-Decene	50.42	41	2288	1.369 ug/L	93
111) Isobutylcyclohexane	50.57	83	5119	1.470 ug/L	97
112) 1-Methyl-2-ethylbenzene	50.61	105	13237	1.579 ug/L	98
113) Decane	50.79	43	4042	1.417 ug/L	93
114) tert-Butylbenzene	51.05	119	9866	1.574 ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000493.D
Acq On : 29 Oct 2021 09:26 pm
Operator : VOA9:RY
Sample : I910292101
Misc : WG1565572
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 01 10:10:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) 1,2,4-Trimethylbenzene	51.44	105	11779	1.597	ug/L	96
116) Isobutylbenzene	51.63	91	12716M6	1.551	ug/L	
117) sec-Butylbenzene	51.69	105	14682	1.606	ug/L	99
118) 1-Methyl-3-isopropylbe...	52.07	119	12162	1.550	ug/L	96
119) 1-Methyl-4-isopropylbe...	52.27	119	12159	1.547	ug/L	98
120) 1,2,3-Trimethylbenzene	52.53	105	11838	1.596	ug/L	94
121) 1-Methyl-2-isopropylbe...	52.73	119	12236	1.559	ug/L	97
122) Indan	52.82	117	11336	1.613	ug/L	95
123) 1,3-Diethylbenzene	52.97	105	7775	1.564	ug/L	95
124) 1-Methyl-3-propylbenzene	53.08	105	14481	1.555	ug/L	99
125) Indene	53.24	115	10342	1.549	ug/L	93
126) 1-Methyl-4-propylbenzene	53.24	105	17397	1.591	ug/L	94
127) n-Butylbenzene	53.23	91	13421	1.572	ug/L	97
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	12770	1.578	ug/L	97
129) 1,2-Diethylbenzene	53.45	119	6244	1.601	ug/L	90
130) 1-Methyl-2-propylbenzene	53.63	105	15206	1.544	ug/L	97
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	11946	1.566	ug/L	96
132) Undecane	53.97	57	5207	1.412	ug/L	93
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	14331	1.574	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	13465	1.619	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	14469	1.608	ug/L	97
136) 1,2-Dimethyl-3-ethylbe...	54.75	119	12913	1.590	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.16	119	13705	1.576	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	12682	1.624	ug/L	98
139) Pentylbenzene	55.72	91	11185	1.499	ug/L	97
140) 1,2,3,4-Tetramethylben...	56.06	119	16379	1.582	ug/L	96
141) 1,3-DM-5-tert-Butylben...	56.04	147	10895	1.496	ug/L	93
142) Dodecane	56.21	43	4051	1.760	ug/L	96
143) 1,3,5-Triethylbenzene	56.93	147	6576	1.410	ug/L	99
144) Naphthalene	57.08	128	15815	1.747	ug/L	99
145) Benzothiophene	57.18	134	9535	1.741	ug/L	95
146) 1,2,4-Triethylbenzene	57.50	147	7552	1.768	ug/L	91
147) Hexylbenzene	58.00	91	9544	1.410	ug/L	98
148) MMT	58.26	134	5859	1.767	ug/L	98
149) Tridecane	58.32	57	5459	2.468	ug/L	96
150) 2-Methylnaphthalene	59.88	142	10173	1.663	ug/L	91
151) 1-Methylnaphthalene	60.36	142	9085	1.697	ug/L	98
152) Tetradecane	60.64	57	4852M4	3.103	ug/L	
153) Pentadecane	63.48	57	3927M4	3.839	ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000493.D
Acq On : 29 Oct 2021 09:26 pm
Operator : VOA9:RY
Sample : I910292101
Misc : WG1565572
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 01 10:10:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000493.D
Acq On : 29 Oct 2021 09:26 pm
Operator : VOA9:RY
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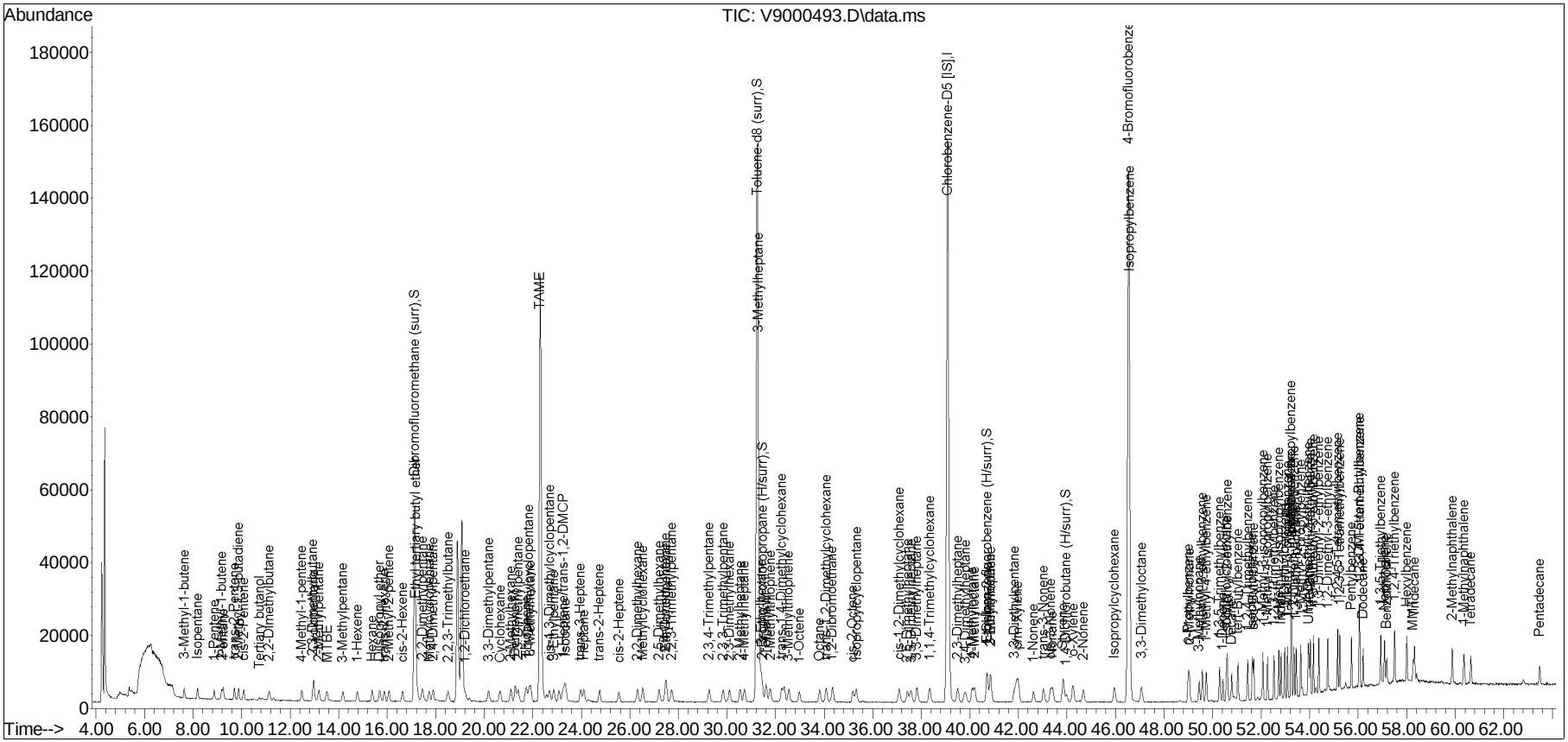
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000494.D
Acq On : 29 Oct 2021 10:38 pm
Operator : VOA9:RY
Sample : I910292102
Misc : WG1565572
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 01 10:10:53 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	351792	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.16	113	91235	50.045	ug/L	-0.04
Spiked Amount 50.000	Range 78 - 118		Recovery = 100.09%			
62) Toluene-d8 (surr)	31.25	98	376822	49.303	ug/L	-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.61%			
64) 2-Bromo-1-chloropropan...	31.48	77	10233	4.191	ug/L	-0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.38%#			
87) 1-Chloro-2-fluorobenze...	40.73	130	19874	4.243	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.49%#			
97) 1,4-Dichlorobutane (H/...	43.99	55	11454	4.134	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.27%#			
101) 4-Bromofluorobenzene (...	46.55	95	188486	50.359	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.72%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.70	55	11851	4.440	ug/L	96
3) Isopentane	8.24	43	7021	4.751	ug/L	95
4) 1-Pentene	8.92	42	7738	4.540	ug/L	97
5) 2-Methyl-1-butene	9.23	55	12364	4.521	ug/L	96
6) Pentane	9.30	43	12156	4.963	ug/L	97
7) trans-2-Pentene	9.75	55	13104	4.414	ug/L	94
8) 2-Methyl-1,3-butadiene	9.93	67	8635	4.163	ug/L	96
9) cis-2-Pentene	10.13	55	12708	4.659	ug/L	99
10) Tertiary butanol	10.74	59	9048M4	19.934	ug/L	
11) 2,2-Dimethylbutane	11.18	43	8298	4.947	ug/L	98
12) 4-Methyl-1-pentene	12.52	43	9723	4.401	ug/L	99
13) Cyclopentane	13.01	70	5479	4.403	ug/L	94
14) 2,3-Dimethylbutane	13.00	71	3813	4.191	ug/L #	91
15) 2-Methylpentane	13.22	43	13112	4.293	ug/L	98
16) MTBE	13.55	73	20668	4.272	ug/L	96
17) 3-Methylpentane	14.19	57	12471	4.356	ug/L	97
18) 1-Hexene	14.81	56	7205	4.026	ug/L	97
19) Hexane	15.41	57	10970	4.387	ug/L	95
20) Diisopropyl ether	15.73	45	19913	4.125	ug/L	99
21) trans-2-Hexene	15.92	55	12110	4.241	ug/L	98
22) 2-Methyl-2-pentene	16.10	69	12804	4.250	ug/L	97
23) cis-2-Hexene	16.67	55	11043	4.310	ug/L	98
25) Ethyl tertiary butyl e...	17.21	59	21386	4.234	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000494.D
Acq On : 29 Oct 2021 10:38 pm
Operator : VOA9:RY
Sample : I910292102
Misc : WG1565572
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 01 10:10:53 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.47	57	15653	4.365	ug/L	95
27) Methylcyclopentane	17.76	56	14271	4.473	ug/L	97
28) 2,4-Dimethylpentane	17.92	43	11509	4.021	ug/L	98
29) 2,2,3-Trimethylbutane	18.54	57	14177	4.362	ug/L	99
30) 1,2-Dichloroethane	19.25	62	9385	4.304	ug/L	95
31) 3,3-Dimethylpentane	20.21	43	15869M4	4.335	ug/L	
32) Cyclohexane	20.67	56	11504	4.268	ug/L	97
33) 2-Methylhexane	21.12	43	13616	4.273	ug/L	99
34) Benzene	21.31	78	29299	4.321	ug/L	99
35) 2,3-Dimethylpentane	21.41	56	11305	4.203	ug/L	93
36) Thiophene	21.75	84	15446	4.170	ug/L	92
37) 1,1-Dimethylcyclopentane	21.86	83	7080	3.826	ug/L	94
38) 3-Methylhexane	21.93	43	10798	3.966	ug/L	97
39) TAME	22.31	73	24730	4.922	ug/L	89
40) cis-1,3-Dimethylcyclop...	22.71	70	9901	4.196	ug/L	97
41) 3-Ethylpentane	22.88	43	15691	4.291	ug/L	100
43) 1-Heptene/trans-1,2-DMCP	23.27	70	11514	8.325	ug/L	97
44) Isooctane	23.38	57	29737	4.395	ug/L	96
45) trans-3-Heptene	23.99	41	9189	4.398	ug/L	91
46) Heptane	24.11	43	10541	4.426	ug/L	93
48) trans-2-Heptene	24.77	56	8646	4.216	ug/L	91
49) cis-2-Heptene	25.55	56	8161	4.359	ug/L	93
50) 2,2-Dimethylhexane	26.32	57	29663	4.469	ug/L	98
51) Methylcyclohexane	26.53	83	13394	4.319	ug/L	92
52) 2,5-Dimethylhexane	27.21	57	14919	4.436	ug/L	99
53) 2,4-Dimethylhexane	27.48	57	11214	4.079	ug/L	94
54) Ethylcyclopentane	27.51	69	11083	4.375	ug/L	92
55) 2,2,3-Trimethylpentane	27.74	57	22932	4.292	ug/L	98
57) 2,3,4-Trimethylpentane	29.28	43	16218	4.416	ug/L	96
58) 2,3,3-Trimethylpentane	29.85	43	13420	4.385	ug/L	95
59) 2,3-Dimethylhexane	30.10	43	14227	4.501	ug/L	89
60) 2-Methylheptane	30.55	57	13689	4.464	ug/L	98
61) 4-Methylheptane	30.73	43	15653	4.678	ug/L	87
63) 3-Methylheptane	31.31	43	12503	4.736	ug/L	94
65) 3-Ethylhexane	31.42	43	16851	4.034	ug/L	97
66) Toluene	31.63	91	32780M4	4.284	ug/L	
67) 2-Methylthiophene	31.80	97	25233	4.167	ug/L	98
68) trans-1,4-Dimethylcycl...	32.27	97	16201	4.478	ug/L	96
69) 3-Methylthiophene	32.55	97	24890	4.102	ug/L	99
70) 1-Octene	33.00	55	6471	4.277	ug/L	94
71) Octane	33.83	43	14041	4.302	ug/L	98

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000494.D
Acq On : 29 Oct 2021 10:38 pm
Operator : VOA9:RY
Sample : I910292102
Misc : WG1565572
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 01 10:10:53 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72)	trans-1,2-Dimethylcycl...	34.08	55	11482	4.466	ug/L	99
73)	1,2-Dibromoethane	34.33	107	7386M4	4.103	ug/L	
75)	cis-2-Octene	35.19	55	9415	4.250	ug/L	98
76)	Isopropylcyclopentane	35.32	68	13396	4.198	ug/L	93
77)	cis-1,2-Dimethylcycloh...	37.10	55	11340	4.231	ug/L	97
78)	2,5-Dimethylheptane	37.44	57	18772	4.188	ug/L	98
79)	3,5-Dimethylheptane	37.58	57	22480	3.771	ug/L	97
80)	3,3-Dimethylheptane	37.83	57	16074	4.370	ug/L	96
81)	1,1,4-Trimethylcyclohe...	38.35	69	14136	4.367	ug/L	87
82)	2,3-Dimethylheptane	39.50	43	17230	4.242	ug/L	99
83)	3,4-Dimethylheptane	39.82	43	11540	4.546	ug/L	97
84)	4-Methyloctane	40.09	43	15293M4	4.271	ug/L	
85)	2-Methyloctane	40.19	43	13925M6	3.686	ug/L	
86)	Ethylbenzene	40.70	91	37731	4.239	ug/L	98
88)	2-Ethylthiophene	40.86	97	27516	4.160	ug/L	97
89)	3-Methyloctane	40.85	57	25663	4.129	ug/L	98
90)	3,3-Diethylpentane	41.85	57	29979	4.203	ug/L	98
91)	p/m-Xylene	41.98	91	57587	8.489	ug/L	95
92)	1-Nonene	42.63	56	6283	3.841	ug/L	90
93)	trans-3-Nonene	43.04	55	9155	3.934	ug/L	93
94)	cis-3-Nonene	43.34	55	10519M6	3.980	ug/L	
95)	Nonane	43.42	43	14021M6	4.077	ug/L	
96)	Styrene	43.84	104	23011	4.024	ug/L	98
98)	o-Xylene	44.25	91	29318	4.253	ug/L	95
99)	2-Nonene	44.68	55	9101	3.921	ug/L	97
100)	Isopropylcyclohexane	45.95	83	13649M4	4.070	ug/L	
102)	Isopropylbenzene	46.59	105	38615	4.357	ug/L	99
103)	3,3-Dimethyloctane	47.07	71	20591	3.918	ug/L	95
104)	n-Propylbenzene	49.01	91	43751	4.142	ug/L	99
105)	2-Methylnonane	49.05	43	11879	3.808	ug/L	97
106)	3-Methylnonane	49.45	57	14904	3.746	ug/L	99
107)	1-Methyl-3-ethylbenzene	49.58	105	36264	4.059	ug/L	99
108)	1-Methyl-4-ethylbenzene	49.74	105	35072	4.117	ug/L	95
109)	1,3,5-Trimethylbenzene	50.29	105	30161	4.052	ug/L	98
110)	1-Decene	50.43	41	6455	3.667	ug/L	95
111)	Isobutylcyclohexane	50.58	83	14333	3.907	ug/L	96
112)	1-Methyl-2-ethylbenzene	50.61	105	36796	4.167	ug/L	100
113)	Decane	50.79	43	11629	3.872	ug/L	95
114)	tert-Butylbenzene	51.05	119	27698	4.194	ug/L	98
115)	1,2,4-Trimethylbenzene	51.45	105	32044	4.125	ug/L	96
116)	Isobutylbenzene	51.65	91	35379M6	4.097	ug/L	

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000494.D
Acq On : 29 Oct 2021 10:38 pm
Operator : VOA9:RY
Sample : I910292102
Misc : WG1565572
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 01 10:10:53 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	39949	4.149	ug/L	97
118) 1-Methyl-3-isopropylbe...	52.07	119	33533	4.057	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.27	119	33807	4.083	ug/L	98
120) 1,2,3-Trimethylbenzene	52.54	105	32410	4.149	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.73	119	33788	4.087	ug/L	98
122) Indan	52.82	117	30910	4.176	ug/L	97
123) 1,3-Diethylbenzene	52.97	105	20781	3.968	ug/L	98
124) 1-Methyl-3-propylbenzene	53.09	105	39753	4.052	ug/L	100
125) Indene	53.25	115	28687	4.078	ug/L	100
126) 1-Methyl-4-propylbenzene	53.24	105	46633	4.048	ug/L	98
127) n-Butylbenzene	53.24	91	37118	4.127	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	34478	4.044	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	16958	4.128	ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	42397	4.087	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	32330	4.024	ug/L	98
132) Undecane	53.98	57	15000	3.862	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	39675	4.137	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	35834	4.091	ug/L	97
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	39233	4.139	ug/L	98
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	35243	4.119	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.16	119	36919	4.030	ug/L	97
138) 1,2,3,5-Tetramethylben...	55.24	119	33719	4.100	ug/L	96
139) Pentylbenzene	55.72	91	30724	3.909	ug/L	98
140) 1,2,3,4-Tetramethylben...	56.06	119	44351	4.066	ug/L	98
141) 1,3-DM-5-tert-Butylben...	56.04	147	29679	3.869	ug/L	100
142) Dodecane	56.21	43	11903	4.908	ug/L	94
143) 1,3,5-Triethylbenzene	56.93	147	18814	3.830	ug/L	97
144) Naphthalene	57.09	128	41847	4.388	ug/L	97
145) Benzothiophene	57.18	134	25059	4.345	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	17303	3.845	ug/L	99
147) Hexylbenzene	58.00	91	27057	3.794	ug/L	99
148) MMT	58.27	134	15303	4.381	ug/L	95
149) Tridecane	58.32	57	15831	6.795	ug/L	96
150) 2-Methylnaphthalene	59.88	142	27227	4.226	ug/L	97
151) 1-Methylnaphthalene	60.36	142	24572	4.357	ug/L	95
152) Tetradecane	60.64	57	14423M4	8.756	ug/L	
153) Pentadecane	63.48	57	10117M4	9.389	ug/L	

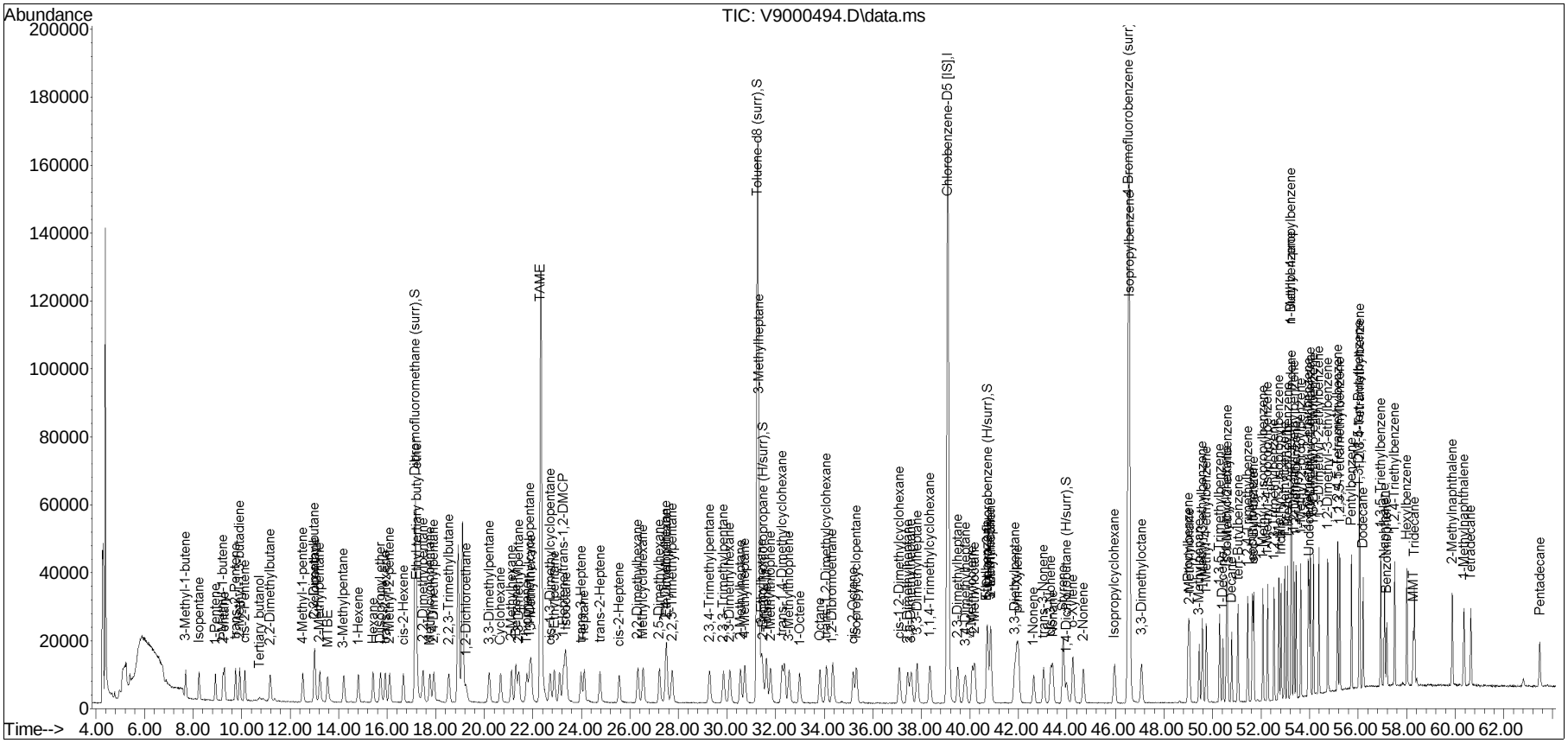
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000494.D
Acq On : 29 Oct 2021 10:38 pm
Operator : VOA9:RY
Sample : I910292102
Misc : WG1565572
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 01 10:10:53 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000495.D
Acq On : 29 Oct 2021 11:49 pm
Operator : VOA9:RY
Sample : I910292103
Misc : WG1565572
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 01 10:02:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	324194	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.13	113	82498	49.105	ug/L	-0.06
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.21%			
62) Toluene-d8 (surr)	31.24	98	344994	48.981	ug/L	-0.03
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.96%			
64) 2-Bromo-1-chloropropan...	31.47	77	44475	19.764	ug/L	-0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 39.53%#			
87) 1-Chloro-2-fluorobenze...	40.73	130	81934	18.984	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 37.97%#			
97) 1,4-Dichlorobutane (H/...	43.99	55	51163	20.038	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 40.08%#			
101) 4-Bromofluorobenzene (...	46.54	95	175343	50.836	ug/L	-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.67%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.64	55	47307	19.235	ug/L	100
3) Isopentane	8.20	43	25734	18.897	ug/L	94
4) 1-Pentene	8.87	42	30099	19.165	ug/L	98
5) 2-Methyl-1-butene	9.19	55	47781	18.957	ug/L	97
6) Pentane	9.24	43	43404	19.228	ug/L	99
7) trans-2-Pentene	9.71	55	52370	19.142	ug/L	98
8) 2-Methyl-1,3-butadiene	9.88	67	35813	18.736	ug/L	99
9) cis-2-Pentene	10.09	55	48927	19.466	ug/L	98
10) Tertiary butanol	10.71	59	37651M4	90.014	ug/L	
11) 2,2-Dimethylbutane	11.15	43	29742	19.241	ug/L	97
12) 4-Methyl-1-pentene	12.48	43	38573	18.944	ug/L	98
13) Cyclopentane	12.96	70	21573	18.813	ug/L	93
14) 2,3-Dimethylbutane	12.96	71	15832	18.882	ug/L	99
15) 2-Methylpentane	13.18	43	53435	18.986	ug/L	97
16) MTBE	13.51	73	82971	18.609	ug/L	98
17) 3-Methylpentane	14.18	57	49875	18.903	ug/L	99
18) 1-Hexene	14.77	56	29088	17.636	ug/L	97
19) Hexane	15.38	57	43836	19.021	ug/L	98
20) Diisopropyl ether	15.69	45	82507	18.545	ug/L	99
21) trans-2-Hexene	15.88	55	49503	18.813	ug/L	97
22) 2-Methyl-2-pentene	16.07	69	52077	18.756	ug/L	98
23) cis-2-Hexene	16.64	55	44305	18.763	ug/L	100
25) Ethyl tertiary butyl e...	17.18	59	86444	18.569	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000495.D
Acq On : 29 Oct 2021 11:49 pm
Operator : VOA9:RY
Sample : I910292103
Misc : WG1565572
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 01 10:02:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.44	57	63909	19.338	ug/L	98
27) Methylcyclopentane	17.74	56	56157	19.102	ug/L	98
28) 2,4-Dimethylpentane	17.89	43	49111	18.620	ug/L	97
29) 2,2,3-Trimethylbutane	18.51	57	57358	19.151	ug/L	99
30) 1,2-Dichloroethane	19.22	62	37140	18.485	ug/L	99
31) 3,3-Dimethylpentane	20.18	43	63547	18.838	ug/L	98
32) Cyclohexane	20.64	56	46897	18.881	ug/L	96
33) 2-Methylhexane	21.10	43	55107	18.767	ug/L	98
34) Benzene	21.29	78	117513	18.805	ug/L	100
35) 2,3-Dimethylpentane	21.39	56	46891	18.917	ug/L	92
36) Thiophene	21.73	84	63854	18.708	ug/L	98
37) 1,1-Dimethylcyclopentane	21.85	83	32040	18.789	ug/L	95
38) 3-Methylhexane	21.91	43	49331	19.661	ug/L	99
39) TAME	22.28	73	91067	19.667	ug/L	98
40) cis-1,3-Dimethylcyclop...	22.69	70	40311	18.537	ug/L	97
41) 3-Ethylpentane	22.86	43	63395	18.815	ug/L	96
43) 1-Heptene/trans-1,2-DMCP	23.25	70	48503	38.054	ug/L	91
44) Isooctane	23.36	57	121427	19.474	ug/L	97
45) trans-3-Heptene	23.97	41	37865	19.667	ug/L	95
46) Heptane	24.10	43	41848	19.066	ug/L	95
48) trans-2-Heptene	24.75	56	36110	19.109	ug/L	99
49) cis-2-Heptene	25.54	56	32727	18.967	ug/L	97
50) 2,2-Dimethylhexane	26.31	57	118781	19.417	ug/L	99
51) Methylcyclohexane	26.53	83	54484	19.065	ug/L	99
52) 2,5-Dimethylhexane	27.20	57	59556	19.218	ug/L	99
53) 2,4-Dimethylhexane	27.47	57	47611	18.792	ug/L	99
54) Ethylcyclopentane	27.49	69	44428	19.032	ug/L	97
55) 2,2,3-Trimethylpentane	27.72	57	96955	19.692	ug/L	99
57) 2,3,4-Trimethylpentane	29.26	43	65880	19.465	ug/L	99
58) 2,3,3-Trimethylpentane	29.84	43	55059	19.521	ug/L	98
59) 2,3-Dimethylhexane	30.11	43	59604	20.463	ug/L	95
60) 2-Methylheptane	30.55	57	54719	19.363	ug/L	98
61) 4-Methylheptane	30.72	43	65141	21.127	ug/L	94
63) 3-Methylheptane	31.28	43	47121	19.369	ug/L	95
65) 3-Ethylhexane	31.42	43	69018	17.928	ug/L	100
66) Toluene	31.61	91	131504	18.648	ug/L	99
67) 2-Methylthiophene	31.78	97	104755	18.771	ug/L	99
68) trans-1,4-Dimethylcycl...	32.26	97	63497	19.046	ug/L	95
69) 3-Methylthiophene	32.54	97	107012	19.139	ug/L	100
70) 1-Octene	32.97	55	25714	18.441	ug/L	92
71) Octane	33.81	43	54688	18.183	ug/L	99

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000495.D
Acq On : 29 Oct 2021 11:49 pm
Operator : VOA9:RY
Sample : I910292103
Misc : WG1565572
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 01 10:02:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.08	55	45308	19.123	ug/L	99
73) 1,2-Dibromoethane	34.33	107	31692	19.105	ug/L	99
75) cis-2-Octene	35.18	55	38108	18.665	ug/L	96
76) Isopropylcyclopentane	35.32	68	51820	17.620	ug/L	96
77) cis-1,2-Dimethylcycloh...	37.09	55	45147	18.277	ug/L	98
78) 2,5-Dimethylheptane	37.43	57	78577	19.023	ug/L	98
79) 3,5-Dimethylheptane	37.56	57	88030	16.026	ug/L	98
80) 3,3-Dimethylheptane	37.82	57	61904	18.262	ug/L	97
81) 1,1,4-Trimethylcyclohe...	38.36	69	54411	18.240	ug/L	99
82) 2,3-Dimethylheptane	39.50	43	66868	17.862	ug/L	99
83) 3,4-Dimethylheptane	39.81	43	43334	18.526	ug/L	98
84) 4-Methyloctane	40.10	43	62832	19.042	ug/L	98
85) 2-Methyloctane	40.19	43	56539M3	16.239	ug/L	
86) Ethylbenzene	40.71	91	151920	18.520	ug/L	99
88) 2-Ethylthiophene	40.85	97	114210	18.735	ug/L	99
89) 3-Methyloctane	40.85	57	99925	17.444	ug/L	100
90) 3,3-Diethylpentane	41.84	57	116392	17.706	ug/L	99
91) p/m-Xylene	41.96	91	232073	37.121	ug/L	99
92) 1-Nonene	42.63	56	25015	16.596	ug/L	97
93) trans-3-Nonene	43.04	55	36987	17.245	ug/L	99
94) cis-3-Nonene	43.33	55	41660M6	17.103	ug/L	
95) Nonane	43.40	43	54563M6	17.216	ug/L	
96) Styrene	43.84	104	99433	18.871	ug/L	99
98) o-Xylene	44.25	91	120999	19.048	ug/L	99
99) 2-Nonene	44.68	55	36801	17.204	ug/L	98
100) Isopropylcyclohexane	45.96	83	53784	17.403	ug/L	97
102) Isopropylbenzene	46.58	105	153908	18.842	ug/L	98
103) 3,3-Dimethyloctane	47.07	71	79358	16.386	ug/L	98
104) n-Propylbenzene	49.01	91	182800	18.780	ug/L	99
105) 2-Methylnonane	49.05	43	47560	16.542	ug/L	99
106) 3-Methylnonane	49.45	57	59240	16.158	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.58	105	154907	18.812	ug/L	100
108) 1-Methyl-4-ethylbenzene	49.74	105	146746	18.693	ug/L	100
109) 1,3,5-Trimethylbenzene	50.29	105	127825	18.635	ug/L	99
110) 1-Decene	50.43	41	26852	16.552	ug/L	94
111) Isobutylcyclohexane	50.58	83	57353	16.966	ug/L	97
112) 1-Methyl-2-ethylbenzene	50.62	105	154917	19.037	ug/L	99
113) Decane	50.79	43	46628	16.845	ug/L	94
114) tert-Butylbenzene	51.05	119	117222	19.261	ug/L	98
115) 1,2,4-Trimethylbenzene	51.45	105	135397	18.915	ug/L	99
116) Isobutylbenzene	51.64	91	150267M6	18.881	ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000495.D
Acq On : 29 Oct 2021 11:49 pm
Operator : VOA9:RY
Sample : I910292103
Misc : WG1565572
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 01 10:02:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	169781	19.135	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	143905	18.891	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.27	119	144119	18.890	ug/L	99
120) 1,2,3-Trimethylbenzene	52.53	105	140056	19.454	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.73	119	146069	19.172	ug/L	99
122) Indan	52.82	117	132565	19.432	ug/L	100
123) 1,3-Diethylbenzene	52.97	105	91527	18.965	ug/L	98
124) 1-Methyl-3-propylbenzene	53.08	105	171514	18.969	ug/L	100
125) Indene	53.25	115	128901	19.883	ug/L	99
126) 1-Methyl-4-propylbenzene	53.24	105	202016	19.028	ug/L	99
127) n-Butylbenzene	53.23	91	159256	19.213	ug/L	100
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	152229	19.374	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	73701	19.467	ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	184951	19.345	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	143560	19.387	ug/L	98
132) Undecane	53.97	57	64427	18.001	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	173084	19.586	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	157499	19.514	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	173112	19.819	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.75	119	156535	19.852	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	168221	19.925	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	151042	19.928	ug/L	98
139) Pentylbenzene	55.72	91	140290	19.366	ug/L	98
140) 1,2,3,4-Tetramethylben...	56.06	119	202601	20.153	ug/L	100
141) 1,3-DM-5-tert-Butylben...	56.04	147	135909	19.224	ug/L	98
142) Dodecane	56.21	43	49800	22.284	ug/L	98
143) 1,3,5-Triethylbenzene	56.93	147	87257	19.277	ug/L	99
144) Naphthalene	57.08	128	187146	21.293	ug/L	100
145) Benzothiophene	57.17	134	112969	21.255	ug/L	100
146) 1,2,4-Triethylbenzene	57.50	147	81318	19.610	ug/L	98
147) Hexylbenzene	58.00	91	125742	19.135	ug/L	100
148) MMT	58.27	134	69557	21.608	ug/L	99
149) Tridecane	58.32	57	55691	25.937	ug/L	99
150) 2-Methylnaphthalene	59.87	142	126749	21.350	ug/L	98
151) 1-Methylnaphthalene	60.36	142	111630	21.480	ug/L	99
152) Tetradecane	60.64	57	37970	25.013	ug/L	99
153) Pentadecane	63.47	57	23760	23.928	ug/L	98

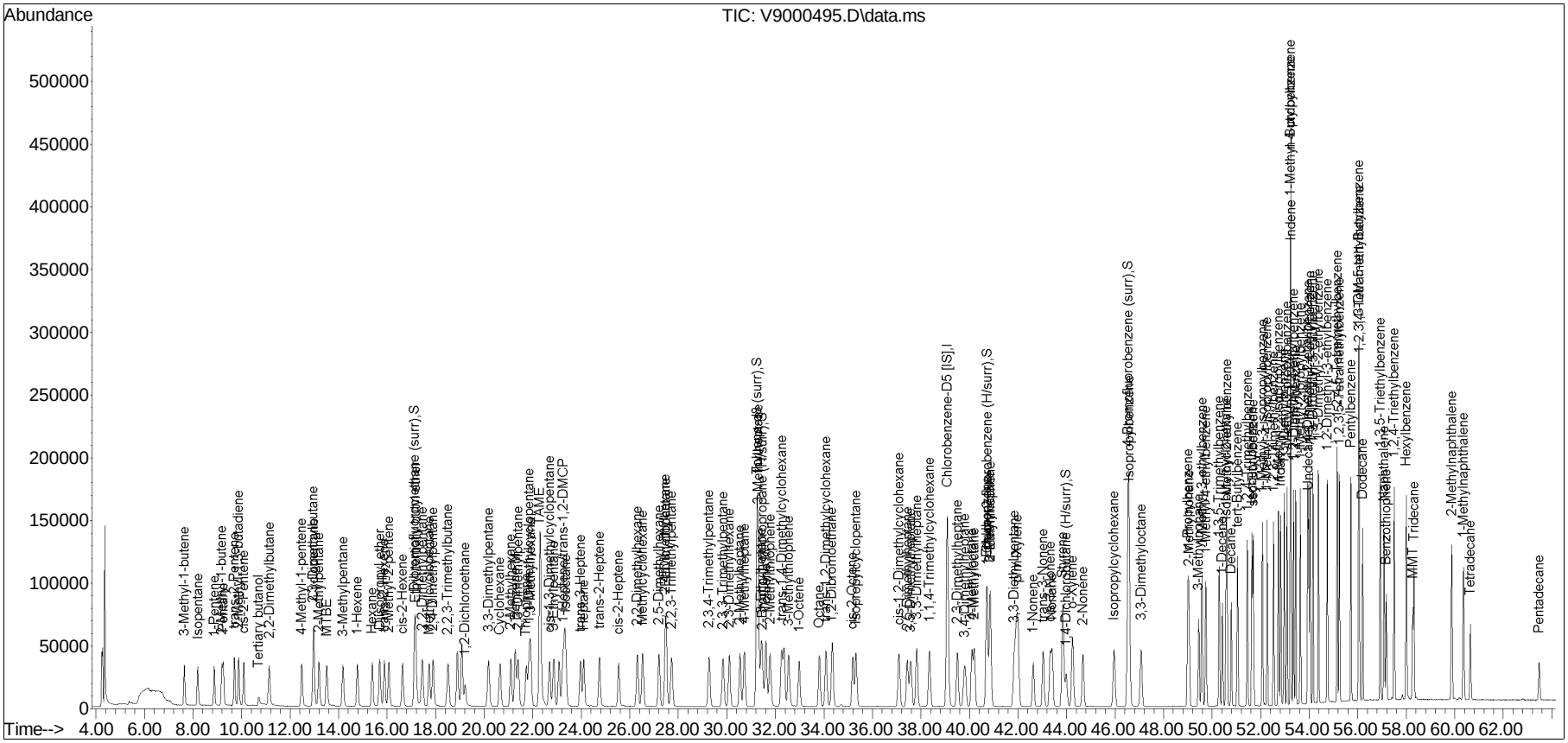
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000495.D
Acq On : 29 Oct 2021 11:49 pm
Operator : VOA9:RY
Sample : I910292103
Misc : WG1565572
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 01 10:02:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000496.D
Acq On : 30 Oct 2021 01:01 am
Operator : VOA9:RY
Sample : I910292104
Misc : WG1565572
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 01 09:51:21 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Oct 18 13:56:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.10	117	345495	50.000	ug/L	0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.19	113	89521	49.479	ug/L	0.06
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.96%			
62) Toluene-d8 (surr)	31.27	98	375311	49.352	ug/L	0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.70%			
64) 2-Bromo-1-chloropropan...	31.50	77	119906	51.071	ug/L	0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.14%			
87) 1-Chloro-2-fluorobenze...	40.73	130	229981	52.619	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 105.24%			
97) 1,4-Dichlorobutane (H/...	43.98	55	136053	51.388	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 102.78%			
101) 4-Bromofluorobenzene (...	46.56	95	183792	50.281	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.56%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.78	55	131054	49.016	ug/L	98
3) Isopentane	8.32	43	72565	46.760	ug/L	97
4) 1-Pentene	9.00	42	83686	49.582	ug/L	99
5) 2-Methyl-1-butene	9.31	55	134304	49.885	ug/L	98
6) Pentane	9.37	43	120283	47.298	ug/L	98
7) trans-2-Pentene	9.82	55	145784	49.309	ug/L	99
8) 2-Methyl-1,3-butadiene	9.99	67	101851	50.265	ug/L	98
9) cis-2-Pentene	10.20	55	133931	48.194	ug/L	99
10) Tertiary butanol	10.73	59	111441M4	282.868	ug/L	
11) 2,2-Dimethylbutane	11.24	43	82368	47.279	ug/L	96
12) 4-Methyl-1-pentene	12.58	43	108496	50.682	ug/L	100
13) Cyclopentane	13.07	70	61103	50.166	ug/L	96
14) 2,3-Dimethylbutane	13.06	71	44679	49.880	ug/L #	92
15) 2-Methylpentane	13.28	43	149966	50.445	ug/L	97
16) MTBE	13.58	73	237574	51.063	ug/L	98
17) 3-Methylpentane	14.26	57	140591	50.664	ug/L	99
18) 1-Hexene	14.85	56	87887	53.617	ug/L	100
19) Hexane	15.46	57	122803	48.859	ug/L	99
20) Diisopropyl ether	15.75	45	237066	53.839	ug/L	100
21) trans-2-Hexene	15.96	55	140214	51.043	ug/L	98
22) 2-Methyl-2-pentene	16.14	69	147952	51.960	ug/L	99
23) cis-2-Hexene	16.71	55	125820	50.982	ug/L	99
25) Ethyl tertiary butyl e...	17.23	59	248054	53.391	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000496.D
Acq On : 30 Oct 2021 01:01 am
Operator : VOA9:RY
Sample : I910292104
Misc : WG1565572
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 01 09:51:21 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Oct 18 13:56:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.52	57	176095	51.576	ug/L	98
27) Methylcyclopentane	17.80	56	156654	51.122	ug/L	97
28) 2,4-Dimethylpentane	17.96	43	140540	53.578	ug/L	99
29) 2,2,3-Trimethylbutane	18.58	57	159595	51.081	ug/L	99
30) 1,2-Dichloroethane	19.27	62	107063	54.005	ug/L	97
31) 3,3-Dimethylpentane	20.24	43	179754	52.104	ug/L	100
32) Cyclohexane	20.71	56	132348	51.979	ug/L	99
33) 2-Methylhexane	21.15	43	156462	51.923	ug/L	100
34) Benzene	21.33	78	332988	52.235	ug/L	100
35) 2,3-Dimethylpentane	21.45	56	132081	52.347	ug/L	95
36) Thiophene	21.79	84	181873	53.663	ug/L	97
37) 1,1-Dimethylcyclopentane	21.91	83	90865	52.869	ug/L	98
38) 3-Methylhexane	21.97	43	133694	52.151	ug/L	98
39) TAME	22.32	73	246736	48.283	ug/L	98
40) cis-1,3-Dimethylcyclop...	22.74	70	115874	53.432	ug/L	98
41) 3-Ethylpentane	22.91	43	179543	53.250	ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.30	70	135832	104.632	ug/L	97
44) Isooctane	23.40	57	332243	52.393	ug/L	97
45) trans-3-Heptene	24.00	41	102590	49.855	ug/L	98
46) Heptane	24.14	43	116957	52.246	ug/L	99
48) trans-2-Heptene	24.79	56	100691	52.554	ug/L	98
49) cis-2-Heptene	25.57	56	91941	51.504	ug/L	96
50) 2,2-Dimethylhexane	26.34	57	325967	51.584	ug/L	100
51) Methylcyclohexane	26.56	83	152282	51.463	ug/L	99
52) 2,5-Dimethylhexane	27.23	57	165130	51.408	ug/L	99
53) 2,4-Dimethylhexane	27.50	57	134999	56.572	ug/L	98
54) Ethylcyclopentane	27.53	69	124388	51.568	ug/L	95
55) 2,2,3-Trimethylpentane	27.75	57	262354	52.418	ug/L	100
57) 2,3,4-Trimethylpentane	29.30	43	180347	50.114	ug/L	98
58) 2,3,3-Trimethylpentane	29.87	43	150291	50.460	ug/L	99
59) 2,3-Dimethylhexane	30.13	43	155205	49.028	ug/L	98
60) 2-Methylheptane	30.56	57	150580	50.964	ug/L	98
61) 4-Methylheptane	30.74	43	164297	45.983	ug/L	95
63) 3-Methylheptane	31.31	43	129635	48.752	ug/L	96
65) 3-Ethylhexane	31.44	43	205139M4	53.273	ug/L	
66) Toluene	31.64	91	375772	53.459	ug/L	98
67) 2-Methylthiophene	31.80	97	297373	53.169	ug/L	100
68) trans-1,4-Dimethylcycl...	32.28	97	177643	50.301	ug/L	98
69) 3-Methylthiophene	32.57	97	297935	52.633	ug/L	100
70) 1-Octene	33.00	55	74302	52.103	ug/L	97
71) Octane	33.83	43	160260	52.338	ug/L	98

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000496.D
Acq On : 30 Oct 2021 01:01 am
Operator : VOA9:RY
Sample : I910292104
Misc : WG1565572
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 01 09:51:21 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Oct 18 13:56:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72)	trans-1,2-Dimethylcycl...	34.10	55	126251	52.085	ug/L	99
73)	1,2-Dibromoethane	34.34	107	88390	52.678	ug/L	97
75)	cis-2-Octene	35.20	55	108790	52.680	ug/L	98
76)	Isopropylcyclopentane	35.34	68	156714	54.276	ug/L	97
77)	cis-1,2-Dimethylcycloh...	37.11	55	131625	52.295	ug/L	99
78)	2,5-Dimethylheptane	37.45	57	220107	49.969	ug/L	100
79)	3,5-Dimethylheptane	37.59	57	292699M4	54.911	ug/L	
80)	3,3-Dimethylheptane	37.83	57	180625	52.455	ug/L	99
81)	1,1,4-Trimethylcyclohe...	38.37	69	158949	51.479	ug/L	99
82)	2,3-Dimethylheptane	39.51	43	199475	52.893	ug/L	99
83)	3,4-Dimethylheptane	39.82	43	124640	50.588	ug/L	97
84)	4-Methyloctane	40.11	43	175824	48.463	ug/L	99
85)	2-Methyloctane	40.20	43	185517M3	56.939	ug/L	
86)	Ethylbenzene	40.71	91	437107	53.093	ug/L	99
88)	2-Ethylthiophene	40.86	97	324838	53.390	ug/L	100
89)	3-Methyloctane	40.86	57	305232	52.855	ug/L	99
90)	3,3-Diethylpentane	41.85	57	350277	52.614	ug/L	99
91)	p/m-Xylene	41.97	91	666255	105.770	ug/L	98
92)	1-Nonene	42.64	56	80318	51.940	ug/L	99
93)	trans-3-Nonene	43.04	55	114286	52.788	ug/L	99
94)	cis-3-Nonene	43.34	55	129797M6	52.942	ug/L	
95)	Nonane	43.42	43	168873M6	51.754	ug/L	
96)	Styrene	43.84	104	280772	53.182	ug/L	98
98)	o-Xylene	44.26	91	338493	52.575	ug/L	100
99)	2-Nonene	44.68	55	113985	52.886	ug/L	99
100)	Isopropylcyclohexane	45.96	83	164674	52.314	ug/L	98
102)	Isopropylbenzene	46.58	105	435254	52.020	ug/L	99
103)	3,3-Dimethyloctane	47.08	71	258056	52.928	ug/L	98
104)	n-Propylbenzene	49.01	91	518655	52.609	ug/L	100
105)	2-Methylnonane	49.05	43	153200	53.326	ug/L	97
106)	3-Methylnonane	49.45	57	195363	53.445	ug/L	97
107)	1-Methyl-3-ethylbenzene	49.58	105	438766	52.463	ug/L	99
108)	1-Methyl-4-ethylbenzene	49.74	105	418298	52.465	ug/L	99
109)	1,3,5-Trimethylbenzene	50.29	105	365496	52.243	ug/L	99
110)	1-Decene	50.43	41	86443	53.520	ug/L	97
111)	Isobutylcyclohexane	50.58	83	180133	52.873	ug/L	99
112)	1-Methyl-2-ethylbenzene	50.62	105	433620	52.399	ug/L	99
113)	Decane	50.79	43	147496	53.529	ug/L	99
114)	tert-Butylbenzene	51.05	119	324294	52.651	ug/L	99
115)	1,2,4-Trimethylbenzene	51.45	105	381426	52.223	ug/L	100
116)	Isobutylbenzene	51.64	91	424078M6	52.252	ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000496.D
Acq On : 30 Oct 2021 01:01 am
Operator : VOA9:RY
Sample : I910292104
Misc : WG1565572
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 01 09:51:21 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Oct 18 13:56:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	472786	52.480	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	405918	52.360	ug/L	100
119) 1-Methyl-4-isopropylbe...	52.27	119	406537	52.312	ug/L	99
120) 1,2,3-Trimethylbenzene	52.54	105	383612	52.028	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.73	119	405965	52.542	ug/L	99
122) Indan	52.83	117	363505	52.307	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	257163	52.215	ug/L	98
124) 1-Methyl-3-propylbenzene	53.08	105	481785	52.175	ug/L	99
125) Indene	53.25	115	345447	52.084	ug/L	99
126) 1-Methyl-4-propylbenzene	53.24	105	565707	52.275	ug/L	99
127) n-Butylbenzene	53.23	91	441689	52.049	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	418674	52.255	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	201731	51.607	ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	509431	52.159	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	394572	52.070	ug/L	99
132) Undecane	53.97	57	190713	55.669	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	470890	52.128	ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	430080	51.905	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	465437	51.729	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.75	119	420166	52.014	ug/L	100
137) 1,2,4,5-Tetramethylben...	55.15	119	449873	52.100	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	403873	51.976	ug/L	99
139) Pentylbenzene	55.72	91	386003	52.737	ug/L	100
140) 1,2,3,4-Tetramethylben...	56.06	119	535677	51.988	ug/L	99
141) 1,3-DM-5-tert-Butylben...	56.04	147	376715	51.873	ug/L	100
142) Dodecane	56.21	43	119079	50.863	ug/L	99
143) 1,3,5-Triethylbenzene	56.93	147	241198	51.935	ug/L	99
144) Naphthalene	57.08	128	468325	51.220	ug/L	100
145) Benzothiophene	57.18	134	283212	51.153	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	220959	49.029	ug/L	100
147) Hexylbenzene	58.00	91	350151	52.598	ug/L	99
148) MMT	58.27	134	171531	50.619	ug/L	99
149) Tridecane	58.32	57	114412	44.061	ug/L	99
150) 2-Methylnaphthalene	59.88	142	316346	50.402	ug/L	99
151) 1-Methylnaphthalene	60.36	142	276916	50.428	ug/L	99
152) Tetradecane	60.64	57	80888	38.686	ug/L	98
153) Pentadecane	63.48	57	52911	39.252	ug/L	96

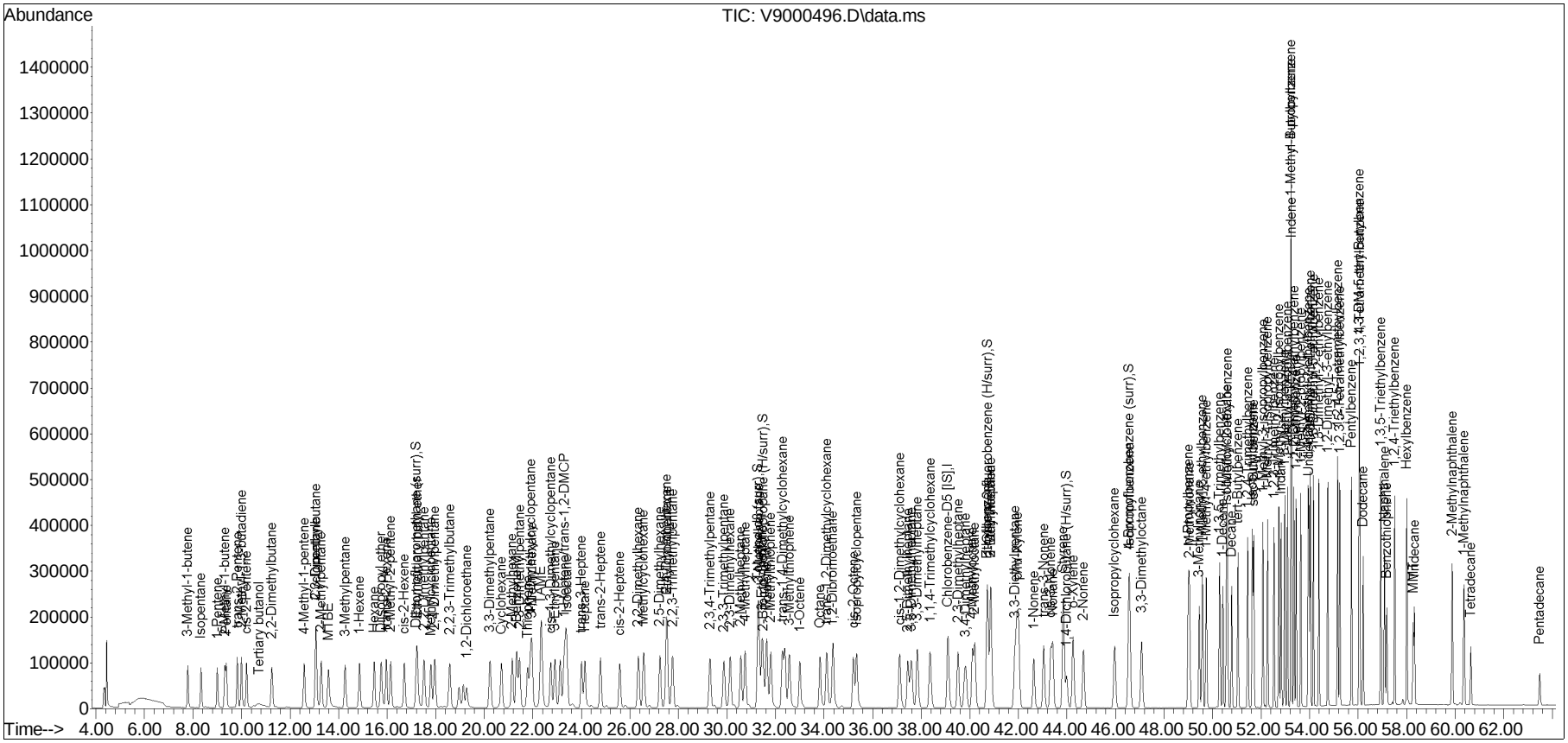
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000496.D
Acq On : 30 Oct 2021 01:01 am
Operator : VOA9:RY
Sample : I910292104
Misc : WG1565572
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 01 09:51:21 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Oct 18 13:56:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000497.D
Acq On : 30 Oct 2021 02:12 am
Operator : VOA9:RY
Sample : I910292105
Misc : WG1565572
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 10:04:46 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	347367	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.14	113	90252	50.137	ug/L	-0.05
Spiked Amount 50.000	Range 78 - 118		Recovery = 100.27%			
62) Toluene-d8 (surr)	31.25	98	370516	49.095	ug/L	-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.19%			
64) 2-Bromo-1-chloropropan...	31.48	77	248224	102.950	ug/L	-0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 205.90%#			
87) 1-Chloro-2-fluorobenze...	40.72	130	458666	99.181	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 198.36%#			
97) 1,4-Dichlorobutane (H/...	43.99	55	273914	100.122	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 200.24%#			
101) 4-Bromofluorobenzene (...	46.55	95	190457	51.534	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.07%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.65	55	212769	80.739	ug/L	99
3) Isopentane	8.21	43	116701	79.978	ug/L	97
4) 1-Pentene	8.89	42	137814	81.896	ug/L	98
5) 2-Methyl-1-butene	9.20	55	226360	83.817	ug/L	98
6) Pentane	9.26	43	194753	80.520	ug/L	99
7) trans-2-Pentene	9.71	55	246757	84.175	ug/L	99
8) 2-Methyl-1,3-butadiene	9.89	67	176148	86.007	ug/L	99
9) cis-2-Pentene	10.10	55	231628	86.007	ug/L	98
10) Tertiary butanol	10.70	59	219237M4	489.173	ug/L	
11) 2,2-Dimethylbutane	11.15	43	141863	85.651	ug/L	96
12) 4-Methyl-1-pentene	12.49	43	187512	85.949	ug/L	98
13) Cyclopentane	12.98	70	104585	85.120	ug/L	97
14) 2,3-Dimethylbutane	12.98	71	76541	85.195	ug/L	98
15) 2-Methylpentane	13.20	43	259831	86.163	ug/L	96
16) MTBE	13.50	73	457738	95.817	ug/L	97
17) 3-Methylpentane	14.18	57	245760	86.931	ug/L	97
18) 1-Hexene	14.78	56	148601	84.085	ug/L	99
19) Hexane	15.39	57	217187	87.952	ug/L	99
20) Diisopropyl ether	15.69	45	453062	95.041	ug/L	100
21) trans-2-Hexene	15.90	55	251625	89.245	ug/L	99
22) 2-Methyl-2-pentene	16.08	69	267926	90.057	ug/L	98
23) cis-2-Hexene	16.65	55	228505	90.317	ug/L	97
25) Ethyl tertiary butyl e...	17.17	59	477869	95.804	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000497.D
Acq On : 30 Oct 2021 02:12 am
Operator : VOA9:RY
Sample : I910292105
Misc : WG1565572
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 10:04:46 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	17.45	57	315097	88.986 ug/L	98
27) Methylcyclopentane	17.74	56	281183	89.263 ug/L	99
28) 2,4-Dimethylpentane	17.90	43	245459	86.856 ug/L	100
29) 2,2,3-Trimethylbutane	18.52	57	291436	90.813 ug/L	99
30) 1,2-Dichloroethane	19.21	62	207700	96.476 ug/L	99
31) 3,3-Dimethylpentane	20.18	43	327958	90.733 ug/L	99
32) Cyclohexane	20.65	56	240534	90.382 ug/L	99
33) 2-Methylhexane	21.10	43	283232	90.024 ug/L	99
34) Benzene	21.28	78	631803	94.357 ug/L	99
35) 2,3-Dimethylpentane	21.40	56	237788	89.531 ug/L	94
36) Thiophene	21.74	84	349811	95.651 ug/L	97
37) 1,1-Dimethylcyclopentane	21.85	83	170159	93.128 ug/L	95
38) 3-Methylhexane	21.93	43	245713	91.399 ug/L	98
39) TAME	22.28	73	478897	96.523 ug/L	98
40) cis-1,3-Dimethylcyclop...	22.70	70	218871	93.935 ug/L	100
41) 3-Ethylpentane	22.87	43	327736	90.778 ug/L	99
43) 1-Heptene/trans-1,2-DMCP	23.25	70	255722	187.249 ug/L	93
44) Isooctane	23.36	57	631586	94.537 ug/L	100
45) trans-3-Heptene	23.97	41	193005	93.559 ug/L	97
46) Heptane	24.11	43	217156	92.336 ug/L	99
48) trans-2-Heptene	24.75	56	193960	95.795 ug/L	98
49) cis-2-Heptene	25.54	56	177208	95.851 ug/L	97
50) 2,2-Dimethylhexane	26.32	57	624316	95.248 ug/L	100
51) Methylcyclohexane	26.53	83	291504	95.196 ug/L	99
52) 2,5-Dimethylhexane	27.20	57	319024	96.077 ug/L	99
53) 2,4-Dimethylhexane	27.47	57	251414	92.615 ug/L	98
54) Ethylcyclopentane	27.50	69	239524	95.762 ug/L	99
55) 2,2,3-Trimethylpentane	27.73	57	515309	97.679 ug/L	99
57) 2,3,4-Trimethylpentane	29.27	43	352774	97.277 ug/L	100
58) 2,3,3-Trimethylpentane	29.85	43	294340	97.396 ug/L	98
59) 2,3-Dimethylhexane	30.11	43	323864	103.772 ug/L	99
60) 2-Methylheptane	30.55	57	302268	99.827 ug/L	97
61) 4-Methylheptane	30.72	43	351050	106.258 ug/L	94
63) 3-Methylheptane	31.30	43	264199	101.352 ug/L	99
65) 3-Ethylhexane	31.42	43	371096	89.962 ug/L	100
66) Toluene	31.61	91	711841	94.207 ug/L	100
67) 2-Methylthiophene	31.78	97	573879	95.971 ug/L	99
68) trans-1,4-Dimethylcycl...	32.27	97	353370	98.925 ug/L	97
69) 3-Methylthiophene	32.55	97	584848	97.621 ug/L	99
70) 1-Octene	32.98	55	143839	96.272 ug/L	98
71) Octane	33.82	43	306098	94.986 ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000497.D
Acq On : 30 Oct 2021 02:12 am
Operator : VOA9:RY
Sample : I910292105
Misc : WG1565572
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 10:04:46 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72)	trans-1,2-Dimethylcycl...	34.09	55	247120	97.341	ug/L	98
73)	1,2-Dibromoethane	34.32	107	178154	100.234	ug/L	98
75)	cis-2-Octene	35.19	55	222373	101.652	ug/L	99
76)	Isopropylcyclopentane	35.33	68	300661	95.410	ug/L	98
77)	cis-1,2-Dimethylcycloh...	37.09	55	254760	96.253	ug/L	99
78)	2,5-Dimethylheptane	37.44	57	477057	107.785	ug/L	99
79)	3,5-Dimethylheptane	37.58	57	556137M4	94.490	ug/L	
80)	3,3-Dimethylheptane	37.83	57	354919	97.718	ug/L	98
81)	1,1,4-Trimethylcyclohe...	38.35	69	316445	99.006	ug/L	97
82)	2,3-Dimethylheptane	39.50	43	394898	98.451	ug/L	99
83)	3,4-Dimethylheptane	39.81	43	251883	100.500	ug/L	98
84)	4-Methyloctane	40.11	43	387155	109.504	ug/L	99
85)	2-Methyloctane	40.20	43	334833M3	89.757	ug/L	
86)	Ethylbenzene	40.71	91	858604	97.685	ug/L	100
88)	2-Ethylthiophene	40.85	97	641536	98.215	ug/L	100
89)	3-Methyloctane	40.86	57	612837	99.848	ug/L	99
90)	3,3-Diethylpentane	41.84	57	700716	99.484	ug/L	100
91)	p/m-Xylene	41.97	91	1319916	197.042	ug/L	98
92)	1-Nonene	42.63	56	167513	103.719	ug/L	98
93)	trans-3-Nonene	43.04	55	234401	101.998	ug/L	99
94)	cis-3-Nonene	43.33	55	259929M6	99.589	ug/L	
95)	Nonane	43.41	43	338666M6	99.732	ug/L	
96)	Styrene	43.84	104	566565	100.350	ug/L	99
98)	o-Xylene	44.24	91	671593	98.669	ug/L	99
99)	2-Nonene	44.68	55	232657	101.506	ug/L	98
100)	Isopropylcyclohexane	45.96	83	334393	100.985	ug/L	98
102)	Isopropylbenzene	46.58	105	883976	101.000	ug/L	99
103)	3,3-Dimethyloctane	47.07	71	532000	102.523	ug/L	99
104)	n-Propylbenzene	49.00	91	1068769	102.477	ug/L	100
105)	2-Methylnonane	49.05	43	314263	102.014	ug/L	95
106)	3-Methylnonane	49.45	57	406675	103.521	ug/L	99
107)	1-Methyl-3-ethylbenzene	49.59	105	908035	102.918	ug/L	98
108)	1-Methyl-4-ethylbenzene	49.74	105	866783	103.050	ug/L	99
109)	1,3,5-Trimethylbenzene	50.29	105	770401	104.823	ug/L	100
110)	1-Decene	50.42	41	180344	103.752	ug/L	98
111)	Isobutylcyclohexane	50.58	83	374171	103.300	ug/L	99
112)	1-Methyl-2-ethylbenzene	50.61	105	896735	102.844	ug/L	99
113)	Decane	50.79	43	302075	101.849	ug/L	99
114)	tert-Butylbenzene	51.05	119	671715	103.008	ug/L	99
115)	1,2,4-Trimethylbenzene	51.45	105	801005	104.435	ug/L	99
116)	Isobutylbenzene	51.64	91	886065M6	103.907	ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000497.D
Acq On : 30 Oct 2021 02:12 am
Operator : VOA9:RY
Sample : I910292105
Misc : WG1565572
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 10:04:46 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	985842	103.697	ug/L	99
118) 1-Methyl-3-isopropylbe...	52.07	119	861833	105.586	ug/L	100
119) 1-Methyl-4-isopropylbe...	52.27	119	864050	105.697	ug/L	99
120) 1,2,3-Trimethylbenzene	52.53	105	814006	105.526	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.73	119	861815	105.572	ug/L	99
122) Indan	52.82	117	761952	104.241	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	550127	106.384	ug/L	98
124) 1-Methyl-3-propylbenzene	53.08	105	1035548	106.891	ug/L	100
125) Indene	53.25	115	742986	106.960	ug/L	98
126) 1-Methyl-4-propylbenzene	53.24	105	1211523	106.503	ug/L	100
127) n-Butylbenzene	53.24	91	947275	106.655	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	899322	106.822	ug/L	100
129) 1,2-Diethylbenzene	53.44	119	433019	106.747	ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	1093488	106.746	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	853681	107.595	ug/L	99
132) Undecane	53.97	57	376792	98.253	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	1016071	107.307	ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	934263	108.030	ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	1008735	107.780	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.75	119	914074	108.189	ug/L	100
137) 1,2,4,5-Tetramethylben...	55.15	119	983785	108.751	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	876323	107.905	ug/L	99
139) Pentylbenzene	55.72	91	842156	108.499	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.06	119	1174225	109.011	ug/L	100
141) 1,3-DM-5-tert-Butylben...	56.04	147	833723	110.061	ug/L	100
142) Dodecane	56.21	43	206926	86.418	ug/L	97
143) 1,3,5-Triethylbenzene	56.93	147	536557	110.628	ug/L	99
144) Naphthalene	57.08	128	1028875	109.254	ug/L	100
145) Benzothiophene	57.18	134	623552	109.492	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	491454	110.610	ug/L	99
147) Hexylbenzene	58.00	91	757471	107.581	ug/L	100
148) MMT	58.27	134	387365	112.305	ug/L	98
149) Tridecane	58.32	57	196919	85.593	ug/L	99
150) 2-Methylnaphthalene	59.87	142	721537	113.428	ug/L	98
151) 1-Methylnaphthalene	60.36	142	634307	113.913	ug/L	99
152) Tetradecane	60.64	57	150732	92.671	ug/L	99
153) Pentadecane	63.48	57	96290	90.502	ug/L	96

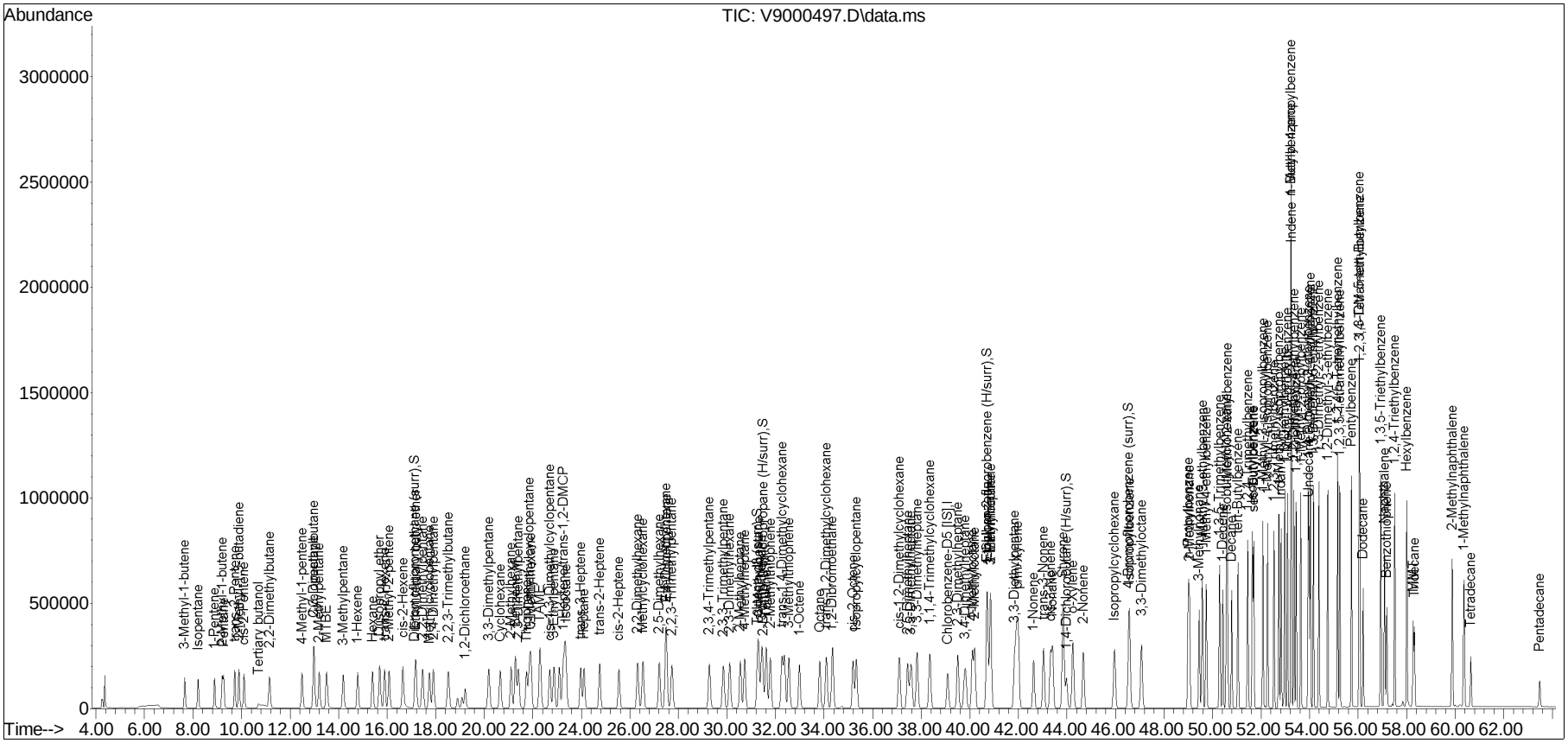
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000497.D
Acq On : 30 Oct 2021 02:12 am
Operator : VOA9:RY
Sample : I910292105
Misc : WG1565572
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 01 10:04:46 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000498.D
Acq On : 30 Oct 2021 03:23 am
Operator : VOA9:RY
Sample : I910292106
Misc : WG1565572
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 01 10:06:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	339295	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.15	113	85665	48.721	ug/L	-0.05
Spiked Amount 50.000	Range 78 - 118		Recovery = 97.44%			
62) Toluene-d8 (surr)	31.25	98	363313	49.286	ug/L	-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.57%			
64) 2-Bromo-1-chloropropan...	31.48	77	479272	203.505	ug/L	-0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 407.01%#			
87) 1-Chloro-2-fluorobenze...	40.73	130	869022	192.386	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 384.77%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	511296	191.337	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 382.67%#			
101) 4-Bromofluorobenzene (...	46.55	95	181894	50.388	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.78%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.65	55	444348	172.626	ug/L	99
3) Isopentane	8.20	43	239527	168.059	ug/L	99
4) 1-Pentene	8.88	42	285881	173.927	ug/L	99
5) 2-Methyl-1-butene	9.20	55	462158	175.201	ug/L	100
6) Pentane	9.26	43	403909	170.968	ug/L	99
7) trans-2-Pentene	9.71	55	513193	179.228	ug/L	99
8) 2-Methyl-1,3-butadiene	9.89	67	356602	178.260	ug/L	98
9) cis-2-Pentene	10.10	55	468352M3	178.043	ug/L	
10) Tertiary butanol	10.70	59	407004M4	929.732	ug/L	
11) 2,2-Dimethylbutane	11.15	43	286384	177.021	ug/L	94
12) 4-Methyl-1-pentene	12.49	43	373715	175.372	ug/L	98
13) Cyclopentane	12.98	70	208825	174.002	ug/L	99
14) 2,3-Dimethylbutane	12.98	71	151402	172.529	ug/L #	89
15) 2-Methylpentane	13.20	43	502929	170.745	ug/L	98
16) MTBE	13.51	73	871364	186.739	ug/L	98
17) 3-Methylpentane	14.19	57	481280	174.291	ug/L	99
18) 1-Hexene	14.78	56	288738	167.268	ug/L	99
19) Hexane	15.40	57	426141	176.676	ug/L	97
20) Diisopropyl ether	15.69	45	850459	182.649	ug/L	100
21) trans-2-Hexene	15.89	55	487915	177.169	ug/L	98
22) 2-Methyl-2-pentene	16.07	69	511296	175.949	ug/L	99
23) cis-2-Hexene	16.64	55	435087	176.060	ug/L	99
25) Ethyl tertiary butyl e...	17.18	59	890217	182.719	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000498.D
Acq On : 30 Oct 2021 03:23 am
Operator : VOA9:RY
Sample : I910292106
Misc : WG1565572
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 01 10:06:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.46	57	612348	177.046	ug/L	97
27) Methylcyclopentane	17.74	56	546838	177.726	ug/L	99
28) 2,4-Dimethylpentane	17.90	43	475058	172.100	ug/L	100
29) 2,2,3-Trimethylbutane	18.52	57	551766	176.023	ug/L	99
30) 1,2-Dichloroethane	19.22	62	380242	180.824	ug/L	98
31) 3,3-Dimethylpentane	20.19	43	612324	173.435	ug/L	99
32) Cyclohexane	20.66	56	450907	173.462	ug/L	99
33) 2-Methylhexane	21.11	43	521373	169.658	ug/L	97
34) Benzene	21.29	78	1180196	180.451	ug/L	99
35) 2,3-Dimethylpentane	21.40	56	451316	173.970	ug/L	97
36) Thiophene	21.74	84	656829	183.873	ug/L	97
37) 1,1-Dimethylcyclopentane	21.85	83	304834	170.805	ug/L	93
38) 3-Methylhexane	21.92	43	441912	168.290	ug/L	97
39) TAME	22.29	73	892245	184.114	ug/L	99
40) cis-1,3-Dimethylcyclop...	22.70	70	401464	176.399	ug/L	98
41) 3-Ethylpentane	22.87	43	601518	170.575	ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.26	70	446749	334.908	ug/L	98
44) Isooctane	23.36	57	1113322	170.608	ug/L	99
45) trans-3-Heptene	23.97	41	345847	171.638	ug/L	97
46) Heptane	24.11	43	382296	166.421	ug/L	98
48) trans-2-Heptene	24.75	56	347796	175.860	ug/L	99
49) cis-2-Heptene	25.55	56	316580	175.311	ug/L	98
50) 2,2-Dimethylhexane	26.31	57	1112266	173.728	ug/L	99
51) Methylcyclohexane	26.53	83	522941	174.839	ug/L	98
52) 2,5-Dimethylhexane	27.22	57	565434	174.337	ug/L	98
53) 2,4-Dimethylhexane	27.47	57	428953	161.776	ug/L	99
54) Ethylcyclopentane	27.51	69	426367	174.518	ug/L	100
55) 2,2,3-Trimethylpentane	27.73	57	867304	168.313	ug/L	99
57) 2,3,4-Trimethylpentane	29.28	43	625093	176.470	ug/L	99
58) 2,3,3-Trimethylpentane	29.85	43	523342	177.291	ug/L	98
59) 2,3-Dimethylhexane	30.11	43	619842	203.334	ug/L	99
60) 2-Methylheptane	30.55	57	535934	181.208	ug/L	98
61) 4-Methylheptane	30.72	43	695076	215.396	ug/L	99
63) 3-Methylheptane	31.30	43	449651	176.599	ug/L	99
65) 3-Ethylhexane	31.42	43	760395	188.723	ug/L	99
66) Toluene	31.61	91	1373163	186.051	ug/L	99
67) 2-Methylthiophene	31.78	97	1112260	190.432	ug/L	100
68) trans-1,4-Dimethylcycl...	32.26	97	671215	192.375	ug/L	99
69) 3-Methylthiophene	32.55	97	1131914	193.431	ug/L	99
70) 1-Octene	32.98	55	272034	186.405	ug/L	99
71) Octane	33.82	43	582711	185.124	ug/L	98

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000498.D
Acq On : 30 Oct 2021 03:23 am
Operator : VOA9:RY
Sample : I910292106
Misc : WG1565572
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 01 10:06:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72)	trans-1,2-Dimethylcycl...	34.09	55	454399	183.247	ug/L	100
73)	1,2-Dibromoethane	34.33	107	343171	197.670	ug/L	98
75)	cis-2-Octene	35.19	55	396482	185.553	ug/L	99
76)	Isopropylcyclopentane	35.33	68	568606	184.730	ug/L	99
77)	cis-1,2-Dimethylcycloh...	37.10	55	482823	186.760	ug/L	98
78)	2,5-Dimethylheptane	37.44	57	816060	188.765	ug/L	99
79)	3,5-Dimethylheptane	37.59	57	1044685M4	181.718	ug/L	
80)	3,3-Dimethylheptane	37.83	57	675730	190.471	ug/L	98
81)	1,1,4-Trimethylcyclohe...	38.36	69	601746	192.748	ug/L	98
82)	2,3-Dimethylheptane	39.51	43	746982	190.658	ug/L	98
83)	3,4-Dimethylheptane	39.82	43	466089	190.391	ug/L	97
84)	4-Methyloctane	40.12	43	705573	204.314	ug/L	99
85)	2-Methyloctane	40.20	43	656716M3	180.230	ug/L	
86)	Ethylbenzene	40.72	91	1628829	189.724	ug/L	100
88)	2-Ethylthiophene	40.86	97	1216853	190.724	ug/L	99
89)	3-Methyloctane	40.86	57	1161147	193.683	ug/L	100
90)	3,3-Diethylpentane	41.85	57	1323897	192.432	ug/L	100
91)	p/m-Xylene	41.97	91	2494850	381.301	ug/L	98
92)	1-Nonene	42.63	56	320100	202.912	ug/L	98
93)	trans-3-Nonene	43.04	55	443423	197.542	ug/L	99
94)	cis-3-Nonene	43.34	55	493782M6	193.689	ug/L	
95)	Nonane	43.42	43	649882M6	195.933	ug/L	
96)	Styrene	43.84	104	1068636	193.781	ug/L	99
98)	o-Xylene	44.25	91	1262647	189.918	ug/L	100
99)	2-Nonene	44.68	55	438724	195.965	ug/L	98
100)	Isopropylcyclohexane	45.96	83	632817	195.653	ug/L	98
102)	Isopropylbenzene	46.59	105	1655766	193.683	ug/L	100
103)	3,3-Dimethyloctane	47.09	71	990358	195.395	ug/L	99
104)	n-Propylbenzene	49.01	91	1987698	195.122	ug/L	99
105)	2-Methylnonane	49.05	43	570169	189.487	ug/L	95
106)	3-Methylnonane	49.45	57	736162	191.852	ug/L	98
107)	1-Methyl-3-ethylbenzene	49.58	105	1674526	194.309	ug/L	98
108)	1-Methyl-4-ethylbenzene	49.74	105	1604962	195.350	ug/L	98
109)	1,3,5-Trimethylbenzene	50.29	105	1415579	197.190	ug/L	99
110)	1-Decene	50.43	41	331087	195.005	ug/L	97
111)	Isobutylcyclohexane	50.58	83	696501	196.862	ug/L	99
112)	1-Methyl-2-ethylbenzene	50.62	105	1651102	193.865	ug/L	100
113)	Decane	50.79	43	530256	183.037	ug/L	98
114)	tert-Butylbenzene	51.05	119	1233220	193.614	ug/L	100
115)	1,2,4-Trimethylbenzene	51.45	105	1475539	196.958	ug/L	99
116)	Isobutylbenzene	51.64	91	1588034M6	190.655	ug/L	

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000498.D
Acq On : 30 Oct 2021 03:23 am
Operator : VOA9:RY
Sample : I910292106
Misc : WG1565572
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 01 10:06:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
117) sec-Butylbenzene	51.70	105	1796300	193.441 ug/L	98
118) 1-Methyl-3-isopropylbe...	52.08	119	1572572	197.245 ug/L	99
119) 1-Methyl-4-isopropylbe...	52.27	119	1567724	196.338 ug/L	99
120) 1,2,3-Trimethylbenzene	52.54	105	1471296	195.273 ug/L	99
121) 1-Methyl-2-isopropylbe...	52.73	119	1551817	194.619 ug/L	100
122) Indan	52.83	117	1376684	192.823 ug/L	100
123) 1,3-Diethylbenzene	52.97	105	991836	196.366 ug/L	98
124) 1-Methyl-3-propylbenzene	53.09	105	1861318	196.699 ug/L	99
125) Indene	53.25	115	1327355	195.632 ug/L	98
126) 1-Methyl-4-propylbenzene	53.24	105	2195216	197.570 ug/L	99
127) n-Butylbenzene	53.24	91	1701913	196.180 ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.36	119	1614621	196.349 ug/L	100
129) 1,2-Diethylbenzene	53.45	119	779129	196.640 ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	1950600	194.947 ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	1516689	195.706 ug/L	99
132) Undecane	53.97	57	578138	154.342 ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	1805991	195.268 ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	1655149	195.940 ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	1783266	195.070 ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.75	119	1604267	194.397 ug/L	100
137) 1,2,4,5-Tetramethylben...	55.16	119	1718234	194.458 ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	1536837	193.739 ug/L	99
139) Pentylbenzene	55.72	91	1470892	194.010 ug/L	98
140) 1,2,3,4-Tetramethylben...	56.06	119	2051295	194.966 ug/L	99
141) 1,3-DM-5-tert-Butylben...	56.04	147	1457148	196.936 ug/L	100
142) Dodecane	56.21	43	327068	139.842 ug/L	99
143) 1,3,5-Triethylbenzene	56.93	147	939192	198.251 ug/L	99
144) Naphthalene	57.09	128	1765771	191.965 ug/L	99
145) Benzothiophene	57.18	134	1073366	192.961 ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	863471	198.962 ug/L	99
147) Hexylbenzene	58.00	91	1329151	193.265 ug/L	99
148) MMT	58.27	134	660971	196.189 ug/L	99
149) Tridecane	58.32	57	355271	158.097 ug/L	99
150) 2-Methylnaphthalene	59.88	142	1240154	199.594 ug/L	99
151) 1-Methylnaphthalene	60.36	142	1082311	198.993 ug/L	99
152) Tetradecane	60.64	57	303970	191.329 ug/L	99
153) Pentadecane	63.48	57	185230	178.238 ug/L	95

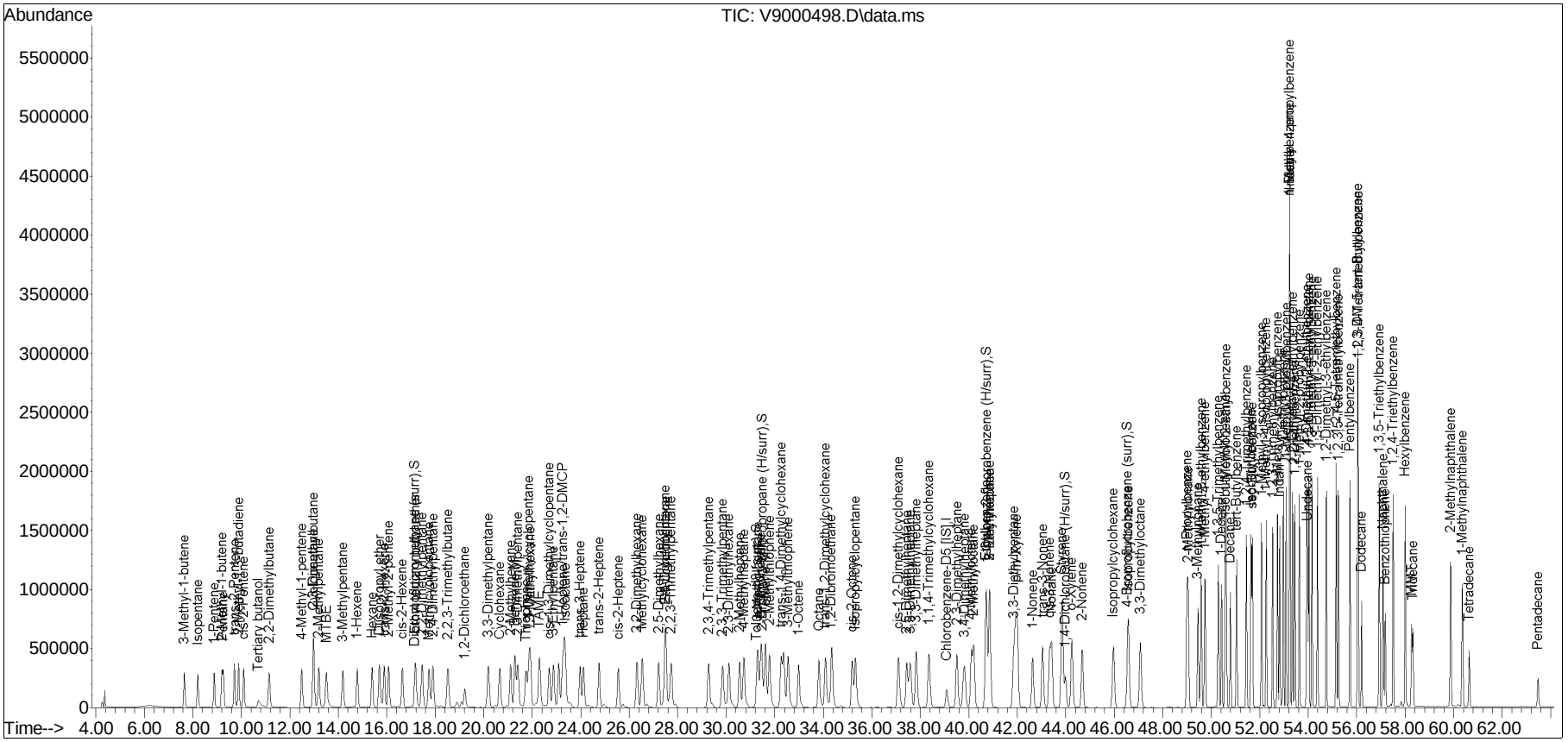
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000498.D
Acq On : 30 Oct 2021 03:23 am
Operator : VOA9:RY
Sample : I910292106
Misc : WG1565572
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 01 10:06:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 09:52:09 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000500.D
Acq On : 30 Oct 2021 05:46 am
Operator : VOA9:RY
Sample : CQ910292101
Misc : WG1565572
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 01 10:16:34 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	108	-0.01
4		1-Pentene	0.217	0.220	-1.4	102	-0.13
6		Pentane	0.318	0.287	9.7	93	-0.13
10		Tertiary butanol	0.059	0.054#	8.5	100	0.00
13		Cyclopentane	0.156	0.149	4.5	97	-0.10
15		2-Methylpentane	0.387	0.373	3.6	98	-0.10
16		MTBE	0.626	0.593	5.3	100	-0.06
17		3-Methylpentane	0.361	0.364	-0.8	102	-0.09
18		1-Hexene	0.218	0.207	5.0	100	-0.08
19		Hexane	0.320	0.301	5.9	96	-0.08
20		Diisopropyl ether	0.618	0.599	3.1	102	-0.05
24	S	Dibromofluoromethane (surr)	0.257	0.256	0.4	108	-0.06
25		Ethyl tertiary butyl ether	0.651	0.613	5.8	99	-0.04
27		Methylcyclopentane	0.410	0.410	0.0	102	-0.07
28		2,4-Dimethylpentane	0.359	0.354	1.4	101	-0.07
32		Cyclohexane	0.343	0.355	-3.5	106	-0.06
33		2-Methylhexane	0.403	0.396	1.7	101	-0.05
34	M	Benzene	0.887	0.865	2.5	103	-0.05
35		2,3-Dimethylpentane	0.339	0.341	-0.6	102	-0.06
38		3-Methylhexane	0.345	0.315	8.7	89	-0.05
39		TAME	0.720	0.639	11.2	98	-0.04
44		Isooctane	0.870	0.892	-2.5	103	-0.05
46		Heptane	0.304	0.327	-7.6	109	-0.04
51		Methylcyclohexane	0.400	0.401	-0.3	103	-0.02
60		2-Methylheptane	0.404	0.400	1.0	102	-0.02
62	S	Toluene-d8 (surr)	1.071	1.058	1.2	107	-0.02
63		3-Methylheptane	0.373	0.356	4.6	106	-0.02
66	M	Toluene	0.986	0.977	0.9	104	-0.03
71		Octane	0.422	0.437	-3.6	112	-0.02
86		Ethylbenzene	1.156	1.124	2.8	104	-0.01
91		p/m-Xylene	0.888	0.869	2.1	105	0.00
95		Nonane	0.440	0.387	12.0	99	-0.01
98		o-Xylene	0.906	0.901	0.6	104	-0.01
101	S	4-Bromofluorobenzene (surr)	0.538	0.542	-0.7	108	-0.02
102		Isopropylbenzene	1.175	1.163	1.0	106	0.00
104		n-Propylbenzene	1.382	1.352	2.2	104	-0.01
107		1-Methyl-3-ethylbenzene	1.170	1.129	3.5	102	0.00
108		1-Methyl-4-ethylbenzene	1.119	1.106	1.2	106	0.00
109		1,3,5-Trimethylbenzene	0.979	0.945	3.5	103	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000500.D
Acq On : 30 Oct 2021 05:46 am
Operator : VOA9:RY
Sample : CQ910292101
Misc : WG1565572
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 01 10:16:34 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
110	1-Decene	0.219	0.174	20.5	91	0.00
112	1-Methyl-2-ethylbenzene	1.166	1.133	2.8	102	0.00
113	Decane	0.374	0.372	0.5	112	0.00
115	1,2,4-Trimethylbenzene	1.030	0.957	7.1	99	0.00
117	sec-Butylbenzene	1.276	1.277	-0.1	105	0.00
126	1-Methyl-4-propylbenzene	1.531	1.448	5.4	100	0.00
127	n-Butylbenzene	1.197	1.139	4.8	100	0.00
129	1,2-Diethylbenzene	0.550	0.525	4.5	100	0.00
132	Undecane	0.472	0.450	4.7	98	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.175	1.174	0.1	104	0.00
139	Pentylbenzene	1.034	0.961	7.1	96	0.00
142	Dodecane	0.318	0.364	-14.5	102	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000500.D
Acq On : 30 Oct 2021 05:46 am
Operator : VOA9:RY
Sample : CQ910292101
Misc : WG1565572
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 01 10:16:34 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	349947	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.13	113	89451	49.665	ug/L	-0.06
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.33%			
62) Toluene-d8 (surr)	31.25	98	370192	49.404	ug/L	-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.81%			
101) 4-Bromofluorobenzene (...	46.54	95	189744	50.371	ug/L	-0.02
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.74%			
Target Compounds						Qvalue
4) 1-Pentene	8.87	42	30741	20.249	ug/L	94
6) Pentane	9.24	43	40199	18.047	ug/L	98
10) Tertiary butanol	10.73	59	37463M4	90.079	ug/L	
13) Cyclopentane	12.96	70	20902	19.130	ug/L #	39
15) 2-Methylpentane	13.18	43	52163	19.266	ug/L	99
16) MTBE	13.52	73	83003	18.956	ug/L	98
17) 3-Methylpentane	14.17	57	51013	20.172	ug/L	99
18) 1-Hexene	14.77	56	29028	19.031	ug/L	99
19) Hexane	15.38	57	42196	18.851	ug/L	96
20) Diisopropyl ether	15.69	45	83902	19.402	ug/L	99
25) Ethyl tertiary butyl e...	17.19	59	85787	18.827	ug/L	100
27) Methylcyclopentane	17.73	56	57328	19.975	ug/L	96
28) 2,4-Dimethylpentane	17.89	43	49574	19.742	ug/L	97
32) Cyclohexane	20.65	56	49650	20.711	ug/L	95
33) 2-Methylhexane	21.09	43	55423	19.665	ug/L	98
34) Benzene	21.28	78	121111	19.513	ug/L	100
35) 2,3-Dimethylpentane	21.39	56	47696	20.125	ug/L	94
38) 3-Methylhexane	21.91	43	44028	18.257	ug/L	97
39) TAME	22.29	73	89492	17.766	ug/L	97
44) Isooctane	23.35	57	124820	20.507	ug/L	99
46) Heptane	24.10	43	45767	21.519	ug/L	97
51) Methylcyclohexane	26.54	83	56075	20.044	ug/L	97
60) 2-Methylheptane	30.54	57	55990	19.806	ug/L	95
63) 3-Methylheptane	31.29	43	49896	19.121	ug/L	97
66) Toluene	31.61	91	136748	19.825	ug/L	97
71) Octane	33.81	43	61181	20.727	ug/L	98
86) Ethylbenzene	40.70	91	157378	19.446	ug/L	100
91) p/m-Xylene	41.97	91	243351	39.169	ug/L	100
95) Nonane	43.41	43	54231	17.609	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000500.D
Acq On : 30 Oct 2021 05:46 am
Operator : VOA9:RY
Sample : CQ910292101
Misc : WG1565572
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 01 10:16:34 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) o-Xylene	44.24	91	126138	19.898	ug/L	99
102) Isopropylbenzene	46.57	105	162743	19.791	ug/L	98
104) n-Propylbenzene	48.99	91	189269	19.561	ug/L	100
107) 1-Methyl-3-ethylbenzene	49.58	105	158047	19.297	ug/L	98
108) 1-Methyl-4-ethylbenzene	49.74	105	154855	19.766	ug/L	100
109) 1,3,5-Trimethylbenzene	50.29	105	132280	19.315	ug/L	100
110) 1-Decene	50.43	41	24391	15.894	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.61	105	158535	19.432	ug/L	100
113) Decane	50.79	43	52004	19.857	ug/L	97
115) 1,2,4-Trimethylbenzene	51.45	105	133958	18.580	ug/L	99
117) sec-Butylbenzene	51.69	105	178707	20.013	ug/L	97
126) 1-Methyl-4-propylbenzene	53.24	105	202643	18.915	ug/L	98
127) n-Butylbenzene	53.23	91	159472	19.030	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	73466	19.090	ug/L	98
132) Undecane	53.97	57	62958	19.049	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	164267	19.974	ug/L	100
139) Pentylbenzene	55.72	91	134490	18.579	ug/L	99
142) Dodecane	56.21	43	50910	22.861	ug/L	98

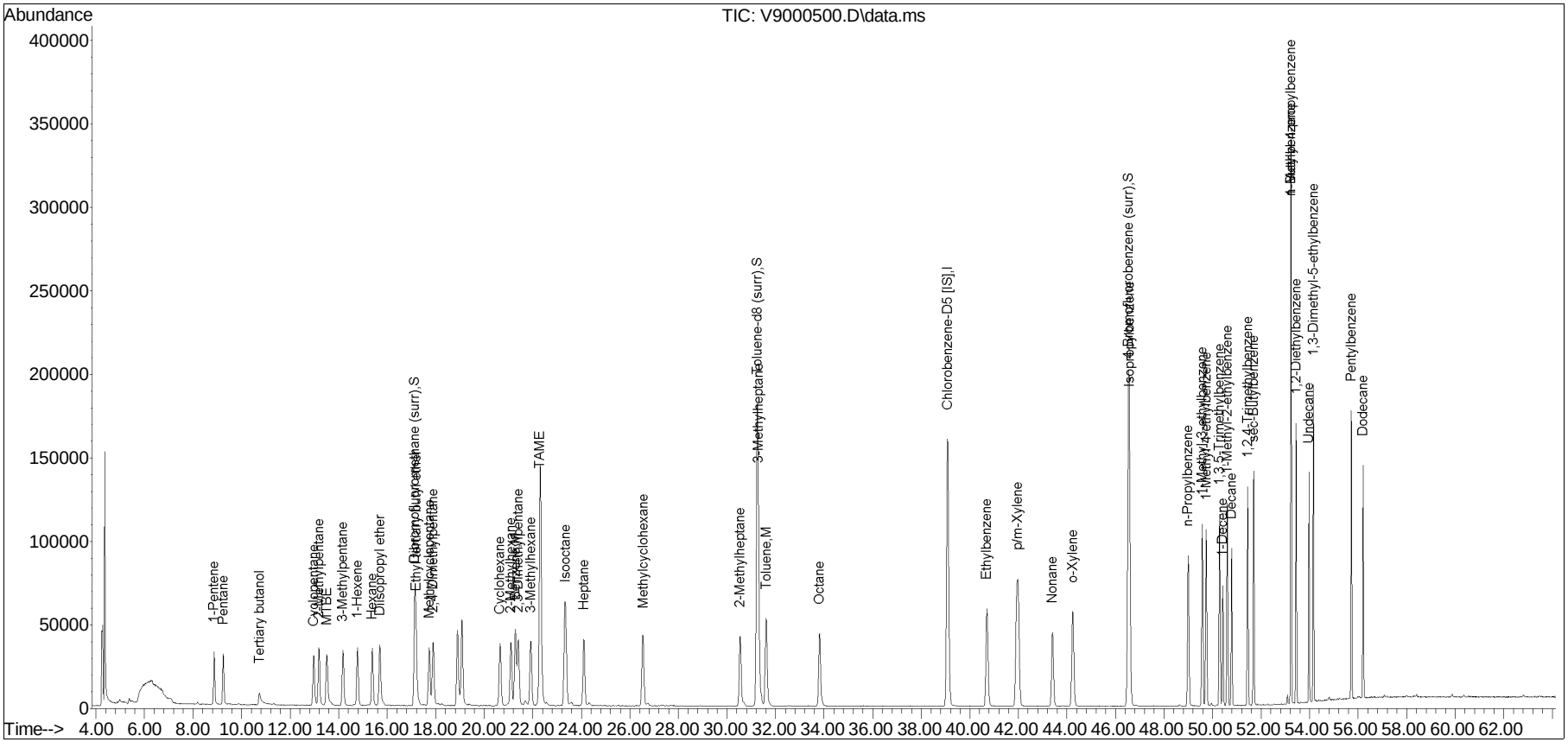
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\10-OCT\211029\
Data File : V9000500.D
Acq On : 30 Oct 2021 05:46 am
Operator : VOA9:RY
Sample : CQ910292101
Misc : WG1565572
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 01 10:16:34 2021
Quant Method : O:\Organics\DATA\VOA9\2021\10-OCT\211029\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO



Response Factor Report VOA9

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Method File : P9121121W.M
Title : PIANO VOLATILES
Last Update : Sun Dec 12 09:32:29 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	----------ISTD----------							
2)		3-Methyl-1-butene	0.288	0.379	0.400	0.373	0.418	0.394	0.3755	12.15
3)		Isopentane	0.208	0.223	0.229	0.195	0.222	0.232	0.2180	6.43
4)		1-Pentene	0.205	0.257	0.262	0.228	0.260	0.256	0.2447	9.44
5)		2-Methyl-1-butene	0.294	0.383	0.406	0.366	0.408	0.407	0.3776	11.69
6)		Pentane	0.364	0.411	0.386	0.336	0.374	0.388	0.3764	6.74
7)		trans-2-Pentene	0.304	0.417	0.438	0.385	0.450	0.431	0.4042	13.30
8)		2-Methyl-1,3-butadiene	0.195	0.257	0.293	0.264	0.308	0.279	0.2661	14.89
9)		cis-2-Pentene	0.282	0.386	0.410	0.379	0.416	0.408	0.3801	13.24
10)		Tertiary butanol		0.079	0.076	0.071	0.082	0.070	0.0757#	6.90
11)		2,2-Dimethylbutane	0.227	0.269	0.259	0.225	0.254	0.256	0.2483	7.27
12)		4-Methyl-1-pentene	0.240	0.296	0.327	0.292	0.332	0.316	0.3007	11.21
13)		Cyclopentane	0.136	0.163	0.177	0.161	0.184	0.172	0.1656	10.07
14)		2,3-Dimethylbutane	0.095	0.119	0.127	0.114	0.131	0.124	0.1184	10.85
15)		2-Methylpentane	0.370	0.416	0.460	0.427	0.470	0.452	0.4326	8.45
16)		MTBE	0.500	0.581	0.656	0.616	0.714	0.619	0.6144	11.68
17)		3-Methylpentane	0.279	0.379	0.412	0.373	0.429	0.404	0.3792	14.07
18)		1-Hexene	0.152	0.218	0.243	0.217	0.257	0.231	0.2198	16.63
19)		Hexane	0.260	0.333	0.368	0.328	0.382	0.357	0.3379	12.81
20)		Diisopropyl ether	0.486	0.584	0.716	0.668	0.764	0.644	0.6436	15.28
21)		trans-2-Hexene	0.269	0.364	0.411	0.371	0.423	0.401	0.3733	15.03
22)		2-Methyl-2-pentene	0.274	0.377	0.408	0.374	0.443	0.398	0.3789	15.11
23)		cis-2-Hexene	0.227	0.315	0.369	0.336	0.391	0.362	0.3333	17.51
24)	S	Dibromofluoromethane (surr)	0.237	0.259	0.258	0.250	0.281	0.257	0.2571	5.47
25)		Ethyl tertiary butyl ether	0.481	0.574	0.713	0.672	0.768	0.644	0.6419	15.94
26)		2,2-Dimethylpentane	0.388	0.481	0.514	0.460	0.529	0.513	0.4808	10.87
27)		Methylcyclopentane	0.320	0.424	0.456	0.413	0.460	0.443	0.4194	12.36
28)		2,4-Dimethylpentane	0.321	0.377	0.417	0.367	0.422	0.412	0.3860	10.14
29)		2,2,3-Trimethylbutane	0.337	0.421	0.467	0.427	0.481	0.453	0.4310	11.96
30)		1,2-Dichloroethane	0.244	0.244	0.323	0.303	0.341	0.288	0.2904	13.85
31)		3,3-Dimethylpentane	0.390	0.479	0.541	0.484	0.539	0.522	0.4924	11.55
32)		Cyclohexane	0.286	0.340	0.383	0.349	0.398	0.368	0.3540	11.11

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Method File : P9121121W.M
Title : PIANO VOLATILES
Last Update : Sun Dec 12 09:32:29 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

		Compound	2	5	50	100	200	20	Avg	%RSD
33)		2-Methylhexane	0.331	0.413	0.465	0.426	0.468	0.461	0.4273	12.22
34)	M	Benzene	0.682	0.834	0.953	0.890	1.008	0.874	0.8736	12.83
35)		2,3-Dimethylpentane	0.297	0.348	0.382	0.346	0.384	0.378	0.3559	9.35
36)		Thiophene	0.363	0.430	0.512	0.481	0.546	0.448	0.4634	13.96
37)		1,1-Dimethylcyclopentane	0.167	0.208	0.252	0.233	0.260	0.227	0.2244	15.05
38)		3-Methylhexane	0.311	0.365	0.393	0.362	0.400	0.383	0.3691	8.69
39)		TAME	0.829	0.702	0.696	0.665	0.745	0.683	0.7199	8.30
40)		cis-1,3-Dimethylcyclopentane	0.283	0.267	0.321	0.298	0.331	0.298	0.2997	7.83
41)		3-Ethylpentane	0.412	0.467	0.521	0.481	0.518	0.512	0.4853	8.60
43)		1-Heptene/trans-1,2-DMCP	0.141	0.174	0.184	0.174	0.187	0.177	0.1728	9.64
44)		Isooctane	0.705	0.896	0.959	0.894	0.958	0.945	0.8927	10.82
45)		trans-3-Heptene	0.275	0.296	0.304	0.279	0.302	0.310	0.2943	4.77
46)		Heptane	0.244	0.309	0.350	0.330	0.333	0.339	0.3175	12.13
48)		trans-2-Heptene	0.182	0.253	0.302	0.275	0.297	0.285	0.2655	16.72
49)		cis-2-Heptene	0.183	0.230	0.272	0.266	0.277	0.253	0.2469	14.37
50)		2,2-Dimethylhexane	0.697	0.856	0.949	0.959	0.969	0.934	0.8940	11.69
51)		Methylcyclohexane	0.312	0.372	0.423	0.417	0.432	0.407	0.3938	11.45
52)		2,5-Dimethylhexane	0.331	0.427	0.472	0.473	0.473	0.462	0.4396	12.72
53)		2,4-Dimethylhexane	0.291	0.353	0.367	0.323	0.319	0.368	0.3366	9.18
54)		Ethylcyclopentane	0.255	0.312	0.357	0.354	0.363	0.341	0.3302	12.43
55)		2,2,3-Trimethylpentane	0.571	0.684	0.777	0.775	0.773	0.734	0.7190	11.26
57)		2,3,4-Trimethylpentane	0.404	0.491	0.549	0.545	0.535	0.525	0.5081	10.82
58)		2,3,3-Trimethylpentane	0.308	0.407	0.454	0.452	0.437	0.440	0.4164	13.39
59)		2,3-Dimethylhexane	0.354	0.425	0.506	0.493	0.484	0.464	0.4544	12.47
60)		2-Methylheptane	0.293	0.382	0.437	0.440	0.422	0.422	0.3992	13.97
61)		4-Methylheptane	0.422	0.466	0.551	0.550	0.535	0.534	0.5098	10.42
62)	S	Toluene-d8 (surr)	1.143	1.210	1.200	1.168	1.244	1.192	1.1927	2.93
63)		3-Methylheptane	0.413	0.394	0.372	0.379	0.356	0.396	0.3849	5.28
64)	S	2-Bromo-1-chloropropane (...	0.224	0.269	0.343	0.345	0.362	0.322	0.3110	17.16
65)		3-Ethylhexane	0.471	0.522	0.595	0.611	0.578	0.561	0.5562	9.33
66)	M	Toluene	0.776	0.931	1.026	1.004	1.053	0.980	0.9618	10.40
67)		2-Methylthiophene	0.594	0.693	0.812	0.800	0.855	0.771	0.7543	12.62
68)		trans-1,4-Dimethylcyclohe...	0.357	0.434	0.485	0.492	0.484	0.476	0.4544	11.48

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Method File : P9121121W.M
Title : PIANO VOLATILES
Last Update : Sun Dec 12 09:32:29 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

		Compound	2	5	50	100	200	20	Avg	%RSD
69)		3-Methylthiophene	0.585	0.705	0.828	0.813	0.862	0.775	0.7613	13.39
70)		1-Octene	0.128	0.171	0.204	0.213	0.204	0.192	0.1853	17.04
71)		Octane	0.344	0.407	0.463	0.473	0.445	0.451	0.4305	11.14
72)		trans-1,2-Dimethylcyclohe...	0.279	0.318	0.367	0.368	0.346	0.354	0.3386	10.13
73)		1,2-Dibromoethane	0.183	0.203	0.251	0.255	0.269	0.237	0.2330	14.26
75)		cis-2-Octene	0.193	0.255	0.312	0.311	0.298	0.288	0.2762	16.55
76)		Isopropylcyclopentane	0.326	0.370	0.437	0.441	0.417	0.428	0.4034	11.34
77)		cis-1,2-Dimethylcyclohexane	0.271	0.324	0.369	0.378	0.352	0.354	0.3412	11.44
78)		2,5-Dimethylheptane	0.445	0.505	0.646	0.664	0.613	0.608	0.5802	14.89
79)		3,5-Dimethylheptane	0.616	0.695	0.781	0.801	0.767	0.779	0.7397	9.58
80)		3,3-Dimethylheptane	0.381	0.415	0.502	0.520	0.475	0.491	0.4638	11.71
81)		1,1,4-Trimethylcyclohexane	0.332	0.379	0.437	0.450	0.419	0.421	0.4066	10.71
82)		2,3-Dimethylheptane	0.446	0.504	0.574	0.601	0.539	0.557	0.5369	10.32
83)		3,4-Dimethylheptane	0.310	0.334	0.363	0.383	0.336	0.353	0.3463	7.37
84)		4-Methyloctane	0.402	0.412	0.547	0.557	0.502	0.564	0.4972	14.74
85)		2-Methyloctane	0.407	0.494	0.503	0.546	0.475	0.450	0.4791	9.92
86)		Ethylbenzene	0.873	1.009	1.198	1.200	1.152	1.125	1.0927	11.76
87)	S	1-Chloro-2-fluorobenzene ...	0.466	0.527	0.616	0.617	0.615	0.587	0.5712	10.89
88)		2-Ethylthiophene	0.617	0.727	0.888	0.896	0.873	0.840	0.8069	13.86
89)		3-Methyloctane	0.619	0.724	0.855	0.905	0.806	0.818	0.7877	12.95
90)		3,3-Diethylpentane	0.747	0.844	0.973	1.018	0.912	0.941	0.9059	10.74
91)		p/m-Xylene	0.669	0.769	0.916	0.918	0.873	0.865	0.8352	11.69
92)		1-Nonene	0.141	0.163	0.219	0.238	0.215	0.197	0.1956	18.81
93)		trans-3-Nonene	0.211	0.254	0.321	0.339	0.302	0.303	0.2885	16.41
94)		cis-3-Nonene	0.227	0.298	0.366	0.380	0.339	0.338	0.3247	17.04
95)		Nonane	0.374	0.424	0.510	0.518	0.462	0.449	0.4563	11.80
96)		Styrene	0.452	0.573	0.757	0.769	0.742	0.702	0.6660	19.05
97)	S	1,4-Dichlorobutane (H/surr)	0.327	0.352	0.448	0.428	0.425	0.420	0.4001	12.16
98)		o-Xylene	0.733	0.784	0.940	0.937	0.881	0.888	0.8603	9.78
99)		2-Nonene	0.219	0.248	0.316	0.339	0.298	0.300	0.2868	15.56
100)		Isopropylcyclohexane	0.331	0.368	0.442	0.467	0.413	0.423	0.4073	12.24
101)	S	4-Bromofluorobenzene (surr)	0.511	0.492	0.511	0.506	0.490	0.514	0.5039	2.10
102)		Isopropylbenzene	0.937	0.983	1.189	1.198	1.101	1.136	1.0907	9.93

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Method File : P9121121W.M
Title : PIANO VOLATILES
Last Update : Sun Dec 12 09:32:29 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

	Compound	2	5	50	100	200	20	Avg	%RSD
103)	3,3-Dimethyloctane	0.535	0.576	0.699	0.753	0.660	0.672	0.6494	12.37
104)	n-Propylbenzene	1.038	1.126	1.443	1.455	1.324	1.342	1.2880	13.20
105)	2-Methylnonane	0.321	0.363	0.459	0.477	0.413	0.439	0.4121	14.51
106)	3-Methylnonane	0.393	0.435	0.555	0.582	0.509	0.533	0.5011	14.56
107)	1-Methyl-3-ethylbenzene	0.881	0.926	1.200	1.200	1.096	1.133	1.0728	12.83
108)	1-Methyl-4-ethylbenzene	0.824	0.913	1.150	1.149	1.046	1.077	1.0265	12.86
109)	1,3,5-Trimethylbenzene	0.730	0.772	1.000	1.001	0.914	0.942	0.8932	12.99
110)	1-Decene	0.145	0.176	0.248	0.259	0.229	0.238	0.2157	20.92
111)	Isobutylcyclohexane	0.379	0.391	0.485	0.508	0.449	0.476	0.4478	11.75
112)	1-Methyl-2-ethylbenzene	0.905	0.953	1.204	1.180	1.084	1.144	1.0782	11.48
113)	Decane	0.341	0.348	0.443	0.449	0.392	0.433	0.4011	12.02
114)	tert-Butylbenzene	0.668	0.696	0.874	0.862	0.781	0.850	0.7882	11.28
115)	1,2,4-Trimethylbenzene	0.780	0.809	1.052	1.038	0.954	1.005	0.9396	12.53
116)	Isobutylbenzene	0.885	0.921	1.200	1.174	1.052	1.140	1.0618	12.58
117)	sec-Butylbenzene	0.994	1.021	1.298	1.269	1.148	1.274	1.1673	11.53
118)	1-Methyl-3-isopropylbenzene	0.828	0.830	1.094	1.073	0.978	1.055	0.9763	12.37
119)	1-Methyl-4-isopropylbenzene	0.822	0.844	1.103	1.071	0.973	1.065	0.9799	12.43
120)	1,2,3-Trimethylbenzene	0.807	0.837	1.079	1.030	0.959	1.032	0.9574	11.69
121)	1-Methyl-2-isopropylbenzene	0.817	0.856	1.105	1.061	0.968	1.067	0.9790	12.23
122)	Indan	0.779	0.790	1.016	0.961	0.900	0.967	0.9022	10.91
123)	1,3-Diethylbenzene	0.508	0.543	0.704	0.677	0.619	0.690	0.6235	13.18
124)	1-Methyl-3-propylbenzene	0.984	1.031	1.338	1.271	1.157	1.315	1.1826	12.66
125)	Indene	0.711	0.777	1.008	0.957	0.919	0.954	0.8876	13.13
126)	1-Methyl-4-propylbenzene	1.170	1.224	1.567	1.503	1.374	1.553	1.3985	12.24
127)	n-Butylbenzene	0.927	0.981	1.249	1.201	1.095	1.237	1.1152	12.28
128)	1,2-Dimethyl-4-ethylbenzene	0.844	0.892	1.143	1.085	0.986	1.137	1.0145	12.59
129)	1,2-Diethylbenzene	0.434	0.431	0.553	0.520	0.478	0.542	0.4930	10.85
130)	1-Methyl-2-propylbenzene	1.061	1.111	1.416	1.339	1.221	1.412	1.2601	12.15
131)	1,4-Dimethyl-2-ethylbenzene	0.827	0.827	1.086	1.018	0.930	1.066	0.9591	12.05
132)	Undecane	0.403	0.426	0.561	0.530	0.444	0.576	0.4900	15.20
133)	1,3-Dimethyl-4-ethylbenzene	0.966	1.018	1.301	1.219	1.111	1.294	1.1516	12.36
134)	1,3-Dimethyl-5-ethylbenzene	0.892	0.923	1.187	1.110	1.012	1.175	1.0499	12.08
135)	1,3-Dimethyl-2-ethylbenzene	0.971	1.024	1.302	1.206	1.101	1.277	1.1467	11.87

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Method File : P9121121W.M
Title : PIANO VOLATILES
Last Update : Sun Dec 12 09:32:29 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

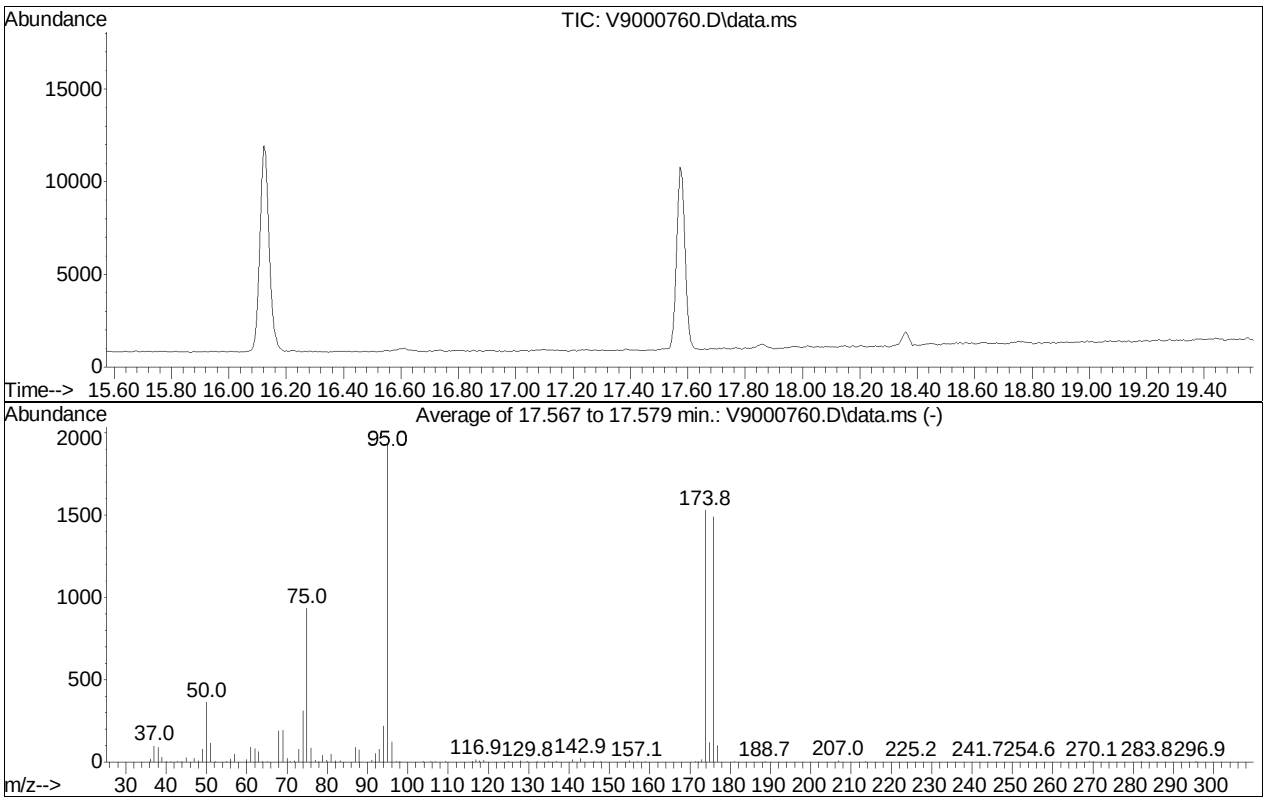
	Compound	2	5	50	100	200	20	Avg	%RSD
136)	1,2-Dimethyl-3-ethylbenzene	0.881	0.902	1.166	1.082	0.983	1.150	1.0274	12.00
137)	1,2,4,5-Tetramethylbenzene	0.926	0.944	1.243	1.157	1.048	1.234	1.0919	12.88
138)	1,2,3,5-Tetramethylbenzene	0.828	0.874	1.125	1.041	0.937	1.117	0.9869	12.79
139)	Pentylbenzene	0.800	0.838	1.060	1.018	0.907	1.100	0.9539	12.95
140)	1,2,3,4-Tetramethylbenzene	1.136	1.179	1.483	1.384	1.239	1.492	1.3188	11.76
141)	1,3-DM-5-tert-Butylbenzene	0.770	0.792	0.967	0.942	0.836	1.006	0.8856	11.18
142)	Dodecane	0.327	0.359	0.407	0.317	0.267	0.461	0.3565	19.42
143)	1,3,5-Triethylbenzene	0.449	0.491	0.600	0.600	0.528	0.635	0.5504	13.23
144)	Naphthalene	1.153	1.223	1.457	1.284	1.219	1.425	1.2935	9.42
145)	Benzothiophene	0.694	0.754	0.904	0.791	0.774	0.874	0.7984	9.77
146)	1,2,4-Triethylbenzene	0.558	0.459	0.553	0.549	0.479	0.585	0.5305	9.36
147)	Hexylbenzene	0.697	0.781	0.902	0.913	0.798	0.971	0.8437	12.09
148)	MMT	0.385	0.420	0.511	0.454	0.419	0.518	0.4512	11.95
149)	Tridecane	0.407	0.438	0.390	0.292	0.268	0.513	0.3845	23.83
150)	2-Methylnaphthalene	0.749	0.777	0.924	0.850	0.795	0.934	0.8382	9.29
151)	1-Methylnaphthalene	0.654	0.696	0.822	0.758	0.703	0.849	0.7469	10.27
152)	Tetradecane	0.360	0.398	0.275	0.221	0.226	0.363	0.3070	24.86
153)	Pentadecane	0.286	0.277	0.175	0.152	0.146	0.219	0.2092	29.53#

(#) = Out of Range

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000760.D
Acq On : 11 Dec 2021 07:49 pm
Operator : VOA9:RY
Sample : WG1582211-1,31
Misc : WG1582211
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Title : PIANO VOLATILES
Last Update : Sun Dec 12 09:32:29 2021



Spectrum Information: Average of 17.567 to 17.579 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.8	365	PASS
75	95	30	60	48.2	936	PASS
95	95	100	100	100.0	1942	PASS
96	95	5	9	6.4	124	PASS
173	174	0.00	2	1.1	17	PASS
174	95	50	100	78.9	1532	PASS
175	174	5	9	7.8	120	PASS
176	174	95	101	97.5	1493	PASS
177	176	5	9	6.7	100	PASS

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000761.D
Acq On : 11 Dec 2021 08:20 pm
Operator : VOA9:RY
Sample : I921121101
Misc : WG1582211
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:31:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.11	117	220011	50.000	ug/L	0.02
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.30	113	52244	46.052	ug/L	0.11
Spiked Amount 50.000	Range 78 - 118		Recovery = 92.10%			
62) Toluene-d8 (surr)	31.29	98	251381	47.591	ug/L	0.03
Spiked Amount 50.000	Range 87 - 113		Recovery = 95.18%			
64) 2-Bromo-1-chloropropan...	31.51	77	1975	1.309	ug/L	0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 2.62%#			
87) 1-Chloro-2-fluorobenze...	40.75	130	4099	1.512	ug/L	0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.02%#			
97) 1,4-Dichlorobutane (H/...	44.00	55	2876	1.458	ug/L	0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 2.92%#			
101) 4-Bromofluorobenzene (...	46.54	95	112419	49.976	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.95%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.97	55	2537M4	1.441	ug/L	
3) Isopentane	8.51	43	1829M3	1.817	ug/L	
4) 1-Pentene	9.17	42	1803M3	1.562	ug/L	
5) 2-Methyl-1-butene	9.49	55	2589M4	1.449	ug/L	
6) Pentane	9.54	43	3205M3	1.888	ug/L	
7) trans-2-Pentene	9.99	55	2678M3	1.390	ug/L	
8) 2-Methyl-1,3-butadiene	10.17	67	1714M4	1.328	ug/L	
9) cis-2-Pentene	10.35	55	2479M4	1.374	ug/L	
11) 2,2-Dimethylbutane	11.40	43	1996M3	1.754	ug/L	
12) 4-Methyl-1-pentene	12.70	43	2114M3	1.471	ug/L	
13) Cyclopentane	13.20	70	1199M3	1.541	ug/L	
14) 2,3-Dimethylbutane	13.20	71	838M3	1.497	ug/L	
15) 2-Methylpentane	13.42	43	3260M3	1.609	ug/L	
16) MTBE	13.71	73	4403	1.525	ug/L	96
17) 3-Methylpentane	14.38	57	2455	1.354	ug/L	92
18) 1-Hexene	14.98	56	1339M3	1.253	ug/L	
19) Hexane	15.57	57	2289	1.414	ug/L	99
20) Diisopropyl ether	15.87	45	4281	1.360	ug/L	94
21) trans-2-Hexene	16.07	55	2366	1.307	ug/L	86
22) 2-Methyl-2-pentene	16.24	69	2410	1.342	ug/L	93
23) cis-2-Hexene	16.80	55	1998	1.232	ug/L	88
25) Ethyl tertiary butyl e...	17.33	59	4232	1.349	ug/L	96
26) 2,2-Dimethylpentane	17.61	57	3411	1.507	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000761.D
Acq On : 11 Dec 2021 08:20 pm
Operator : VOA9:RY
Sample : I921121101
Misc : WG1582211
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:31:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
27) Methylcyclopentane	17.87	56	2819M4	1.403	ug/L		
28) 2,4-Dimethylpentane	18.04	43	2822	1.537	ug/L		96
29) 2,2,3-Trimethylbutane	18.66	57	2964M3	1.443	ug/L		
30) 1,2-Dichloroethane	19.36	62	2149M3	1.512	ug/L		
31) 3,3-Dimethylpentane	20.31	43	3430	1.442	ug/L		92
32) Cyclohexane	20.79	56	2521M4	1.497	ug/L		
33) 2-Methylhexane	21.21	43	2916	1.426	ug/L		96
34) Benzene	21.41	78	6004M4	1.432	ug/L		
35) 2,3-Dimethylpentane	21.51	56	2618M4	1.557	ug/L		
36) Thiophene	21.85	84	3197M4	1.419	ug/L		
37) 1,1-Dimethylcyclopentane	21.97	83	1467M4	1.323	ug/L		
38) 3-Methylhexane	22.00	43	2740M4	1.583	ug/L		
39) TAME	22.40	73	7296	2.383	ug/L		80
40) cis-1,3-Dimethylcyclop...	22.80	70	2490M3	1.763	ug/L		
41) 3-Ethylpentane	22.96	43	3630M4	1.583	ug/L		
43) 1-Heptene/trans-1,2-DMCP	23.33	70	2475M4	3.062	ug/L		
44) Isooctane	23.45	57	6202	1.470	ug/L		94
45) trans-3-Heptene	24.07	41	2423M6	1.813	ug/L		
46) Heptane	24.19	43	2148	1.393	ug/L		87
48) trans-2-Heptene	24.83	56	1602	1.207	ug/L		93
49) cis-2-Heptene	25.62	56	1612M4	1.349	ug/L		
50) 2,2-Dimethylhexane	26.38	57	6135	1.469	ug/L		99
51) Methylcyclohexane	26.62	83	2747M4	1.476	ug/L		
52) 2,5-Dimethylhexane	27.27	57	2915	1.404	ug/L		97
53) 2,4-Dimethylhexane	27.54	57	2558M4	1.586	ug/L		
54) Ethylcyclopentane	27.57	69	2246M4	1.428	ug/L		
55) 2,2,3-Trimethylpentane	27.79	57	5025	1.469	ug/L		97
57) 2,3,4-Trimethylpentane	29.31	43	3557	1.472	ug/L		93
58) 2,3,3-Trimethylpentane	29.91	43	2711	1.357	ug/L		93
59) 2,3-Dimethylhexane	30.15	43	3119	1.400	ug/L		91
60) 2-Methylheptane	30.59	57	2582	1.344	ug/L		88
61) 4-Methylheptane	30.75	43	3715M4	1.532	ug/L		
63) 3-Methylheptane	31.31	43	3638	2.224	ug/L	#	75
65) 3-Ethylhexane	31.44	43	4142M4	1.582	ug/L		
66) Toluene	31.66	91	6831	1.512	ug/L		89
67) 2-Methylthiophene	31.83	97	5229	1.463	ug/L		95
68) trans-1,4-Dimethylcycl...	32.31	97	3140	1.472	ug/L		93
69) 3-Methylthiophene	32.59	97	5145	1.412	ug/L		99
70) 1-Octene	33.03	55	1128M4	1.254	ug/L		
71) Octane	33.83	43	3027	1.486	ug/L		91
72) trans-1,2-Dimethylcycl...	34.12	55	2456M4	1.522	ug/L		

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000761.D
Acq On : 11 Dec 2021 08:20 pm
Operator : VOA9:RY
Sample : I921121101
Misc : WG1582211
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:31:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
73) 1,2-Dibromoethane	34.36	107	1612M4	1.457	ug/L		
75) cis-2-Octene	35.22	55	1699	1.238	ug/L		94
76) Isopropylcyclopentane	35.37	68	2869M4	1.491	ug/L		
77) cis-1,2-Dimethylcycloh...	37.10	55	2385M4	1.469	ug/L		
78) 2,5-Dimethylheptane	37.44	57	3913	1.376	ug/L		96
79) 3,5-Dimethylheptane	37.56	57	5418M4	1.576	ug/L		
80) 3,3-Dimethylheptane	37.84	57	3349	1.517	ug/L		97
81) 1,1,4-Trimethylcyclohe...	38.38	69	2926	1.521	ug/L	#	77
82) 2,3-Dimethylheptane	39.51	43	3922M4	1.553	ug/L		
83) 3,4-Dimethylheptane	39.80	43	2724M4	1.706	ug/L		
84) 4-Methyloctane	40.12	43	3538M4	1.469	ug/L		
85) 2-Methyloctane	40.22	43	3582M3	1.618	ug/L		
86) Ethylbenzene	40.72	91	7680	1.457	ug/L		91
88) 2-Ethylthiophene	40.87	97	5427	1.389	ug/L		96
89) 3-Methyloctane	40.85	57	5445	1.448	ug/L		95
90) 3,3-Diethylpentane	41.86	57	6576	1.535	ug/L		99
91) p/m-Xylene	41.99	91	11783	2.922	ug/L		92
92) 1-Nonene	42.64	56	1241M3	1.286	ug/L		
93) trans-3-Nonene	43.05	55	1856	1.314	ug/L		84
94) cis-3-Nonene	43.33	55	2001M6	1.243	ug/L		
95) Nonane	43.41	43	3294M4	1.467	ug/L		
96) Styrene	43.87	104	3979	1.194	ug/L		99
98) o-Xylene	44.24	91	6452	1.560	ug/L		99
99) 2-Nonene	44.69	55	1928M4	1.385	ug/L		
100) Isopropylcyclohexane	45.96	83	2909M4	1.496	ug/L		
102) Isopropylbenzene	46.58	105	8247	1.576	ug/L		93
103) 3,3-Dimethyloctane	47.07	71	4710	1.531	ug/L		95
104) n-Propylbenzene	49.01	91	9139	1.440	ug/L		98
105) 2-Methylnonane	49.04	43	2824	1.399	ug/L		88
106) 3-Methylnonane	49.45	57	3459	1.416	ug/L		88
107) 1-Methyl-3-ethylbenzene	49.59	105	7754	1.469	ug/L		92
108) 1-Methyl-4-ethylbenzene	49.75	105	7253	1.433	ug/L		100
109) 1,3,5-Trimethylbenzene	50.29	105	6425	1.460	ug/L		90
110) 1-Decene	50.42	41	1273	1.166	ug/L		98
111) Isobutylcyclohexane	50.57	83	3332	1.560	ug/L		93
112) 1-Methyl-2-ethylbenzene	50.61	105	7960	1.502	ug/L		98
113) Decane	50.78	43	3005	1.541	ug/L		94
114) tert-Butylbenzene	51.04	119	5880	1.529	ug/L		96
115) 1,2,4-Trimethylbenzene	51.44	105	6861	1.482	ug/L		96
116) Isobutylbenzene	51.64	91	7784M6	1.474	ug/L		
117) sec-Butylbenzene	51.69	105	8751	1.533	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000761.D
Acq On : 11 Dec 2021 08:20 pm
Operator : VOA9:RY
Sample : I921121101
Misc : WG1582211
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:31:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
118) 1-Methyl-3-isopropylbe...	52.07	119	7286	1.513	ug/L	96
119) 1-Methyl-4-isopropylbe...	52.27	119	7233	1.490	ug/L	96
120) 1,2,3-Trimethylbenzene	52.53	105	7106	1.497	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.73	119	7193	1.480	ug/L	95
122) Indan	52.82	117	6853	1.532	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	4469	1.443	ug/L	97
124) 1-Methyl-3-propylbenzene	53.08	105	8661	1.471	ug/L	99
125) Indene	53.25	115	6259	1.411	ug/L	96
126) 1-Methyl-4-propylbenzene	53.23	105	10293	1.493	ug/L	96
127) n-Butylbenzene	53.23	91	8161	1.485	ug/L	95
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	7427	1.477	ug/L	96
129) 1,2-Diethylbenzene	53.44	119	3818	1.568	ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	9335	1.498	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	7281	1.524	ug/L	98
132) Undecane	53.97	57	3550	1.439	ug/L	97
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	8500	1.485	ug/L	97
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	7851	1.503	ug/L	94
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	8541	1.491	ug/L	96
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	7756	1.512	ug/L	100
137) 1,2,4,5-Tetramethylben...	55.15	119	8145	1.489	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	7283	1.471	ug/L	97
139) Pentylbenzene	55.72	91	7040	1.509	ug/L	97
140) 1,2,3,4-Tetramethylben...	56.05	119	10000	1.533	ug/L	99
141) 1,3-DM-5-tert-Butylben...	56.04	147	6772	1.591	ug/L	100
142) Dodecane	56.20	43	2878	1.606	ug/L	95
143) 1,3,5-Triethylbenzene	56.93	147	3948	1.496	ug/L	89
144) Naphthalene	57.08	128	10145	1.583	ug/L	99
145) Benzothiophene	57.18	134	6110	1.536	ug/L	98
146) 1,2,4-Triethylbenzene	57.50	147	4908	2.015	ug/L	90
147) Hexylbenzene	58.00	91	6133	1.545	ug/L	93
148) MMT	58.26	134	3387	1.506	ug/L	98
149) Tridecane	58.32	57	3578	2.085	ug/L	97
150) 2-Methylnaphthalene	59.88	142	6589	1.621	ug/L	81
151) 1-Methylnaphthalene	60.36	142	5754	1.590	ug/L	100
152) Tetradecane	60.64	57	3164	2.614	ug/L	89
153) Pentadecane	63.47	57	2520	3.276	ug/L	97

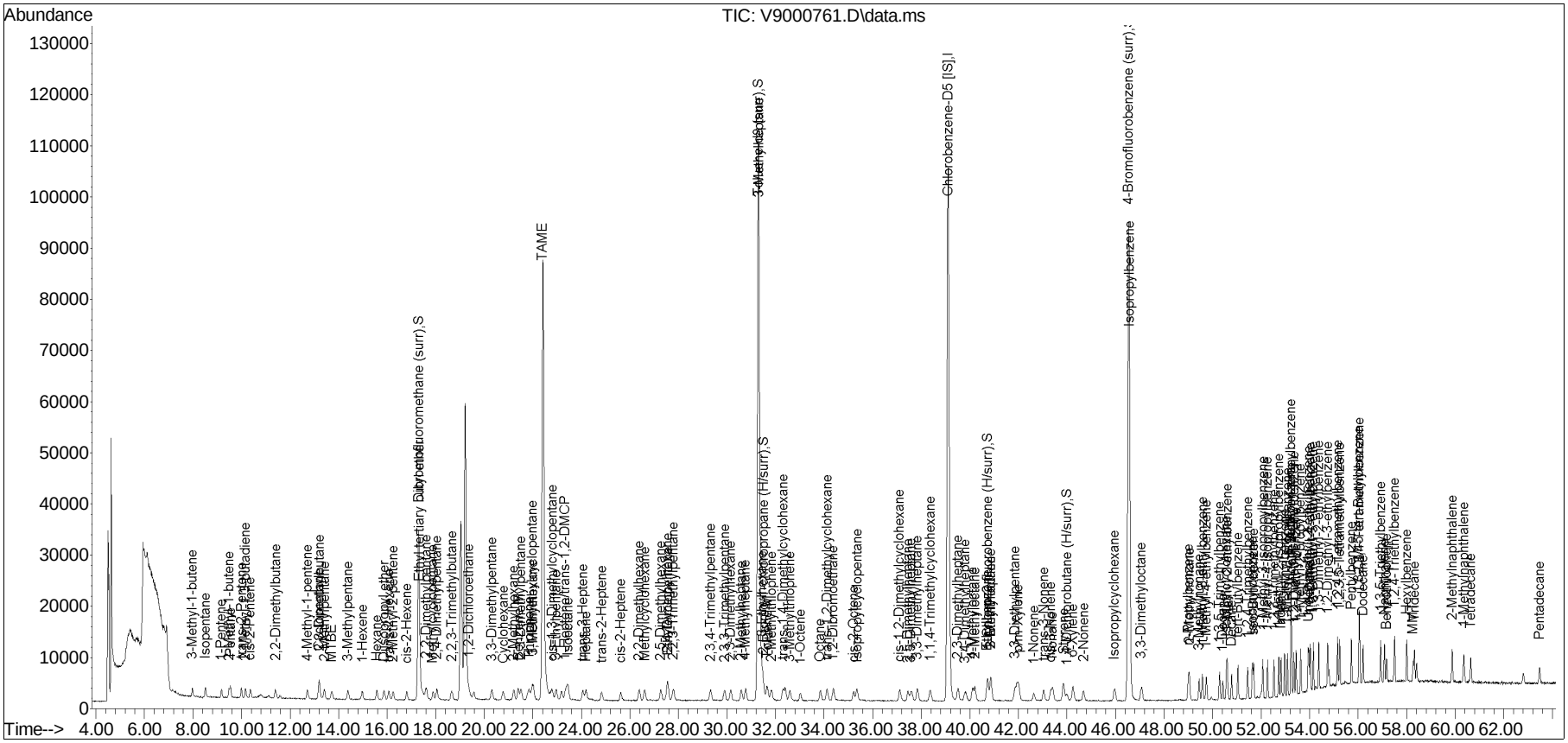
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000761.D
Acq On : 11 Dec 2021 08:20 pm
Operator : VOA9:RY
Sample : I921121101
Misc : WG1582211
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 12 09:31:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000762.D
Acq On : 11 Dec 2021 09:32 pm
Operator : VOA9:RY
Sample : I921121102
Misc : WG1582211
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 12 09:21:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	262717	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.19	113	68044	50.229	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 100.46%			
62) Toluene-d8 (surr)	31.25	98	317832	50.391	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.78%			
64) 2-Bromo-1-chloropropan...	31.47	77	7061	3.919	ug/L	-0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 7.84%#			
87) 1-Chloro-2-fluorobenze...	40.72	130	13843	4.275	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.55%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	9248	3.925	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 7.85%#			
101) 4-Bromofluorobenzene (...	46.54	95	129212	48.104	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 96.21%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.77	55	9966	4.741	ug/L	98
3) Isopentane	8.31	43	5855	4.870	ug/L	92
4) 1-Pentene	8.98	42	6758	4.903	ug/L	94
5) 2-Methyl-1-butene	9.29	55	10065	4.717	ug/L	96
6) Pentane	9.34	43	10791	5.322	ug/L	93
7) trans-2-Pentene	9.80	55	10966	4.766	ug/L	97
8) 2-Methyl-1,3-butadiene	9.98	67	6742	4.375	ug/L	93
9) cis-2-Pentene	10.18	55	10149	4.712	ug/L	92
10) Tertiary butanol	10.81	59	10368M4	26.063	ug/L	
11) 2,2-Dimethylbutane	11.23	43	7061	5.197	ug/L	98
12) 4-Methyl-1-pentene	12.56	43	7783	4.534	ug/L	90
13) Cyclopentane	13.04	70	4289	4.615	ug/L	96
14) 2,3-Dimethylbutane	13.03	71	3127	4.678	ug/L #	81
15) 2-Methylpentane	13.26	43	10939	4.522	ug/L	95
16) MTBE	13.59	73	15266	4.427	ug/L	95
17) 3-Methylpentane	14.24	57	9944	4.594	ug/L	95
18) 1-Hexene	14.84	56	5716	4.478	ug/L	95
19) Hexane	15.44	57	8740	4.522	ug/L	98
20) Diisopropyl ether	15.77	45	15349	4.083	ug/L	97
21) trans-2-Hexene	15.94	55	9562	4.424	ug/L	100
22) 2-Methyl-2-pentene	16.12	69	9908	4.622	ug/L	98
23) cis-2-Hexene	16.69	55	8286	4.278	ug/L	99
25) Ethyl tertiary butyl e...	17.24	59	15082	4.027	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000762.D
Acq On : 11 Dec 2021 09:32 pm
Operator : VOA9:RY
Sample : I921121102
Misc : WG1582211
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 12 09:21:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	17.50	57	12625	4.671 ug/L	97
27) Methylcyclopentane	17.77	56	11144M4	4.646 ug/L	
28) 2,4-Dimethylpentane	17.94	43	9903	4.518 ug/L	94
29) 2,2,3-Trimethylbutane	18.55	57	11062	4.510 ug/L	98
30) 1,2-Dichloroethane	19.26	62	6402	3.771 ug/L	98
31) 3,3-Dimethylpentane	20.22	43	12581	4.429 ug/L	94
32) Cyclohexane	20.69	56	8932	4.443 ug/L	95
33) 2-Methylhexane	21.13	43	10840	4.439 ug/L	97
34) Benzene	21.32	78	21919M4	4.377 ug/L	
35) 2,3-Dimethylpentane	21.43	56	9131	4.549 ug/L	96
36) Thiophene	21.77	84	11303	4.202 ug/L	96
37) 1,1-Dimethylcyclopentane	21.89	83	5470	4.130 ug/L	94
38) 3-Methylhexane	21.94	43	9577	4.633 ug/L	92
39) TAME	22.33	73	18450	5.046 ug/L	89
40) cis-1,3-Dimethylcyclop...	22.72	70	7026	4.167 ug/L	97
41) 3-Ethylpentane	22.89	43	12280	4.486 ug/L	94
43) 1-Heptene/trans-1,2-DMCP	23.29	70	9139M4	9.469 ug/L	
44) Isooctane	23.38	57	23539	4.671 ug/L	98
45) trans-3-Heptene	24.00	41	7767	4.867 ug/L	96
46) Heptane	24.14	43	8105	4.402 ug/L	97
48) trans-2-Heptene	24.78	56	6652	4.199 ug/L	90
49) cis-2-Heptene	25.57	56	6038M4	4.232 ug/L	
50) 2,2-Dimethylhexane	26.33	57	22491	4.511 ug/L	98
51) Methylcyclohexane	26.54	83	9767M4	4.394 ug/L	
52) 2,5-Dimethylhexane	27.22	57	11225	4.529 ug/L	98
53) 2,4-Dimethylhexane	27.47	57	9267	4.812 ug/L	85
54) Ethylcyclopentane	27.52	69	8185	4.359 ug/L	91
55) 2,2,3-Trimethylpentane	27.75	57	17974	4.402 ug/L	98
57) 2,3,4-Trimethylpentane	29.28	43	12898	4.470 ug/L	94
58) 2,3,3-Trimethylpentane	29.86	43	10680	4.476 ug/L	94
59) 2,3-Dimethylhexane	30.11	43	11157	4.194 ug/L	98
60) 2-Methylheptane	30.55	57	10036	4.375 ug/L	96
61) 4-Methylheptane	30.73	43	12254	4.232 ug/L	97
63) 3-Methylheptane	31.30	43	10346	5.298 ug/L	92
65) 3-Ethylhexane	31.43	43	13712	4.386 ug/L	92
66) Toluene	31.62	91	24455	4.535 ug/L	99
67) 2-Methylthiophene	31.79	97	18196	4.264 ug/L	99
68) trans-1,4-Dimethylcycl...	32.27	97	11393	4.474 ug/L	94
69) 3-Methylthiophene	32.56	97	18518	4.255 ug/L	94
70) 1-Octene	32.99	55	4483	4.175 ug/L	94
71) Octane	33.81	43	10695	4.397 ug/L	94

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000762.D
Acq On : 11 Dec 2021 09:32 pm
Operator : VOA9:RY
Sample : I921121102
Misc : WG1582211
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 12 09:21:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.11	55	8361	4.338	ug/L	91
73) 1,2-Dibromoethane	34.34	107	5327	4.033	ug/L	83
75) cis-2-Octene	35.19	55	6704	4.091	ug/L	94
76) Isopropylcyclopentane	35.33	68	9733	4.235	ug/L	97
77) cis-1,2-Dimethylcycloh...	37.11	55	8500	4.386	ug/L	92
78) 2,5-Dimethylheptane	37.43	57	13268	3.909	ug/L	94
79) 3,5-Dimethylheptane	37.59	57	18258M4	4.448	ug/L	
80) 3,3-Dimethylheptane	37.84	57	10899	4.135	ug/L	99
81) 1,1,4-Trimethylcyclohe...	38.36	69	9960	4.335	ug/L	98
82) 2,3-Dimethylheptane	39.50	43	13242	4.391	ug/L	96
83) 3,4-Dimethylheptane	39.81	43	8774M4	4.603	ug/L	
84) 4-Methyloctane	40.10	43	10814	3.759	ug/L	97
85) 2-Methyloctane	40.18	43	12984M3	4.913	ug/L	
86) Ethylbenzene	40.71	91	26506	4.213	ug/L	96
88) 2-Ethylthiophene	40.85	97	19107	4.095	ug/L	95
89) 3-Methyloctane	40.85	57	19024	4.235	ug/L	100
90) 3,3-Diethylpentane	41.84	57	22185	4.338	ug/L	98
91) p/m-Xylene	41.97	91	40415	8.393	ug/L	96
92) 1-Nonene	42.62	56	4287	3.721	ug/L	96
93) trans-3-Nonene	43.03	55	6684	3.962	ug/L	100
94) cis-3-Nonene	43.33	55	7839M6	4.078	ug/L	
95) Nonane	43.40	43	11151M6	4.159	ug/L	
96) Styrene	43.83	104	15051	3.782	ug/L	99
98) o-Xylene	44.24	91	20589	4.170	ug/L	96
99) 2-Nonene	44.68	55	6522	3.922	ug/L	89
100) Isopropylcyclohexane	45.97	83	9673	4.166	ug/L	92
102) Isopropylbenzene	46.57	105	25820	4.132	ug/L	99
103) 3,3-Dimethyloctane	47.07	71	15140	4.122	ug/L	99
104) n-Propylbenzene	49.00	91	29581	3.903	ug/L	98
105) 2-Methylnonane	49.04	43	9539	3.956	ug/L	97
106) 3-Methylnonane	49.45	57	11420	3.916	ug/L	92
107) 1-Methyl-3-ethylbenzene	49.58	105	24337	3.860	ug/L	96
108) 1-Methyl-4-ethylbenzene	49.74	105	23981	3.967	ug/L	98
109) 1,3,5-Trimethylbenzene	50.29	105	20276	3.859	ug/L	98
110) 1-Decene	50.42	41	4625	3.547	ug/L	94
111) Isobutylcyclohexane	50.57	83	10261	4.023	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.60	105	25024	3.955	ug/L	99
113) Decane	50.78	43	9133	3.922	ug/L	97
114) tert-Butylbenzene	51.04	119	18272	3.979	ug/L	97
115) 1,2,4-Trimethylbenzene	51.44	105	21261	3.847	ug/L	97
116) Isobutylbenzene	51.63	91	24190M6	3.836	ug/L	

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000762.D
Acq On : 11 Dec 2021 09:32 pm
Operator : VOA9:RY
Sample : I921121102
Misc : WG1582211
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 12 09:21:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	26820	3.933	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	21806	3.793	ug/L	97
119) 1-Methyl-4-isopropylbe...	52.26	119	22186	3.827	ug/L	100
120) 1,2,3-Trimethylbenzene	52.53	105	21982	3.878	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.72	119	22486	3.874	ug/L	97
122) Indan	52.82	117	20764	3.888	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	14255	3.855	ug/L	95
124) 1-Methyl-3-propylbenzene	53.08	105	27093	3.855	ug/L	98
125) Indene	53.24	115	20421	3.856	ug/L	95
126) 1-Methyl-4-propylbenzene	53.23	105	32164	3.906	ug/L	96
127) n-Butylbenzene	53.23	91	25779	3.928	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	23429	3.901	ug/L	100
129) 1,2-Diethylbenzene	53.44	119	11331	3.897	ug/L	97
130) 1-Methyl-2-propylbenzene	53.63	105	29198	3.924	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	21717	3.806	ug/L	98
132) Undecane	53.97	57	11192	3.798	ug/L	96
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	26745	3.913	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	24261	3.890	ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	26901	3.934	ug/L	97
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	23709	3.871	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	24794	3.797	ug/L	100
138) 1,2,3,5-Tetramethylben...	55.24	119	22959	3.884	ug/L	99
139) Pentylbenzene	55.72	91	22003	3.949	ug/L	97
140) 1,2,3,4-Tetramethylben...	56.05	119	30972	3.975	ug/L	97
141) 1,3-DM-5-tert-Butylben...	56.04	147	20813	4.095	ug/L	100
142) Dodecane	56.20	43	9427	4.405	ug/L	92
143) 1,3,5-Triethylbenzene	56.93	147	12890	4.091	ug/L	100
144) Naphthalene	57.08	128	32138	4.199	ug/L	100
145) Benzothiophene	57.18	134	19797	4.167	ug/L	98
146) 1,2,4-Triethylbenzene	57.50	147	12067	4.149	ug/L	97
147) Hexylbenzene	58.00	91	20531	4.331	ug/L	97
148) MMT	58.26	134	11027	4.107	ug/L	98
149) Tridecane	58.32	57	11503	5.613	ug/L	96
150) 2-Methylnaphthalene	59.86	142	20420	4.208	ug/L	92
151) 1-Methylnaphthalene	60.36	142	18281	4.230	ug/L	100
152) Tetradecane	60.64	57	10446	7.226	ug/L	96
153) Pentadecane	63.47	57	7278	7.924	ug/L	93

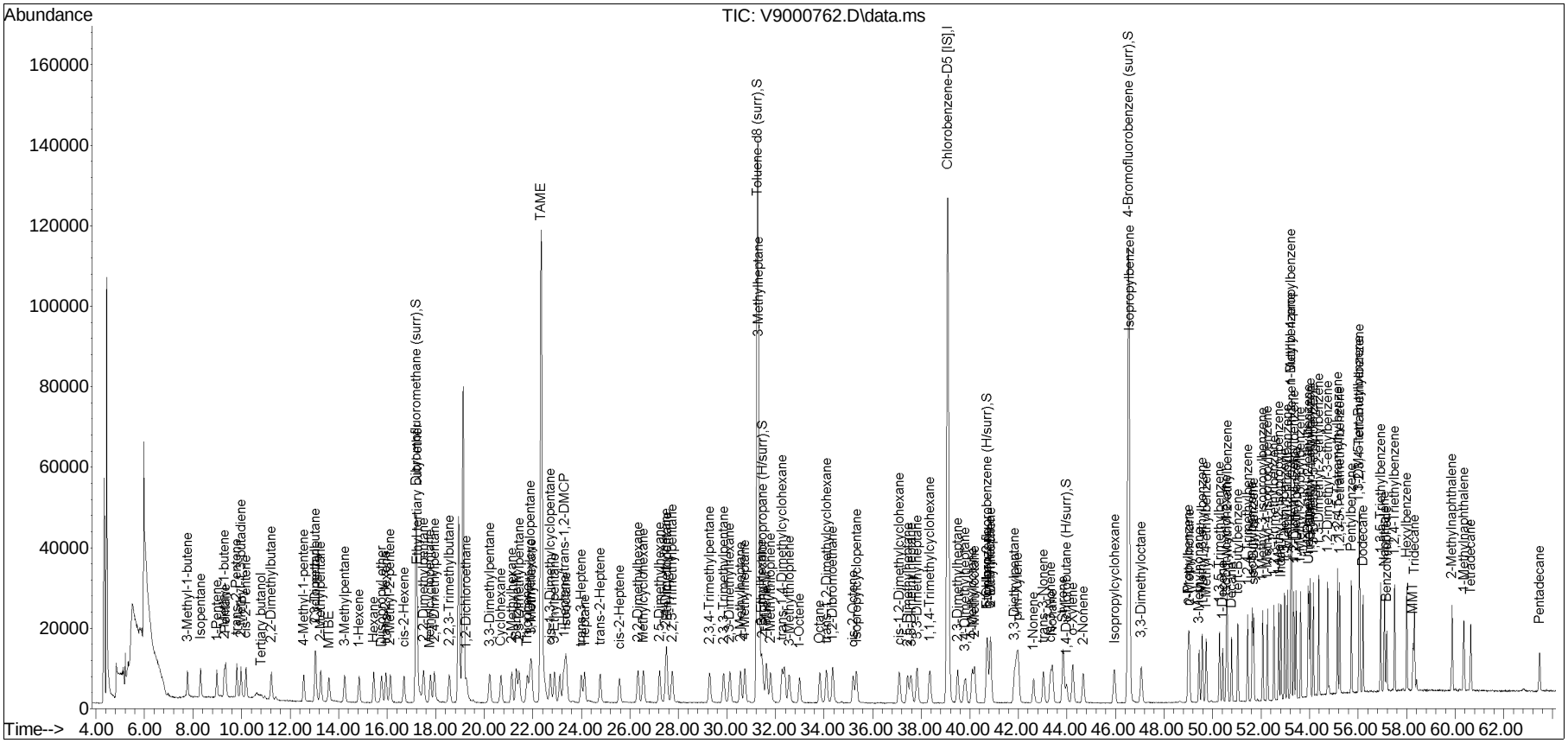
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000762.D
Acq On : 11 Dec 2021 09:32 pm
Operator : VOA9:RY
Sample : I921121102
Misc : WG1582211
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 12 09:21:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000763.D
Acq On : 11 Dec 2021 10:43 pm
Operator : VOA9:RY
Sample : I921121103
Misc : WG1582211
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 09:19:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	248234	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.19	113	63920	49.938	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.88%			
62) Toluene-d8 (surr)	31.26	98	295819	49.637	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.27%			
64) 2-Bromo-1-chloropropan...	31.48	77	32007	18.799	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 37.60%#			
87) 1-Chloro-2-fluorobenze...	40.71	130	58256	19.042	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 38.08%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	41729	18.745	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 37.49%#			
101) 4-Bromofluorobenzene (...	46.54	95	127545	50.254	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.51%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.76	55	39151	19.713	ug/L	98
3) Isopentane	8.29	43	23030	20.272	ug/L	97
4) 1-Pentene	8.97	42	25392	19.495	ug/L	98
5) 2-Methyl-1-butene	9.28	55	40426	20.053	ug/L	100
6) Pentane	9.34	43	38489	20.091	ug/L	98
7) trans-2-Pentene	9.79	55	42797	19.685	ug/L	99
8) 2-Methyl-1,3-butadiene	9.97	67	27744	19.053	ug/L	99
9) cis-2-Pentene	10.17	55	40517	19.909	ug/L	99
10) Tertiary butanol	10.79	59	34665M4	92.226	ug/L	
11) 2,2-Dimethylbutane	11.23	43	25426	19.806	ug/L	99
12) 4-Methyl-1-pentene	12.56	43	31408	19.365	ug/L	98
13) Cyclopentane	13.05	70	17050	19.416	ug/L	94
14) 2,3-Dimethylbutane	13.04	71	12349	19.551	ug/L #	94
15) 2-Methylpentane	13.26	43	44916	19.653	ug/L	97
16) MTBE	13.59	73	61467	18.864	ug/L	99
17) 3-Methylpentane	14.24	57	40138	19.624	ug/L	98
18) 1-Hexene	14.83	56	22984	19.056	ug/L	97
19) Hexane	15.45	57	35443	19.409	ug/L	97
20) Diisopropyl ether	15.77	45	63897	17.988	ug/L	96
21) trans-2-Hexene	15.94	55	39865	19.520	ug/L	97
22) 2-Methyl-2-pentene	16.12	69	39511	19.505	ug/L	99
23) cis-2-Hexene	16.68	55	35965	19.652	ug/L	99
25) Ethyl tertiary butyl e...	17.24	59	63952	18.070	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000763.D
Acq On : 11 Dec 2021 10:43 pm
Operator : VOA9:RY
Sample : I921121103
Misc : WG1582211
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 09:19:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.50	57	50956	19.951	ug/L	98
27) Methylcyclopentane	17.77	56	43944	19.390	ug/L	98
28) 2,4-Dimethylpentane	17.94	43	40930	19.763	ug/L	97
29) 2,2,3-Trimethylbutane	18.55	57	44977	19.407	ug/L	99
30) 1,2-Dichloroethane	19.25	62	28580	17.817	ug/L	97
31) 3,3-Dimethylpentane	20.22	43	51878	19.330	ug/L	99
32) Cyclohexane	20.69	56	36581	19.256	ug/L	98
33) 2-Methylhexane	21.13	43	45769	19.836	ug/L	99
34) Benzene	21.32	78	86770	18.336	ug/L	99
35) 2,3-Dimethylpentane	21.43	56	37554	19.799	ug/L	100
36) Thiophene	21.77	84	44437	17.482	ug/L	99
37) 1,1-Dimethylcyclopentane	21.89	83	22507	17.986	ug/L	99
38) 3-Methylhexane	21.96	43	38060	19.488	ug/L	96
39) TAME	22.32	73	67824	19.631	ug/L	99
40) cis-1,3-Dimethylcyclop...	22.72	70	29574	18.562	ug/L	97
41) 3-Ethylpentane	22.89	43	50812	19.645	ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.27	70	35190	38.588	ug/L	99
44) Isooctane	23.38	57	93789	19.698	ug/L	94
45) trans-3-Heptene	23.99	41	30752	20.395	ug/L	99
46) Heptane	24.13	43	33682	19.360	ug/L	97
48) trans-2-Heptene	24.77	56	28319	18.917	ug/L	99
49) cis-2-Heptene	25.56	56	25147	18.655	ug/L	99
50) 2,2-Dimethylhexane	26.33	57	92721	19.680	ug/L	99
51) Methylcyclohexane	26.56	83	40421	19.247	ug/L	98
52) 2,5-Dimethylhexane	27.22	57	45864	19.585	ug/L	96
53) 2,4-Dimethylhexane	27.49	57	36572	20.098	ug/L	99
54) Ethylcyclopentane	27.52	69	33825	19.063	ug/L	98
55) 2,2,3-Trimethylpentane	27.74	57	72847	18.881	ug/L	99
57) 2,3,4-Trimethylpentane	29.28	43	52121	19.117	ug/L	97
58) 2,3,3-Trimethylpentane	29.85	43	43678	19.375	ug/L	99
59) 2,3-Dimethylhexane	30.13	43	46035	18.313	ug/L	96
60) 2-Methylheptane	30.55	57	41867	19.318	ug/L	96
61) 4-Methylheptane	30.73	43	53043	19.387	ug/L	99
63) 3-Methylheptane	31.30	43	39285	21.289	ug/L	98
65) 3-Ethylhexane	31.42	43	55690	18.851	ug/L	99
66) Toluene	31.62	91	97315	19.097	ug/L	100
67) 2-Methylthiophene	31.79	97	76590	18.993	ug/L	98
68) trans-1,4-Dimethylcycl...	32.26	97	47221	19.624	ug/L	98
69) 3-Methylthiophene	32.55	97	76915	18.704	ug/L	98
70) 1-Octene	32.99	55	19034	18.762	ug/L	98
71) Octane	33.83	43	44801	19.496	ug/L	97

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000763.D
Acq On : 11 Dec 2021 10:43 pm
Operator : VOA9:RY
Sample : I921121103
Misc : WG1582211
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 09:19:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.09	55	35180	19.320	ug/L	99
73) 1,2-Dibromoethane	34.33	107	23494	18.824	ug/L	100
75) cis-2-Octene	35.19	55	28636	18.494	ug/L	99
76) Isopropylcyclopentane	35.33	68	42487	19.566	ug/L	97
77) cis-1,2-Dimethylcycloh...	37.10	55	35156	19.197	ug/L	99
78) 2,5-Dimethylheptane	37.43	57	60408	18.834	ug/L	98
79) 3,5-Dimethylheptane	37.57	57	77313M4	19.932	ug/L	
80) 3,3-Dimethylheptane	37.82	57	48725	19.565	ug/L	99
81) 1,1,4-Trimethylcyclohe...	38.34	69	41814	19.262	ug/L	96
82) 2,3-Dimethylheptane	39.50	43	55350	19.426	ug/L	97
83) 3,4-Dimethylheptane	39.81	43	35058	19.465	ug/L	98
84) 4-Methyloctane	40.11	43	55965	20.591	ug/L	97
85) 2-Methyloctane	40.19	43	44648M3	17.880	ug/L	
86) Ethylbenzene	40.70	91	111743	18.795	ug/L	97
88) 2-Ethylthiophene	40.84	97	83381	18.912	ug/L	98
89) 3-Methyloctane	40.85	57	81214	19.135	ug/L	98
90) 3,3-Diethylpentane	41.84	57	93389	19.325	ug/L	98
91) p/m-Xylene	41.96	91	171791	37.759	ug/L	99
92) 1-Nonene	42.63	56	19598	18.005	ug/L	97
93) trans-3-Nonene	43.03	55	30092	18.879	ug/L	99
94) cis-3-Nonene	43.31	55	33514M6	18.450	ug/L	
95) Nonane	43.40	43	44614M6	17.610	ug/L	
96) Styrene	43.84	104	69752	18.552	ug/L	97
98) o-Xylene	44.25	91	88146	18.893	ug/L	95
99) 2-Nonene	44.67	55	29774	18.950	ug/L	99
100) Isopropylcyclohexane	45.95	83	42047	19.164	ug/L	96
102) Isopropylbenzene	46.58	105	112751	19.096	ug/L	98
103) 3,3-Dimethyloctane	47.06	71	66772	19.242	ug/L	99
104) n-Propylbenzene	49.00	91	133286	18.611	ug/L	97
105) 2-Methylnonane	49.04	43	43624	19.148	ug/L	99
106) 3-Methylnonane	49.44	57	52900	19.200	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.57	105	112497	18.886	ug/L	100
108) 1-Methyl-4-ethylbenzene	49.74	105	106922	18.720	ug/L	100
109) 1,3,5-Trimethylbenzene	50.29	105	93575	18.850	ug/L	98
110) 1-Decene	50.42	41	23585	19.141	ug/L	97
111) Isobutylcyclohexane	50.57	83	47252	19.608	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.61	105	113586	18.997	ug/L	99
113) Decane	50.78	43	43019	19.554	ug/L	100
114) tert-Butylbenzene	51.04	119	84350	19.441	ug/L	99
115) 1,2,4-Trimethylbenzene	51.44	105	99785	19.108	ug/L	99
116) Isobutylbenzene	51.63	91	113215M6	18.999	ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000763.D
Acq On : 11 Dec 2021 10:43 pm
Operator : VOA9:RY
Sample : I921121103
Misc : WG1582211
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 09:19:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	126515	19.637	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	104746	19.281	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	105778	19.309	ug/L	100
120) 1,2,3-Trimethylbenzene	52.53	105	102477	19.132	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.73	119	105950	19.320	ug/L	99
122) Indan	52.82	117	95968	19.019	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	68536	19.615	ug/L	97
124) 1-Methyl-3-propylbenzene	53.08	105	130527	19.655	ug/L	100
125) Indene	53.24	115	94718	18.928	ug/L	98
126) 1-Methyl-4-propylbenzene	53.23	105	154170	19.815	ug/L	97
127) n-Butylbenzene	53.23	91	122842	19.809	ug/L	100
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	112935	19.903	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	53780	19.573	ug/L	100
130) 1-Methyl-2-propylbenzene	53.63	105	140221	19.943	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	105893	19.639	ug/L	99
132) Undecane	53.97	57	57183	20.539	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	128522	19.902	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	116707	19.804	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	126827	19.627	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	114168	19.730	ug/L	98
137) 1,2,4,5-Tetramethylben...	55.15	119	122545	19.860	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	110937	19.861	ug/L	99
139) Pentylbenzene	55.72	91	109225	20.746	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	148124	20.120	ug/L	99
141) 1,3-DM-5-tert-Butylben...	56.04	147	99884	20.798	ug/L	99
142) Dodecane	56.20	43	45796	22.646	ug/L	96
143) 1,3,5-Triethylbenzene	56.93	147	63093	21.192	ug/L	99
144) Naphthalene	57.08	128	141470	19.561	ug/L	99
145) Benzothiophene	57.18	134	86759	19.325	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	58049	21.125	ug/L	97
147) Hexylbenzene	58.00	91	96418	21.525	ug/L	99
148) MMT	58.27	134	51475	20.289	ug/L	98
149) Tridecane	58.32	57	50915	26.295	ug/L	99
150) 2-Methylnaphthalene	59.87	142	92788	20.237	ug/L	98
151) 1-Methylnaphthalene	60.35	142	84279	20.640	ug/L	98
152) Tetradecane	60.64	57	36030	26.378	ug/L	98
153) Pentadecane	63.47	57	21727	25.037	ug/L	98

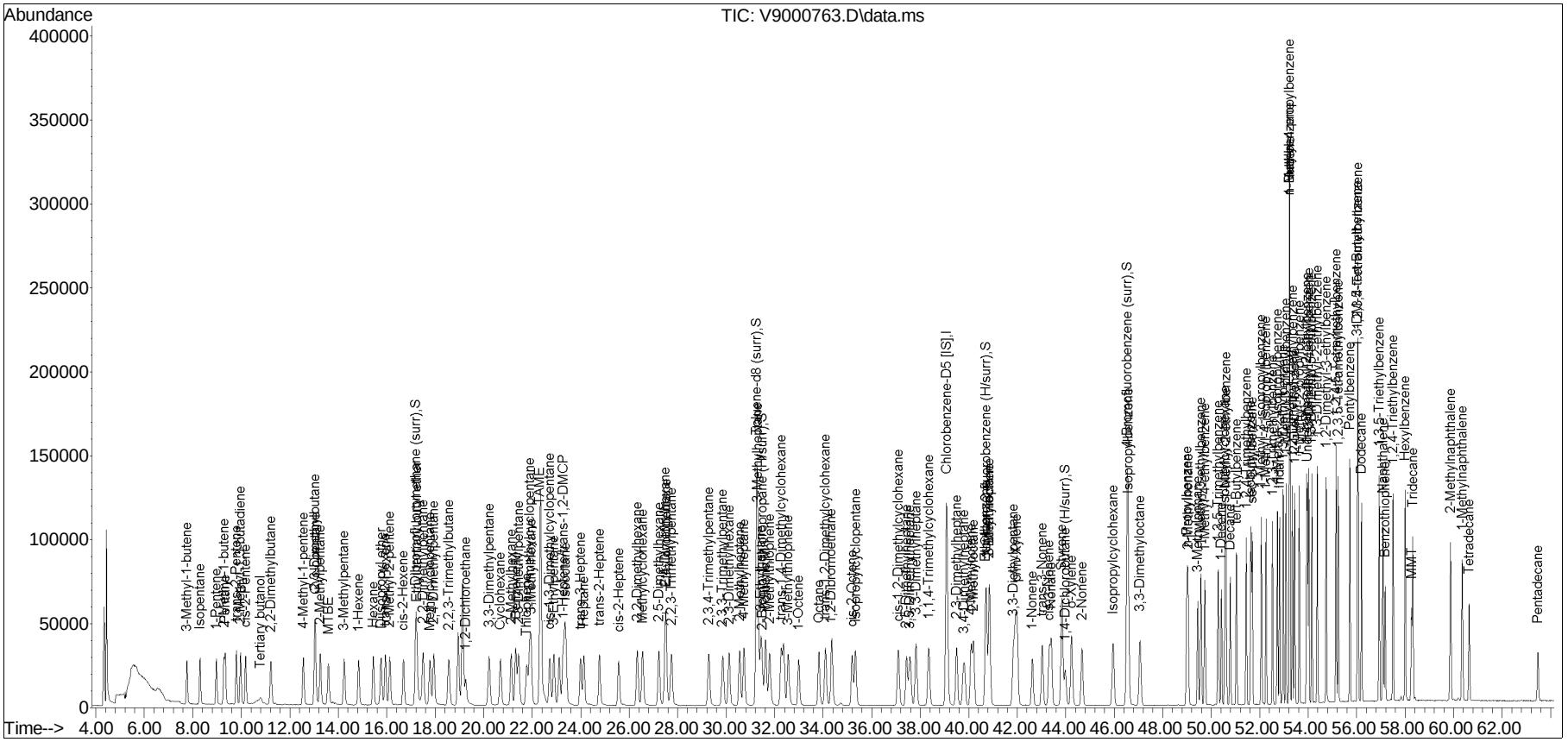
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000763.D
Acq On : 11 Dec 2021 10:43 pm
Operator : VOA9:RY
Sample : I921121103
Misc : WG1582211
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 12 09:19:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000764.D
Acq On : 11 Dec 2021 11:54 pm
Operator : VOA9:RY
Sample : I921121104
Misc : WG1582211
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 12 09:09:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	262334	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.19	113	67635	50.094	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 100.19%			
62) Toluene-d8 (surr)	31.26	98	314909	56.062	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 112.12%			
64) 2-Bromo-1-chloropropan...	31.49	77	89963	52.120	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 104.24%			
87) 1-Chloro-2-fluorobenze...	40.72	130	161658	49.708	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 99.42%			
97) 1,4-Dichlorobutane (H/...	43.98	55	117630	60.068	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 120.14%			
101) 4-Bromofluorobenzene (...	46.54	95	134108	47.492	ug/L	-0.02
Spiked Amount 50.000	Range 76 - 120		Recovery = 94.98%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.76	55	104943	59.270	ug/L	98
3) Isopentane	8.31	43	60028	60.926	ug/L	99
4) 1-Pentene	8.98	42	68822	60.474	ug/L	94
5) 2-Methyl-1-butene	9.29	55	106522	58.706	ug/L	96
6) Pentane	9.34	43	101226	60.623	ug/L	99
7) trans-2-Pentene	9.81	55	114877	57.664	ug/L	98
8) 2-Methyl-1,3-butadiene	9.98	67	76942	56.750	ug/L	99
9) cis-2-Pentene	10.18	55	107537	58.025	ug/L	98
10) Tertiary butanol	10.77	59	99305M4	318.521	ug/L	
11) 2,2-Dimethylbutane	11.23	43	67835	58.375	ug/L	100
12) 4-Methyl-1-pentene	12.56	43	85700	57.895	ug/L	96
13) Cyclopentane	13.04	70	46402	56.651	ug/L #	83
14) 2,3-Dimethylbutane	13.04	71	33375	55.231	ug/L #	86
15) 2-Methylpentane	13.27	43	120764	59.500	ug/L	96
16) MTBE	13.60	73	172172	52.452	ug/L	98
17) 3-Methylpentane	14.24	57	108076	57.009	ug/L	98
18) 1-Hexene	14.83	56	63732	55.737	ug/L	96
19) Hexane	15.44	57	96490	57.503	ug/L	96
20) Diisopropyl ether	15.77	45	187700	57.901	ug/L	97
21) trans-2-Hexene	15.94	55	107916	56.769	ug/L	96
22) 2-Methyl-2-pentene	16.13	69	107036	53.425	ug/L	95
23) cis-2-Hexene	16.69	55	96704	56.503	ug/L	97
25) Ethyl tertiary butyl e...	17.24	59	187006	54.746	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000764.D
Acq On : 11 Dec 2021 11:54 pm
Operator : VOA9:RY
Sample : I921121104
Misc : WG1582211
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 12 09:09:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.50	57	134955	56.507	ug/L	99
27) Methylcyclopentane	17.77	56	119750	55.660	ug/L	95
28) 2,4-Dimethylpentane	17.94	43	109435	58.135	ug/L	95
29) 2,2,3-Trimethylbutane	18.55	57	122463	56.183	ug/L	98
30) 1,2-Dichloroethane	19.25	62	84758	57.836	ug/L	99
31) 3,3-Dimethylpentane	20.21	43	141816	57.830	ug/L	93
32) Cyclohexane	20.69	56	100379	55.855	ug/L	99
33) 2-Methylhexane	21.13	43	121919	57.706	ug/L	96
34) Benzene	21.32	78	250050	53.743	ug/L	100
35) 2,3-Dimethylpentane	21.43	56	100226	56.414	ug/L	96
36) Thiophene	21.77	84	134310	54.055	ug/L	96
37) 1,1-Dimethylcyclopentane	21.89	83	66121	55.307	ug/L	97
38) 3-Methylhexane	21.95	43	103195	57.084	ug/L	98
39) TAME	22.32	73	182563	48.347	ug/L	98
40) cis-1,3-Dimethylcyclop...	22.72	70	84189	54.421	ug/L	98
41) 3-Ethylpentane	22.89	43	136674	55.986	ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.28	70	96375	104.826	ug/L	92
44) Isooctane	23.38	57	251594	55.140	ug/L	98
45) trans-3-Heptene	23.99	41	79672	54.932	ug/L	94
46) Heptane	24.13	43	91928	57.659	ug/L	98
48) trans-2-Heptene	24.77	56	79103	57.451	ug/L	97
49) cis-2-Heptene	25.56	56	71229	56.489	ug/L	96
50) 2,2-Dimethylhexane	26.33	57	248948	55.302	ug/L	99
51) Methylcyclohexane	26.55	83	110969	52.913	ug/L	96
52) 2,5-Dimethylhexane	27.22	57	123743	54.382	ug/L	95
53) 2,4-Dimethylhexane	27.49	57	96150	53.063	ug/L	99
54) Ethylcyclopentane	27.52	69	93759	54.884	ug/L	98
55) 2,2,3-Trimethylpentane	27.74	57	203870	56.365	ug/L	99
57) 2,3,4-Trimethylpentane	29.28	43	144067	56.908	ug/L	94
58) 2,3,3-Trimethylpentane	29.86	43	119117	56.531	ug/L	96
59) 2,3-Dimethylhexane	30.12	43	132830	57.545	ug/L	95
60) 2-Methylheptane	30.56	57	114517	54.039	ug/L	97
61) 4-Methylheptane	30.73	43	144573	57.693	ug/L	95
63) 3-Methylheptane	31.31	43	97506	49.846	ug/L	94
65) 3-Ethylhexane	31.43	43	156102	56.461	ug/L	99
66) Toluene	31.62	91	269260	52.073	ug/L	100
67) 2-Methylthiophene	31.79	97	213079	51.781	ug/L	99
68) trans-1,4-Dimethylcycl...	32.26	97	127149	50.418	ug/L	98
69) 3-Methylthiophene	32.55	97	217287	52.445	ug/L	99
70) 1-Octene	32.99	55	53607	53.004	ug/L	97
71) Octane	33.82	43	121426	54.876	ug/L	98

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000764.D
Acq On : 11 Dec 2021 11:54 pm
Operator : VOA9:RY
Sample : I921121104
Misc : WG1582211
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 12 09:09:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72)	trans-1,2-Dimethylcycl...	34.10	55	96219	54.515	ug/L	90
73)	1,2-Dibromoethane	34.33	107	65948	53.369	ug/L	100
75)	cis-2-Octene	35.19	55	81816	54.251	ug/L	95
76)	Isopropylcyclopentane	35.33	68	114742	54.151	ug/L	96
77)	cis-1,2-Dimethylcycloh...	37.10	55	96767	53.097	ug/L	97
78)	2,5-Dimethylheptane	37.43	57	169480	54.567	ug/L	99
79)	3,5-Dimethylheptane	37.57	57	204954M4	52.875	ug/L	
80)	3,3-Dimethylheptane	37.83	57	131594	52.356	ug/L	98
81)	1,1,4-Trimethylcyclohe...	38.36	69	114707	51.249	ug/L	97
82)	2,3-Dimethylheptane	39.50	43	150552	54.545	ug/L	94
83)	3,4-Dimethylheptane	39.81	43	95170	54.069	ug/L	96
84)	4-Methyloctane	40.10	43	143617	55.441	ug/L	96
85)	2-Methyloctane	40.18	43	131946M3	55.714	ug/L	
86)	Ethylbenzene	40.71	91	314149	51.780	ug/L	99
88)	2-Ethylthiophene	40.85	97	232967	51.791	ug/L	98
89)	3-Methyloctane	40.85	57	224263	53.741	ug/L	97
90)	3,3-Diethylpentane	41.84	57	255356	52.493	ug/L	98
91)	p/m-Xylene	41.96	91	480812	103.236	ug/L	100
92)	1-Nonene	42.63	56	57515	53.106	ug/L	97
93)	trans-3-Nonene	43.04	55	84224	54.086	ug/L	96
94)	cis-3-Nonene	43.32	55	95981M6	55.547	ug/L	
95)	Nonane	43.40	43	133867M6	57.985	ug/L	
96)	Styrene	43.84	104	198673	51.082	ug/L	99
98)	o-Xylene	44.24	91	246530	51.879	ug/L	100
99)	2-Nonene	44.66	55	83020	53.378	ug/L	96
100)	Isopropylcyclohexane	45.96	83	115936	51.179	ug/L	98
102)	Isopropylbenzene	46.57	105	311984	50.612	ug/L	98
103)	3,3-Dimethyloctane	47.07	71	183364	52.798	ug/L	96
104)	n-Propylbenzene	48.99	91	378423	52.172	ug/L	97
105)	2-Methylnonane	49.04	43	120384	59.106	ug/L	97
106)	3-Methylnonane	49.44	57	145588	56.169	ug/L	97
107)	1-Methyl-3-ethylbenzene	49.58	105	314749	51.263	ug/L	99
108)	1-Methyl-4-ethylbenzene	49.74	105	301811	51.389	ug/L	100
109)	1,3,5-Trimethylbenzene	50.29	105	262305	51.091	ug/L	99
110)	1-Decene	50.42	41	65108	56.596	ug/L	95
111)	Isobutylcyclohexane	50.57	83	127334	51.894	ug/L	95
112)	1-Methyl-2-ethylbenzene	50.61	105	315932	51.659	ug/L	98
113)	Decane	50.79	43	116249	59.213	ug/L	94
114)	tert-Butylbenzene	51.04	119	229261	49.996	ug/L	97
115)	1,2,4-Trimethylbenzene	51.44	105	275937	51.053	ug/L	100
116)	Isobutylbenzene	51.63	91	314881M6	53.038	ug/L	

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000764.D
Acq On : 11 Dec 2021 11:54 pm
Operator : VOA9:RY
Sample : I921121104
Misc : WG1582211
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 12 09:09:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	340432	50.858	ug/L	99
118) 1-Methyl-3-isopropylbe...	52.07	119	287059	50.138	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	289467	50.477	ug/L	99
120) 1,2,3-Trimethylbenzene	52.53	105	283032	51.758	ug/L	98
121) 1-Methyl-2-isopropylbe...	52.73	119	289774	50.502	ug/L	99
122) Indan	52.82	117	266631	51.569	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	184622	50.930	ug/L	97
124) 1-Methyl-3-propylbenzene	53.08	105	350905	51.492	ug/L	99
125) Indene	53.24	115	264424	53.701	ug/L	100
126) 1-Methyl-4-propylbenzene	53.23	105	411126	51.190	ug/L	98
127) n-Butylbenzene	53.23	91	327680	52.163	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	299823	50.379	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	145184	50.326	ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	371529	51.466	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	284907	50.840	ug/L	99
132) Undecane	53.97	57	147112	59.377	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	341235	50.735	ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	311397	50.510	ug/L	97
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	341444	51.066	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	305762	50.753	ug/L	98
137) 1,2,4,5-Tetramethylben...	55.15	119	326048	50.683	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	295154	50.869	ug/L	97
139) Pentylbenzene	55.72	91	278199	51.266	ug/L	98
140) 1,2,3,4-Tetramethylben...	56.05	119	389005	50.545	ug/L	97
141) 1,3-DM-5-tert-Butylben...	56.03	147	253773	47.800	ug/L	100
142) Dodecane	56.20	43	106854	64.006	ug/L	95
143) 1,3,5-Triethylbenzene	56.92	147	157319	46.579	ug/L	99
144) Naphthalene	57.08	128	382156	54.943	ug/L	100
145) Benzothiophene	57.17	134	237220	56.453	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	145201	45.277	ug/L	99
147) Hexylbenzene	58.00	91	236688	48.890	ug/L	97
148) MMT	58.26	134	134058	51.950	ug/L	99
149) Tridecane	58.31	57	102314	54.056	ug/L	96
150) 2-Methylnaphthalene	59.87	142	242279	51.491	ug/L	100
151) 1-Methylnaphthalene	60.35	142	215759	51.930	ug/L	99
152) Tetradecane	60.64	57	72174	47.406	ug/L	96
153) Pentadecane	63.48	57	45854	41.360	ug/L	95

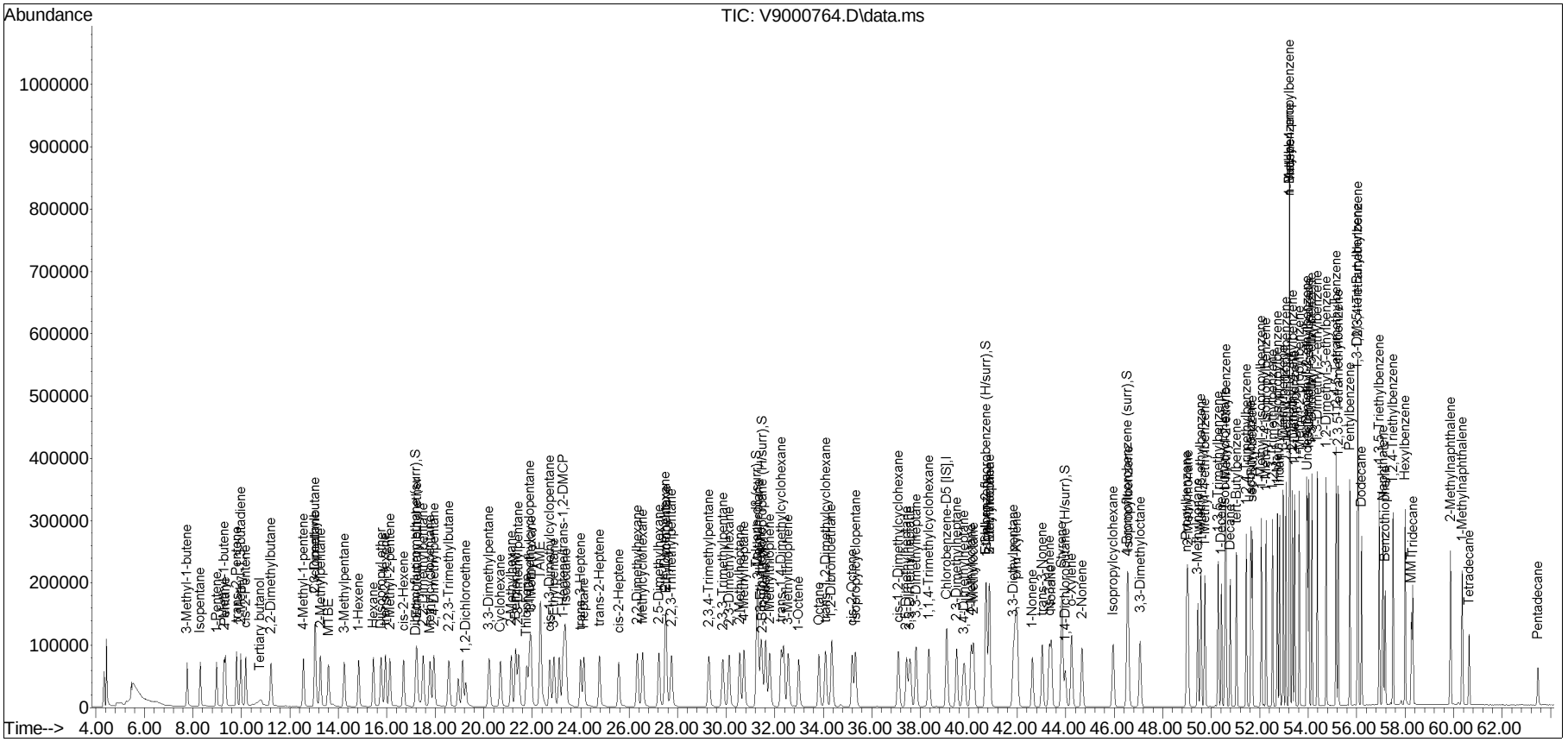
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000764.D
Acq On : 11 Dec 2021 11:54 pm
Operator : VOA9:RY
Sample : I921121104
Misc : WG1582211
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 12 09:09:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000765.D
Acq On : 12 Dec 2021 01:06 am
Operator : VOA9:RY
Sample : I921121105
Misc : WG1582211
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 12 09:16:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	273330	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.18	113	68379	48.516	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 97.03%			
62) Toluene-d8 (surr)	31.25	98	319174	48.638	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.28%			
64) 2-Bromo-1-chloropropan...	31.48	77	188835	100.729	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 201.46%#			
87) 1-Chloro-2-fluorobenze...	40.72	130	337046	100.053	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 200.11%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	234221	95.553	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 191.11%#			
101) 4-Bromofluorobenzene (...	46.55	95	138273	49.479	ug/L	0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 98.96%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.74	55	203791	93.190	ug/L	99
3) Isopentane	8.28	43	106578	85.202	ug/L	99
4) 1-Pentene	8.95	42	124865	87.066	ug/L	97
5) 2-Methyl-1-butene	9.26	55	200332	90.250	ug/L	99
6) Pentane	9.32	43	183408	86.949	ug/L	99
7) trans-2-Pentene	9.78	55	210379	87.883	ug/L	99
8) 2-Methyl-1,3-butadiene	9.95	67	144532	90.144	ug/L	99
9) cis-2-Pentene	10.16	55	207013	92.380	ug/L	99
10) Tertiary butanol	10.81	59	195228M4	471.713	ug/L	
11) 2,2-Dimethylbutane	11.20	43	122995	87.010	ug/L	100
12) 4-Methyl-1-pentene	12.54	43	159662	89.404	ug/L	100
13) Cyclopentane	13.02	70	88235	91.252	ug/L	96
14) 2,3-Dimethylbutane	13.02	71	62168	89.389	ug/L #	93
15) 2-Methylpentane	13.24	43	233276	92.698	ug/L	99
16) MTBE	13.57	73	336894	93.901	ug/L	99
17) 3-Methylpentane	14.23	57	203904	90.539	ug/L	98
18) 1-Hexene	14.82	56	118866	89.503	ug/L	99
19) Hexane	15.43	57	179307	89.177	ug/L	99
20) Diisopropyl ether	15.75	45	365323	93.401	ug/L	98
21) trans-2-Hexene	15.93	55	202689	90.133	ug/L	98
22) 2-Methyl-2-pentene	16.11	69	204179	91.542	ug/L	98
23) cis-2-Hexene	16.68	55	183552	91.086	ug/L	99
25) Ethyl tertiary butyl e...	17.22	59	367190	94.226	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000765.D
Acq On : 12 Dec 2021 01:06 am
Operator : VOA9:RY
Sample : I921121105
Misc : WG1582211
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 12 09:16:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.49	57	251257	89.344	ug/L	98
27) Methylcyclopentane	17.77	56	225802	90.488	ug/L	99
28) 2,4-Dimethylpentane	17.93	43	200628	87.978	ug/L	98
29) 2,2,3-Trimethylbutane	18.55	57	233424	91.470	ug/L	98
30) 1,2-Dichloroethane	19.24	62	165701	93.817	ug/L	99
31) 3,3-Dimethylpentane	20.21	43	264410	89.473	ug/L	96
32) Cyclohexane	20.68	56	190520	91.083	ug/L	96
33) 2-Methylhexane	21.12	43	232785	91.626	ug/L	99
34) Benzene	21.30	78	486549	93.376	ug/L	99
35) 2,3-Dimethylpentane	21.43	56	189191	90.585	ug/L	99
36) Thiophene	21.77	84	263187	94.036	ug/L	97
37) 1,1-Dimethylcyclopentane	21.88	83	127318	92.403	ug/L	98
38) 3-Methylhexane	21.94	43	198105	92.124	ug/L	99
39) TAME	22.31	73	363312	95.500	ug/L	98
40) cis-1,3-Dimethylcyclop...	22.71	70	162984	92.902	ug/L	98
41) 3-Ethylpentane	22.89	43	262925	92.317	ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.27	70	190385	189.599	ug/L	99
44) Isooctane	23.37	57	488938	93.259	ug/L	96
45) trans-3-Heptene	23.99	41	152558	91.890	ug/L	99
46) Heptane	24.13	43	180538M4	94.245	ug/L	
48) trans-2-Heptene	24.77	56	150099	91.059	ug/L	97
49) cis-2-Heptene	25.56	56	145490	98.020	ug/L	97
50) 2,2-Dimethylhexane	26.33	57	524191	101.046	ug/L	99
51) Methylcyclohexane	26.54	83	228200	98.685	ug/L	99
52) 2,5-Dimethylhexane	27.22	57	258307	100.173	ug/L	99
53) 2,4-Dimethylhexane	27.49	57	176405	88.044	ug/L	100
54) Ethylcyclopentane	27.52	69	193307	98.940	ug/L	96
55) 2,2,3-Trimethylpentane	27.73	57	423588	99.707	ug/L	99
57) 2,3,4-Trimethylpentane	29.28	43	297786	99.192	ug/L	98
58) 2,3,3-Trimethylpentane	29.86	43	247226	99.600	ug/L	99
59) 2,3-Dimethylhexane	30.11	43	269706	97.439	ug/L	99
60) 2-Methylheptane	30.55	57	240308	100.701	ug/L	99
61) 4-Methylheptane	30.73	43	300478	99.738	ug/L	99
63) 3-Methylheptane	31.30	43	207335	102.042	ug/L	98
65) 3-Ethylhexane	31.43	43	333761	102.604	ug/L	97
66) Toluene	31.61	91	548899	97.827	ug/L	99
67) 2-Methylthiophene	31.79	97	437484	98.528	ug/L	100
68) trans-1,4-Dimethylcycl...	32.27	97	268851	101.470	ug/L	99
69) 3-Methylthiophene	32.55	97	444526	98.175	ug/L	100
70) 1-Octene	32.98	55	116241	104.058	ug/L	98
71) Octane	33.82	43	258323	102.091	ug/L	98

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000765.D
Acq On : 12 Dec 2021 01:06 am
Operator : VOA9:RY
Sample : I921121105
Misc : WG1582211
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 12 09:16:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.09	55	200949	100.222	ug/L	99
73) 1,2-Dibromoethane	34.33	107	139292	101.359	ug/L	99
75) cis-2-Octene	35.18	55	169902	99.655	ug/L	99
76) Isopropylcyclopentane	35.33	68	241317	100.926	ug/L	97
77) cis-1,2-Dimethylcycloh...	37.09	55	206466	102.390	ug/L	99
78) 2,5-Dimethylheptane	37.44	57	363181	102.835	ug/L	98
79) 3,5-Dimethylheptane	37.58	57	437910M4	102.533	ug/L	
80) 3,3-Dimethylheptane	37.82	57	284212	103.644	ug/L	99
81) 1,1,4-Trimethylcyclohe...	38.35	69	246195	102.997	ug/L	99
82) 2,3-Dimethylheptane	39.50	43	328770	104.796	ug/L	99
83) 3,4-Dimethylheptane	39.81	43	209196	105.485	ug/L	99
84) 4-Methyloctane	40.10	43	304292	101.677	ug/L	98
85) 2-Methyloctane	40.20	43	298282M3	108.485	ug/L	
86) Ethylbenzene	40.71	91	656119	100.227	ug/L	100
88) 2-Ethylthiophene	40.85	97	489869	100.907	ug/L	100
89) 3-Methyloctane	40.85	57	494596	105.835	ug/L	99
90) 3,3-Diethylpentane	41.84	57	556613	104.603	ug/L	99
91) p/m-Xylene	41.97	91	1004191	200.451	ug/L	100
92) 1-Nonene	42.63	56	130161	108.602	ug/L	99
93) trans-3-Nonene	43.03	55	185351	105.608	ug/L	99
94) cis-3-Nonene	43.33	55	207808M6	103.900	ug/L	
95) Nonane	43.40	43	282924M6	101.422	ug/L	
96) Styrene	43.84	104	420184	101.493	ug/L	98
98) o-Xylene	44.24	91	512070	99.677	ug/L	97
99) 2-Nonene	44.68	55	185204	107.054	ug/L	98
100) Isopropylcyclohexane	45.96	83	255017	105.557	ug/L	98
102) Isopropylbenzene	46.58	105	655059	100.759	ug/L	100
103) 3,3-Dimethyloctane	47.07	71	411781	107.768	ug/L	98
104) n-Propylbenzene	49.00	91	795215	100.843	ug/L	99
105) 2-Methylnonane	49.05	43	260801	103.963	ug/L	98
106) 3-Methylnonane	49.44	57	318151	104.868	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.57	105	655946	100.009	ug/L	98
108) 1-Methyl-4-ethylbenzene	49.74	105	627976	99.849	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	547446	100.155	ug/L	98
110) 1-Decene	50.42	41	141396	104.217	ug/L	98
111) Isobutylcyclohexane	50.57	83	277452	104.564	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.61	105	645078	97.984	ug/L	100
113) Decane	50.79	43	245554	101.367	ug/L	98
114) tert-Butylbenzene	51.04	119	470996	98.588	ug/L	99
115) 1,2,4-Trimethylbenzene	51.44	105	567369	98.672	ug/L	99
116) Isobutylbenzene	51.64	91	641520M6	97.769	ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000765.D
Acq On : 12 Dec 2021 01:06 am
Operator : VOA9:RY
Sample : I921121105
Misc : WG1582211
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 12 09:16:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	693735	97.791 ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	586642	98.071 ug/L	100
119) 1-Methyl-4-isopropylbe...	52.27	119	585506	97.067 ug/L	98
120) 1,2,3-Trimethylbenzene	52.53	105	563103	95.475 ug/L	100
121) 1-Methyl-2-isopropylbe...	52.73	119	579979	96.048 ug/L	99
122) Indan	52.82	117	525485	94.577 ug/L	100
123) 1,3-Diethylbenzene	52.97	105	370359	96.267 ug/L	100
124) 1-Methyl-3-propylbenzene	53.08	105	694556	94.985 ug/L	100
125) Indene	53.24	115	522913	94.900 ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	821584	95.899 ug/L	99
127) n-Butylbenzene	53.23	91	656360	96.123 ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	593363	94.971 ug/L	99
129) 1,2-Diethylbenzene	53.44	119	284357	93.990 ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	732082	94.559 ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	556433	93.723 ug/L	99
132) Undecane	53.97	57	289918	94.572 ug/L	100
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	666637	93.750 ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	606569	93.477 ug/L	97
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	659027	92.623 ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	591725	92.870 ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	632628	93.112 ug/L	100
138) 1,2,3,5-Tetramethylben...	55.24	119	568974	92.508 ug/L	99
139) Pentylbenzene	55.72	91	556638	96.018 ug/L	98
140) 1,2,3,4-Tetramethylben...	56.05	119	756387	93.310 ug/L	98
141) 1,3-DM-5-tert-Butylben...	56.03	147	515123	97.410 ug/L	99
142) Dodecane	56.20	43	173534	77.935 ug/L	98
143) 1,3,5-Triethylbenzene	56.92	147	327923	100.029 ug/L	99
144) Naphthalene	57.08	128	701946	88.146 ug/L	99
145) Benzothiophene	57.17	134	432360	87.464 ug/L	100
146) 1,2,4-Triethylbenzene	57.50	147	300301	99.249 ug/L	100
147) Hexylbenzene	58.00	91	499121	101.197 ug/L	98
148) MMT	58.26	134	248325	88.892 ug/L	99
149) Tridecane	58.31	57	159725	74.916 ug/L	99
150) 2-Methylnaphthalene	59.87	142	464889	92.081 ug/L	98
151) 1-Methylnaphthalene	60.36	142	414295	92.146 ug/L	99
152) Tetradecane	60.64	57	120593	80.182 ug/L	98
153) Pentadecane	63.47	57	83045	86.911 ug/L	98

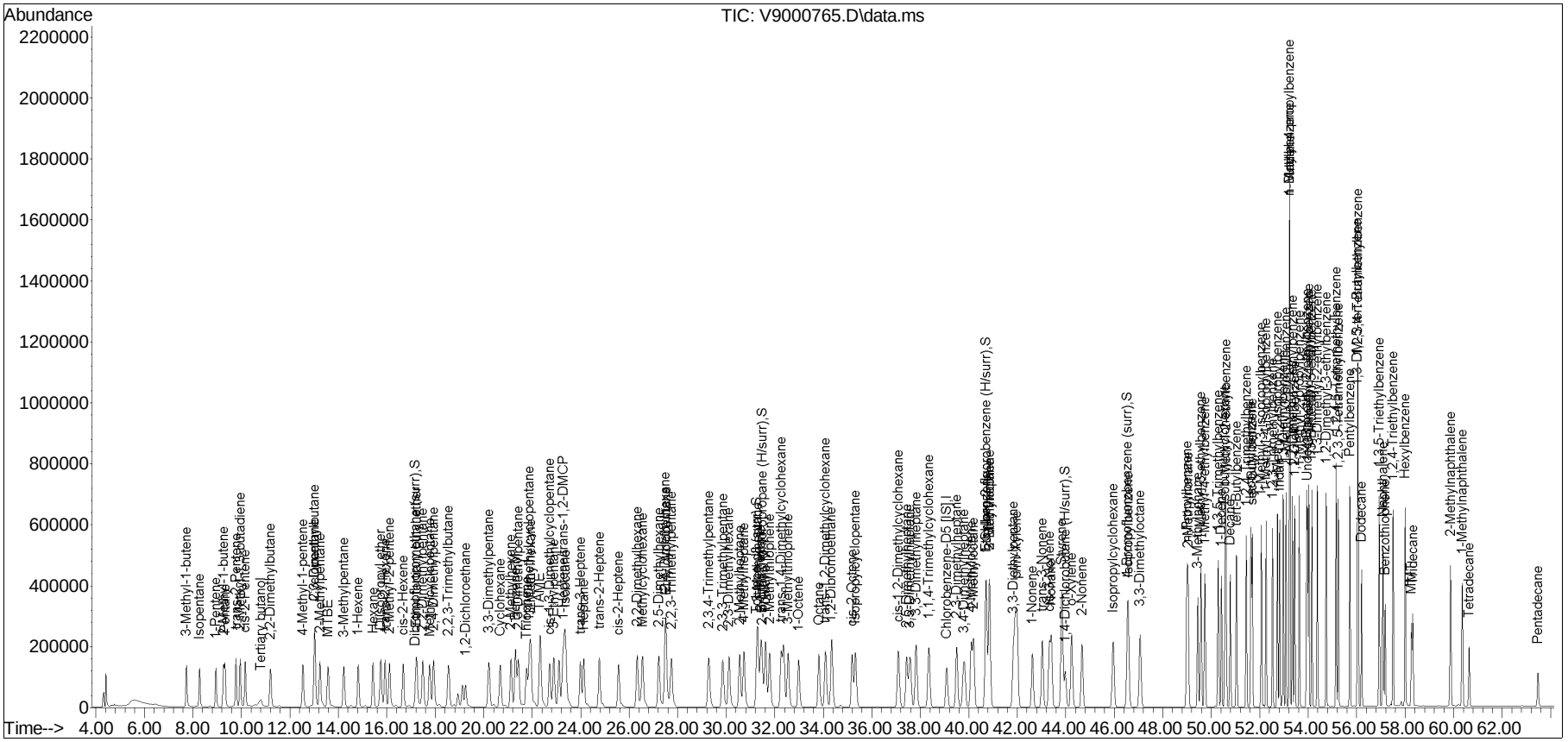
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000765.D
Acq On : 12 Dec 2021 01:06 am
Operator : VOA9:RY
Sample : I921121105
Misc : WG1582211
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 12 09:16:47 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000766.D
Acq On : 12 Dec 2021 02:17 am
Operator : VOA9:RY
Sample : I921121106
Misc : WG1582211
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 12 09:14:25 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	254982	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.18	113	71534	54.407	ug/L	-0.01
Spiked Amount 50.000	Range 78 - 118		Recovery = 108.81%			
62) Toluene-d8 (surr)	31.26	98	317183	51.813	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 103.63%			
64) 2-Bromo-1-chloropropan...	31.49	77	369471	211.267	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 422.53%#			
87) 1-Chloro-2-fluorobenze...	40.72	130	627399	199.646	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 399.29%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	433186	189.440	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 378.88%#			
101) 4-Bromofluorobenzene (...	46.54	95	124819	47.879	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 95.76%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.72	55	426576	209.102	ug/L	98
3) Isopentane	8.26	43	226068	193.732	ug/L	99
4) 1-Pentene	8.93	42	264927	198.022	ug/L	97
5) 2-Methyl-1-butene	9.25	55	416537	201.154	ug/L	98
6) Pentane	9.31	43	381917	194.085	ug/L	100
7) trans-2-Pentene	9.76	55	458565	205.344	ug/L	98
8) 2-Methyl-1,3-butadiene	9.94	67	313994	209.929	ug/L	99
9) cis-2-Pentene	10.15	55	424010	202.830	ug/L	99
10) Tertiary butanol	10.79	59	420524M4	1089.193	ug/L	
11) 2,2-Dimethylbutane	11.19	43	259507	196.793	ug/L	98
12) 4-Methyl-1-pentene	12.53	43	339099	203.545	ug/L	100
13) Cyclopentane	13.01	70	187762	208.155	ug/L	94
14) 2,3-Dimethylbutane	13.01	71	133360	205.551	ug/L	100
15) 2-Methylpentane	13.23	43	478873	203.985	ug/L	98
16) MTBE	13.57	73	727863	217.471	ug/L	98
17) 3-Methylpentane	14.22	57	437097	208.048	ug/L	99
18) 1-Hexene	14.82	56	262624	211.979	ug/L	98
19) Hexane	15.43	57	389526	207.668	ug/L	99
20) Diisopropyl ether	15.74	45	778726	213.420	ug/L	99
21) trans-2-Hexene	15.93	55	431682	205.775	ug/L	98
22) 2-Methyl-2-pentene	16.11	69	451771	217.122	ug/L	96
23) cis-2-Hexene	16.66	55	398851	212.169	ug/L	99
25) Ethyl tertiary butyl e...	17.23	59	783197	215.442	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000766.D
Acq On : 12 Dec 2021 02:17 am
Operator : VOA9:RY
Sample : I921121106
Misc : WG1582211
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 12 09:14:25 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	17.48	57	539721	205.729 ug/L	99
27) Methylcyclopentane	17.76	56	469208	201.560 ug/L	99
28) 2,4-Dimethylpentane	17.93	43	430276	202.258 ug/L	99
29) 2,2,3-Trimethylbutane	18.54	57	490903	206.208 ug/L	98
30) 1,2-Dichloroethane	19.24	62	347534	210.927 ug/L	100
31) 3,3-Dimethylpentane	20.21	43	549602	199.360 ug/L	97
32) Cyclohexane	20.68	56	405699	207.910 ug/L	98
33) 2-Methylhexane	21.12	43	477585	201.509 ug/L	99
34) Benzene	21.30	78	1027945	211.475 ug/L	100
35) 2,3-Dimethylpentane	21.42	56	391375	200.876 ug/L	99
36) Thiophene	21.76	84	557110	213.377 ug/L	98
37) 1,1-Dimethylcyclopentane	21.88	83	265257	206.368 ug/L	99
38) 3-Methylhexane	21.94	43	407911	203.340 ug/L	98
39) TAME	22.31	73	759609	214.039 ug/L	97
40) cis-1,3-Dimethylcyclop...	22.71	70	337481	206.210 ug/L	98
41) 3-Ethylpentane	22.88	43	528734	199.006 ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.27	70	382141	407.948 ug/L	90
44) Isooctane	23.38	57	976694	199.698 ug/L	99
45) trans-3-Heptene	23.98	41	308344	199.088 ug/L	95
46) Heptane	24.13	43	339377	189.911 ug/L	99
48) trans-2-Heptene	24.77	56	302512	196.727 ug/L	99
49) cis-2-Heptene	25.56	56	282791	204.232 ug/L	97
50) 2,2-Dimethylhexane	26.33	57	988318	204.222 ug/L	99
51) Methylcyclohexane	26.55	83	440204	204.064 ug/L	99
52) 2,5-Dimethylhexane	27.22	57	482692	200.662 ug/L	98
53) 2,4-Dimethylhexane	27.48	57	325232	174.004 ug/L	99
54) Ethylcyclopentane	27.52	69	369978	202.992 ug/L	99
55) 2,2,3-Trimethylpentane	27.74	57	788368	198.926 ug/L	100
57) 2,3,4-Trimethylpentane	29.28	43	545389	194.741 ug/L	96
58) 2,3,3-Trimethylpentane	29.85	43	446130	192.665 ug/L	97
59) 2,3-Dimethylhexane	30.12	43	493351	191.062 ug/L	100
60) 2-Methylheptane	30.55	57	430693	193.470 ug/L	98
61) 4-Methylheptane	30.73	43	546102	194.313 ug/L	99
63) 3-Methylheptane	31.30	43	362776	191.391 ug/L	96
65) 3-Ethylhexane	31.43	43	589681	194.323 ug/L	98
66) Toluene	31.62	91	1074038	205.193 ug/L	99
67) 2-Methylthiophene	31.78	97	871942	210.505 ug/L	98
68) trans-1,4-Dimethylcycl...	32.27	97	493714	199.746 ug/L	99
69) 3-Methylthiophene	32.55	97	879610	208.244 ug/L	98
70) 1-Octene	32.98	55	208140	199.733 ug/L	98
71) Octane	33.82	43	454192	192.417 ug/L	99

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000766.D
Acq On : 12 Dec 2021 02:17 am
Operator : VOA9:RY
Sample : I921121106
Misc : WG1582211
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 12 09:14:25 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72)	trans-1,2-Dimethylcycl...	34.09	55	352449	188.430	ug/L	95
73)	1,2-Dibromoethane	34.32	107	274371	214.019	ug/L	99
75)	cis-2-Octene	35.19	55	303921	191.090	ug/L	98
76)	Isopropylcyclopentane	35.33	68	425807	190.900	ug/L	97
77)	cis-1,2-Dimethylcycloh...	37.09	55	358924	190.805	ug/L	99
78)	2,5-Dimethylheptane	37.44	57	624915	189.678	ug/L	97
79)	3,5-Dimethylheptane	37.58	57	782107M3	196.302	ug/L	
80)	3,3-Dimethylheptane	37.83	57	484728	189.486	ug/L	99
81)	1,1,4-Trimethylcyclohe...	38.36	69	427664	191.791	ug/L	99
82)	2,3-Dimethylheptane	39.51	43	549446	187.739	ug/L	97
83)	3,4-Dimethylheptane	39.81	43	342400	185.075	ug/L	98
84)	4-Methyloctane	40.11	43	512079	183.420	ug/L	97
85)	2-Methyloctane	40.20	43	484819M3	189.016	ug/L	
86)	Ethylbenzene	40.71	91	1174535	192.329	ug/L	99
88)	2-Ethylthiophene	40.85	97	890687	196.673	ug/L	99
89)	3-Methyloctane	40.86	57	821891	188.526	ug/L	98
90)	3,3-Diethylpentane	41.85	57	929929	187.335	ug/L	99
91)	p/m-Xylene	41.96	91	1780175	380.919	ug/L	99
92)	1-Nonene	42.63	56	219217	196.069	ug/L	98
93)	trans-3-Nonene	43.04	55	308324	188.316	ug/L	99
94)	cis-3-Nonene	43.34	55	345631M6	185.243	ug/L	
95)	Nonane	43.41	43	471186M6	181.065	ug/L	
96)	Styrene	43.83	104	757211	196.062	ug/L	99
98)	o-Xylene	44.24	91	898552	187.494	ug/L	98
99)	2-Nonene	44.68	55	304257	188.527	ug/L	97
100)	Isopropylcyclohexane	45.96	83	421570	187.054	ug/L	97
102)	Isopropylbenzene	46.57	105	1123338	185.222	ug/L	99
103)	3,3-Dimethyloctane	47.07	71	673218	188.867	ug/L	98
104)	n-Propylbenzene	49.00	91	1350611	183.598	ug/L	99
105)	2-Methylnonane	49.05	43	421404	180.071	ug/L	98
106)	3-Methylnonane	49.45	57	519008	183.385	ug/L	98
107)	1-Methyl-3-ethylbenzene	49.58	105	1118307	182.773	ug/L	99
108)	1-Methyl-4-ethylbenzene	49.74	105	1066741	181.819	ug/L	99
109)	1,3,5-Trimethylbenzene	50.29	105	931730	182.725	ug/L	99
110)	1-Decene	50.42	41	233998	184.881	ug/L	97
111)	Isobutylcyclohexane	50.57	83	457480	184.817	ug/L	99
112)	1-Methyl-2-ethylbenzene	50.61	105	1105354	179.979	ug/L	99
113)	Decane	50.79	43	399731	176.886	ug/L	98
114)	tert-Butylbenzene	51.05	119	796102	178.630	ug/L	99
115)	1,2,4-Trimethylbenzene	51.45	105	972867	181.367	ug/L	100
116)	Isobutylbenzene	51.64	91	1072641M6	175.236	ug/L	

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000766.D
Acq On : 12 Dec 2021 02:17 am
Operator : VOA9:RY
Sample : I921121106
Misc : WG1582211
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 12 09:14:25 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	1170585	176.884	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	997351	178.728	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.27	119	992392	176.360	ug/L	99
120) 1,2,3-Trimethylbenzene	52.53	105	978566	177.856	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.73	119	987605	175.323	ug/L	99
122) Indan	52.82	117	918042	177.120	ug/L	100
123) 1,3-Diethylbenzene	52.97	105	631516	175.961	ug/L	100
124) 1-Methyl-3-propylbenzene	53.08	105	1180520	173.061	ug/L	100
125) Indene	53.24	115	936957	182.278	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	1401587	175.372	ug/L	100
127) n-Butylbenzene	53.23	91	1117293	175.401	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	1005143	172.456	ug/L	100
129) 1,2-Diethylbenzene	53.44	119	487142	172.604	ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	1245397	172.437	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	948987	171.345	ug/L	100
132) Undecane	53.97	57	452703	158.300	ug/L	100
133) 1,3-Dimethyl-4-ethylbe...	54.03	119	1132985	170.799	ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	1031801	170.450	ug/L	97
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	1122981	169.187	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	1002312	168.630	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	1068433	168.570	ug/L	100
138) 1,2,3,5-Tetramethylben...	55.24	119	955324	166.501	ug/L	99
139) Pentylbenzene	55.72	91	925434	171.122	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	1264073	167.160	ug/L	99
141) 1,3-DM-5-tert-Butylben...	56.04	147	853084	172.926	ug/L	99
142) Dodecane	56.21	43	272323	131.102	ug/L	99
143) 1,3,5-Triethylbenzene	56.93	147	538671	176.140	ug/L	100
144) Naphthalene	57.08	128	1243429	167.377	ug/L	99
145) Benzothiophene	57.18	134	789297	171.161	ug/L	100
146) 1,2,4-Triethylbenzene	57.50	147	488099	172.923	ug/L	99
147) Hexylbenzene	58.00	91	813581	176.823	ug/L	98
148) MMT	58.26	134	427146	163.907	ug/L	99
149) Tridecane	58.32	57	273062	137.291	ug/L	99
150) 2-Methylnaphthalene	59.87	142	810385	172.064	ug/L	99
151) 1-Methylnaphthalene	60.36	142	716819	170.905	ug/L	100
152) Tetradecane	60.64	57	230620	164.373	ug/L	97
153) Pentadecane	63.47	57	149109	167.279	ug/L	99

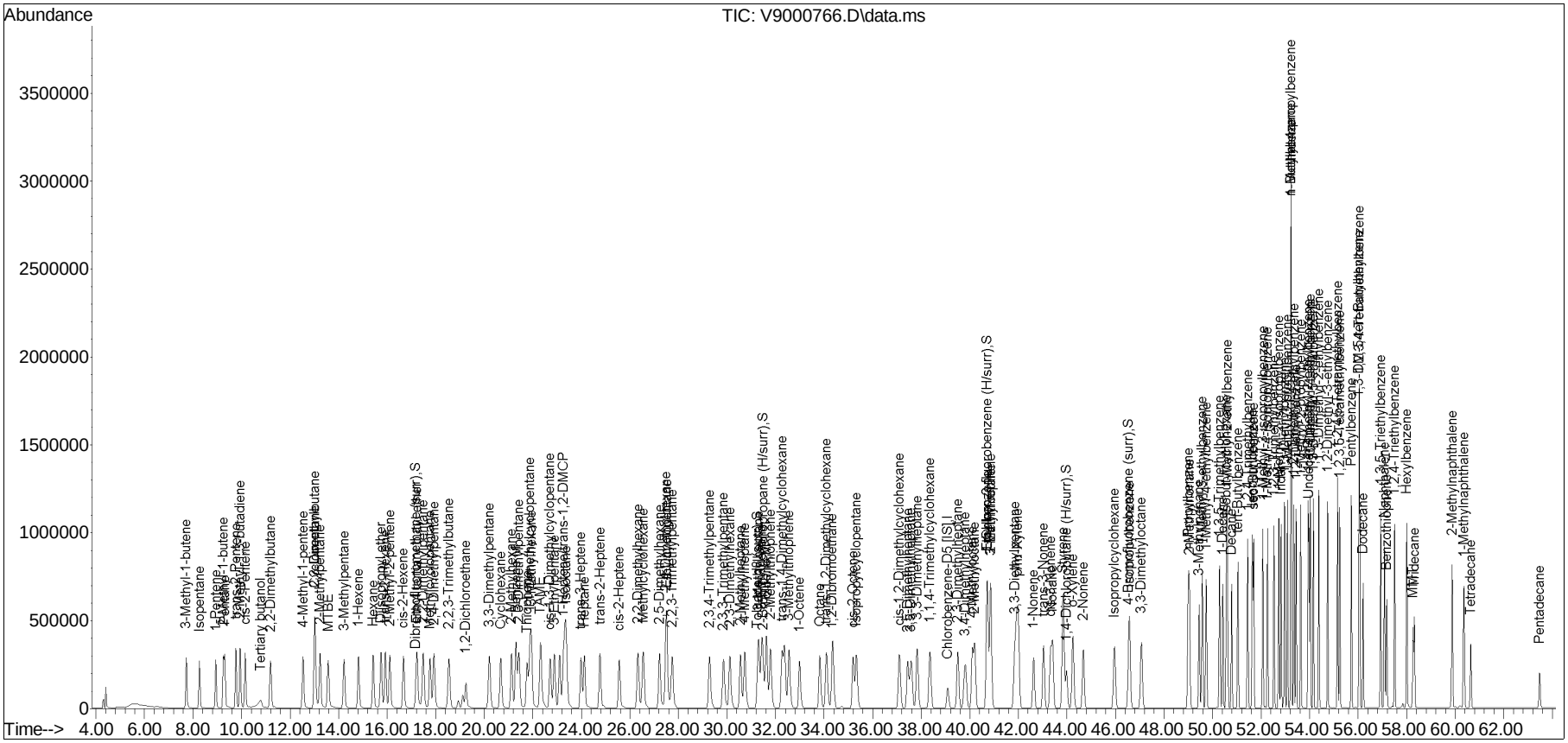
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000766.D
Acq On : 12 Dec 2021 02:17 am
Operator : VOA9:RY
Sample : I921121106
Misc : WG1582211
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 12 09:14:25 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:10:01 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000768.D
Acq On : 12 Dec 2021 04:39 am
Operator : VOA9:RY
Sample : CQ921121101
Misc : WG1582211
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 09:33:51 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	104	0.00
4		1-Pentene	0.245	0.179	26.9#	73	0.00
6		Pentane	0.376	0.229	39.1#	61	0.01
10		Tertiary butanol	0.076	0.069#	9.2	103	-0.04
13		Cyclopentane	0.166	0.131	21.1	79	0.01
15		2-Methylpentane	0.433	0.336	22.4	77	0.00
16		MTBE	0.614	0.550	10.4	92	-0.02
17		3-Methylpentane	0.379	0.323	14.8	83	0.00
18		1-Hexene	0.220	0.184	16.4	83	0.01
19		Hexane	0.338	0.273	19.2	80	0.00
20		Diisopropyl ether	0.644	0.569	11.6	92	-0.01
24	S	Dibromofluoromethane (surr)	0.257	0.252	1.9	102	0.00
25		Ethyl tertiary butyl ether	0.642	0.564	12.1	91	0.00
27		Methylcyclopentane	0.419	0.375	10.5	88	0.01
28		2,4-Dimethylpentane	0.386	0.345	10.6	87	0.00
32		Cyclohexane	0.354	0.334	5.6	94	0.00
33		2-Methylhexane	0.427	0.386	9.6	87	0.00
34	M	Benzene	0.874	0.806	7.8	96	0.00
35		2,3-Dimethylpentane	0.356	0.329	7.6	90	0.00
38		3-Methylhexane	0.369	0.307	16.8	83	0.00
39		TAME	0.720	0.609	15.4	93	0.00
44		Isooctane	0.893	0.864	3.2	95	0.00
46		Heptane	0.318	0.321	-0.9	98	0.00
51		Methylcyclohexane	0.394	0.375	4.8	96	0.00
60		2-Methylheptane	0.399	0.380	4.8	94	0.00
62	S	Toluene-d8 (surr)	1.193	1.198	-0.4	104	0.00
63		3-Methylheptane	0.385	0.371	3.6	97	-0.01
66	M	Toluene	0.962	0.931	3.2	99	0.00
71		Octane	0.430	0.419	2.6	97	0.00
86		Ethylbenzene	1.093	1.030	5.8	95	0.00
91		p/m-Xylene	0.835	0.805	3.6	97	0.00
95		Nonane	0.456	0.381	16.4	88	0.00
98		o-Xylene	0.860	0.850	1.2	100	0.00
101	S	4-Bromofluorobenzene (surr)	0.504	0.516	-2.4	104	0.00
102		Isopropylbenzene	1.091	1.062	2.7	97	0.00
104		n-Propylbenzene	1.288	1.244	3.4	96	0.00
107		1-Methyl-3-ethylbenzene	1.073	1.046	2.5	96	0.00
108		1-Methyl-4-ethylbenzene	1.026	1.045	-1.9	101	0.00
109		1,3,5-Trimethylbenzene	0.893	0.897	-0.4	99	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000768.D
Acq On : 12 Dec 2021 04:39 am
Operator : VOA9:RY
Sample : CQ921121101
Misc : WG1582211
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 09:33:51 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
110	1-Decene	0.216	0.174	19.4	76	0.00
112	1-Methyl-2-ethylbenzene	1.078	1.098	-1.9	100	0.00
113	Decane	0.401	0.388	3.2	93	0.00
115	1,2,4-Trimethylbenzene	0.940	0.930	1.1	96	0.00
117	sec-Butylbenzene	1.167	1.230	-5.4	100	0.00
126	1-Methyl-4-propylbenzene	1.398	1.464	-4.7	98	0.00
127	n-Butylbenzene	1.115	1.191	-6.8	100	0.00
129	1,2-Diethylbenzene	0.493	0.532	-7.9	102	0.00
132	Undecane	0.490	0.507	-3.5	91	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.050	1.200	-14.3	106	0.00
139	Pentylbenzene	0.954	1.065	-11.6	101	0.00
142	Dodecane	0.356	0.440	-23.6	99	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000768.D
Acq On : 12 Dec 2021 04:39 am
Operator : VOA9:RY
Sample : CQ921121101
Misc : WG1582211
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 09:33:51 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	258059	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.19	113	65031	49.012	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.02%			
62) Toluene-d8 (surr)	31.26	98	309085	50.211	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.42%			
101) 4-Bromofluorobenzene (...	46.54	95	133198	51.219	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.44%			
Target Compounds						Qvalue
4) 1-Pentene	8.98	42	18467	14.621	ug/L	96
6) Pentane	9.35	43	23662	12.180	ug/L	94
10) Tertiary butanol	10.73	59	35601M4	91.157	ug/L	
13) Cyclopentane	13.06	70	13485	15.778	ug/L #	27
15) 2-Methylpentane	13.27	43	34689	15.536	ug/L	100
16) MTBE	13.58	73	56818	17.917	ug/L	97
17) 3-Methylpentane	14.25	57	33386	17.058	ug/L	97
18) 1-Hexene	14.85	56	19035	16.776	ug/L	97
19) Hexane	15.45	57	28197	16.168	ug/L	95
20) Diisopropyl ether	15.76	45	58712	17.676	ug/L	99
25) Ethyl tertiary butyl e...	17.23	59	58252	17.583	ug/L	99
27) Methylcyclopentane	17.79	56	38703	17.878	ug/L	98
28) 2,4-Dimethylpentane	17.94	43	35563	17.852	ug/L	96
32) Cyclohexane	20.68	56	34446	18.855	ug/L	92
33) 2-Methylhexane	21.13	43	39801	18.048	ug/L	100
34) Benzene	21.31	78	83201	18.453	ug/L	98
35) 2,3-Dimethylpentane	21.43	56	33949	18.484	ug/L	98
38) 3-Methylhexane	21.95	43	31741	16.660	ug/L	97
39) TAME	22.32	73	62858	16.917	ug/L	98
44) Isooctane	23.38	57	89150	19.349	ug/L	94
46) Heptane	24.13	43	33096	20.194	ug/L	98
51) Methylcyclohexane	26.56	83	38700	19.039	ug/L	97
60) 2-Methylheptane	30.55	57	39211	19.029	ug/L	96
63) 3-Methylheptane	31.30	43	38274	19.266	ug/L	99
66) Toluene	31.62	91	96053	19.350	ug/L	99
71) Octane	33.83	43	43264	19.472	ug/L	98
86) Ethylbenzene	40.71	91	106313	18.851	ug/L	100
91) p/m-Xylene	41.97	91	166209	38.557	ug/L	98
95) Nonane	43.40	43	39280	16.679	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000768.D
Acq On : 12 Dec 2021 04:39 am
Operator : VOA9:RY
Sample : CQ921121101
Misc : WG1582211
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 09:33:51 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) o-Xylene	44.24	91	87715	19.754	ug/L	96
102) Isopropylbenzene	46.57	105	109591	19.467	ug/L	100
104) n-Propylbenzene	49.00	91	128443	19.321	ug/L	98
107) 1-Methyl-3-ethylbenzene	49.58	105	107988	19.504	ug/L	98
108) 1-Methyl-4-ethylbenzene	49.74	105	107819	20.351	ug/L	98
109) 1,3,5-Trimethylbenzene	50.29	105	92582	20.083	ug/L	100
110) 1-Decene	50.42	41	17948	16.118	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.61	105	113389	20.377	ug/L	100
113) Decane	50.79	43	40093	19.367	ug/L	99
115) 1,2,4-Trimethylbenzene	51.44	105	95990	19.795	ug/L	98
117) sec-Butylbenzene	51.69	105	126967	21.074	ug/L	100
126) 1-Methyl-4-propylbenzene	53.23	105	151082	20.932	ug/L	97
127) n-Butylbenzene	53.23	91	122927	21.358	ug/L	97
129) 1,2-Diethylbenzene	53.44	119	54963	21.601	ug/L	99
132) Undecane	53.97	57	52294	20.676	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	123890	22.864	ug/L	97
139) Pentylbenzene	55.72	91	109904	22.323	ug/L	100
142) Dodecane	56.20	43	45403	24.678	ug/L	98

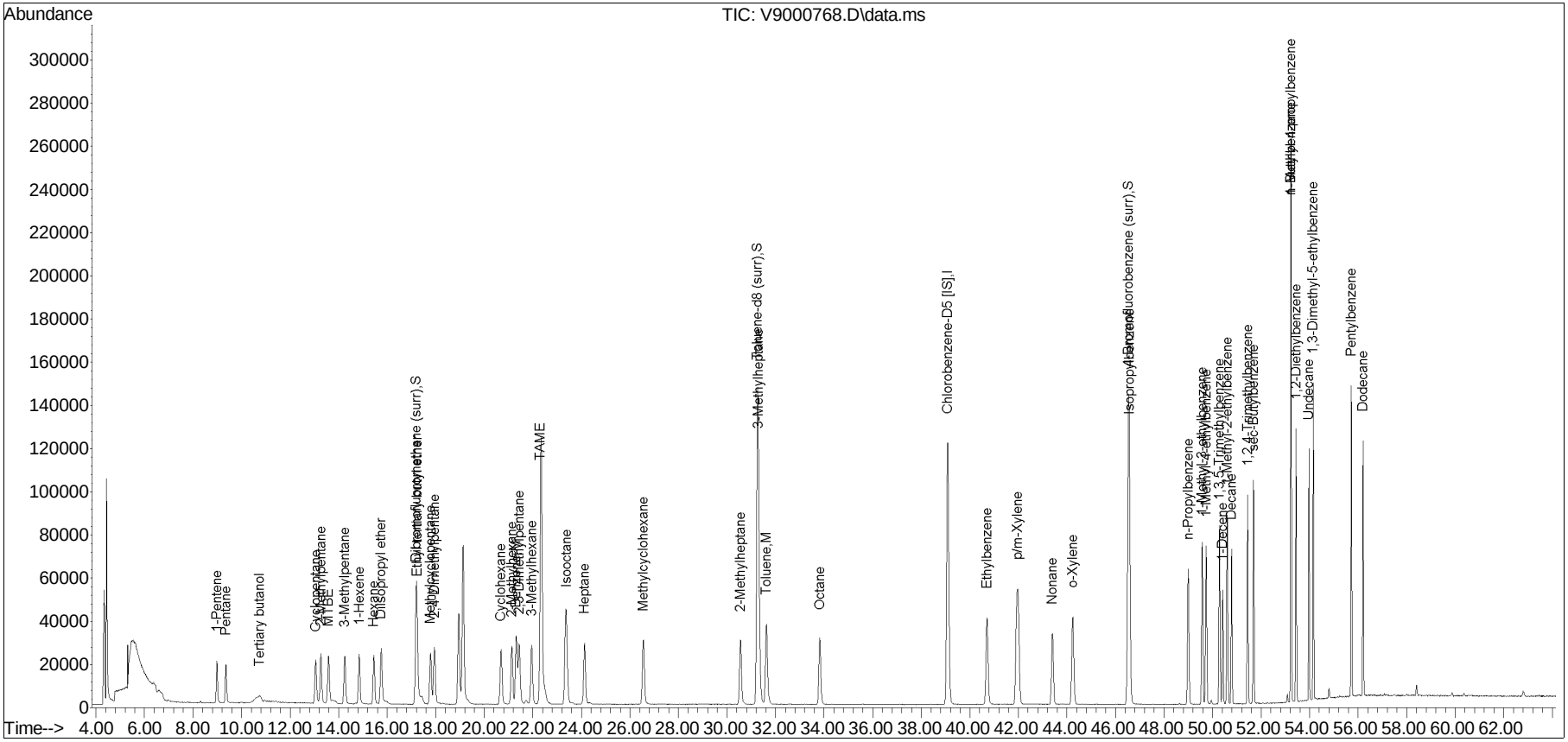
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211211\
Data File : V9000768.D
Acq On : 12 Dec 2021 04:39 am
Operator : VOA9:RY
Sample : CQ921121101
Misc : WG1582211
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 12 09:33:51 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211211\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO



Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Dec 20 2021, 01:23 pm

Work Group: WG1581735 for Department: 31 GC/MS - Volatiles

Created: 10-DEC-21 Due: Operator: JT

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2166503-02	ERH2051	S	A2-PIANO8260	WATER	DONE	U	1216	1220	2A	Vial-B
WG1581735-1	MS BFB Tune Standard	S	A2-PIANO8260	WATER	DONE	U				
WG1581735-2	Continuing Calibrati	S	A2-PIANO8260	WATER	DONE	U				
WG1581735-3	Laboratory Control S	S	A2-PIANO8260	WATER	DONE	U				
WG1581735-4	LCS Duplicate	S	A2-PIANO8260	WATER	DONE	U				
WG1581735-5	Laboratory Method Bl	S	A2-PIANO8260	WATER	DONE	U				
WG1581735-6	MS BFB Tune Standard	S	A2-PIANO8260	WATER	DONE	U				
WG1581735-7	Continuing Calibrati	S	A2-PIANO8260	WATER	DONE	U				

Comments:

WG1581735-4 WG1581735-3

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Dec 20 2021, 01:23 pm

Work Group: WG1582700 for Department: 31 GC/MS - Volatiles

Created: 13-DEC-21 Due: Operator: JT

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2166503-01	ERH1967	S	A2-PIANO8260	OIL	DONE	U	1124	1220	2A	Vial-A-20
WG1582700-1	MS BFB Tune Standard	S	A2-PIANO8260	OIL	DONE	U				
WG1582700-2	Continuing Calibrati	S	A2-PIANO8260	OIL	DONE	U				
WG1582700-3	Laboratory Control S	S	A2-PIANO8260	OIL	DONE	U				
WG1582700-4	LCS Duplicate	S	A2-PIANO8260	OIL	DONE	U				
WG1582700-5	Laboratory Method Bl	S	A2-PIANO8260	OIL	DONE	U				
WG1582700-6	MS BFB Tune Standard	S	A2-PIANO8260	OIL	DONE	U				
WG1582700-7	Continuing Calibrati	S	A2-PIANO8260	OIL	DONE	U				

Comments:

WG1582700-4 WG1582700-3

Sequence Logs

Alpha Analytical
Instrument Run Log

Instrument ID: VOA9

Internal Standard/Surrogate IDs: VW101621L

Date: 10/29/21

CCV/ LCS MIX ID's VW101621G/ VW101621C

Analyst Initials: RY

Sequence File Name: 211029.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
1	BLANK	TUNE.M	V9000490.D	WG,ICAL		10/29/21 07:54 PM	
2	BLANK	TUNE.M	V9000491.D	WG,ICAL		10/29/21 08:25 PM	
3	WG1565572-1,31	TUNE.M	V9000492.D	WG,ICAL	Tune	10/29/21 08:56 PM	
4	I910292101	PIANO.M	V9000493.D	WG,ICAL		10/29/21 09:26 PM	
5	I910292102	PIANO.M	V9000494.D	WG,ICAL		10/29/21 10:38 PM	
6	I910292103	PIANO.M	V9000495.D	WG,ICAL		10/29/21 11:49 PM	
7	I910292104	PIANO.M	V9000496.D	WG,ICAL		10/30/21 01:01 AM	
8	I910292105	PIANO.M	V9000497.D	WG,ICAL		10/30/21 02:12 AM	
9	I910292106	PIANO.M	V9000498.D	WG,ICAL		10/30/21 03:23 AM	
10	BLANK	PIANO.M	V9000499.D	WG,ICAL		10/30/21 04:34 AM	
11	CQ910292101	PIANO.M	V9000500.D	WG,ICAL	ICV	10/30/21 05:46 AM	
12	BLANK	PIANO.M	V9000501.D	WG,ICAL		10/30/21 06:57 AM	
13	TUNE	TUNE.M	V9000502.D	WG,ICAL		10/30/21 08:06 AM	
14	CCV	PIANO.M	V9000503.D	WG,ICAL		10/30/21 08:37 AM	
15	LCS	PIANO.M	V9000504.D	WG,ICAL		10/30/21 09:48 AM	
16	LCSD	PIANO.M	V9000505.D	WG,ICAL		10/30/21 10:58 AM	
17	LD7	PIANO.M	V9000506.D	WG,ICAL		10/30/21 12:10 PM	
18	BLANK	PIANO.M	V9000507.D	WG,ICAL		10/30/21 01:21 PM	
19	WBLANK	PIANO.M	V9000508.D	WG,ICAL		10/30/21 02:33 PM	
20	L2151398-01D,31,0.1101,10,0.1	PIANO.M	V9000509.D	WG,ICAL		10/30/21 03:44 PM	
21	L2151398-01DUPD,31,0.1051,10,0.1	PIANO.M	V9000510.D	WG,ICAL		10/30/21 04:56 PM	
22	L2156589-01D,31,0.1129,10,0.1	PIANO.M	V9000511.D	WG,ICAL		10/30/21 06:07 PM	

Alpha Analytical
Instrument Run Log

23	L2156589-01DUPD,31,0.1095,10,0.1	PIANO.M	V9000512.D	WG,ICAL		10/30/21 07:19 PM	
24	L2156589-02D,31,0.1069,10,0.1	PIANO.M	V9000513.D	WG,ICAL		10/30/21 08:31 PM	
25	BLANK	PIANO.M	V9000514.D	WG,ICAL		10/30/21 09:42 PM	
26	L2151398-01D,31,0.1101,10,0.005	PIANO.M	V9000515.D	WG,ICAL		10/30/21 10:54 PM	
27	L2151398-01DUPD,31,0.1051,10,0.005	PIANO.M	V9000516.D	WG,ICAL		10/31/21 12:05 PM	
28	L2156589-01D,31,0.1129,10,0.005	PIANO.M	V9000517.D	WG,ICAL		10/31/21 01:17 AM	
29	L2156589-01DUPD,31,0.1095,10,0.005	PIANO.M	V9000518.D	WG,ICAL		10/31/21 02:28 AM	
30	L2156589-02D,31,0.1069,10,0.005	PIANO.M	V9000519.D	WG,ICAL		10/31/21 03:40 AM	
31	BLANK	PIANO.M	V9000520.D	WG,ICAL		10/31/21 04:51 AM	
32	TUNE	TUNE.M	V9000521.D	WG,ICAL		10/31/21 06:01 AM	
33	CCV	PIANO.M	V9000522.D	WG,ICAL		10/31/21 06:31 AM	

Alpha Analytical
Instrument Run Log

Instrument ID: VOA9

Internal Standard/Surrogate IDs: VW101621L

Date: 12/11/21

CCV/ LCS MIX ID's VW101621G/ VW101621C

Analyst Initials: JT/JB

Sequence File Name: 211211.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
9	WG1582211-1,31	TUNE.M	V9000760.D	WG,ICAL	TUNE	12/11/21 07:49 PM	
10	I921121101	PIANO.M	V9000761.D	WG,ICAL		12/11/21 08:20 PM	
11	I921121102	PIANO.M	V9000762.D	WG,ICAL		12/11/21 09:32 PM	
12	I921121103	PIANO.M	V9000763.D	WG,ICAL		12/11/21 10:43 PM	
13	I921121104	PIANO.M	V9000764.D	WG,ICAL		12/11/21 11:54 PM	
14	I921121105	PIANO.M	V9000765.D	WG,ICAL		12/12/21 01:06 AM	
15	I921121106	PIANO.M	V9000766.D	WG,ICAL		12/12/21 02:17 AM	
16	BLANK	PIANO.M	V9000767.D	WG,ICAL		12/12/21 03:28 AM	
17	CQ921121101	PIANO.M	V9000768.D	WG,ICAL		12/12/21 04:39 AM	
18	BLANK	PIANO.M	V9000769.D	WG,ICAL		12/12/21 05:51 AM	

Alpha Analytical
Instrument Run Log

Instrument ID: VOA9

Internal Standard/Surrogate IDs: VW101621L

Date: 12/07/21

CCV/ LCS MIX ID's VW101621G/ VW101621C

Analyst Initials: JT/JB

Sequence File Name: 211207.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
9	TUNE	TUNE.M	V9000730.D	WG,ICAL		12/07/21 04:49 PM	
10	CCV	PIANO.M	V9000731.D	WG,ICAL		12/07/21 05:19 PM	
11	LCS	PIANO.M	V9000732.D	WG,ICAL		12/07/21 06:30 PM	
12	LCSD	PIANO.M	V9000733.D	WG,ICAL		12/07/21 07:42 PM	
13	LD7	PIANO.M	V9000734.D	WG,ICAL		12/07/21 08:53 PM	
14	BLANK	PIANO.M	V9000735.D	WG,ICAL		12/07/21 10:04 PM	
15	wBLANK	PIANO.M	V9000736.D	WG,ICAL		12/07/21 11:16 PM	
16	L2166503-02,31,5,5	PIANO.M	V9000737.D	WG,ICAL		12/08/21 10:30 AM	
17	TUNE	TUNE.M	V9000738.D	WG,ICAL		12/08/21 11:39 AM	
18	CCV	PIANO.M	V9000739.D	WG,ICAL		12/08/21 01:55 PM	

Alpha Analytical
Instrument Run Log

Instrument ID: VOA9

Internal Standard/Surrogate IDs: VW101621L

Date: 12/13/21

CCV/ LCS MIX ID's VW101621G/ VW101621C

Analyst Initials: JT

Sequence File Name: 211213.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
1	BLANK	TUNE.M	V9000770.D	WG,ICAL		12/13/21 08:54 AM	
2	TUNE	TUNE.M	V9000771.D	WG,ICAL		12/13/21 09:26 AM	
3	CCV	PIANO.M	V9000772.D	WG,ICAL		12/13/21 09:57 AM	
4	LCS	PIANO.M	V9000773.D	WG,ICAL		12/13/21 11:08 AM	
5	LCSD	PIANO.M	V9000774.D	WG,ICAL		12/13/21 12:19 PM	
6	LD7	PIANO.M	V9000775.D	WG,ICAL		12/13/21 01:31 PM	
7	BLANK	PIANO.M	V9000776.D	WG,ICAL		12/13/21 02:42 PM	
8	BLANK	PIANO.M	V9000777.D	WG,ICAL		12/13/21 03:53 PM	
9	L2164188-01D,31,0.1115,10,0.01	PIANO.M	V9000778.D	WG,ICAL		12/13/21 05:05 PM	
10	L2164188-01DUPD,31,0.1050,10,0.01	PIANO.M	V9000779.D	WG,ICAL		12/13/21 06:16 PM	
11	L2166503-01D,31,0.1135,10,0.01	PIANO.M	V9000780.D	WG,ICAL		12/13/21 07:28 PM	
12	BLANK	PIANO.M	V9000781.D	WG,ICAL		12/13/21 08:40 PM	
13	L2164188-01D2,31,0.1115,10,0.0005	PIANO.M	V9000782.D	WG,ICAL		12/13/21 09:51 PM	
14	L2164188-01DUPD2,31,0.1050,10,0.0005	PIANO.M	V9000783.D	WG,ICAL		12/13/21 11:03 PM	
15	L2166503-01D2,31,0.1135,10,0.0005	PIANO.M	V9000784.D	WG,ICAL		12/14/21 12:15 PM	

Alpha Analytical
Instrument Run Log

16	BLANK	PIANO.M	V9000785.D	WG,ICAL		12/14/21 01:26 AM	
17	TUNE	TUNE.M	V9000786.D	WG,ICAL		12/14/21 02:36 AM	
18	BLANK	PIANO.M	V9000787.D	WG,ICAL		12/14/21 10:05 AM	
19	CCV	PIANO.M	V9000788.D	WG,ICAL	Failed penatdecane	12/14/21 10:36 AM	
20	CCV	PIANO.M	V9000789.D	WG,ICAL		12/14/21 12:37 PM	
21	L2165274-01D,31,0.1019,10,0.01	PIANO.M	V9000790.D	WG,ICAL	RR due to failed cc	12/14/21 03:22 PM	
22	L2167792-01D,31,0.1376,10,0.01	PIANO.M	V9000791.D	WG,ICAL	Reprep	12/14/21 04:33 PM	
23	BLANK	PIANO.M	V9000792.D	WG,ICAL		12/14/21 05:45 PM	
24	L2165274-01D2,31,0.1019,10,0.0005	PIANO.M	V9000793.D	WG,ICAL	RR due to failed cc	12/14/21 06:56 PM	
25	L2167792-01D2,31,0.1376,10,0.0005	PIANO.M	V9000794.D	WG,ICAL	do not use	12/14/21 08:08 PM	
26	BLANK	PIANO.M	V9000795.D	WG,ICAL		12/14/21 09:19 PM	
27	TUNE	TUNE.M	V9000796.D	WG,ICAL		12/14/21 10:28 PM	
28	CCV	PIANO.M	V9000797.D	WG,ICAL	Failed penatdecane		
29	CCV	PIANO.M	V9000797.D	WG,ICAL	Failed penatdecane		

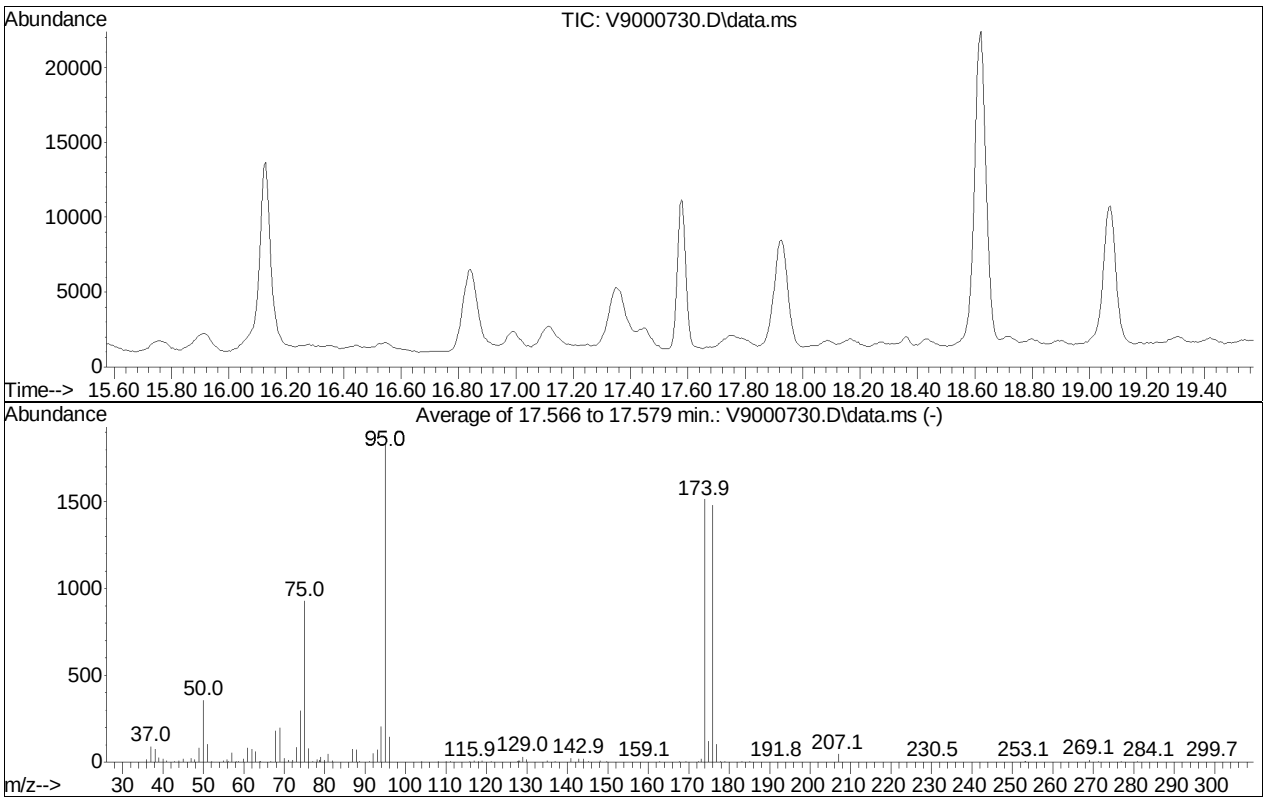
Analytical Event

Continuing Calibration
BFB Tune

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000730.D
Acq On : 07 Dec 2021 04:49 pm
Operator : VOA9:RY
Sample : WG1581735-1,31
Misc : WG1581735,ICAL18423
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Title : PIANO VOLATILES
Last Update : Mon Nov 01 10:11:47 2021



Spectrum Information: Average of 17.566 to 17.579 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.3	355	PASS
75	95	30	60	50.5	930	PASS
95	95	100	100	100.0	1840	PASS
96	95	5	9	7.9	146	PASS
173	174	0.00	2	1.3	20	PASS
174	95	50	100	82.2	1513	PASS
175	174	5	9	7.9	119	PASS
176	174	95	101	97.7	1478	PASS
177	176	5	9	6.9	102	PASS

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	77	0.00
2		3-Methyl-1-butene	0.337	0.317	5.9	65	0.01
3		Isopentane	0.188	0.169	10.1	62	0.00
4		1-Pentene	0.217	0.215	0.9	69	0.00
5		2-Methyl-1-butene	0.346	0.336	2.9	67	0.00
6		Pentane	0.318	0.304	4.4	67	0.00
7		trans-2-Pentene	0.380	0.374	1.6	68	0.00
8		2-Methyl-1,3-butadiene	0.258	0.263	-1.9	69	0.00
9		cis-2-Pentene	0.353	0.357	-1.1	71	0.00
10		Tertiary butanol	0.059	0.072#	-22.0	86	0.09
11		2,2-Dimethylbutane	0.221	0.215	2.7	70	0.00
12		4-Methyl-1-pentene	0.282	0.301	-6.7	74	0.00
13		Cyclopentane	0.156	0.157	-0.6	69	0.00
14		2,3-Dimethylbutane	0.115	0.113	1.7	68	0.00
15		2-Methylpentane	0.387	0.406	-4.9	72	0.00
16		MTBE	0.626	0.646	-3.2	73	0.04
17		3-Methylpentane	0.361	0.381	-5.5	72	0.00
18		1-Hexene	0.218	0.228	-4.6	69	0.00
19		Hexane	0.320	0.341	-6.6	74	0.00
20		Diisopropyl ether	0.618	0.682	-10.4	77	0.03
21		trans-2-Hexene	0.362	0.395	-9.1	75	0.00
22		2-Methyl-2-pentene	0.382	0.419	-9.7	76	0.00
23		cis-2-Hexene	0.326	0.356	-9.2	75	0.00
24	S	Dibromofluoromethane (surr)	0.257	0.261	-1.6	78	0.02
25		Ethyl tertiary butyl ether	0.651	0.674	-3.5	73	0.03
26		2,2-Dimethylpentane	0.455	0.504	-10.8	76	0.00
27		Methylcyclopentane	0.410	0.424	-3.4	72	0.00
28		2,4-Dimethylpentane	0.359	0.424	-18.1	80	0.00
29		2,2,3-Trimethylbutane	0.415	0.479	-15.4	80	-0.01
30		1,2-Dichloroethane	0.279	0.295	-5.7	73	0.00
31		3,3-Dimethylpentane	0.467	0.547	-17.1	81	0.00
32		Cyclohexane	0.343	0.386	-12.5	78	-0.01
33		2-Methylhexane	0.403	0.492	-22.1	84	0.00
34	M	Benzene	0.887	0.914	-3.0	73	-0.01
35		2,3-Dimethylpentane	0.339	0.390	-15.0	79	0.00
36		Thiophene	0.474	0.493	-4.0	72	0.00
37		1,1-Dimethylcyclopentane	0.228	0.259	-13.6	76	-0.01
38		3-Methylhexane	0.345	0.416	-20.6	83	-0.02
39		TAME	0.720	0.670	6.9	72	0.01

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.295	0.324	-9.8	75	0.00
41		3-Ethylpentane	0.465	0.545	-17.2	81	0.00
43		1-Heptene/trans-1,2-DMCP	0.175	0.199	-13.7	78	-0.01
44		Isooctane	0.870	1.039	-19.4	83	0.00
45		trans-3-Heptene	0.276	0.317	-14.9	82	-0.01
46		Heptane	0.304	0.383	-26.0#	87	-0.01
48		trans-2-Heptene	0.262	0.319	-21.8	85	-0.02
49		cis-2-Heptene	0.240	0.286	-19.2	83	0.00
50		2,2-Dimethylhexane	0.858	1.016	-18.4	83	0.00
51		Methylcyclohexane	0.400	0.438	-9.5	77	0.00
52		2,5-Dimethylhexane	0.434	0.506	-16.6	82	0.00
53		2,4-Dimethylhexane	0.345	0.390	-13.0	77	0.00
54		Ethylcyclopentane	0.326	0.374	-14.7	80	0.00
55		2,2,3-Trimethylpentane	0.689	0.829	-20.3	84	0.00
57		2,3,4-Trimethylpentane	0.483	0.581	-20.3	86	0.00
58		2,3,3-Trimethylpentane	0.402	0.483	-20.1	86	0.00
59		2,3-Dimethylhexane	0.440	0.531	-20.7	91	0.00
60		2-Methylheptane	0.404	0.464	-14.9	82	0.00
61		4-Methylheptane	0.478	0.577	-20.7	94	0.00
62	S	Toluene-d8 (surr)	1.071	1.212	-13.2	86	-0.01
63		3-Methylheptane	0.373	0.420	-12.6	86	0.00
65		3-Ethylhexane	0.527	0.616	-16.9	80	0.00
66	M	Toluene	0.986	1.043	-5.8	74	-0.01
67		2-Methylthiophene	0.784	0.816	-4.1	73	0.00
68		trans-1,4-Dimethylcyclohexa	0.481	0.518	-7.7	78	-0.02
69		3-Methylthiophene	0.790	0.824	-4.3	74	-0.01
70		1-Octene	0.193	0.222	-15.0	80	0.00
71		Octane	0.422	0.488	-15.6	81	0.00
72		trans-1,2-Dimethylcyclohexa	0.336	0.392	-16.7	83	0.00
73		1,2-Dibromoethane	0.236	0.246	-4.2	74	0.00
75		cis-2-Octene	0.287	0.328	-14.3	81	-0.01
76		Isopropylcyclopentane	0.404	0.449	-11.1	76	0.00
77		cis-1,2-Dimethylcyclohexane	0.347	0.393	-13.3	80	-0.01
78		2,5-Dimethylheptane	0.592	0.685	-15.7	83	-0.01
79		3,5-Dimethylheptane	0.739	0.846	-14.5	77	0.00
80		3,3-Dimethylheptane	0.479	0.535	-11.7	79	0.00
81		1,1,4-Trimethylcyclohexane	0.427	0.470	-10.1	79	0.00
82		2,3-Dimethylheptane	0.526	0.621	-18.1	83	-0.01
83		3,4-Dimethylheptane	0.335	0.395	-17.9	84	-0.02

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
84		4-Methyloctane	0.494	0.609	-23.3	92	0.00
85		2-Methyloctane	0.451	0.507	-12.4	73	0.00
86		Ethylbenzene	1.156	1.222	-5.7	75	0.00
88		2-Ethylthiophene	0.857	0.905	-5.6	74	0.00
89		3-Methyloctane	0.795	0.911	-14.6	80	0.00
90		3,3-Diethylpentane	0.927	1.051	-13.4	80	0.00
91		p/m-Xylene	0.888	0.916	-3.2	73	0.00
92		1-Nonene	0.206	0.236	-14.6	78	-0.01
93		trans-3-Nonene	0.297	0.342	-15.2	80	-0.01
94		cis-3-Nonene	0.329	0.377	-14.6	77	-0.01
95		Nonane	0.440	0.520	-18.2	82	-0.02
96		Styrene	0.741	0.744	-0.4	71	-0.01
98		o-Xylene	0.906	0.929	-2.5	73	-0.01
99		2-Nonene	0.296	0.340	-14.9	79	0.00
100		Isopropylcyclohexane	0.432	0.478	-10.6	77	0.00
101	S	4-Bromofluorobenzene (surr)	0.538	0.500	7.1	73	-0.02
102		Isopropylbenzene	1.175	1.209	-2.9	74	0.00
103		3,3-Dimethyloctane	0.662	0.753	-13.7	78	-0.01
104		n-Propylbenzene	1.382	1.449	-4.8	75	0.00
105		2-Methylnonane	0.388	0.487	-25.5#	85	-0.01
106		3-Methylnonane	0.494	0.592	-19.8	81	0.00
107		1-Methyl-3-ethylbenzene	1.170	1.196	-2.2	73	0.00
108		1-Methyl-4-ethylbenzene	1.119	1.157	-3.4	74	0.00
109		1,3,5-Trimethylbenzene	0.979	1.003	-2.5	73	0.00
110		1-Decene	0.219	0.266	-21.5	82	0.00
111		Isobutylcyclohexane	0.468	0.520	-11.1	77	0.00
112		1-Methyl-2-ethylbenzene	1.166	1.188	-1.9	73	0.00
113		Decane	0.374	0.467	-24.9	84	0.00
114		tert-Butylbenzene	0.874	0.884	-1.1	73	0.00
115		1,2,4-Trimethylbenzene	1.030	1.052	-2.1	74	0.00
116		Isobutylbenzene	1.132	1.220	-7.8	77	0.00
117		sec-Butylbenzene	1.276	1.310	-2.7	74	0.00
118		1-Methyl-3-isopropylbenzene	1.091	1.103	-1.1	72	0.00
119		1-Methyl-4-isopropylbenzene	1.093	1.108	-1.4	73	0.00
120		1,2,3-Trimethylbenzene	1.042	1.056	-1.3	73	0.00
121		1-Methyl-2-isopropylbenzene	1.094	1.100	-0.5	72	0.00
122		Indan	0.985	0.977	0.8	72	0.00
123		1,3-Diethylbenzene	0.691	0.711	-2.9	74	0.00
124		1-Methyl-3-propylbenzene	1.299	1.352	-4.1	75	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
125	Indene	0.938	0.943	-0.5	73	0.00
126	1-Methyl-4-propylbenzene	1.531	1.582	-3.3	75	0.00
127	n-Butylbenzene	1.197	1.273	-6.3	77	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.134	1.138	-0.4	73	0.00
129	1,2-Diethylbenzene	0.550	0.549	0.2	73	0.00
130	1-Methyl-2-propylbenzene	1.376	1.415	-2.8	74	0.00
131	1,4-Dimethyl-2-ethylbenzene	1.068	1.076	-0.7	73	0.00
132	Undecane	0.472	0.603	-27.8#	84	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.282	1.294	-0.9	73	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.175	1.182	-0.6	73	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.274	1.269	0.4	73	0.00
136	1,2-Dimethyl-3-ethylbenzene	1.148	1.133	1.3	72	0.00
137	1,2,4,5-Tetramethylbenzene	1.226	1.206	1.6	71	0.00
138	1,2,3,5-Tetramethylbenzene	1.106	1.087	1.7	72	0.00
139	Pentylbenzene	1.034	1.081	-4.5	75	0.00
140	1,2,3,4-Tetramethylbenzene	1.467	1.421	3.1	71	0.00
141	1,3-DM-5-tert-Butylbenzene	1.012	0.978	3.4	69	0.00
142	Dodecane	0.318	0.445	-39.9#	100	0.00
143	1,3,5-Triethylbenzene	0.644	0.602	6.5	67	0.00
144	Naphthalene	1.326	1.221	7.9	70	0.00
145	Benzothiophene	0.801	0.748	6.6	70	0.00
146	1,2,4-Triethylbenzene	0.611	0.549	10.1	66	0.00
147	Hexylbenzene	0.923	0.900	2.5	69	0.00
148	MMT	0.492	0.407	17.3	63	0.00
149	Tridecane	0.361	0.436	-20.8	102	0.00
150	2-Methylnaphthalene	0.897	0.733	18.3	62	0.00
151	1-Methylnaphthalene	0.792	0.657	17.0	63	0.00
152	Tetradecane	0.290	0.304	-4.8	100	0.00
153	Pentadecane	0.211	0.210	0.5	106	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Chlorobenzene-D5 [IS]	39.09	117	266772	50.000	ug/L		0.00
System Monitoring Compounds							
24) Dibromofluoromethane (...	17.21	113	69740	50.794	ug/L		0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 101.59%				
62) Toluene-d8 (surr)	31.26	98	323273	56.594	ug/L		-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 113.19%#				
101) 4-Bromofluorobenzene (...	46.54	95	133382	46.449	ug/L		-0.02
Spiked Amount 50.000	Range 76 - 120		Recovery = 92.90%				
Target Compounds							Qvalue
2) 3-Methyl-1-butene	7.79	55	84601	46.987	ug/L		98
3) Isopentane	8.33	43	44955	44.869	ug/L		97
4) 1-Pentene	9.01	42	57338	49.545	ug/L		95
5) 2-Methyl-1-butene	9.32	55	89538	48.525	ug/L		97
6) Pentane	9.37	43	81078	47.749	ug/L		98
7) trans-2-Pentene	9.83	55	99681	49.204	ug/L		98
8) 2-Methyl-1,3-butadiene	10.00	67	70107	50.848	ug/L		96
9) cis-2-Pentene	10.21	55	95189	50.508	ug/L		98
10) Tertiary butanol	10.82	59	95992M4	302.772	ug/L		
11) 2,2-Dimethylbutane	11.24	43	57284	48.476	ug/L		100
12) 4-Methyl-1-pentene	12.57	43	80423	53.426	ug/L		95
13) Cyclopentane	13.07	70	41945	50.358	ug/L	#	83
14) 2,3-Dimethylbutane	13.06	71	30276	49.269	ug/L	#	87
15) 2-Methylpentane	13.28	43	108433	52.535	ug/L		98
16) MTBE	13.62	73	172287	51.613	ug/L		98
17) 3-Methylpentane	14.27	57	101664	52.734	ug/L		99
18) 1-Hexene	14.85	56	60845	52.327	ug/L		97
19) Hexane	15.46	57	90841	53.236	ug/L		95
20) Diisopropyl ether	15.78	45	181953	55.195	ug/L		96
21) trans-2-Hexene	15.96	55	105289	54.466	ug/L		97
22) 2-Methyl-2-pentene	16.15	69	111748	54.849	ug/L		96
23) cis-2-Hexene	16.71	55	94980	54.573	ug/L		98
25) Ethyl tertiary butyl e...	17.26	59	179869	51.781	ug/L		97
26) 2,2-Dimethylpentane	17.51	57	134432	55.351	ug/L		99
27) Methylcyclopentane	17.80	56	113068	51.680	ug/L		97
28) 2,4-Dimethylpentane	17.96	43	112989	59.025	ug/L		98
29) 2,2,3-Trimethylbutane	18.57	57	127739	57.629	ug/L		95
30) 1,2-Dichloroethane	19.27	62	78586	52.732	ug/L		100
31) 3,3-Dimethylpentane	20.23	43	145859	58.490	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	20.69	56	102889	56.300	ug/L	95
33) 2-Methylhexane	21.15	43	131224	61.077	ug/L	95
34) Benzene	21.32	78	243774	51.523	ug/L	100
35) 2,3-Dimethylpentane	21.44	56	103995	57.562	ug/L	95
36) Thiophene	21.79	84	131414	52.010	ug/L	98
37) 1,1-Dimethylcyclopentane	21.90	83	69115	56.849	ug/L	97
38) 3-Methylhexane	21.95	43	110960	60.358	ug/L	97
39) TAME	22.33	73	178733	46.546	ug/L	98
40) cis-1,3-Dimethylcyclop...	22.73	70	86522	54.999	ug/L	96
41) 3-Ethylpentane	22.91	43	145271	58.518	ug/L	96
43) 1-Heptene/trans-1,2-DMCP	23.29	70	106390	113.794	ug/L	93
44) Isooctane	23.39	57	277244	59.751	ug/L	98
45) trans-3-Heptene	23.99	41	84561	57.333	ug/L	95
46) Heptane	24.13	43	102279	63.084	ug/L	95
48) trans-2-Heptene	24.77	56	85184	60.838	ug/L	95
49) cis-2-Heptene	25.58	56	76264	59.476	ug/L	95
50) 2,2-Dimethylhexane	26.34	57	271081	59.216	ug/L	99
51) Methylcyclohexane	26.56	83	116939	54.832	ug/L	96
52) 2,5-Dimethylhexane	27.23	57	134987	58.337	ug/L	98
53) 2,4-Dimethylhexane	27.49	57	104062	56.474	ug/L	93
54) Ethylcyclopentane	27.53	69	99742	57.415	ug/L	99
55) 2,2,3-Trimethylpentane	27.75	57	221176	60.132	ug/L	99
57) 2,3,4-Trimethylpentane	29.30	43	155123	60.256	ug/L	92
58) 2,3,3-Trimethylpentane	29.86	43	128881	60.147	ug/L	98
59) 2,3-Dimethylhexane	30.13	43	141611	60.328	ug/L	95
60) 2-Methylheptane	30.56	57	123814	57.454	ug/L	96
61) 4-Methylheptane	30.73	43	153927	60.404	ug/L	95
63) 3-Methylheptane	31.31	43	112127	56.367	ug/L	93
65) 3-Ethylhexane	31.44	43	164343	58.453	ug/L	96
66) Toluene	31.62	91	278187	52.904	ug/L	100
67) 2-Methylthiophene	31.80	97	217779	52.043	ug/L	100
68) trans-1,4-Dimethylcycl...	32.26	97	138127	53.860	ug/L	97
69) 3-Methylthiophene	32.56	97	219826	52.175	ug/L	99
70) 1-Octene	32.99	55	59205	57.565	ug/L	96
71) Octane	33.83	43	130200	57.862	ug/L	97
72) trans-1,2-Dimethylcycl...	34.10	55	104605	58.280	ug/L	92
73) 1,2-Dibromoethane	34.33	107	65689	52.275	ug/L	98
75) cis-2-Octene	35.19	55	87584	57.110	ug/L	96
76) Isopropylcyclopentane	35.33	68	119883	55.636	ug/L	97
77) cis-1,2-Dimethylcycloh...	37.10	55	104718	56.504	ug/L	94
78) 2,5-Dimethylheptane	37.44	57	182824	57.884	ug/L	98

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) 3,5-Dimethylheptane	37.58	57	225650M4	57.246	ug/L	
80) 3,3-Dimethylheptane	37.83	57	142827	55.879	ug/L	96
81) 1,1,4-Trimethylcyclohe...	38.36	69	125509	55.143	ug/L	97
82) 2,3-Dimethylheptane	39.50	43	165694	59.033	ug/L	95
83) 3,4-Dimethylheptane	39.81	43	105252	58.802	ug/L	96
84) 4-Methyloctane	40.11	43	162499	61.687	ug/L	97
85) 2-Methyloctane	40.20	43	135240M3	56.155	ug/L	
86) Ethylbenzene	40.71	91	325876	52.819	ug/L	99
88) 2-Ethylthiophene	40.85	97	241417	52.777	ug/L	98
89) 3-Methyloctane	40.85	57	243084	57.283	ug/L	98
90) 3,3-Diethylpentane	41.85	57	280359	56.674	ug/L	97
91) p/m-Xylene	41.96	91	488803	103.206	ug/L	99
92) 1-Nonene	42.62	56	62832	57.050	ug/L	98
93) trans-3-Nonene	43.03	55	91241	57.617	ug/L	97
94) cis-3-Nonene	43.32	55	100483M6	57.185	ug/L	
95) Nonane	43.40	43	138598M6	59.036	ug/L	
96) Styrene	43.83	104	198545	50.200	ug/L	98
98) o-Xylene	44.24	91	247942	51.308	ug/L	97
99) 2-Nonene	44.67	55	90578	57.269	ug/L	98
100) Isopropylcyclohexane	45.96	83	127600	55.391	ug/L	98
102) Isopropylbenzene	46.57	105	322454	51.440	ug/L	100
103) 3,3-Dimethyloctane	47.07	71	200949	56.898	ug/L	95
104) n-Propylbenzene	49.00	91	386457	52.393	ug/L	99
105) 2-Methylnonane	49.04	43	129973	62.753	ug/L	97
106) 3-Methylnonane	49.44	57	157887	59.901	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.57	105	319018	51.094	ug/L	100
108) 1-Methyl-4-ethylbenzene	49.74	105	308615	51.673	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	267572	51.250	ug/L	99
110) 1-Decene	50.42	41	70832	60.548	ug/L	95
111) Isobutylcyclohexane	50.57	83	138644	55.563	ug/L	94
112) 1-Methyl-2-ethylbenzene	50.61	105	316975	50.967	ug/L	98
113) Decane	50.79	43	124625	62.423	ug/L	96
114) tert-Butylbenzene	51.04	119	235709	50.547	ug/L	97
115) 1,2,4-Trimethylbenzene	51.44	105	280631	51.058	ug/L	99
116) Isobutylbenzene	51.64	91	325527M6	53.919	ug/L	
117) sec-Butylbenzene	51.69	105	349578	51.355	ug/L	99
118) 1-Methyl-3-isopropylbe...	52.07	119	294121	50.517	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	295697	50.705	ug/L	99
120) 1,2,3-Trimethylbenzene	52.53	105	281627	50.644	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.73	119	293330	50.271	ug/L	100
122) Indan	52.82	117	260550	49.554	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
123) 1,3-Diethylbenzene	52.97	105	189749	51.473	ug/L	97
124) 1-Methyl-3-propylbenzene	53.08	105	360600	52.035	ug/L	99
125) Indene	53.24	115	251618	50.250	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	422136	51.687	ug/L	97
127) n-Butylbenzene	53.23	91	339710	53.178	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	303697	50.181	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	146527	49.947	ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	377366	51.405	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	287051	50.370	ug/L	98
132) Undecane	53.97	57	160756	63.804	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	345098	50.456	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	315240	50.283	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	338475	49.780	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	302226	49.332	ug/L	98
137) 1,2,4,5-Tetramethylben...	55.15	119	321652	49.167	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	289948	49.141	ug/L	98
139) Pentylbenzene	55.72	91	288456	52.272	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	379127	48.442	ug/L	96
141) 1,3-DM-5-tert-Butylben...	56.04	147	260861	48.317	ug/L	100
142) Dodecane	56.21	43	118820	69.990	ug/L	94
143) 1,3,5-Triethylbenzene	56.93	147	160663	46.778	ug/L	98
144) Naphthalene	57.08	128	325670	46.043	ug/L	100
145) Benzothiophene	57.18	134	199501	46.687	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	146495	44.920	ug/L	99
147) Hexylbenzene	58.00	91	240085	48.767	ug/L	98
148) MMT	58.26	134	108632	41.396	ug/L	99
149) Tridecane	58.32	57	116276	60.411	ug/L	97
150) 2-Methylnaphthalene	59.87	142	195673	40.894	ug/L	99
151) 1-Methylnaphthalene	60.35	142	175192	41.464	ug/L	99
152) Tetradecane	60.64	57	81078	52.369	ug/L	98
153) Pentadecane	63.47	57	56128	49.785	ug/L	96

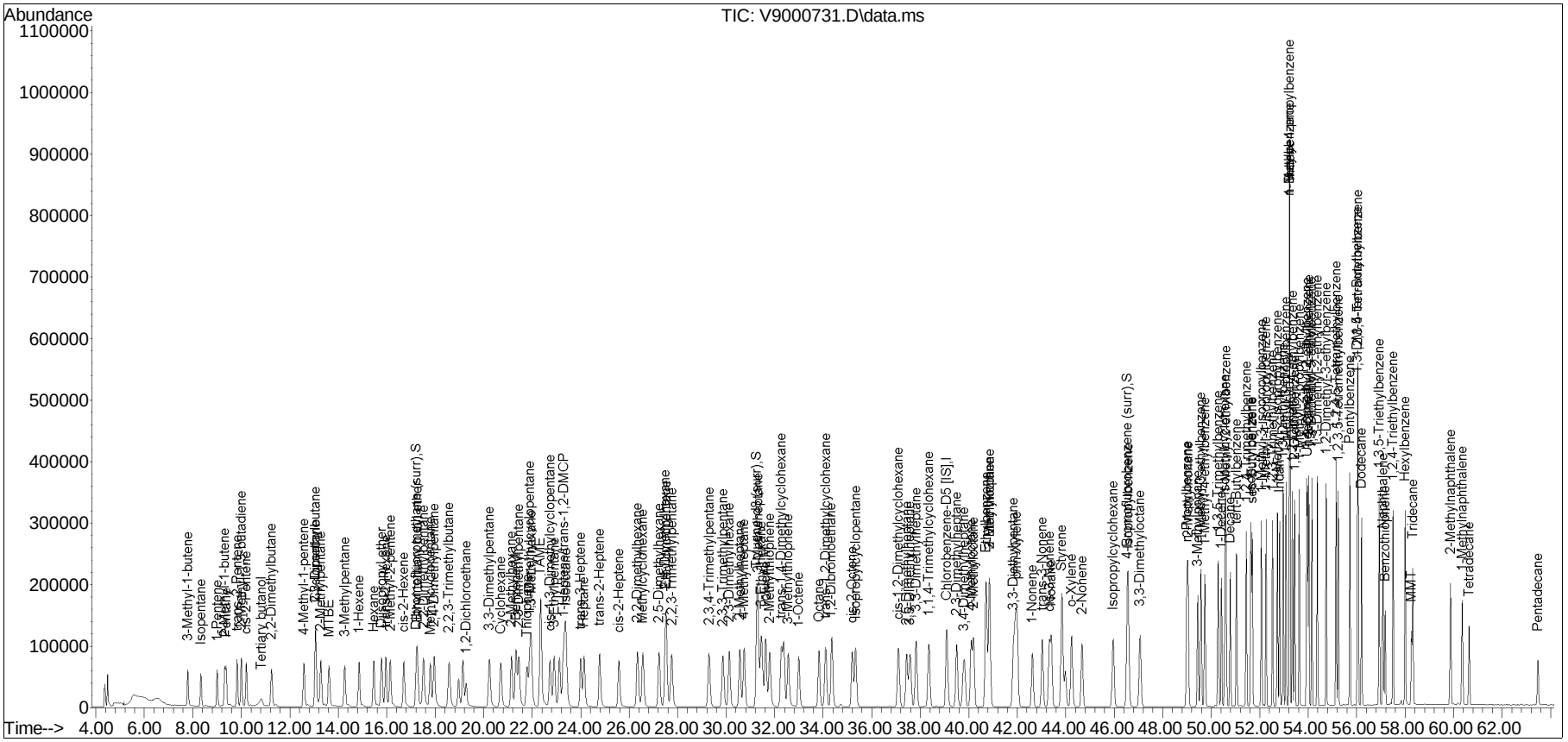
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000731.D
Acq On : 07 Dec 2021 05:19 pm
Operator : VOA9:RY
Sample : WG1581735-2,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 08 08:31:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	78	-0.02
2		3-Methyl-1-butene	0.337	0.386	-14.5	80	-0.06
3		Isopentane	0.188	0.224	-19.1	84	-0.05
4		1-Pentene	0.217	0.261	-20.3	85	-0.07
5		2-Methyl-1-butene	0.346	0.390	-12.7	79	-0.06
6		Pentane	0.318	0.383	-20.4	86	-0.07
7		trans-2-Pentene	0.380	0.414	-8.9	77	-0.06
8		2-Methyl-1,3-butadiene	0.258	0.275	-6.6	73	-0.06
9		cis-2-Pentene	0.353	0.392	-11.0	79	-0.05
10		Tertiary butanol	0.059	0.071#	-20.3	86	0.04
11		2,2-Dimethylbutane	0.221	0.247	-11.8	81	-0.05
12		4-Methyl-1-pentene	0.282	0.317	-12.4	79	-0.06
13		Cyclopentane	0.156	0.167	-7.1	74	-0.05
14		2,3-Dimethylbutane	0.115	0.118	-2.6	71	-0.05
15		2-Methylpentane	0.387	0.444	-14.7	80	-0.06
16		MTBE	0.626	0.605	3.4	69	-0.02
17		3-Methylpentane	0.361	0.395	-9.4	76	-0.05
18		1-Hexene	0.218	0.247	-13.3	76	-0.05
19		Hexane	0.320	0.350	-9.4	77	-0.05
20		Diisopropyl ether	0.618	0.659	-6.6	75	-0.02
21		trans-2-Hexene	0.362	0.395	-9.1	76	-0.05
22		2-Methyl-2-pentene	0.382	0.386	-1.0	71	-0.05
23		cis-2-Hexene	0.326	0.348	-6.7	75	-0.05
24	S	Dibromofluoromethane (surr)	0.257	0.234	8.9	71	-0.03
25		Ethyl tertiary butyl ether	0.651	0.635	2.5	69	-0.02
26		2,2-Dimethylpentane	0.455	0.487	-7.0	75	-0.05
27		Methylcyclopentane	0.410	0.431	-5.1	75	-0.05
28		2,4-Dimethylpentane	0.359	0.402	-12.0	77	-0.04
29		2,2,3-Trimethylbutane	0.415	0.449	-8.2	76	-0.04
30		1,2-Dichloroethane	0.279	0.304	-9.0	77	-0.04
31		3,3-Dimethylpentane	0.467	0.523	-12.0	79	-0.04
32		Cyclohexane	0.343	0.369	-7.6	76	-0.04
33		2-Methylhexane	0.403	0.465	-15.4	80	-0.04
34	M	Benzene	0.887	0.894	-0.8	73	-0.04
35		2,3-Dimethylpentane	0.339	0.377	-11.2	77	-0.04
36		Thiophene	0.474	0.479	-1.1	71	-0.04
37		1,1-Dimethylcyclopentane	0.228	0.234	-2.6	70	-0.06
38		3-Methylhexane	0.345	0.386	-11.9	78	-0.05
39		TAME	0.720	0.666	7.5	73	-0.03

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.295	0.312	-5.8	73	-0.03
41		3-Ethylpentane	0.465	0.512	-10.1	77	-0.04
43		1-Heptene/trans-1,2-DMCP	0.175	0.178	-1.7	71	-0.05
44		Isooctane	0.870	0.930	-6.9	76	-0.04
45		trans-3-Heptene	0.276	0.303	-9.8	80	-0.03
46		Heptane	0.304	0.344	-13.2	80	-0.04
48		trans-2-Heptene	0.262	0.293	-11.8	79	-0.04
49		cis-2-Heptene	0.240	0.262	-9.2	77	-0.03
50		2,2-Dimethylhexane	0.858	0.929	-8.3	77	-0.02
51		Methylcyclohexane	0.400	0.405	-1.3	72	-0.02
52		2,5-Dimethylhexane	0.434	0.464	-6.9	76	-0.02
53		2,4-Dimethylhexane	0.345	0.367	-6.4	74	-0.03
54		Ethylcyclopentane	0.326	0.340	-4.3	74	-0.03
55		2,2,3-Trimethylpentane	0.689	0.731	-6.1	75	-0.03
57		2,3,4-Trimethylpentane	0.483	0.545	-12.8	82	-0.03
58		2,3,3-Trimethylpentane	0.402	0.454	-12.9	82	-0.03
59		2,3-Dimethylhexane	0.440	0.427	3.0	74	-0.03
60		2-Methylheptane	0.404	0.426	-5.4	77	-0.02
61		4-Methylheptane	0.478	0.472	1.3	78	-0.02
62	S	Toluene-d8 (surr)	1.071	1.162	-8.5	84	-0.03
63		3-Methylheptane	0.373	0.391	-4.8	82	-0.02
65		3-Ethylhexane	0.527	0.646	-22.6	85	-0.03
66	M	Toluene	0.986	1.009	-2.3	73	-0.03
67		2-Methylthiophene	0.784	0.791	-0.9	72	-0.03
68		trans-1,4-Dimethylcyclohexa	0.481	0.495	-2.9	76	-0.03
69		3-Methylthiophene	0.790	0.810	-2.5	74	-0.03
70		1-Octene	0.193	0.214	-10.9	78	-0.02
71		Octane	0.422	0.481	-14.0	81	-0.02
72		trans-1,2-Dimethylcyclohexa	0.336	0.370	-10.1	79	-0.02
73		1,2-Dibromoethane	0.236	0.246	-4.2	76	-0.02
75		cis-2-Octene	0.287	0.313	-9.1	78	-0.02
76		Isopropylcyclopentane	0.404	0.452	-11.9	78	-0.02
77		cis-1,2-Dimethylcyclohexane	0.347	0.392	-13.0	81	-0.02
78		2,5-Dimethylheptane	0.592	0.649	-9.6	80	-0.02
79		3,5-Dimethylheptane	0.739	0.852	-15.3	79	-0.02
80		3,3-Dimethylheptane	0.479	0.527	-10.0	79	-0.02
81		1,1,4-Trimethylcyclohexane	0.427	0.459	-7.5	78	-0.02
82		2,3-Dimethylheptane	0.526	0.611	-16.2	83	-0.02
83		3,4-Dimethylheptane	0.335	0.381	-13.7	83	-0.02

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
84		4-Methyloctane	0.494	0.574	-16.2	88	-0.01
85		2-Methyloctane	0.451	0.538	-19.3	79	-0.01
86		Ethylbenzene	1.156	1.221	-5.6	76	-0.02
88		2-Ethylthiophene	0.857	0.913	-6.5	76	-0.01
89		3-Methyloctane	0.795	0.899	-13.1	80	-0.02
90		3,3-Diethylpentane	0.927	1.038	-12.0	80	-0.02
91		p/m-Xylene	0.888	0.920	-3.6	75	0.00
92		1-Nonene	0.206	0.234	-13.6	79	-0.01
93		trans-3-Nonene	0.297	0.339	-14.1	80	-0.02
94		cis-3-Nonene	0.329	0.392	-19.1	82	-0.02
95		Nonane	0.440	0.535	-21.6	86	-0.02
96		Styrene	0.741	0.758	-2.3	73	-0.01
98		o-Xylene	0.906	0.941	-3.9	75	-0.02
99		2-Nonene	0.296	0.339	-14.5	81	-0.01
100		Isopropylcyclohexane	0.432	0.473	-9.5	78	-0.01
101	S	4-Bromofluorobenzene (surr)	0.538	0.515	4.3	76	-0.02
102		Isopropylbenzene	1.175	1.231	-4.8	77	-0.01
103		3,3-Dimethyloctane	0.662	0.751	-13.4	79	-0.02
104		n-Propylbenzene	1.382	1.484	-7.4	78	-0.01
105		2-Methylnonane	0.388	0.498	-28.4#	88	-0.01
106		3-Methylnonane	0.494	0.599	-21.3	83	0.00
107		1-Methyl-3-ethylbenzene	1.170	1.232	-5.3	76	0.00
108		1-Methyl-4-ethylbenzene	1.119	1.183	-5.7	77	0.00
109		1,3,5-Trimethylbenzene	0.979	1.033	-5.5	77	0.00
110		1-Decene	0.219	0.271	-23.7	85	0.00
111		Isobutylcyclohexane	0.468	0.518	-10.7	78	0.00
112		1-Methyl-2-ethylbenzene	1.166	1.221	-4.7	76	-0.01
113		Decane	0.374	0.474	-26.7#	87	0.00
114		tert-Butylbenzene	0.874	0.904	-3.4	76	0.00
115		1,2,4-Trimethylbenzene	1.030	1.081	-5.0	77	0.00
116		Isobutylbenzene	1.132	1.191	-5.2	76	0.00
117		sec-Butylbenzene	1.276	1.338	-4.9	77	0.00
118		1-Methyl-3-isopropylbenzene	1.091	1.118	-2.5	75	0.00
119		1-Methyl-4-isopropylbenzene	1.093	1.128	-3.2	75	0.00
120		1,2,3-Trimethylbenzene	1.042	1.087	-4.3	77	-0.01
121		1-Methyl-2-isopropylbenzene	1.094	1.125	-2.8	75	0.00
122		Indan	0.985	1.008	-2.3	75	0.00
123		1,3-Diethylbenzene	0.691	0.719	-4.1	76	0.00
124		1-Methyl-3-propylbenzene	1.299	1.362	-4.8	77	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
125	Indene	0.938	0.977	-4.2	77	0.00
126	1-Methyl-4-propylbenzene	1.531	1.604	-4.8	77	0.00
127	n-Butylbenzene	1.197	1.276	-6.6	78	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.134	1.151	-1.5	74	0.00
129	1,2-Diethylbenzene	0.550	0.557	-1.3	75	0.00
130	1-Methyl-2-propylbenzene	1.376	1.436	-4.4	76	0.00
131	1,4-Dimethyl-2-ethylbenzene	1.068	1.085	-1.6	75	0.00
132	Undecane	0.472	0.585	-23.9	83	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.282	1.310	-2.2	75	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.175	1.192	-1.4	75	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.274	1.295	-1.6	75	0.00
136	1,2-Dimethyl-3-ethylbenzene	1.148	1.160	-1.0	75	0.00
137	1,2,4,5-Tetramethylbenzene	1.226	1.239	-1.1	75	0.00
138	1,2,3,5-Tetramethylbenzene	1.106	1.114	-0.7	75	0.00
139	Pentylbenzene	1.034	1.067	-3.2	75	0.00
140	1,2,3,4-Tetramethylbenzene	1.467	1.465	0.1	74	0.00
141	1,3-DM-5-tert-Butylbenzene	1.012	0.970	4.2	70	0.00
142	Dodecane	0.318	0.421	-32.4#	96	0.00
143	1,3,5-Triethylbenzene	0.644	0.600	6.8	67	0.00
144	Naphthalene	1.326	1.365	-2.9	79	0.00
145	Benzothiophene	0.801	0.841	-5.0	80	0.00
146	1,2,4-Triethylbenzene	0.611	0.552	9.7	68	0.00
147	Hexylbenzene	0.923	0.904	2.1	70	0.00
148	MMT	0.492	0.488	0.8	77	0.00
149	Tridecane	0.361	0.397	-10.0	94	0.00
150	2-Methylnaphthalene	0.897	0.886	1.2	76	0.00
151	1-Methylnaphthalene	0.792	0.794	-0.3	78	0.00
152	Tetradecane	0.290	0.284	2.1	95	0.00
153	Pentadecane	0.211	0.183	13.3	93	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Chlorobenzene-D5 [IS]	39.08	117	270867	50.000	ug/L		-0.02
System Monitoring Compounds							
24) Dibromofluoromethane (...	17.16	113	63366	45.454	ug/L		-0.03
Spiked Amount 50.000	Range 78 - 118		Recovery = 90.91%				
62) Toluene-d8 (surr)	31.24	98	314735	54.266	ug/L		-0.03
Spiked Amount 50.000	Range 87 - 113		Recovery = 108.53%				
101) 4-Bromofluorobenzene (...	46.53	95	139516	47.850	ug/L		-0.02
Spiked Amount 50.000	Range 76 - 120		Recovery = 95.70%				
Target Compounds							Qvalue
2) 3-Methyl-1-butene	7.72	55	104532	57.178	ug/L		97
3) Isopentane	8.27	43	60743	59.710	ug/L		98
4) 1-Pentene	8.93	42	70729	60.192	ug/L		91
5) 2-Methyl-1-butene	9.25	55	105622	56.376	ug/L		95
6) Pentane	9.31	43	103803	60.208	ug/L		98
7) trans-2-Pentene	9.76	55	112242	54.567	ug/L		96
8) 2-Methyl-1,3-butadiene	9.93	67	74599	53.288	ug/L		98
9) cis-2-Pentene	10.15	55	106200	55.498	ug/L		98
10) Tertiary butanol	10.76	59	95635M4	297.086	ug/L		
11) 2,2-Dimethylbutane	11.19	43	66896	55.754	ug/L		98
12) 4-Methyl-1-pentene	12.52	43	85872	56.183	ug/L		94
13) Cyclopentane	13.01	70	45253	53.508	ug/L	#	80
14) 2,3-Dimethylbutane	13.01	71	31925	51.167	ug/L	#	79
15) 2-Methylpentane	13.22	43	120318	57.412	ug/L		95
16) MTBE	13.56	73	163902	48.359	ug/L		96
17) 3-Methylpentane	14.21	57	106903	54.614	ug/L		98
18) 1-Hexene	14.80	56	66903	56.667	ug/L		98
19) Hexane	15.41	57	94899	54.773	ug/L		94
20) Diisopropyl ether	15.73	45	178568	53.349	ug/L		96
21) trans-2-Hexene	15.91	55	106874	54.450	ug/L		97
22) 2-Methyl-2-pentene	16.09	69	104627	50.577	ug/L		95
23) cis-2-Hexene	16.65	55	94356	53.395	ug/L		95
25) Ethyl tertiary butyl e...	17.21	59	171978	48.761	ug/L		96
26) 2,2-Dimethylpentane	17.47	57	132044	53.546	ug/L		98
27) Methylcyclopentane	17.75	56	116873	52.611	ug/L		96
28) 2,4-Dimethylpentane	17.91	43	108877	56.017	ug/L		99
29) 2,2,3-Trimethylbutane	18.54	57	121522	53.995	ug/L		96
30) 1,2-Dichloroethane	19.22	62	82297	54.388	ug/L		97
31) 3,3-Dimethylpentane	20.19	43	141548	55.903	ug/L		93

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	20.66	56	100066	53.927	ug/L	93
33) 2-Methylhexane	21.11	43	125823	57.678	ug/L	95
34) Benzene	21.29	78	242211	50.418	ug/L	99
35) 2,3-Dimethylpentane	21.41	56	102005	55.607	ug/L	98
36) Thiophene	21.75	84	129810	50.598	ug/L	96
37) 1,1-Dimethylcyclopentane	21.85	83	63264	51.250	ug/L	95
38) 3-Methylhexane	21.92	43	104590	56.033	ug/L	98
39) TAME	22.29	73	180501	46.295	ug/L	96
40) cis-1,3-Dimethylcyclop...	22.71	70	84393	52.835	ug/L	97
41) 3-Ethylpentane	22.87	43	138790	55.062	ug/L	96
43) 1-Heptene/trans-1,2-DMCP	23.25	70	96440	101.592	ug/L	99
44) Isooctane	23.36	57	252001	53.489	ug/L	96
45) trans-3-Heptene	23.97	41	82018	54.768	ug/L	93
46) Heptane	24.11	43	93045	56.521	ug/L	93
48) trans-2-Heptene	24.75	56	79234	55.733	ug/L	94
49) cis-2-Heptene	25.54	56	70977	54.516	ug/L	95
50) 2,2-Dimethylhexane	26.31	57	251603	54.131	ug/L	99
51) Methylcyclohexane	26.54	83	109574	50.602	ug/L	97
52) 2,5-Dimethylhexane	27.20	57	125681	53.494	ug/L	95
53) 2,4-Dimethylhexane	27.47	57	99522	53.194	ug/L	96
54) Ethylcyclopentane	27.50	69	92116	52.224	ug/L	100
55) 2,2,3-Trimethylpentane	27.72	57	198060	53.034	ug/L	97
57) 2,3,4-Trimethylpentane	29.27	43	147568	56.454	ug/L	94
58) 2,3,3-Trimethylpentane	29.84	43	122843	56.462	ug/L	95
59) 2,3-Dimethylhexane	30.10	43	115549	48.481	ug/L	93
60) 2-Methylheptane	30.54	57	115397	52.739	ug/L	97
61) 4-Methylheptane	30.72	43	127757	49.377	ug/L	97
63) 3-Methylheptane	31.29	43	105933	52.448	ug/L	93
65) 3-Ethylhexane	31.41	43	175037	61.315	ug/L	99
66) Toluene	31.61	91	273187	51.168	ug/L	97
67) 2-Methylthiophene	31.77	97	214358	50.451	ug/L	100
68) trans-1,4-Dimethylcycl...	32.25	97	134170	51.526	ug/L	98
69) 3-Methylthiophene	32.54	97	219292	51.261	ug/L	98
70) 1-Octene	32.97	55	57993	55.534	ug/L	95
71) Octane	33.81	43	130250	57.009	ug/L	96
72) trans-1,2-Dimethylcycl...	34.08	55	100193	54.978	ug/L	87
73) 1,2-Dibromoethane	34.32	107	66768	52.330	ug/L	97
75) cis-2-Octene	35.18	55	84869	54.503	ug/L	96
76) Isopropylcyclopentane	35.32	68	122333	55.914	ug/L	98
77) cis-1,2-Dimethylcycloh...	37.09	55	106222	56.449	ug/L	92
78) 2,5-Dimethylheptane	37.43	57	175681	54.782	ug/L	96

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) 3,5-Dimethylheptane	37.57	57	230702M4	57.643	ug/L	
80) 3,3-Dimethylheptane	37.81	57	142863	55.049	ug/L	96
81) 1,1,4-Trimethylcyclohe...	38.34	69	124356	53.810	ug/L	96
82) 2,3-Dimethylheptane	39.49	43	165533	58.084	ug/L	93
83) 3,4-Dimethylheptane	39.81	43	103126	56.743	ug/L	96
84) 4-Methyloctane	40.10	43	155489	58.133	ug/L	94
85) 2-Methyloctane	40.18	43	145677M3	59.574	ug/L	
86) Ethylbenzene	40.70	91	330605	52.776	ug/L	98
88) 2-Ethylthiophene	40.85	97	247371	53.261	ug/L	98
89) 3-Methyloctane	40.84	57	243532	56.521	ug/L	96
90) 3,3-Diethylpentane	41.83	57	281229	55.990	ug/L	97
91) p/m-Xylene	41.96	91	498588	103.680	ug/L	100
92) 1-Nonene	42.62	56	63306	56.612	ug/L	98
93) trans-3-Nonene	43.03	55	91838	57.117	ug/L	97
94) cis-3-Nonene	43.32	55	106145M6	59.494	ug/L	
95) Nonane	43.40	43	144894M6	60.785	ug/L	
96) Styrene	43.83	104	205256	51.112	ug/L	98
98) o-Xylene	44.23	91	254893	51.949	ug/L	99
99) 2-Nonene	44.67	55	91888	57.219	ug/L	98
100) Isopropylcyclohexane	45.95	83	128044	54.743	ug/L	98
102) Isopropylbenzene	46.57	105	333499	52.398	ug/L	96
103) 3,3-Dimethyloctane	47.06	71	203528	56.757	ug/L	96
104) n-Propylbenzene	48.99	91	402051	53.684	ug/L	98
105) 2-Methylnonane	49.04	43	134775	64.087	ug/L	96
106) 3-Methylnonane	49.44	57	162212	60.611	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.57	105	333797	52.653	ug/L	98
108) 1-Methyl-4-ethylbenzene	49.74	105	320404	52.836	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	279684	52.760	ug/L	98
110) 1-Decene	50.42	41	73279	61.692	ug/L	95
111) Isobutylcyclohexane	50.57	83	140423	55.425	ug/L	95
112) 1-Methyl-2-ethylbenzene	50.60	105	330640	52.360	ug/L	98
113) Decane	50.78	43	128263	63.274	ug/L	94
114) tert-Butylbenzene	51.04	119	244999	51.745	ug/L	97
115) 1,2,4-Trimethylbenzene	51.44	105	292727	52.454	ug/L	98
116) Isobutylbenzene	51.63	91	322638M6	52.633	ug/L	
117) sec-Butylbenzene	51.69	105	362410	52.436	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	302762	51.215	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	305487	51.592	ug/L	99
120) 1,2,3-Trimethylbenzene	52.52	105	294312	52.125	ug/L	98
121) 1-Methyl-2-isopropylbe...	52.72	119	304625	51.418	ug/L	98
122) Indan	52.82	117	272934	51.125	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
123) 1,3-Diethylbenzene	52.97	105	194745	52.030	ug/L	97
124) 1-Methyl-3-propylbenzene	53.08	105	368850	52.421	ug/L	99
125) Indene	53.24	115	264766	52.077	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	434373	52.381	ug/L	98
127) n-Butylbenzene	53.23	91	345700	53.298	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	311880	50.754	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	150964	50.681	ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	389004	52.189	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	293983	50.806	ug/L	100
132) Undecane	53.97	57	158370	61.907	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	354927	51.109	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	322876	50.722	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	350709	50.799	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	314260	50.521	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	335532	50.514	ug/L	100
138) 1,2,3,5-Tetramethylben...	55.24	119	301619	50.346	ug/L	97
139) Pentylbenzene	55.72	91	288895	51.560	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	396764	49.929	ug/L	96
141) 1,3-DM-5-tert-Butylben...	56.04	147	262739	47.930	ug/L	99
142) Dodecane	56.20	43	113931	66.095	ug/L	93
143) 1,3,5-Triethylbenzene	56.93	147	162650	46.640	ug/L	99
144) Naphthalene	57.08	128	369704	51.479	ug/L	99
145) Benzothiophene	57.18	134	227772	52.497	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	149464	45.138	ug/L	98
147) Hexylbenzene	58.00	91	244919	48.997	ug/L	99
148) MMT	58.26	134	132195	49.614	ug/L	99
149) Tridecane	58.32	57	107506	55.010	ug/L	96
150) 2-Methylnaphthalene	59.87	142	240123	49.425	ug/L	99
151) 1-Methylnaphthalene	60.35	142	214959	50.107	ug/L	99
152) Tetradecane	60.64	57	76811	48.863	ug/L	97
153) Pentadecane	63.48	57	49445	43.195	ug/L	96

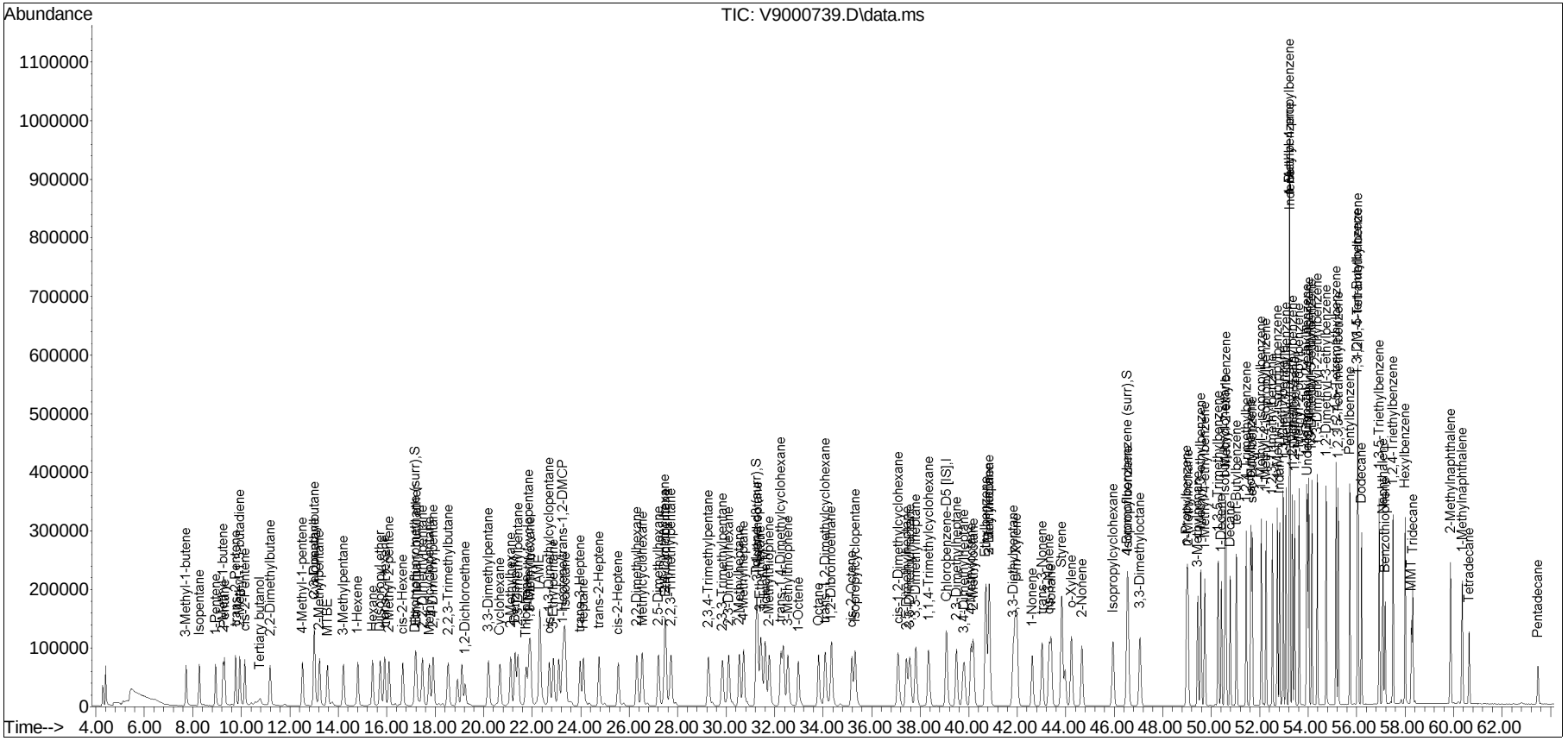
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000739.D
Acq On : 08 Dec 2021 01:55 pm
Operator : VOA9:RY
Sample : WG1581735-7,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 08 14:58:31 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000737.D
Acq On : 08 Dec 2021 10:30 am
Operator : VOA9:RY
Sample : L2166503-02,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 12 10:06:18 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	267367	50.000	ug/L	-0.03
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.12	113	80698	58.644	ug/L	-0.08
Spiked Amount 50.000	Range 78 - 118		Recovery = 117.29%			
62) Toluene-d8 (surr)	31.23	98	323938	56.584	ug/L	-0.04
Spiked Amount 50.000	Range 87 - 113		Recovery = 113.17%#			
101) 4-Bromofluorobenzene (...	46.52	95	133129	46.257	ug/L	-0.03
Spiked Amount 50.000	Range 76 - 120		Recovery = 92.51%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.	d	
3) Isopentane	0.00		0	N.D.	d	
4) 1-Pentene	0.00		0	N.D.	d	
5) 2-Methyl-1-butene	0.00		0	N.D.	d	
6) Pentane	0.00		0	N.D.	d	
7) trans-2-Pentene	0.00		0	N.D.	d	
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.	d	
9) cis-2-Pentene	0.00		0	N.D.	d	
10) Tertiary butanol	0.00		0	N.D.	d	
11) 2,2-Dimethylbutane	0.00		0	N.D.	d	
12) 4-Methyl-1-pentene	0.00		0	N.D.	d	
13) Cyclopentane	0.00		0	N.D.	d	
14) 2,3-Dimethylbutane	0.00		0	N.D.	d	
15) 2-Methylpentane	0.00		0	N.D.	d	
16) MTBE	0.00		0	N.D.	d	
17) 3-Methylpentane	0.00		0	N.D.	d	
18) 1-Hexene	0.00		0	N.D.	d	
19) Hexane	0.00		0	N.D.	d	
20) Diisopropyl ether	0.00		0	N.D.	d	
21) trans-2-Hexene	0.00		0	N.D.	d	
22) 2-Methyl-2-pentene	0.00		0	N.D.	d	
23) cis-2-Hexene	0.00		0	N.D.	d	
25) Ethyl tertiary butyl e...	0.00		0	N.D.	d	
26) 2,2-Dimethylpentane	0.00		0	N.D.	d	
27) Methylcyclopentane	0.00		0	N.D.	d	
28) 2,4-Dimethylpentane	0.00		0	N.D.	d	
29) 2,2,3-Trimethylbutane	0.00		0	N.D.	d	
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.	d	

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000737.D
Acq On : 08 Dec 2021 10:30 am
Operator : VOA9:RY
Sample : L2166503-02,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 12 10:06:18 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	0.00		0	N.D.	d	
33) 2-Methylhexane	0.00		0	N.D.	d	
34) Benzene	0.00		0	N.D.	d	
35) 2,3-Dimethylpentane	0.00		0	N.D.	d	
36) Thiophene	0.00		0	N.D.	d	
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.	d	
38) 3-Methylhexane	0.00		0	N.D.	d	
39) TAME	0.00		0	N.D.	d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.	d	
41) 3-Ethylpentane	0.00		0	N.D.	d	
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d	
44) Isooctane	0.00		0	N.D.	d	
45) trans-3-Heptene	0.00		0	N.D.	d	
46) Heptane	0.00		0	N.D.	d	
48) trans-2-Heptene	0.00		0	N.D.	d	
49) cis-2-Heptene	0.00		0	N.D.	d	
50) 2,2-Dimethylhexane	0.00		0	N.D.	d	
51) Methylcyclohexane	0.00		0	N.D.	d	
52) 2,5-Dimethylhexane	0.00		0	N.D.	d	
53) 2,4-Dimethylhexane	0.00		0	N.D.	d	
54) Ethylcyclopentane	0.00		0	N.D.	d	
55) 2,2,3-Trimethylpentane	0.00		0	N.D.	d	
57) 2,3,4-Trimethylpentane	0.00		0	N.D.	d	
58) 2,3,3-Trimethylpentane	0.00		0	N.D.	d	
59) 2,3-Dimethylhexane	0.00		0	N.D.	d	
60) 2-Methylheptane	0.00		0	N.D.	d	
61) 4-Methylheptane	0.00		0	N.D.	d	
63) 3-Methylheptane	0.00		0	N.D.	d	
65) 3-Ethylhexane	0.00		0	N.D.	d	
66) Toluene	31.59	91	573M4	0.109	ug/L	
67) 2-Methylthiophene	0.00		0	N.D.	d	
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.	d	
69) 3-Methylthiophene	0.00		0	N.D.	d	
70) 1-Octene	0.00		0	N.D.	d	
71) Octane	0.00		0	N.D.	d	
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.	d	
73) 1,2-Dibromoethane	0.00		0	N.D.	d	
75) cis-2-Octene	0.00		0	N.D.	d	
76) Isopropylcyclopentane	0.00		0	N.D.	d	
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.	d	
78) 2,5-Dimethylheptane	0.00		0	N.D.	d	

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000737.D
Acq On : 08 Dec 2021 10:30 am
Operator : VOA9:RY
Sample : L2166503-02,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 12 10:06:18 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79)	3,5-Dimethylheptane	0.00		0	N.D.	d	
80)	3,3-Dimethylheptane	0.00		0	N.D.	d	
81)	1,1,4-Trimethylcyclohe...	0.00		0	N.D.	d	
82)	2,3-Dimethylheptane	0.00		0	N.D.	d	
83)	3,4-Dimethylheptane	0.00		0	N.D.	d	
84)	4-Methyloctane	0.00		0	N.D.	d	
85)	2-Methyloctane	0.00		0	N.D.	d	
86)	Ethylbenzene	0.00		0	N.D.	d	
88)	2-Ethylthiophene	0.00		0	N.D.	d	
89)	3-Methyloctane	0.00		0	N.D.	d	
90)	3,3-Diethylpentane	0.00		0	N.D.	d	
91)	p/m-Xylene	0.00		0	N.D.	d	
92)	1-Nonene	0.00		0	N.D.	d	
93)	trans-3-Nonene	0.00		0	N.D.	d	
94)	cis-3-Nonene	0.00		0	N.D.	d	
95)	Nonane	0.00		0	N.D.	d	
96)	Styrene	0.00		0	N.D.	d	
98)	o-Xylene	0.00		0	N.D.	d	
99)	2-Nonene	0.00		0	N.D.	d	
100)	Isopropylcyclohexane	0.00		0	N.D.	d	
102)	Isopropylbenzene	0.00		0	N.D.	d	
103)	3,3-Dimethyloctane	0.00		0	N.D.	d	
104)	n-Propylbenzene	0.00		0	N.D.	d	
105)	2-Methylnonane	0.00		0	N.D.	d	
106)	3-Methylnonane	0.00		0	N.D.	d	
107)	1-Methyl-3-ethylbenzene	0.00		0	N.D.	d	
108)	1-Methyl-4-ethylbenzene	49.73	105	257	0.043	ug/L	75
109)	1,3,5-Trimethylbenzene	0.00		0	N.D.	d	
110)	1-Decene	0.00		0	N.D.	d	
111)	Isobutylcyclohexane	0.00		0	N.D.	d	
112)	1-Methyl-2-ethylbenzene	50.61	105	510M3	0.082	ug/L	
113)	Decane	50.79	43	301	0.150	ug/L	84
114)	tert-Butylbenzene	51.04	119	491	0.105	ug/L	87
115)	1,2,4-Trimethylbenzene	51.46	105	89	0.016	ug/L	93
116)	Isobutylbenzene	0.00		0	N.D.	d	
117)	sec-Butylbenzene	51.69	105	561M3	0.082	ug/L	
118)	1-Methyl-3-isopropylbe...	52.08	119	273	0.047	ug/L	77
119)	1-Methyl-4-isopropylbe...	52.27	119	1433	0.245	ug/L	84
120)	1,2,3-Trimethylbenzene	52.52	105	4846	0.869	ug/L	96
121)	1-Methyl-2-isopropylbe...	52.73	119	911	0.156	ug/L	87
122)	Indan	0.00		0	N.D.	d	

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000737.D
Acq On : 08 Dec 2021 10:30 am
Operator : VOA9:RY
Sample : L2166503-02,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 12 10:06:18 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
123) 1,3-Diethylbenzene	52.97	105	1070	0.290	ug/L	98
124) 1-Methyl-3-propylbenzene	53.08	105	136	0.020	ug/L	90
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	0.00		0	N.D.	d	
127) n-Butylbenzene	0.00		0	N.D.	d	
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	233	0.038	ug/L	64
129) 1,2-Diethylbenzene	53.44	119	1700	0.578	ug/L	90
130) 1-Methyl-2-propylbenzene	53.63	105	1365	0.186	ug/L	86
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
132) Undecane	53.97	57	1909M3	0.756	ug/L	
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	54.16	119	2339	0.372	ug/L	92
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	9459	1.388	ug/L	94
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	5857	0.954	ug/L	96
137) 1,2,4,5-Tetramethylben...	55.15	119	2000	0.305	ug/L	91
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d	
139) Pentylbenzene	0.00		0	N.D.	d	
140) 1,2,3,4-Tetramethylben...	56.06	119	9169	1.169	ug/L	92
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d	
142) Dodecane	56.20	43	2946	1.731	ug/L	87
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d	
144) Naphthalene	57.10	128	734	0.104	ug/L	68
145) Benzothiophene	0.00		0	N.D.	d	
146) 1,2,4-Triethylbenzene	0.00		0	N.D.	d	
147) Hexylbenzene	0.00		0	N.D.	d	
148) MMT	0.00		0	N.D.	d	
149) Tridecane	58.32	57	4477	2.321	ug/L	93
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.	d	
152) Tetradecane	60.64	57	3627M3	2.337	ug/L	
153) Pentadecane	63.48	57	1236	1.094	ug/L	95

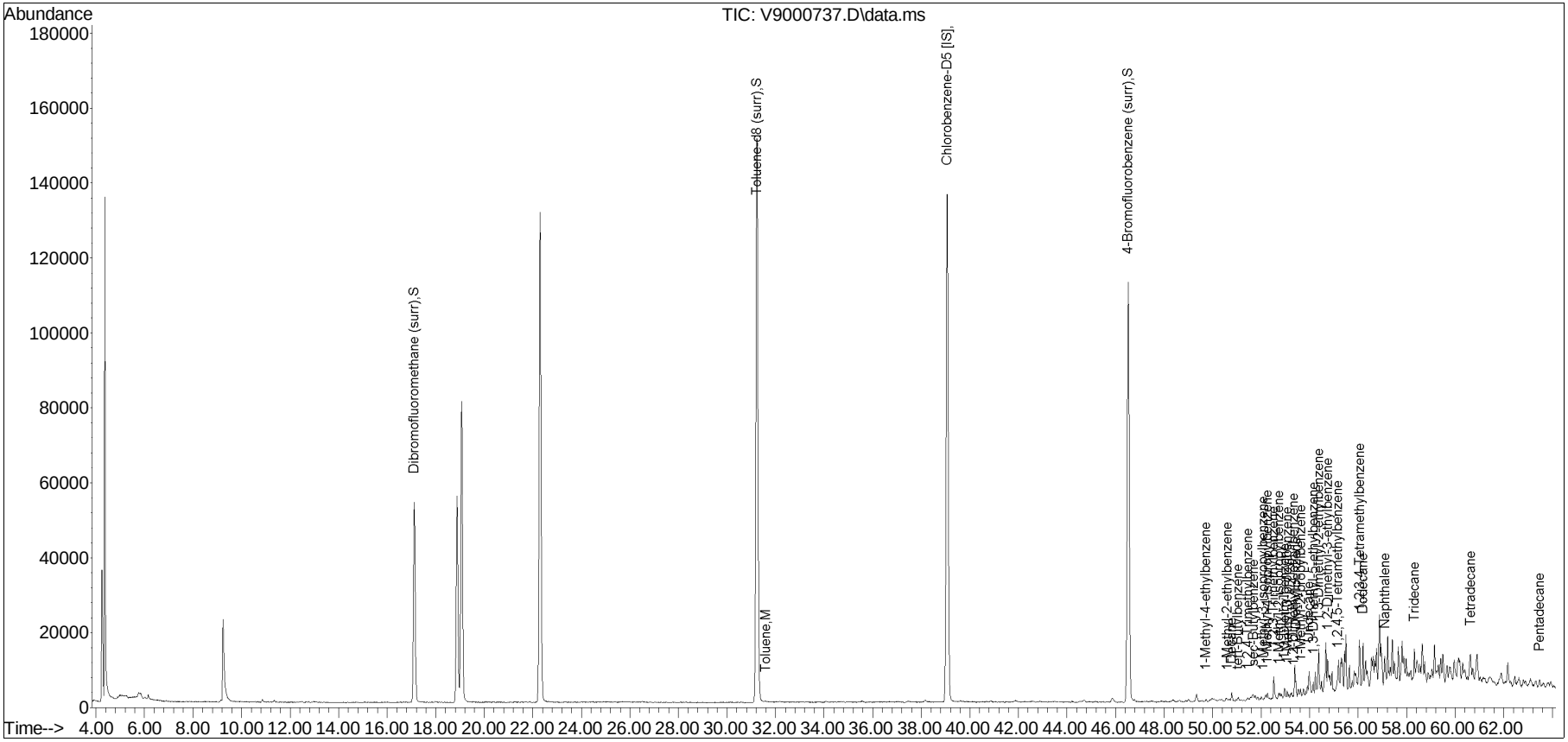
(#) = qualifier out of range (m) = manual integration (+) = signals summed

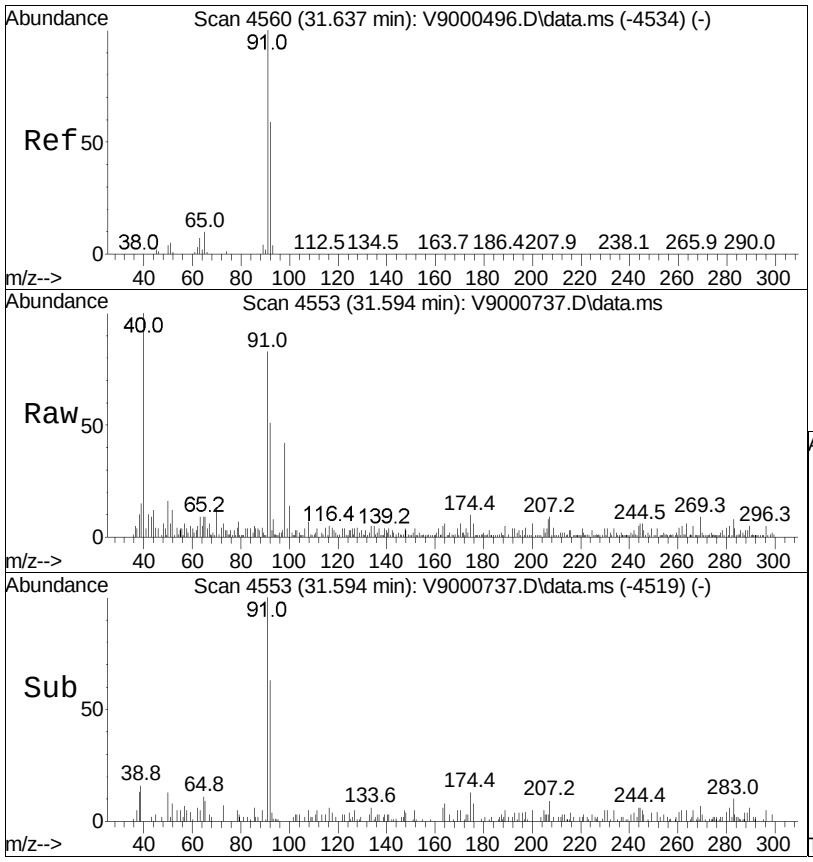
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000737.D
Acq On : 08 Dec 2021 10:30 am
Operator : VOA9:RY
Sample : L2166503-02,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 12 10:06:18 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

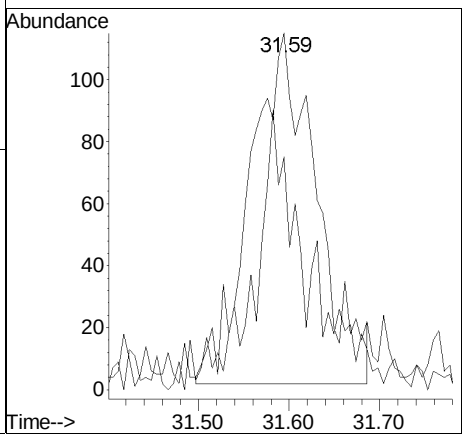


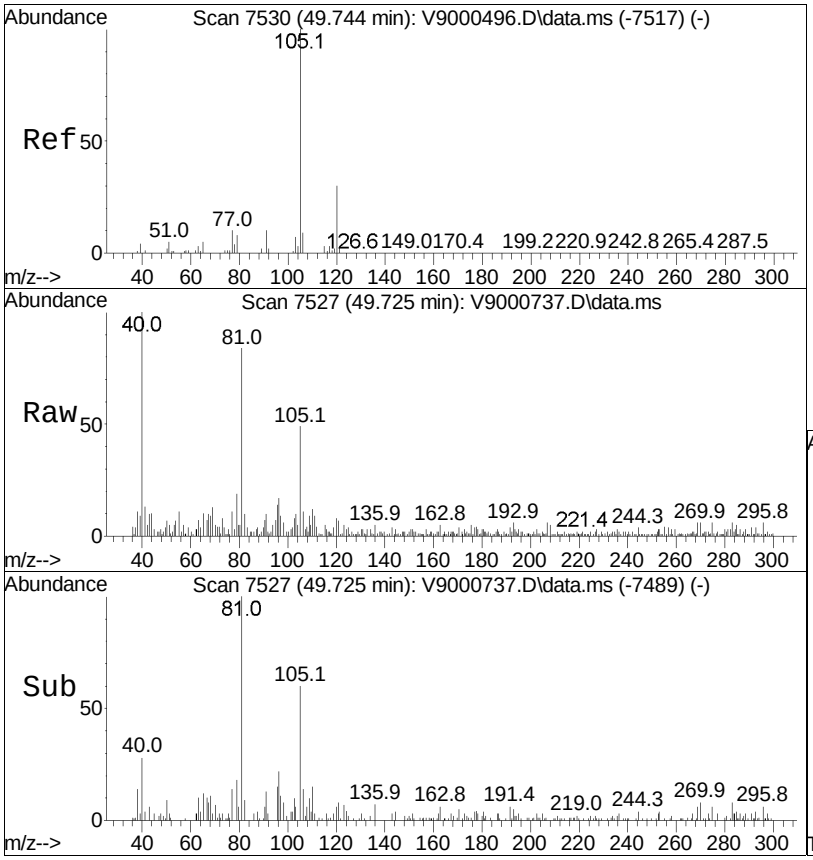


#66
Toluene
Concen: 0.11 ug/L m
RT: 31.59 min Scan# 4553
Delta R.T. -0.043 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion: 91 Resp: 573

Ion	Ratio	Lower	Upper
91	100		
92	61.7	38.5	78.5

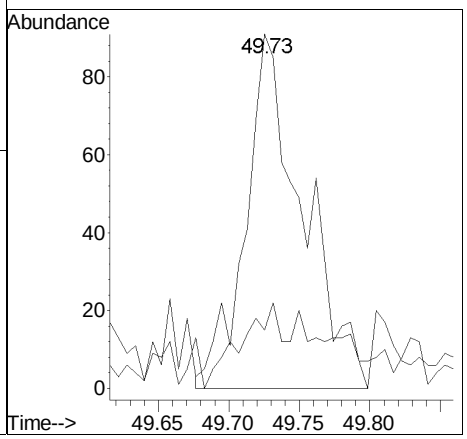


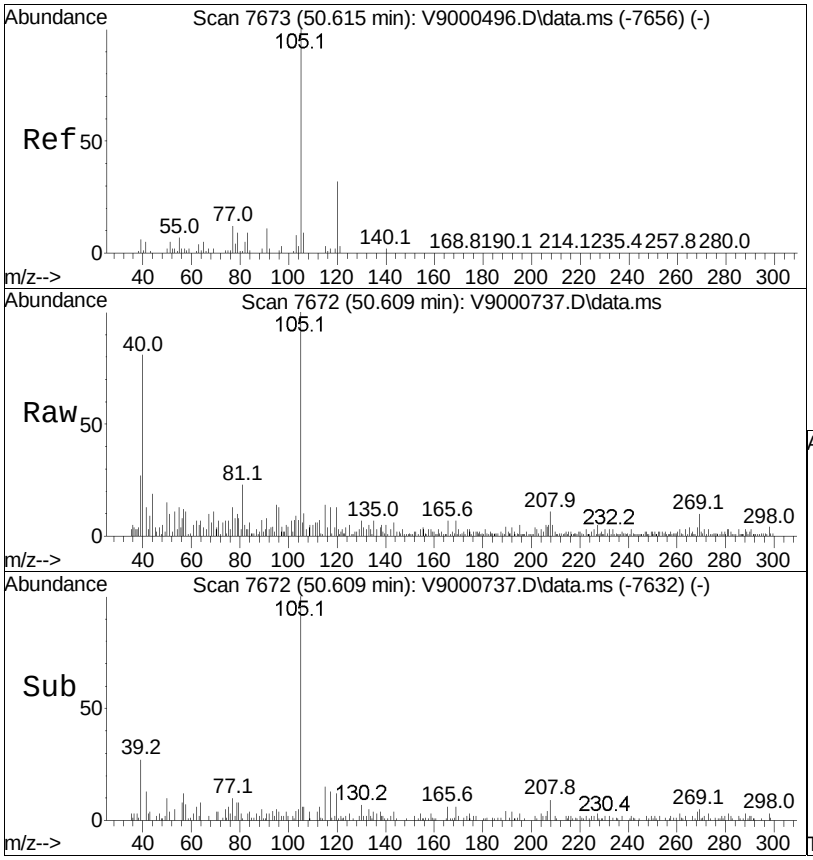


#108
1-Methyl-4-ethylbenzene
Concen: 0.04 ug/L
RT: 49.73 min Scan# 7527
Delta R.T. -0.018 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:105 Resp: 257

Ion	Ratio	Lower	Upper
105	100		
120	16.5	9.8	49.8

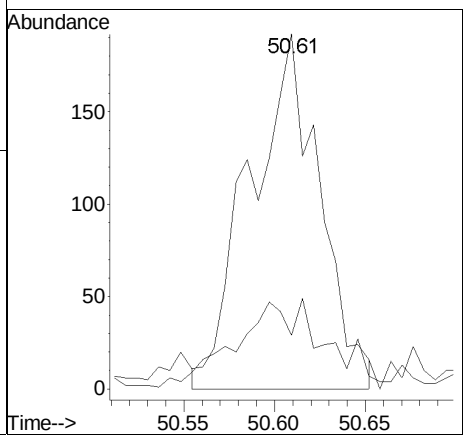


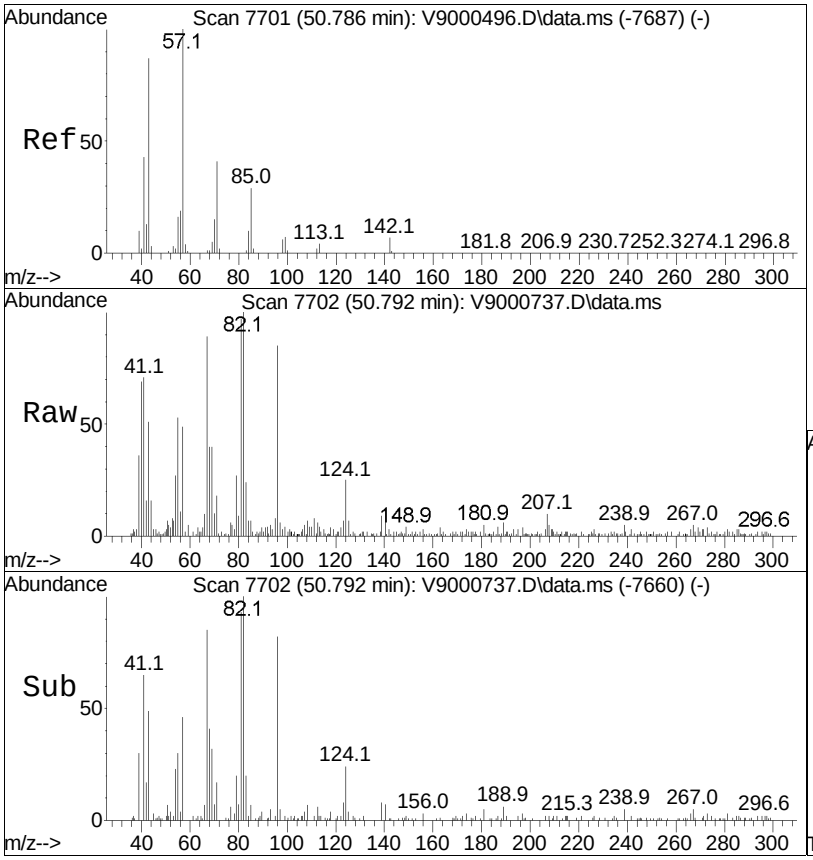


#112
1-Methyl-2-ethylbenzene
Concen: 0.08 ug/L m
RT: 50.61 min Scan# 7672
Delta R.T. -0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:105 Resp: 510

Ion	Ratio	Lower	Upper
105	100		
120	12.5	11.7	51.7

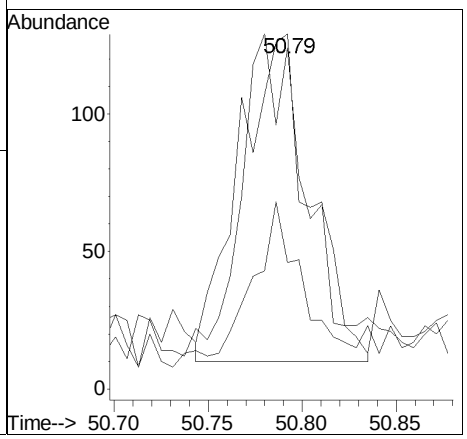


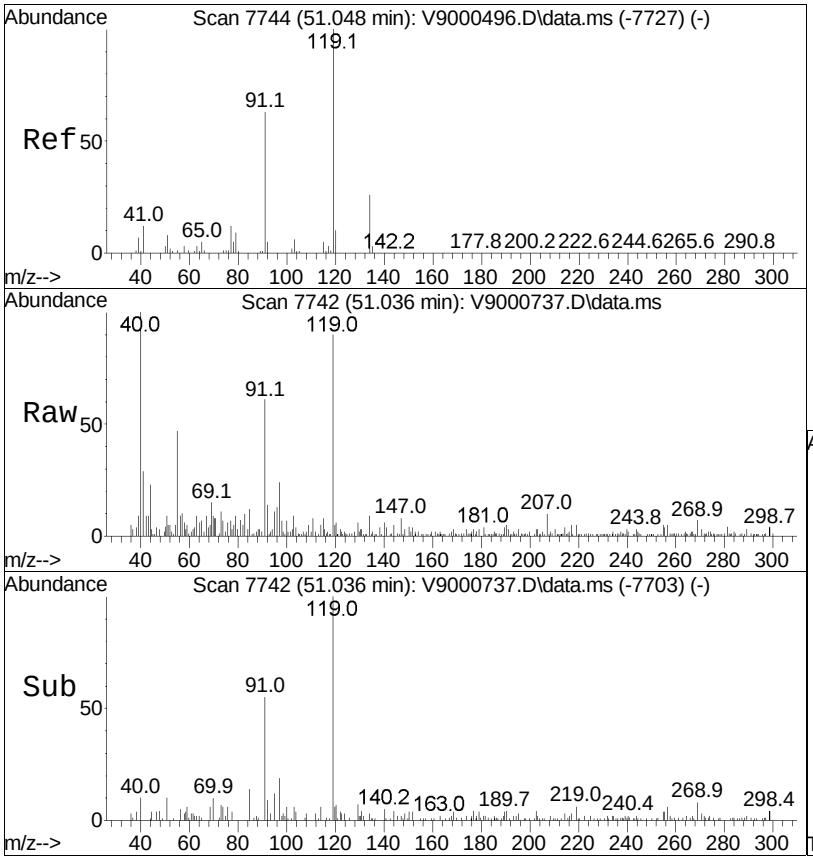


#113
Decane
Concen: 0.15 ug/L
RT: 50.79 min Scan# 7702
Delta R.T. 0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion: 43 Resp: 301

Ion	Ratio	Lower	Upper
43	100		
57	96.1	94.6	134.6
71	37.2	27.1	67.1

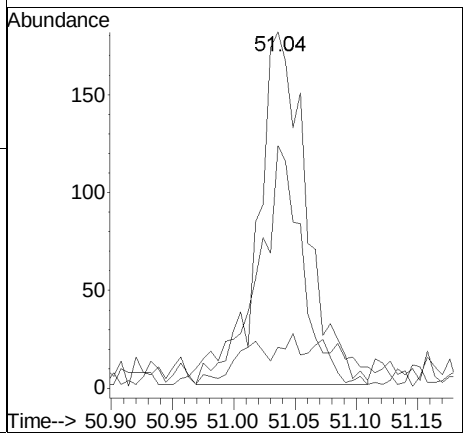


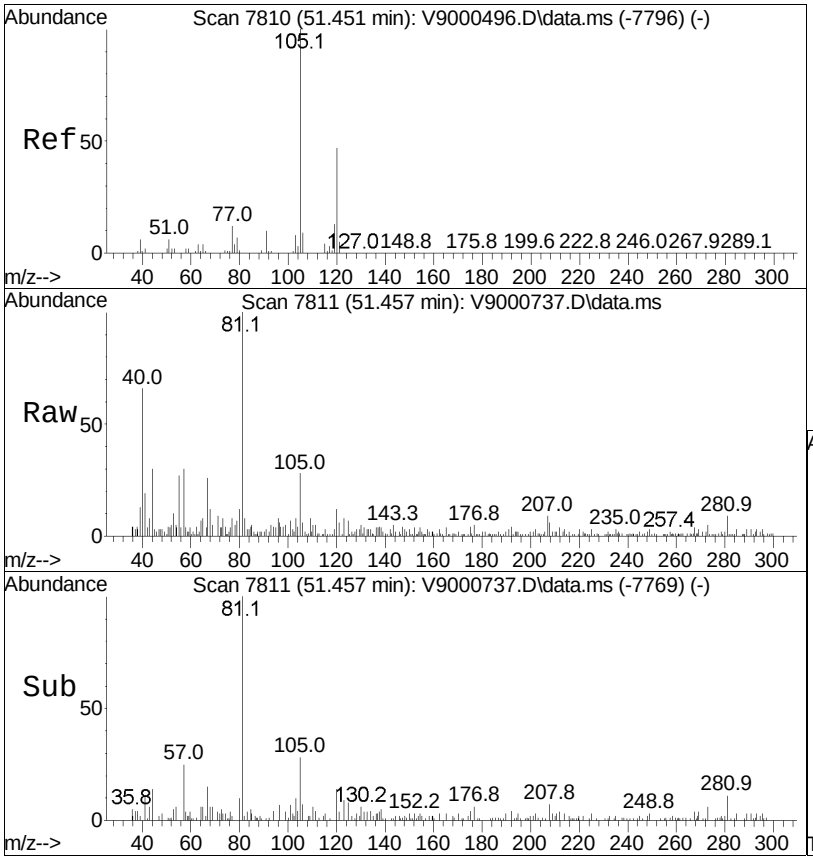


#114
tert-Butylbenzene
Concen: 0.11 ug/L
RT: 51.04 min Scan# 7742
Delta R.T. -0.012 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 491

Ion	Ratio	Lower	Upper
119	100		
91	68.1	42.6	82.6
134	11.5	5.7	45.7

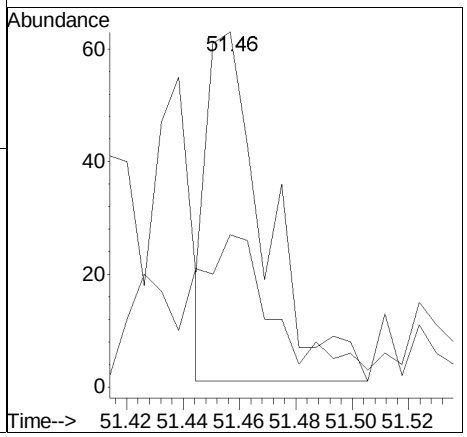


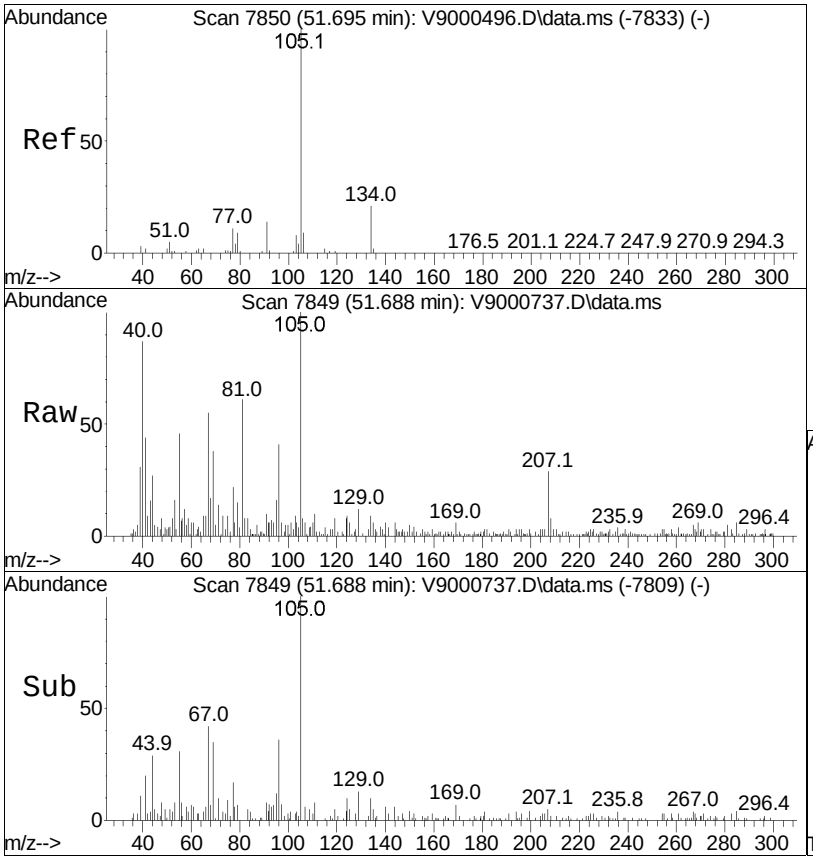


#115
1,2,4-Trimethylbenzene
Concen: 0.02 ug/L
RT: 51.46 min Scan# 7811
Delta R.T. 0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:105 Resp: 89

Ion	Ratio	Lower	Upper
105	100		
120	42.9	27.3	67.3

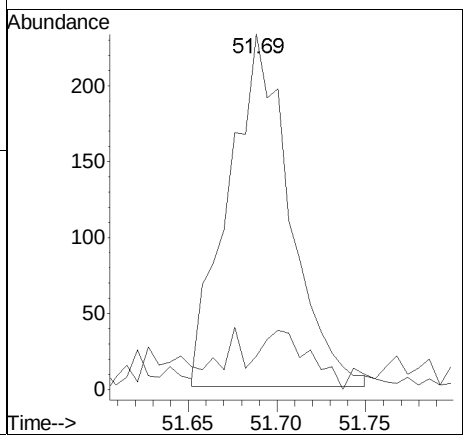


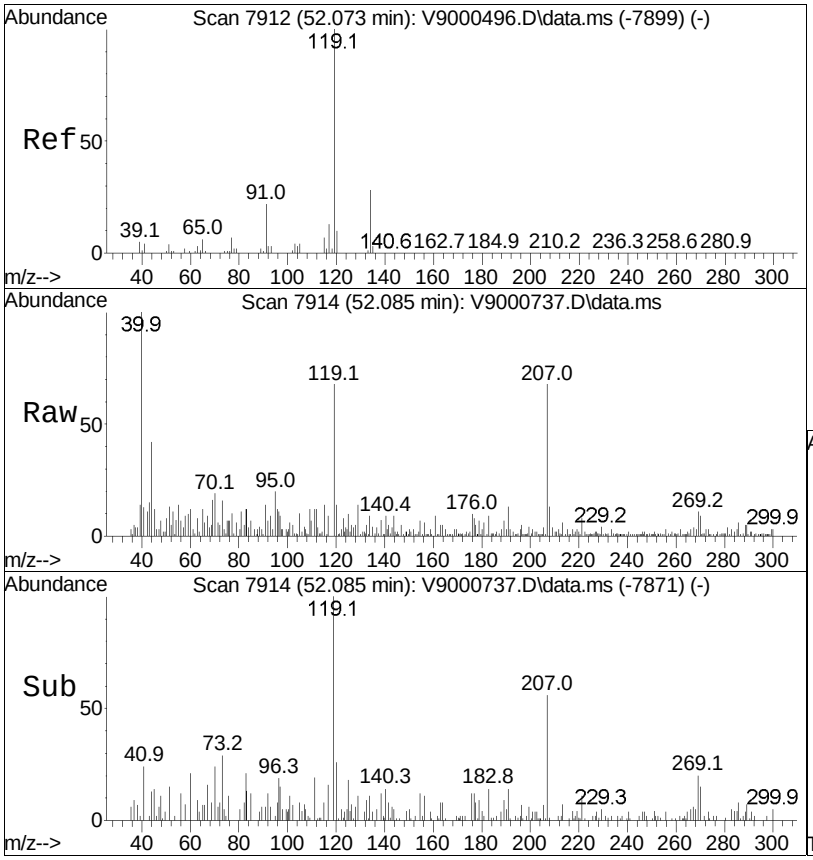


#117
sec-Butylbenzene
Concen: 0.08 ug/L m
RT: 51.69 min Scan# 7849
Delta R.T. -0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:105 Resp: 561

Ion	Ratio	Lower	Upper
105	100		
134	9.4	1.1	41.1

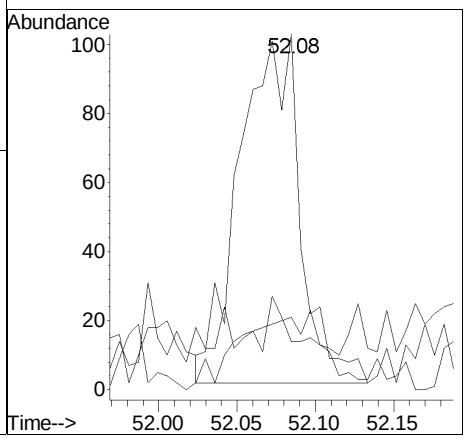


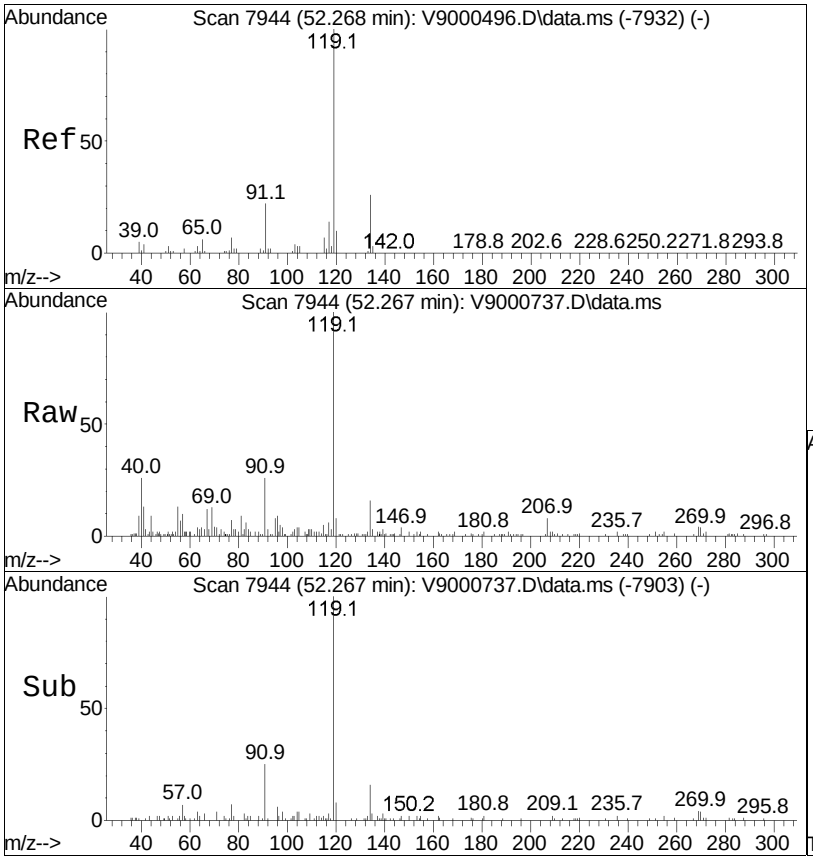


#118
1-Methyl-3-isopropylbenzene
Concen: 0.05 ug/L
RT: 52.08 min Scan# 7914
Delta R.T. 0.012 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 273

Ion	Ratio	Lower	Upper
119	100		
134	13.6	8.3	48.3
91	30.1	2.0	42.0

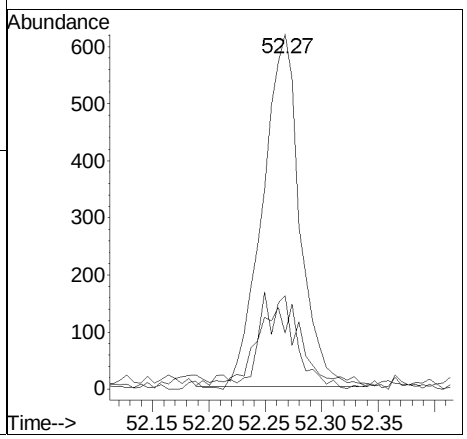


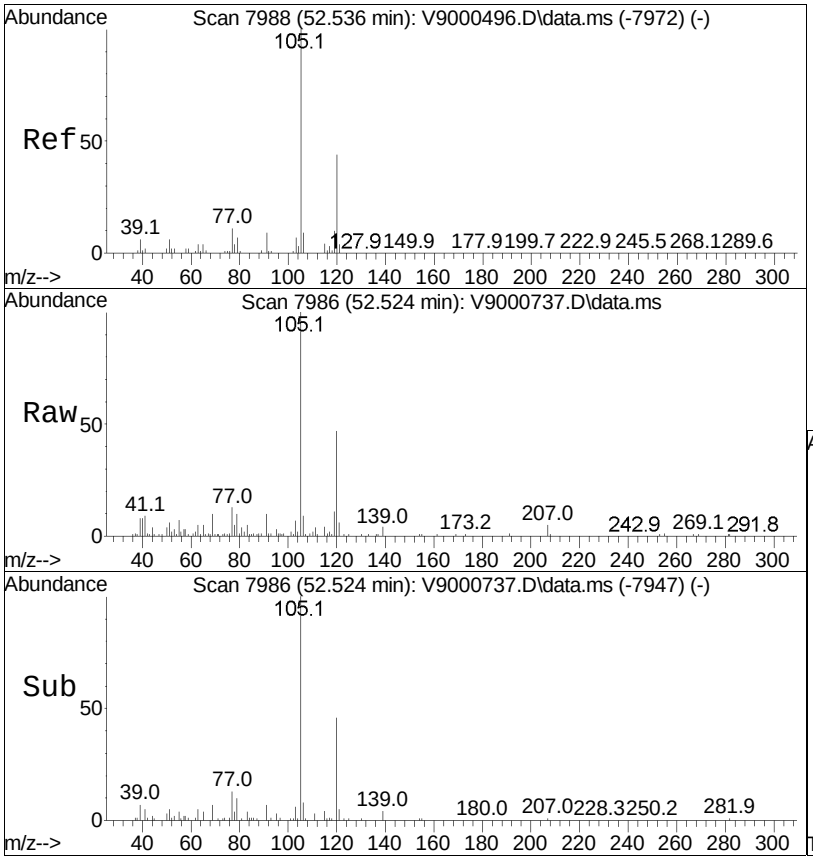


#119
1-Methyl-4-isopropylbenzene
Concen: 0.25 ug/L
RT: 52.27 min Scan# 7944
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 1433

Ion	Ratio	Lower	Upper
119	100		
134	15.8	6.5	46.5
91	26.4	2.0	42.0

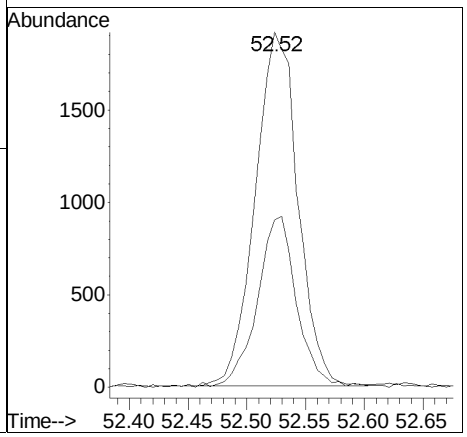


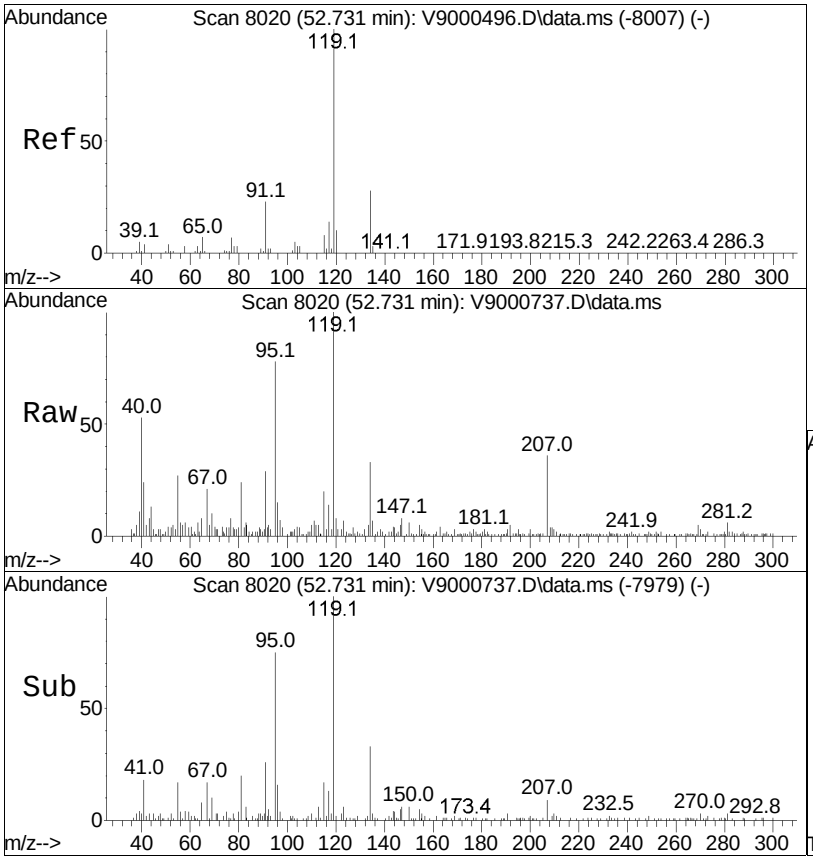


#120
1,2,3-Trimethylbenzene
Concen: 0.87 ug/L
RT: 52.52 min Scan# 7986
Delta R.T. -0.012 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:105 Resp: 4846

Ion	Ratio	Lower	Upper
105	100		
120	47.1	24.4	64.4

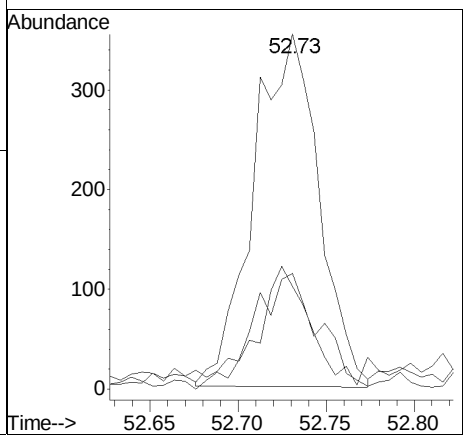


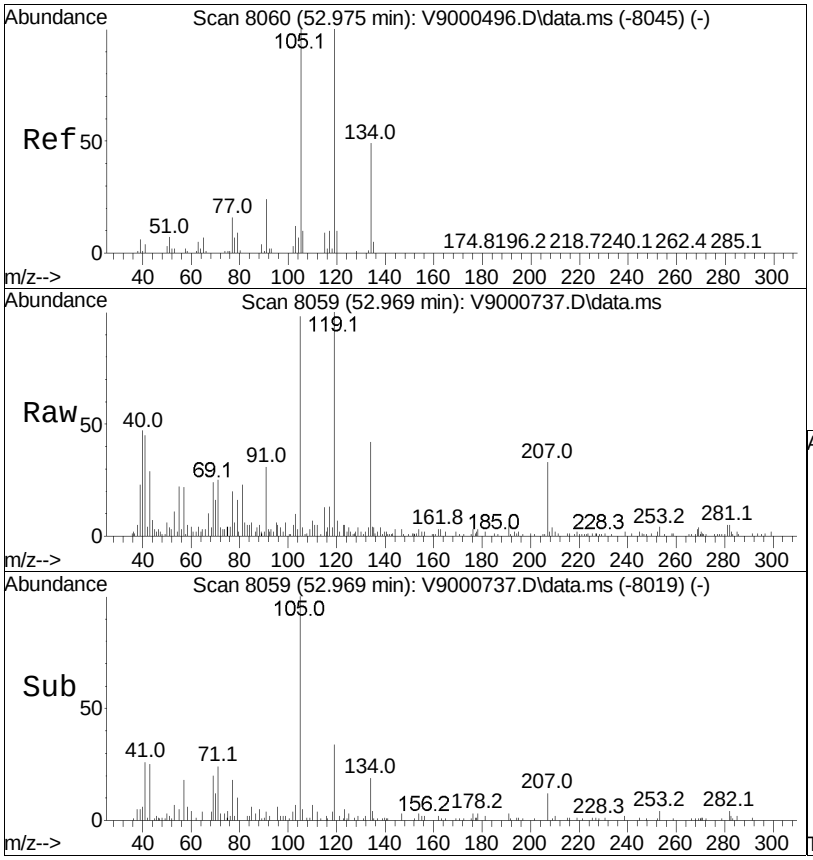


#121
1-Methyl-2-isopropylbenzene
Concen: 0.16 ug/L
RT: 52.73 min Scan# 8020
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 911

Ion	Ratio	Lower	Upper
119	100		
134	32.6	8.4	48.4
91	32.6	3.1	43.1

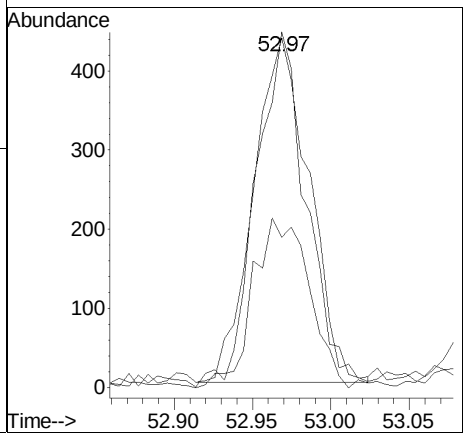


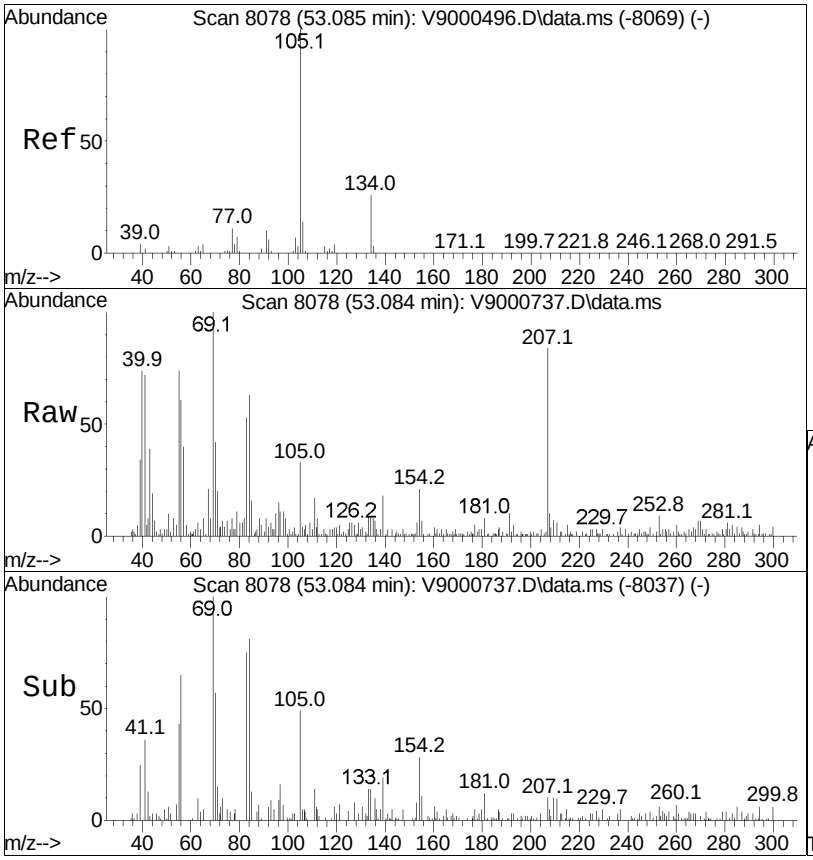


#123
1,3-Diethylbenzene
Concen: 0.29 ug/L
RT: 52.97 min Scan# 8059
Delta R.T. -0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:105 Resp: 1070

Ion	Ratio	Lower	Upper
105	100		
119	101.6	80.0	120.0
134	47.3	28.5	68.5

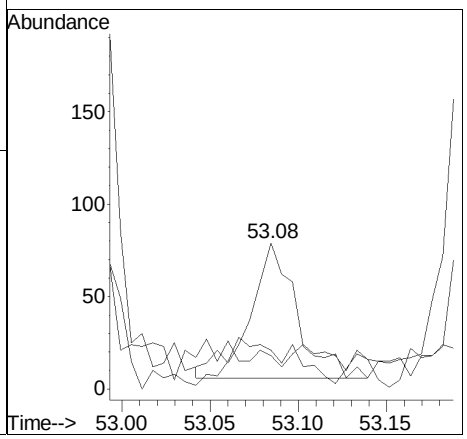


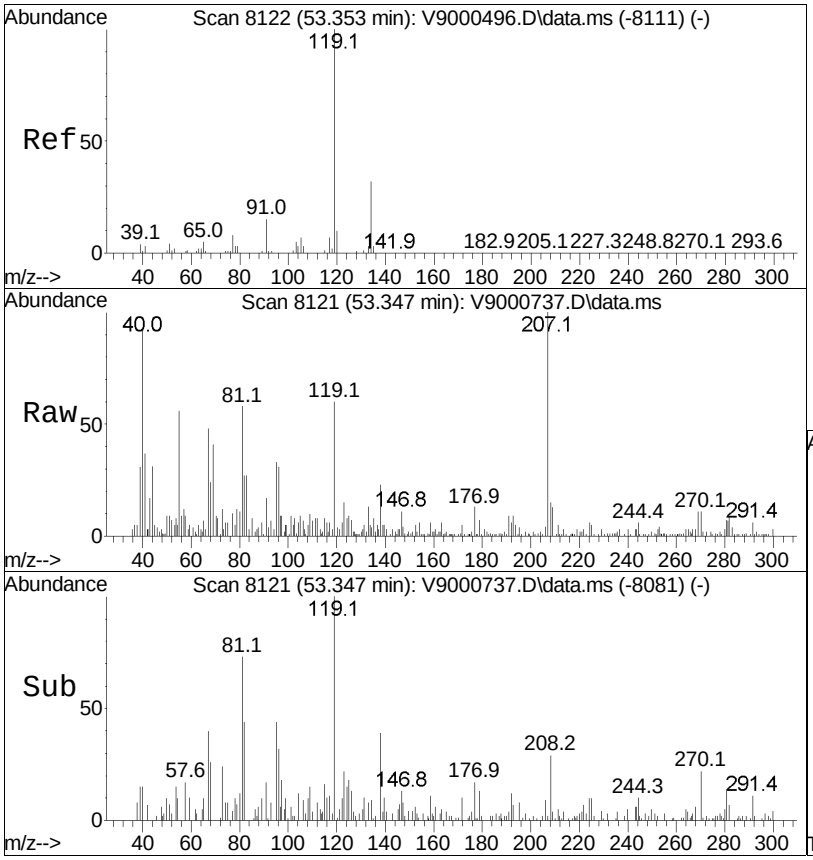


#124
1-Methyl-3-propylbenzene
Concen: 0.02 ug/L
RT: 53.08 min Scan# 8078
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:105 Resp: 136

Ion	Ratio	Lower	Upper
105	100		
134	26.6	6.3	46.3
91	22.8	0.0	30.0

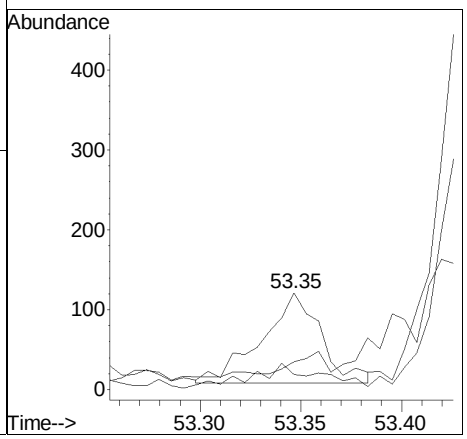


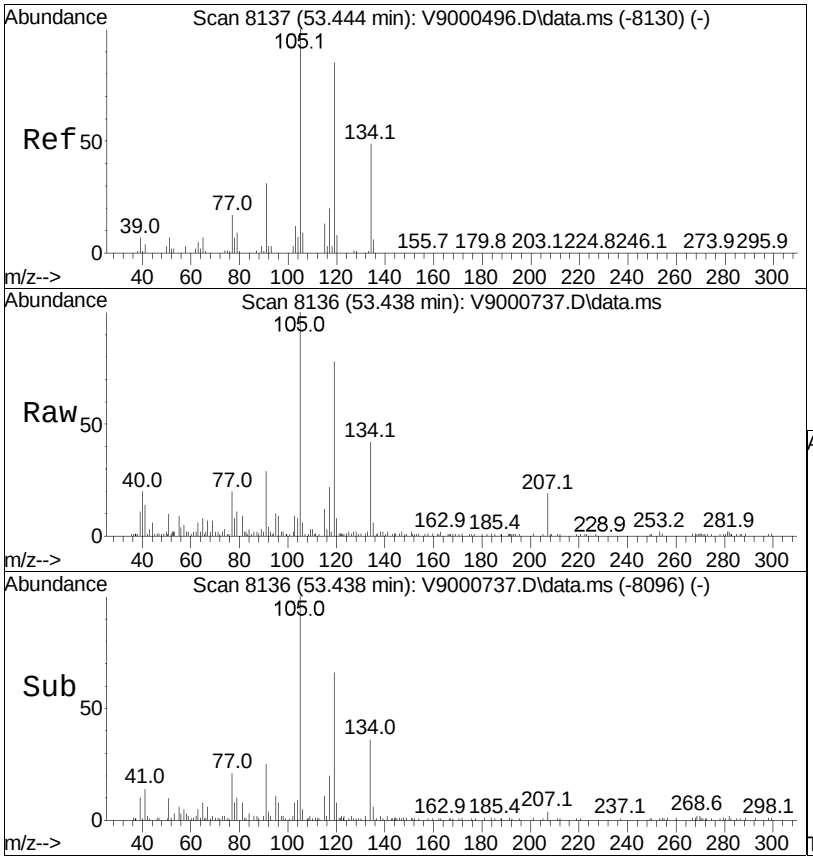


#128
1,2-Dimethyl-4-ethylbenzene
Concen: 0.04 ug/L
RT: 53.35 min Scan# 8121
Delta R.T. -0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 233

Ion	Ratio	Lower	Upper
119	100		
134	15.7	12.8	52.8
91	35.5	0.0	35.9

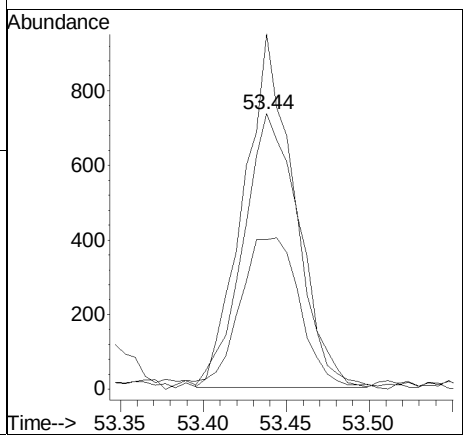


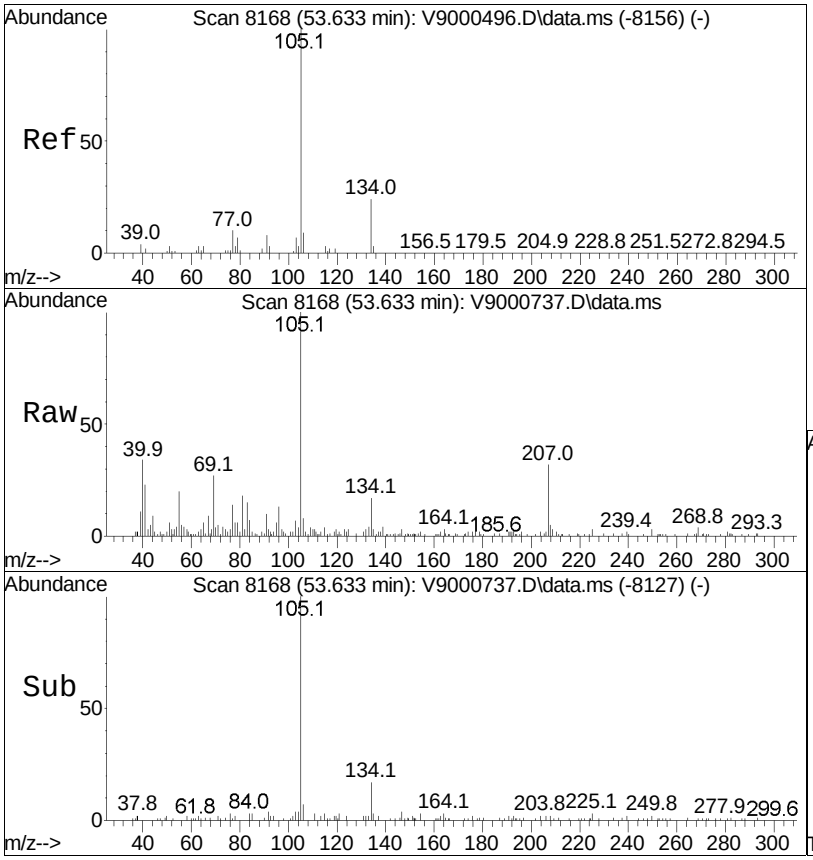


#129
1,2-Diethylbenzene
Concen: 0.58 ug/L
RT: 53.44 min Scan# 8136
Delta R.T. -0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 1700

Ion	Ratio	Lower	Upper
119	100		
105	128.8	95.9	135.9
134	54.3	38.0	78.0

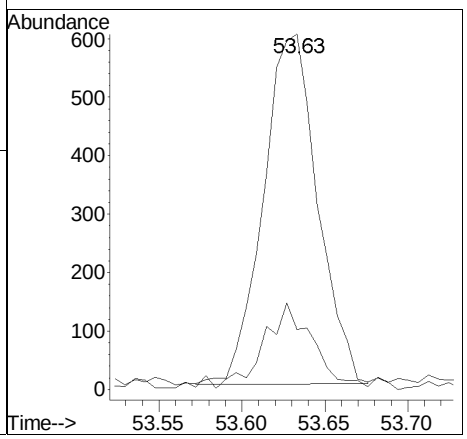


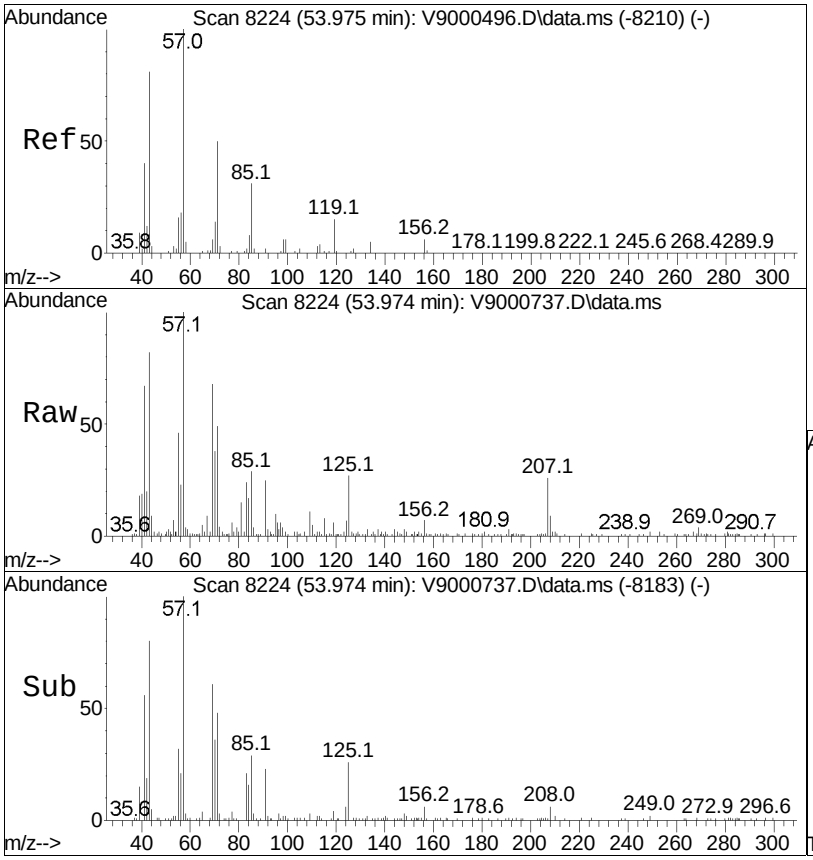


#130
1-Methyl-2-propylbenzene
Concen: 0.19 ug/L
RT: 53.63 min Scan# 8168
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:105 Resp: 1365

Ion	Ratio	Lower	Upper
105	100		
134	16.9	3.8	43.8

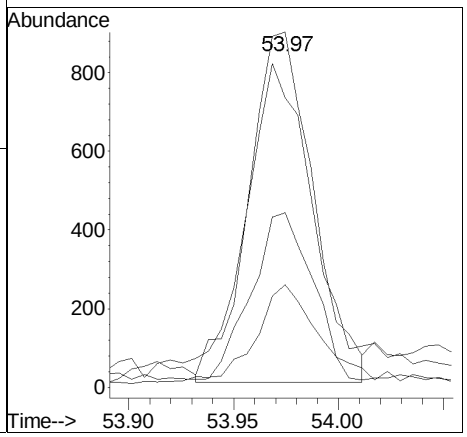


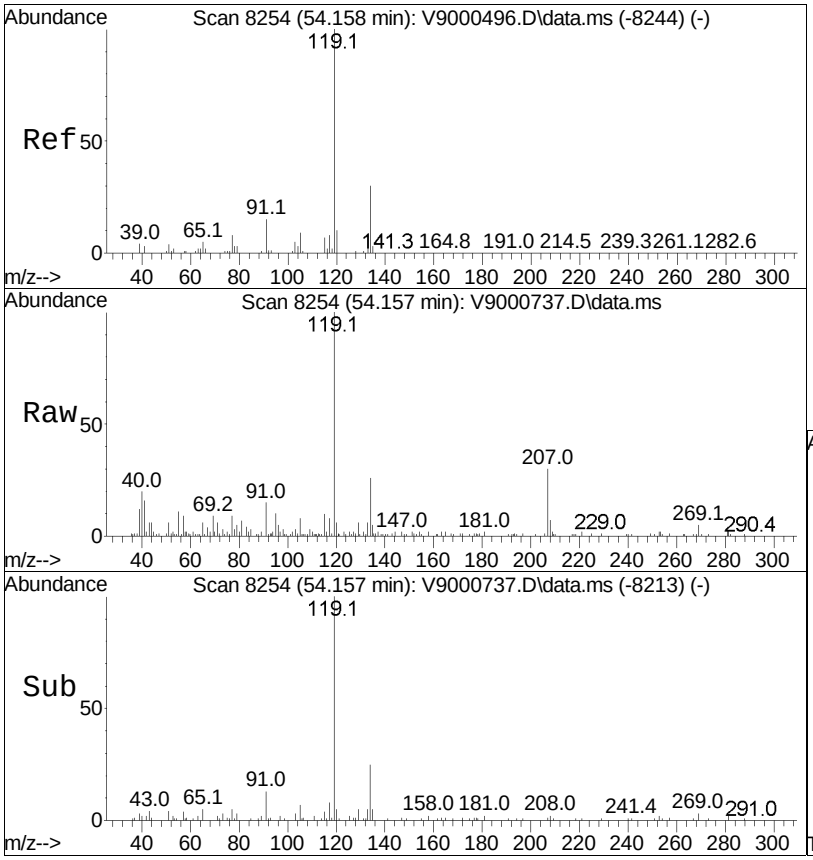


#132
Undecane
Concen: 0.76 ug/L m
RT: 53.97 min Scan# 8224
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion: 57 Resp: 1909

Ion	Ratio	Lower	Upper
57	100		
43	81.5	61.2	101.2
71	49.2	29.8	69.8
85	28.9	11.5	51.5

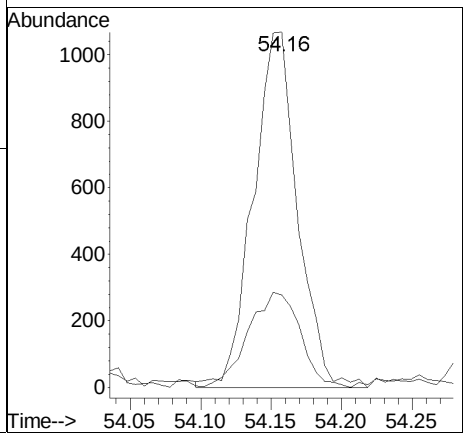


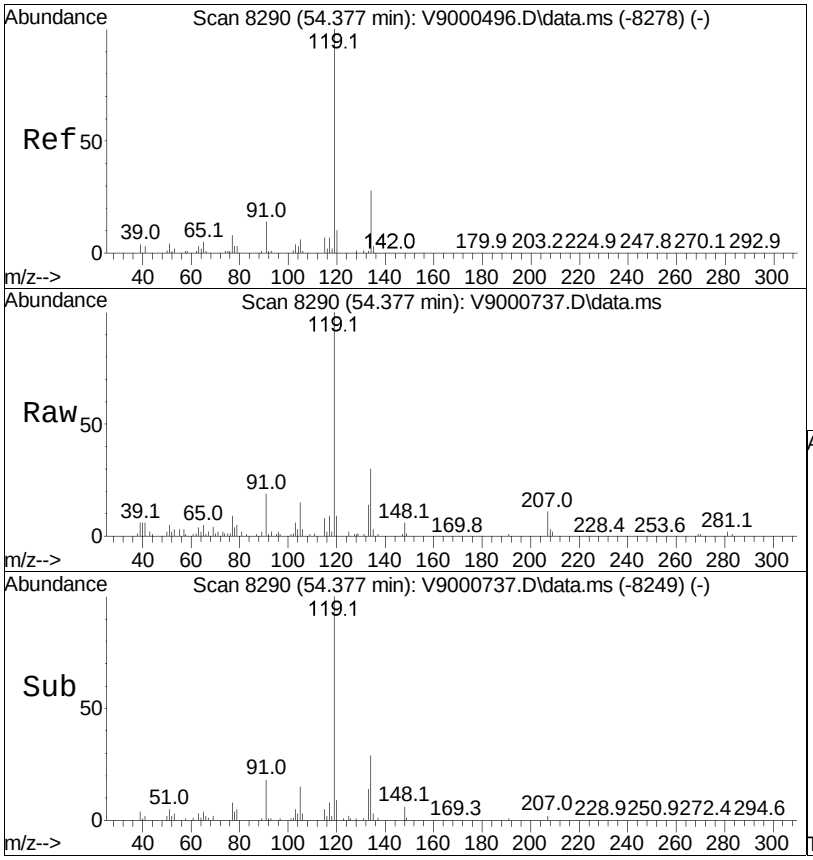


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 0.37 ug/L
RT: 54.16 min Scan# 8254
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 2339

Ion	Ratio	Lower	Upper
119	100		
134	26.0	10.1	50.1

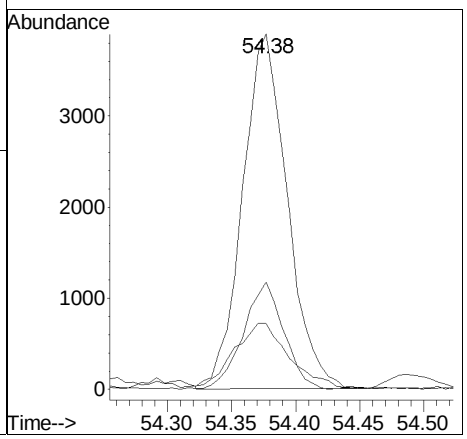


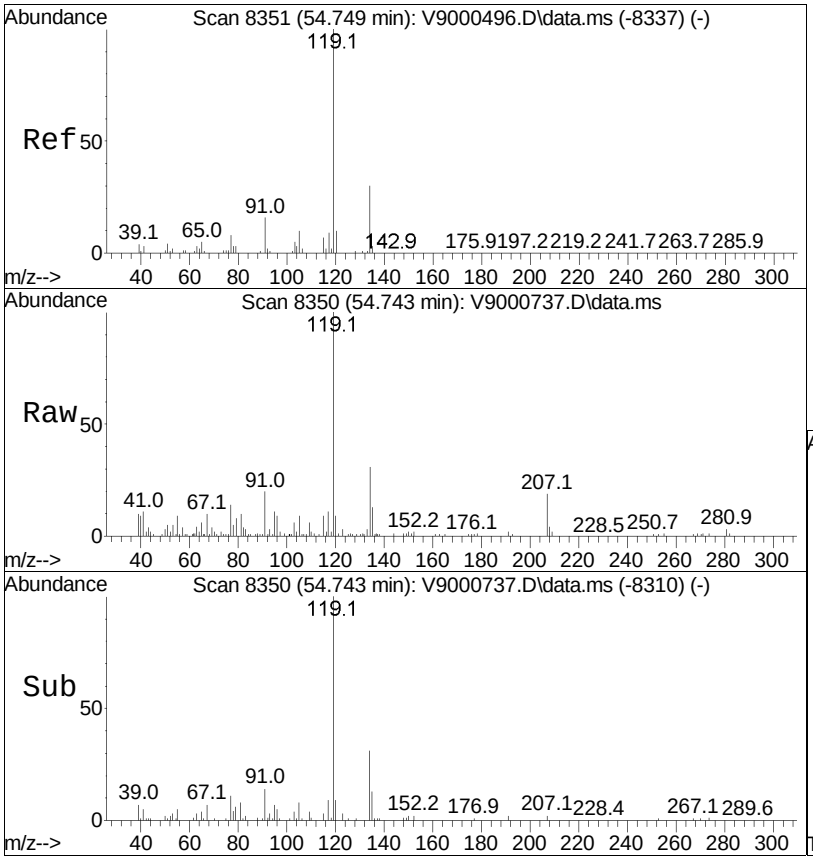


#135
1,3-Dimethyl-2-ethylbenzene
Concen: 1.39 ug/L
RT: 54.38 min Scan# 8290
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 9459

Ion	Ratio	Lower	Upper
119	100		
134	30.2	8.4	48.4
91	18.6	0.0	34.3

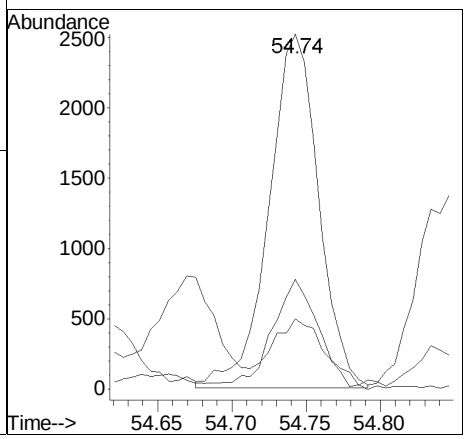


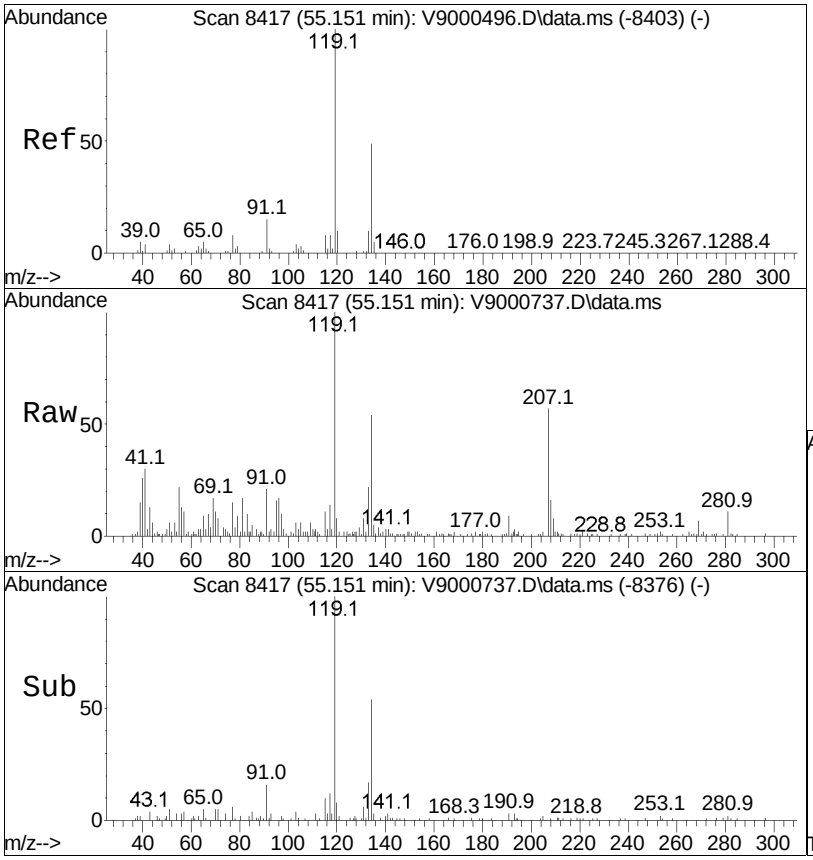


#136
1,2-Dimethyl-3-ethylbenzene
Concen: 0.95 ug/L
RT: 54.74 min Scan# 8350
Delta R.T. -0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 5857

Ion	Ratio	Lower	Upper
119	100		
134	30.9	10.5	50.5
91	19.8	0.0	36.1

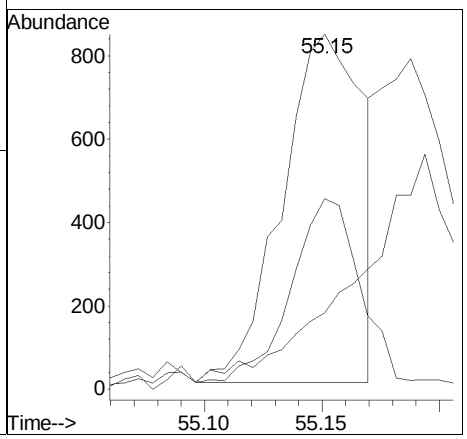


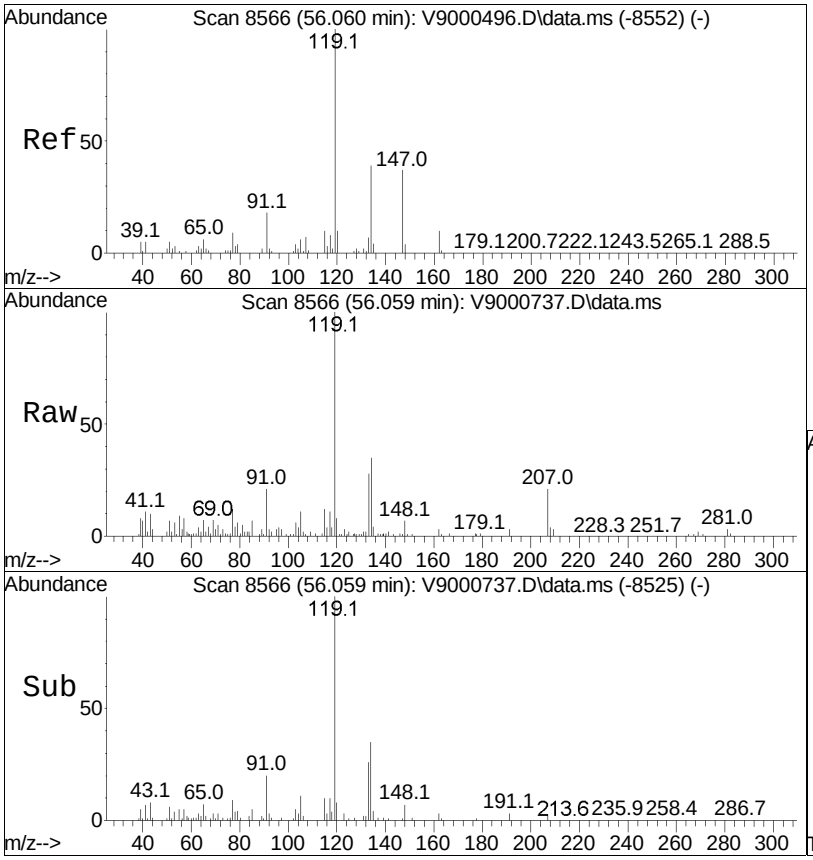


#137
1,2,4,5-Tetramethylbenzene
Concen: 0.31 ug/L
RT: 55.15 min Scan# 8417
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 2000

Ion	Ratio	Lower	Upper
119	100		
134	53.6	28.7	68.7
91	21.5	0.0	34.9

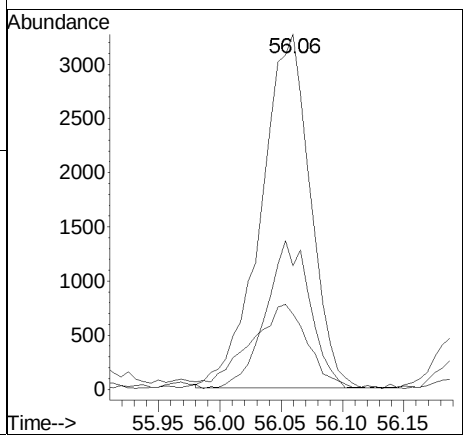


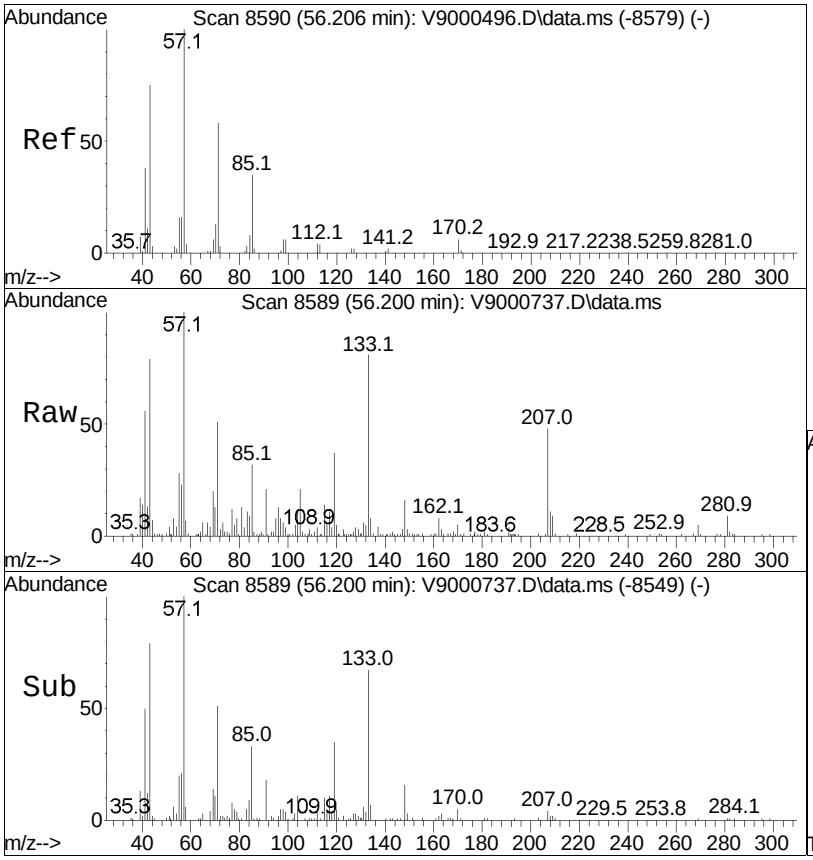


#140
1,2,3,4-Tetramethylbenzene
Concen: 1.17 ug/L
RT: 56.06 min Scan# 8566
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:119 Resp: 9169

Ion	Ratio	Lower	Upper
119	100		
134	34.8	19.3	59.3
91	21.2	0.0	37.7

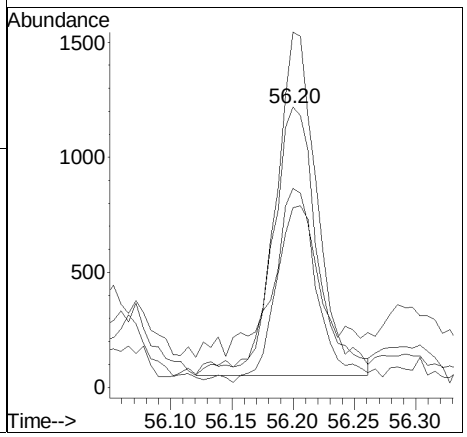


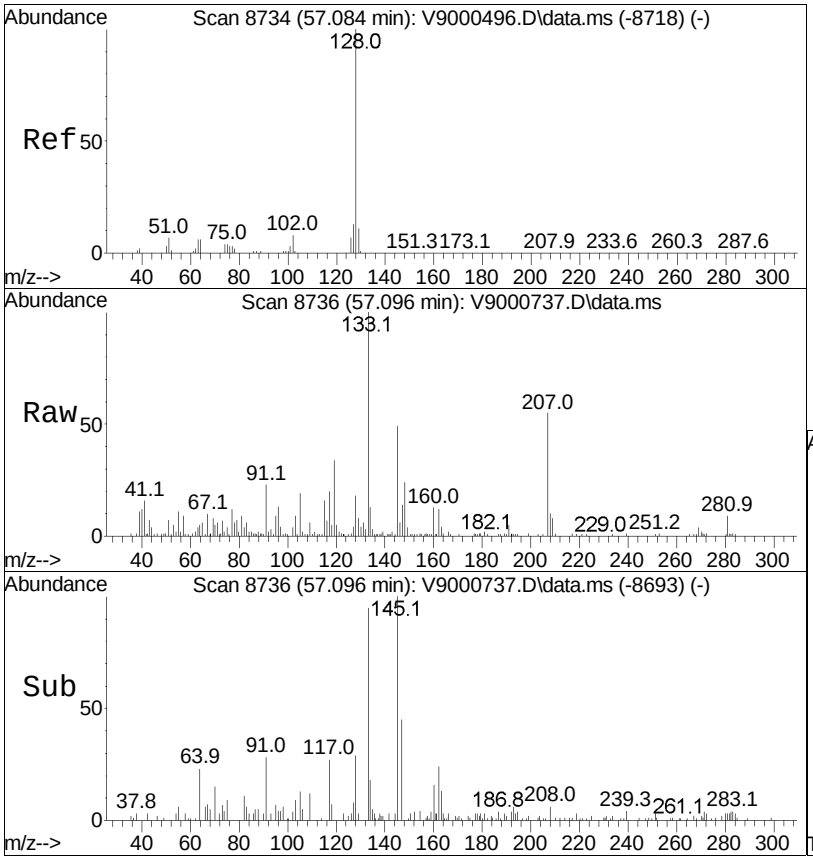


#142
Dodecane
Concen: 1.73 ug/L
RT: 56.20 min Scan# 8589
Delta R.T. -0.006 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion: 43 Resp: 2946

Ion	Ratio	Lower	Upper
43	100		
57	126.8	113.3	153.3
71	64.1	57.3	97.3
41	71.0	31.2	71.2

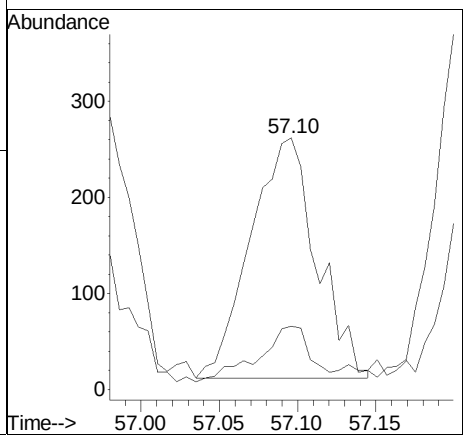


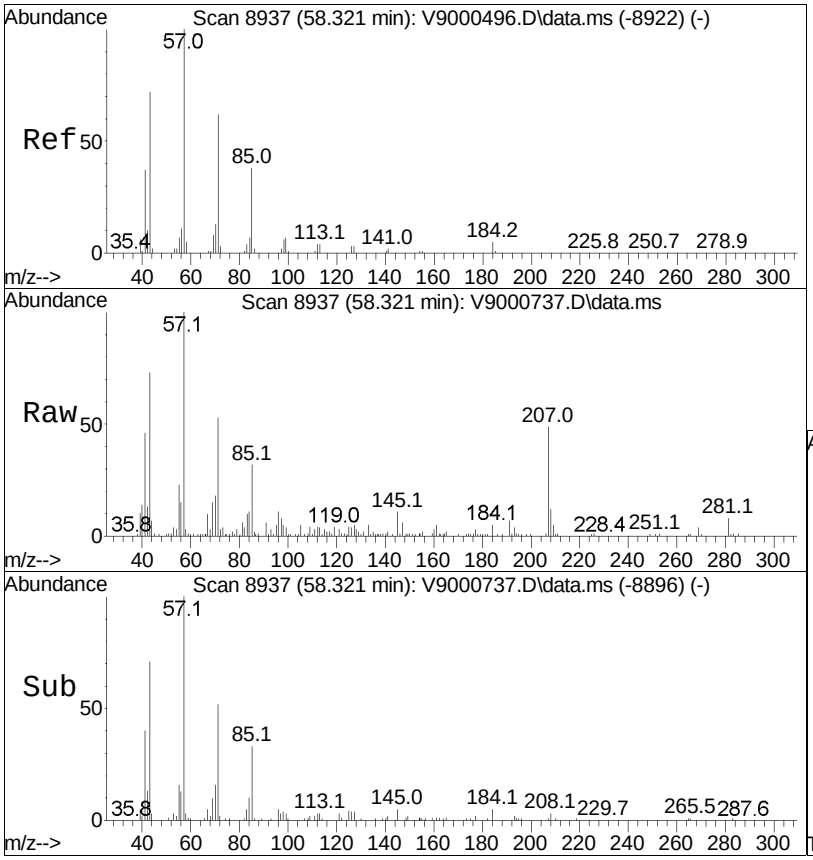


#144
Naphthalene
Concen: 0.10 ug/L
RT: 57.10 min Scan# 8736
Delta R.T. 0.012 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion:128 Resp: 734

Ion	Ratio	Lower	Upper
128	100		
127	25.2	0.0	32.6

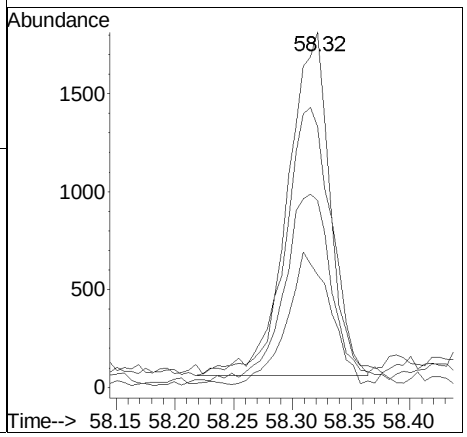


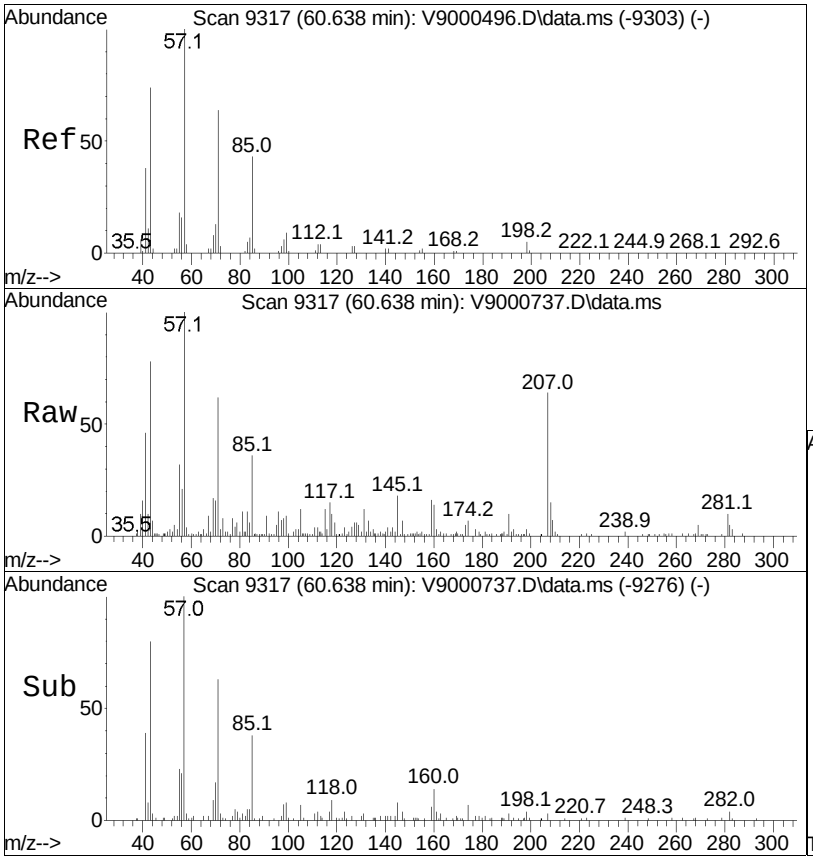


#149
Tridecane
Concen: 2.32 ug/L
RT: 58.32 min Scan# 8937
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion: 57 Resp: 4477

Ion	Ratio	Lower	Upper
57	100		
43	73.4	52.5	92.5
71	52.6	41.9	81.9
85	31.7	18.4	58.4

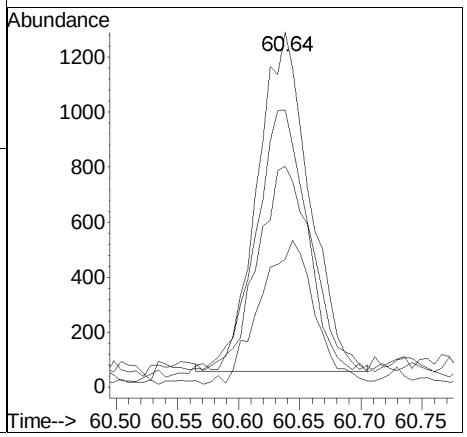


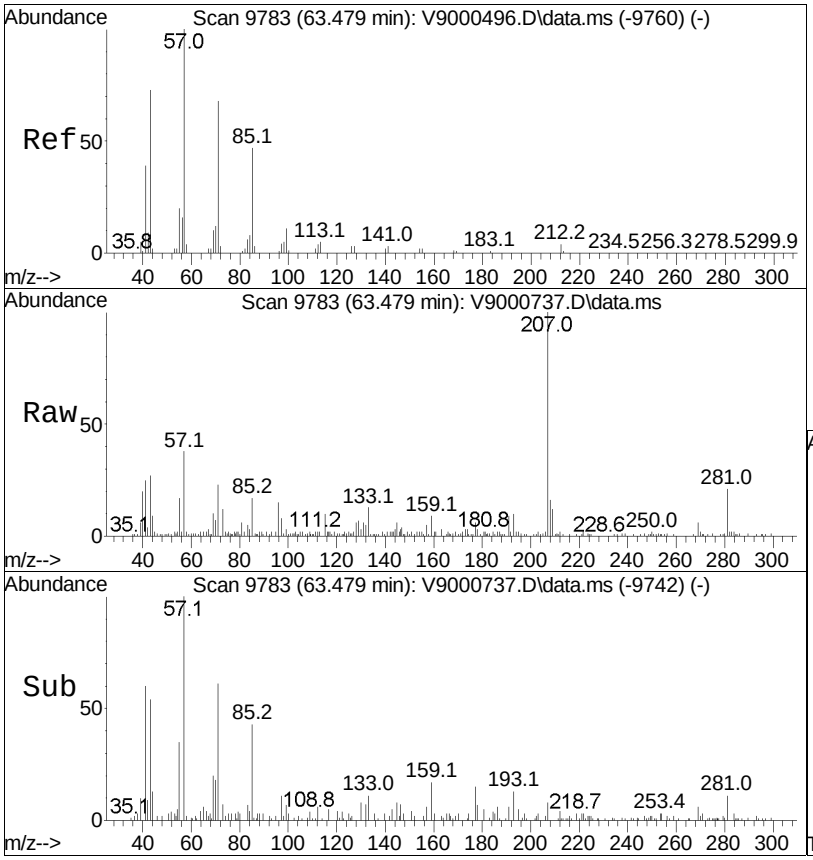


#152
Tetradecane
Concen: 2.34 ug/L m
RT: 60.64 min Scan# 9317
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion: 57 Resp: 3627

Ion	Ratio	Lower	Upper
57	100		
43	78.1	53.7	93.7
71	62.2	44.3	84.3
85	36.1	22.8	62.8

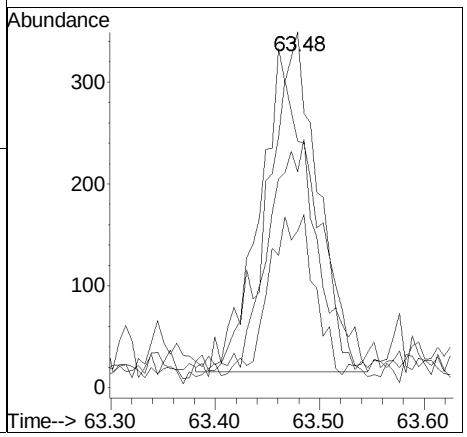




#153
Pentadecane
Concen: 1.09 ug/L
RT: 63.48 min Scan# 9783
Delta R.T. -0.000 min
Lab File: V9000737.D
Acq: 08 Dec 2021 10:30 am

Tgt Ion: 57 Resp: 1236

Ion	Ratio	Lower	Upper
57	100		
43	69.3	53.3	93.3
71	60.7	47.7	87.7
85	45.3	26.7	66.7



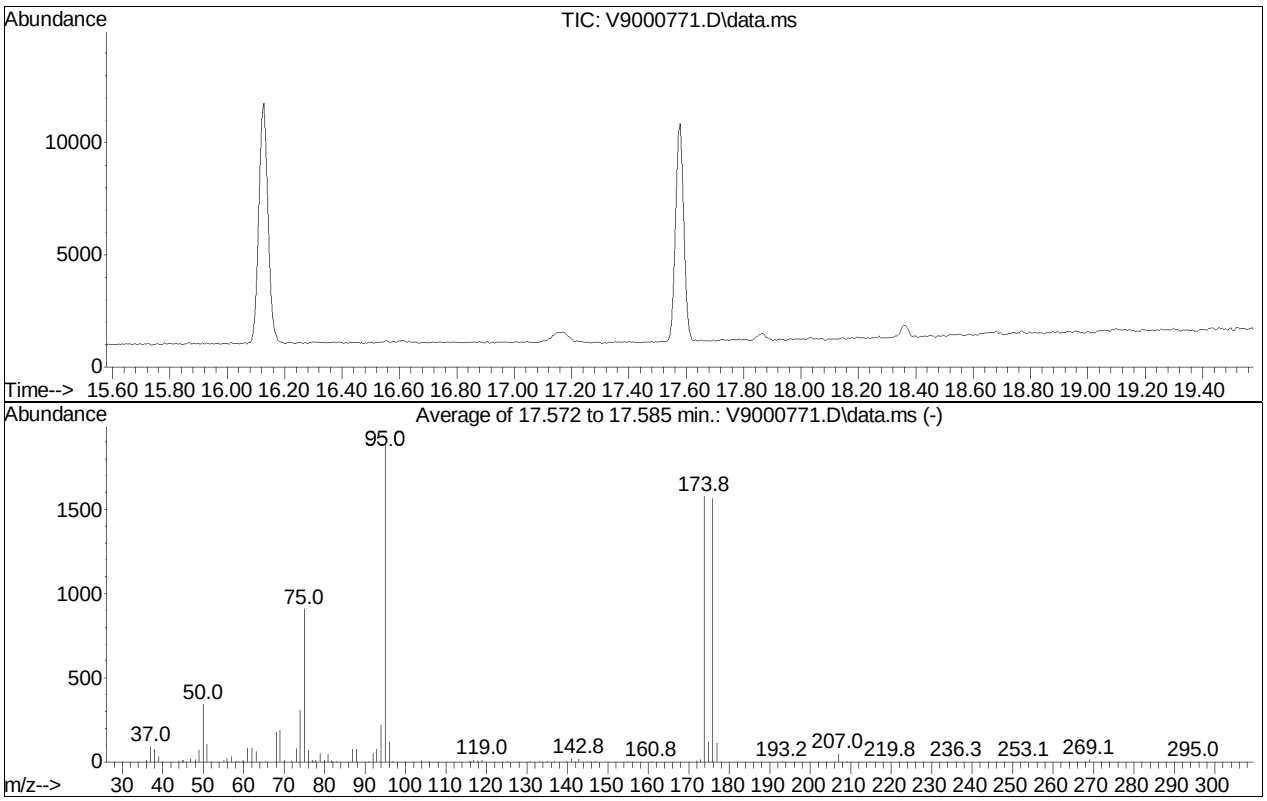
Analytical Event

Continuing Calibration
BFB Tune

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000771.D
Acq On : 13 Dec 2021 09:26 am
Operator : VOA9:RY
Sample : WG1582700-1,31
Misc : WG1582700,ICAL18544
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Title : PIANO VOLATILES
Last Update : Sun Dec 12 09:32:29 2021



Spectrum Information: Average of 17.572 to 17.585 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.2	346	PASS
75	95	30	60	47.9	909	PASS
95	95	100	100	100.0	1896	PASS
96	95	5	9	6.3	120	PASS
173	174	0.00	2	1.1	17	PASS
174	95	50	100	83.4	1581	PASS
175	174	5	9	7.7	122	PASS
176	174	95	101	99.1	1566	PASS
177	176	5	9	7.2	113	PASS

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	104	-0.02
2		3-Methyl-1-butene	0.375	0.372	0.8	96	-0.09
3		Isopentane	0.218	0.208	4.6	94	-0.09
4		1-Pentene	0.245	0.221	9.8	87	-0.09
5		2-Methyl-1-butene	0.378	0.342	9.5	87	-0.08
6		Pentane	0.376	0.323	14.1	87	-0.08
7		trans-2-Pentene	0.404	0.368	8.9	87	-0.09
8		2-Methyl-1,3-butadiene	0.266	0.252	5.3	89	-0.08
9		cis-2-Pentene	0.380	0.349	8.2	88	-0.08
10		Tertiary butanol	0.076	0.076#	0.0	104	0.03
11		2,2-Dimethylbutane	0.248	0.219	11.7	88	-0.07
12		4-Methyl-1-pentene	0.301	0.272	9.6	86	-0.06
13		Cyclopentane	0.166	0.157	5.4	92	-0.06
14		2,3-Dimethylbutane	0.118	0.109	7.6	89	-0.06
15		2-Methylpentane	0.433	0.385	11.1	87	-0.07
16		MTBE	0.614	0.606	1.3	96	-0.05
17		3-Methylpentane	0.379	0.352	7.1	89	-0.06
18		1-Hexene	0.220	0.208	5.5	89	-0.05
19		Hexane	0.338	0.313	7.4	88	-0.05
20		Diisopropyl ether	0.644	0.606	5.9	88	-0.04
21		trans-2-Hexene	0.373	0.352	5.6	89	-0.05
22		2-Methyl-2-pentene	0.379	0.352	7.1	90	-0.05
23		cis-2-Hexene	0.333	0.316	5.1	89	-0.05
24	S	Dibromofluoromethane (surr)	0.257	0.229	10.9	92	-0.04
25		Ethyl tertiary butyl ether	0.642	0.617	3.9	90	-0.03
26		2,2-Dimethylpentane	0.481	0.458	4.8	92	-0.05
27		Methylcyclopentane	0.419	0.373	11.0	85	-0.04
28		2,4-Dimethylpentane	0.386	0.382	1.0	95	-0.05
29		2,2,3-Trimethylbutane	0.431	0.423	1.9	94	-0.04
30		1,2-Dichloroethane	0.290	0.290	0.0	93	-0.04
31		3,3-Dimethylpentane	0.492	0.490	0.4	94	-0.03
32		Cyclohexane	0.354	0.349	1.4	95	-0.04
33		2-Methylhexane	0.427	0.436	-2.1	97	-0.04
34	M	Benzene	0.874	0.814	6.9	89	-0.03
35		2,3-Dimethylpentane	0.356	0.348	2.2	94	-0.03
36		Thiophene	0.463	0.446	3.7	90	-0.02
37		1,1-Dimethylcyclopentane	0.224	0.232	-3.6	95	-0.04
38		3-Methylhexane	0.369	0.362	1.9	95	-0.04
39		TAME	0.720	0.618	14.2	92	-0.03

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.300	0.284	5.3	92	-0.04
41		3-Ethylpentane	0.485	0.485	0.0	97	-0.03
43		1-Heptene/trans-1,2-DMCP	0.173	0.175	-1.2	99	-0.04
44		Isooctane	0.893	0.906	-1.5	98	-0.03
45		trans-3-Heptene	0.294	0.277	5.8	95	-0.03
46		Heptane	0.318	0.331	-4.1	98	-0.04
48		trans-2-Heptene	0.266	0.284	-6.8	98	-0.03
49		cis-2-Heptene	0.247	0.256	-3.6	98	-0.04
50		2,2-Dimethylhexane	0.894	0.916	-2.5	100	-0.02
51		Methylcyclohexane	0.394	0.405	-2.8	99	-0.03
52		2,5-Dimethylhexane	0.440	0.456	-3.6	100	-0.02
53		2,4-Dimethylhexane	0.337	0.339	-0.6	96	-0.03
54		Ethylcyclopentane	0.330	0.342	-3.6	99	-0.03
55		2,2,3-Trimethylpentane	0.719	0.743	-3.3	99	-0.02
57		2,3,4-Trimethylpentane	0.508	0.531	-4.5	100	-0.01
58		2,3,3-Trimethylpentane	0.416	0.438	-5.3	100	-0.02
59		2,3-Dimethylhexane	0.454	0.491	-8.1	101	-0.02
60		2-Methylheptane	0.399	0.428	-7.3	102	-0.02
61		4-Methylheptane	0.510	0.538	-5.5	101	-0.01
62	S	Toluene-d8 (surr)	1.193	1.135	4.9	98	-0.02
63		3-Methylheptane	0.385	0.371	3.6	104	-0.02
65		3-Ethylhexane	0.556	0.586	-5.4	102	-0.02
66	M	Toluene	0.962	0.998	-3.7	101	-0.02
67		2-Methylthiophene	0.754	0.796	-5.6	102	-0.02
68		trans-1,4-Dimethylcyclohexa	0.454	0.484	-6.6	104	-0.01
69		3-Methylthiophene	0.761	0.810	-6.4	102	-0.01
70		1-Octene	0.185	0.206	-11.4	104	-0.02
71		Octane	0.430	0.460	-7.0	103	-0.01
72		trans-1,2-Dimethylcyclohexa	0.339	0.365	-7.7	103	-0.02
73		1,2-Dibromoethane	0.233	0.257	-10.3	106	-0.01
75		cis-2-Octene	0.276	0.311	-12.7	104	-0.02
76		Isopropylcyclopentane	0.403	0.445	-10.4	106	-0.02
77		cis-1,2-Dimethylcyclohexane	0.341	0.379	-11.1	106	-0.02
78		2,5-Dimethylheptane	0.580	0.657	-13.3	106	0.00
79		3,5-Dimethylheptane	0.740	0.812	-9.7	108	0.00
80		3,3-Dimethylheptane	0.464	0.521	-12.3	108	-0.01
81		1,1,4-Trimethylcyclohexane	0.407	0.454	-11.5	108	-0.02
82		2,3-Dimethylheptane	0.537	0.600	-11.7	108	0.00
83		3,4-Dimethylheptane	0.346	0.393	-13.6	112	-0.02

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
84		4-Methyloctane	0.497	0.586	-17.9	111	-0.01
85		2-Methyloctane	0.479	0.507	-5.8	105	0.00
86		Ethylbenzene	1.093	1.236	-13.1	107	0.00
88		2-Ethylthiophene	0.807	0.926	-14.7	108	0.00
89		3-Methyloctane	0.788	0.901	-14.3	109	-0.01
90		3,3-Diethylpentane	0.906	1.039	-14.7	111	-0.01
91		p/m-Xylene	0.835	0.937	-12.2	106	0.00
92		1-Nonene	0.196	0.234	-19.4	111	-0.01
93		trans-3-Nonene	0.288	0.342	-18.8	111	-0.01
94		cis-3-Nonene	0.325	0.391	-20.3	111	-0.01
95		Nonane	0.456	0.530	-16.2	108	0.00
96		Styrene	0.666	0.779	-17.0	107	-0.01
98		o-Xylene	0.860	0.963	-12.0	106	-0.01
99		2-Nonene	0.287	0.346	-20.6	113	0.00
100		Isopropylcyclohexane	0.407	0.490	-20.4	115	-0.01
101	S	4-Bromofluorobenzene (surr)	0.504	0.517	-2.6	105	0.00
102		Isopropylbenzene	1.091	1.258	-15.3	110	0.00
103		3,3-Dimethyloctane	0.649	0.769	-18.5	114	-0.01
104		n-Propylbenzene	1.288	1.521	-18.1	109	0.00
105		2-Methylnonane	0.412	0.496	-20.4	112	0.00
106		3-Methylnonane	0.501	0.600	-19.8	112	0.00
107		1-Methyl-3-ethylbenzene	1.073	1.251	-16.6	108	0.00
108		1-Methyl-4-ethylbenzene	1.026	1.202	-17.2	108	0.00
109		1,3,5-Trimethylbenzene	0.893	1.043	-16.8	108	0.00
110		1-Decene	0.216	0.272	-25.9#	114	0.00
111		Isobutylcyclohexane	0.448	0.534	-19.2	114	0.00
112		1-Methyl-2-ethylbenzene	1.078	1.246	-15.6	107	0.00
113		Decane	0.401	0.474	-18.2	111	0.00
114		tert-Butylbenzene	0.788	0.919	-16.6	109	0.00
115		1,2,4-Trimethylbenzene	0.940	1.088	-15.7	107	0.00
116		Isobutylbenzene	1.062	1.227	-15.5	106	0.00
117		sec-Butylbenzene	1.167	1.357	-16.3	108	0.00
118		1-Methyl-3-isopropylbenzene	0.976	1.134	-16.2	108	0.00
119		1-Methyl-4-isopropylbenzene	0.980	1.133	-15.6	107	0.00
120		1,2,3-Trimethylbenzene	0.957	1.087	-13.6	105	0.00
121		1-Methyl-2-isopropylbenzene	0.979	1.125	-14.9	106	0.00
122		Indan	0.902	1.017	-12.7	104	0.00
123		1,3-Diethylbenzene	0.624	0.722	-15.7	107	0.00
124		1-Methyl-3-propylbenzene	1.183	1.361	-15.0	106	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
125	Indene	0.888	0.980	-10.4	101	0.00
126	1-Methyl-4-propylbenzene	1.398	1.601	-14.5	106	0.00
127	n-Butylbenzene	1.115	1.277	-14.5	106	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.014	1.154	-13.8	105	0.00
129	1,2-Diethylbenzene	0.493	0.557	-13.0	105	0.00
130	1-Methyl-2-propylbenzene	1.260	1.426	-13.2	104	0.00
131	1,4-Dimethyl-2-ethylbenzene	0.959	1.082	-12.8	103	0.00
132	Undecane	0.490	0.587	-19.8	109	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.152	1.299	-12.8	104	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.050	1.181	-12.5	103	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.147	1.280	-11.6	102	0.00
136	1,2-Dimethyl-3-ethylbenzene	1.027	1.141	-11.1	102	0.00
137	1,2,4,5-Tetramethylbenzene	1.092	1.211	-10.9	101	0.00
138	1,2,3,5-Tetramethylbenzene	0.987	1.091	-10.5	101	0.00
139	Pentylbenzene	0.954	1.055	-10.6	103	0.00
140	1,2,3,4-Tetramethylbenzene	1.319	1.427	-8.2	100	0.00
141	1,3-DM-5-tert-Butylbenzene	0.886	0.973	-9.8	104	0.00
142	Dodecane	0.356	0.414	-16.3	106	0.00
143	1,3,5-Triethylbenzene	0.550	0.599	-8.9	104	0.00
144	Naphthalene	1.293	1.261	2.5	90	0.00
145	Benzothiophene	0.798	0.771	3.4	88	0.00
146	1,2,4-Triethylbenzene	0.531	0.543	-2.3	102	0.00
147	Hexylbenzene	0.844	0.902	-6.9	104	0.00
148	MMT	0.451	0.420	6.9	85	0.00
149	Tridecane	0.385	0.391	-1.6	104	0.00
150	2-Methylnaphthalene	0.838	0.758	9.5	85	0.00
151	1-Methylnaphthalene	0.747	0.672	10.0	85	0.00
152	Tetradecane	0.307	0.272	11.4	102	0.00
153	Pentadecane	0.209	0.181	13.4	107	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Chlorobenzene-D5 [IS]	39.07	117	272223	50.000	ug/L		-0.02
System Monitoring Compounds							
24) Dibromofluoromethane (...	17.15	113	62394	44.577	ug/L		-0.04
Spiked Amount 50.000	Range 78 - 118		Recovery = 89.15%				
62) Toluene-d8 (surr)	31.24	98	309015	47.588	ug/L		-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 95.18%				
101) 4-Bromofluorobenzene (...	46.54	95	140730	51.299	ug/L		0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.60%				
Target Compounds							Qvalue
2) 3-Methyl-1-butene	7.68	55	101151	49.477	ug/L		99
3) Isopentane	8.22	43	56719	47.785	ug/L		99
4) 1-Pentene	8.89	42	60187	45.172	ug/L		97
5) 2-Methyl-1-butene	9.21	55	92977	45.231	ug/L		99
6) Pentane	9.26	43	87975	42.930	ug/L		98
7) trans-2-Pentene	9.72	55	100184	45.527	ug/L		99
8) 2-Methyl-1,3-butadiene	9.90	67	68723	47.443	ug/L		98
9) cis-2-Pentene	10.10	55	94918	45.871	ug/L		99
10) Tertiary butanol	10.80	59	103202M4	250.502	ug/L		
11) 2,2-Dimethylbutane	11.15	43	59482	44.004	ug/L		100
12) 4-Methyl-1-pentene	12.50	43	74057	45.240	ug/L		99
13) Cyclopentane	12.98	70	42645	47.299	ug/L	#	91
14) 2,3-Dimethylbutane	12.98	71	29693	46.068	ug/L		97
15) 2-Methylpentane	13.20	43	104867	44.522	ug/L		98
16) MTBE	13.55	73	164925	49.300	ug/L		99
17) 3-Methylpentane	14.18	57	95836	46.419	ug/L		98
18) 1-Hexene	14.78	56	56570	47.262	ug/L		99
19) Hexane	15.39	57	85206	46.314	ug/L		98
20) Diisopropyl ether	15.73	45	165043	47.102	ug/L		98
21) trans-2-Hexene	15.89	55	95768	47.122	ug/L		99
22) 2-Methyl-2-pentene	16.08	69	95948	46.512	ug/L		97
23) cis-2-Hexene	16.64	55	86153	47.470	ug/L		98
25) Ethyl tertiary butyl e...	17.21	59	168012	48.074	ug/L		99
26) 2,2-Dimethylpentane	17.45	57	124695	47.639	ug/L		99
27) Methylcyclopentane	17.74	56	101671	44.522	ug/L		98
28) 2,4-Dimethylpentane	17.89	43	103885	49.435	ug/L		99
29) 2,2,3-Trimethylbutane	18.51	57	115044	49.027	ug/L		96
30) 1,2-Dichloroethane	19.22	62	78963	49.935	ug/L		98
31) 3,3-Dimethylpentane	20.18	43	133413	49.768	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	20.65	56	95105	49.350	ug/L	99
33) 2-Methylhexane	21.10	43	118588	50.976	ug/L	98
34) Benzene	21.29	78	221585	46.589	ug/L	99
35) 2,3-Dimethylpentane	21.40	56	94676	48.867	ug/L	98
36) Thiophene	21.74	84	121544	48.170	ug/L	97
37) 1,1-Dimethylcyclopentane	21.85	83	63127	51.662	ug/L	98
38) 3-Methylhexane	21.91	43	98409	48.964	ug/L	99
39) TAME	22.29	73	168191	42.909	ug/L	99
40) cis-1,3-Dimethylcyclop...	22.69	70	77326	47.390	ug/L	98
41) 3-Ethylpentane	22.86	43	131912	49.922	ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.24	70	95034	101.003	ug/L	93
44) Isooctane	23.35	57	246683	50.753	ug/L	97
45) trans-3-Heptene	23.96	41	75429	47.076	ug/L	98
46) Heptane	24.10	43	90073	52.101	ug/L	99
48) trans-2-Heptene	24.74	56	77396	53.537	ug/L	98
49) cis-2-Heptene	25.53	56	69695	51.855	ug/L	98
50) 2,2-Dimethylhexane	26.31	57	249313	51.222	ug/L	100
51) Methylcyclohexane	26.52	83	110157	51.373	ug/L	99
52) 2,5-Dimethylhexane	27.20	57	124071	51.834	ug/L	98
53) 2,4-Dimethylhexane	27.45	57	92310	50.366	ug/L	97
54) Ethylcyclopentane	27.49	69	93159	51.820	ug/L	99
55) 2,2,3-Trimethylpentane	27.72	57	202215	51.660	ug/L	99
57) 2,3,4-Trimethylpentane	29.27	43	144661	52.292	ug/L	99
58) 2,3,3-Trimethylpentane	29.84	43	119167	52.569	ug/L	99
59) 2,3-Dimethylhexane	30.10	43	133697	54.047	ug/L	97
60) 2-Methylheptane	30.54	57	116462	53.579	ug/L	99
61) 4-Methylheptane	30.72	43	146474	52.769	ug/L	99
63) 3-Methylheptane	31.29	43	101117	48.251	ug/L	98
65) 3-Ethylhexane	31.41	43	159545	52.686	ug/L	100
66) Toluene	31.60	91	271774	51.901	ug/L	100
67) 2-Methylthiophene	31.77	97	216737	52.778	ug/L	99
68) trans-1,4-Dimethylcycl...	32.25	97	131847	53.290	ug/L	98
69) 3-Methylthiophene	32.54	97	220574	53.214	ug/L	99
70) 1-Octene	32.97	55	55990	55.510	ug/L	100
71) Octane	33.81	43	125244	53.436	ug/L	99
72) trans-1,2-Dimethylcycl...	34.08	55	99272	53.851	ug/L	94
73) 1,2-Dibromoethane	34.32	107	69928	55.134	ug/L	99
75) cis-2-Octene	35.17	55	84775	56.372	ug/L	97
76) Isopropylcyclopentane	35.31	68	121102	55.133	ug/L	97
77) cis-1,2-Dimethylcycloh...	37.08	55	103050	55.477	ug/L	97
78) 2,5-Dimethylheptane	37.43	57	178893	56.633	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) 3,5-Dimethylheptane	37.57	57	221033M4	54.882	ug/L	
80) 3,3-Dimethylheptane	37.82	57	141878	56.184	ug/L	98
81) 1,1,4-Trimethylcyclohe...	38.34	69	123639	55.850	ug/L	95
82) 2,3-Dimethylheptane	39.49	43	163282	55.863	ug/L	100
83) 3,4-Dimethylheptane	39.79	43	107044M4	56.776	ug/L	
84) 4-Methyloctane	40.09	43	159500	58.917	ug/L	98
85) 2-Methyloctane	40.18	43	137905M3	52.864	ug/L	
86) Ethylbenzene	40.70	91	336342	56.535	ug/L	100
88) 2-Ethylthiophene	40.85	97	252035	57.373	ug/L	98
89) 3-Methyloctane	40.84	57	245215	57.178	ug/L	100
90) 3,3-Diethylpentane	41.83	57	282870	57.351	ug/L	100
91) p/m-Xylene	41.96	91	509919	112.137	ug/L	99
92) 1-Nonene	42.62	56	63770	59.869	ug/L	99
93) trans-3-Nonene	43.03	55	93116	59.289	ug/L	97
94) cis-3-Nonene	43.31	55	106447M6	60.215	ug/L	
95) Nonane	43.40	43	144402M6	58.124	ug/L	
96) Styrene	43.82	104	212068	58.487	ug/L	99
98) o-Xylene	44.23	91	262249	55.987	ug/L	100
99) 2-Nonene	44.66	55	94167	60.308	ug/L	97
100) Isopropylcyclohexane	45.95	83	133294	60.105	ug/L	98
102) Isopropylbenzene	46.57	105	342580	57.688	ug/L	100
103) 3,3-Dimethyloctane	47.06	71	209437	59.238	ug/L	98
104) n-Propylbenzene	48.99	91	414136	59.056	ug/L	99
105) 2-Methylnonane	49.04	43	135120	60.226	ug/L	99
106) 3-Methylnonane	49.44	57	163269	59.850	ug/L	97
107) 1-Methyl-3-ethylbenzene	49.57	105	340543	58.306	ug/L	100
108) 1-Methyl-4-ethylbenzene	49.73	105	327109	58.531	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	283908	58.382	ug/L	100
110) 1-Decene	50.41	41	73929	62.938	ug/L	97
111) Isobutylcyclohexane	50.57	83	145338	59.619	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.60	105	339063	57.761	ug/L	100
113) Decane	50.78	43	128998	59.071	ug/L	100
114) tert-Butylbenzene	51.04	119	250309	58.329	ug/L	99
115) 1,2,4-Trimethylbenzene	51.44	105	296070	57.877	ug/L	99
116) Isobutylbenzene	51.63	91	333965M6	57.768	ug/L	
117) sec-Butylbenzene	51.69	105	369287	58.106	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	308698	58.073	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	308492	57.826	ug/L	98
120) 1,2,3-Trimethylbenzene	52.52	105	295864	56.758	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.72	119	306375	57.478	ug/L	100
122) Indan	52.82	117	276800	56.351	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
123) 1,3-Diethylbenzene	52.97	105	196663	57.932 ug/L	100
124) 1-Methyl-3-propylbenzene	53.08	105	370548	57.551 ug/L	100
125) Indene	53.24	115	266671	55.183 ug/L	100
126) 1-Methyl-4-propylbenzene	53.23	105	435957	57.258 ug/L	99
127) n-Butylbenzene	53.23	91	347690	57.266 ug/L	100
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	314033	56.855 ug/L	99
129) 1,2-Diethylbenzene	53.44	119	151732	56.530 ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	388151	56.576 ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	294628	56.421 ug/L	99
132) Undecane	53.97	57	159886	59.926 ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	353512	56.385 ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	321485	56.243 ug/L	97
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	348579	55.836 ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	310572	55.523 ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	329742	55.469 ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	296995	55.275 ug/L	99
139) Pentylbenzene	55.72	91	287115	55.282 ug/L	98
140) 1,2,3,4-Tetramethylben...	56.05	119	388426	54.097 ug/L	99
141) 1,3-DM-5-tert-Butylben...	56.04	147	264999	54.959 ug/L	100
142) Dodecane	56.20	43	112804	58.122 ug/L	96
143) 1,3,5-Triethylbenzene	56.93	147	163092	54.426 ug/L	98
144) Naphthalene	57.08	128	343234	48.739 ug/L	99
145) Benzothiophene	57.18	134	209835	48.270 ug/L	98
146) 1,2,4-Triethylbenzene	57.50	147	147913	51.211 ug/L	98
147) Hexylbenzene	58.00	91	245670	53.480 ug/L	100
148) MMT	58.26	134	114325	46.541 ug/L	100
149) Tridecane	58.32	57	106393	50.821 ug/L	99
150) 2-Methylnaphthalene	59.87	142	206238	45.194 ug/L	100
151) 1-Methylnaphthalene	60.35	142	182862	44.966 ug/L	98
152) Tetradecane	60.63	57	73947	44.245 ug/L	98
153) Pentadecane	63.47	57	49211	43.210 ug/L	98

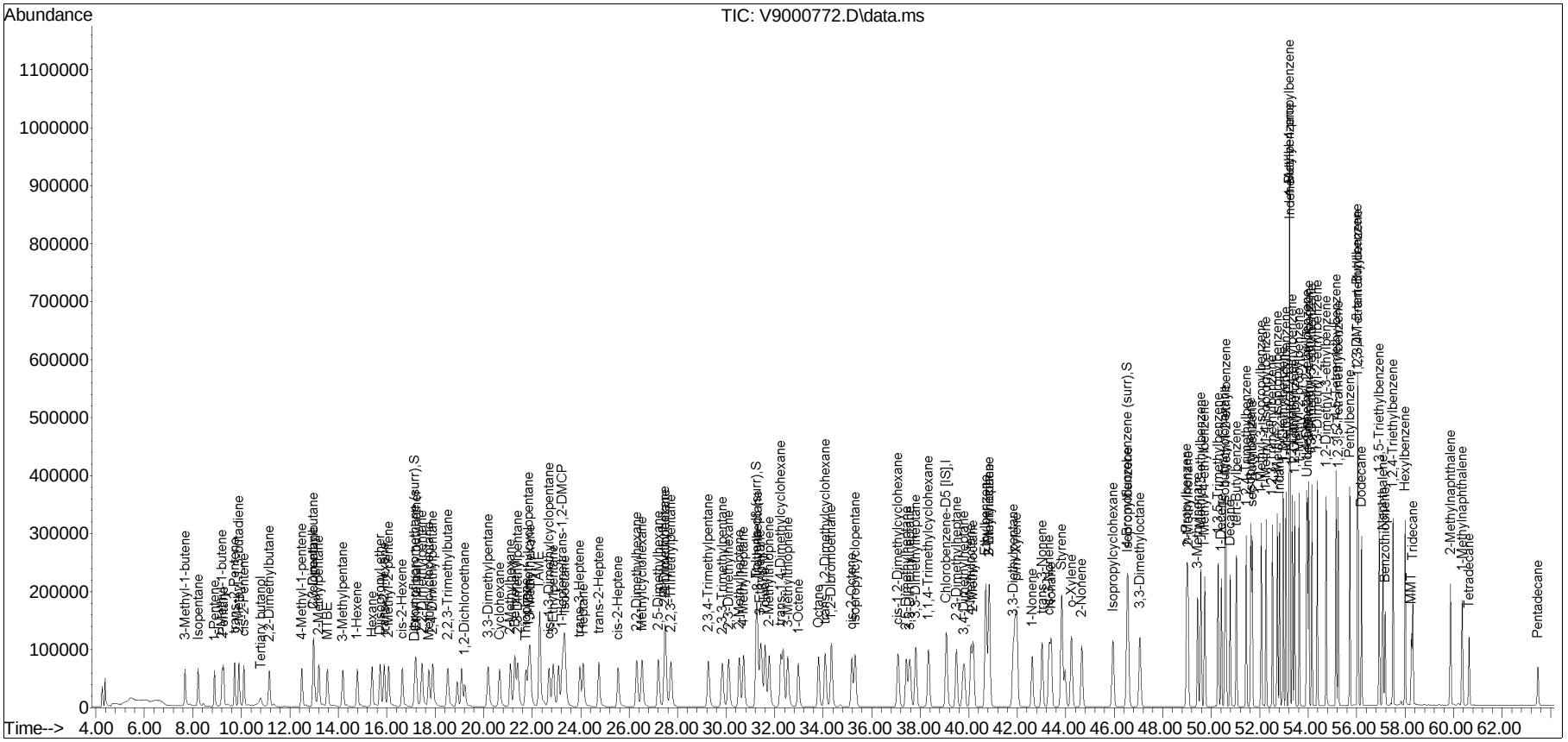
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000772.D
Acq On : 13 Dec 2021 09:57 am
Operator : VOA9:RY
Sample : WG1582700-2,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 13 11:45:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	106	-0.02
2		3-Methyl-1-butene	0.375	0.436	-16.3	115	-0.10
3		Isopentane	0.218	0.233	-6.9	107	-0.10
4		1-Pentene	0.245	0.272	-11.0	109	-0.09
5		2-Methyl-1-butene	0.378	0.430	-13.8	112	-0.09
6		Pentane	0.376	0.401	-6.6	110	-0.08
7		trans-2-Pentene	0.404	0.466	-15.3	113	-0.09
8		2-Methyl-1,3-butadiene	0.266	0.310	-16.5	112	-0.08
9		cis-2-Pentene	0.380	0.437	-15.0	113	-0.08
10		Tertiary butanol	0.076	0.078#	-2.6	108	0.02
11		2,2-Dimethylbutane	0.248	0.271	-9.3	111	-0.09
12		4-Methyl-1-pentene	0.301	0.337	-12.0	109	-0.07
13		Cyclopentane	0.166	0.184	-10.8	110	-0.07
14		2,3-Dimethylbutane	0.118	0.133	-12.7	111	-0.07
15		2-Methylpentane	0.433	0.479	-10.6	110	-0.08
16		MTBE	0.614	0.643	-4.7	103	-0.06
17		3-Methylpentane	0.379	0.430	-13.5	110	-0.07
18		1-Hexene	0.220	0.250	-13.6	109	-0.05
19		Hexane	0.338	0.385	-13.9	111	-0.07
20		Diisopropyl ether	0.644	0.664	-3.1	98	-0.05
21		trans-2-Hexene	0.373	0.432	-15.8	111	-0.06
22		2-Methyl-2-pentene	0.379	0.438	-15.6	113	-0.06
23		cis-2-Hexene	0.333	0.387	-16.2	111	-0.06
24	S	Dibromofluoromethane (surr)	0.257	0.250	2.7	102	-0.04
25		Ethyl tertiary butyl ether	0.642	0.656	-2.2	97	-0.05
26		2,2-Dimethylpentane	0.481	0.541	-12.5	111	-0.05
27		Methylcyclopentane	0.419	0.471	-12.4	109	-0.05
28		2,4-Dimethylpentane	0.386	0.423	-9.6	107	-0.06
29		2,2,3-Trimethylbutane	0.431	0.486	-12.8	110	-0.05
30		1,2-Dichloroethane	0.290	0.289	0.3	95	-0.04
31		3,3-Dimethylpentane	0.492	0.545	-10.8	107	-0.04
32		Cyclohexane	0.354	0.389	-9.9	107	-0.05
33		2-Methylhexane	0.427	0.481	-12.6	109	-0.05
34	M	Benzene	0.874	0.919	-5.1	102	-0.05
35		2,3-Dimethylpentane	0.356	0.393	-10.4	109	-0.04
36		Thiophene	0.463	0.466	-0.6	96	-0.04
37		1,1-Dimethylcyclopentane	0.224	0.257	-14.7	108	-0.05
38		3-Methylhexane	0.369	0.409	-10.8	110	-0.05
39		TAME	0.720	0.660	8.3	100	-0.04

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.300	0.331	-10.3	109	-0.05
41		3-Ethylpentane	0.485	0.536	-10.5	109	-0.04
43		1-Heptene/trans-1,2-DMCP	0.173	0.199	-15.0	114	-0.04
44		Isooctane	0.893	1.022	-14.4	113	-0.04
45		trans-3-Heptene	0.294	0.313	-6.5	109	-0.04
46		Heptane	0.318	0.355	-11.6	107	-0.04
48		trans-2-Heptene	0.266	0.312	-17.3	109	-0.04
49		cis-2-Heptene	0.247	0.279	-13.0	109	-0.04
50		2,2-Dimethylhexane	0.894	0.987	-10.4	110	-0.03
51		Methylcyclohexane	0.394	0.441	-11.9	110	-0.04
52		2,5-Dimethylhexane	0.440	0.490	-11.4	110	-0.03
53		2,4-Dimethylhexane	0.337	0.382	-13.4	110	-0.03
54		Ethylcyclopentane	0.330	0.367	-11.2	108	-0.04
55		2,2,3-Trimethylpentane	0.719	0.802	-11.5	109	-0.03
57		2,3,4-Trimethylpentane	0.508	0.547	-7.7	105	-0.02
58		2,3,3-Trimethylpentane	0.416	0.451	-8.4	105	-0.03
59		2,3-Dimethylhexane	0.454	0.495	-9.0	103	-0.04
60		2-Methylheptane	0.399	0.440	-10.3	106	-0.03
61		4-Methylheptane	0.510	0.543	-6.5	104	-0.03
62	S	Toluene-d8 (surr)	1.193	1.213	-1.7	107	-0.02
63		3-Methylheptane	0.385	0.388	-0.8	110	-0.04
65		3-Ethylhexane	0.556	0.592	-6.5	105	-0.02
66	M	Toluene	0.962	1.060	-10.2	109	-0.03
67		2-Methylthiophene	0.754	0.838	-11.1	109	-0.02
68		trans-1,4-Dimethylcyclohexa	0.454	0.494	-8.8	108	-0.02
69		3-Methylthiophene	0.761	0.841	-10.5	107	-0.02
70		1-Octene	0.185	0.205	-10.8	106	-0.03
71		Octane	0.430	0.443	-3.0	101	-0.02
72		trans-1,2-Dimethylcyclohexa	0.339	0.364	-7.4	105	-0.03
73		1,2-Dibromoethane	0.233	0.249	-6.9	105	-0.02
75		cis-2-Octene	0.276	0.309	-12.0	105	-0.02
76		Isopropylcyclopentane	0.403	0.431	-6.9	104	-0.03
77		cis-1,2-Dimethylcyclohexane	0.341	0.361	-5.9	103	-0.03
78		2,5-Dimethylheptane	0.580	0.607	-4.7	99	-0.01
79		3,5-Dimethylheptane	0.740	0.758	-2.4	102	-0.01
80		3,3-Dimethylheptane	0.464	0.470	-1.3	99	-0.02
81		1,1,4-Trimethylcyclohexane	0.407	0.417	-2.5	101	-0.02
82		2,3-Dimethylheptane	0.537	0.521	3.0	96	-0.02
83		3,4-Dimethylheptane	0.346	0.332	4.0	97	-0.02

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
84		4-Methyloctane	0.497	0.510	-2.6	98	-0.02
85		2-Methyloctane	0.479	0.430	10.2	90	0.00
86		Ethylbenzene	1.093	1.197	-9.5	106	-0.01
88		2-Ethylthiophene	0.807	0.899	-11.4	107	-0.02
89		3-Methyloctane	0.788	0.772	2.0	95	-0.02
90		3,3-Diethylpentane	0.906	0.893	1.4	97	-0.01
91		p/m-Xylene	0.835	0.898	-7.5	103	0.00
92		1-Nonene	0.196	0.193	1.5	93	-0.02
93		trans-3-Nonene	0.288	0.282	2.1	93	-0.01
94		cis-3-Nonene	0.325	0.317	2.5	92	0.00
95		Nonane	0.456	0.431	5.5	89	-0.01
96		Styrene	0.666	0.736	-10.5	103	-0.01
98		o-Xylene	0.860	0.913	-6.2	103	-0.02
99		2-Nonene	0.287	0.277	3.5	93	0.00
100		Isopropylcyclohexane	0.407	0.392	3.7	94	-0.02
101	S	4-Bromofluorobenzene (surr)	0.504	0.493	2.2	102	-0.01
102		Isopropylbenzene	1.091	1.134	-3.9	101	-0.02
103		3,3-Dimethyloctane	0.649	0.594	8.5	90	-0.01
104		n-Propylbenzene	1.288	1.329	-3.2	97	0.00
105		2-Methylnonane	0.412	0.370	10.2	85	0.00
106		3-Methylnonane	0.501	0.450	10.2	86	0.00
107		1-Methyl-3-ethylbenzene	1.073	1.108	-3.3	98	0.00
108		1-Methyl-4-ethylbenzene	1.026	1.066	-3.9	98	0.00
109		1,3,5-Trimethylbenzene	0.893	0.927	-3.8	98	0.00
110		1-Decene	0.216	0.200	7.4	85	0.00
111		Isobutylcyclohexane	0.448	0.403	10.0	88	0.00
112		1-Methyl-2-ethylbenzene	1.078	1.114	-3.3	98	0.00
113		Decane	0.401	0.352	12.2	84	0.00
114		tert-Butylbenzene	0.788	0.788	0.0	95	0.00
115		1,2,4-Trimethylbenzene	0.940	0.977	-3.9	98	0.00
116		Isobutylbenzene	1.062	1.037	2.4	91	0.00
117		sec-Butylbenzene	1.167	1.141	2.2	93	0.00
118		1-Methyl-3-isopropylbenzene	0.976	0.957	1.9	92	0.00
119		1-Methyl-4-isopropylbenzene	0.980	0.957	2.3	92	0.00
120		1,2,3-Trimethylbenzene	0.957	1.002	-4.7	98	0.00
121		1-Methyl-2-isopropylbenzene	0.979	0.972	0.7	93	0.00
122		Indan	0.902	0.948	-5.1	99	0.00
123		1,3-Diethylbenzene	0.624	0.614	1.6	92	0.00
124		1-Methyl-3-propylbenzene	1.183	1.146	3.1	90	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
125	Indene	0.888	0.939	-5.7	98	0.00
126	1-Methyl-4-propylbenzene	1.398	1.339	4.2	90	0.00
127	n-Butylbenzene	1.115	1.070	4.0	90	0.00
128	1,2-Dimethyl-4-ethylbenzene	1.014	0.978	3.6	90	0.00
129	1,2-Diethylbenzene	0.493	0.483	2.0	92	0.00
130	1-Methyl-2-propylbenzene	1.260	1.234	2.1	92	0.00
131	1,4-Dimethyl-2-ethylbenzene	0.959	0.932	2.8	91	0.00
132	Undecane	0.490	0.446	9.0	84	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.152	1.122	2.6	91	0.00
134	1,3-Dimethyl-5-ethylbenzene	1.050	1.017	3.1	90	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.147	1.136	1.0	92	0.00
136	1,2-Dimethyl-3-ethylbenzene	1.027	1.011	1.6	92	0.00
137	1,2,4,5-Tetramethylbenzene	1.092	1.064	2.6	90	0.00
138	1,2,3,5-Tetramethylbenzene	0.987	0.952	3.5	89	0.00
139	Pentylbenzene	0.954	0.852	10.7	85	0.00
140	1,2,3,4-Tetramethylbenzene	1.319	1.253	5.0	89	0.00
141	1,3-DM-5-tert-Butylbenzene	0.886	0.770	13.1	84	0.00
142	Dodecane	0.356	0.317	11.0	82	0.00
143	1,3,5-Triethylbenzene	0.550	0.476	13.5	84	0.00
144	Naphthalene	1.293	1.345	-4.0	97	0.00
145	Benzothiophene	0.798	0.852	-6.8	99	0.00
146	1,2,4-Triethylbenzene	0.531	0.442	16.8	84	0.00
147	Hexylbenzene	0.844	0.709	16.0	83	0.00
148	MMT	0.451	0.454	-0.7	94	0.00
149	Tridecane	0.385	0.306	20.5	83	0.00
150	2-Methylnaphthalene	0.838	0.808	3.6	92	0.00
151	1-Methylnaphthalene	0.747	0.728	2.5	94	0.00
152	Tetradecane	0.307	0.215	30.0#	82	0.00
153	Pentadecane	0.209	0.135	35.4#	81	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	277055M4	50.000	ug/L	-0.02
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.15	113	69320	48.662	ug/L	-0.04
Spiked Amount 50.000	Range 78 - 118		Recovery = 97.32%			
62) Toluene-d8 (surr)	31.23	98	336094	50.855	ug/L	-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 101.71%			
101) 4-Bromofluorobenzene (...	46.52	95	136480	48.883	ug/L	-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.77%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.67	55	120828	58.072	ug/L	99
3) Isopentane	8.21	43	64450	53.352	ug/L	98
4) 1-Pentene	8.89	42	75263	55.502	ug/L	97
5) 2-Methyl-1-butene	9.20	55	119170	56.962	ug/L	98
6) Pentane	9.26	43	110979	53.210	ug/L	99
7) trans-2-Pentene	9.71	55	129243	57.708	ug/L	99
8) 2-Methyl-1,3-butadiene	9.89	67	85797	58.197	ug/L	98
9) cis-2-Pentene	10.10	55	121132	57.518	ug/L	99
10) Tertiary butanol	10.79	59	107453M4	256.272	ug/L	
11) 2,2-Dimethylbutane	11.14	43	75083	54.577	ug/L	96
12) 4-Methyl-1-pentene	12.49	43	93373	56.045	ug/L	98
13) Cyclopentane	12.98	70	50878	55.447	ug/L	98
14) 2,3-Dimethylbutane	12.97	71	36937	56.307	ug/L	95
15) 2-Methylpentane	13.19	43	132745	55.374	ug/L	97
16) MTBE	13.54	73	178111	52.313	ug/L	99
17) 3-Methylpentane	14.18	57	119161	56.710	ug/L	100
18) 1-Hexene	14.78	56	69232	56.832	ug/L	98
19) Hexane	15.38	57	106754	57.015	ug/L	100
20) Diisopropyl ether	15.71	45	183983	51.591	ug/L	99
21) trans-2-Hexene	15.88	55	119668	57.855	ug/L	98
22) 2-Methyl-2-pentene	16.07	69	121285	57.769	ug/L	97
23) cis-2-Hexene	16.63	55	107162	58.016	ug/L	100
25) Ethyl tertiary butyl e...	17.19	59	181620	51.061	ug/L	99
26) 2,2-Dimethylpentane	17.44	57	149822	56.241	ug/L	98
27) Methylcyclopentane	17.72	56	130487	56.144	ug/L	97
28) 2,4-Dimethylpentane	17.88	43	117236	54.816	ug/L	96
29) 2,2,3-Trimethylbutane	18.51	57	134609	56.365	ug/L	98
30) 1,2-Dichloroethane	19.21	62	80162	49.809	ug/L	98
31) 3,3-Dimethylpentane	20.17	43	151125	55.392	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	20.64	56	107691	54.906	ug/L	98
33) 2-Methylhexane	21.08	43	133366	56.328	ug/L	98
34) Benzene	21.27	78	254622	52.601	ug/L	98
35) 2,3-Dimethylpentane	21.39	56	108909	55.233	ug/L	99
36) Thiophene	21.72	84	129074	50.262	ug/L	96
37) 1,1-Dimethylcyclopentane	21.84	83	71251	57.294	ug/L	99
38) 3-Methylhexane	21.90	43	113200	55.341	ug/L	97
39) TAME	22.29	73	182967	45.864	ug/L	98
40) cis-1,3-Dimethylcyclop...	22.67	70	91823	55.294	ug/L	99
41) 3-Ethylpentane	22.85	43	148368	55.170	ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.24	70	110176	115.054	ug/L	89
44) Isooctane	23.34	57	283269	57.264	ug/L	97
45) trans-3-Heptene	23.95	41	86718	53.178	ug/L	97
46) Heptane	24.09	43	98368	55.906	ug/L	99
48) trans-2-Heptene	24.74	56	86512	58.800	ug/L	98
49) cis-2-Heptene	25.53	56	77374	56.564	ug/L	98
50) 2,2-Dimethylhexane	26.30	57	273454	55.202	ug/L	99
51) Methylcyclohexane	26.52	83	122228	56.008	ug/L	98
52) 2,5-Dimethylhexane	27.19	57	135764	55.729	ug/L	98
53) 2,4-Dimethylhexane	27.45	57	105709	56.670	ug/L	99
54) Ethylcyclopentane	27.49	69	101723	55.597	ug/L	98
55) 2,2,3-Trimethylpentane	27.71	57	222064	55.741	ug/L	100
57) 2,3,4-Trimethylpentane	29.25	43	151568	53.833	ug/L	98
58) 2,3,3-Trimethylpentane	29.83	43	124900	54.137	ug/L	100
59) 2,3-Dimethylhexane	30.09	43	137212	54.500	ug/L	97
60) 2-Methylheptane	30.53	57	121823	55.068	ug/L	97
61) 4-Methylheptane	30.70	43	150362	53.225	ug/L	98
63) 3-Methylheptane	31.27	43	107408	50.359	ug/L	97
65) 3-Ethylhexane	31.41	43	164037	53.225	ug/L	99
66) Toluene	31.59	91	293569	55.086	ug/L	99
67) 2-Methylthiophene	31.77	97	232087	55.531	ug/L	98
68) trans-1,4-Dimethylcycl...	32.24	97	136809	54.331	ug/L	99
69) 3-Methylthiophene	32.53	97	233032	55.239	ug/L	97
70) 1-Octene	32.96	55	56899	55.427	ug/L	98
71) Octane	33.80	43	122642	51.413	ug/L	98
72) trans-1,2-Dimethylcycl...	34.07	55	100974	53.819	ug/L	98
73) 1,2-Dibromoethane	34.31	107	69094	53.526	ug/L	97
75) cis-2-Octene	35.17	55	85513	55.871	ug/L	100
76) Isopropylcyclopentane	35.30	68	119466	53.439	ug/L	97
77) cis-1,2-Dimethylcycloh...	37.07	55	100034	52.914	ug/L	97
78) 2,5-Dimethylheptane	37.42	57	168289	52.346	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79)	3,5-Dimethylheptane	37.56	57	209922M4	51.214	ug/L	
80)	3,3-Dimethylheptane	37.81	57	130211	50.664	ug/L	99
81)	1,1,4-Trimethylcyclohe...	38.33	69	115638	51.325	ug/L	99
82)	2,3-Dimethylheptane	39.48	43	144272	48.498	ug/L	99
83)	3,4-Dimethylheptane	39.79	43	91950	47.920	ug/L	99
84)	4-Methyloctane	40.09	43	141391	51.317	ug/L	98
85)	2-Methyloctane	40.18	43	118997M3	44.820	ug/L	
86)	Ethylbenzene	40.70	91	331696	54.782	ug/L	98
88)	2-Ethylthiophene	40.84	97	249096	55.715	ug/L	98
89)	3-Methyloctane	40.84	57	214022	49.034	ug/L	99
90)	3,3-Diethylpentane	41.83	57	247412	49.287	ug/L	98
91)	p/m-Xylene	41.96	91	497501	107.498	ug/L	98
92)	1-Nonene	42.61	56	53542	49.390	ug/L	98
93)	trans-3-Nonene	43.03	55	78089	48.854	ug/L	97
94)	cis-3-Nonene	43.32	55	87955M6	48.886	ug/L	
95)	Nonane	43.39	43	119360M6	47.206	ug/L	
96)	Styrene	43.82	104	204035	55.290	ug/L	99
98)	o-Xylene	44.23	91	252922	53.054	ug/L	99
99)	2-Nonene	44.66	55	76833	48.348	ug/L	98
100)	Isopropylcyclohexane	45.94	83	108479	48.062	ug/L	98
102)	Isopropylbenzene	46.56	105	314220	51.990	ug/L	100
103)	3,3-Dimethyloctane	47.06	71	164633	45.753	ug/L	97
104)	n-Propylbenzene	48.99	91	368287	51.602	ug/L	98
105)	2-Methylnonane	49.04	43	102485	44.883	ug/L	99
106)	3-Methylnonane	49.44	57	124552	44.861	ug/L	98
107)	1-Methyl-3-ethylbenzene	49.57	105	307077	51.659	ug/L	99
108)	1-Methyl-4-ethylbenzene	49.73	105	295449	51.944	ug/L	100
109)	1,3,5-Trimethylbenzene	50.28	105	256711	51.869	ug/L	99
110)	1-Decene	50.41	41	55453	46.385	ug/L	98
111)	Isobutylcyclohexane	50.57	83	111702	45.022	ug/L	98
112)	1-Methyl-2-ethylbenzene	50.60	105	308635	51.661	ug/L	100
113)	Decane	50.78	43	97417	43.832	ug/L	99
114)	tert-Butylbenzene	51.04	119	218333	49.990	ug/L	98
115)	1,2,4-Trimethylbenzene	51.44	105	270672	51.990	ug/L	98
116)	Isobutylbenzene	51.63	91	287187M6	48.811	ug/L	
117)	sec-Butylbenzene	51.69	105	316177	48.882	ug/L	99
118)	1-Methyl-3-isopropylbe...	52.07	119	265047	48.992	ug/L	100
119)	1-Methyl-4-isopropylbe...	52.26	119	265223	48.848	ug/L	99
120)	1,2,3-Trimethylbenzene	52.52	105	277542	52.314	ug/L	99
121)	1-Methyl-2-isopropylbe...	52.72	119	269320	49.645	ug/L	100
122)	Indan	52.82	117	262657	52.539	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
123) 1,3-Diethylbenzene	52.97	105	170234	49.272	ug/L	99
124) 1-Methyl-3-propylbenzene	53.08	105	317447	48.444	ug/L	100
125) Indene	53.24	115	260066	52.877	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	371040	47.882	ug/L	98
127) n-Butylbenzene	53.22	91	296412	47.969	ug/L	97
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	271048	48.217	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	133735	48.956	ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	341781	48.948	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	258350	48.611	ug/L	99
132) Undecane	53.97	57	123566	45.506	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	310785	48.706	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	281630	48.411	ug/L	97
135) 1,3-Dimethyl-2-ethylbe...	54.37	119	314816	49.548	ug/L	98
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	280135	49.208	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	294913	48.745	ug/L	100
138) 1,2,3,5-Tetramethylben...	55.24	119	263623	48.208	ug/L	98
139) Pentylbenzene	55.72	91	236111	44.669	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	347047	47.491	ug/L	98
141) 1,3-DM-5-tert-Butylben...	56.04	147	213267	43.459	ug/L	100
142) Dodecane	56.20	43	87922	44.512	ug/L	100
143) 1,3,5-Triethylbenzene	56.93	147	131999	43.281	ug/L	99
144) Naphthalene	57.08	128	372528	51.977	ug/L	99
145) Benzothiophene	57.17	134	235965	53.335	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	122513	41.677	ug/L	100
147) Hexylbenzene	58.00	91	196368	42.002	ug/L	99
148) MMT	58.26	134	125696	50.278	ug/L	100
149) Tridecane	58.31	57	84865	39.830	ug/L	98
150) 2-Methylnaphthalene	59.86	142	223951	48.220	ug/L	100
151) 1-Methylnaphthalene	60.35	142	201779	48.753	ug/L	100
152) Tetradecane	60.63	57	59473	34.964	ug/L	98
153) Pentadecane	63.47	57	37355M4	32.228	ug/L	

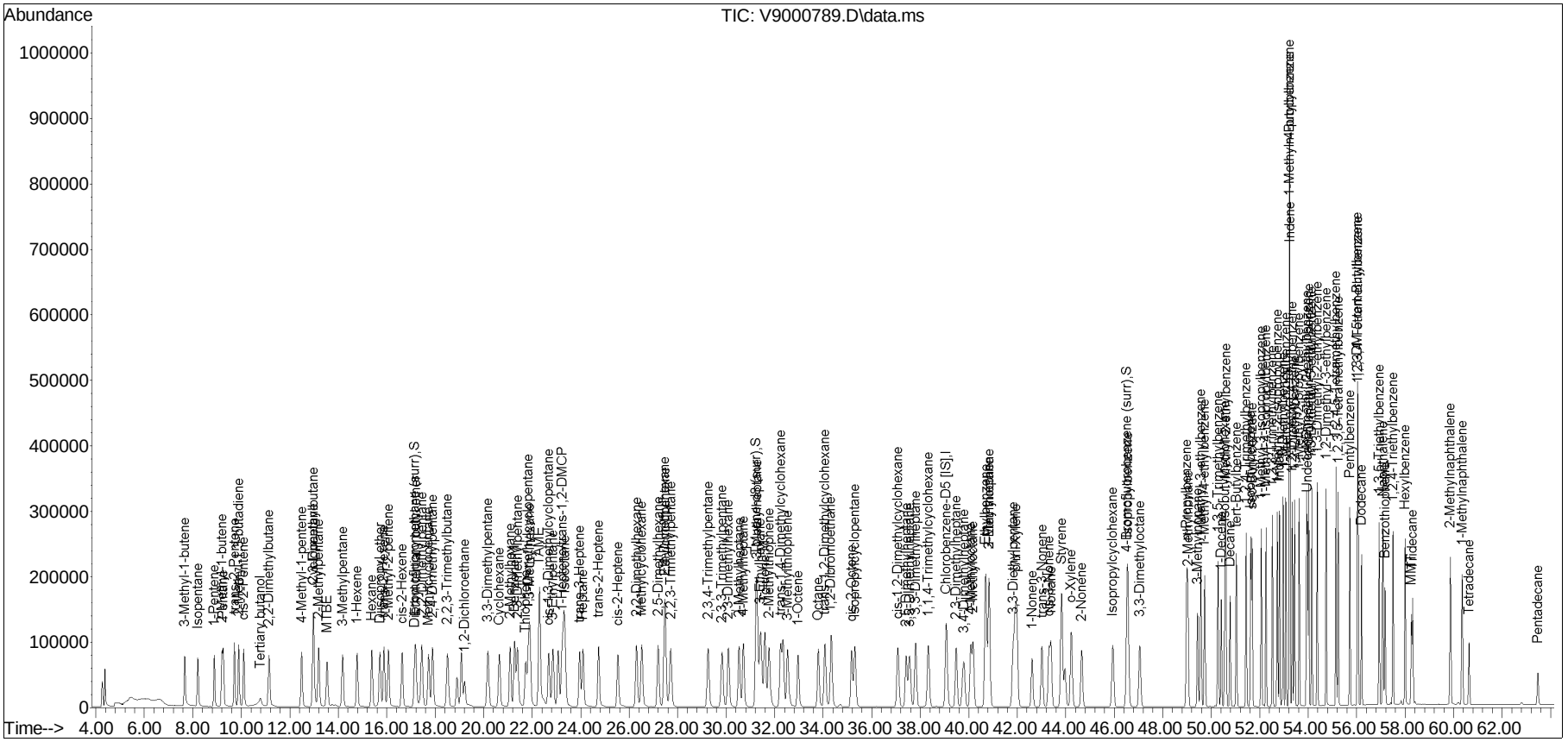
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000789.D
Acq On : 14 Dec 2021 12:37 pm
Operator : VOA9:RY
Sample : WG1582700-7,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 15 14:37:02 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000780.D
Acq On : 13 Dec 2021 07:28 pm
Operator : VOA9:RY
Sample : L2166503-01D,31,0.1135,10,0.01
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 17 15:46:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.08	117	273195	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.16	113	71380	50.816	ug/L	-0.03
Spiked Amount 50.000	Range 78 - 118		Recovery = 101.63%			
62) Toluene-d8 (surr)	31.25	98	319861	49.083	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.17%			
101) 4-Bromofluorobenzene (...	46.54	95	139922	50.823	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.65%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.	d	
3) Isopentane	0.00		0	N.D.	d	
4) 1-Pentene	0.00		0	N.D.	d	
5) 2-Methyl-1-butene	0.00		0	N.D.	d	
6) Pentane	0.00		0	N.D.	d	
7) trans-2-Pentene	0.00		0	N.D.	d	
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.	d	
9) cis-2-Pentene	0.00		0	N.D.	d	
10) Tertiary butanol	0.00		0	N.D.	d	
11) 2,2-Dimethylbutane	0.00		0	N.D.	d	
12) 4-Methyl-1-pentene	0.00		0	N.D.	d	
13) Cyclopentane	0.00		0	N.D.	d	
14) 2,3-Dimethylbutane	0.00		0	N.D.	d	
15) 2-Methylpentane	0.00		0	N.D.	d	
16) MTBE	0.00		0	N.D.	d	
17) 3-Methylpentane	14.17	57	399M4	0.193	ug/L	
18) 1-Hexene	0.00		0	N.D.	d	
19) Hexane	15.40	57	573	0.310	ug/L #	77
20) Diisopropyl ether	0.00		0	N.D.	d	
21) trans-2-Hexene	0.00		0	N.D.	d	
22) 2-Methyl-2-pentene	0.00		0	N.D.	d	
23) cis-2-Hexene	0.00		0	N.D.	d	
25) Ethyl tertiary butyl e...	0.00		0	N.D.	d	
26) 2,2-Dimethylpentane	0.00		0	N.D.	d	
27) Methylcyclopentane	17.73	56	370M4	0.161	ug/L	
28) 2,4-Dimethylpentane	0.00		0	N.D.	d	
29) 2,2,3-Trimethylbutane	0.00		0	N.D.	d	
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000780.D
Acq On : 13 Dec 2021 07:28 pm
Operator : VOA9:RY
Sample : L2166503-01D,31,0.1135,10,0.01
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 17 15:46:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	20.65	56	372M4	0.192	ug/L	
33) 2-Methylhexane	21.11	43	718M4	0.308	ug/L	
34) Benzene	21.30	78	828	0.173	ug/L	62
35) 2,3-Dimethylpentane	0.00		0	N.D.	d	
36) Thiophene	0.00		0	N.D.	d	
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.	d	
38) 3-Methylhexane	0.00		0	N.D.	d	
39) TAME	0.00		0	N.D.	d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.	d	
41) 3-Ethylpentane	0.00		0	N.D.	d	
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d	
44) Isooctane	0.00		0	N.D.	d	
45) trans-3-Heptene	0.00		0	N.D.	d	
46) Heptane	24.11	43	2287	1.318	ug/L	90
48) trans-2-Heptene	0.00		0	N.D.	d	
49) cis-2-Heptene	0.00		0	N.D.	d	
50) 2,2-Dimethylhexane	0.00		0	N.D.	d	
51) Methylcyclohexane	26.52	83	6486	3.014	ug/L	95
52) 2,5-Dimethylhexane	0.00		0	N.D.	d	
53) 2,4-Dimethylhexane	0.00		0	N.D.	d	
54) Ethylcyclopentane	27.49	69	592M4	0.328	ug/L	
55) 2,2,3-Trimethylpentane	0.00		0	N.D.	d	
57) 2,3,4-Trimethylpentane	29.25	43	430M4	0.155	ug/L	
58) 2,3,3-Trimethylpentane	0.00		0	N.D.	d	
59) 2,3-Dimethylhexane	30.09	43	960M4	0.387	ug/L	
60) 2-Methylheptane	30.54	57	7332	3.361	ug/L	100
61) 4-Methylheptane	30.72	43	2692	0.966	ug/L	91
63) 3-Methylheptane	31.28	43	5873M4	2.792	ug/L	
65) 3-Ethylhexane	0.00		0	N.D.	d	
66) Toluene	31.60	91	14995	2.853	ug/L	93
67) 2-Methylthiophene	0.00		0	N.D.	d	
68) trans-1,4-Dimethylcycl...	32.22	97	5485M6	2.209	ug/L	
69) 3-Methylthiophene	0.00		0	N.D.	d	
70) 1-Octene	0.00		0	N.D.	d	
71) Octane	33.81	43	36389	15.470	ug/L	97
72) trans-1,2-Dimethylcycl...	34.07	55	7973	4.310	ug/L	95
73) 1,2-Dibromoethane	0.00		0	N.D.	d	
75) cis-2-Octene	0.00		0	N.D.	d	
76) Isopropylcyclopentane	35.33	68	990M4	0.449	ug/L	
77) cis-1,2-Dimethylcycloh...	37.10	55	5108M4	2.740	ug/L	
78) 2,5-Dimethylheptane	37.42	57	13742	4.335	ug/L	91

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000780.D
Acq On : 13 Dec 2021 07:28 pm
Operator : VOA9:RY
Sample : L2166503-01D,31,0.1135,10,0.01
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 17 15:46:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
79) 3,5-Dimethylheptane	37.56	57	4857M3	1.202	ug/L		
80) 3,3-Dimethylheptane	37.80	57	1244M4	0.491	ug/L		
81) 1,1,4-Trimethylcyclohe...	0.00		0	N.D.	d		
82) 2,3-Dimethylheptane	39.49	43	23984	8.176	ug/L		100
83) 3,4-Dimethylheptane	39.81	43	7069M4	3.736	ug/L		
84) 4-Methyloctane	40.09	43	25268	9.300	ug/L		96
85) 2-Methyloctane	40.18	43	33348M3	12.738	ug/L		
86) Ethylbenzene	40.70	91	40717	6.820	ug/L		96
88) 2-Ethylthiophene	0.00		0	N.D.	d		
89) 3-Methyloctane	40.85	57	76303	17.729	ug/L		98
90) 3,3-Diethylpentane	0.00		0	N.D.	d		
91) p/m-Xylene	41.92	91	150597	33.000	ug/L		100
92) 1-Nonene	0.00		0	N.D.	d		
93) trans-3-Nonene	0.00		0	N.D.	d		
94) cis-3-Nonene	0.00		0	N.D.	d		
95) Nonane	43.40	43	270362	108.437	ug/L		97
96) Styrene	0.00		0	N.D.	d		
98) o-Xylene	44.23	91	85695	18.230	ug/L		99
99) 2-Nonene	0.00		0	N.D.	d		
100) Isopropylcyclohexane	45.95	83	26851	12.065	ug/L	#	74
102) Isopropylbenzene	46.56	105	32836	5.510	ug/L		98
103) 3,3-Dimethyloctane	47.07	71	15792	4.451	ug/L		86
104) n-Propylbenzene	48.99	91	114926	16.330	ug/L		99
105) 2-Methylnonane	49.04	43	127442	56.602	ug/L		99
106) 3-Methylnonane	49.44	57	156691	57.234	ug/L		98
107) 1-Methyl-3-ethylbenzene	49.57	105	241777	41.248	ug/L		99
108) 1-Methyl-4-ethylbenzene	49.74	105	123456	22.012	ug/L		99
109) 1,3,5-Trimethylbenzene	50.29	105	168041	34.433	ug/L		100
110) 1-Decene	0.00		0	N.D.	d		
111) Isobutylcyclohexane	0.00		0	N.D.	d		
112) 1-Methyl-2-ethylbenzene	50.61	105	169130	28.710	ug/L		99
113) Decane	50.79	43	1090273	497.487	ug/L		96
114) tert-Butylbenzene	51.05	119	3381	0.785	ug/L		89
115) 1,2,4-Trimethylbenzene	51.44	105	607473	118.330	ug/L		98
116) Isobutylbenzene	51.63	91	33894	5.842	ug/L		97
117) sec-Butylbenzene	51.69	105	97674	15.314	ug/L		99
118) 1-Methyl-3-isopropylbe...	52.07	119	108850	20.404	ug/L		99
119) 1-Methyl-4-isopropylbe...	52.27	119	88016	16.440	ug/L		98
120) 1,2,3-Trimethylbenzene	52.52	105	334618	63.964	ug/L		99
121) 1-Methyl-2-isopropylbe...	52.72	119	20712	3.872	ug/L		93
122) Indan	52.82	117	51108	10.367	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000780.D
Acq On : 13 Dec 2021 07:28 pm
Operator : VOA9:RY
Sample : L2166503-01D,31,0.1135,10,0.01
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 17 15:46:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
123) 1,3-Diethylbenzene	52.97	105	65602	19.256	ug/L		99
124) 1-Methyl-3-propylbenzene	53.08	105	383074	59.285	ug/L		99
125) Indene	53.22	115	10728	2.212	ug/L	#	28
126) 1-Methyl-4-propylbenzene	53.23	105	220908	28.910	ug/L		97
127) n-Butylbenzene	53.23	91	171809	28.197	ug/L		98
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	267185	48.201	ug/L		99
129) 1,2-Diethylbenzene	53.44	119	31121	11.553	ug/L		99
130) 1-Methyl-2-propylbenzene	53.63	105	347121	50.415	ug/L		100
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	239602	45.720	ug/L		99
132) Undecane	53.98	57	2671871	997.873	ug/L		98
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	357583	56.832	ug/L		98
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	344655	60.082	ug/L		99
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	51994M6	8.299	ug/L		
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	176951	31.522	ug/L		98
137) 1,2,4,5-Tetramethylben...	55.15	119	215452	36.115	ug/L		98
138) 1,2,3,5-Tetramethylben...	55.24	119	358220M4	66.432	ug/L		
139) Pentylbenzene	55.72	91	89939M6	17.256	ug/L		
140) 1,2,3,4-Tetramethylben...	56.05	119	380124M6	52.752	ug/L		
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d		
142) Dodecane	56.21	43	1642770	843.426	ug/L		98
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d		
144) Naphthalene	57.08	128	492079	69.627	ug/L		99
145) Benzothiophene	0.00		0	N.D.	d		
146) 1,2,4-Triethylbenzene	57.49	147	18193	6.276	ug/L	#	1
147) Hexylbenzene	58.00	91	74049	16.062	ug/L		90
148) MMT	0.00		0	N.D.	d		
149) Tridecane	58.32	57	911429	433.813	ug/L		99
150) 2-Methylnaphthalene	59.87	142	526916	115.056	ug/L		100
151) 1-Methylnaphthalene	60.35	142	311353	76.290	ug/L		100
152) Tetradecane	60.64	57	145717	86.877	ug/L		98
153) Pentadecane	63.47	57	10663	9.329	ug/L		93

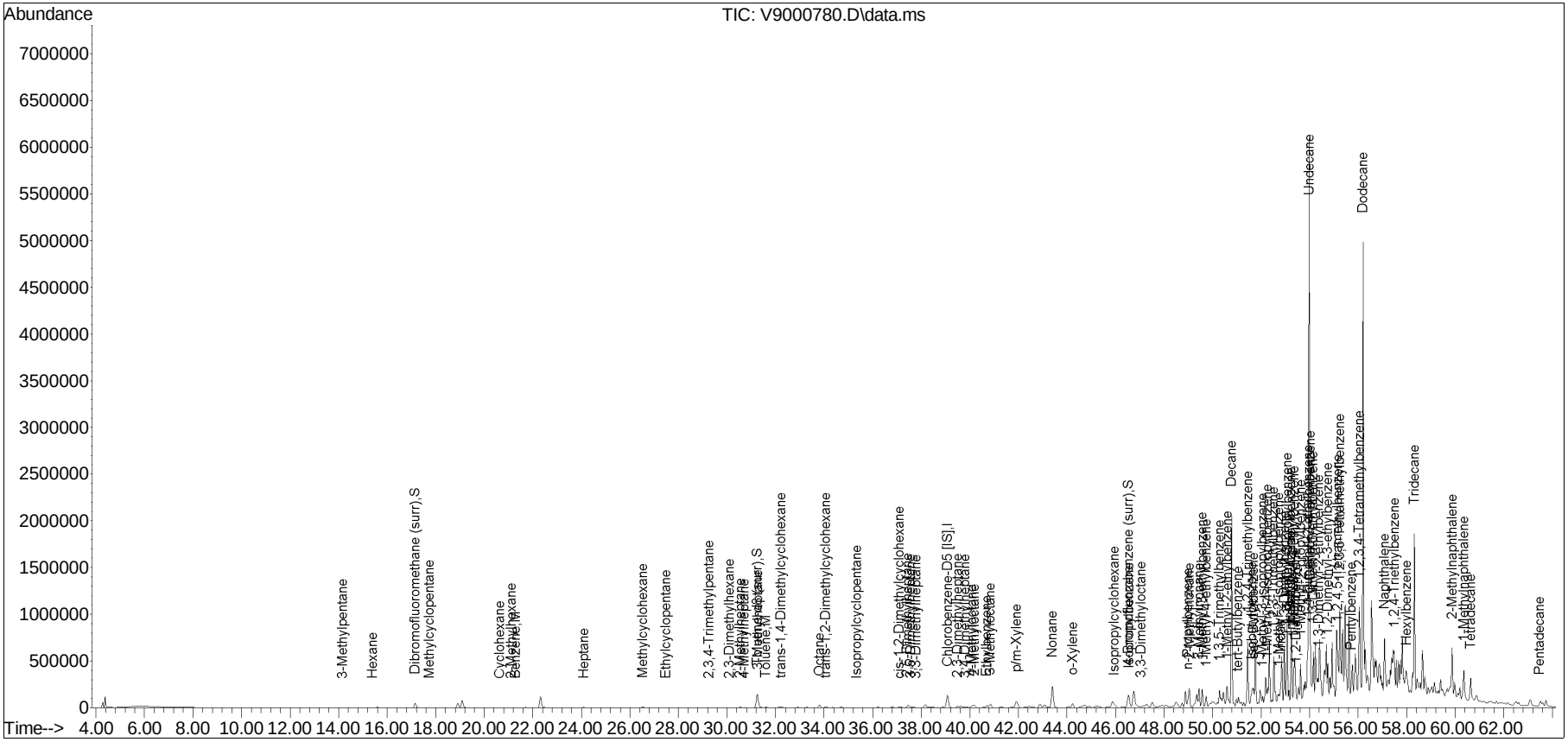
(#) = qualifier out of range (m) = manual integration (+) = signals summed

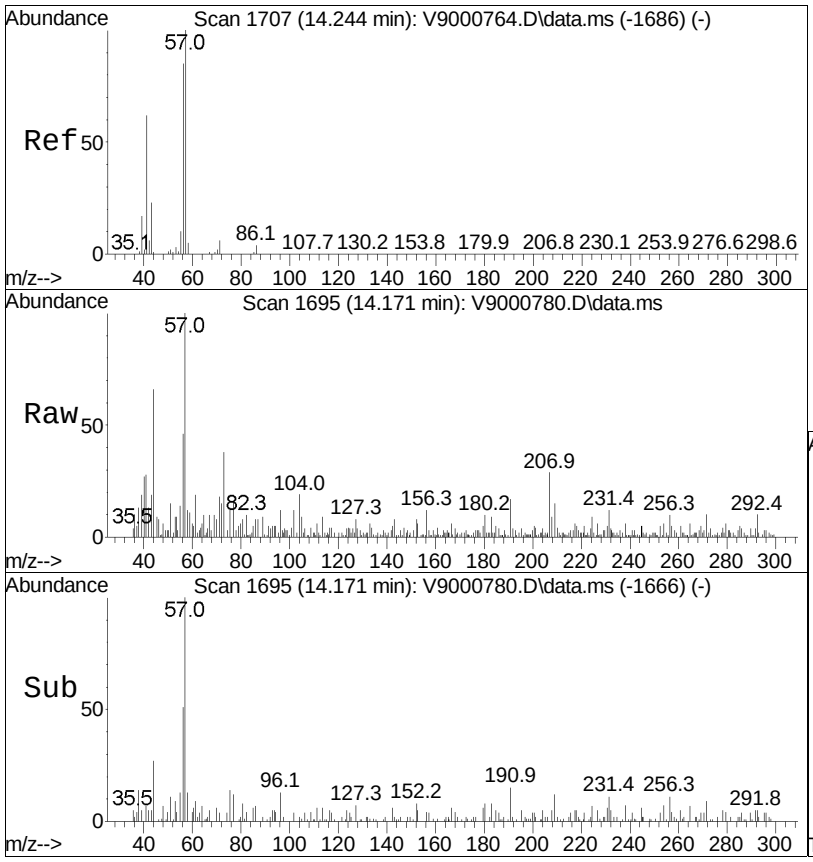
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000780.D
Acq On : 13 Dec 2021 07:28 pm
Operator : VOA9:RY
Sample : L2166503-01D,31,0.1135,10,0.01
Misc : WG1582700,ICAL18544
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 17 15:46:00 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

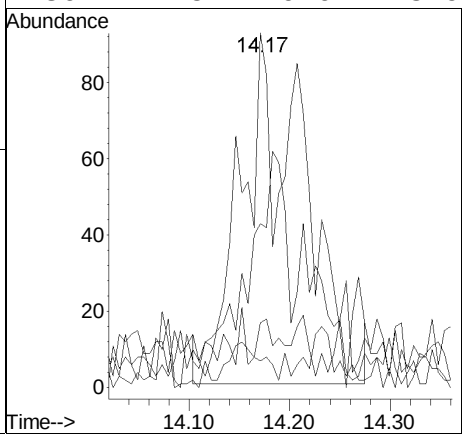


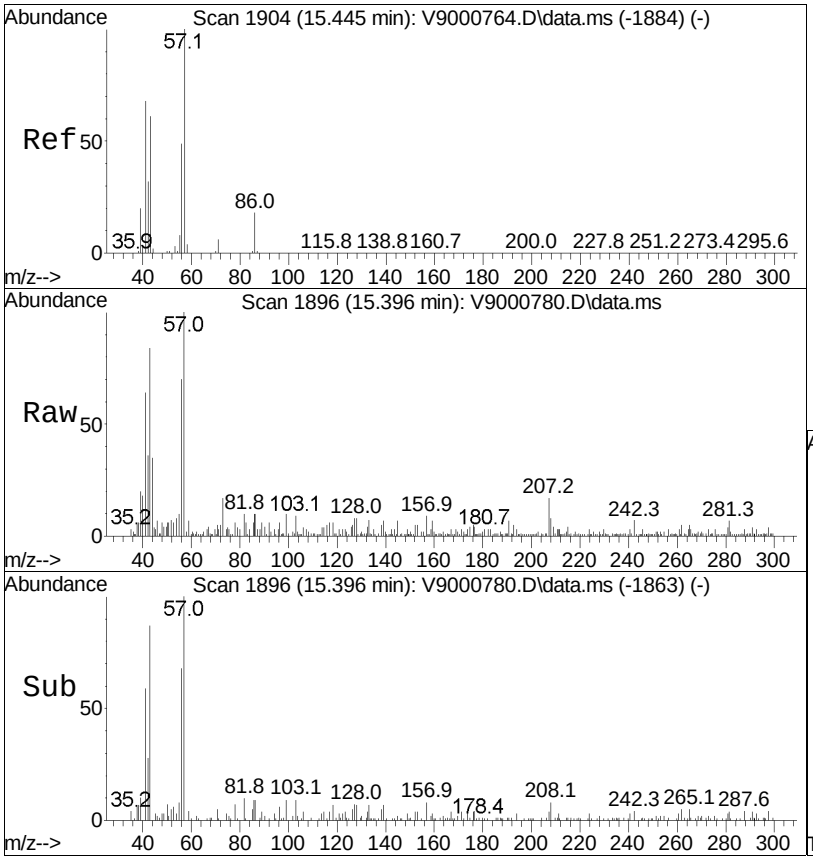


#17
3-Methylpentane
Concen: 0.19 ug/L m
RT: 14.17 min Scan# 1695
Delta R.T. -0.073 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 399

Ion	Ratio	Lower	Upper
57	100		
56	46.2	65.5	105.5#
71	18.3	0.0	26.3
86	7.5	0.0	23.9

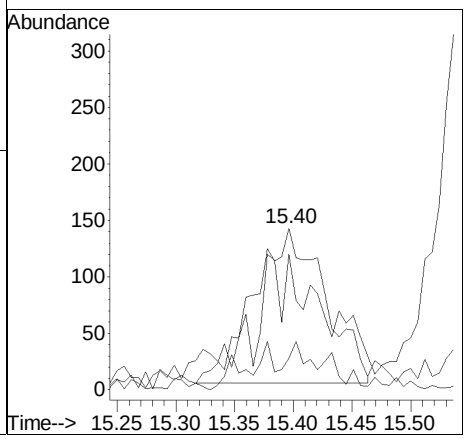


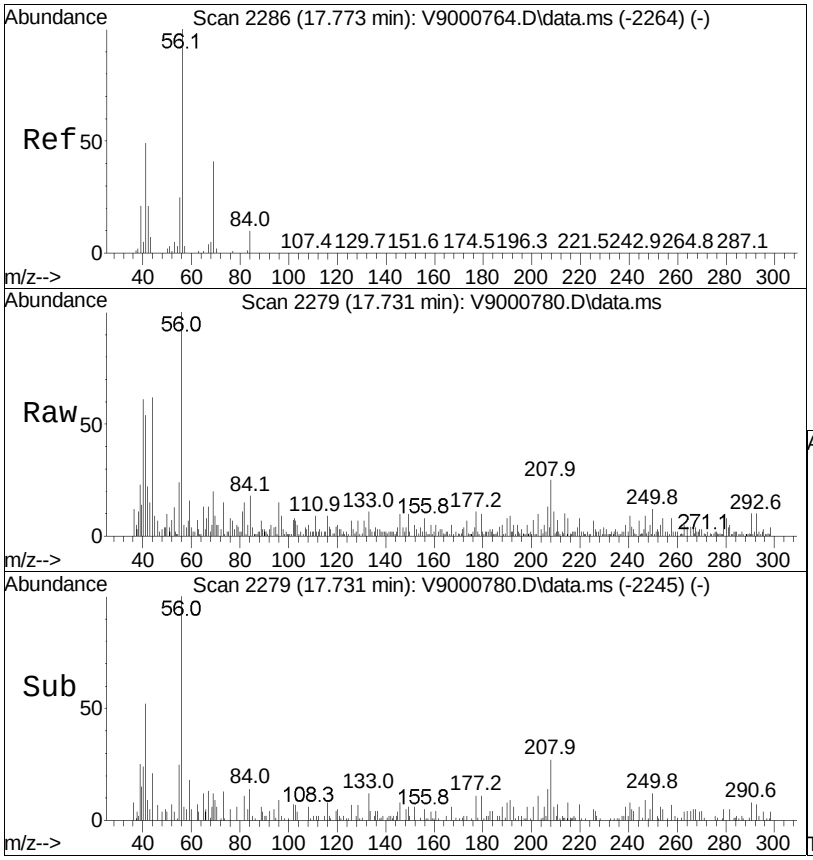


#19
Hexane
Concen: 0.31 ug/L
RT: 15.40 min Scan# 1896
Delta R.T. -0.049 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 573

Ion	Ratio	Lower	Upper
57	100		
43	83.9	42.0	82.0#
86	19.6	0.0	38.4

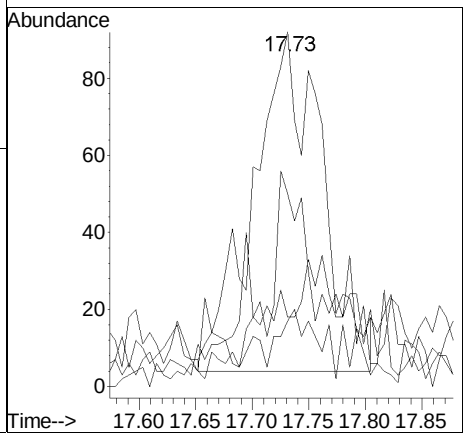


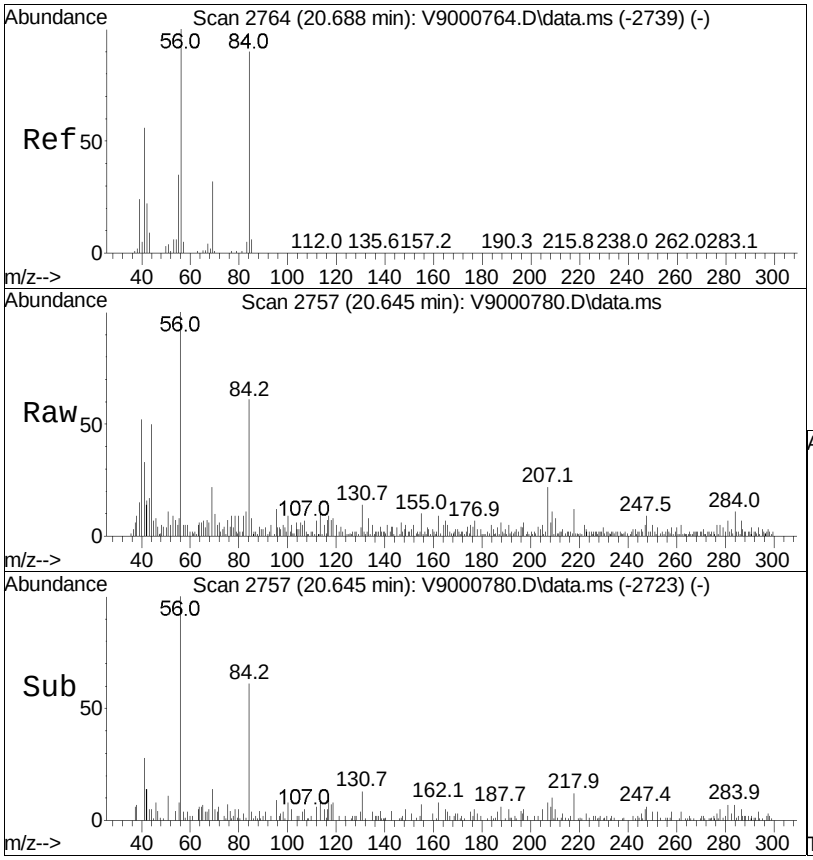


#27
Methylcyclopentane
Concen: 0.16 ug/L m
RT: 17.73 min Scan# 2279
Delta R.T. -0.042 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 56 Resp: 370

Ion	Ratio	Lower	Upper
56	100		
69	19.6	20.9	60.9#
41	54.3	29.4	69.4
84	18.5	0.0	29.6

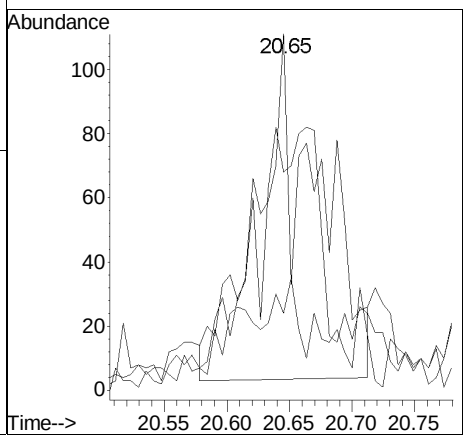


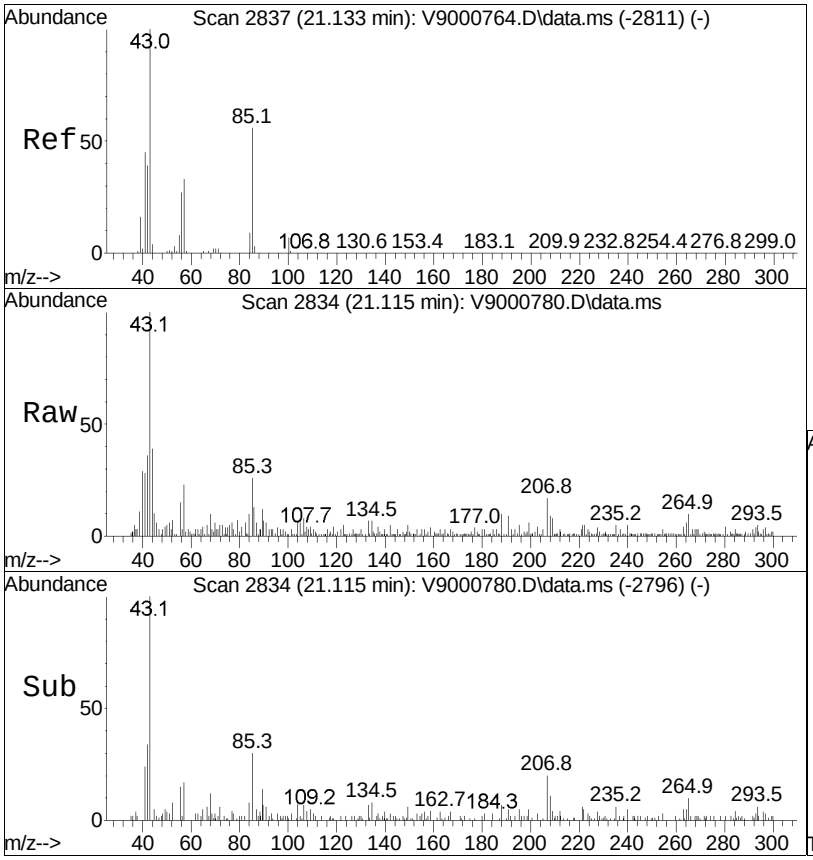


#32
Cyclohexane
Concen: 0.19 ug/L m
RT: 20.65 min Scan# 2757
Delta R.T. -0.042 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 56 Resp: 372

Ion	Ratio	Lower	Upper
56	100		
84	61.3	69.8	109.8#
69	21.6	11.7	51.7

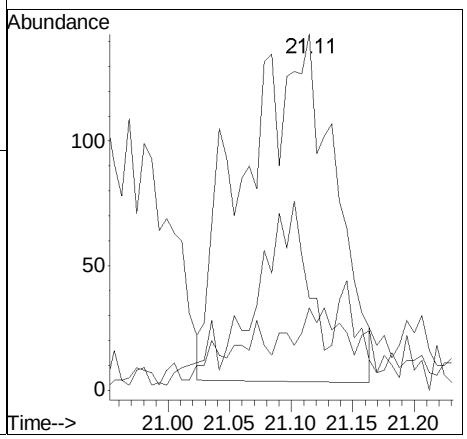


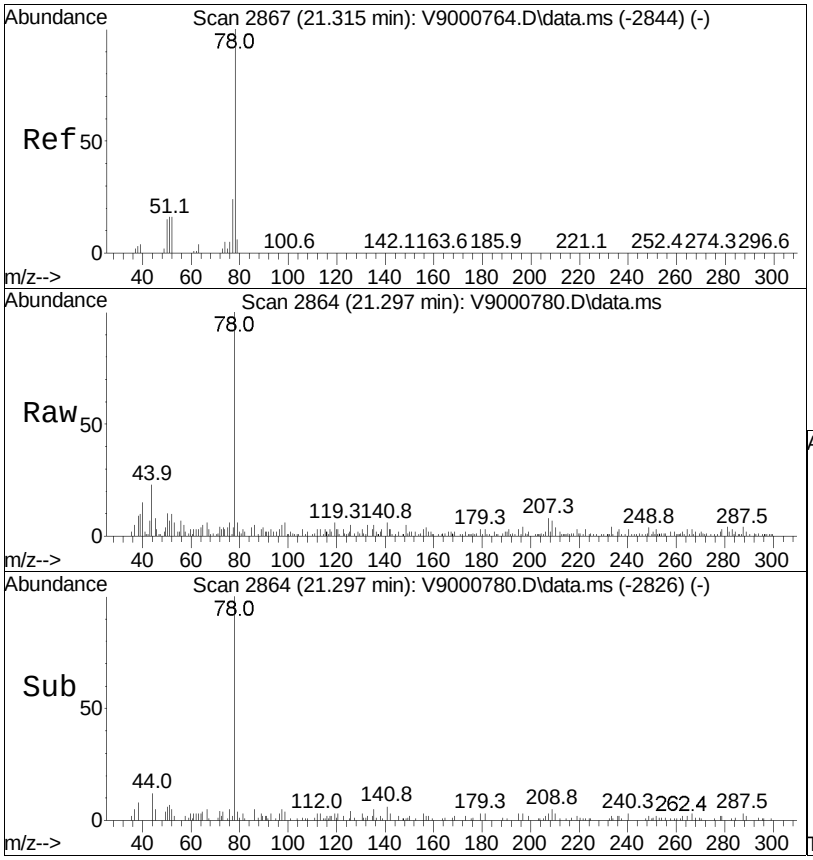


#33
2-Methylhexane
Concen: 0.31 ug/L m
RT: 21.11 min Scan# 2834
Delta R.T. -0.018 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 718

Ion	Ratio	Lower	Upper
43	100		
85	25.9	36.0	76.0#
57	23.1	13.4	53.4

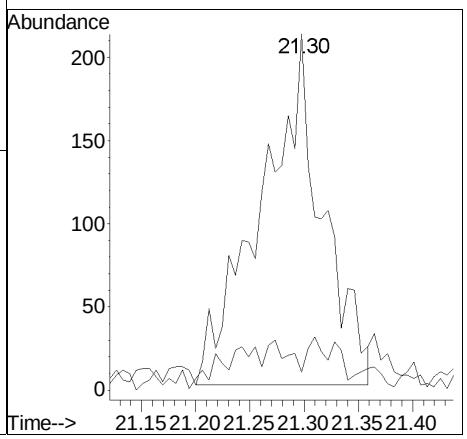


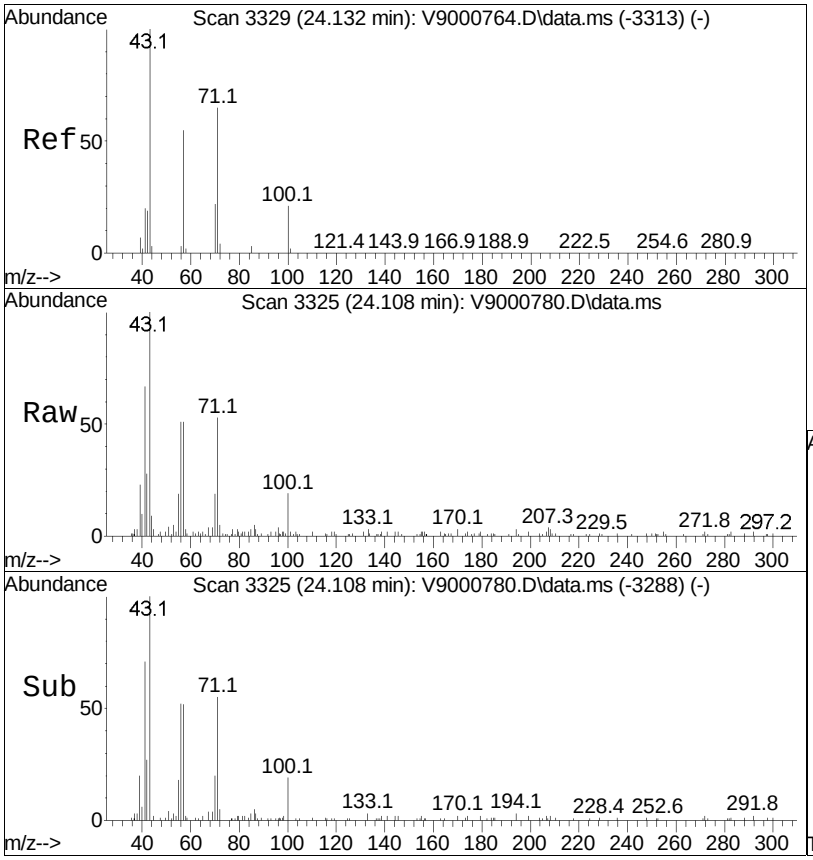


#34
Benzene
Concen: 0.17 ug/L
RT: 21.30 min Scan# 2864
Delta R.T. -0.018 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 78 Resp: 828

Ion	Ratio	Lower	Upper
78	100		
77	5.1	3.9	43.9

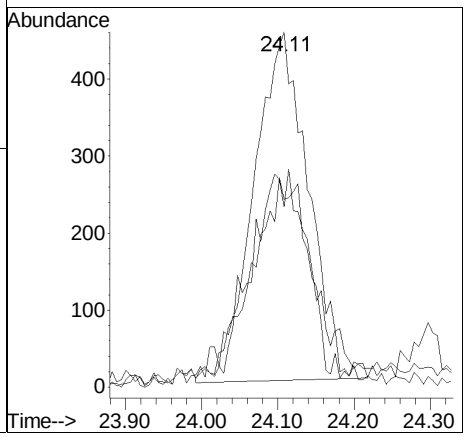


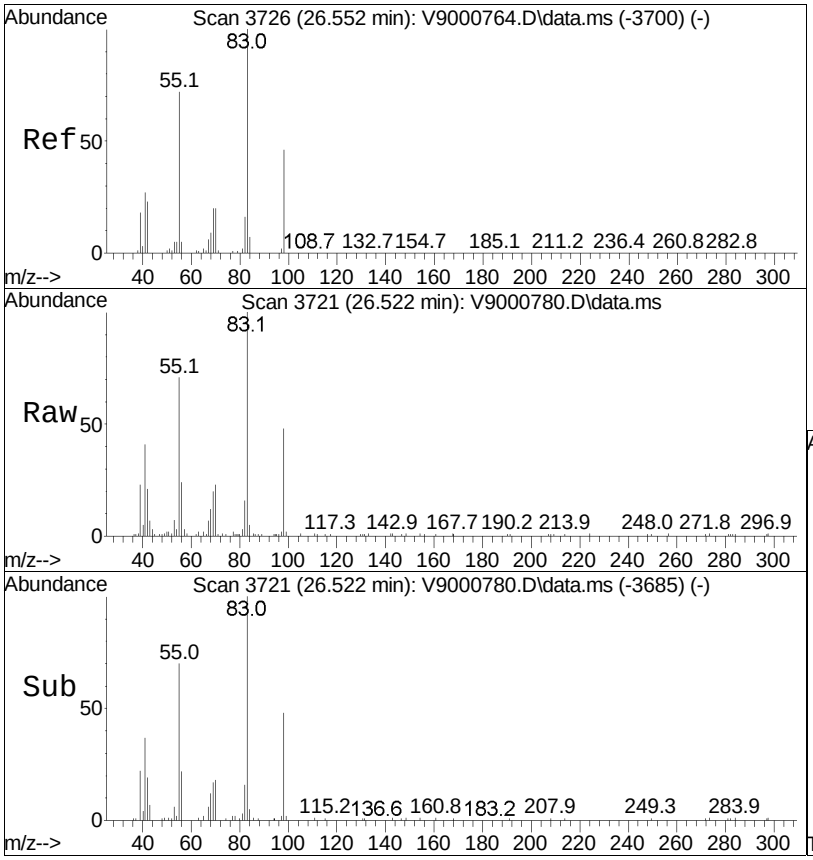


#46
Heptane
Concen: 1.32 ug/L
RT: 24.11 min Scan# 3325
Delta R.T. -0.024 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 2287

Ion	Ratio	Lower	Upper
43	100		
57	50.8	35.5	75.5
71	52.9	42.8	82.8

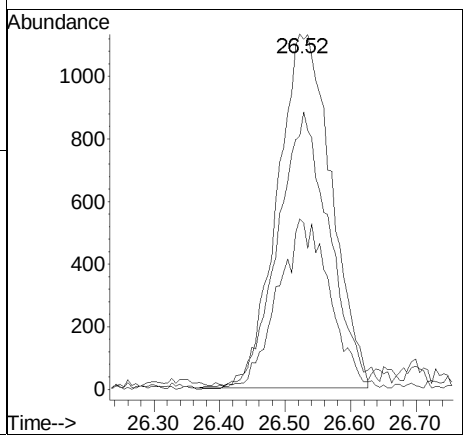


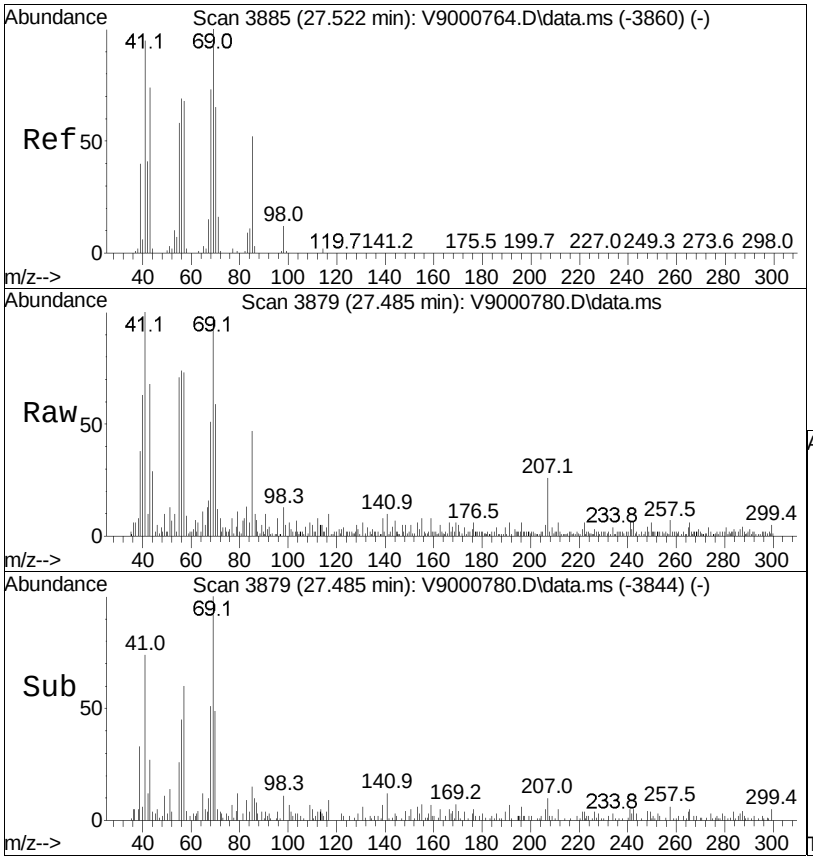


#51
Methylcyclohexane
Concen: 3.01 ug/L
RT: 26.52 min Scan# 3721
Delta R.T. -0.030 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 83 Resp: 6486

Ion	Ratio	Lower	Upper
83	100		
55	71.3	56.2	96.2
98	47.9	26.0	66.0

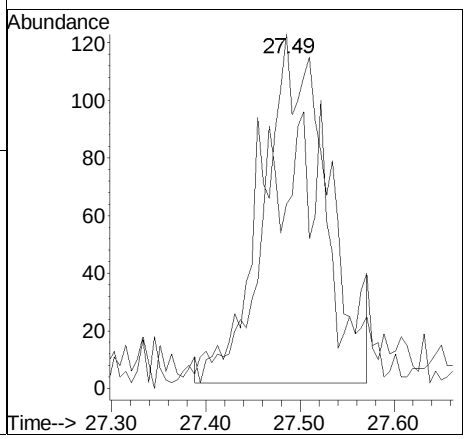


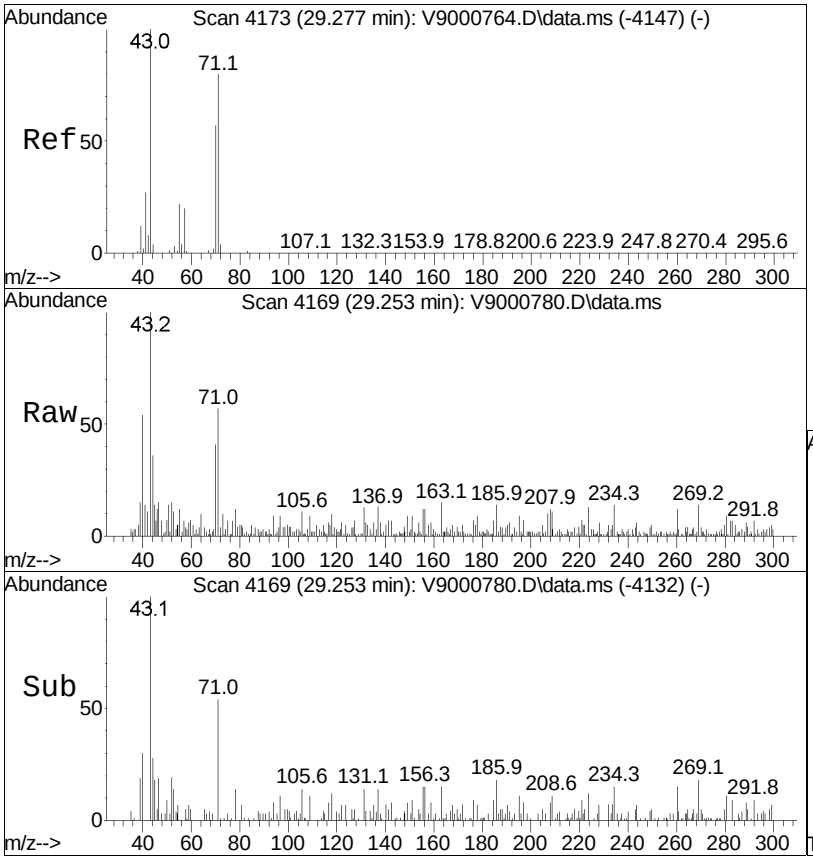


#54
Ethylcyclopentane
Concen: 0.33 ug/L m
RT: 27.49 min Scan# 3879
Delta R.T. -0.036 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 69 Resp: 592

Ion	Ratio	Lower	Upper
69	100		
68	52.0	53.4	93.4#

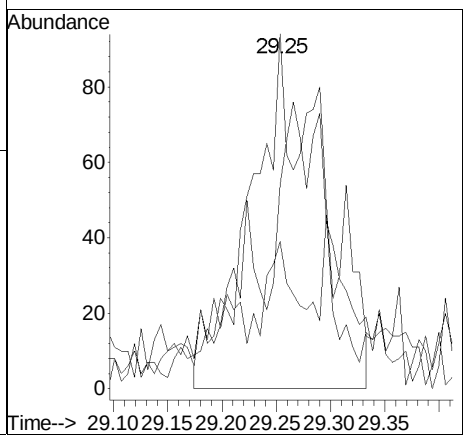


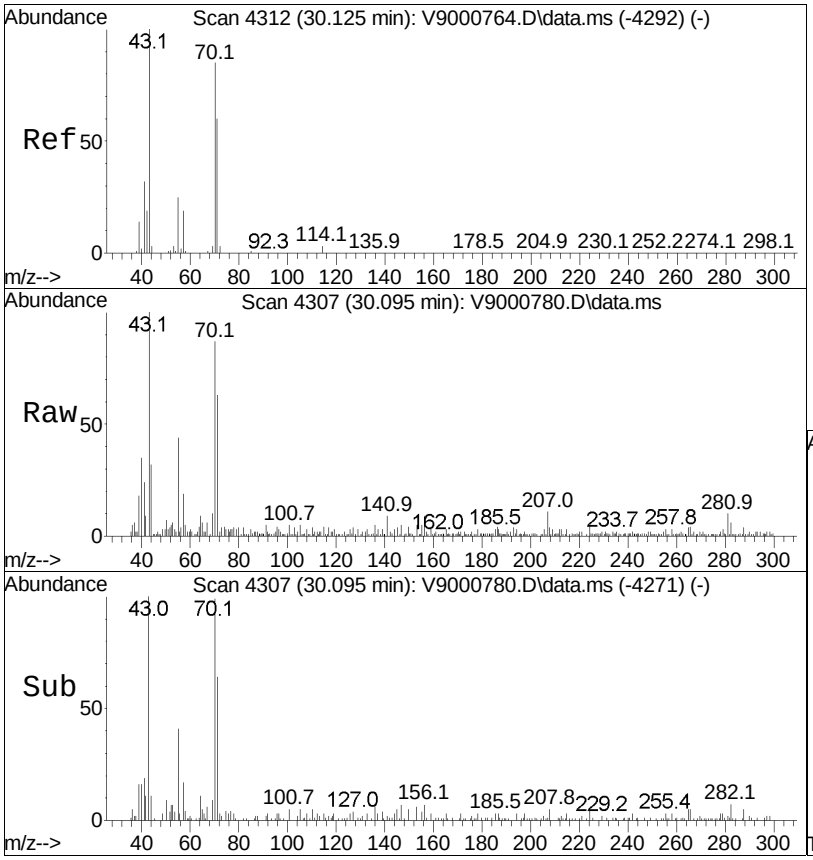


#57
2,3,4-Trimethylpentane
Concen: 0.15 ug/L m
RT: 29.25 min Scan# 4169
Delta R.T. -0.024 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 430

Ion	Ratio	Lower	Upper
43	100		
71	57.4	59.7	99.7#
70	41.5	36.5	76.5

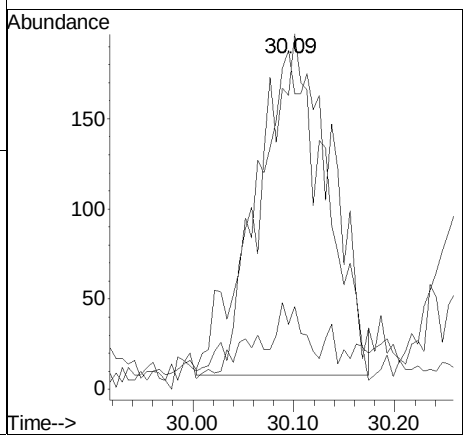


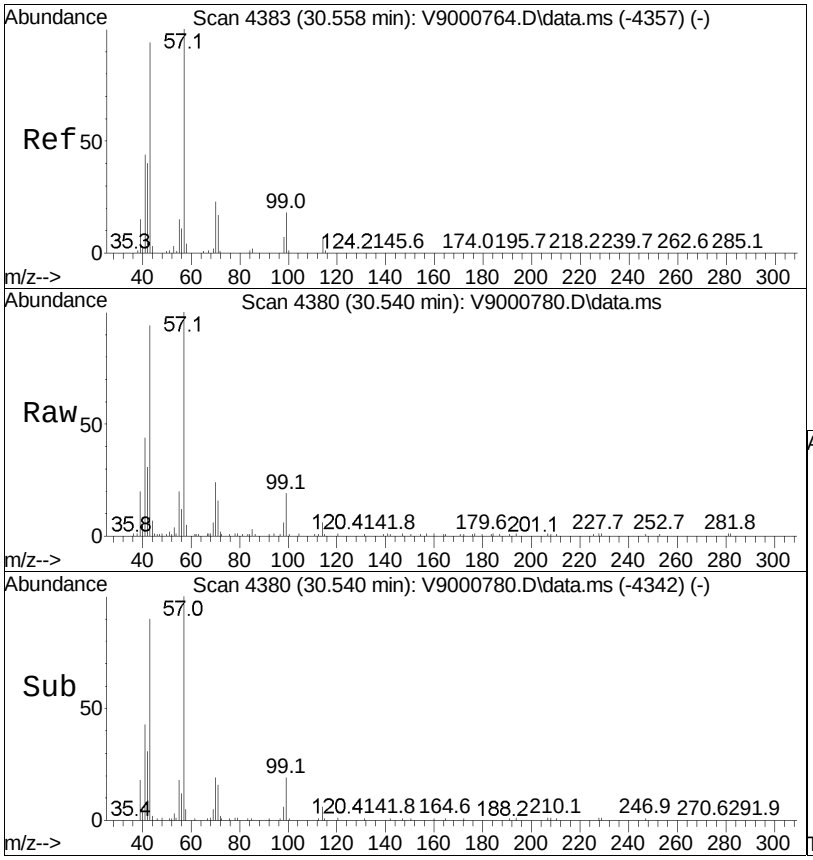


#59
2,3-Dimethylhexane
Concen: 0.39 ug/L m
RT: 30.09 min Scan# 4307
Delta R.T. -0.030 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 960

Ion	Ratio	Lower	Upper
43	100		
70	86.7	64.1	104.1
57	19.1	0.0	39.9

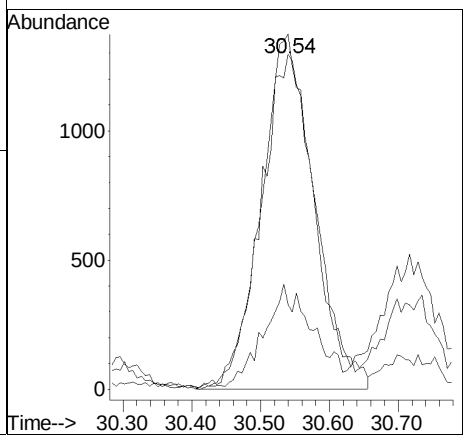


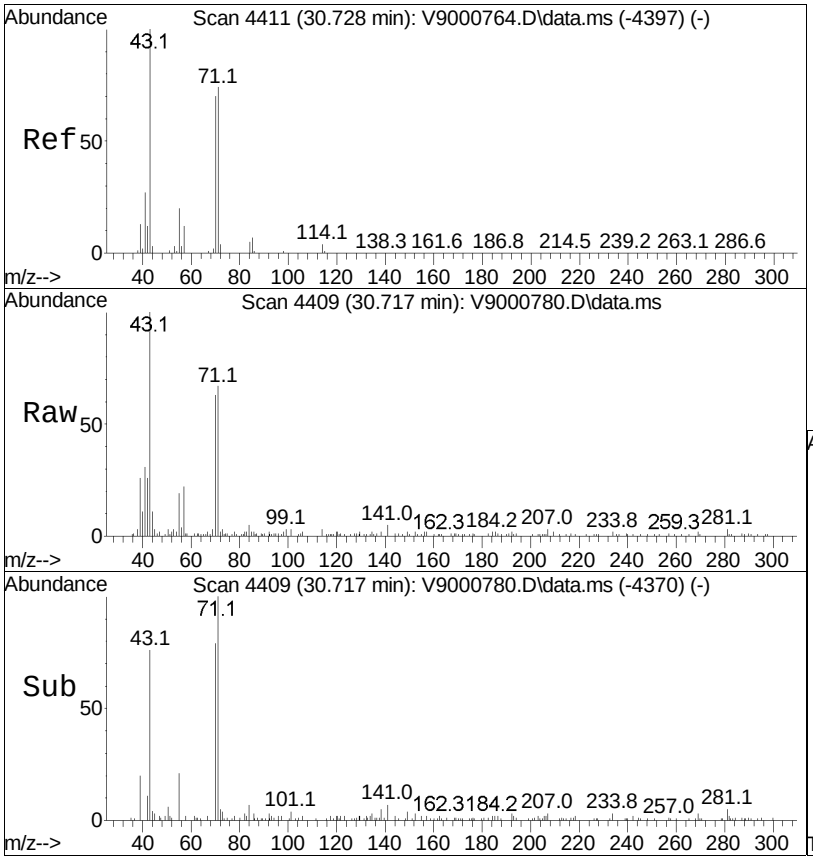


#60
2-Methylheptane
Concen: 3.36 ug/L
RT: 30.54 min Scan# 4380
Delta R.T. -0.018 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 7332

Ion	Ratio	Lower	Upper
57	100		
43	94.3	74.2	114.2
70	23.9	3.6	43.6

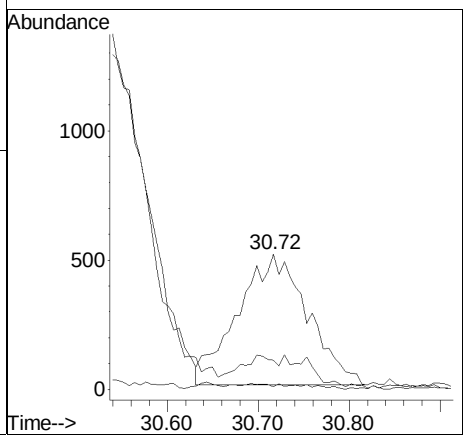


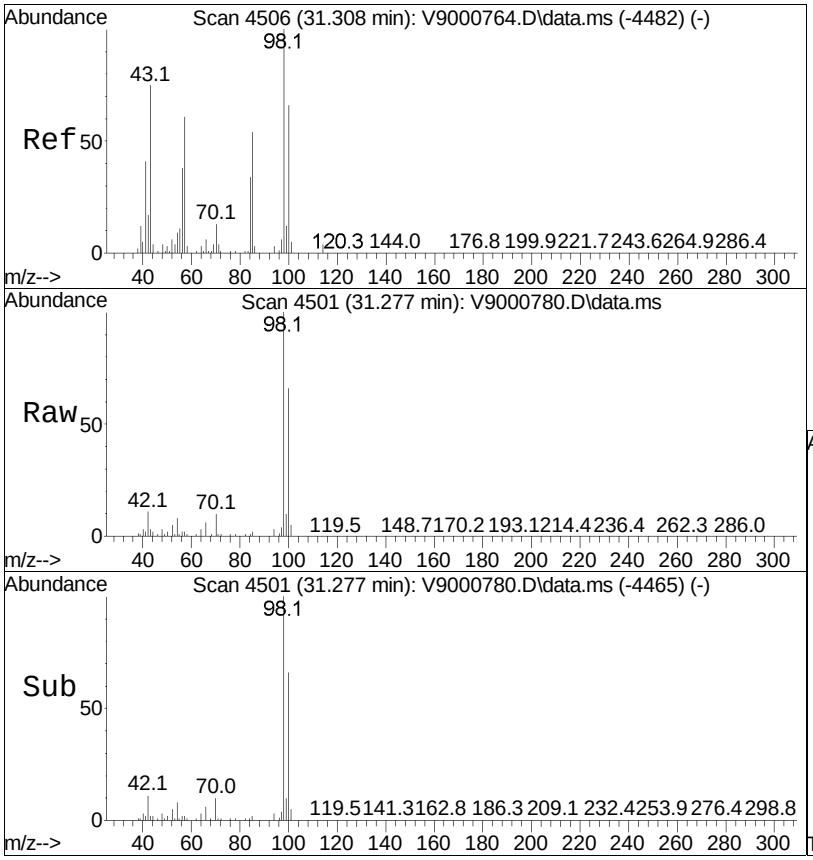


#61
4-Methylheptane
Concen: 0.97 ug/L
RT: 30.72 min Scan# 4409
Delta R.T. -0.012 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 2692

Ion	Ratio	Lower	Upper
43	100		
57	22.8	0.0	39.3
85	2.1	0.0	26.9

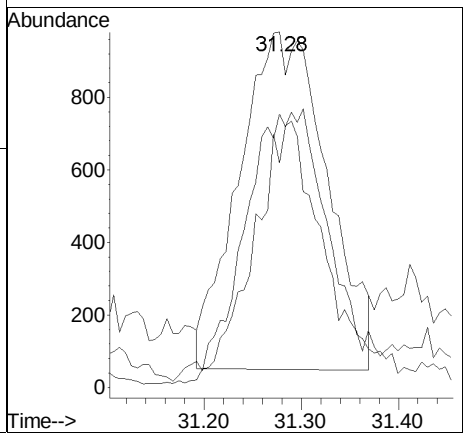


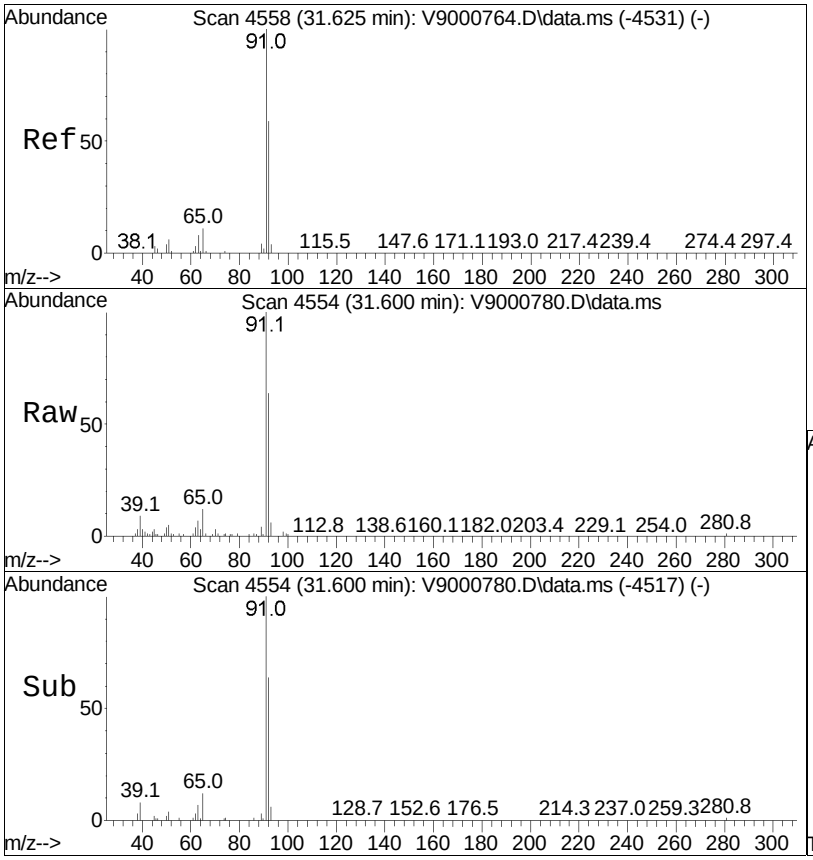


#63
3-Methylheptane
Concen: 2.79 ug/L m
RT: 31.28 min Scan# 4501
Delta R.T. -0.030 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 5873

Ion	Ratio	Lower	Upper
43	100		
57	76.9	61.1	101.1
85	63.2	51.1	91.1

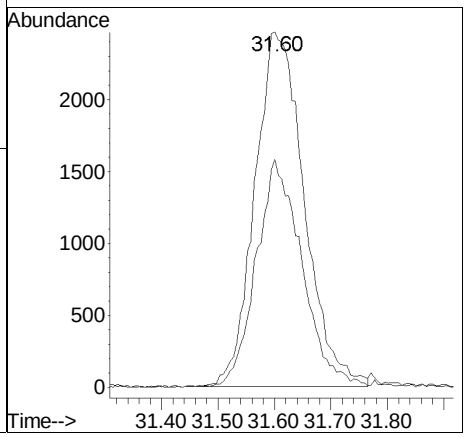


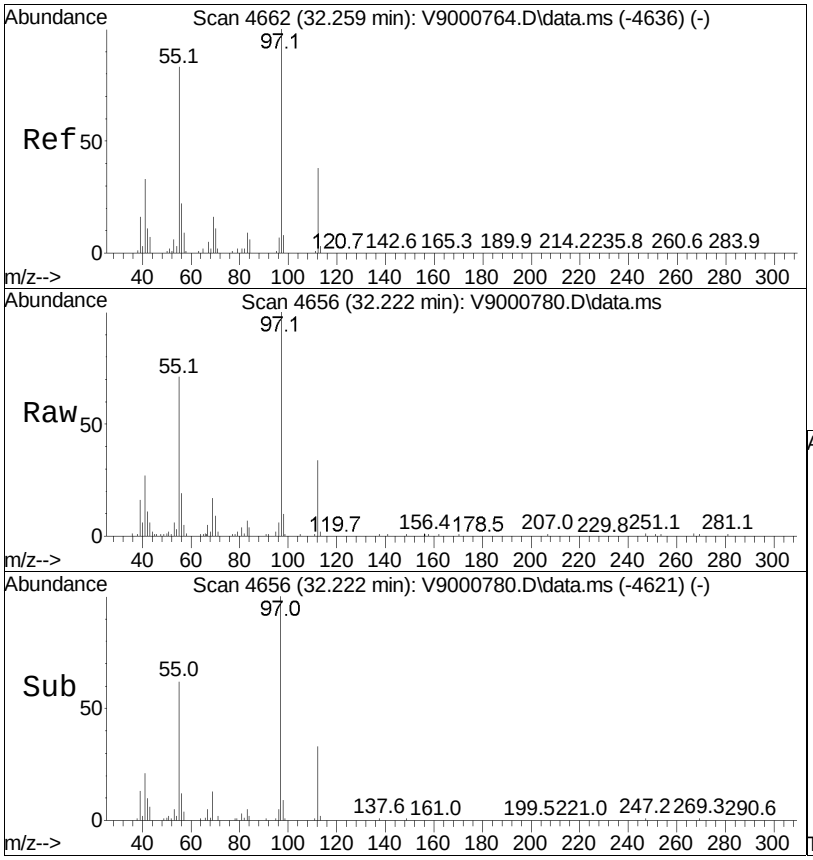


#66
Toluene
Concen: 2.85 ug/L
RT: 31.60 min Scan# 4554
Delta R.T. -0.024 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 14995

Ion	Ratio	Lower	Upper
91	100		
92	64.2	38.6	78.6

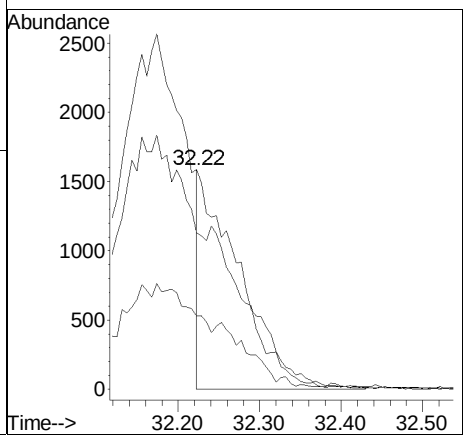


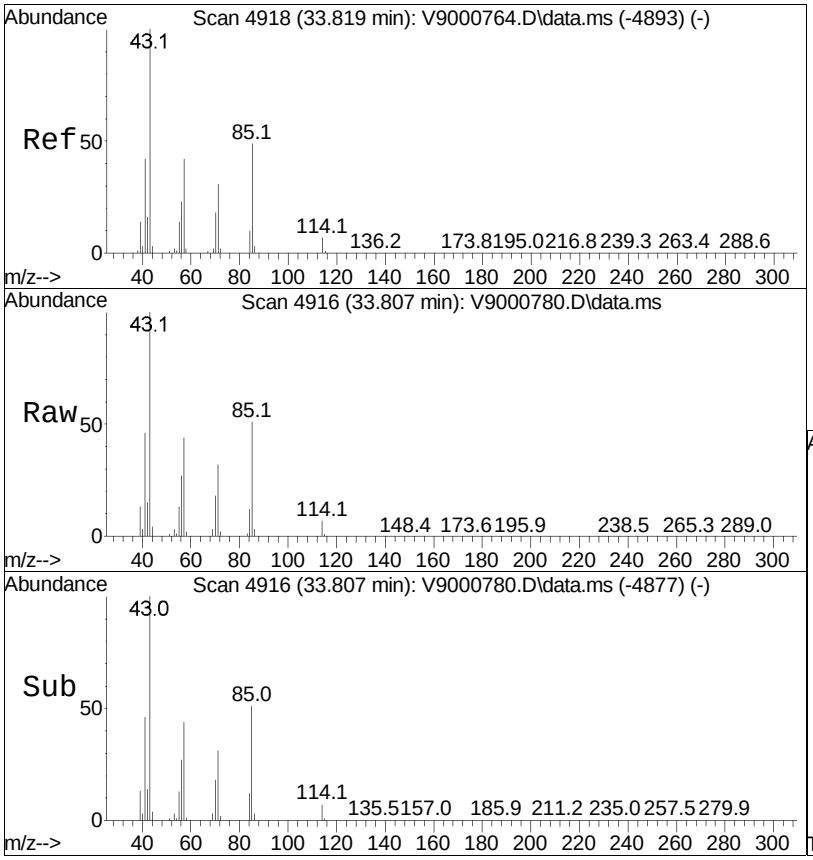


#68
trans-1,4-Dimethylcyclohexane
Concen: 2.21 ug/L m
RT: 32.22 min Scan# 4656
Delta R.T. -0.036 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 97 Resp: 5485

Ion	Ratio	Lower	Upper
97	100		
55	71.3	63.1	103.1
112	33.5	17.7	57.7

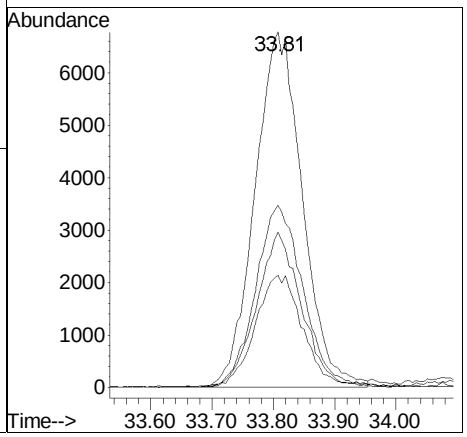


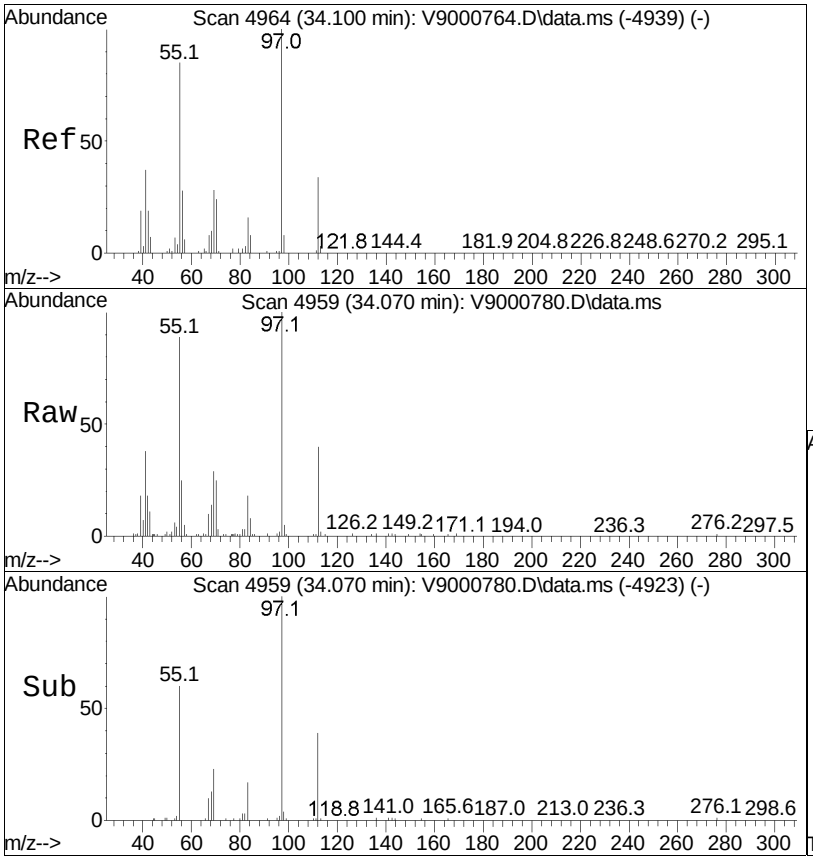


#71
Octane
Concen: 15.47 ug/L
RT: 33.81 min Scan# 4916
Delta R.T. -0.012 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 36389

Ion	Ratio	Lower	Upper
43	100		
57	43.7	21.9	61.9
85	51.2	29.0	69.0
71	31.6	10.6	50.6

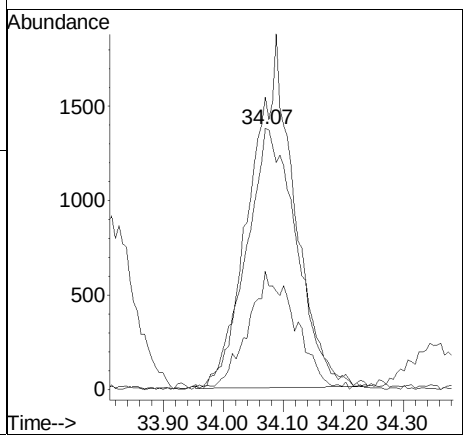


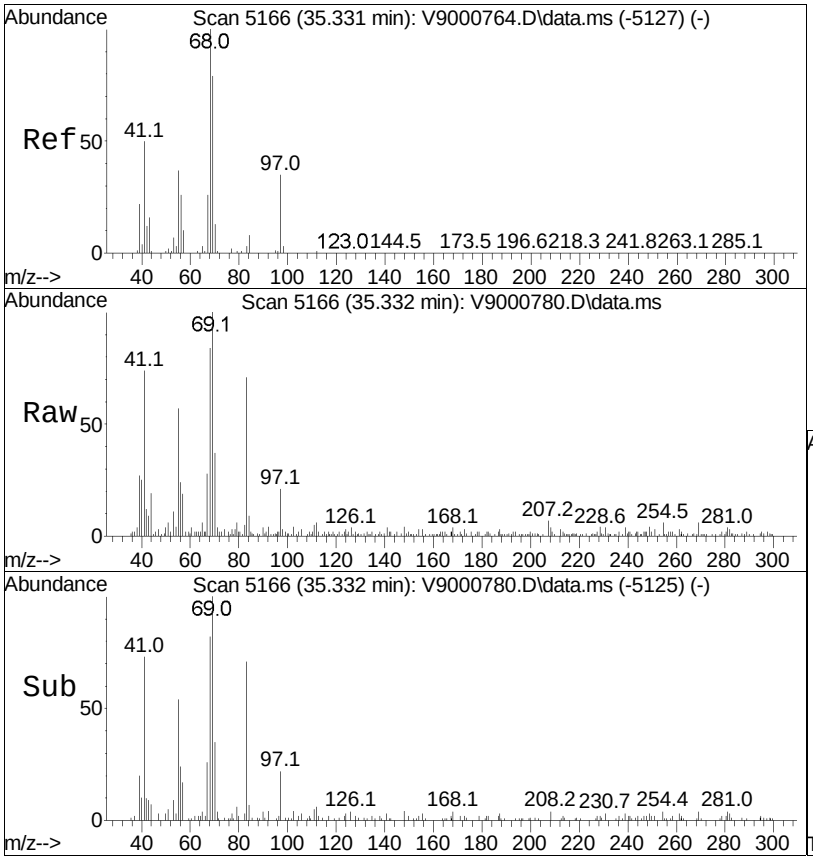


#72
trans-1,2-Dimethylcyclohexane
Concen: 4.31 ug/L
RT: 34.07 min Scan# 4959
Delta R.T. -0.030 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 55 Resp: 7973

Ion	Ratio	Lower	Upper
55	100		
97	111.9	97.0	137.0
112	45.2	20.3	60.3

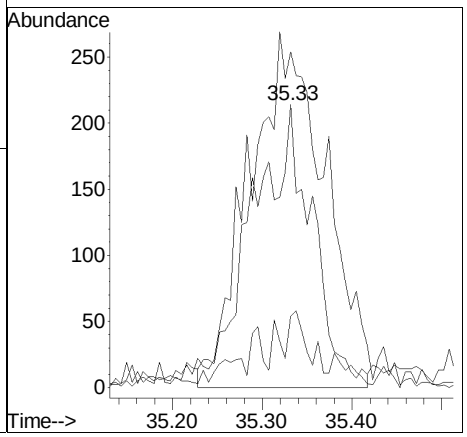


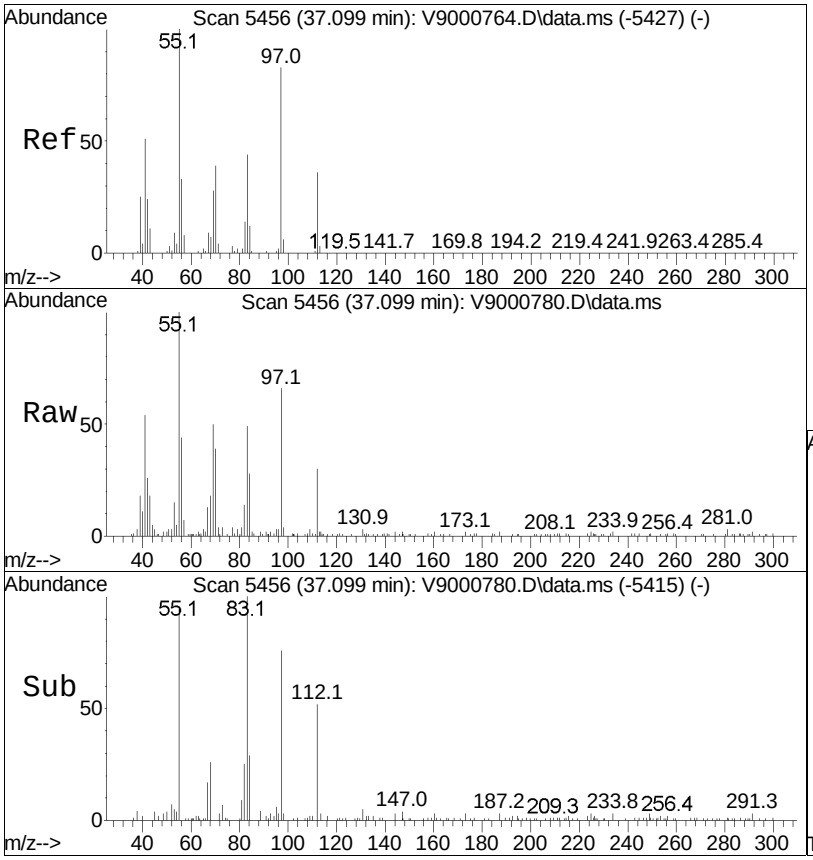


#76
Isopropylcyclopentane
Concen: 0.45 ug/L m
RT: 35.33 min Scan# 5166
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 68 Resp: 990

Ion	Ratio	Lower	Upper
68	100		
69	118.7	59.2	99.2#
97	25.2	15.3	55.3

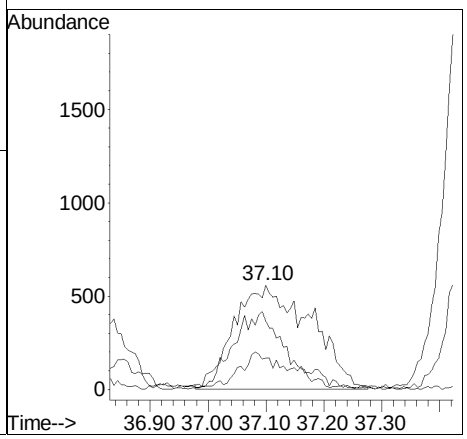


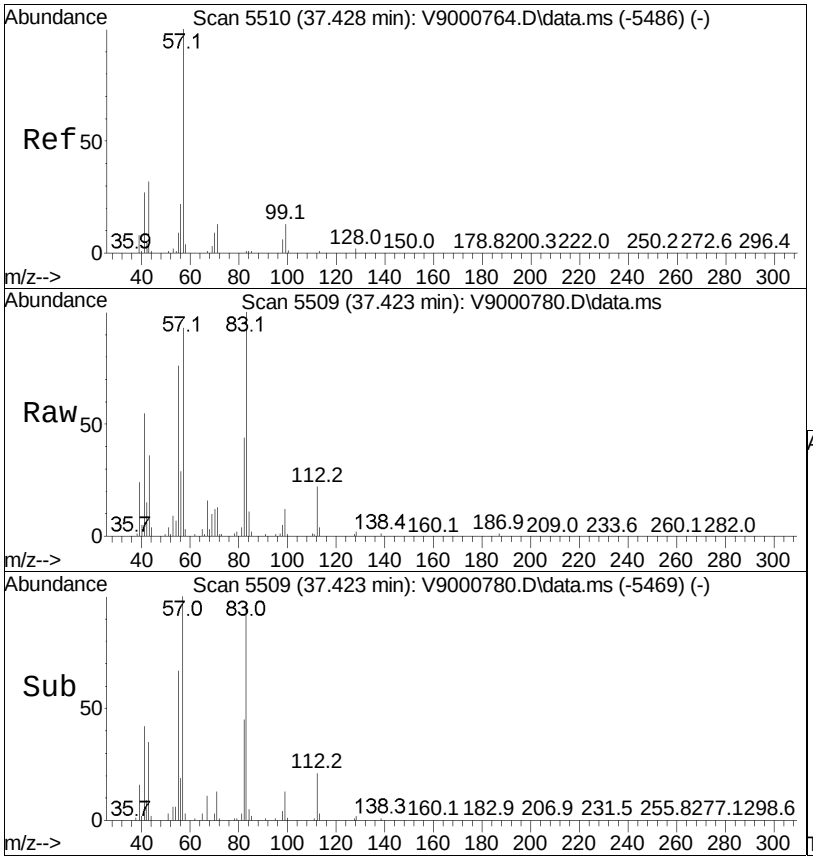


#77
cis-1,2-Dimethylcyclohexane
Concen: 2.74 ug/L m
RT: 37.10 min Scan# 5456
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 55 Resp: 5108

Ion	Ratio	Lower	Upper
55	100		
97	65.6	63.2	103.2
112	30.1	16.1	56.1

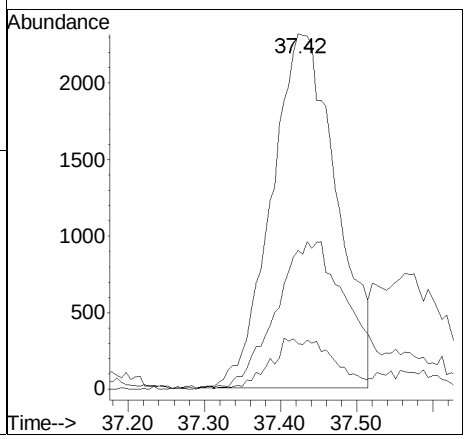


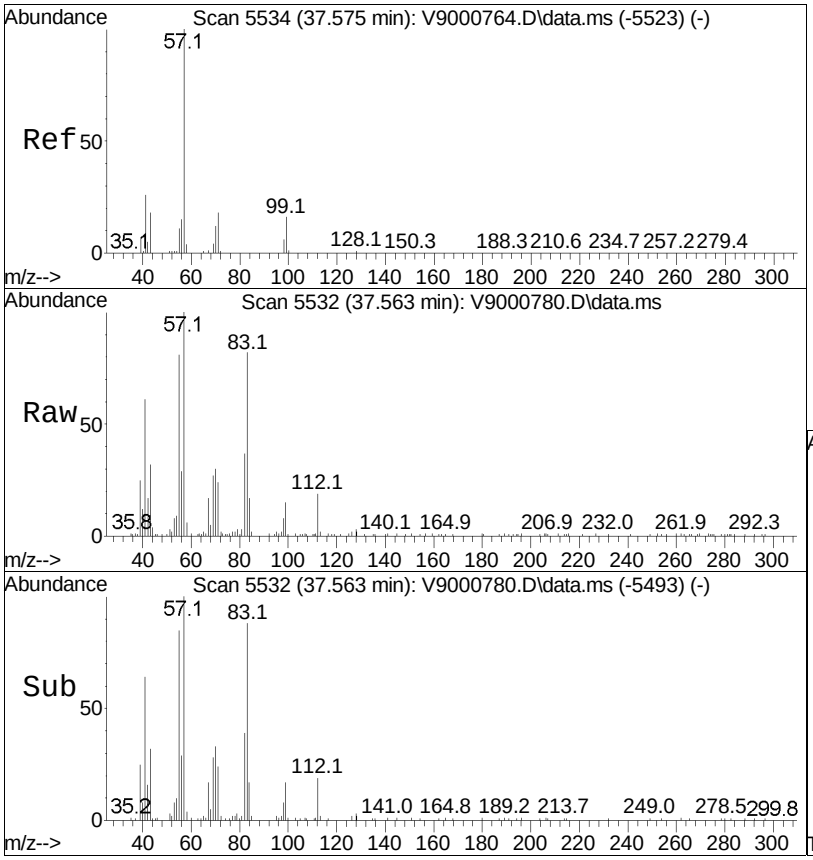


#78
2,5-Dimethylheptane
Concen: 4.33 ug/L
RT: 37.42 min Scan# 5509
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 13742

Ion	Ratio	Lower	Upper
57	100		
43	39.1	12.0	52.0
99	12.9	0.0	33.5

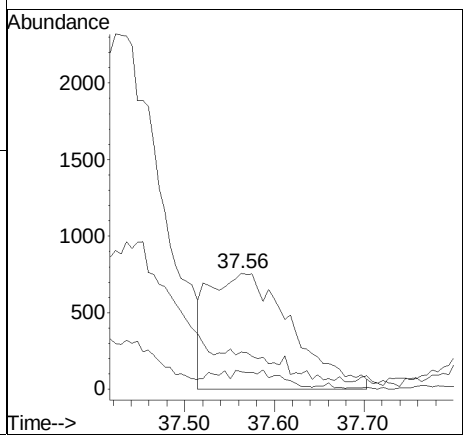


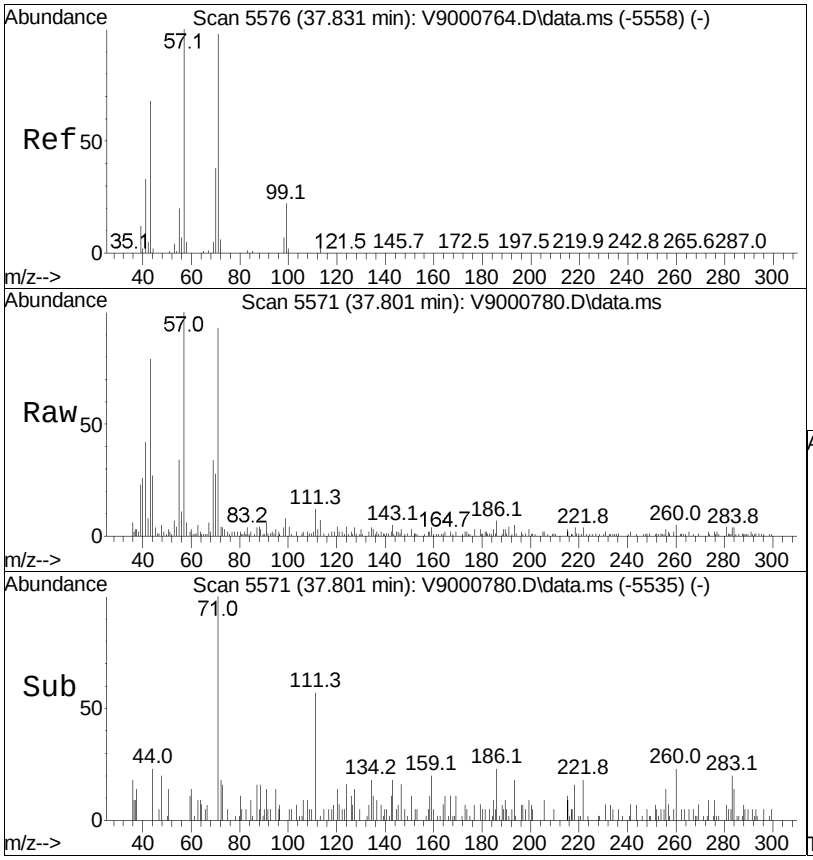


#79
3,5-Dimethylheptane
Concen: 1.20 ug/L m
RT: 37.56 min Scan# 5532
Delta R.T. -0.012 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 4857

Ion	Ratio	Lower	Upper
57	100		
43	32.1	3.2	43.2
99	15.3	0.0	35.0

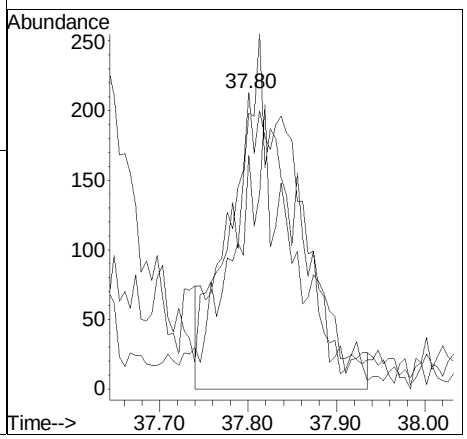


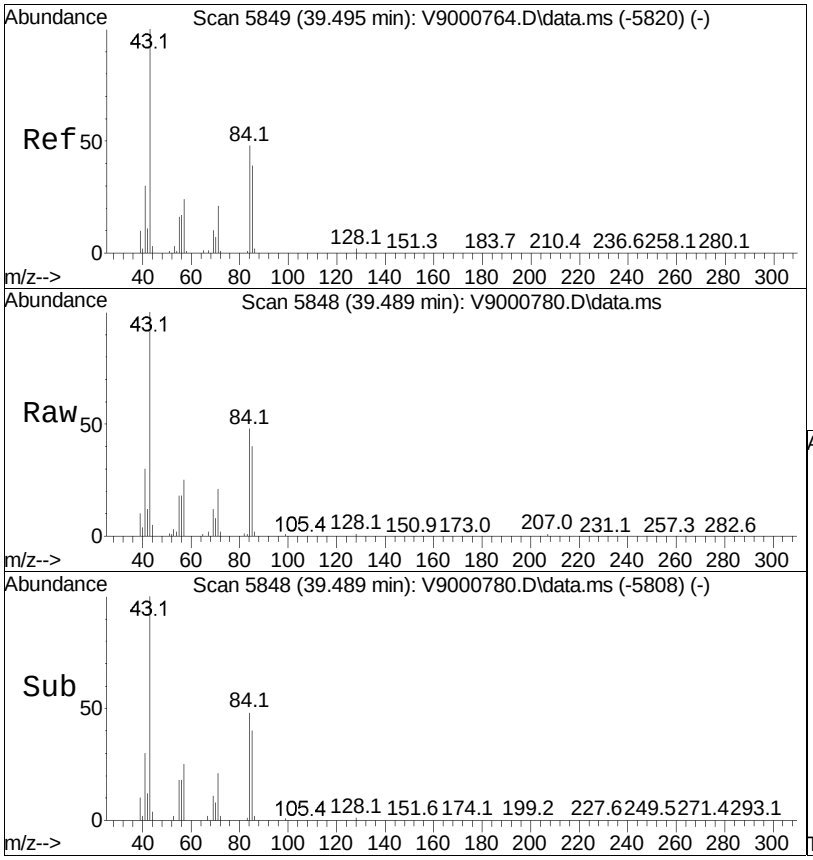


#80
3,3-Dimethylheptane
Concen: 0.49 ug/L m
RT: 37.80 min Scan# 5571
Delta R.T. -0.030 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 1244

Ion	Ratio	Lower	Upper
57	100		
43	78.9	47.2	87.2
71	93.0	76.4	116.4

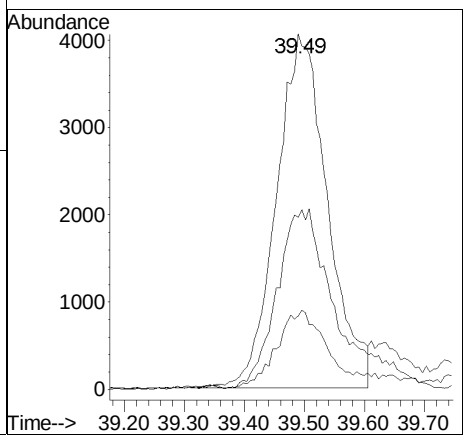


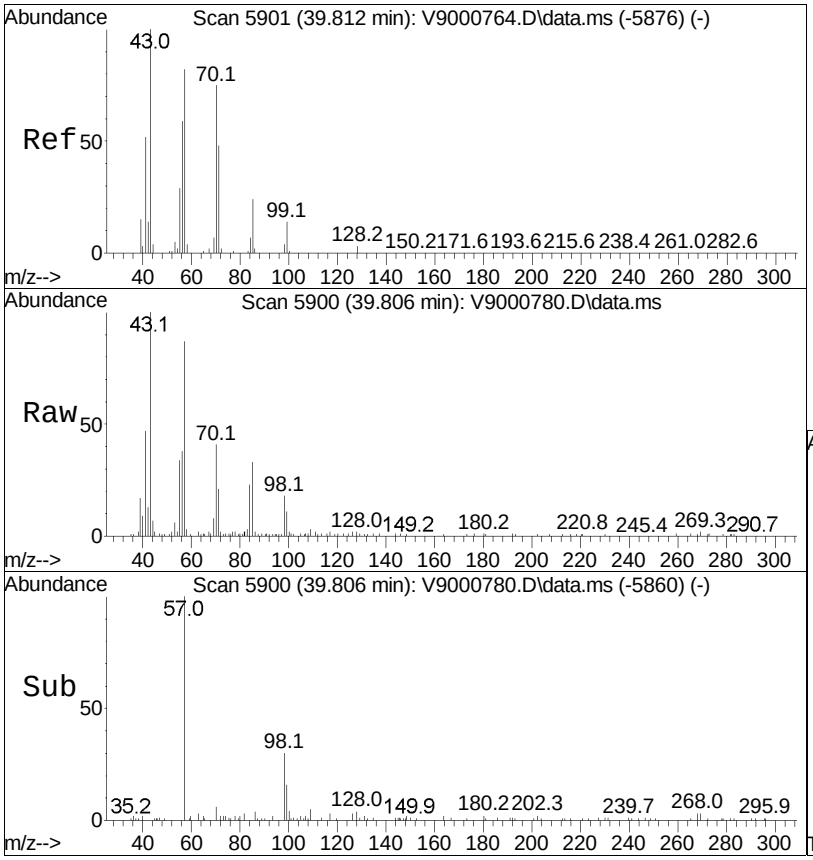


#82
2,3-Dimethylheptane
Concen: 8.18 ug/L
RT: 39.49 min Scan# 5848
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 23984

Ion	Ratio	Lower	Upper
43	100		
84	48.5	28.0	68.0
71	20.7	0.7	40.7

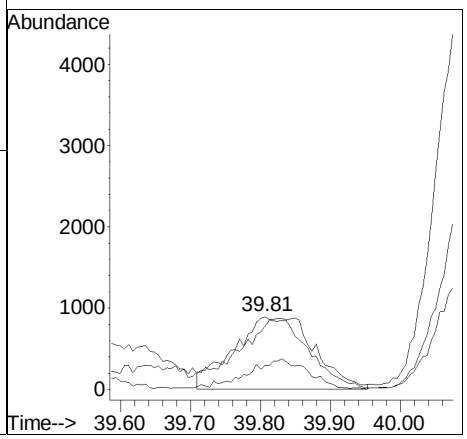


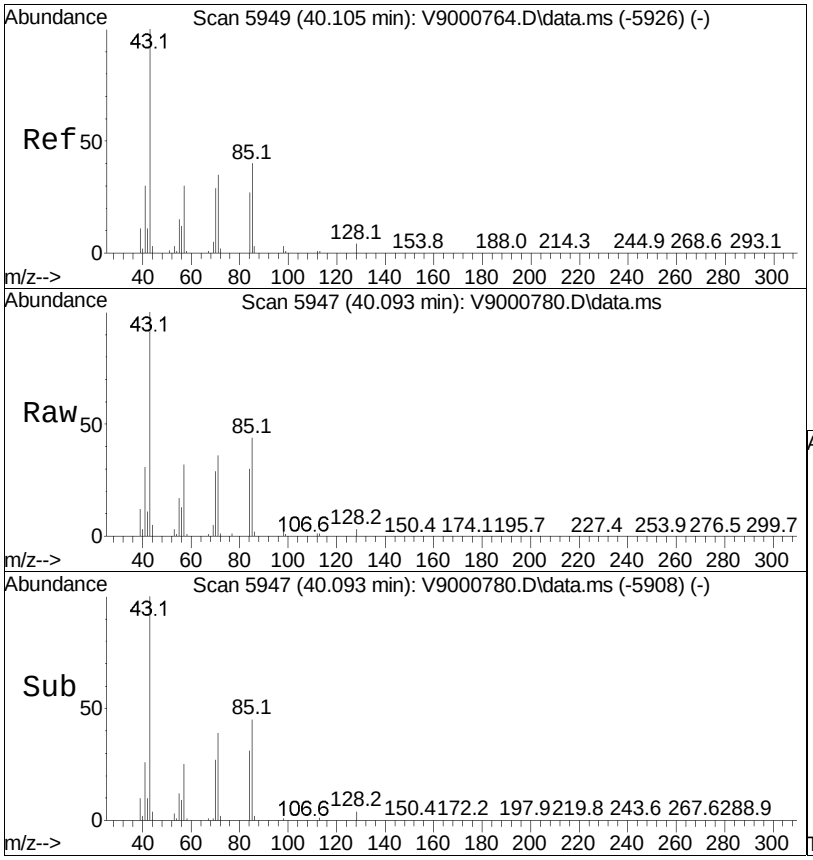


#83
3,4-Dimethylheptane
Concen: 3.74 ug/L m
RT: 39.81 min Scan# 5900
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 7069

Ion	Ratio	Lower	Upper
43	100		
57	87.2	62.0	102.0
85	33.0	3.7	43.7

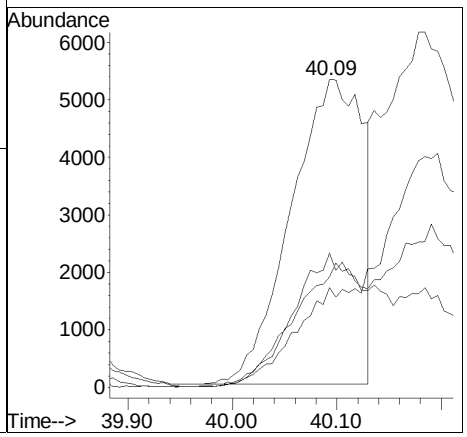


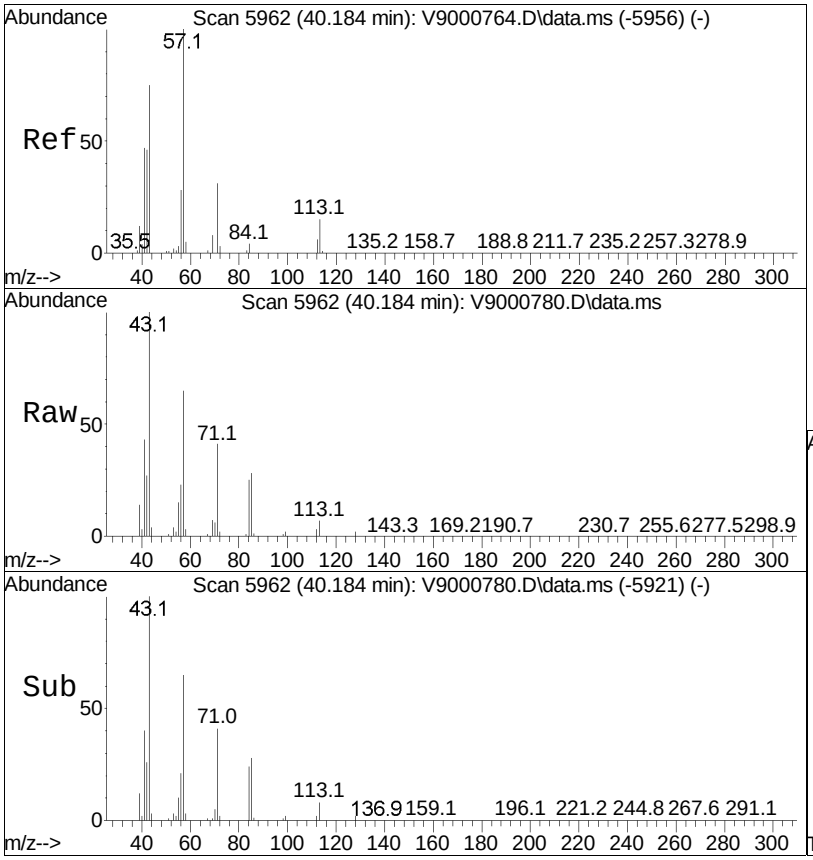


#84
4-Methyloctane
Concen: 9.30 ug/L
RT: 40.09 min Scan# 5947
Delta R.T. -0.012 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 25268

Ion	Ratio	Lower	Upper
43	100		
57	32.4	10.6	50.6
71	36.0	15.2	55.2
85	43.6	19.3	59.3

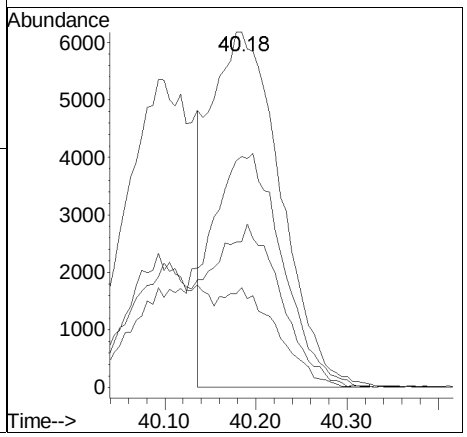


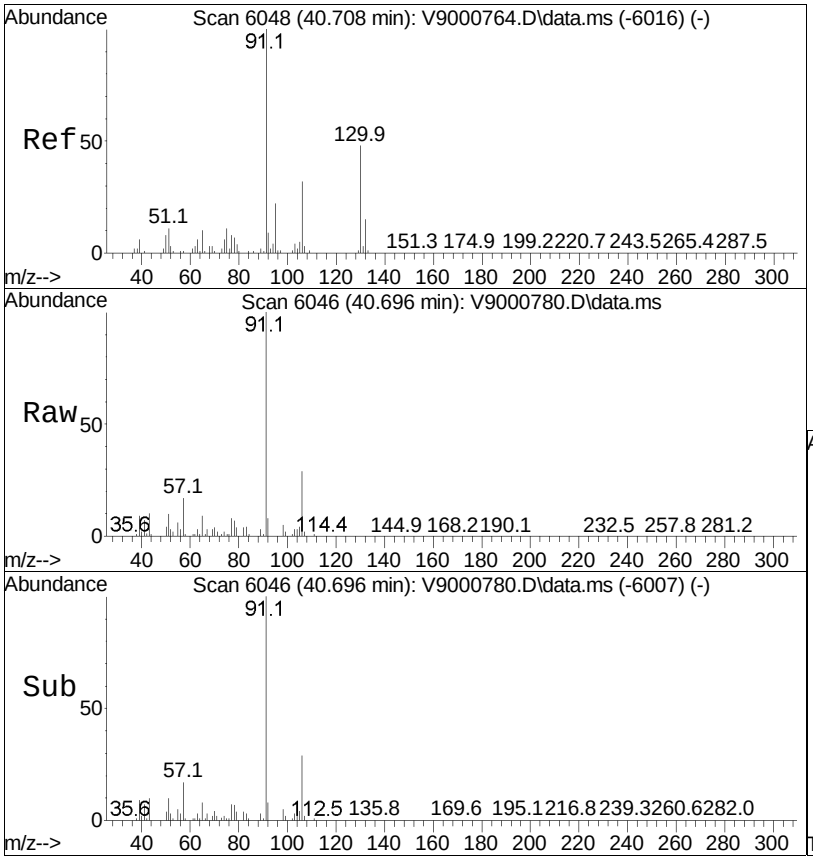


#85
2-Methyloctane
Concen: 12.74 ug/L m
RT: 40.18 min Scan# 5962
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 33348

Ion	Ratio	Lower	Upper
43	100		
57	65.0	40.3	80.3
71	41.1	21.6	61.6
85	28.1	5.7	45.7

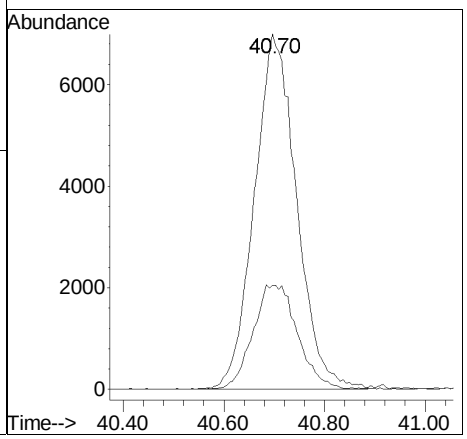


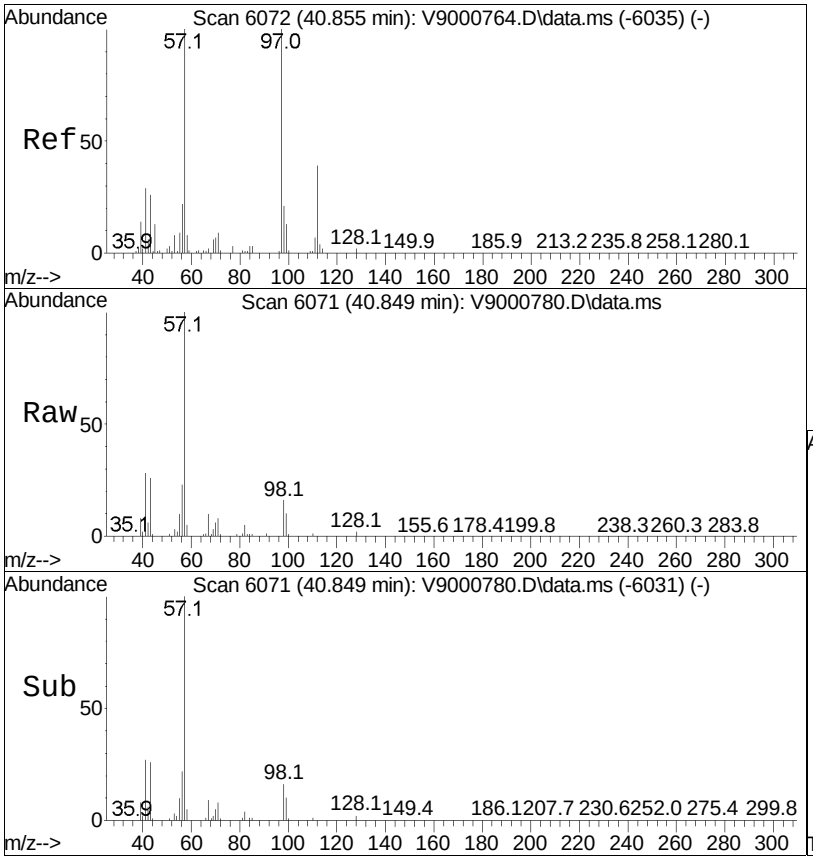


#86
Ethylbenzene
Concen: 6.82 ug/L
RT: 40.70 min Scan# 6046
Delta R.T. -0.012 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 40717

Ion	Ratio	Lower	Upper
91	100		
106	29.3	11.7	51.7

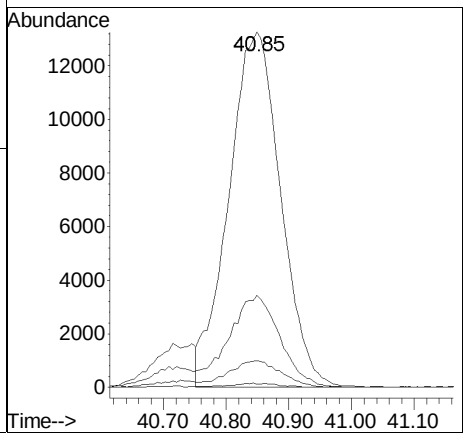


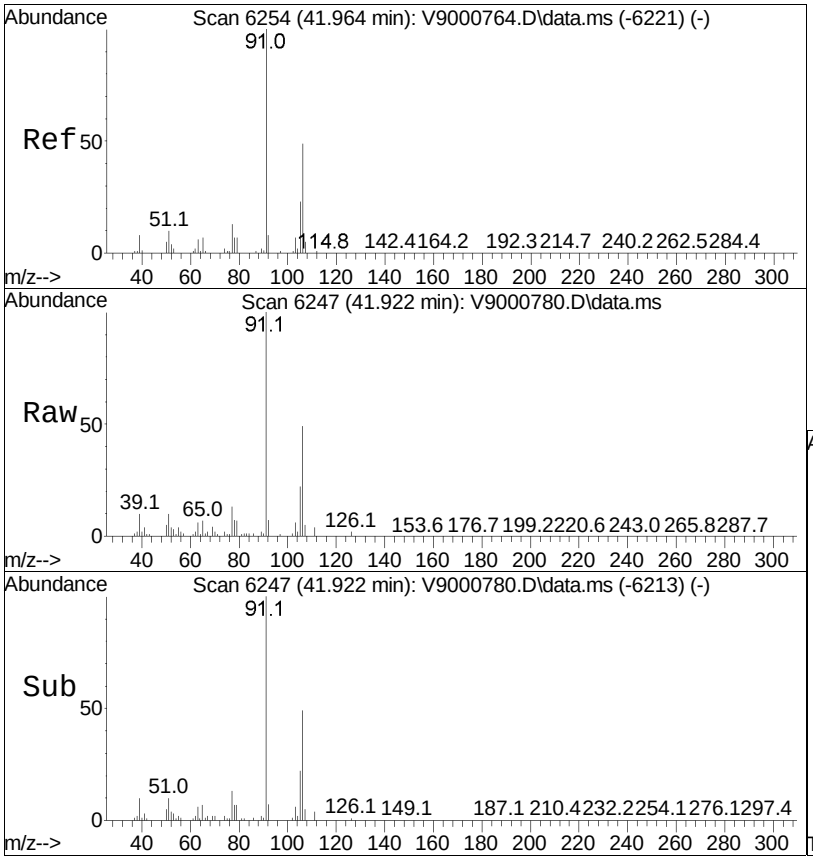


#89
3-Methyloctane
Concen: 17.73 ug/L
RT: 40.85 min Scan# 6071
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 76303

Ion	Ratio	Lower	Upper
57	100		
43	25.9	5.7	45.7
71	7.5	0.0	28.9
85	0.9	0.0	23.1

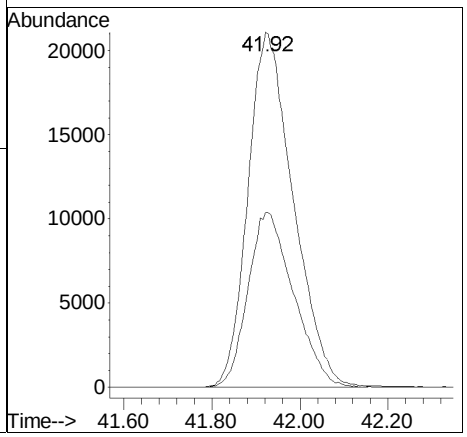


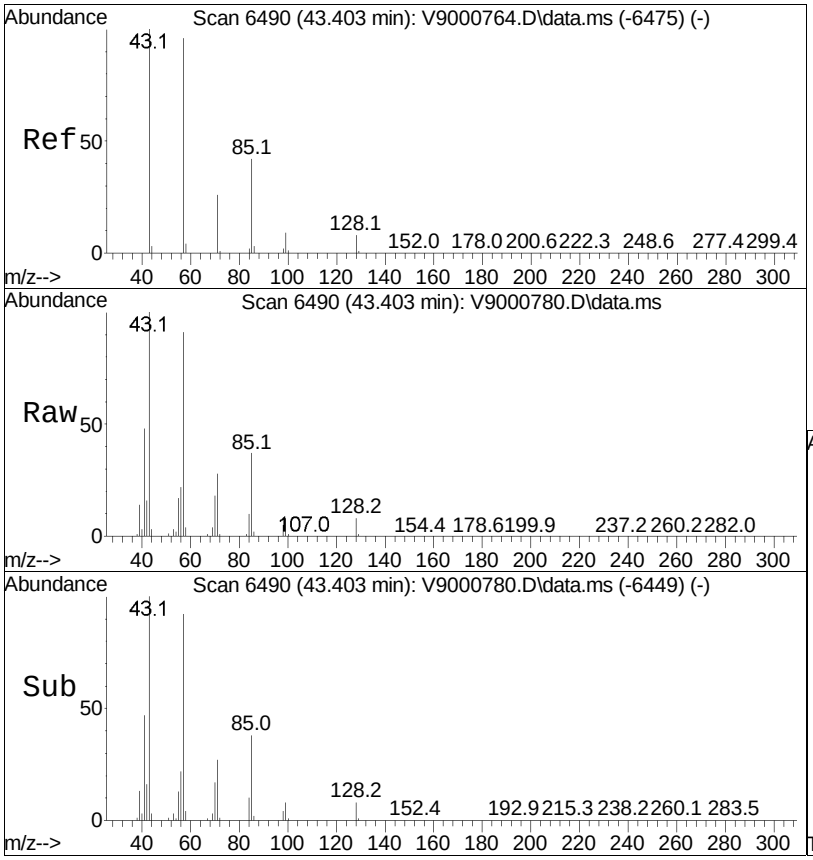


#91
p/m-Xylene
Concen: 33.00 ug/L
RT: 41.92 min Scan# 6247
Delta R.T. -0.042 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 150597

Ion	Ratio	Lower	Upper
91	100		
106	49.3	29.3	69.3

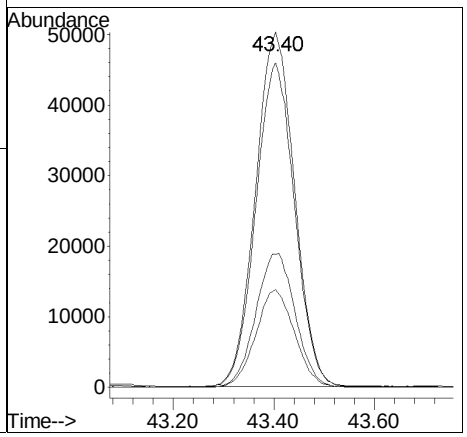


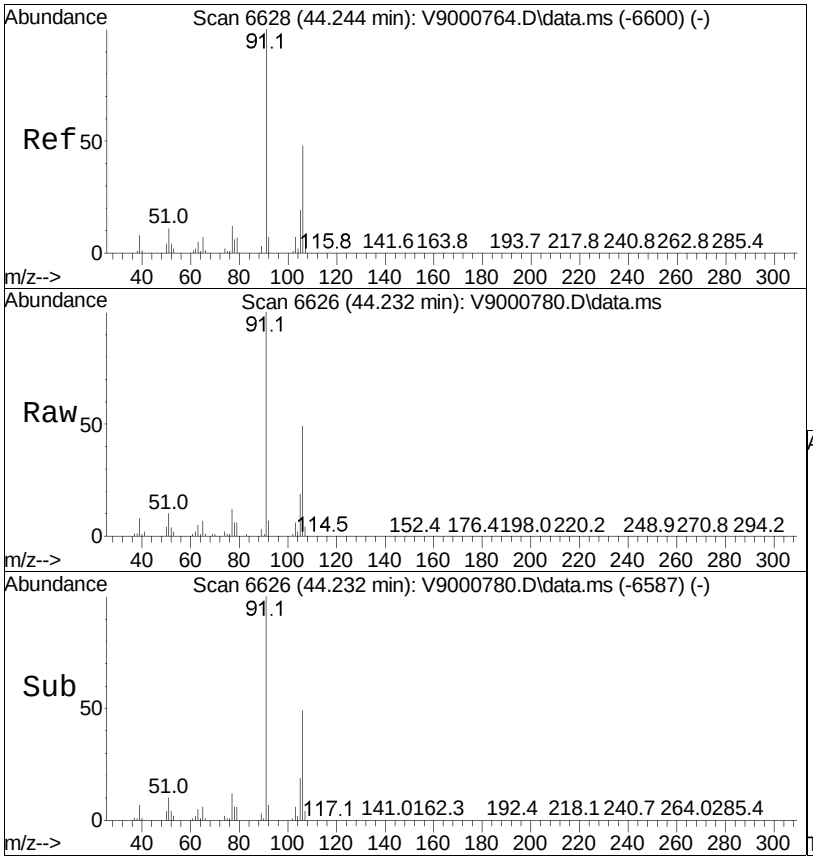


#95
Nonane
Concen: 108.44 ug/L
RT: 43.40 min Scan# 6490
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 270362

Ion	Ratio	Lower	Upper
43	100		
57	91.4	68.7	108.7
85	37.4	15.4	55.4
71	27.5	6.9	46.9

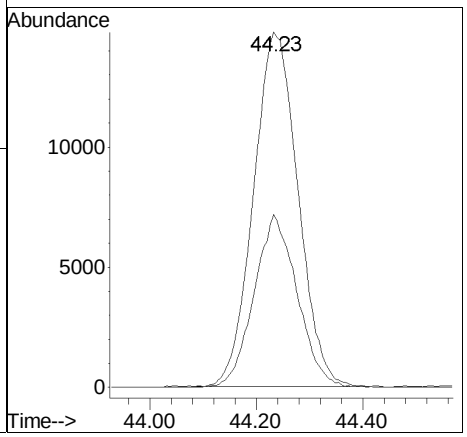


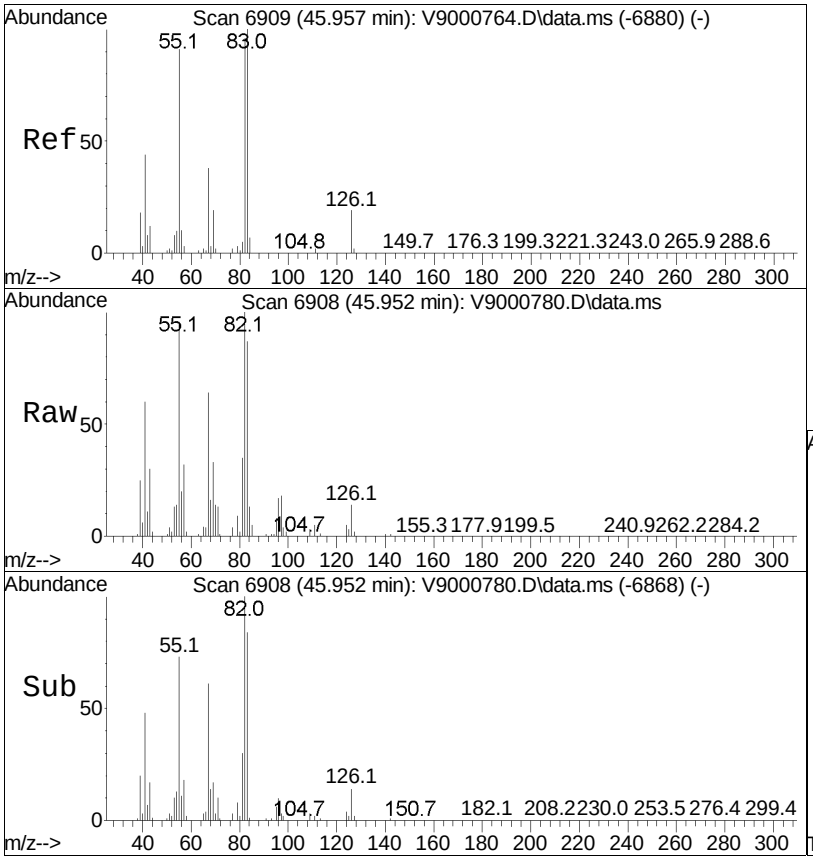


#98
o-Xylene
Concen: 18.23 ug/L
RT: 44.23 min Scan# 6626
Delta R.T. -0.012 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 85695

Ion	Ratio	Lower	Upper
91	100		
106	48.6	28.1	68.1

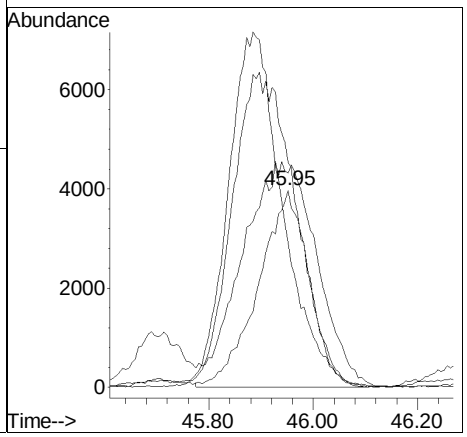


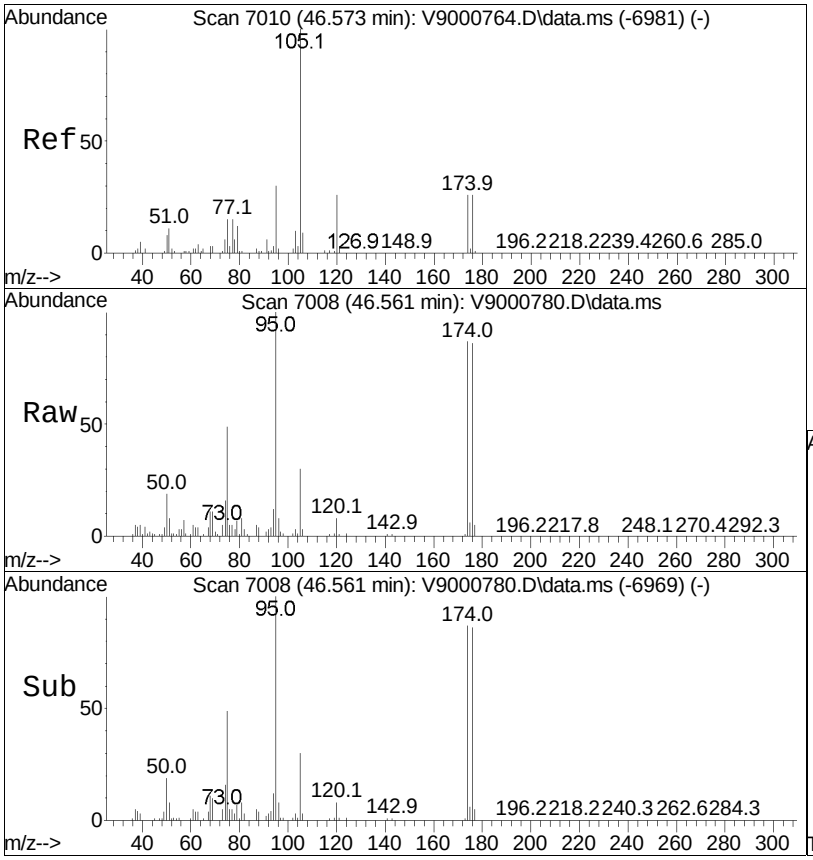


#100
Isopropylcyclohexane
Concen: 12.06 ug/L
RT: 45.95 min Scan# 6908
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 83 Resp: 26851

Ion	Ratio	Lower	Upper
83	100		
82	114.4	76.0	116.0
55	109.0	71.3	111.3
67	73.8	17.6	57.6#

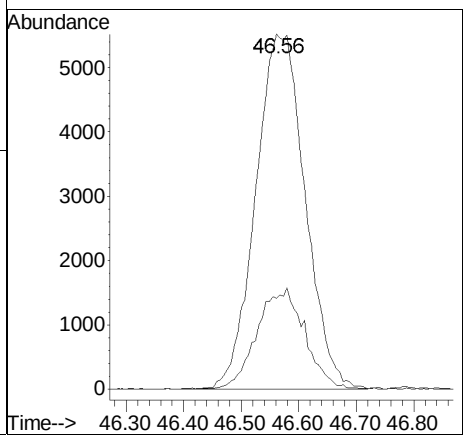


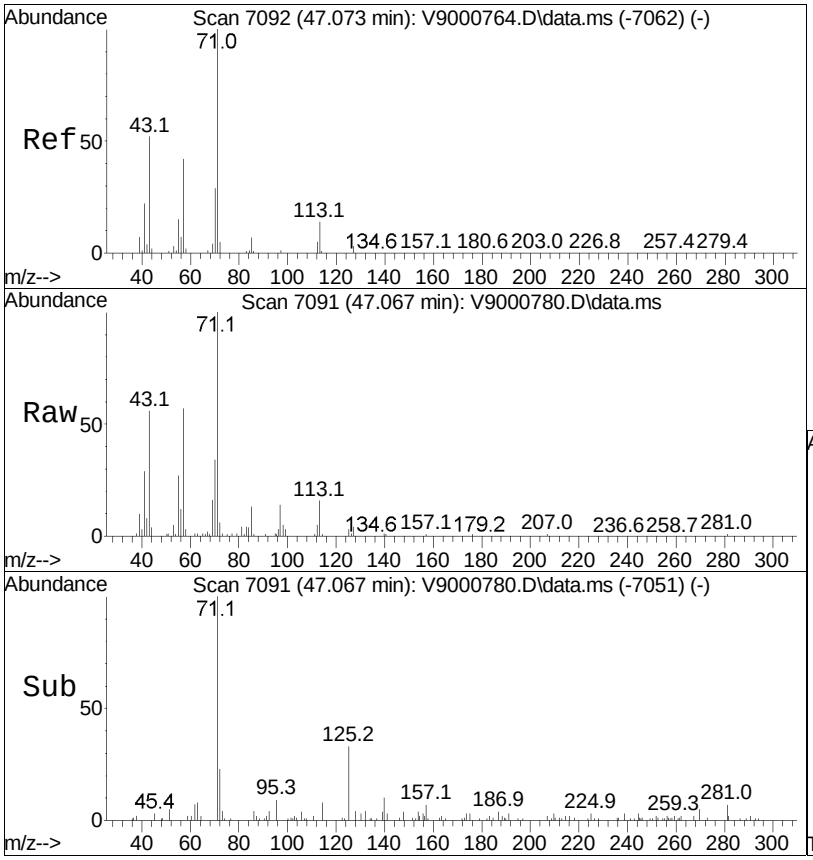


#102
Isopropylbenzene
Concen: 5.51 ug/L
RT: 46.56 min Scan# 7008
Delta R.T. -0.012 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 32836

Ion	Ratio	Lower	Upper
105	100		
120	25.7	6.5	46.5

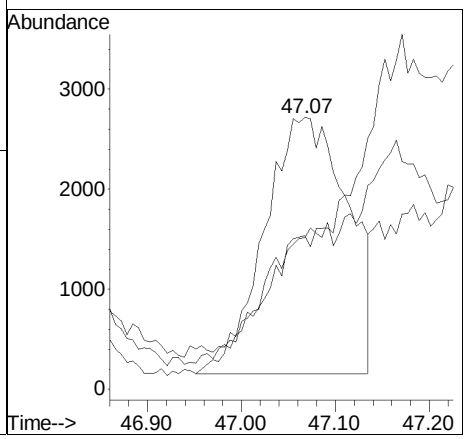


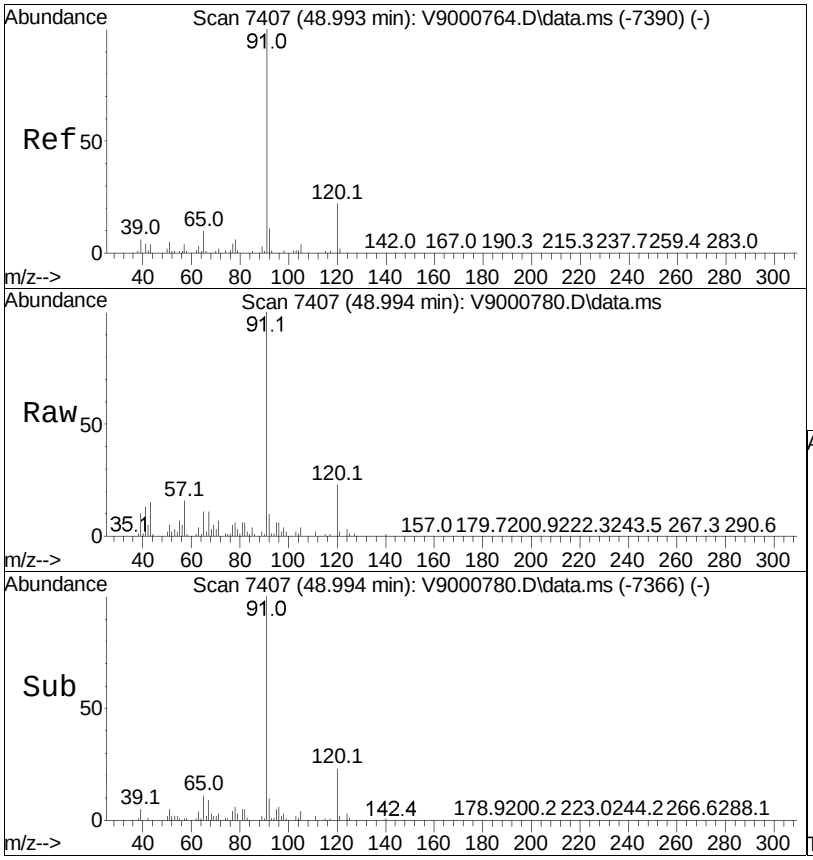


#103
3,3-Dimethyloctane
Concen: 4.45 ug/L
RT: 47.07 min Scan# 7091
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 71 Resp: 15792

Ion	Ratio	Lower	Upper
71	100		
57	56.5	21.7	61.7
43	55.7	31.6	71.6

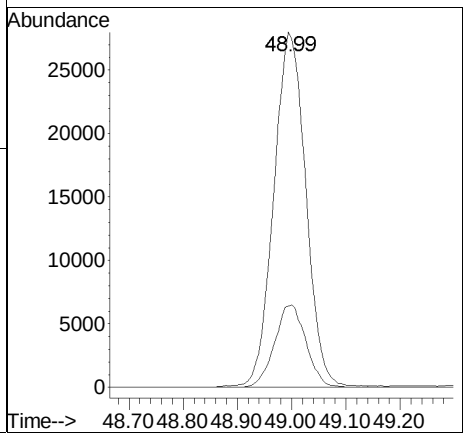


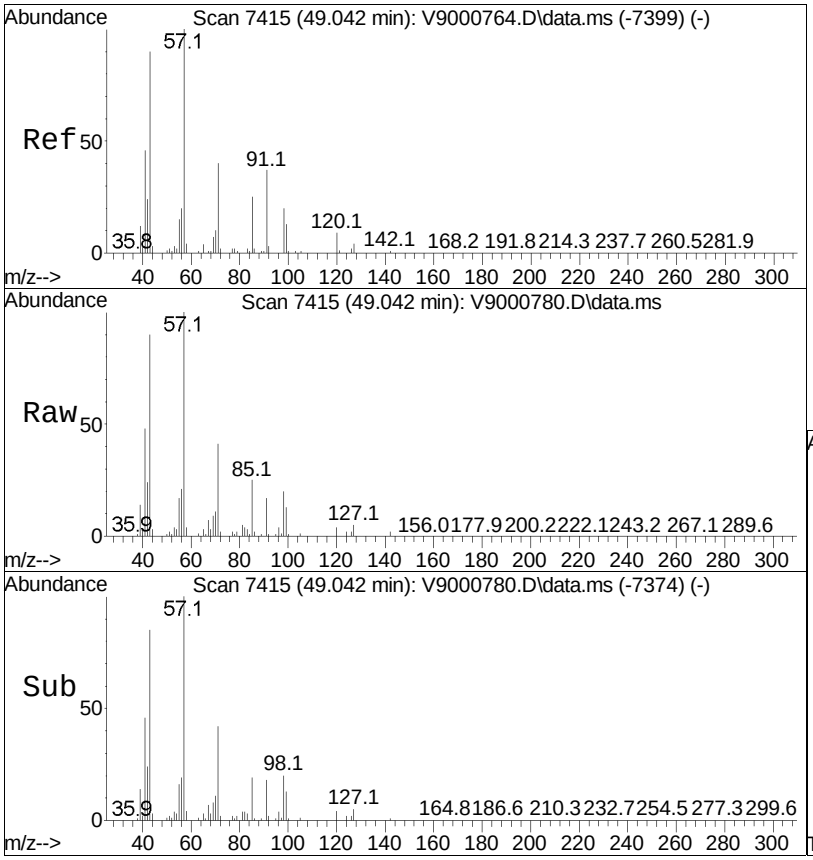


#104
n-Propylbenzene
Concen: 16.33 ug/L
RT: 48.99 min Scan# 7407
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 114926

Ion	Ratio	Lower	Upper
91	100		
120	22.9	2.4	42.4

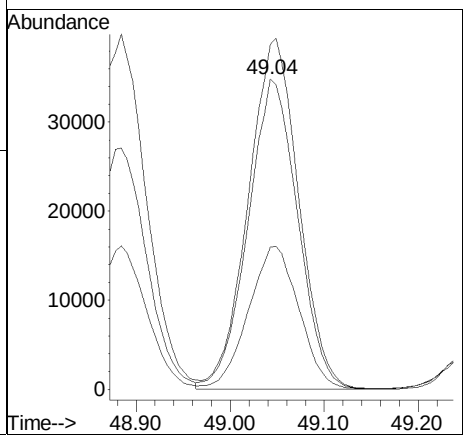


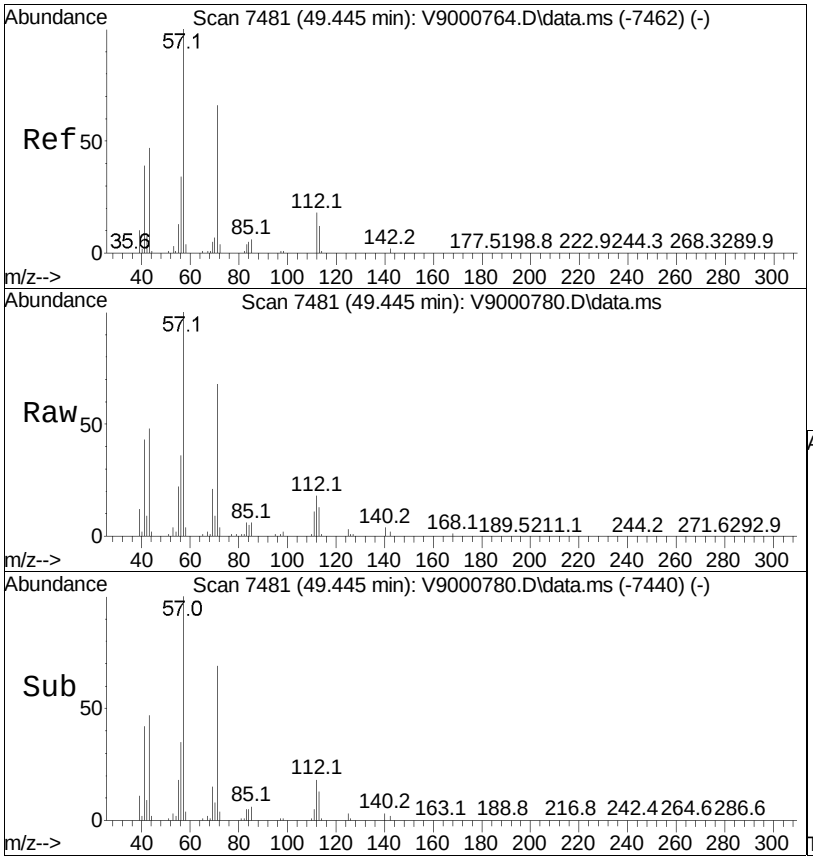


#105
2-Methylnonane
Concen: 56.60 ug/L
RT: 49.04 min Scan# 7415
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 127442

Ion	Ratio	Lower	Upper
43	100		
57	111.1	91.7	131.7
71	45.8	24.9	64.9

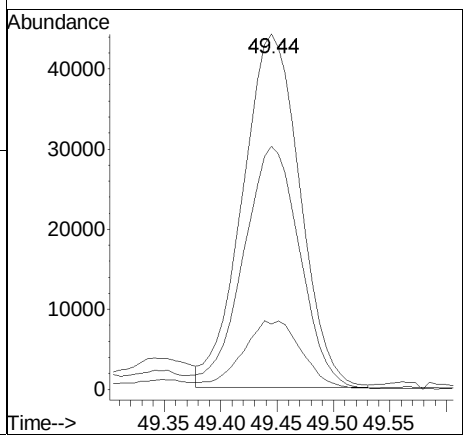


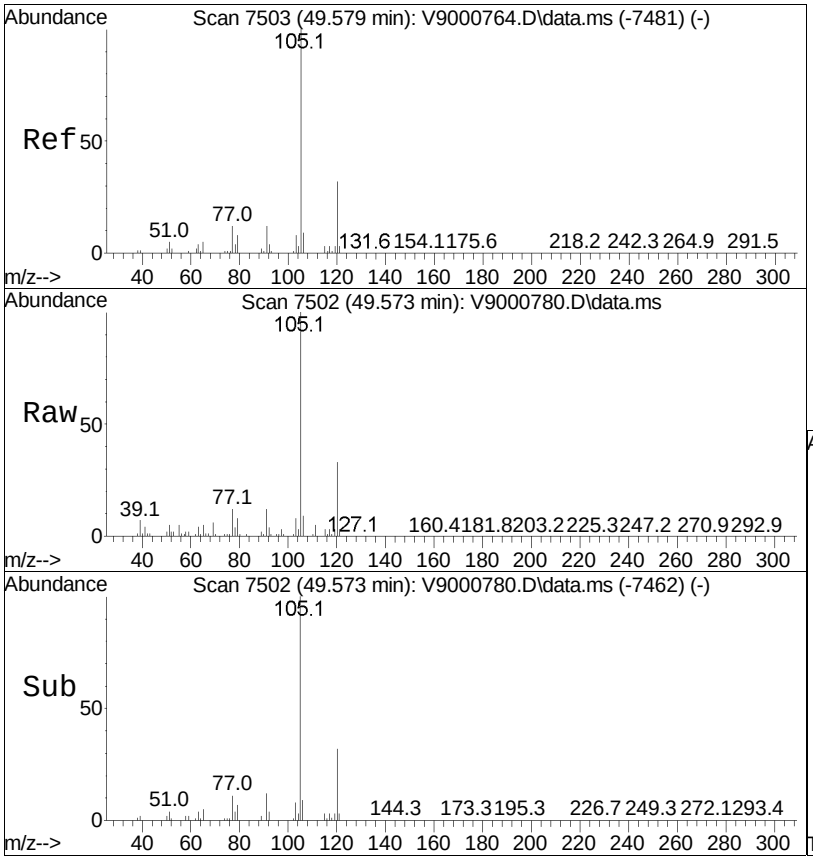


#106
3-Methylnonane
Concen: 57.23 ug/L
RT: 49.44 min Scan# 7481
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 156691

Ion	Ratio	Lower	Upper
57	100		
71	68.4	46.1	86.1
112	18.3	0.0	38.0

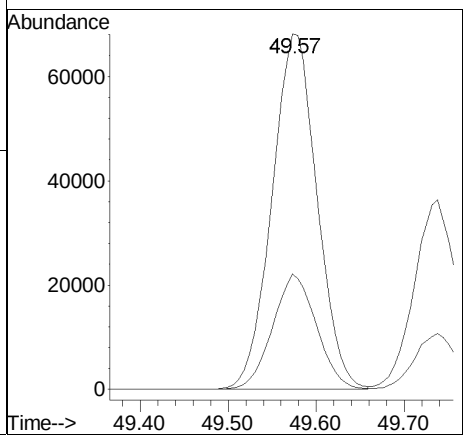


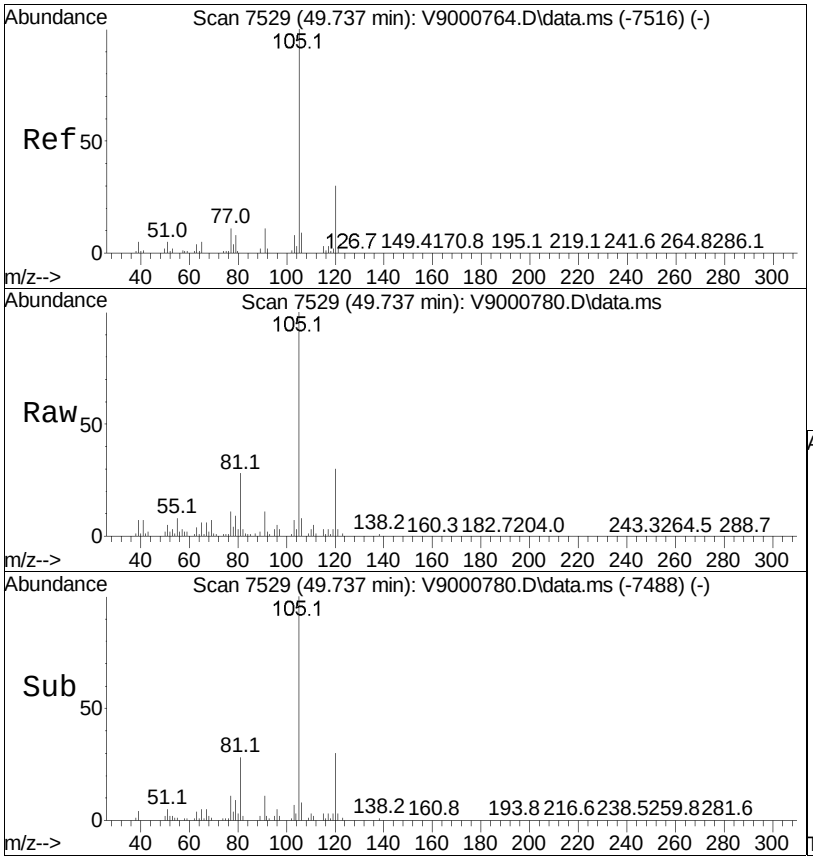


#107
1-Methyl-3-ethylbenzene
Concen: 41.25 ug/L
RT: 49.57 min Scan# 7502
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 241777

Ion	Ratio	Lower	Upper
105	100		
120	32.5	11.8	51.8

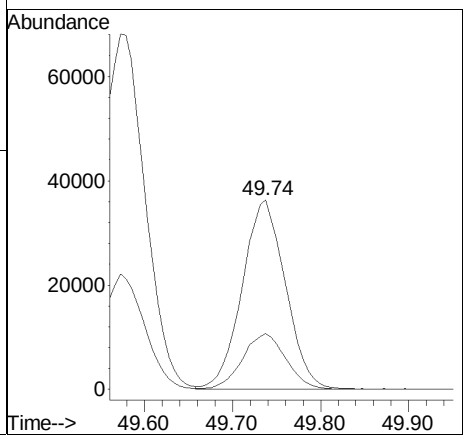


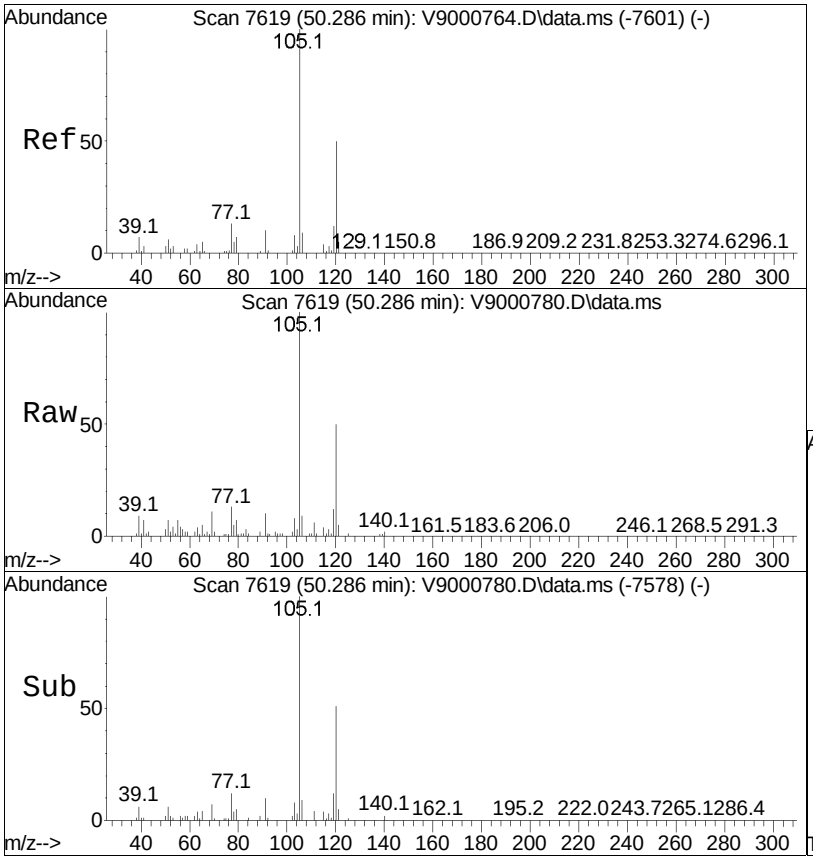


#108
1-Methyl-4-ethylbenzene
Concen: 22.01 ug/L
RT: 49.74 min Scan# 7529
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 123456

Ion	Ratio	Lower	Upper
105	100		
120	29.5	9.9	49.9

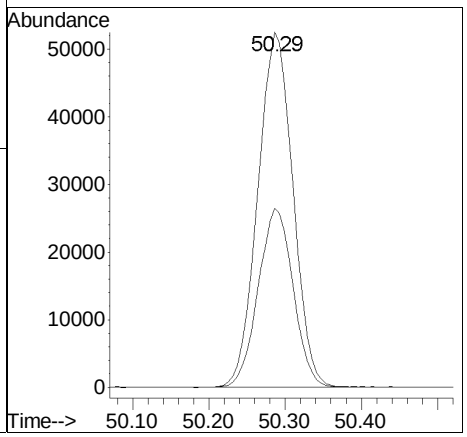


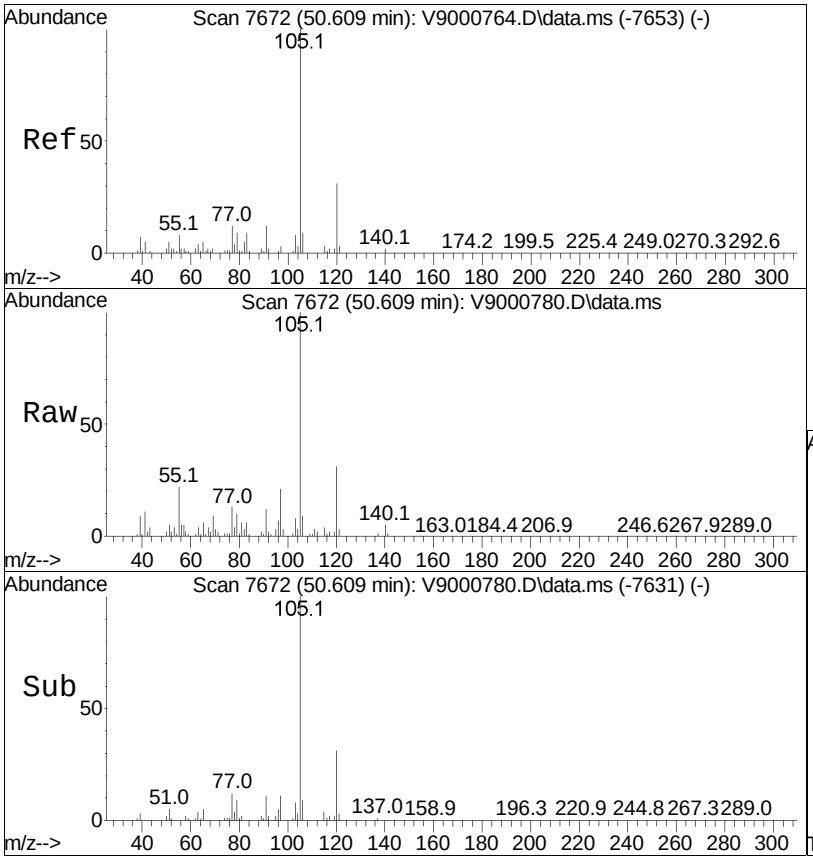


#109
1,3,5-Trimethylbenzene
Concen: 34.43 ug/L
RT: 50.29 min Scan# 7619
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 168041

Ion	Ratio	Lower	Upper
105	100		
120	50.5	30.2	70.2

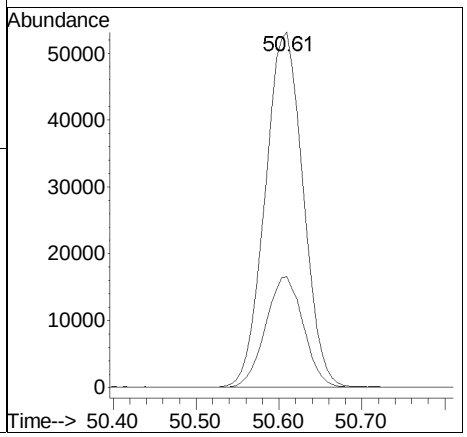


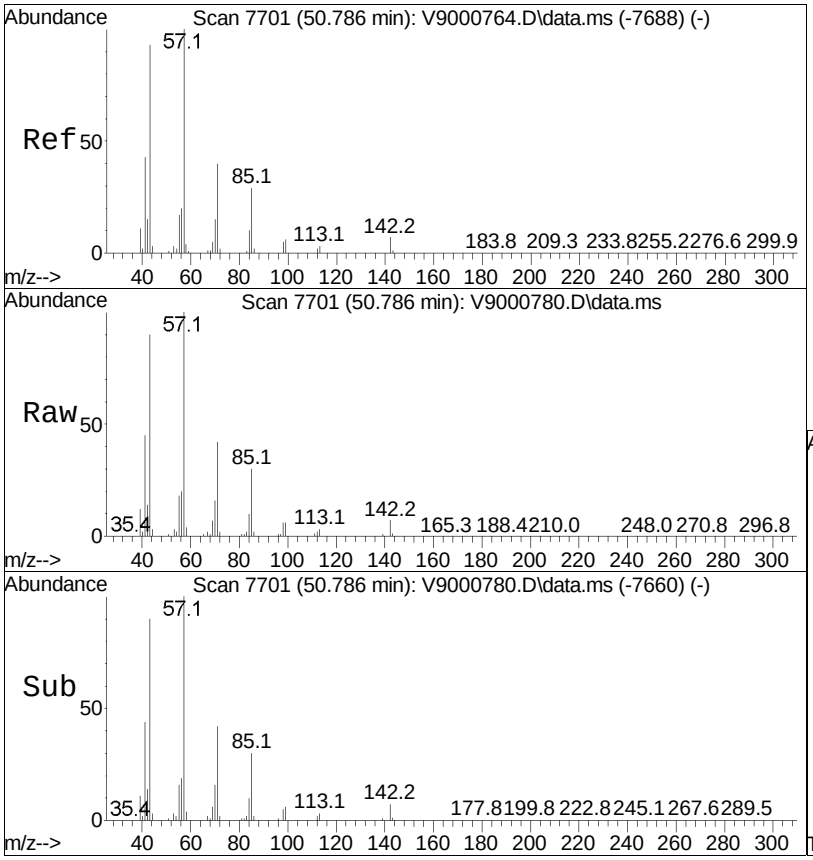


#112
1-Methyl-2-ethylbenzene
Concen: 28.71 ug/L
RT: 50.61 min Scan# 7672
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 169130

Ion	Ratio	Lower	Upper
105	100		
120	31.2	10.7	50.7

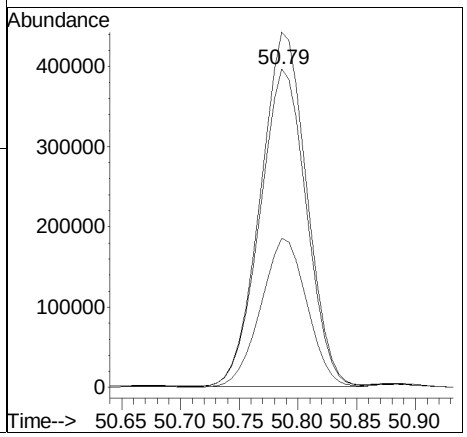


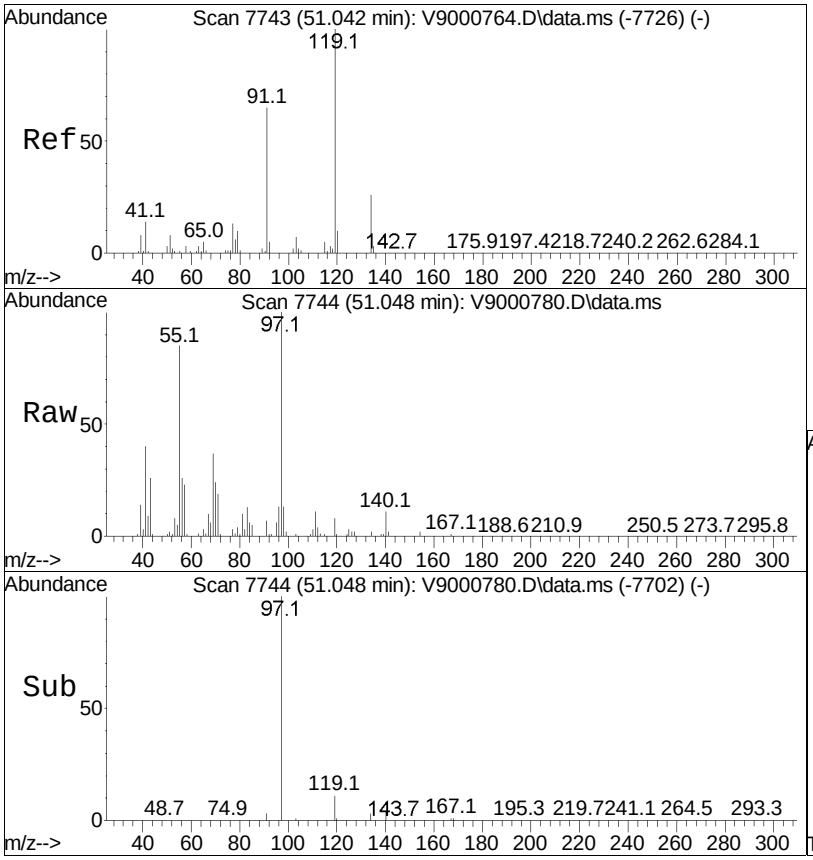


#113
Decane
Concen: 497.49 ug/L
RT: 50.79 min Scan# 7701
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 1090273

Ion	Ratio	Lower	Upper
43	100		
57	111.5	88.0	128.0
71	46.8	23.6	63.6

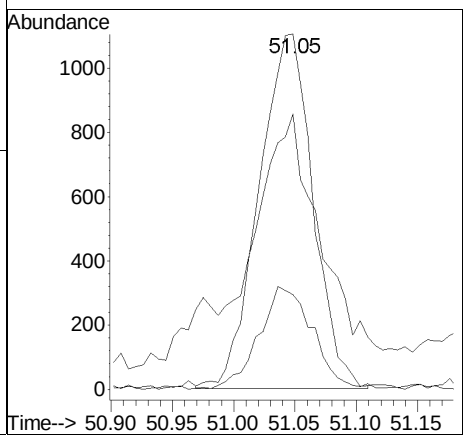


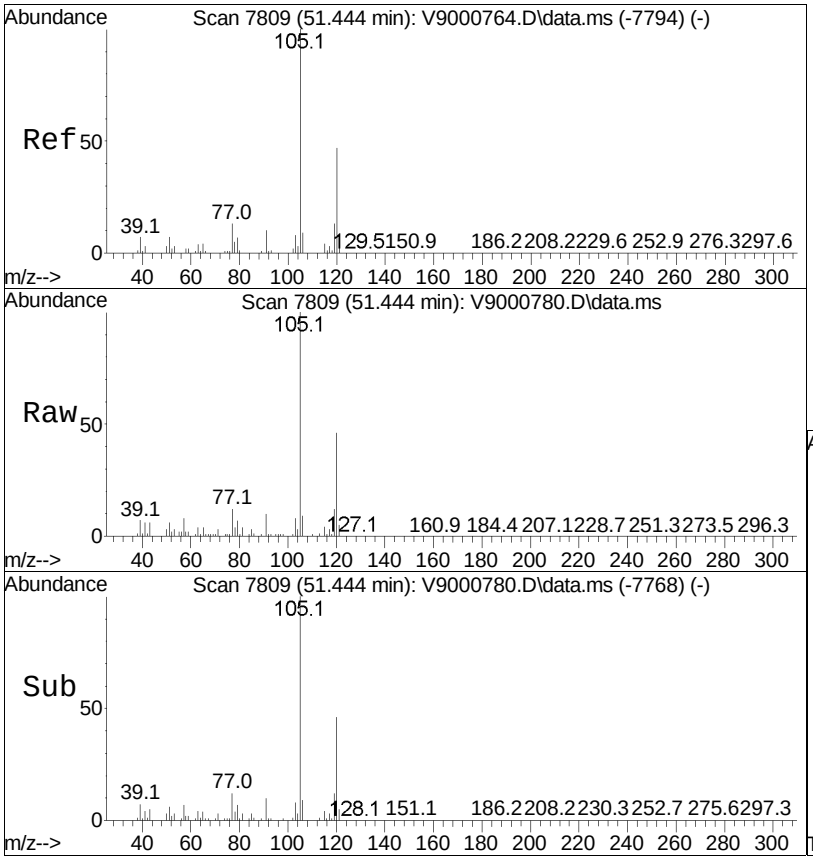


#114
tert-Butylbenzene
Concen: 0.79 ug/L
RT: 51.05 min Scan# 7744
Delta R.T. 0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 3381

Ion	Ratio	Lower	Upper
119	100		
91	77.5	45.4	85.4
134	26.7	5.8	45.8

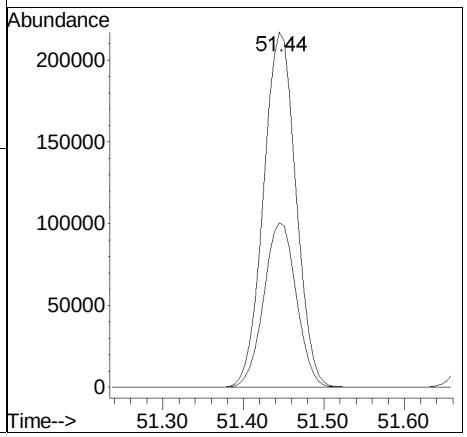


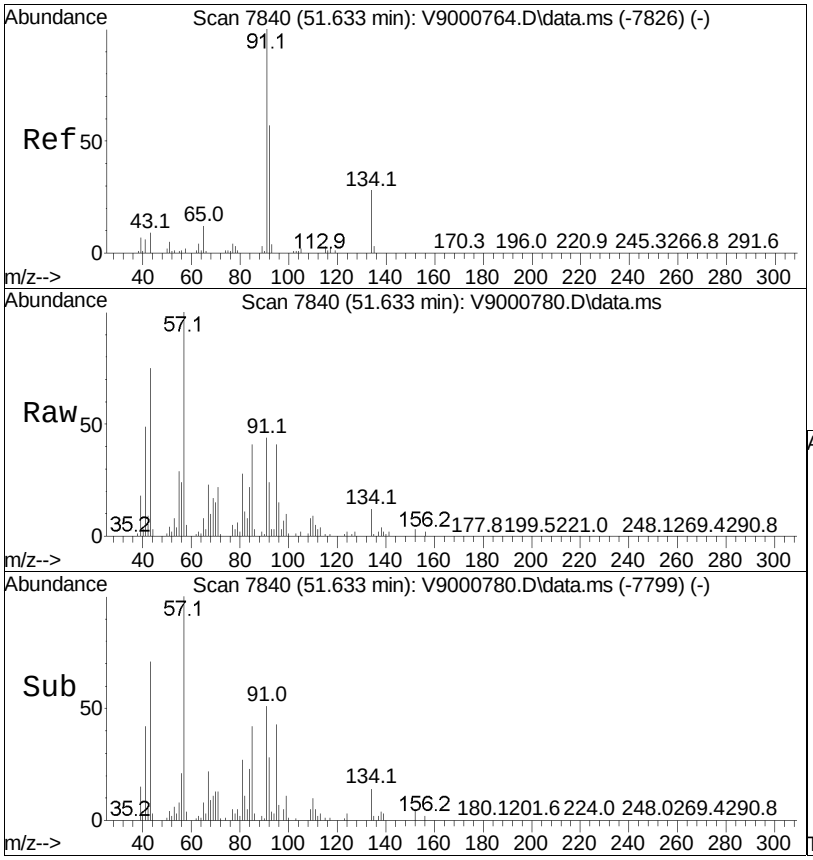


#115
1,2,4-Trimethylbenzene
Concen: 118.33 ug/L
RT: 51.44 min Scan# 7809
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 607473

Ion	Ratio	Lower	Upper
105	100		
120	46.4	27.4	67.4

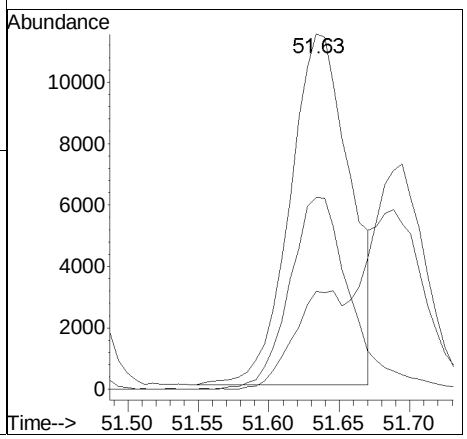


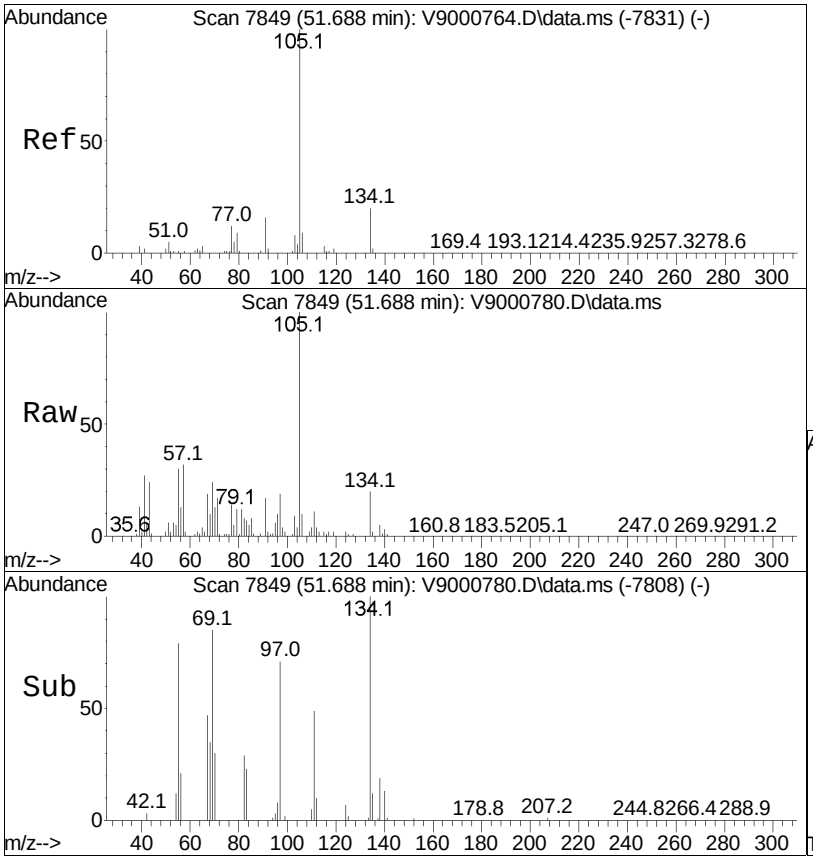


#116
Isobutylbenzene
Concen: 5.84 ug/L
RT: 51.63 min Scan# 7840
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 33894

Ion	Ratio	Lower	Upper
91	100		
92	54.1	36.8	76.8
134	27.6	7.5	47.5

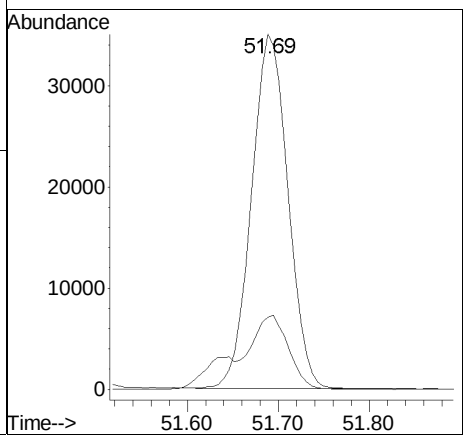


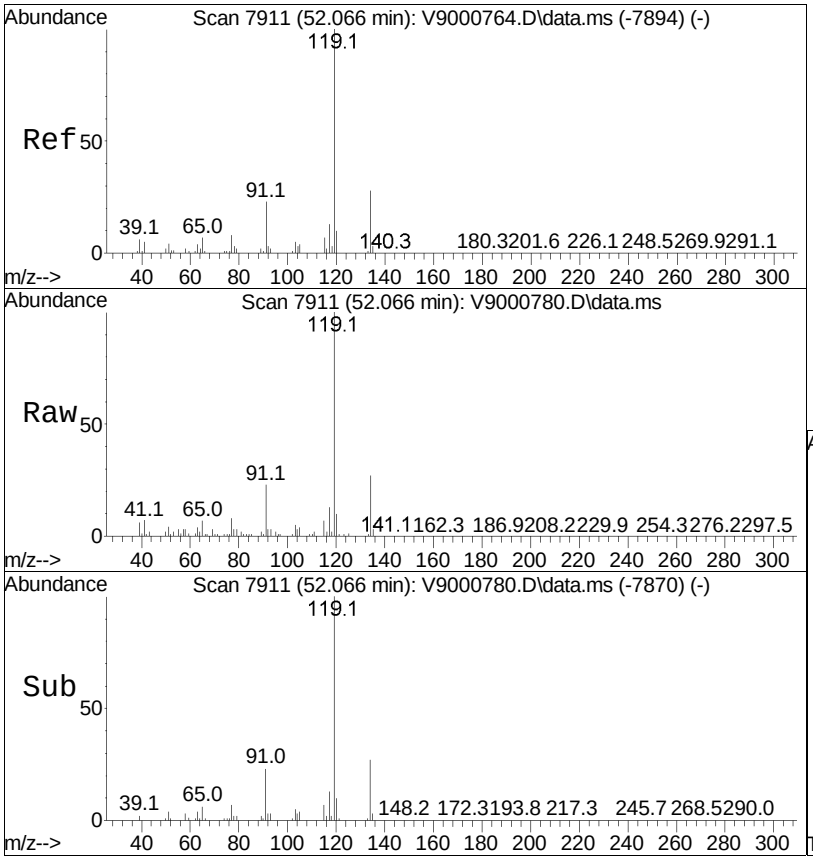


#117
sec-Butylbenzene
Concen: 15.31 ug/L
RT: 51.69 min Scan# 7849
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 97674

Ion	Ratio	Lower	Upper
105	100		
134	20.3	0.6	40.6

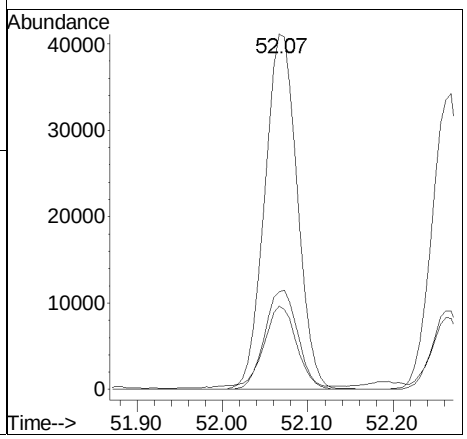


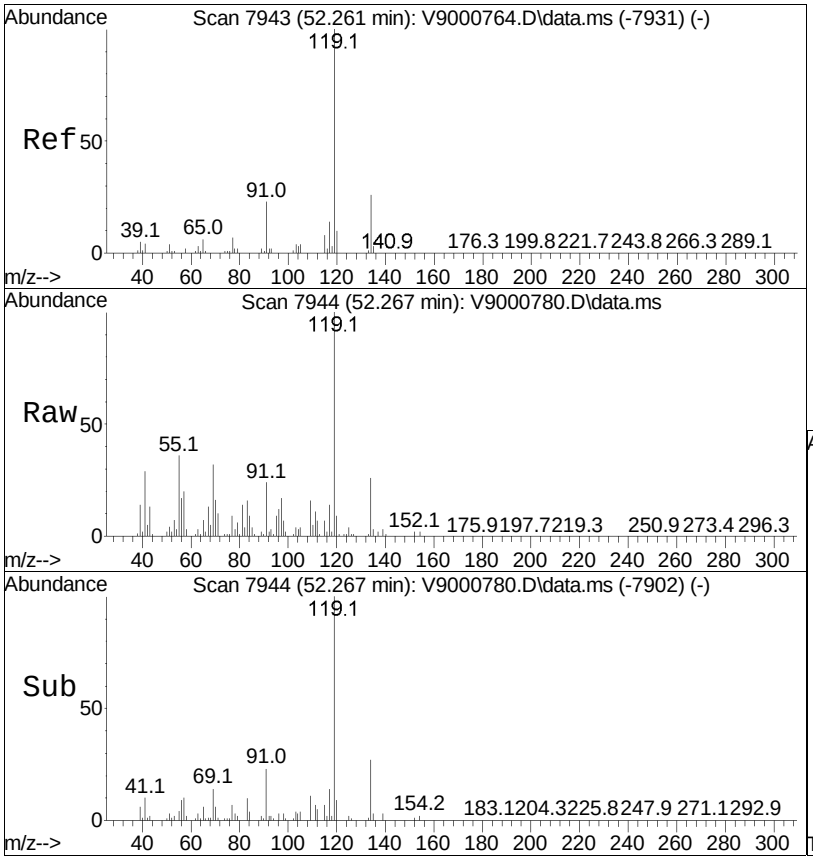


#118
1-Methyl-3-isopropylbenzene
Concen: 20.40 ug/L
RT: 52.07 min Scan# 7911
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 108850

Ion	Ratio	Lower	Upper
119	100		
134	27.4	7.9	47.9
91	23.5	3.0	43.0

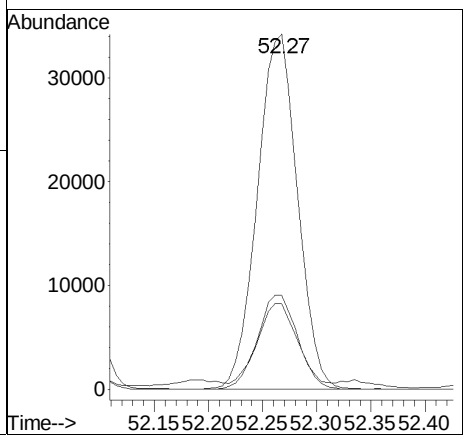


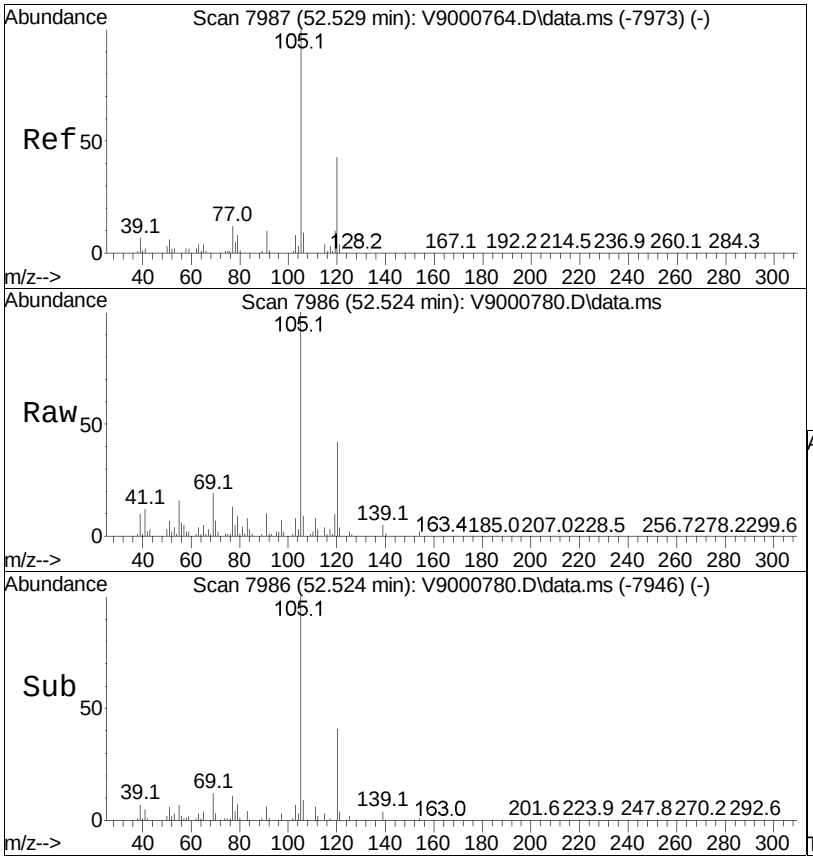


#119
1-Methyl-4-isopropylbenzene
Concen: 16.44 ug/L
RT: 52.27 min Scan# 7944
Delta R.T. 0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 88016

Ion	Ratio	Lower	Upper
119	100		
134	26.5	5.7	45.7
91	24.1	2.6	42.6

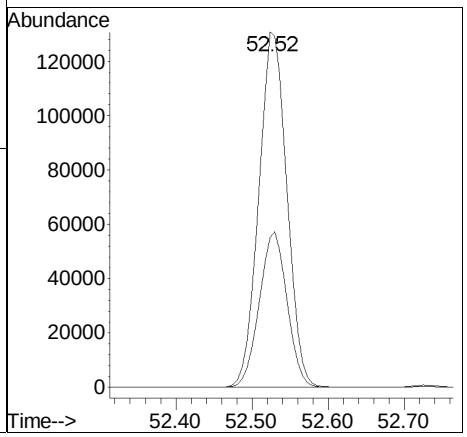


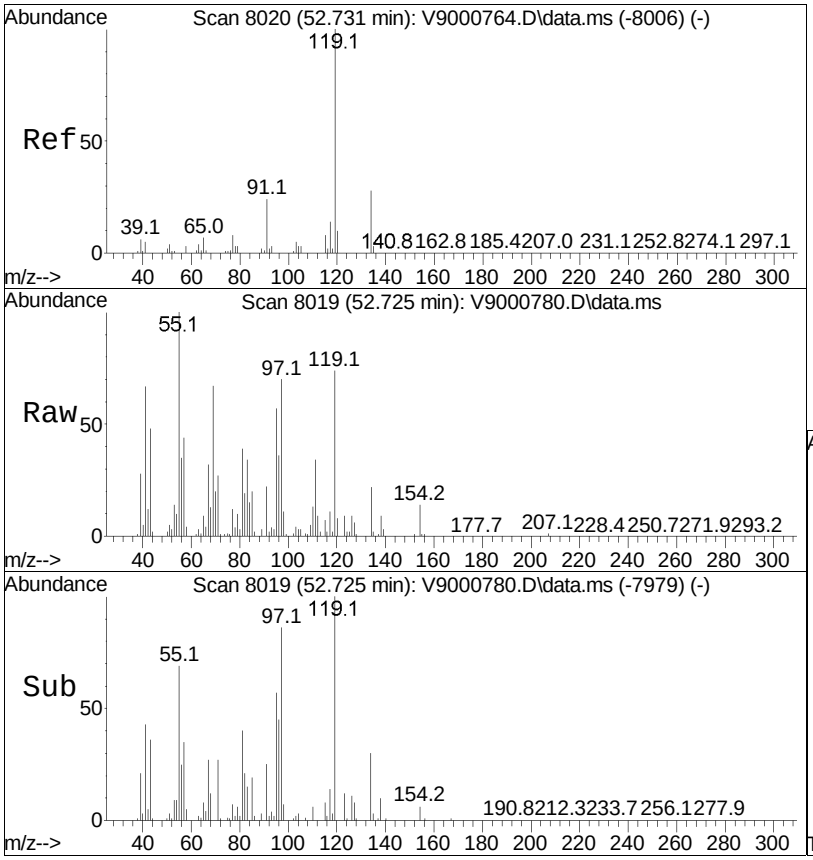


#120
1,2,3-Trimethylbenzene
Concen: 63.96 ug/L
RT: 52.52 min Scan# 7986
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 334618

Ion	Ratio	Lower	Upper
105	100		
120	42.2	23.0	63.0

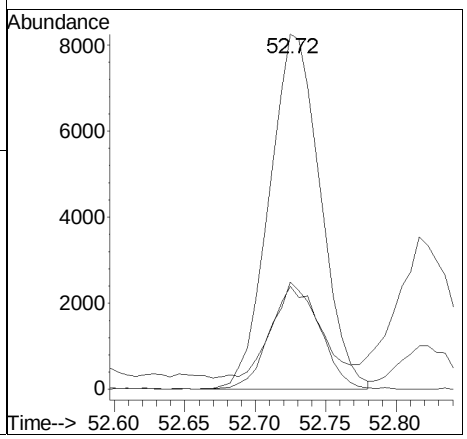


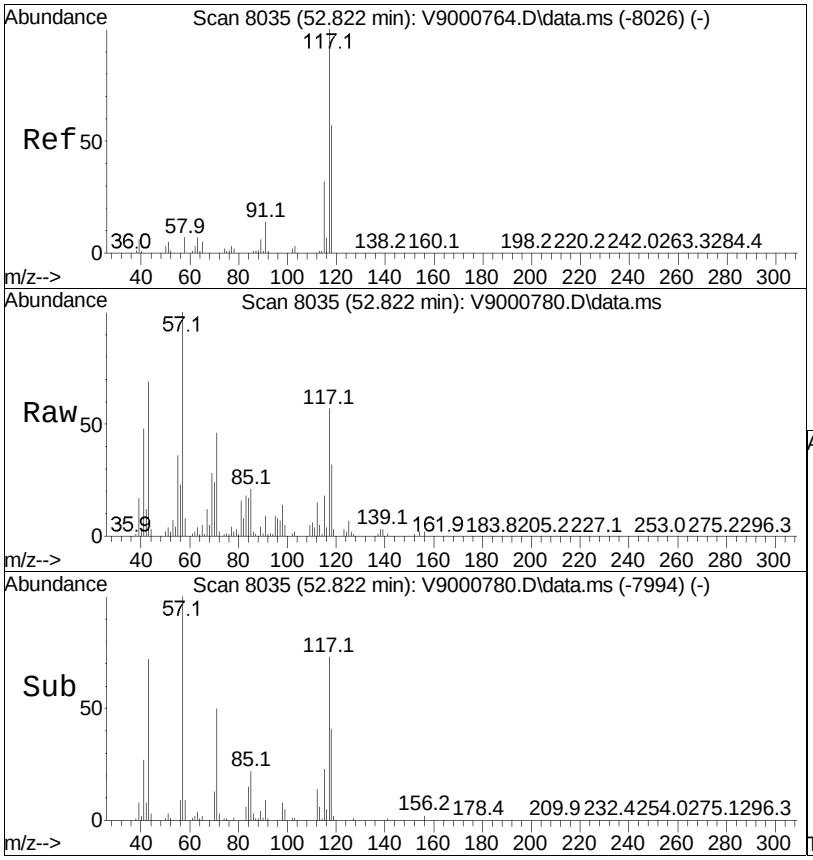


#121
1-Methyl-2-isopropylbenzene
Concen: 3.87 ug/L
RT: 52.72 min Scan# 8019
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 20712

Ion	Ratio	Lower	Upper
119	100		
134	29.0	8.1	48.1
91	30.2	3.9	43.9

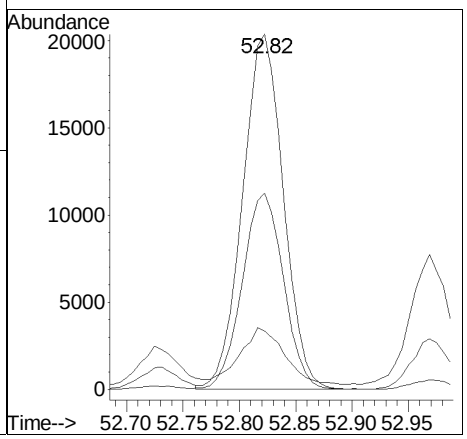


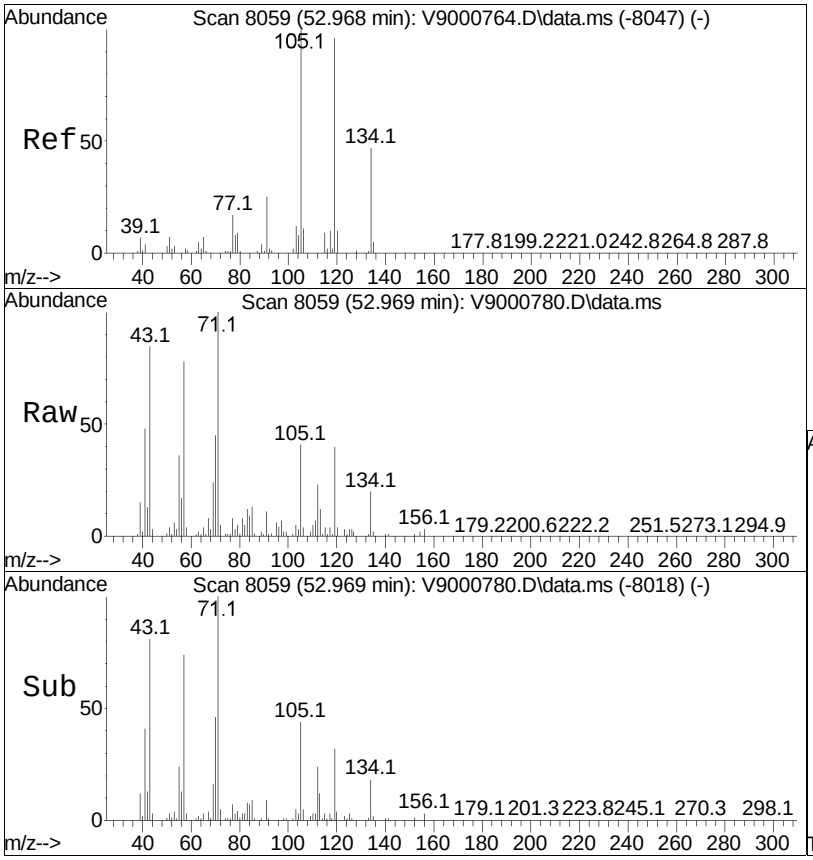


#122
Indan
Concen: 10.37 ug/L
RT: 52.82 min Scan# 8035
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:117 Resp: 51108

Ion	Ratio	Lower	Upper
117	100		
118	55.2	36.3	76.3
91	16.4	0.0	35.0

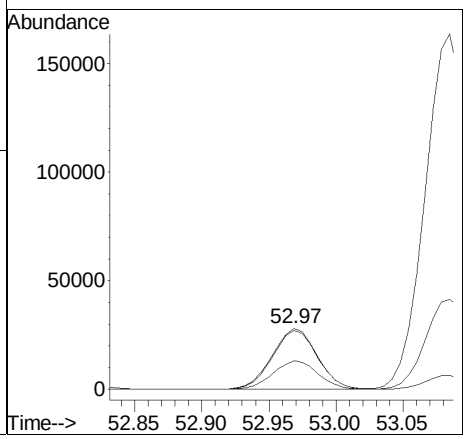


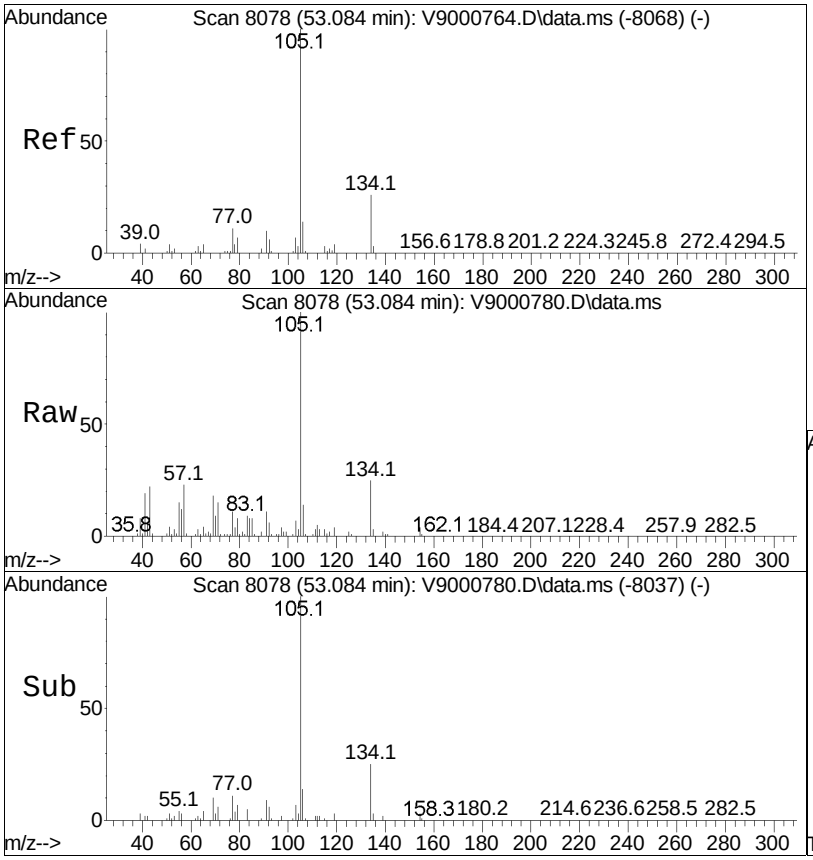


#123
1,3-Diethylbenzene
Concen: 19.26 ug/L
RT: 52.97 min Scan# 8059
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 65602

Ion	Ratio	Lower	Upper
105	100		
119	97.0	76.1	116.1
134	47.4	27.0	67.0

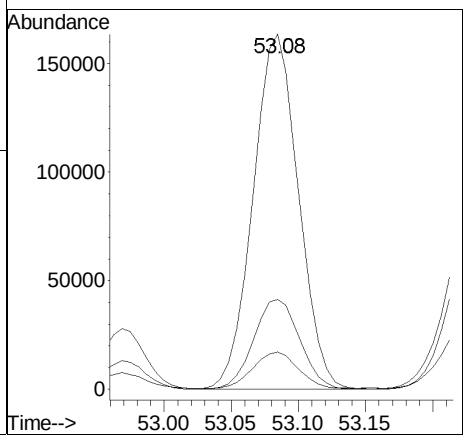


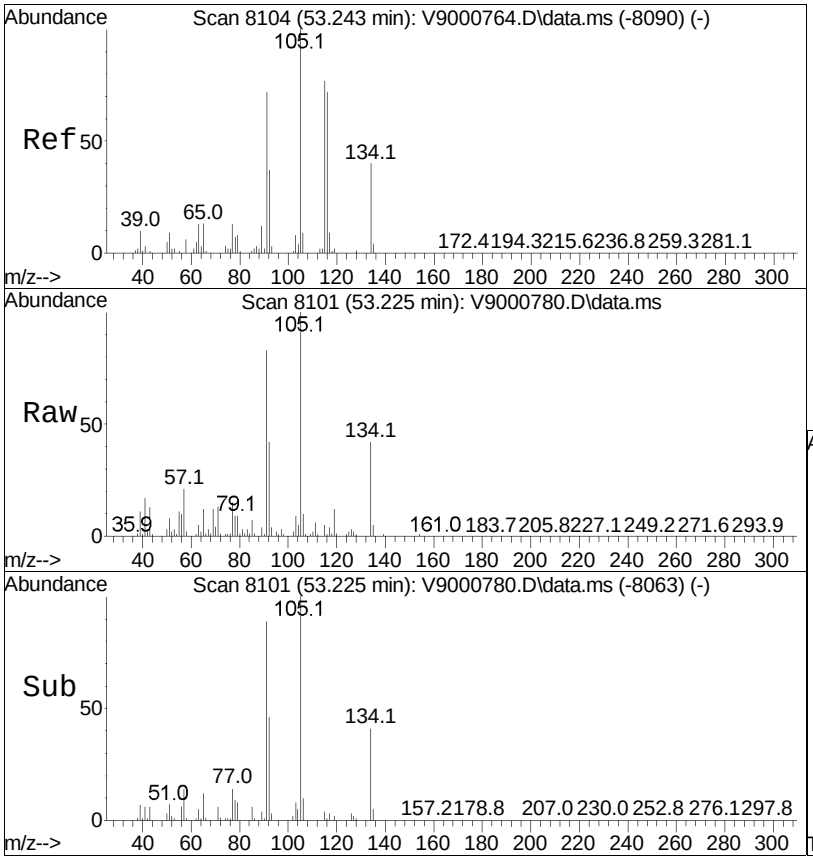


#124
1-Methyl-3-propylbenzene
Concen: 59.28 ug/L
RT: 53.08 min Scan# 8078
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 383074

Ion	Ratio	Lower	Upper
105	100		
134	25.3	5.9	45.9
91	10.5	0.0	30.3

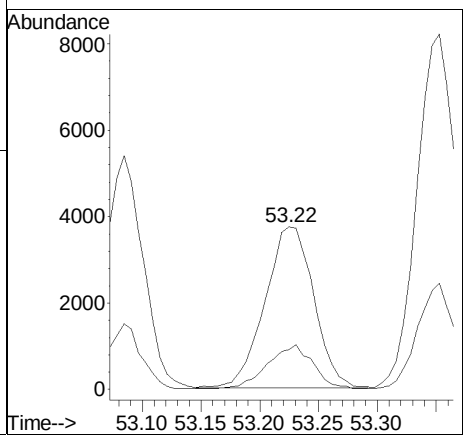


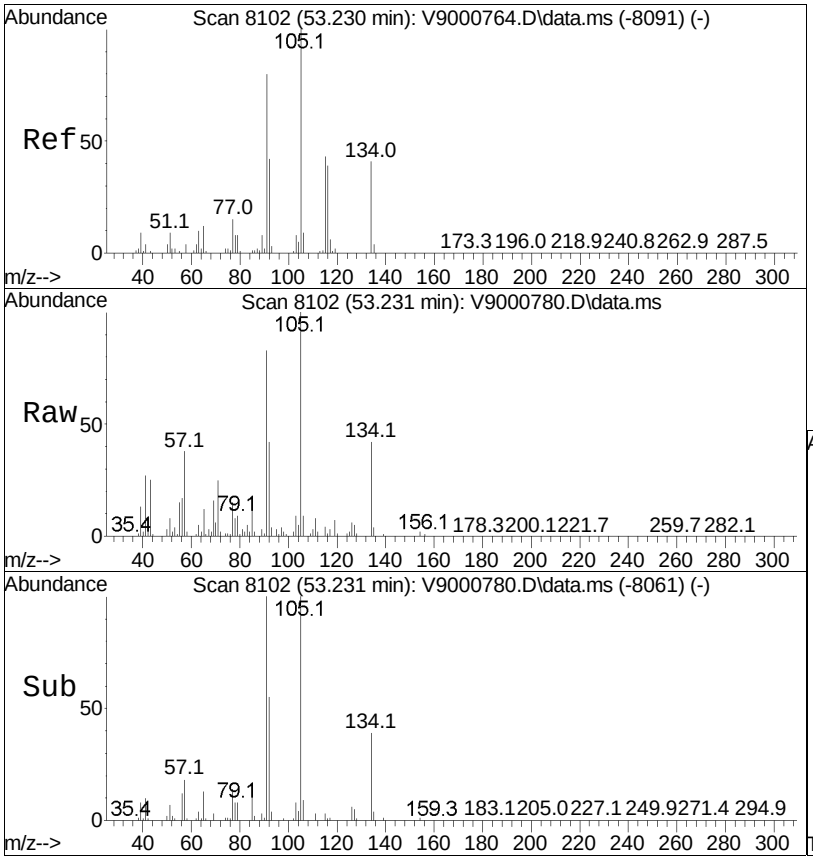


#125
Indene
Concen: 2.21 ug/L
RT: 53.22 min Scan# 8101
Delta R.T. -0.018 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:115 Resp: 10728

Ion	Ratio	Lower	Upper
115	100		
116	24.5	73.8	113.8#

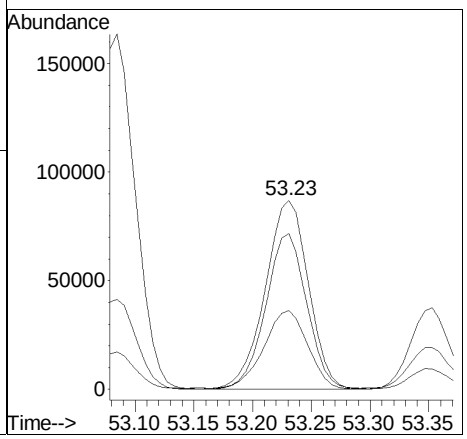


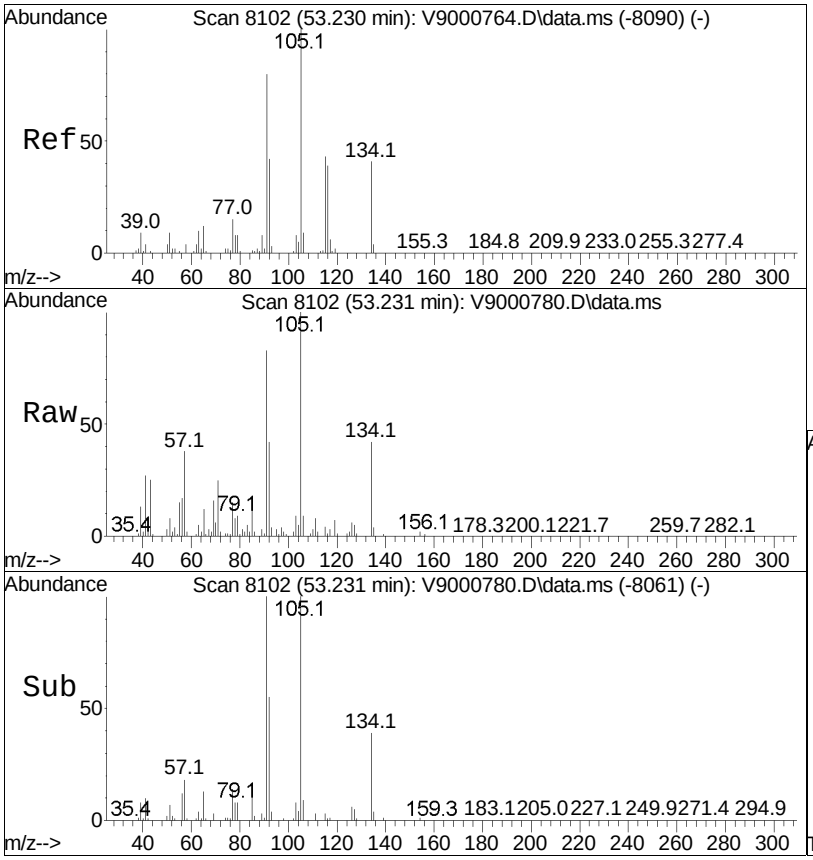


#126
1-Methyl-4-propylbenzene
Concen: 28.91 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 220908

Ion	Ratio	Lower	Upper
105	100		
134	41.8	20.7	60.7
91	82.6	59.6	99.6

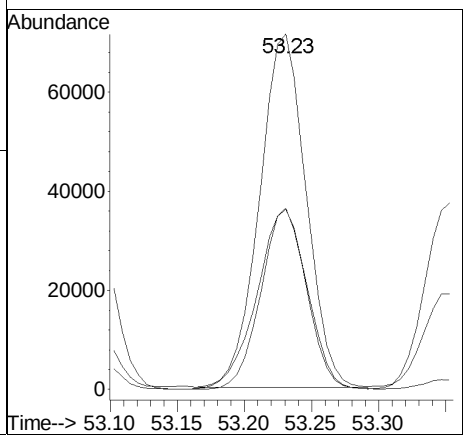


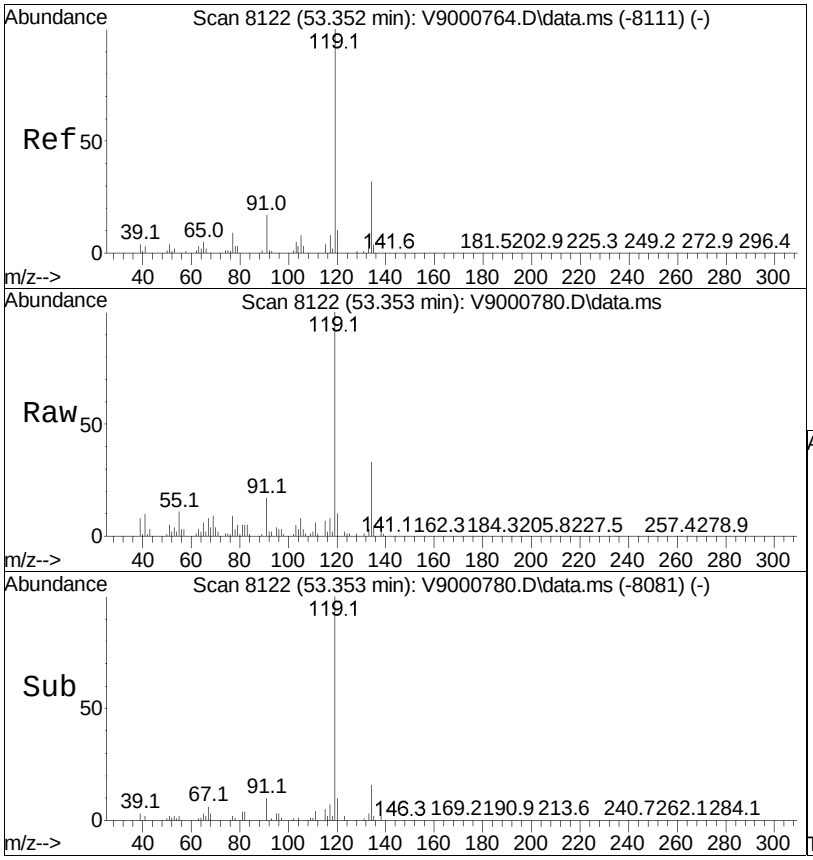


#127
n-Butylbenzene
Concen: 28.20 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 171809

Ion	Ratio	Lower	Upper
91	100		
92	51.0	32.7	72.7
134	50.7	31.2	71.2

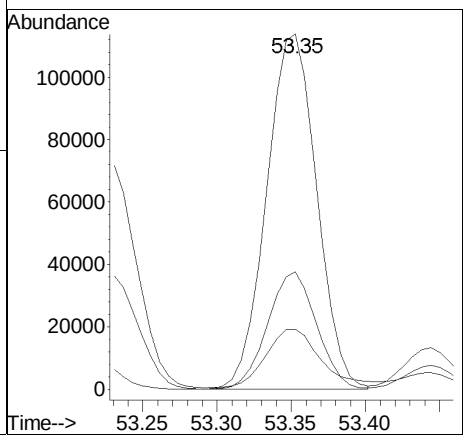


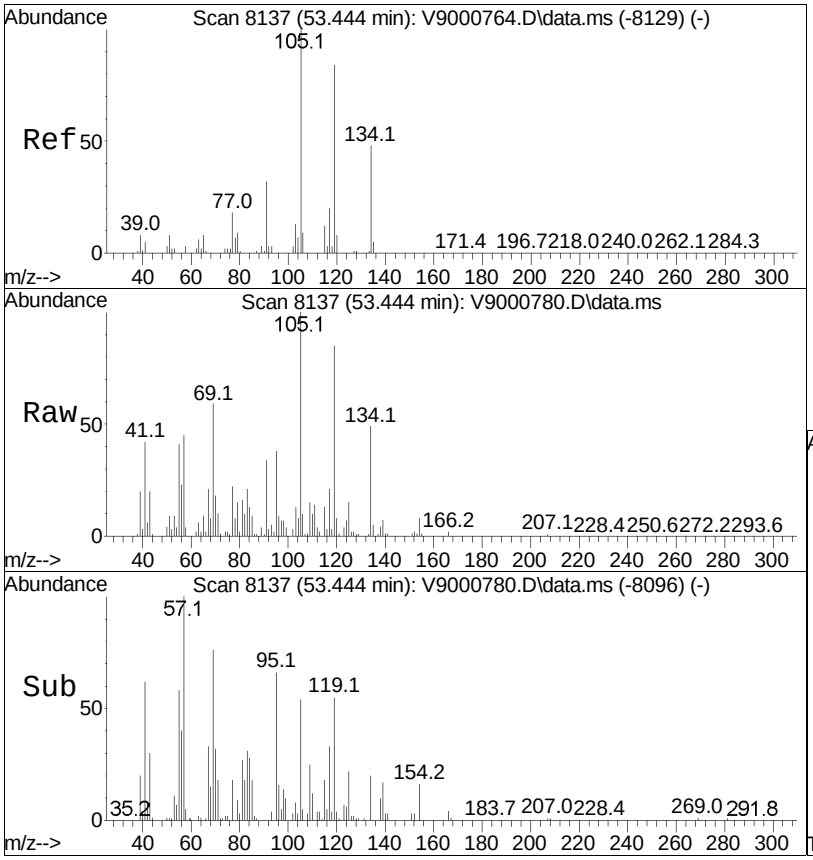


#128
1,2-Dimethyl-4-ethylbenzene
Concen: 48.20 ug/L
RT: 53.35 min Scan# 8122
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 267185

Ion	Ratio	Lower	Upper
119	100		
134	33.1	12.2	52.2
91	17.0	0.0	36.9

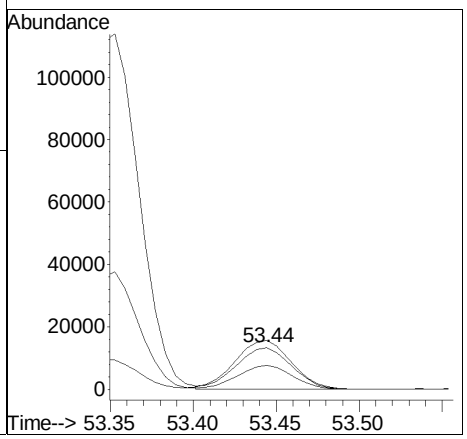


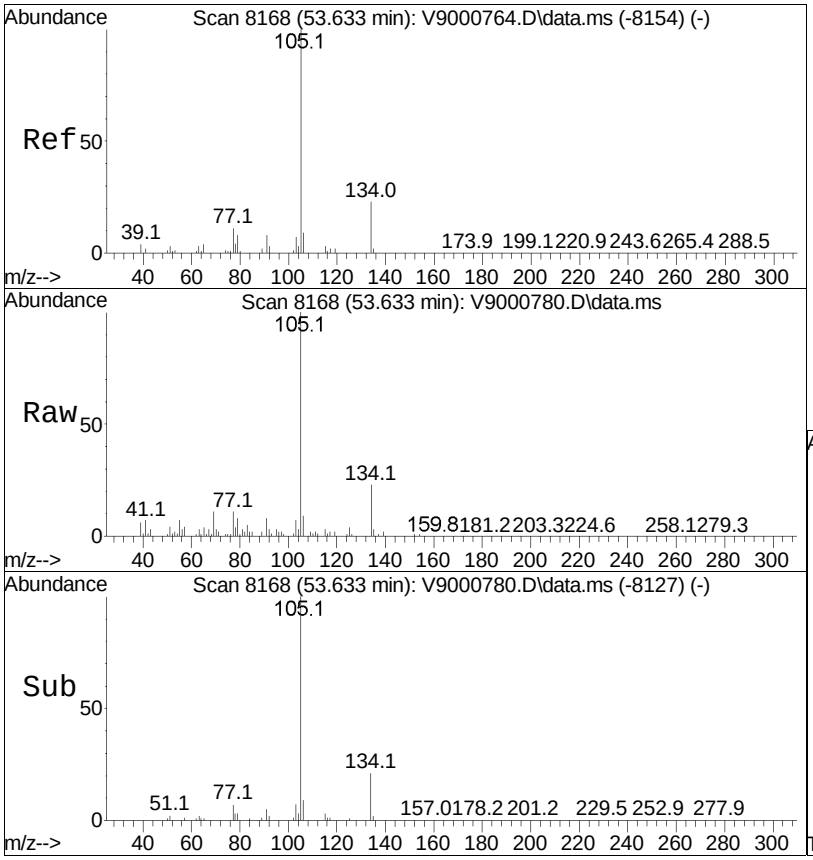


#129
1,2-Diethylbenzene
Concen: 11.55 ug/L
RT: 53.44 min Scan# 8137
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 31121

Ion	Ratio	Lower	Upper
119	100		
105	117.9	96.4	136.4
134	57.9	37.2	77.2

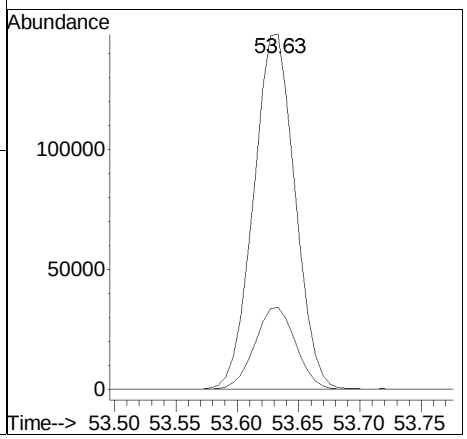


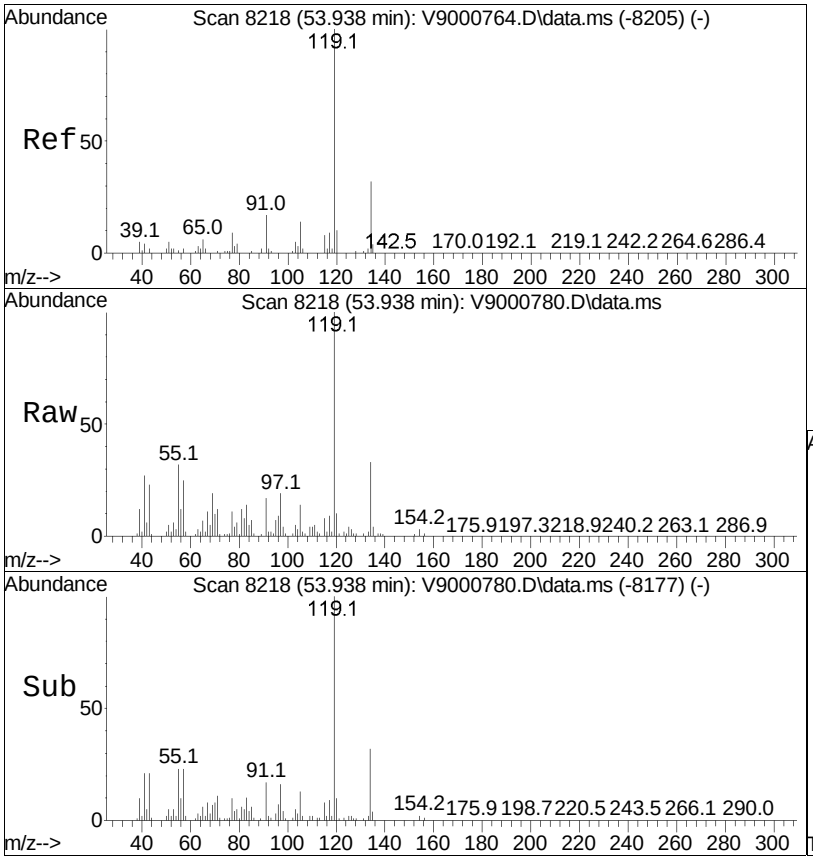


#130
1-Methyl-2-propylbenzene
Concen: 50.42 ug/L
RT: 53.63 min Scan# 8168
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:105 Resp: 347121

Ion	Ratio	Lower	Upper
105	100		
134	23.1	3.3	43.3

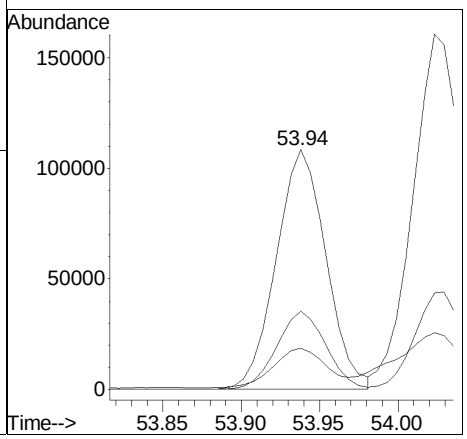


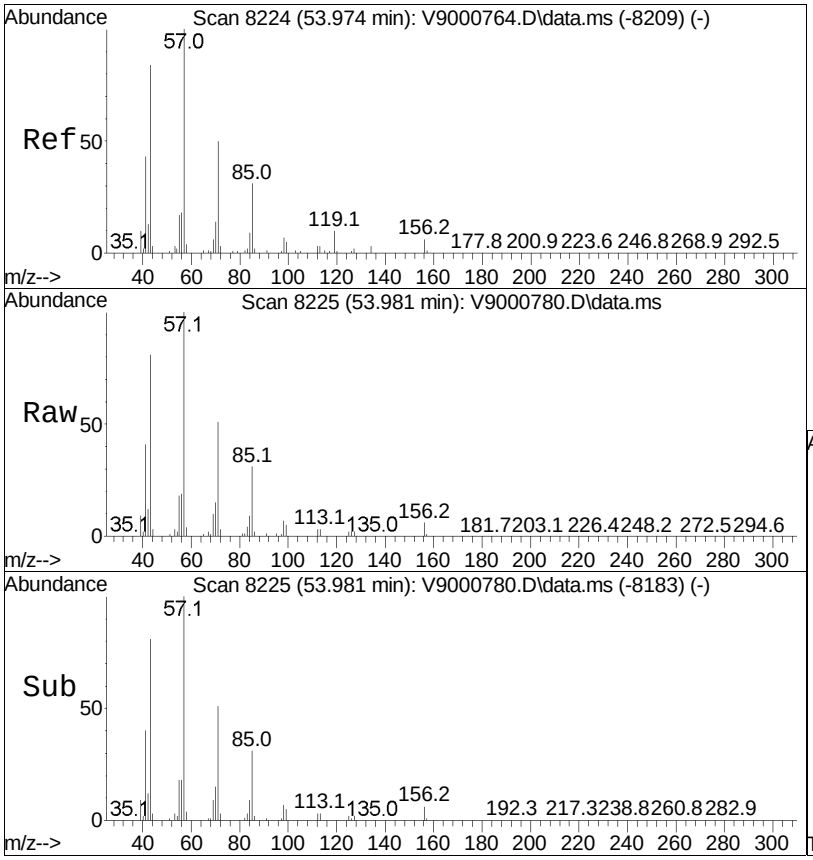


#131
1,4-Dimethyl-2-ethylbenzene
Concen: 45.72 ug/L
RT: 53.94 min Scan# 8218
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 239602

Ion	Ratio	Lower	Upper
119	100		
134	32.6	12.3	52.3
91	17.1	0.0	36.9

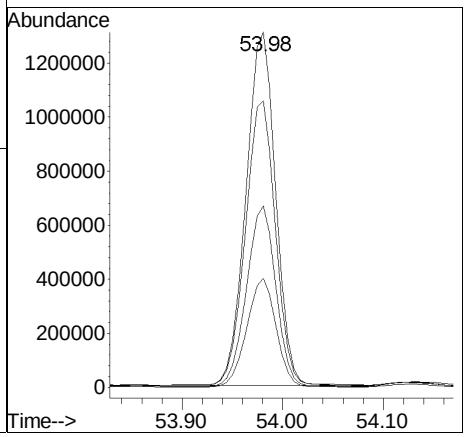


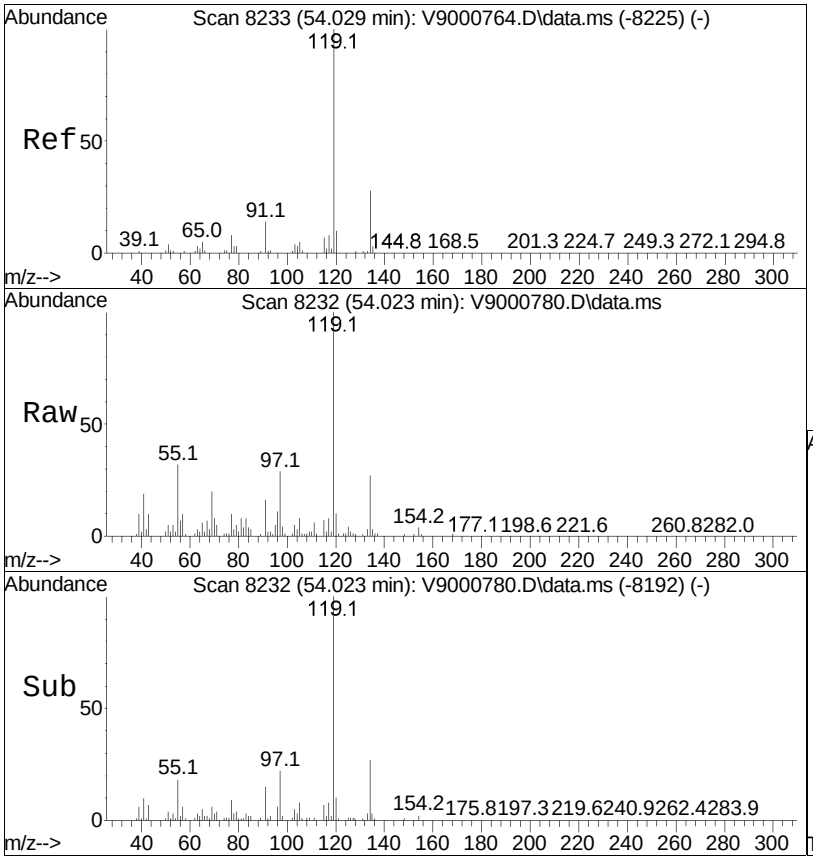


#132
Undecane
Concen: 997.87 ug/L
RT: 53.98 min Scan# 8225
Delta R.T. 0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 2671871

Ion	Ratio	Lower	Upper
57	100		
43	80.7	63.7	103.7
71	51.1	30.1	70.1
85	30.7	11.2	51.2

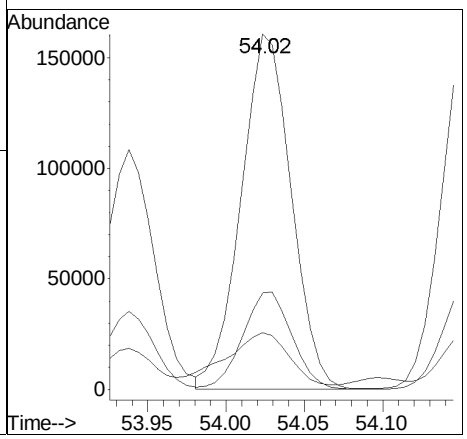


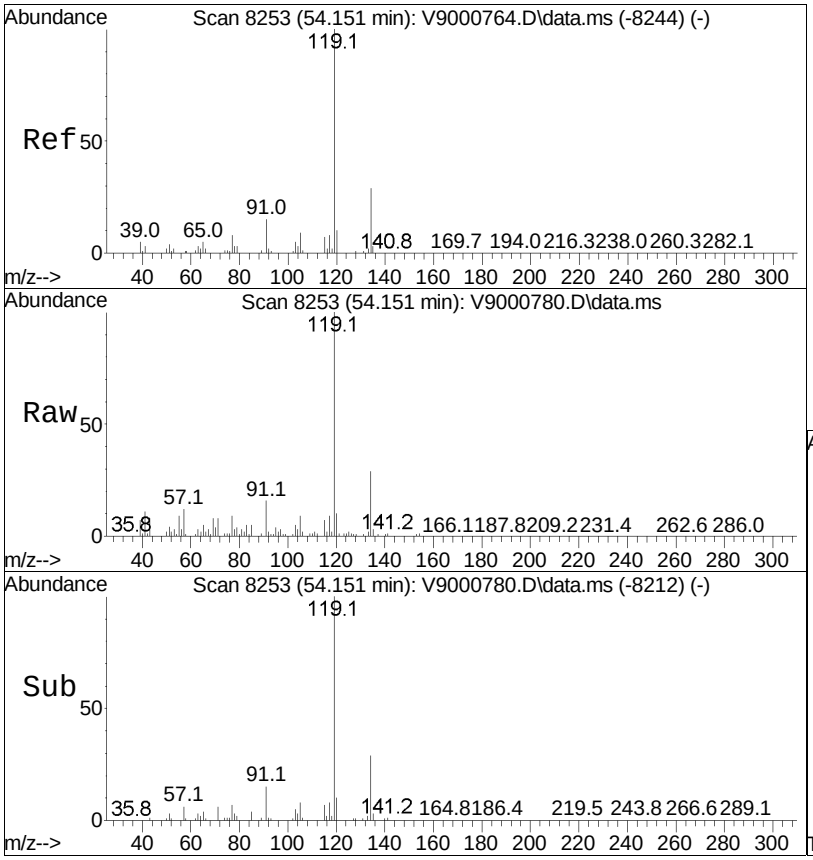


#133
1,3-Dimethyl-4-ethylbenzene
Concen: 56.83 ug/L
RT: 54.02 min Scan# 8232
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 357583

Ion	Ratio	Lower	Upper
119	100		
134	27.1	7.6	47.6
91	16.0	0.0	34.2

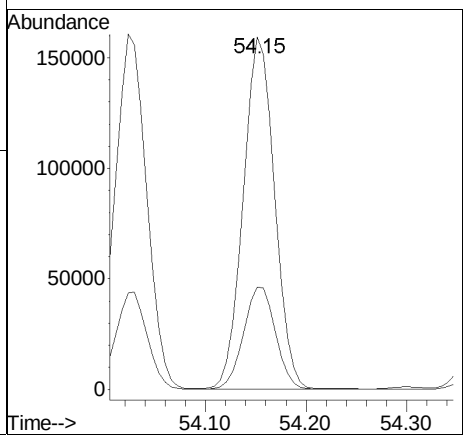


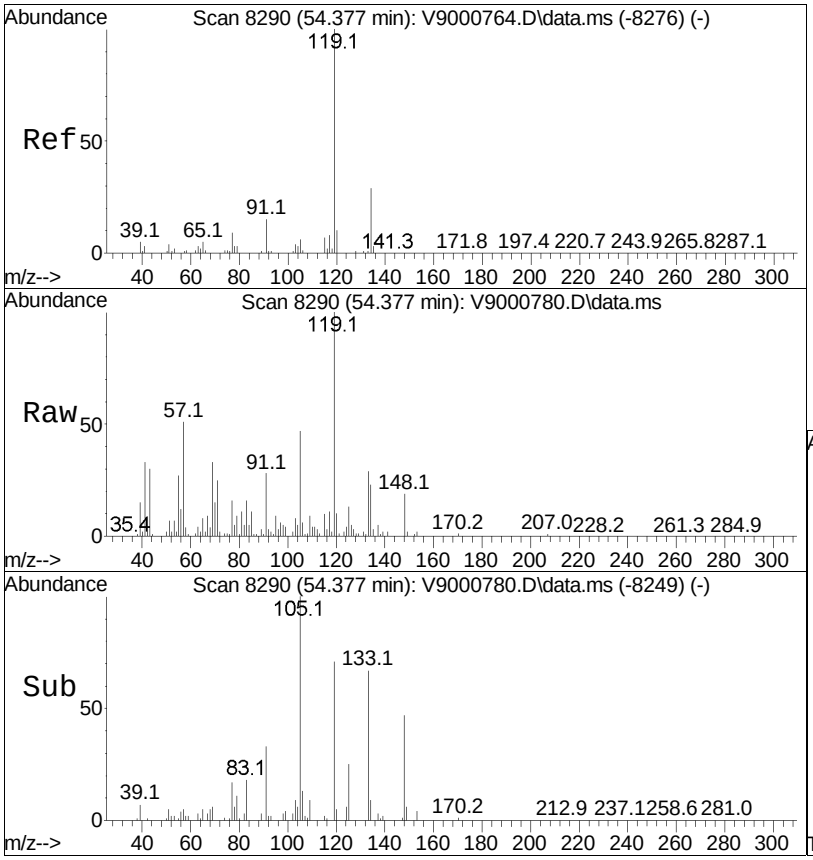


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 60.08 ug/L
RT: 54.15 min Scan# 8253
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 344655

Ion	Ratio	Lower	Upper
119	100		
134	29.0	8.5	48.5

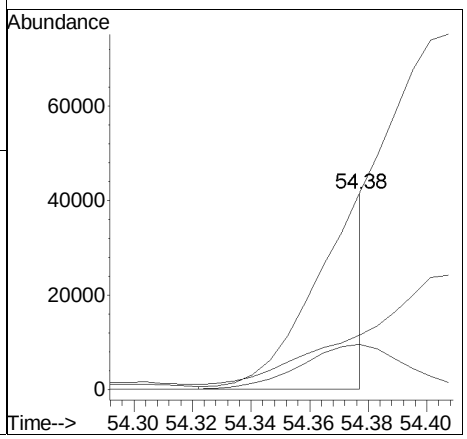


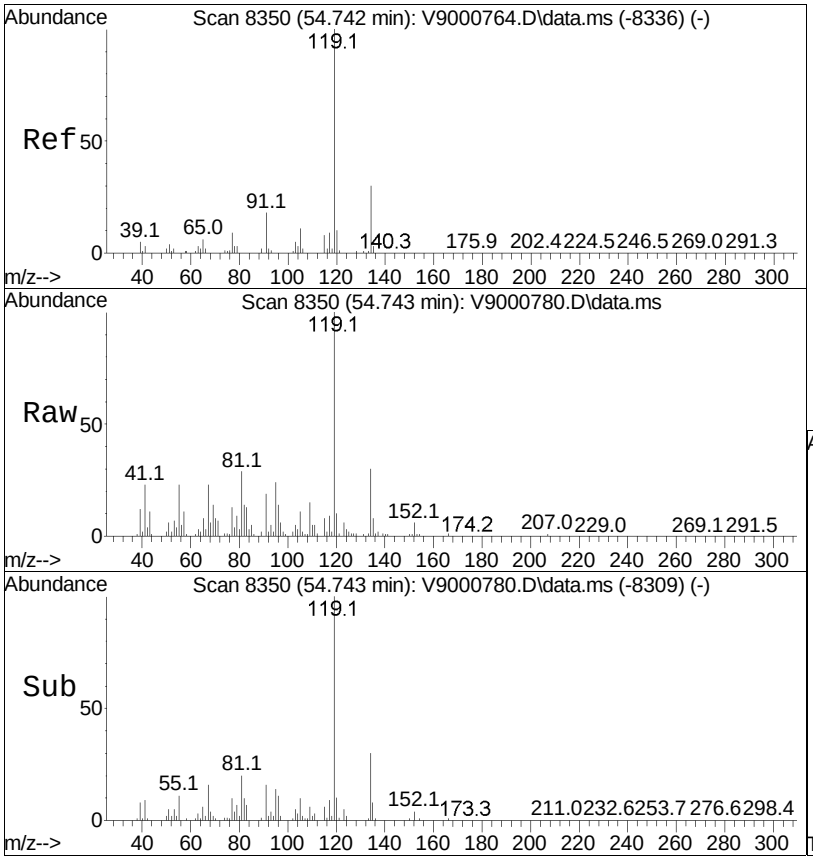


#135
1,3-Dimethyl-2-ethylbenzene
Concen: 8.30 ug/L m
RT: 54.38 min Scan# 8290
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 51994

Ion	Ratio	Lower	Upper
119	100		
134	23.0	8.5	48.5
91	27.7	0.0	35.0

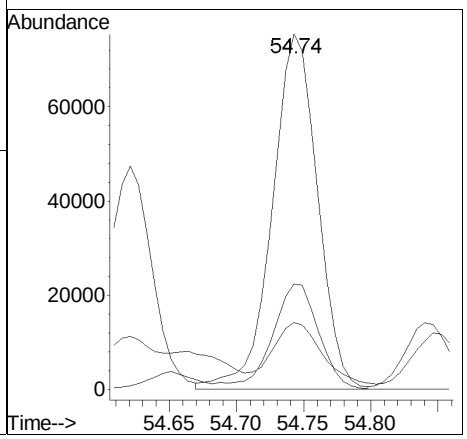


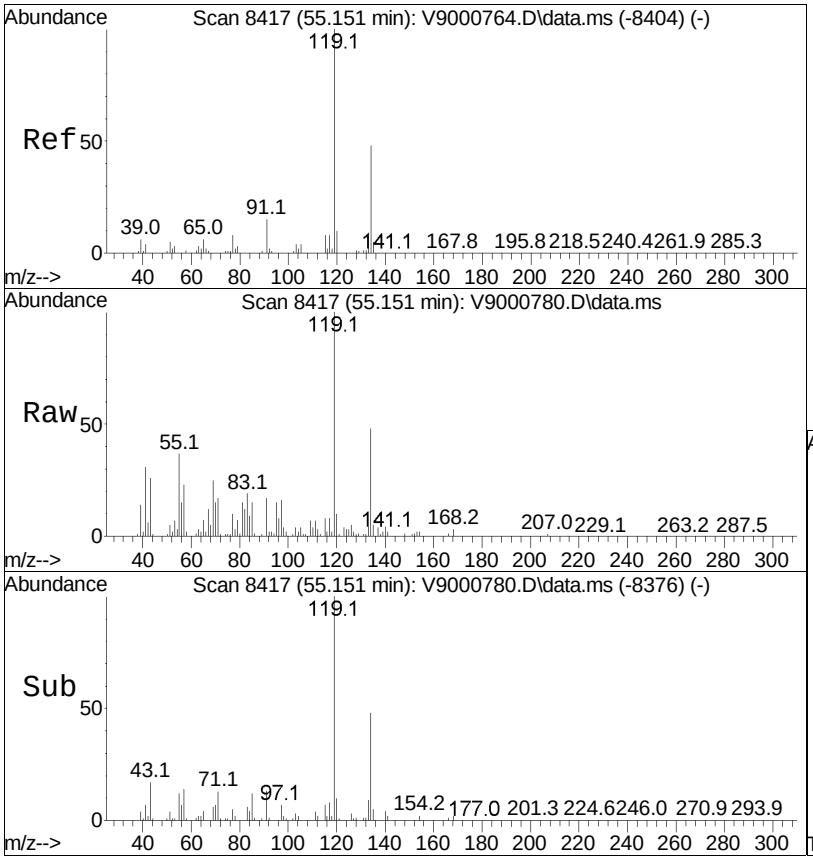


#136
1,2-Dimethyl-3-ethylbenzene
Concen: 31.52 ug/L
RT: 54.74 min Scan# 8350
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 176951

Ion	Ratio	Lower	Upper
119	100		
134	29.7	10.2	50.2
91	18.8	0.0	37.7

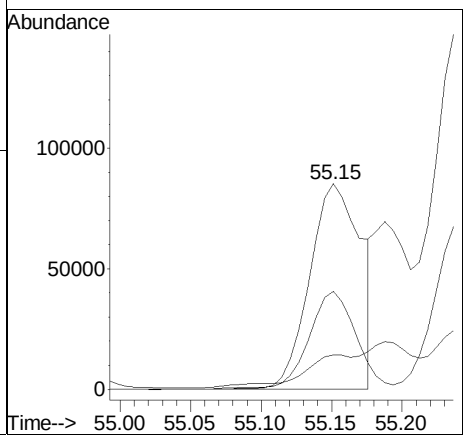


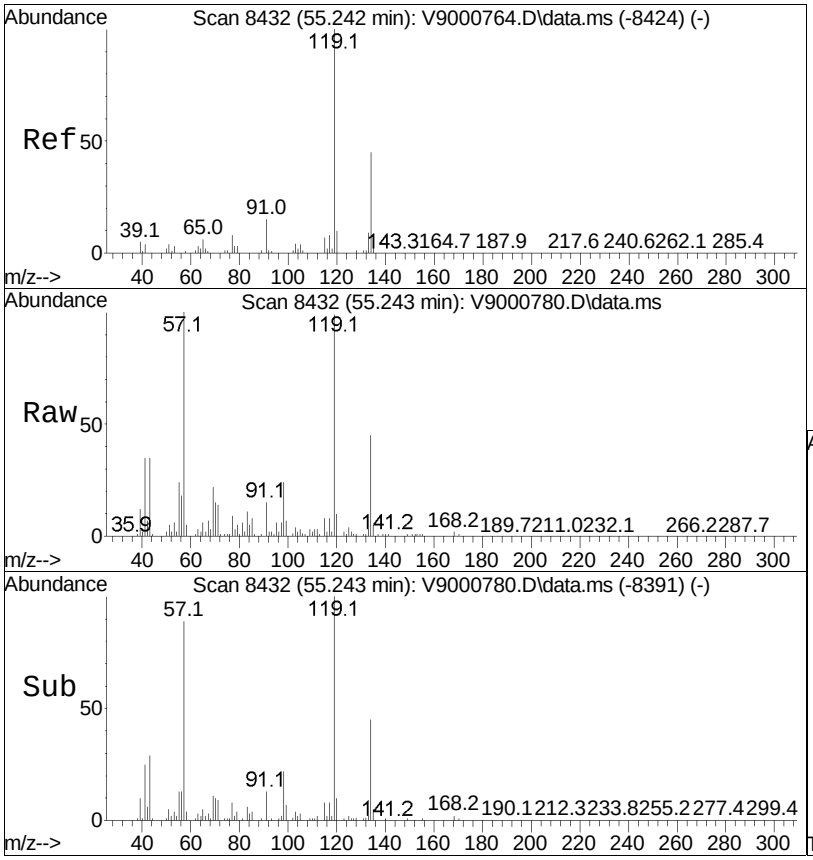


#137
1,2,4,5-Tetramethylbenzene
Concen: 36.11 ug/L
RT: 55.15 min Scan# 8417
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 215452

Ion	Ratio	Lower	Upper
119	100		
134	47.7	28.4	68.4
91	16.7	0.0	35.3

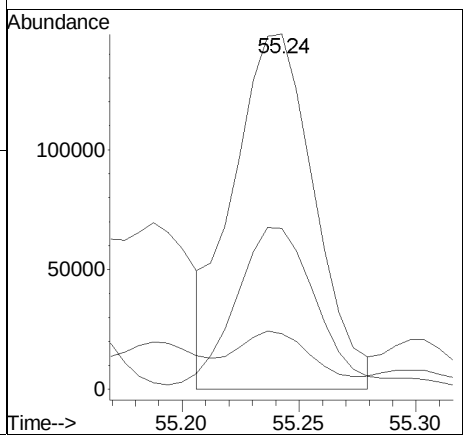


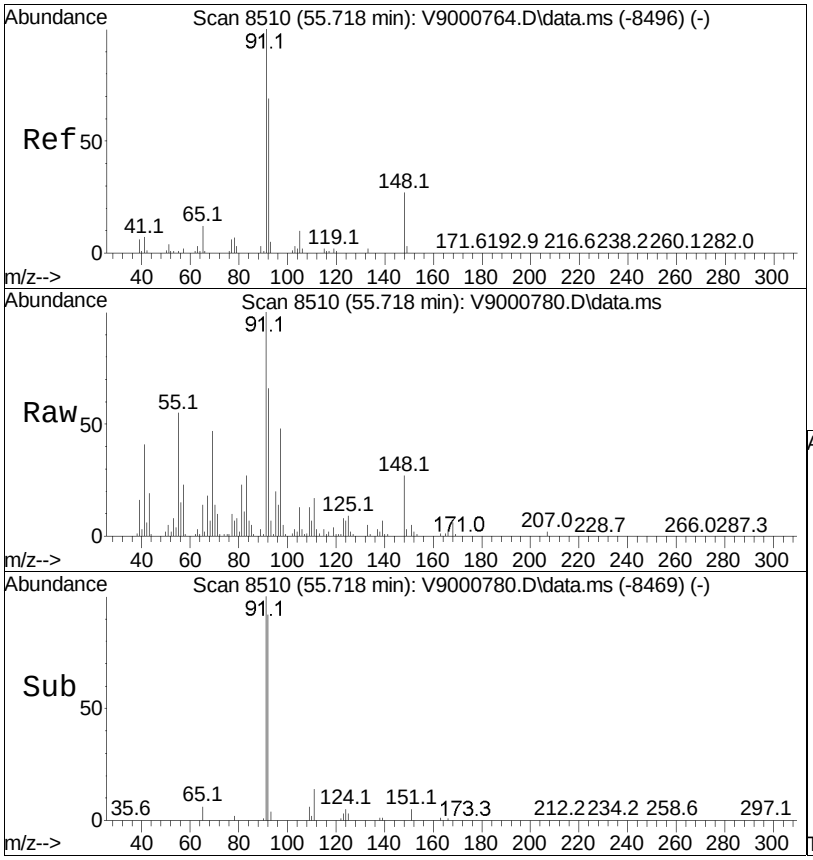


#138
1,2,3,5-Tetramethylbenzene
Concen: 66.43 ug/L m
RT: 55.24 min Scan# 8432
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 358220

Ion	Ratio	Lower	Upper
119	100		
134	45.3	25.1	65.1
91	15.7	0.0	35.4

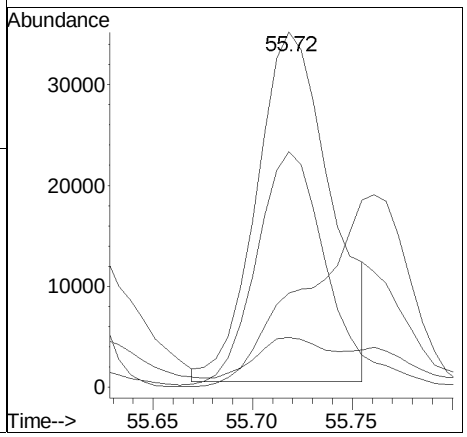


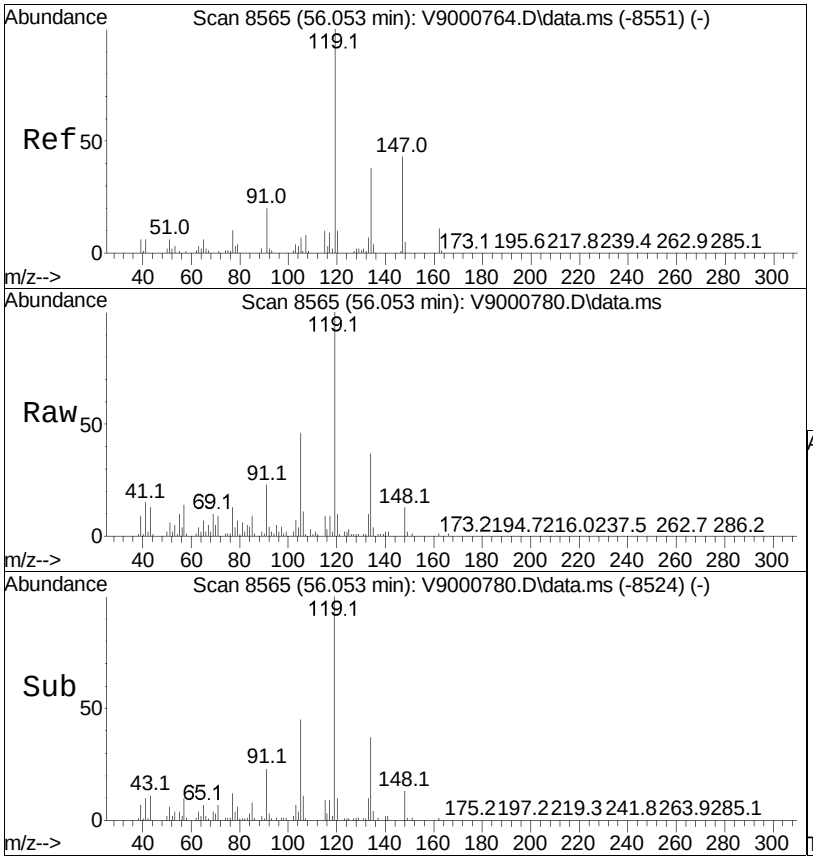


#139
Pentylbenzene
Concen: 17.26 ug/L m
RT: 55.72 min Scan# 8510
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 89939

Ion	Ratio	Lower	Upper
91	100		
92	66.3	49.2	89.2
65	14.1	0.0	32.4
148	26.5	6.8	46.8

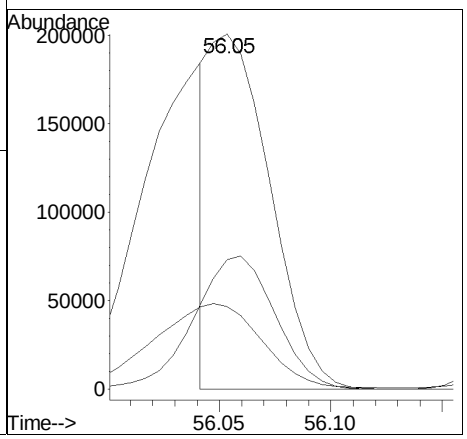


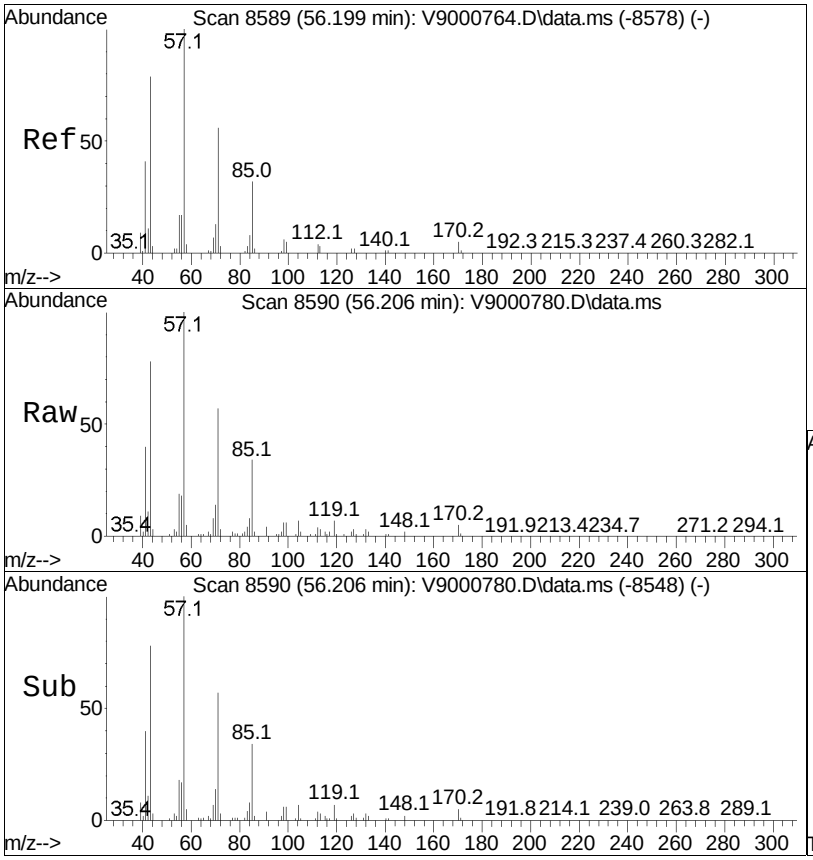


#140
1,2,3,4-Tetramethylbenzene
Concen: 52.75 ug/L m
RT: 56.05 min Scan# 8565
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:119 Resp: 380124

Ion	Ratio	Lower	Upper
119	100		
134	36.5	17.7	57.7
91	23.3	0.0	39.6

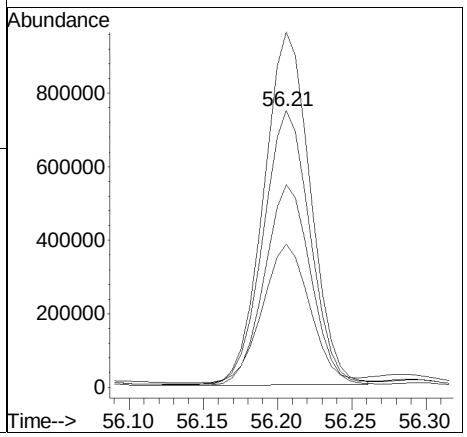


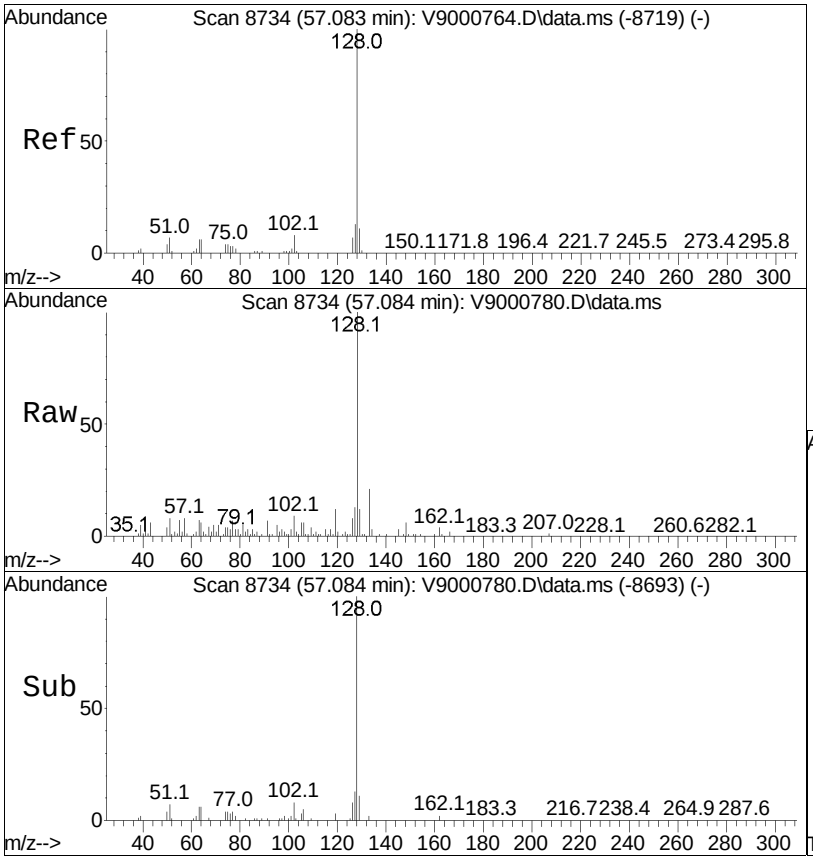


#142
Dodecane
Concen: 843.43 ug/L
RT: 56.21 min Scan# 8590
Delta R.T. 0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 43 Resp: 1642770

Ion	Ratio	Lower	Upper
43	100		
57	128.3	106.2	146.2
71	73.2	51.3	91.3
41	51.8	31.9	71.9

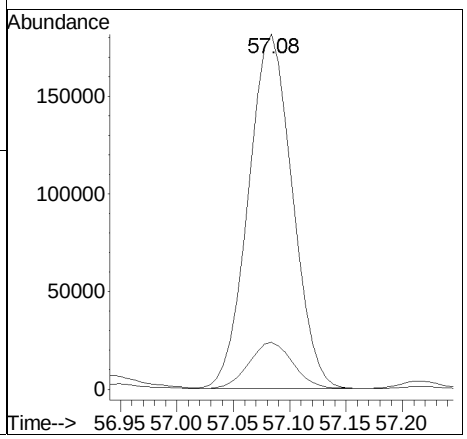


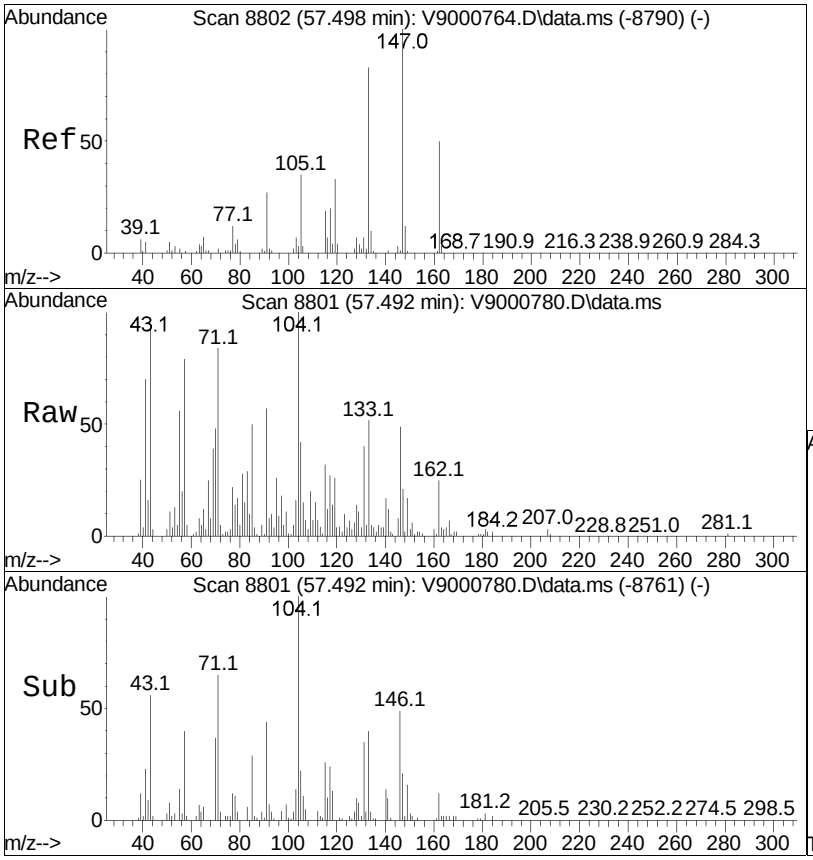


#144
Naphthalene
Concen: 69.63 ug/L
RT: 57.08 min Scan# 8734
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:128 Resp: 492079

Ion	Ratio	Lower	Upper
128	100		
127	13.3	0.0	32.7

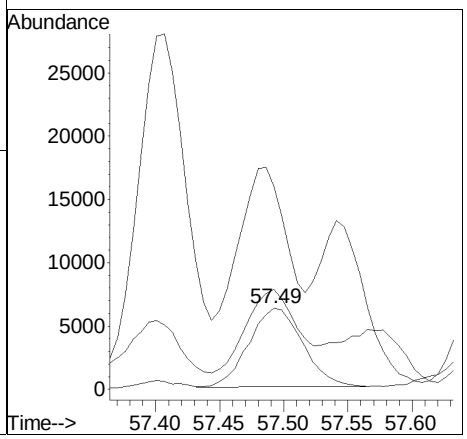


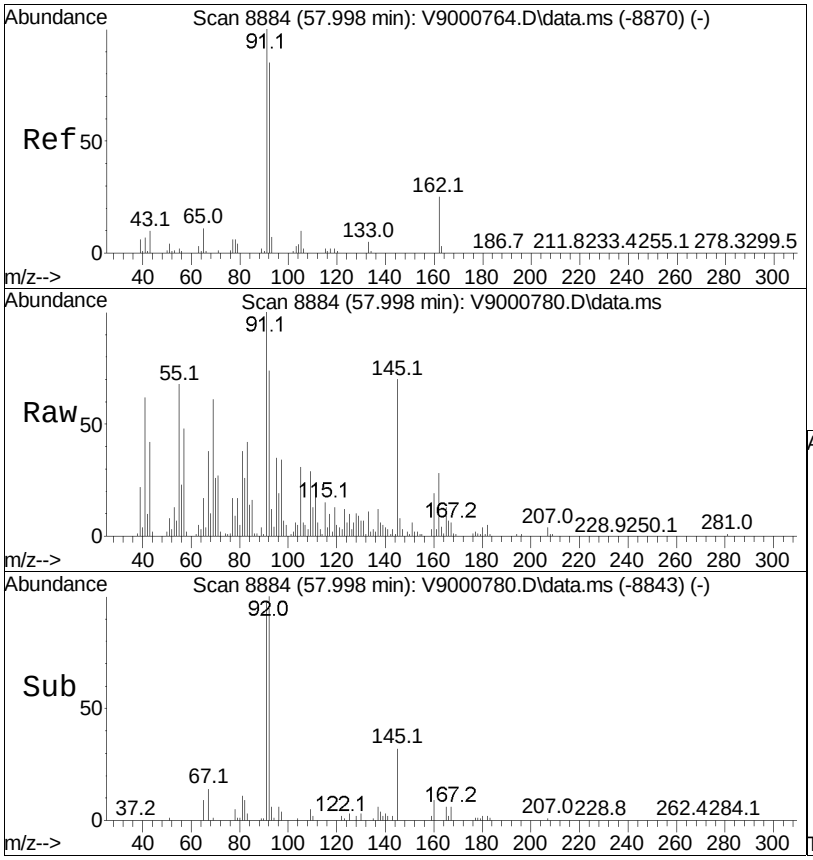


#146
1,2,4-Triethylbenzene
Concen: 6.28 ug/L
RT: 57.49 min Scan# 8801
Delta R.T. -0.006 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:147 Resp: 18193

Ion	Ratio	Lower	Upper
147	100		
162	123.0	30.2	70.2#
133	249.8	64.6	104.6#

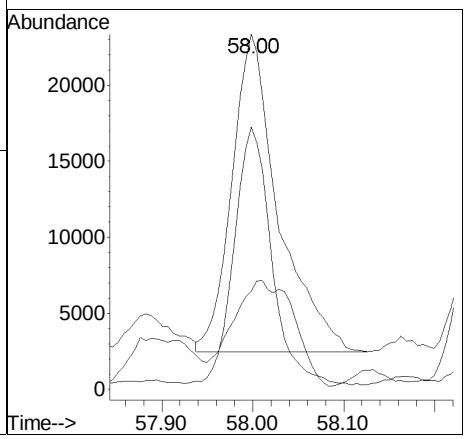


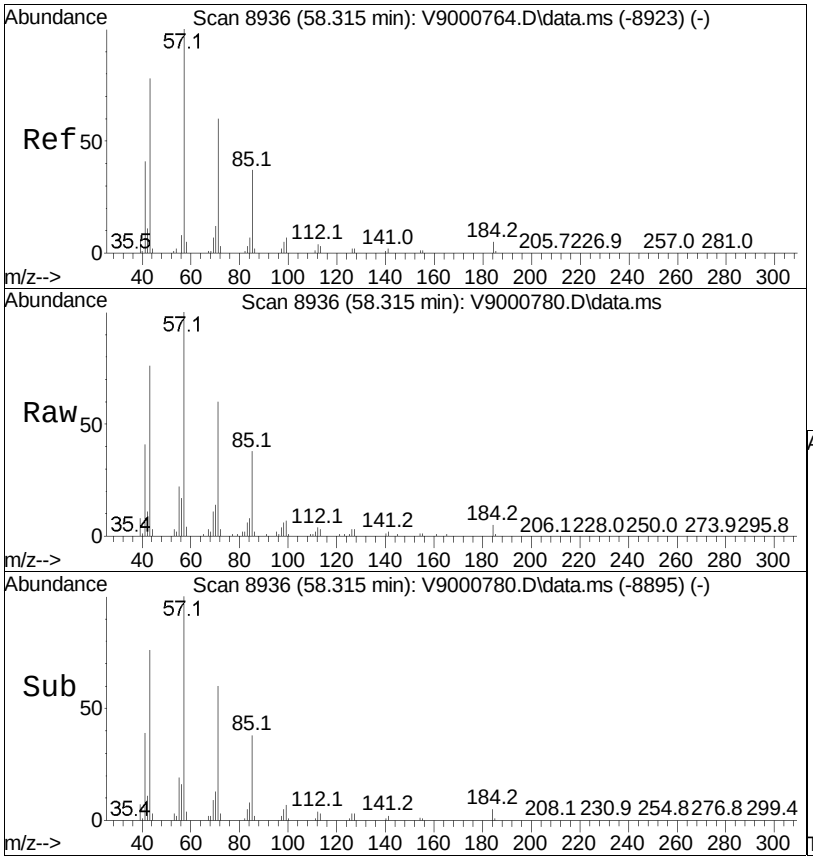


#147
Hexylbenzene
Concen: 16.06 ug/L
RT: 58.00 min Scan# 8884
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 91 Resp: 74049

Ion	Ratio	Lower	Upper
91	100		
92	73.8	64.8	104.8
162	27.6	5.5	45.5

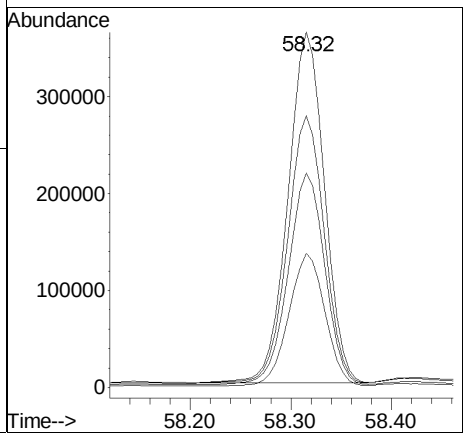


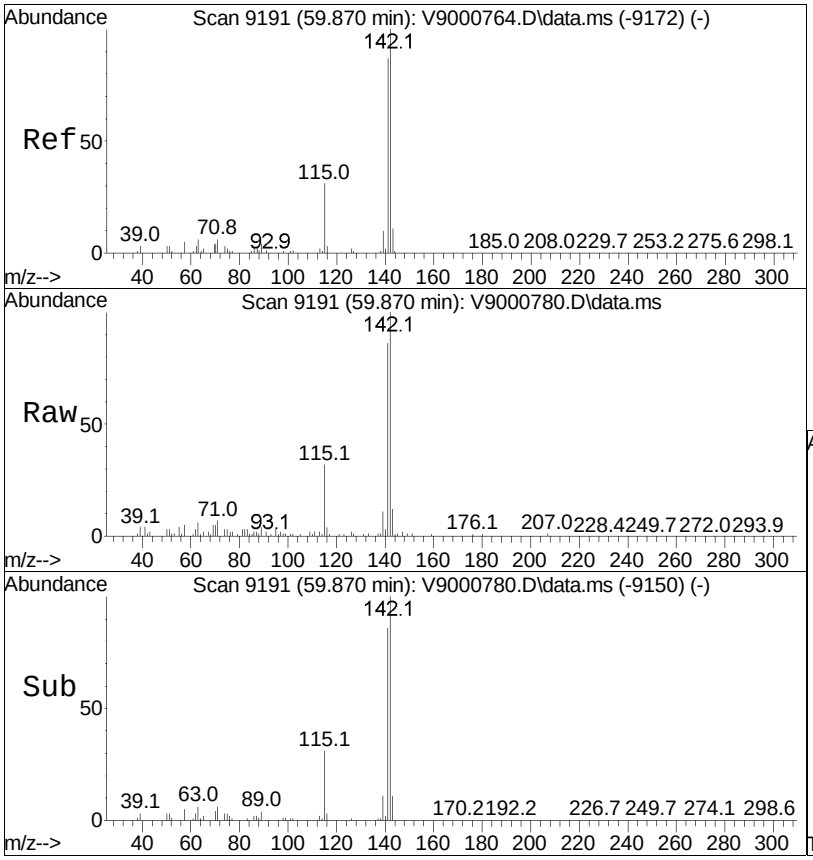


#149
Tridecane
Concen: 433.81 ug/L
RT: 58.32 min Scan# 8936
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 911429

Ion	Ratio	Lower	Upper
57	100		
43	76.4	58.5	98.5
71	60.3	40.3	80.3
85	37.7	17.1	57.1

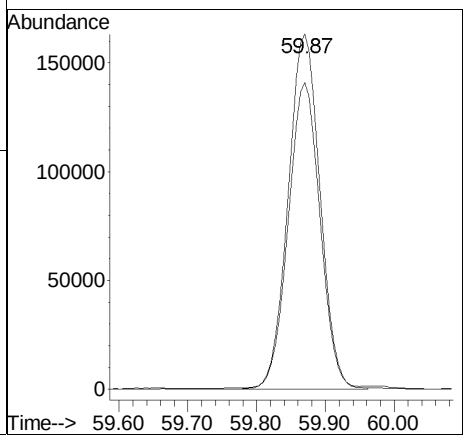


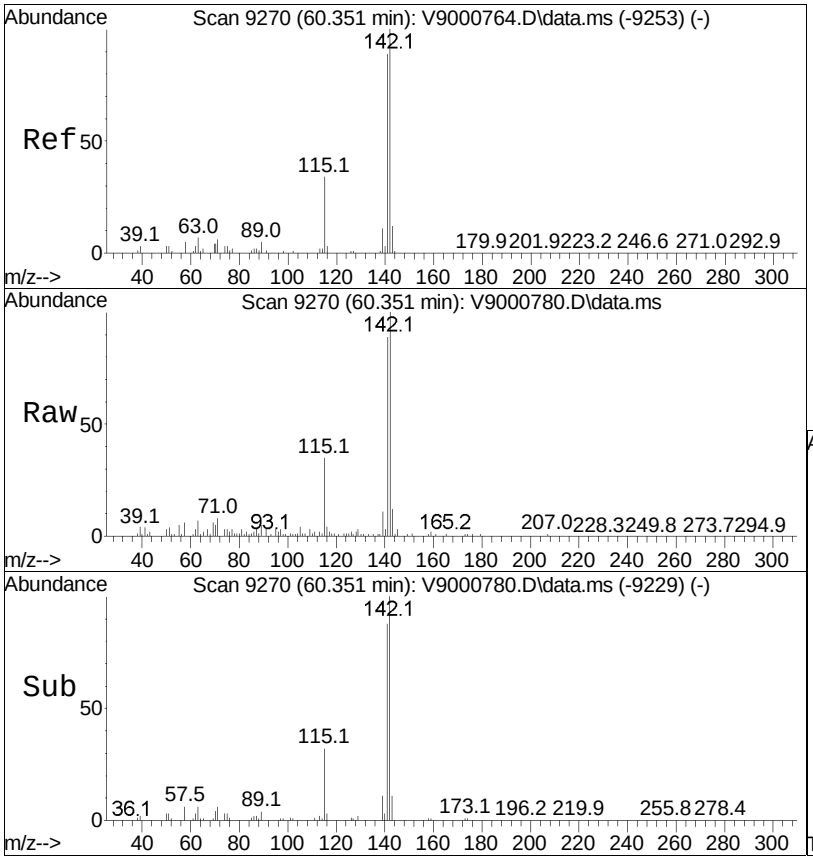


#150
2-Methylnaphthalene
Concen: 115.06 ug/L
RT: 59.87 min Scan# 9191
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:142 Resp: 526916

Ion	Ratio	Lower	Upper
142	100		
141	86.4	66.8	106.8

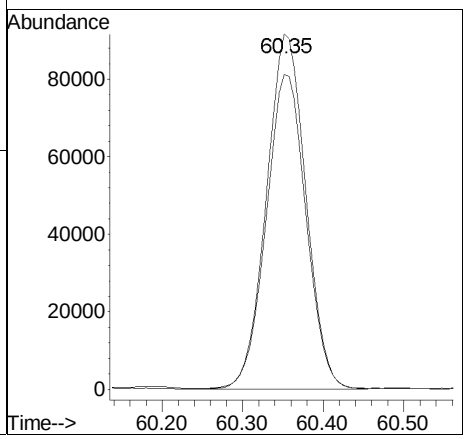


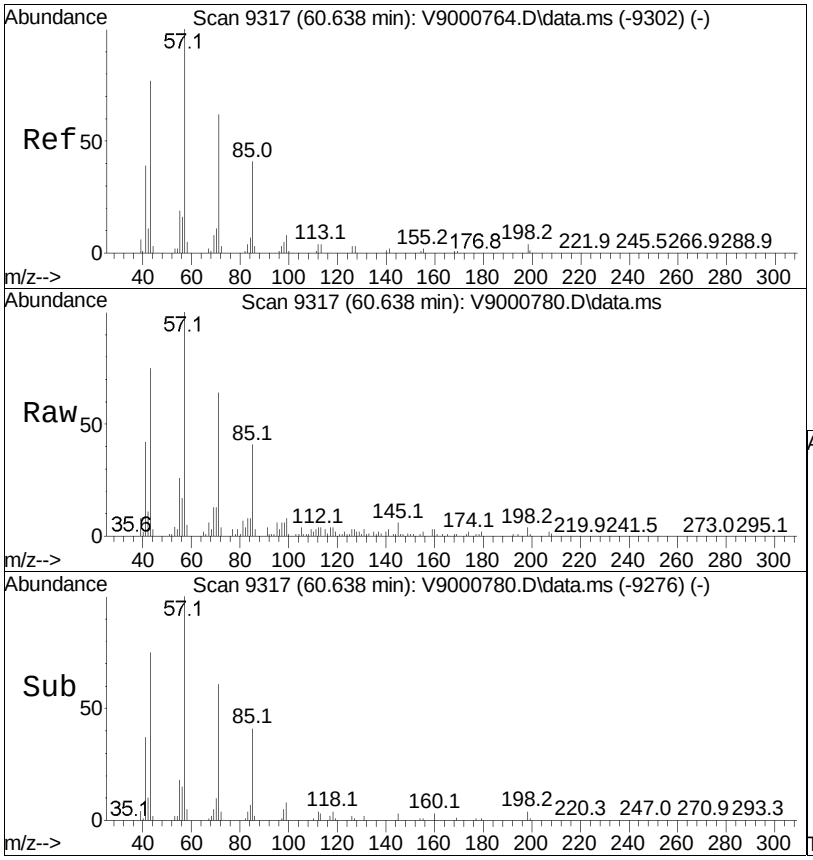


#151
1-Methylnaphthalene
Concen: 76.29 ug/L
RT: 60.35 min Scan# 9270
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion:142 Resp: 311353

Ion	Ratio	Lower	Upper
142	100		
141	88.6	69.0	109.0

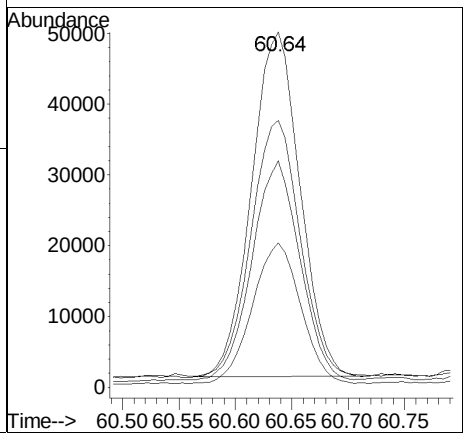


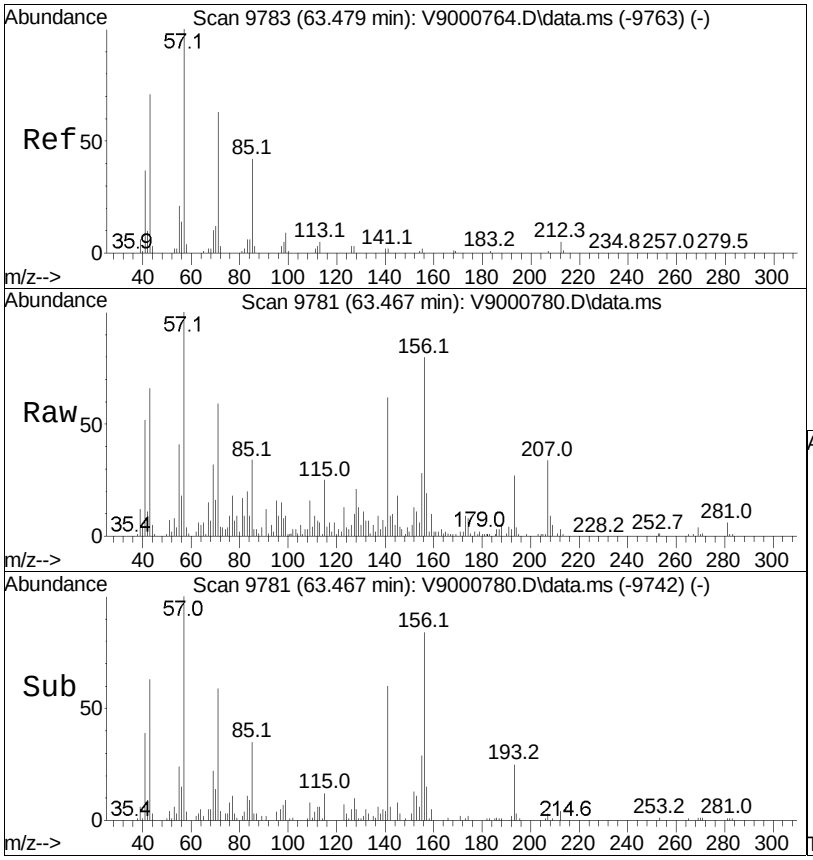


#152
Tetradecane
Concen: 86.88 ug/L
RT: 60.64 min Scan# 9317
Delta R.T. 0.000 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 145717

Ion	Ratio	Lower	Upper
57	100		
43	75.1	57.2	97.2
71	63.7	41.6	81.6
85	40.7	20.7	60.7

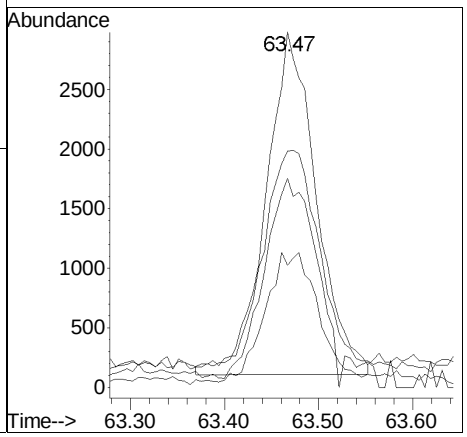




#153
Pentadecane
Concen: 9.33 ug/L
RT: 63.47 min Scan# 9781
Delta R.T. -0.012 min
Lab File: V9000780.D
Acq: 13 Dec 2021 07:28 pm

Tgt Ion: 57 Resp: 10663

Ion	Ratio	Lower	Upper
57	100		
43	66.5	51.4	91.4
71	58.8	42.8	82.8
85	34.4	21.5	61.5



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000784.D
Acq On : 14 Dec 2021 12:15 am
Operator : VOA9:RY
Sample : L2166503-01D2,31,0.1135,10,0.0005
Misc : WG1582700,ICAL18544
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 17 16:07:24 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.08	117	272839	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.17	113	68916	49.126	ug/L	-0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 98.25%			
62) Toluene-d8 (surr)	31.25	98	326587	50.180	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.36%			
101) 4-Bromofluorobenzene (...	46.54	95	134129	48.783	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.57%			
Target Compounds						Qvalue
113) Decane	50.78	43	53367	24.383	ug/L	98
132) Undecane	53.97	57	148203	55.422	ug/L	99
142) Dodecane	56.20	43	101084	51.966	ug/L	97
149) Tridecane	58.32	57	74718	35.610	ug/L	99

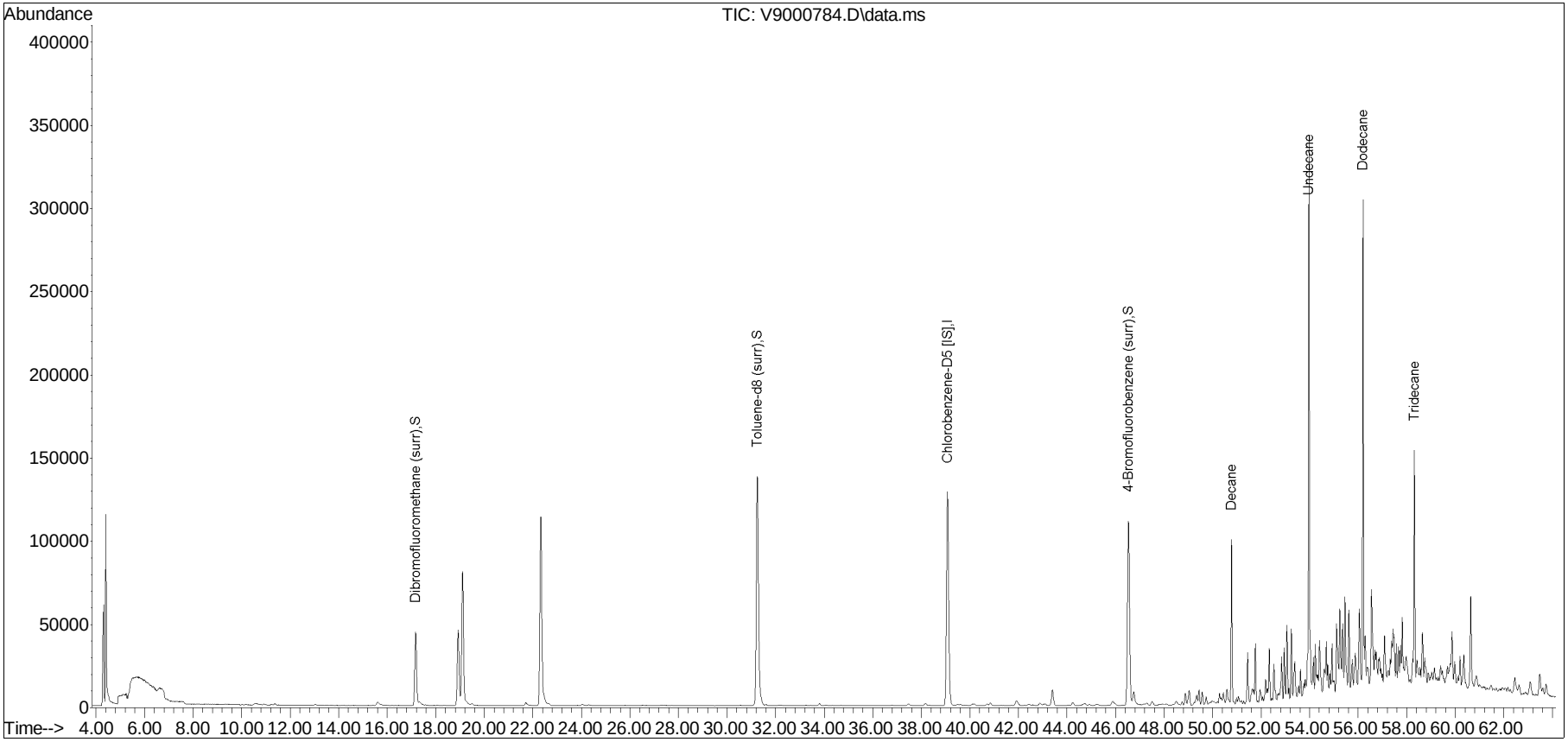
(#) = qualifier out of range (m) = manual integration (+) = signals summed

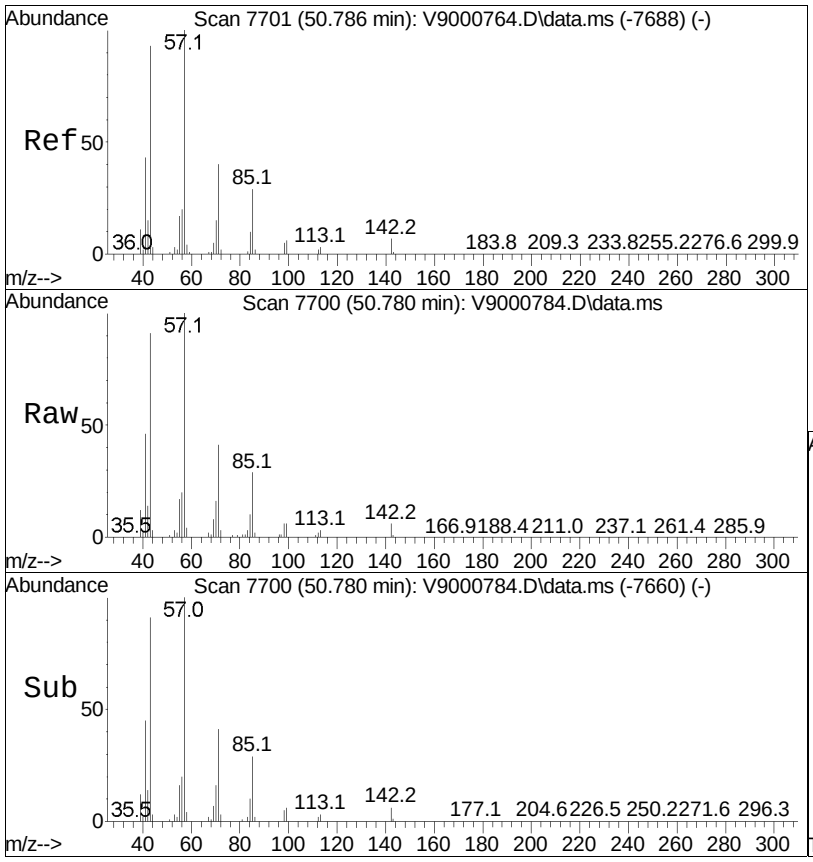
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000784.D
Acq On : 14 Dec 2021 12:15 am
Operator : VOA9:RY
Sample : L2166503-01D2,31,0.1135,10,0.0005
Misc : WG1582700,ICAL18544
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 17 16:07:24 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

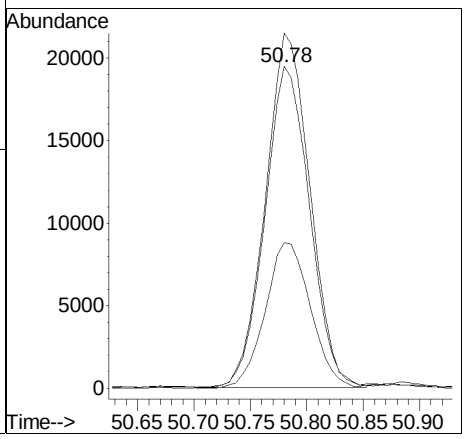


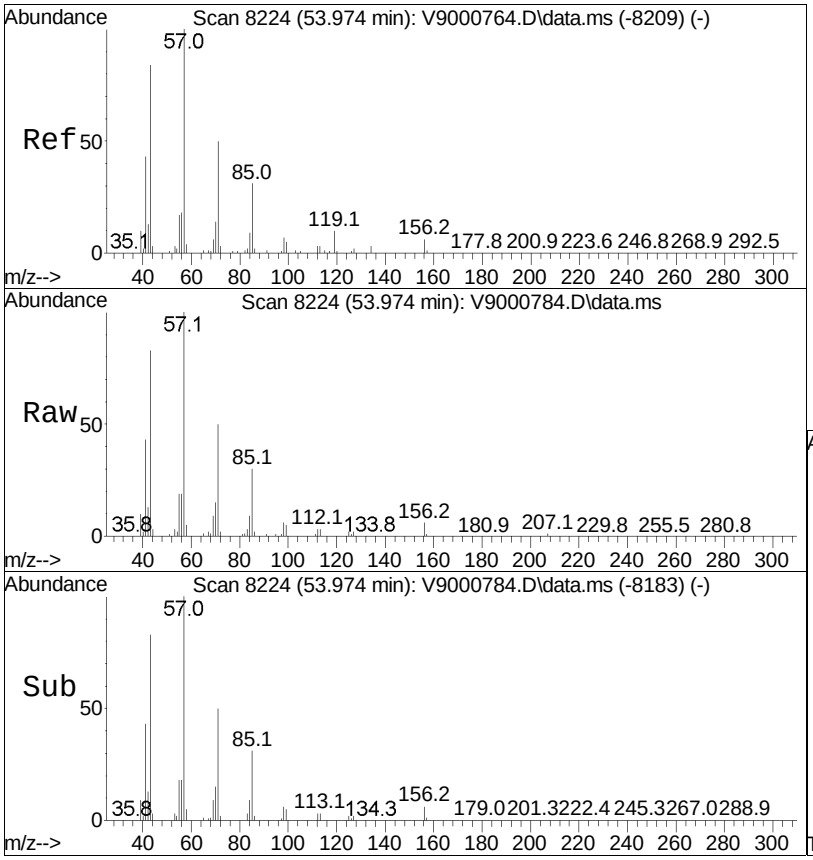


#113
Decane
Concen: 24.38 ug/L
RT: 50.78 min Scan# 7700
Delta R.T. -0.006 min
Lab File: V9000784.D
Acq: 14 Dec 2021 12:15 am

Tgt Ion: 43 Resp: 53367

Ion	Ratio	Lower	Upper
43	100		
57	110.3	88.0	128.0
71	45.2	23.6	63.6

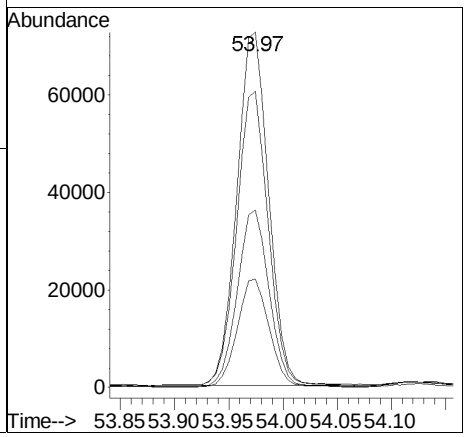


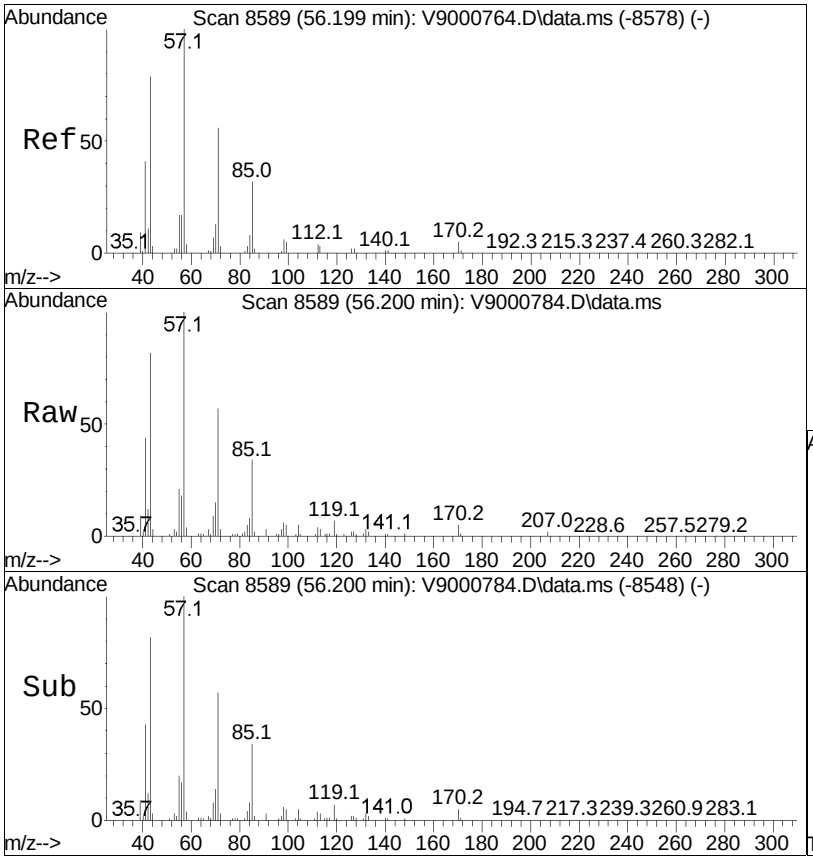


#132
Undecane
Concen: 55.42 ug/L
RT: 53.97 min Scan# 8224
Delta R.T. 0.000 min
Lab File: V9000784.D
Acq: 14 Dec 2021 12:15 am

Tgt Ion: 57 Resp: 148203

Ion	Ratio	Lower	Upper
57	100		
43	83.3	63.7	103.7
71	49.9	30.1	70.1
85	30.5	11.2	51.2

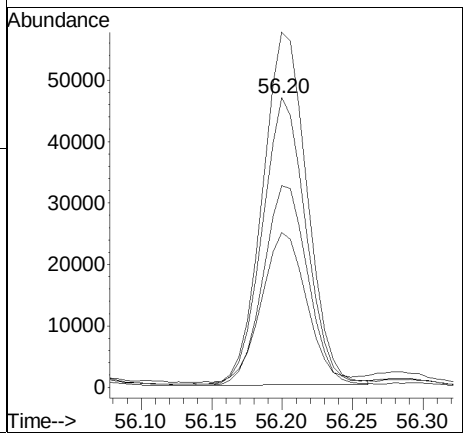


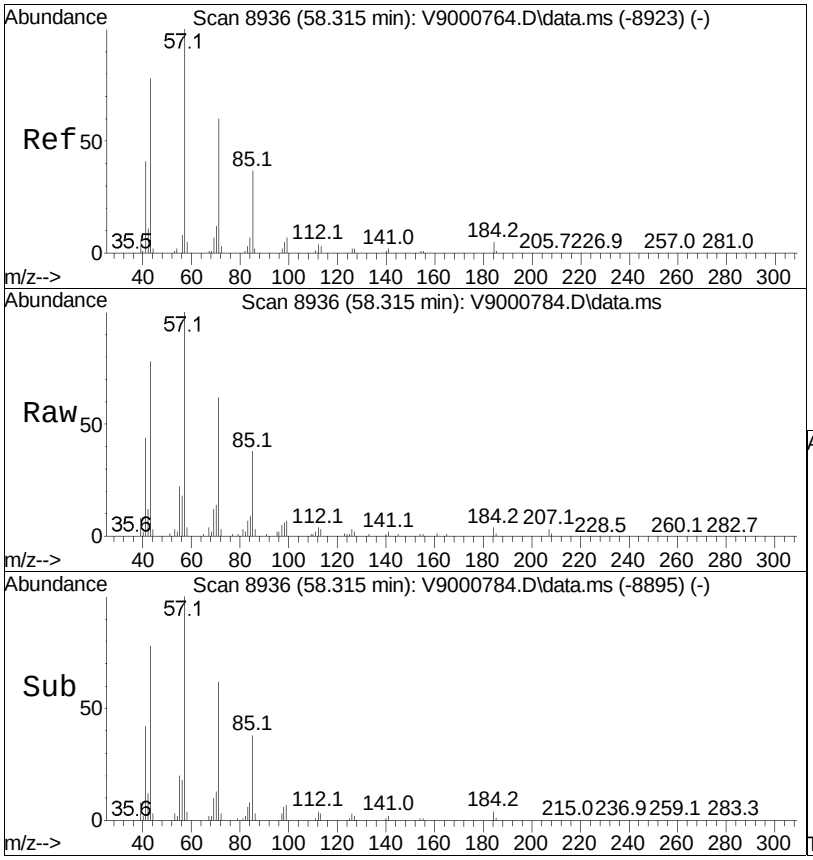


#142
Dodecane
Concen: 51.97 ug/L
RT: 56.20 min Scan# 8589
Delta R.T. 0.000 min
Lab File: V9000784.D
Acq: 14 Dec 2021 12:15 am

Tgt Ion: 43 Resp: 101084

Ion	Ratio	Lower	Upper
43	100		
57	122.6	106.2	146.2
71	69.6	51.3	91.3
41	53.4	31.9	71.9

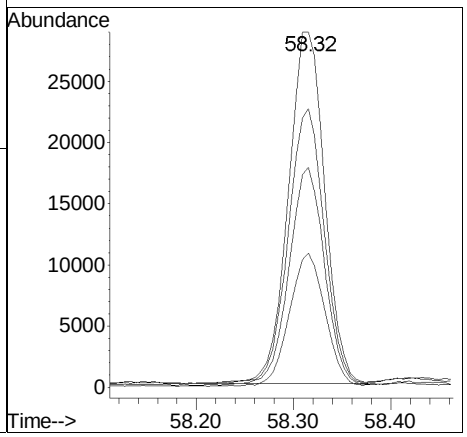




#149
Tridecane
Concen: 35.61 ug/L
RT: 58.32 min Scan# 8936
Delta R.T. 0.000 min
Lab File: V9000784.D
Acq: 14 Dec 2021 12:15 am

Tgt Ion: 57 Resp: 74718

Ion	Ratio	Lower	Upper
57	100		
43	78.5	58.5	98.5
71	62.0	40.3	80.3
85	37.8	17.1	57.1



Batch Quality Control

Method Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000736.D
Acq On : 07 Dec 2021 11:16 pm
Operator : VOA9:RY
Sample : WG1581735-5,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 08 11:23:11 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.08	117	269594	50.000	ug/L	-0.02
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.13	113	80277	57.856	ug/L	-0.06
Spiked Amount 50.000	Range 78 - 118		Recovery = 115.71%			
62) Toluene-d8 (surr)	31.24	98	323165	55.983	ug/L	-0.03
Spiked Amount 50.000	Range 87 - 113		Recovery = 111.97%			
101) 4-Bromofluorobenzene (...	46.54	95	135191	46.586	ug/L	-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 93.17%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.	d	
3) Isopentane	0.00		0	N.D.	d	
4) 1-Pentene	0.00		0	N.D.	d	
5) 2-Methyl-1-butene	0.00		0	N.D.	d	
6) Pentane	0.00		0	N.D.	d	
7) trans-2-Pentene	0.00		0	N.D.	d	
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.	d	
9) cis-2-Pentene	0.00		0	N.D.	d	
10) Tertiary butanol	10.60	59	1749M4	5.459	ug/L	
11) 2,2-Dimethylbutane	0.00		0	N.D.	d	
12) 4-Methyl-1-pentene	0.00		0	N.D.	d	
13) Cyclopentane	0.00		0	N.D.	d	
14) 2,3-Dimethylbutane	0.00		0	N.D.	d	
15) 2-Methylpentane	0.00		0	N.D.	d	
16) MTBE	0.00		0	N.D.	d	
17) 3-Methylpentane	0.00		0	N.D.	d	
18) 1-Hexene	0.00		0	N.D.	d	
19) Hexane	0.00		0	N.D.	d	
20) Diisopropyl ether	0.00		0	N.D.	d	
21) trans-2-Hexene	0.00		0	N.D.	d	
22) 2-Methyl-2-pentene	0.00		0	N.D.	d	
23) cis-2-Hexene	0.00		0	N.D.	d	
25) Ethyl tertiary butyl e...	0.00		0	N.D.	d	
26) 2,2-Dimethylpentane	0.00		0	N.D.	d	
27) Methylcyclopentane	0.00		0	N.D.	d	
28) 2,4-Dimethylpentane	0.00		0	N.D.	d	
29) 2,2,3-Trimethylbutane	0.00		0	N.D.	d	
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.	d	

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000736.D
Acq On : 07 Dec 2021 11:16 pm
Operator : VOA9:RY
Sample : WG1581735-5,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 08 11:23:11 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	0.00		0		N.D.	d
33) 2-Methylhexane	0.00		0		N.D.	d
34) Benzene	0.00		0		N.D.	d
35) 2,3-Dimethylpentane	0.00		0		N.D.	d
36) Thiophene	0.00		0		N.D.	d
37) 1,1-Dimethylcyclopentane	0.00		0		N.D.	d
38) 3-Methylhexane	0.00		0		N.D.	d
39) TAME	0.00		0		N.D.	d
40) cis-1,3-Dimethylcyclop...	0.00		0		N.D.	d
41) 3-Ethylpentane	0.00		0		N.D.	d
43) 1-Heptene/trans-1,2-DMCP	0.00		0		N.D.	d
44) Isooctane	0.00		0		N.D.	d
45) trans-3-Heptene	0.00		0		N.D.	d
46) Heptane	0.00		0		N.D.	d
48) trans-2-Heptene	0.00		0		N.D.	d
49) cis-2-Heptene	0.00		0		N.D.	d
50) 2,2-Dimethylhexane	0.00		0		N.D.	d
51) Methylcyclohexane	0.00		0		N.D.	d
52) 2,5-Dimethylhexane	0.00		0		N.D.	d
53) 2,4-Dimethylhexane	0.00		0		N.D.	d
54) Ethylcyclopentane	27.46		0		N.D.	
55) 2,2,3-Trimethylpentane	0.00		0		N.D.	d
57) 2,3,4-Trimethylpentane	0.00		0		N.D.	d
58) 2,3,3-Trimethylpentane	0.00		0		N.D.	d
59) 2,3-Dimethylhexane	0.00		0		N.D.	d
60) 2-Methylheptane	0.00		0		N.D.	d
61) 4-Methylheptane	0.00		0		N.D.	d
63) 3-Methylheptane	0.00		0		N.D.	d
65) 3-Ethylhexane	0.00		0		N.D.	d
66) Toluene	0.00		0		N.D.	d
67) 2-Methylthiophene	0.00		0		N.D.	d
68) trans-1,4-Dimethylcycl...	0.00		0		N.D.	d
69) 3-Methylthiophene	0.00		0		N.D.	d
70) 1-Octene	0.00		0		N.D.	d
71) Octane	0.00		0		N.D.	d
72) trans-1,2-Dimethylcycl...	0.00		0		N.D.	d
73) 1,2-Dibromoethane	0.00		0		N.D.	d
75) cis-2-Octene	0.00		0		N.D.	d
76) Isopropylcyclopentane	0.00		0		N.D.	d
77) cis-1,2-Dimethylcycloh...	0.00		0		N.D.	d
78) 2,5-Dimethylheptane	0.00		0		N.D.	d

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000736.D
Acq On : 07 Dec 2021 11:16 pm
Operator : VOA9:RY
Sample : WG1581735-5,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 08 11:23:11 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) 3,5-Dimethylheptane	0.00		0		N.D.	d
80) 3,3-Dimethylheptane	0.00		0		N.D.	d
81) 1,1,4-Trimethylcyclohe...	0.00		0		N.D.	d
82) 2,3-Dimethylheptane	0.00		0		N.D.	d
83) 3,4-Dimethylheptane	0.00		0		N.D.	d
84) 4-Methyloctane	0.00		0		N.D.	d
85) 2-Methyloctane	0.00		0		N.D.	d
86) Ethylbenzene	0.00		0		N.D.	d
88) 2-Ethylthiophene	0.00		0		N.D.	d
89) 3-Methyloctane	0.00		0		N.D.	d
90) 3,3-Diethylpentane	0.00		0		N.D.	d
91) p/m-Xylene	0.00		0		N.D.	d
92) 1-Nonene	0.00		0		N.D.	d
93) trans-3-Nonene	0.00		0		N.D.	d
94) cis-3-Nonene	0.00		0		N.D.	d
95) Nonane	0.00		0		N.D.	d
96) Styrene	0.00		0		N.D.	d
98) o-Xylene	0.00		0		N.D.	d
99) 2-Nonene	0.00		0		N.D.	d
100) Isopropylcyclohexane	0.00		0		N.D.	d
102) Isopropylbenzene	0.00		0		N.D.	d
103) 3,3-Dimethyloctane	0.00		0		N.D.	d
104) n-Propylbenzene	0.00		0		N.D.	d
105) 2-Methylnonane	0.00		0		N.D.	d
106) 3-Methylnonane	0.00		0		N.D.	d
107) 1-Methyl-3-ethylbenzene	0.00		0		N.D.	d
108) 1-Methyl-4-ethylbenzene	0.00		0		N.D.	d
109) 1,3,5-Trimethylbenzene	0.00		0		N.D.	d
110) 1-Decene	0.00		0		N.D.	d
111) Isobutylcyclohexane	0.00		0		N.D.	d
112) 1-Methyl-2-ethylbenzene	0.00		0		N.D.	d
113) Decane	0.00		0		N.D.	d
114) tert-Butylbenzene	0.00		0		N.D.	d
115) 1,2,4-Trimethylbenzene	0.00		0		N.D.	d
116) Isobutylbenzene	0.00		0		N.D.	d
117) sec-Butylbenzene	0.00		0		N.D.	d
118) 1-Methyl-3-isopropylbe...	0.00		0		N.D.	d
119) 1-Methyl-4-isopropylbe...	0.00		0		N.D.	d
120) 1,2,3-Trimethylbenzene	0.00		0		N.D.	d
121) 1-Methyl-2-isopropylbe...	0.00		0		N.D.	d
122) Indan	0.00		0		N.D.	d

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000736.D
Acq On : 07 Dec 2021 11:16 pm
Operator : VOA9:RY
Sample : WG1581735-5,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 08 11:23:11 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
123) 1,3-Diethylbenzene	0.00		0	N.D.	d	
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d	
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	0.00		0	N.D.	d	
127) n-Butylbenzene	0.00		0	N.D.	d	
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
129) 1,2-Diethylbenzene	0.00		0	N.D.	d	
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
132) Undecane	0.00		0	N.D.	d	
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	0.00		0	N.D.	d	
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.	d	
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.	d	
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d	
139) Pentylbenzene	0.00		0	N.D.	d	
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.	d	
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d	
142) Dodecane	0.00		0	N.D.	d	
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d	
144) Naphthalene	57.08	128	175	0.024	ug/L	90
145) Benzothiophene	0.00		0	N.D.	d	
146) 1,2,4-Triethylbenzene	0.00		0	N.D.	d	
147) Hexylbenzene	0.00		0	N.D.	d	
148) MMT	0.00		0	N.D.	d	
149) Tridecane	0.00		0	N.D.	d	
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.	d	
152) Tetradecane	0.00		0	N.D.	d	
153) Pentadecane	0.00		0	N.D.	d	

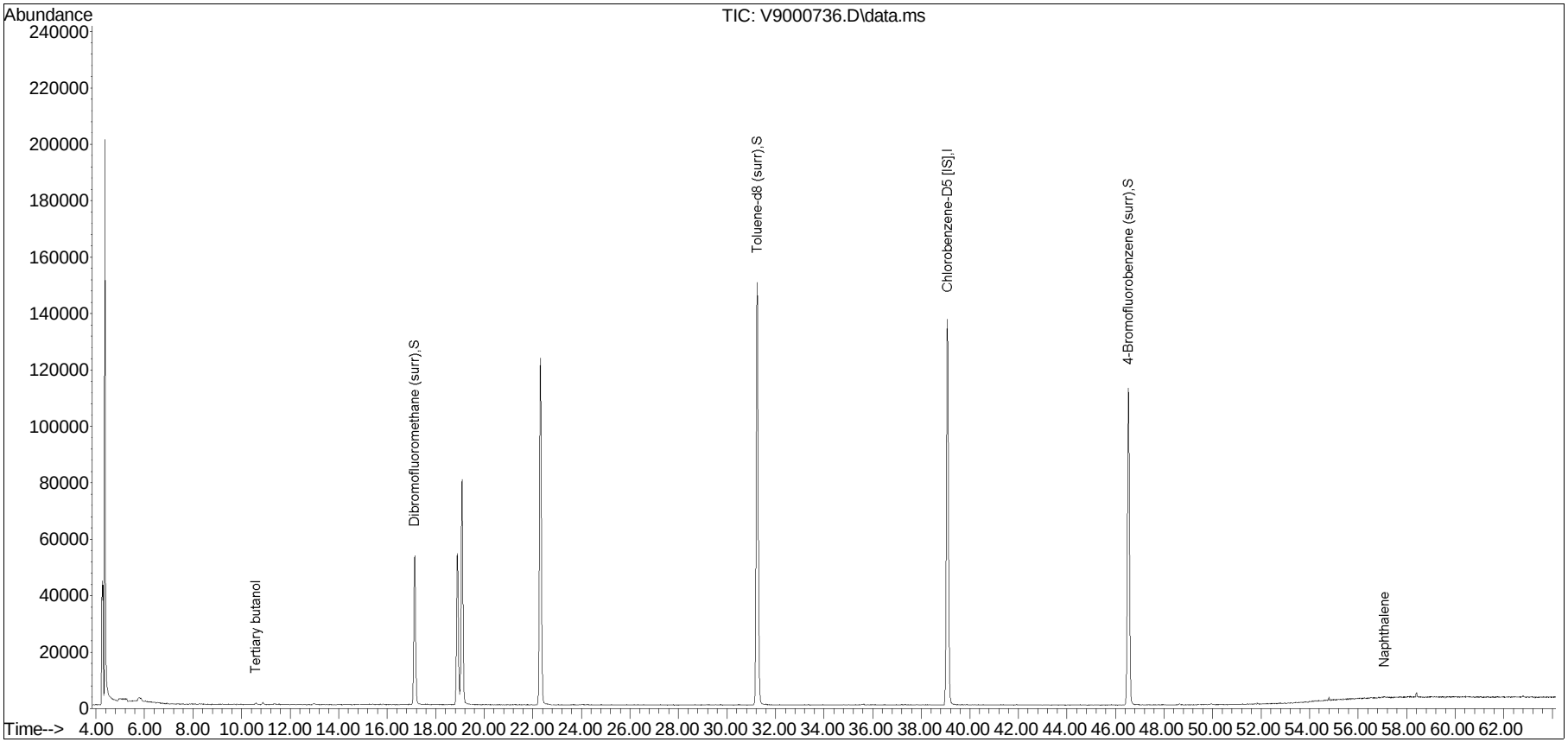
(#) = qualifier out of range (m) = manual integration (+) = signals summed

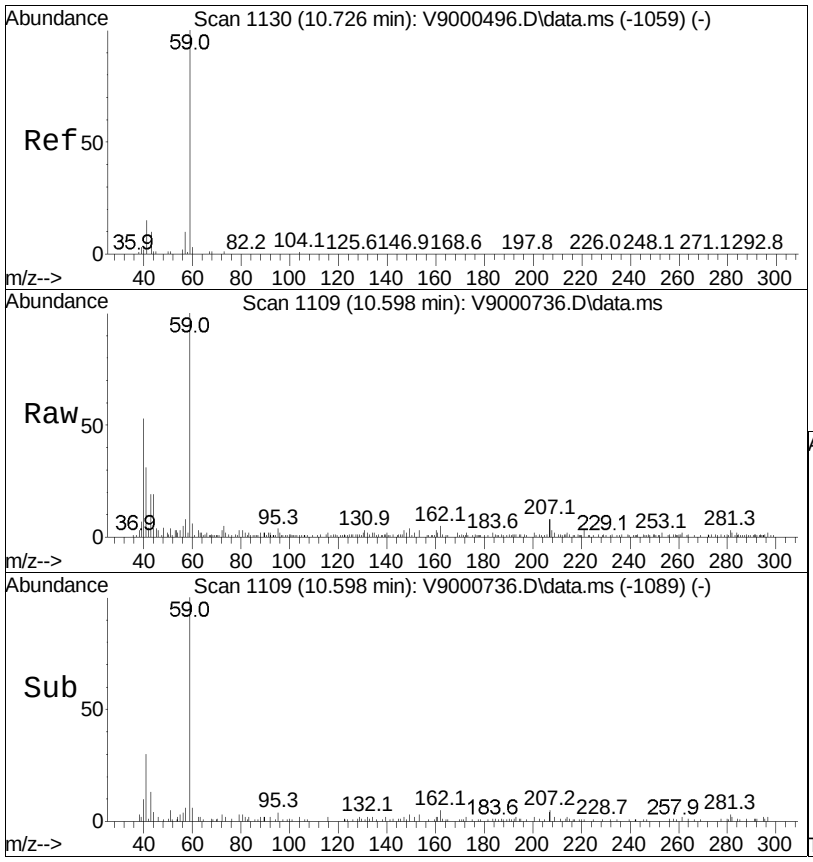
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000736.D
Acq On : 07 Dec 2021 11:16 pm
Operator : VOA9:RY
Sample : WG1581735-5,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 08 11:23:11 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

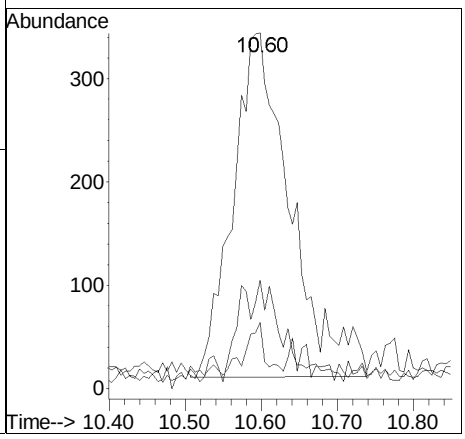


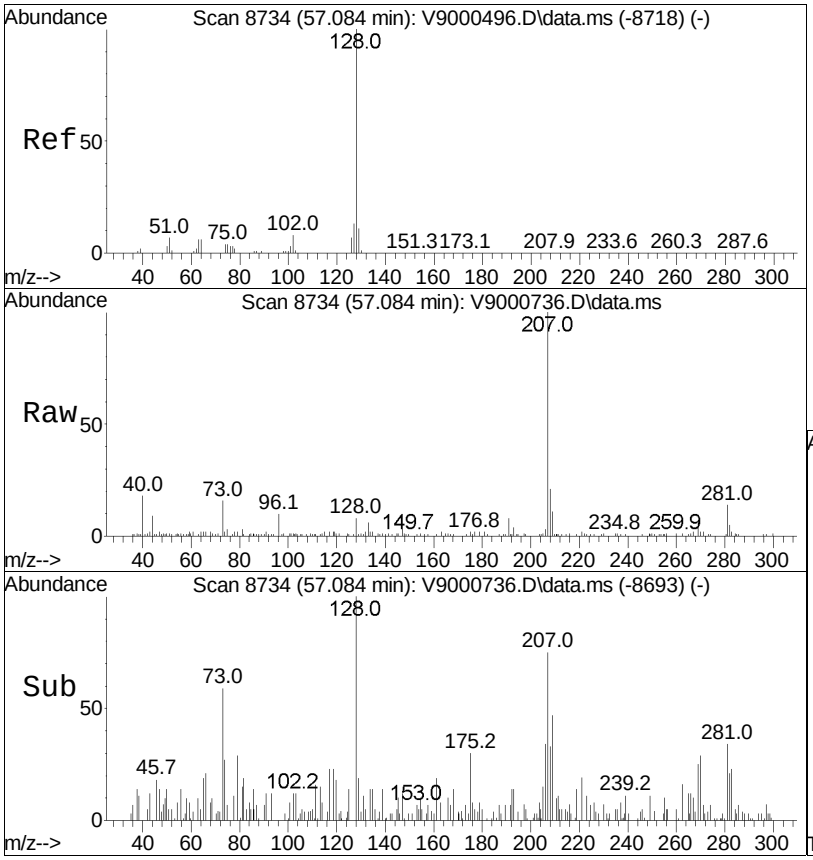


#10
Tertiary butanol
Concen: 5.46 ug/L m
RT: 10.60 min Scan# 1109
Delta R.T. -0.128 min
Lab File: V9000736.D
Acq: 07 Dec 2021 11:16 pm

Tgt Ion: 59 Resp: 1749

Ion	Ratio	Lower	Upper
59	100		
41	30.5	0.6	40.6
43	18.6	0.0	32.3

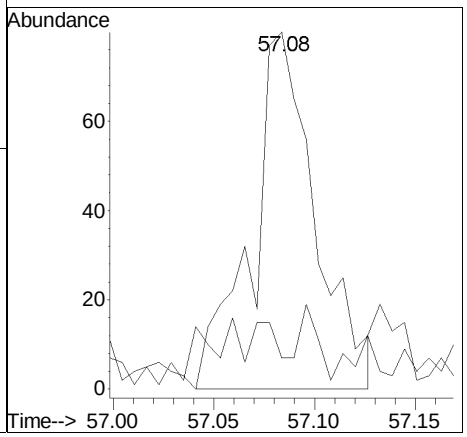




#144
Naphthalene
Concen: 0.02 ug/L
RT: 57.08 min Scan# 8734
Delta R.T. -0.000 min
Lab File: V9000736.D
Acq: 07 Dec 2021 11:16 pm

Tgt Ion:128 Resp: 175

Ion	Ratio	Lower	Upper
128	100		
127	8.8	0.0	32.6



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000776.D
Acq On : 13 Dec 2021 02:42 pm
Operator : VOA9:RY
Sample : WG1582700-5,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 17 15:53:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.08	117	246272	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.17	113	66800	52.754	ug/L	-0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 105.51%			
62) Toluene-d8 (surr)	31.25	98	290516	49.454	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.91%			
101) 4-Bromofluorobenzene (...	46.54	95	123443	49.740	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.48%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.	d	
3) Isopentane	0.00		0	N.D.	d	
4) 1-Pentene	0.00		0	N.D.	d	
5) 2-Methyl-1-butene	0.00		0	N.D.	d	
6) Pentane	0.00		0	N.D.	d	
7) trans-2-Pentene	0.00		0	N.D.	d	
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.	d	
9) cis-2-Pentene	0.00		0	N.D.	d	
10) Tertiary butanol	0.00		0	N.D.	d	
11) 2,2-Dimethylbutane	0.00		0	N.D.	d	
12) 4-Methyl-1-pentene	0.00		0	N.D.	d	
13) Cyclopentane	0.00		0	N.D.	d	
14) 2,3-Dimethylbutane	0.00		0	N.D.	d	
15) 2-Methylpentane	0.00		0	N.D.	d	
16) MTBE	0.00		0	N.D.	d	
17) 3-Methylpentane	0.00		0	N.D.	d	
18) 1-Hexene	0.00		0	N.D.	d	
19) Hexane	0.00		0	N.D.	d	
20) Diisopropyl ether	0.00		0	N.D.	d	
21) trans-2-Hexene	0.00		0	N.D.	d	
22) 2-Methyl-2-pentene	0.00		0	N.D.	d	
23) cis-2-Hexene	0.00		0	N.D.	d	
25) Ethyl tertiary butyl e...	0.00		0	N.D.	d	
26) 2,2-Dimethylpentane	0.00		0	N.D.	d	
27) Methylcyclopentane	0.00		0	N.D.	d	
28) 2,4-Dimethylpentane	0.00		0	N.D.	d	
29) 2,2,3-Trimethylbutane	0.00		0	N.D.	d	
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.	d	

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000776.D
Acq On : 13 Dec 2021 02:42 pm
Operator : VOA9:RY
Sample : WG1582700-5,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 17 15:53:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	0.00		0		N.D.	d
33) 2-Methylhexane	0.00		0		N.D.	d
34) Benzene	0.00		0		N.D.	d
35) 2,3-Dimethylpentane	0.00		0		N.D.	d
36) Thiophene	0.00		0		N.D.	d
37) 1,1-Dimethylcyclopentane	0.00		0		N.D.	d
38) 3-Methylhexane	0.00		0		N.D.	d
39) TAME	0.00		0		N.D.	d
40) cis-1,3-Dimethylcyclop...	0.00		0		N.D.	d
41) 3-Ethylpentane	0.00		0		N.D.	d
43) 1-Heptene/trans-1,2-DMCP	0.00		0		N.D.	d
44) Isooctane	0.00		0		N.D.	d
45) trans-3-Heptene	0.00		0		N.D.	d
46) Heptane	0.00		0		N.D.	d
48) trans-2-Heptene	0.00		0		N.D.	d
49) cis-2-Heptene	0.00		0		N.D.	d
50) 2,2-Dimethylhexane	0.00		0		N.D.	d
51) Methylcyclohexane	0.00		0		N.D.	d
52) 2,5-Dimethylhexane	0.00		0		N.D.	d
53) 2,4-Dimethylhexane	0.00		0		N.D.	d
54) Ethylcyclopentane	0.00		0		N.D.	d
55) 2,2,3-Trimethylpentane	0.00		0		N.D.	d
57) 2,3,4-Trimethylpentane	0.00		0		N.D.	d
58) 2,3,3-Trimethylpentane	0.00		0		N.D.	d
59) 2,3-Dimethylhexane	0.00		0		N.D.	d
60) 2-Methylheptane	0.00		0		N.D.	d
61) 4-Methylheptane	0.00		0		N.D.	d
63) 3-Methylheptane	0.00		0		N.D.	d
65) 3-Ethylhexane	0.00		0		N.D.	d
66) Toluene	0.00		0		N.D.	d
67) 2-Methylthiophene	0.00		0		N.D.	d
68) trans-1,4-Dimethylcycl...	0.00		0		N.D.	d
69) 3-Methylthiophene	0.00		0		N.D.	d
70) 1-Octene	0.00		0		N.D.	d
71) Octane	0.00		0		N.D.	d
72) trans-1,2-Dimethylcycl...	0.00		0		N.D.	d
73) 1,2-Dibromoethane	0.00		0		N.D.	d
75) cis-2-Octene	0.00		0		N.D.	d
76) Isopropylcyclopentane	0.00		0		N.D.	d
77) cis-1,2-Dimethylcycloh...	0.00		0		N.D.	d
78) 2,5-Dimethylheptane	0.00		0		N.D.	d

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000776.D
Acq On : 13 Dec 2021 02:42 pm
Operator : VOA9:RY
Sample : WG1582700-5,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 17 15:53:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79)	3,5-Dimethylheptane	0.00		0		N.D.	d
80)	3,3-Dimethylheptane	0.00		0		N.D.	d
81)	1,1,4-Trimethylcyclohe...	0.00		0		N.D.	d
82)	2,3-Dimethylheptane	0.00		0		N.D.	d
83)	3,4-Dimethylheptane	0.00		0		N.D.	d
84)	4-Methyloctane	0.00		0		N.D.	d
85)	2-Methyloctane	0.00		0		N.D.	d
86)	Ethylbenzene	0.00		0		N.D.	d
88)	2-Ethylthiophene	0.00		0		N.D.	d
89)	3-Methyloctane	0.00		0		N.D.	d
90)	3,3-Diethylpentane	0.00		0		N.D.	d
91)	p/m-Xylene	0.00		0		N.D.	d
92)	1-Nonene	0.00		0		N.D.	d
93)	trans-3-Nonene	0.00		0		N.D.	d
94)	cis-3-Nonene	0.00		0		N.D.	d
95)	Nonane	0.00		0		N.D.	d
96)	Styrene	0.00		0		N.D.	d
98)	o-Xylene	0.00		0		N.D.	d
99)	2-Nonene	0.00		0		N.D.	d
100)	Isopropylcyclohexane	0.00		0		N.D.	d
102)	Isopropylbenzene	0.00		0		N.D.	d
103)	3,3-Dimethyloctane	0.00		0		N.D.	d
104)	n-Propylbenzene	0.00		0		N.D.	d
105)	2-Methylnonane	0.00		0		N.D.	d
106)	3-Methylnonane	0.00		0		N.D.	d
107)	1-Methyl-3-ethylbenzene	0.00		0		N.D.	d
108)	1-Methyl-4-ethylbenzene	0.00		0		N.D.	d
109)	1,3,5-Trimethylbenzene	0.00		0		N.D.	d
110)	1-Decene	0.00		0		N.D.	d
111)	Isobutylcyclohexane	0.00		0		N.D.	d
112)	1-Methyl-2-ethylbenzene	0.00		0		N.D.	d
113)	Decane	0.00		0		N.D.	d
114)	tert-Butylbenzene	0.00		0		N.D.	d
115)	1,2,4-Trimethylbenzene	0.00		0		N.D.	d
116)	Isobutylbenzene	0.00		0		N.D.	d
117)	sec-Butylbenzene	0.00		0		N.D.	d
118)	1-Methyl-3-isopropylbe...	0.00		0		N.D.	d
119)	1-Methyl-4-isopropylbe...	0.00		0		N.D.	d
120)	1,2,3-Trimethylbenzene	0.00		0		N.D.	d
121)	1-Methyl-2-isopropylbe...	0.00		0		N.D.	d
122)	Indan	0.00		0		N.D.	d

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000776.D
Acq On : 13 Dec 2021 02:42 pm
Operator : VOA9:RY
Sample : WG1582700-5,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 17 15:53:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
123) 1,3-Diethylbenzene	0.00		0		N.D.	d
124) 1-Methyl-3-propylbenzene	0.00		0		N.D.	d
125) Indene	0.00		0		N.D.	d
126) 1-Methyl-4-propylbenzene	0.00		0		N.D.	d
127) n-Butylbenzene	0.00		0		N.D.	d
128) 1,2-Dimethyl-4-ethylbe...	0.00		0		N.D.	d
129) 1,2-Diethylbenzene	0.00		0		N.D.	d
130) 1-Methyl-2-propylbenzene	0.00		0		N.D.	d
131) 1,4-Dimethyl-2-ethylbe...	0.00		0		N.D.	d
132) Undecane	0.00		0		N.D.	d
133) 1,3-Dimethyl-4-ethylbe...	0.00		0		N.D.	d
134) 1,3-Dimethyl-5-ethylbe...	0.00		0		N.D.	d
135) 1,3-Dimethyl-2-ethylbe...	0.00		0		N.D.	d
136) 1,2-Dimethyl-3-ethylbe...	0.00		0		N.D.	d
137) 1,2,4,5-Tetramethylben...	0.00		0		N.D.	d
138) 1,2,3,5-Tetramethylben...	0.00		0		N.D.	d
139) Pentylbenzene	0.00		0		N.D.	d
140) 1,2,3,4-Tetramethylben...	0.00		0		N.D.	d
141) 1,3-DM-5-tert-Butylben...	0.00		0		N.D.	d
142) Dodecane	0.00		0		N.D.	d
143) 1,3,5-Triethylbenzene	0.00		0		N.D.	d
144) Naphthalene	0.00		0		N.D.	d
145) Benzothiophene	0.00		0		N.D.	d
146) 1,2,4-Triethylbenzene	0.00		0		N.D.	d
147) Hexylbenzene	0.00		0		N.D.	d
148) MMT	0.00		0		N.D.	d
149) Tridecane	0.00		0		N.D.	d
150) 2-Methylnaphthalene	0.00		0		N.D.	d
151) 1-Methylnaphthalene	0.00		0		N.D.	d
152) Tetradecane	0.00		0		N.D.	d
153) Pentadecane	0.00		0		N.D.	d

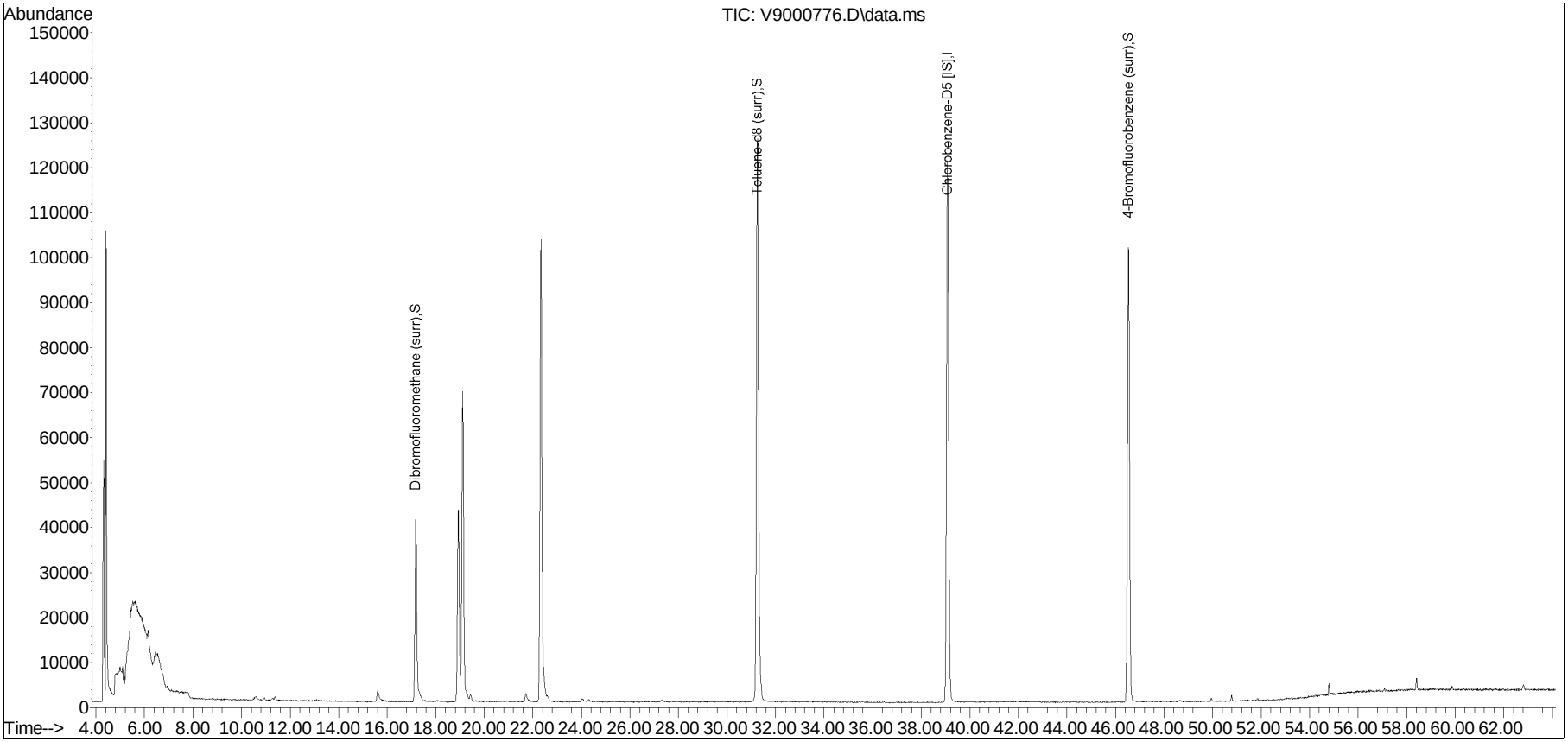
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000776.D
Acq On : 13 Dec 2021 02:42 pm
Operator : VOA9:RY
Sample : WG1582700-5,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 17 15:53:41 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO



LCS Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000732.D
Acq On : 07 Dec 2021 06:30 pm
Operator : VOA9:RY
Sample : WG1581735-3,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 08 08:45:20 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	269330	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.19	113	73270	52.858	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 105.72%			
62) Toluene-d8 (surr)	31.25	98	324708	56.305	ug/L	-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 112.61%			
101) 4-Bromofluorobenzene (...	46.54	95	134427	46.368	ug/L	-0.02
Spiked Amount 50.000	Range 76 - 120		Recovery = 92.74%			
Target Compounds						Qvalue
4) 1-Pentene	8.97	42	22947	19.640	ug/L	94
6) Pentane	9.34	43	29758	17.359	ug/L	98
10) Tertiary butanol	10.81	59	39115M4	122.202	ug/L	
13) Cyclopentane	13.05	70	15095	17.950	ug/L #	44
15) 2-Methylpentane	13.26	43	40917	19.636	ug/L	94
16) MTBE	13.59	73	64470	19.130	ug/L	99
17) 3-Methylpentane	14.24	57	38899	19.986	ug/L	99
18) 1-Hexene	14.83	56	23850	20.316	ug/L	95
19) Hexane	15.44	57	32964	19.135	ug/L	92
20) Diisopropyl ether	15.77	45	66019	19.836	ug/L	98
25) Ethyl tertiary butyl e...	17.24	59	67234	19.172	ug/L	95
27) Methylcyclopentane	17.78	56	44560	20.173	ug/L	93
28) 2,4-Dimethylpentane	17.94	43	40575	20.995	ug/L	96
32) Cyclohexane	20.69	56	38889	21.077	ug/L	98
33) 2-Methylhexane	21.13	43	45554	21.001	ug/L	94
34) Benzene	21.32	78	94464	19.776	ug/L	100
35) 2,3-Dimethylpentane	21.43	56	38711	21.223	ug/L	88
38) 3-Methylhexane	21.94	43	36604	19.722	ug/L	96
39) TAME	22.32	73	68347	17.630	ug/L	98
44) Isooctane	23.38	57	99303	21.198	ug/L	96
46) Heptane	24.13	43	37099	22.665	ug/L	98
51) Methylcyclohexane	26.55	83	42372	19.679	ug/L	97
60) 2-Methylheptane	30.56	57	43347	19.924	ug/L	97
63) 3-Methylheptane	31.30	43	41767	20.797	ug/L	95
66) Toluene	31.61	91	101532	19.125	ug/L	96
71) Octane	33.82	43	50620	22.282	ug/L	97
86) Ethylbenzene	40.71	91	117178	18.812	ug/L	96
91) p/m-Xylene	41.98	91	183069	38.286	ug/L	99
95) Nonane	43.40	43	46655	19.684	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000732.D
Acq On : 07 Dec 2021 06:30 pm
Operator : VOA9:RY
Sample : WG1581735-3,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 08 08:45:20 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) o-Xylene	44.24	91	94265	19.322	ug/L	99
102) Isopropylbenzene	46.58	105	118875	18.784	ug/L	98
104) n-Propylbenzene	49.00	91	139547	18.739	ug/L	98
107) 1-Methyl-3-ethylbenzene	49.57	105	115030	18.248	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.74	105	114688	19.021	ug/L	98
109) 1,3,5-Trimethylbenzene	50.29	105	96939	18.391	ug/L	98
110) 1-Decene	50.42	41	20205	17.107	ug/L	94
112) 1-Methyl-2-ethylbenzene	50.61	105	117488	18.712	ug/L	98
113) Decane	50.79	43	46341	22.991	ug/L	97
115) 1,2,4-Trimethylbenzene	51.44	105	98719	17.790	ug/L	97
117) sec-Butylbenzene	51.69	105	132052	19.215	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	150430	18.244	ug/L	97
127) n-Butylbenzene	53.23	91	121907	18.902	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	54009	18.235	ug/L	97
132) Undecane	53.97	57	54328	21.358	ug/L	95
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	121892	19.258	ug/L	99
139) Pentylbenzene	55.72	91	107153	19.233	ug/L	99
142) Dodecane	56.21	43	44755	26.112	ug/L	93

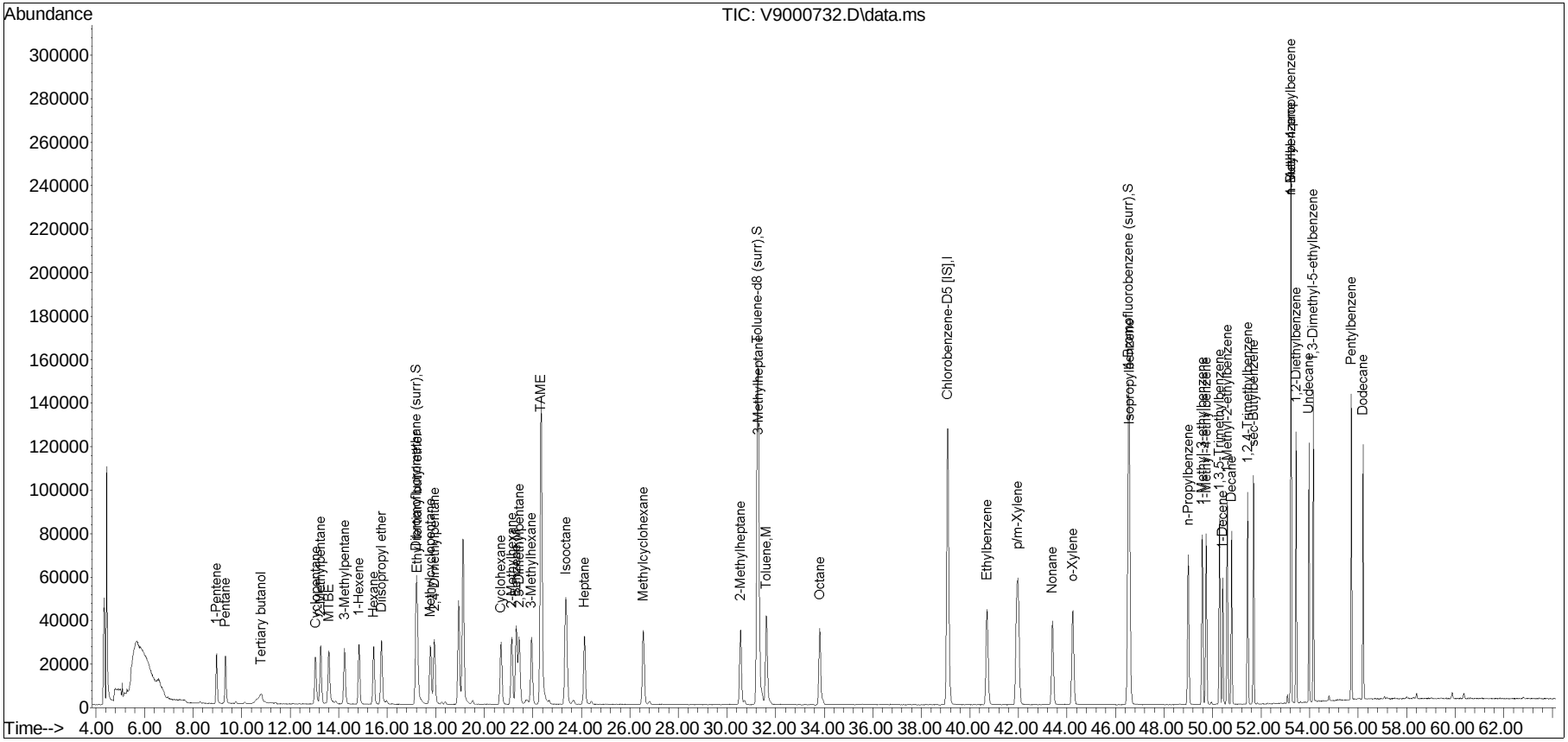
(#) = qualifier out of range (m) = manual integration (+) = signals summed

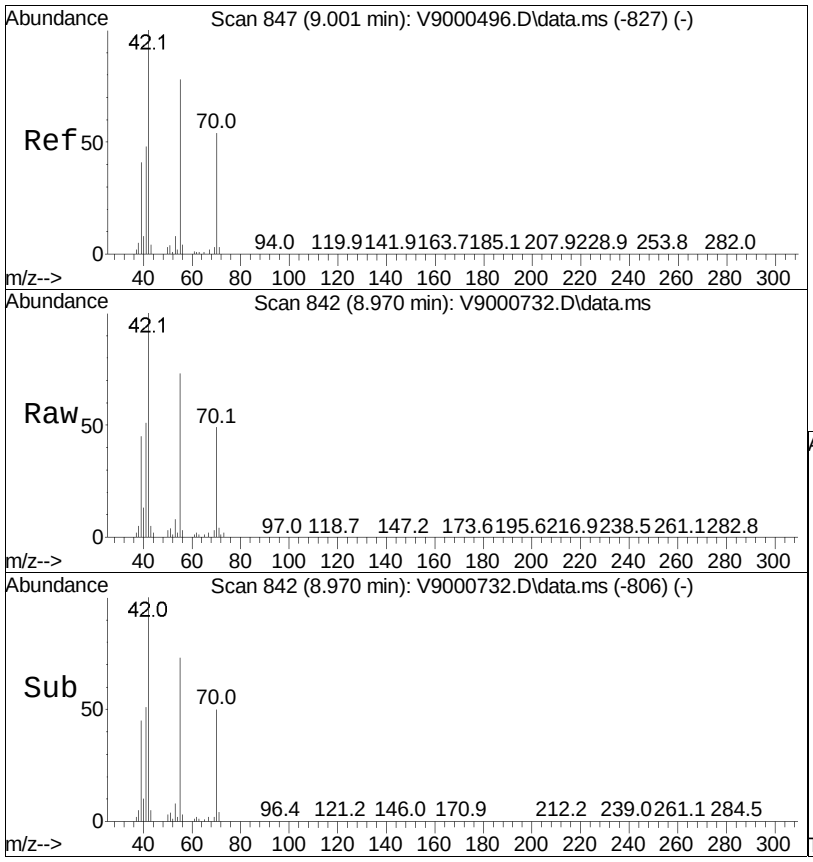
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000732.D
Acq On : 07 Dec 2021 06:30 pm
Operator : VOA9:RY
Sample : WG1581735-3,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 08 08:45:20 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

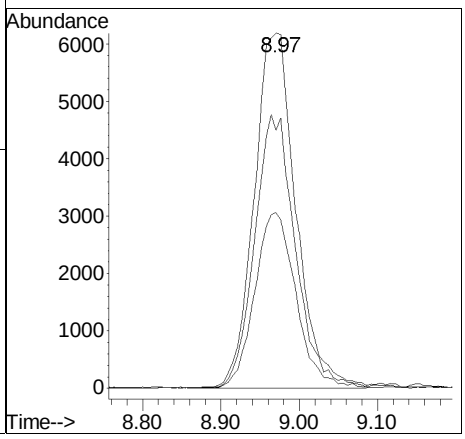


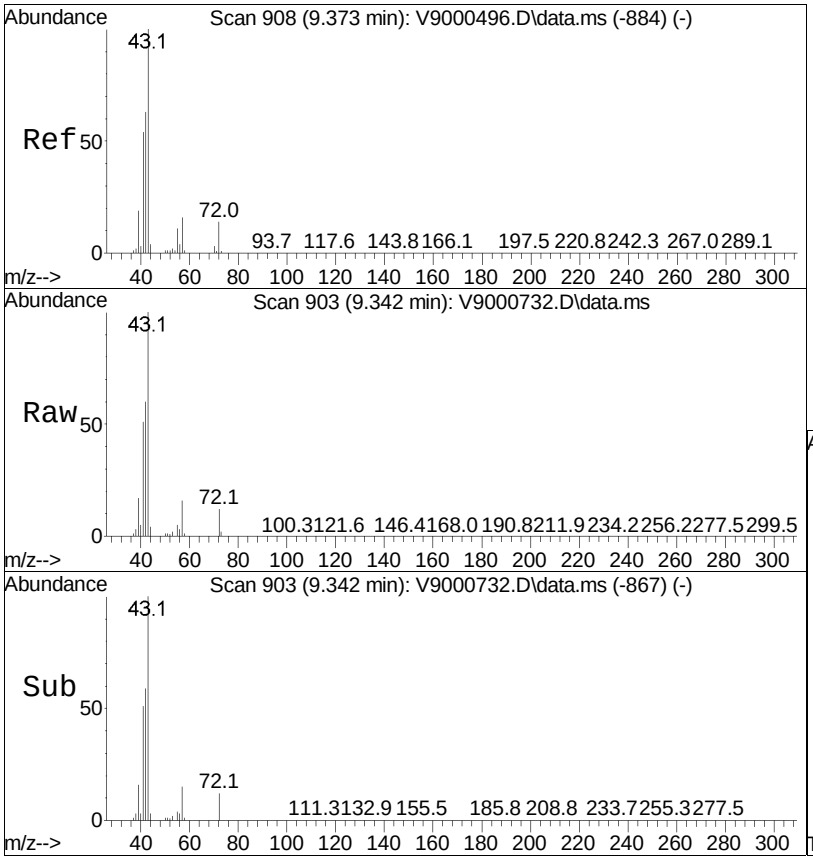


#4
1-Pentene
Concen: 19.64 ug/L
RT: 8.97 min Scan# 842
Delta R.T. -0.031 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 42 Resp: 22947

Ion	Ratio	Lower	Upper
42	100		
55	72.7	57.8	97.8
70	49.5	34.1	74.1

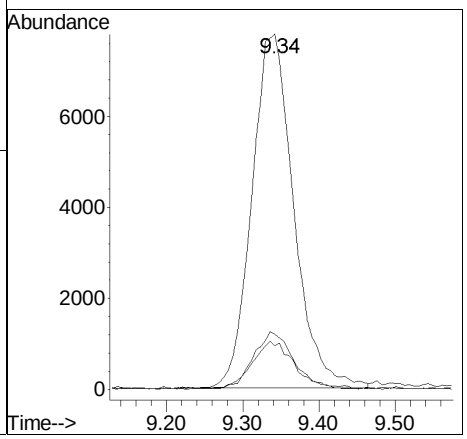


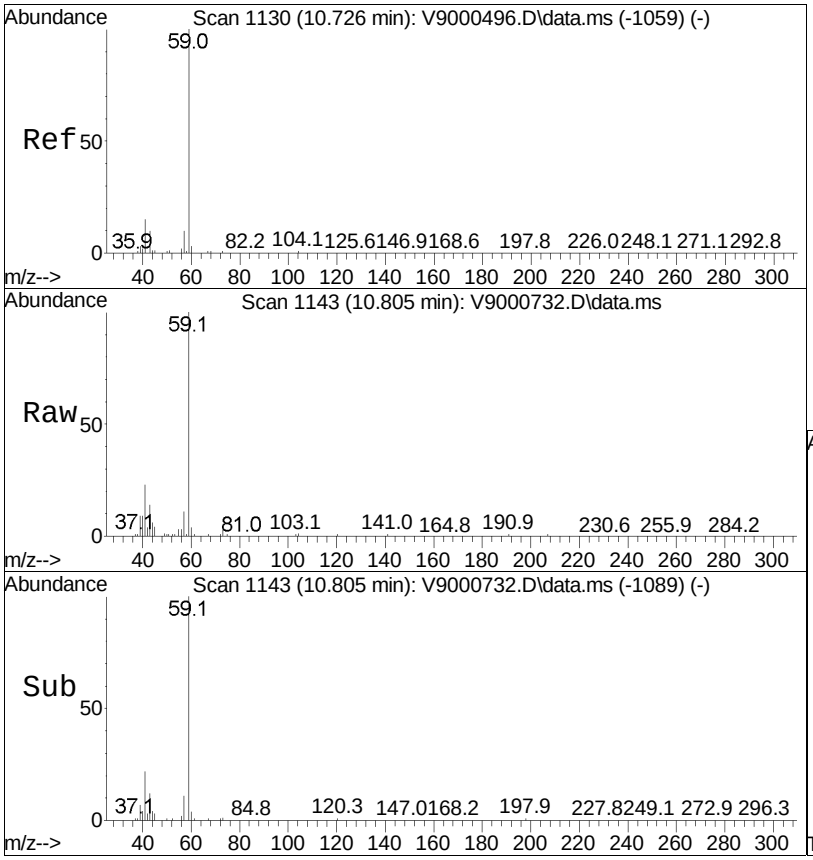


#6
Pentane
Concen: 17.36 ug/L
RT: 9.34 min Scan# 903
Delta R.T. -0.031 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 29758

Ion	Ratio	Lower	Upper
43	100		
57	15.5	0.0	36.2
72	12.3	0.0	33.6

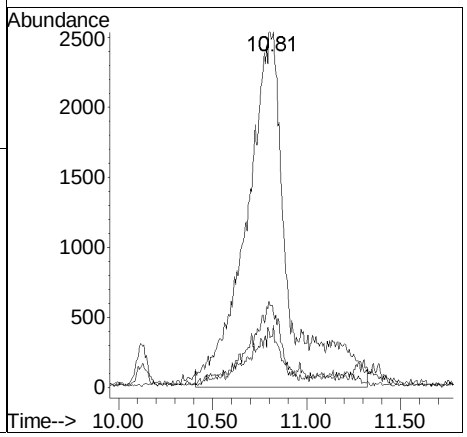


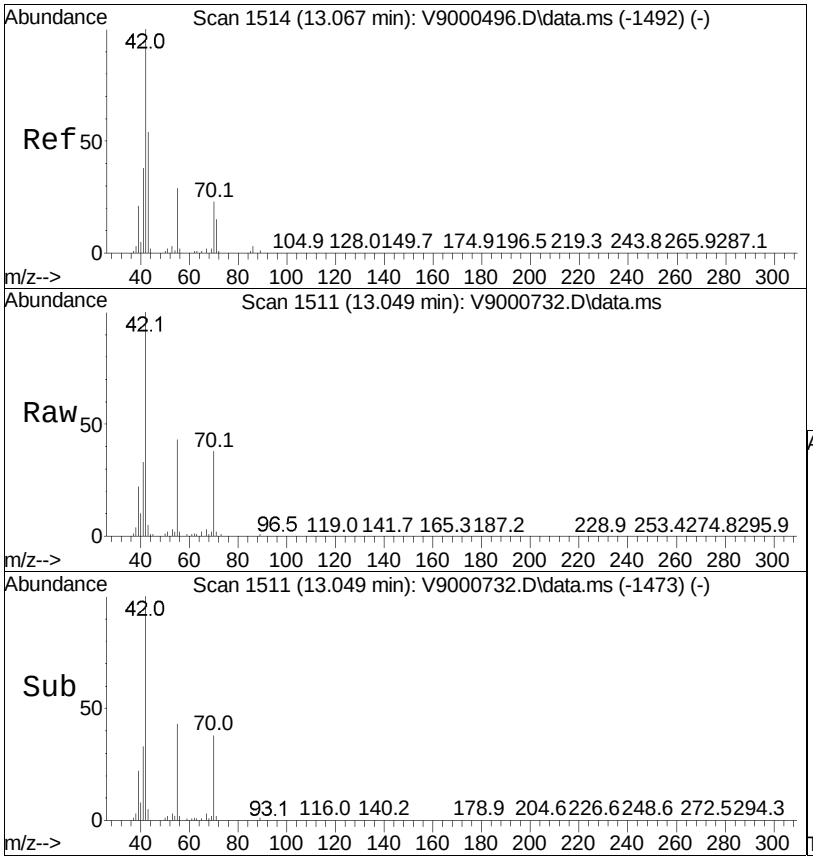


#10
Tertiary butanol
Concen: 122.20 ug/L m
RT: 10.81 min Scan# 1143
Delta R.T. 0.079 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 59 Resp: 39115

Ion	Ratio	Lower	Upper
59	100		
41	23.0	0.6	40.6
43	14.0	0.0	32.3

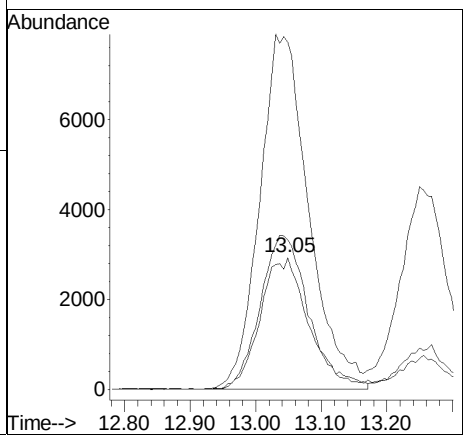


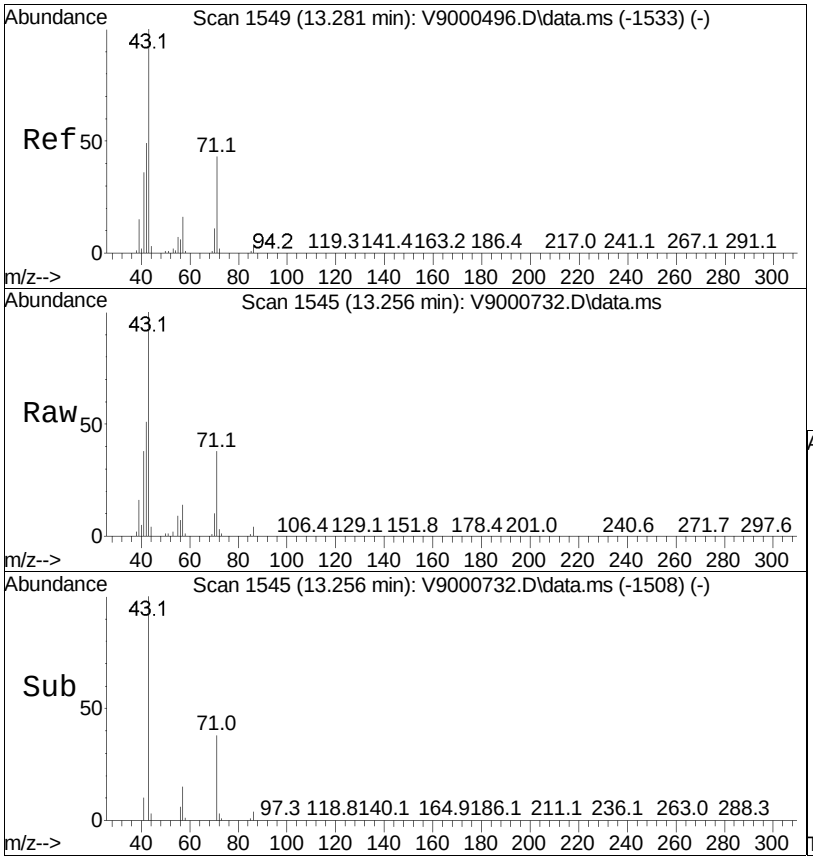


#13
Cyclopentane
Concen: 17.95 ug/L
RT: 13.05 min Scan# 1511
Delta R.T. -0.019 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 70 Resp: 15095

Ion	Ratio	Lower	Upper
70	100		
42	263.7	416.2	456.2#
55	113.6	106.1	146.1

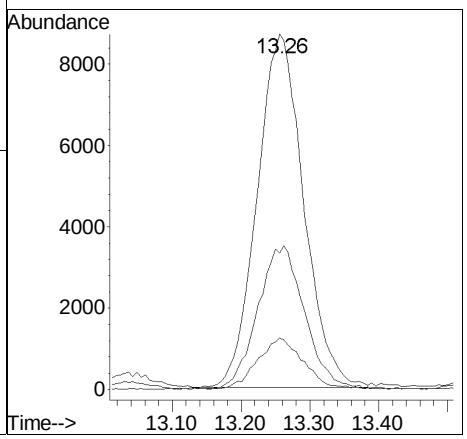


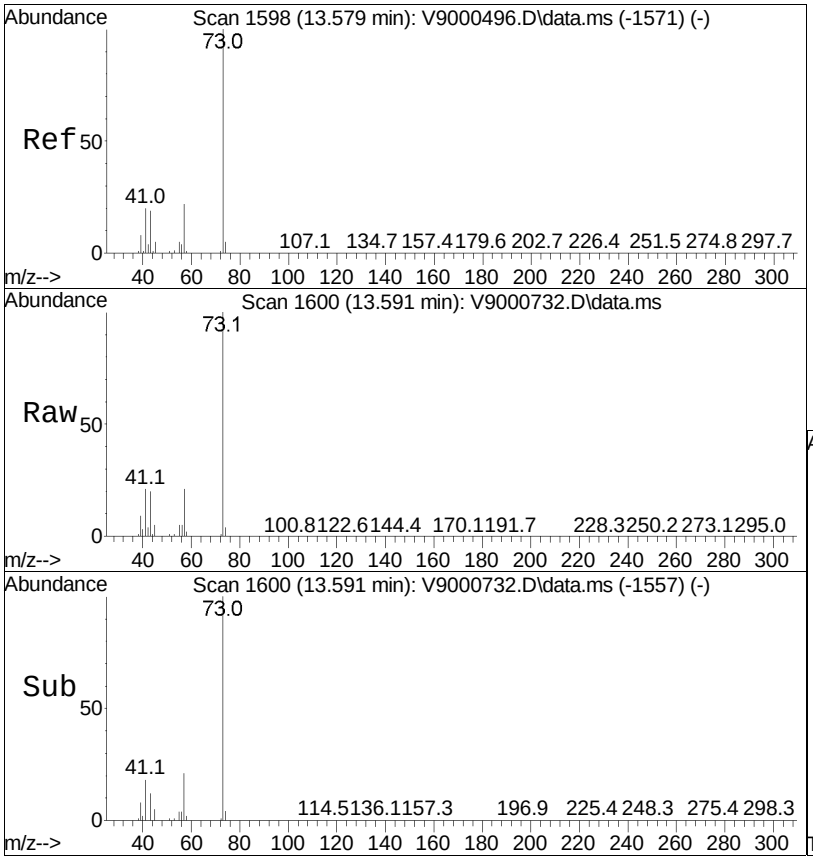


#15
2-Methylpentane
Concen: 19.64 ug/L
RT: 13.26 min Scan# 1545
Delta R.T. -0.025 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 40917

Ion	Ratio	Lower	Upper
43	100		
71	38.3	22.6	62.6
57	14.5	0.0	35.7

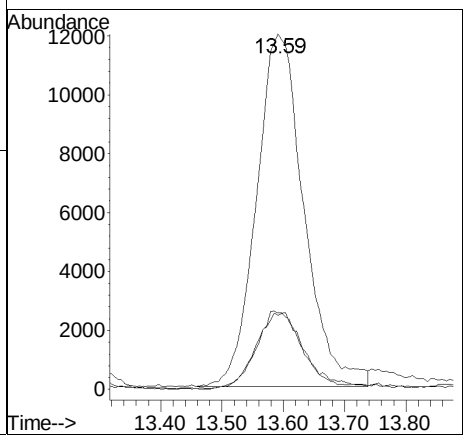


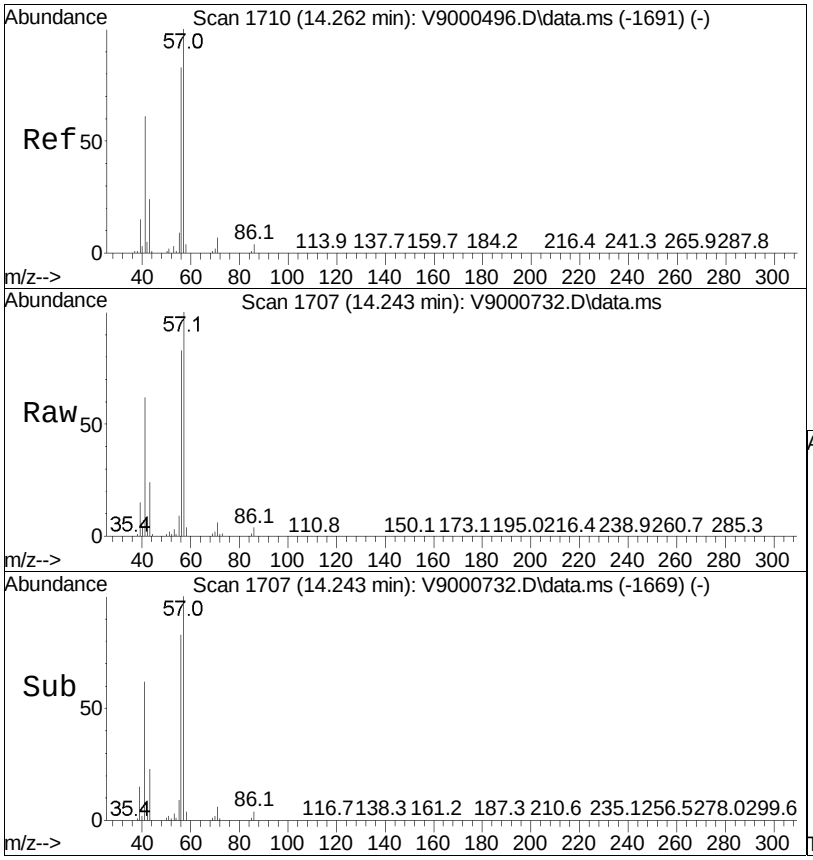


#16
MTBE
Concen: 19.13 ug/L
RT: 13.59 min Scan# 1600
Delta R.T. 0.012 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 73 Resp: 64470

Ion	Ratio	Lower	Upper
73	100		
57	21.5	2.3	42.3
41	20.9	0.5	40.5

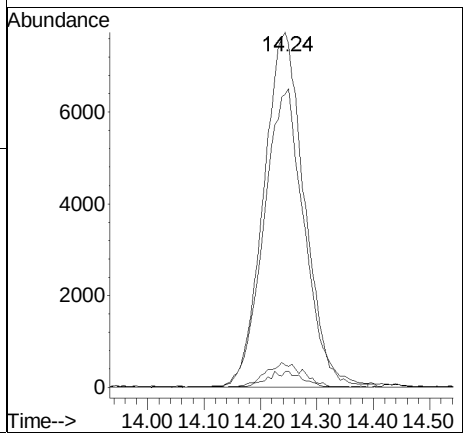


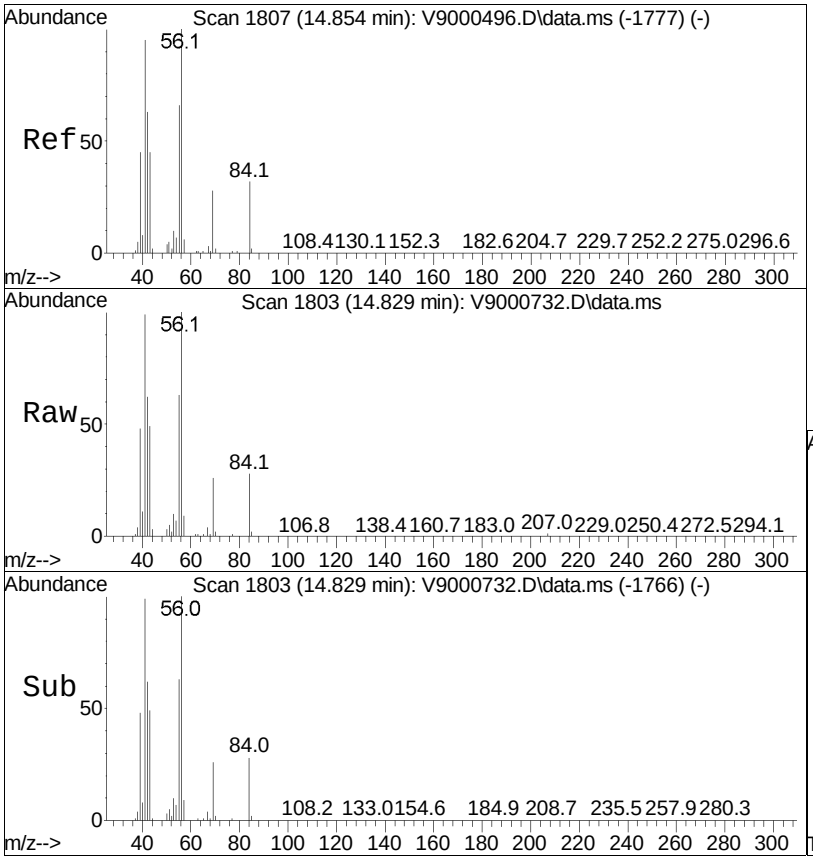


#17
3-Methylpentane
Concen: 19.99 ug/L
RT: 14.24 min Scan# 1707
Delta R.T. -0.019 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 57 Resp: 38899

Ion	Ratio	Lower	Upper
57	100		
56	82.5	63.2	103.2
71	6.2	0.0	27.1
86	4.5	0.0	24.3

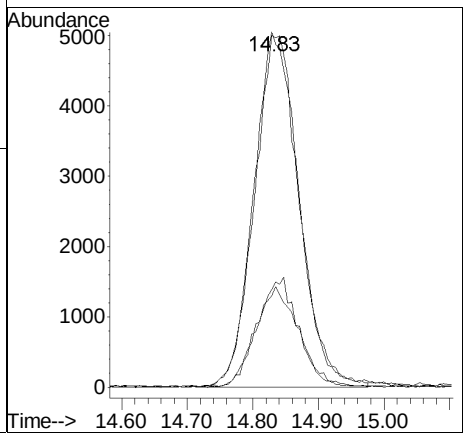


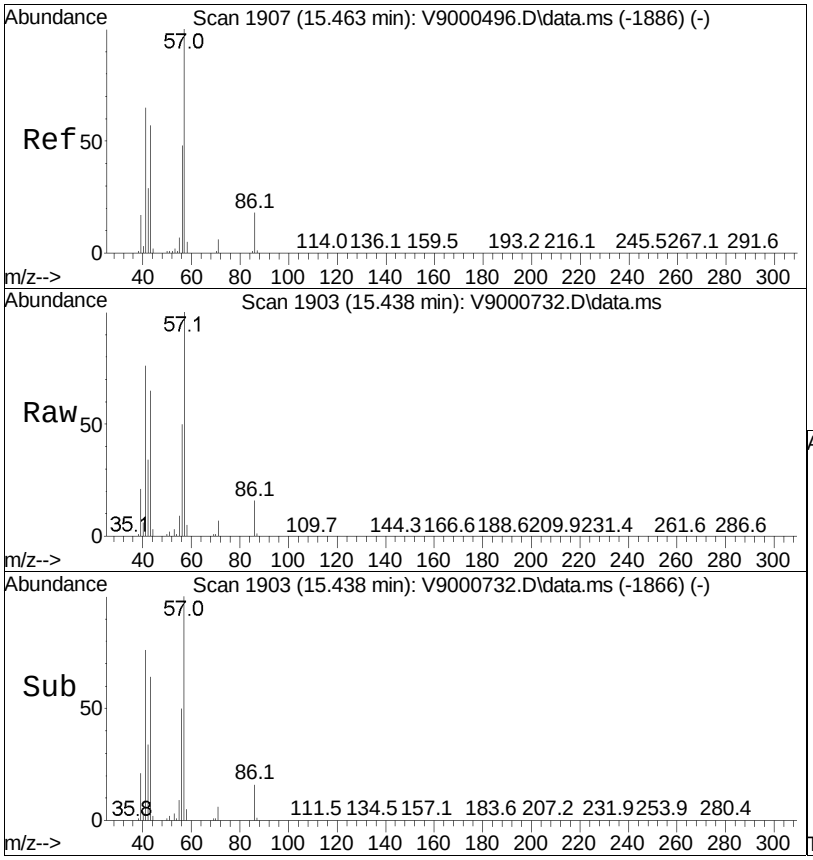


#18
1-Hexene
Concen: 20.32 ug/L
RT: 14.83 min Scan# 1803
Delta R.T. -0.025 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 56 Resp: 23850

Ion	Ratio	Lower	Upper
56	100		
41	99.0	75.1	115.1
84	27.6	11.5	51.5
69	25.8	7.5	47.5

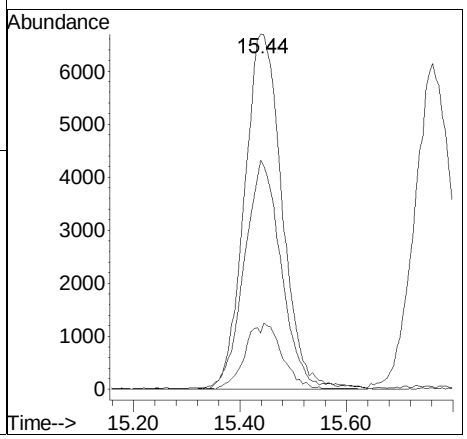


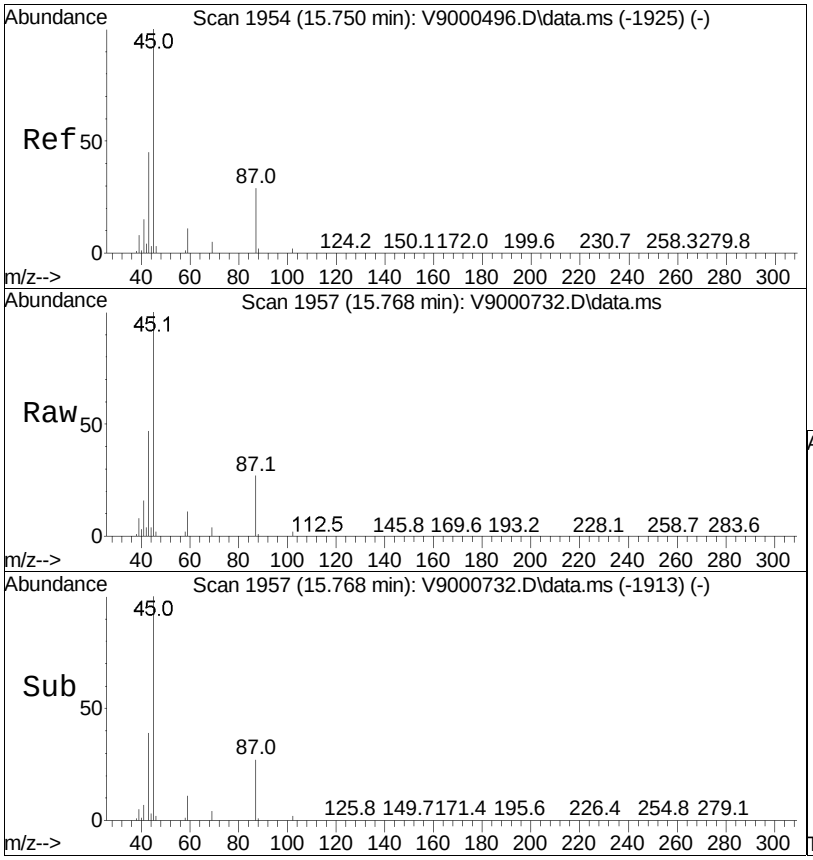


#19
Hexane
Concen: 19.13 ug/L
RT: 15.44 min Scan# 1903
Delta R.T. -0.025 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 57 Resp: 32964

Ion	Ratio	Lower	Upper
57	100		
43	64.5	38.1	78.1
86	15.9	0.0	38.3

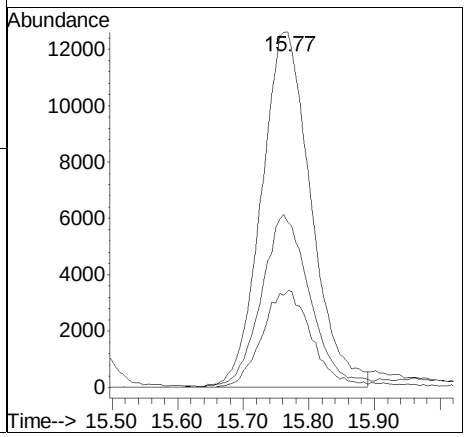


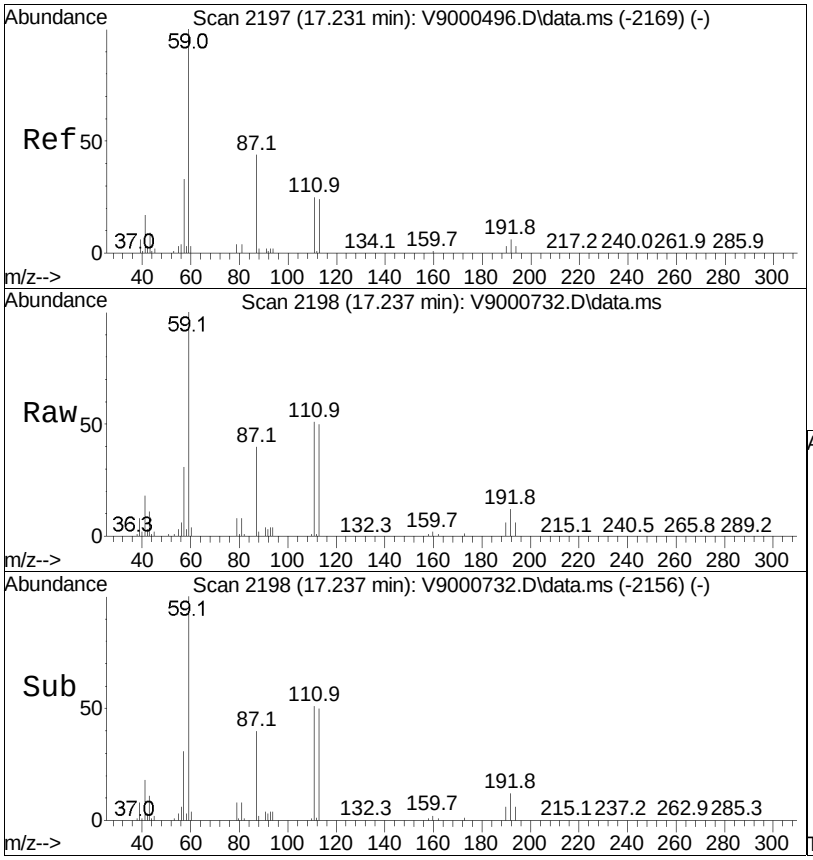


#20
Diisopropyl ether
Concen: 19.84 ug/L
RT: 15.77 min Scan# 1957
Delta R.T. 0.018 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 45 Resp: 66019

Ion	Ratio	Lower	Upper
45	100		
87	27.2	9.2	49.2
43	46.5	26.2	66.2

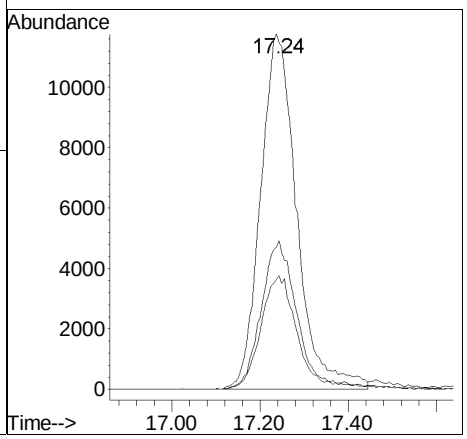


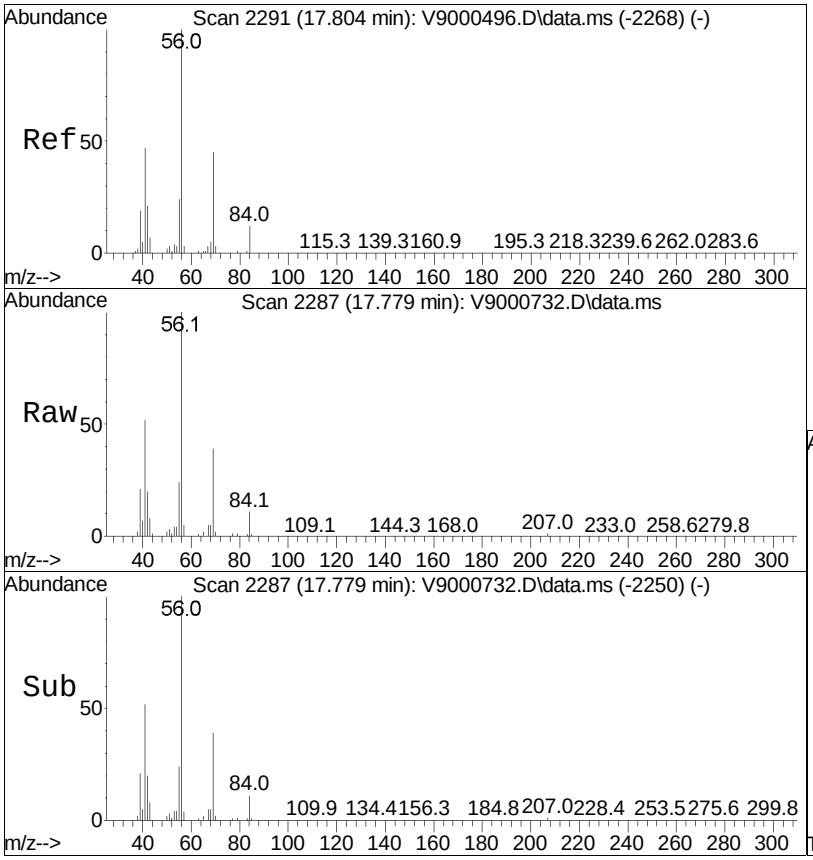


#25
Ethyl tertiary butyl ether
Concen: 19.17 ug/L
RT: 17.24 min Scan# 2198
Delta R.T. 0.006 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 59 Resp: 67234

Ion	Ratio	Lower	Upper
59	100		
87	40.0	23.9	63.9
57	30.9	12.5	52.5

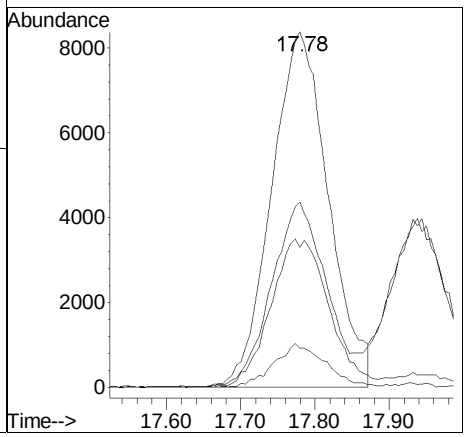


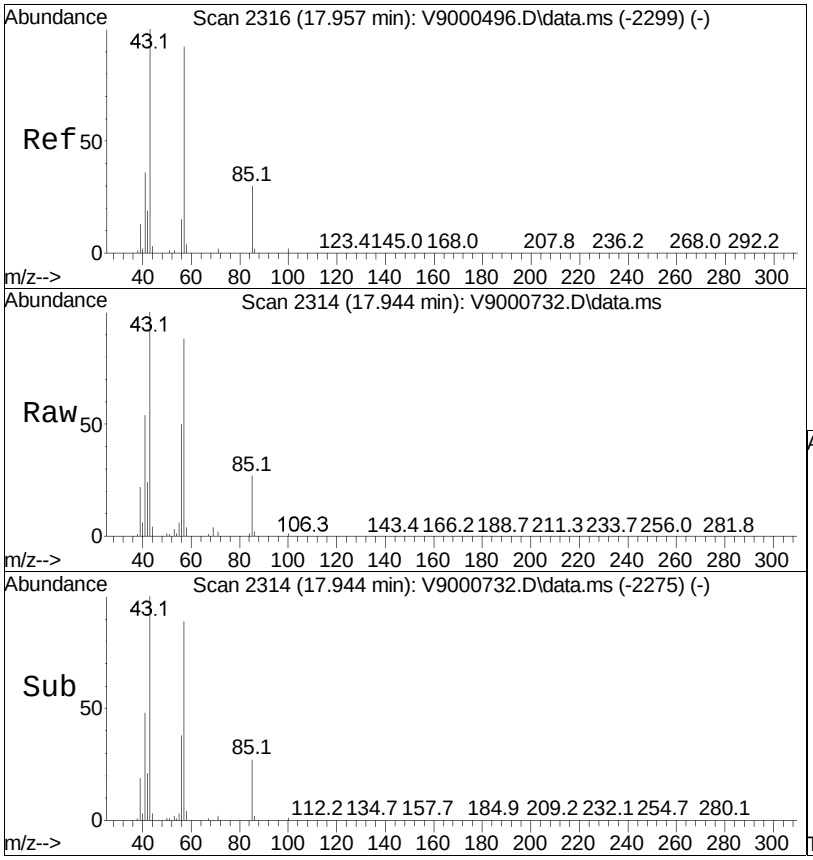


#27
Methylcyclopentane
Concen: 20.17 ug/L
RT: 17.78 min Scan# 2287
Delta R.T. -0.025 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 56 Resp: 44560

Ion	Ratio	Lower	Upper
56	100		
69	39.4	25.2	65.2
41	52.2	27.6	67.6
84	11.1	0.0	31.8

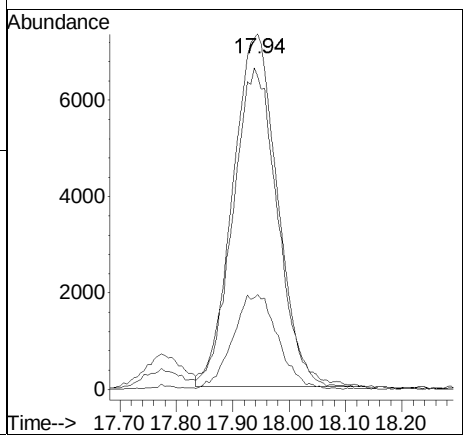


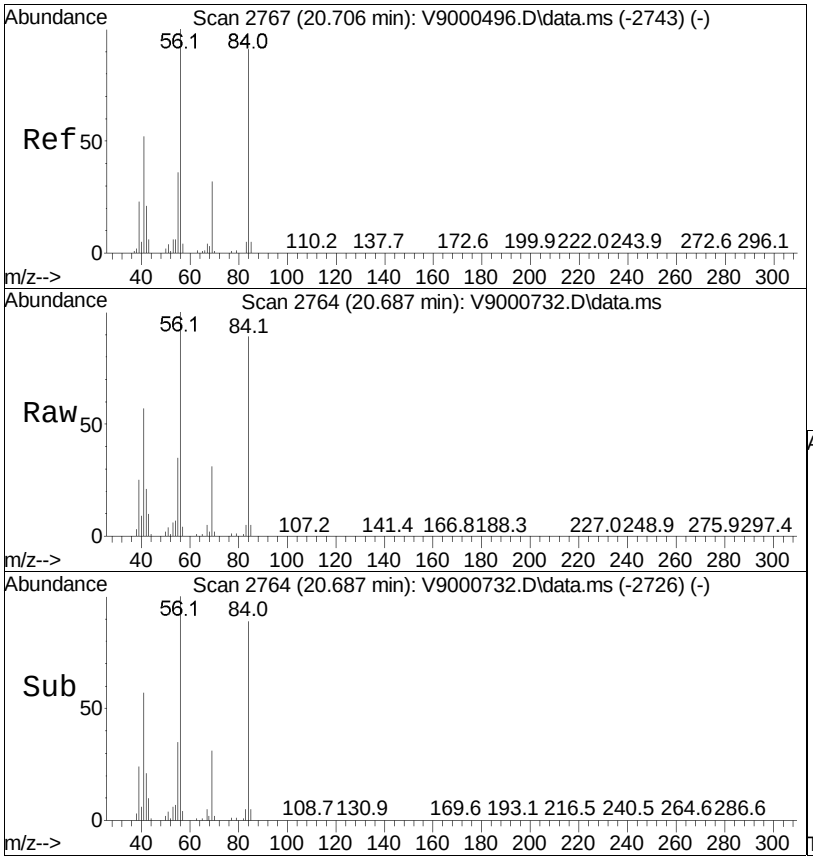


#28
2,4-Dimethylpentane
Concen: 20.99 ug/L
RT: 17.94 min Scan# 2314
Delta R.T. -0.013 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 40575

Ion	Ratio	Lower	Upper
43	100		
57	88.1	71.4	111.4
85	26.7	9.0	49.0

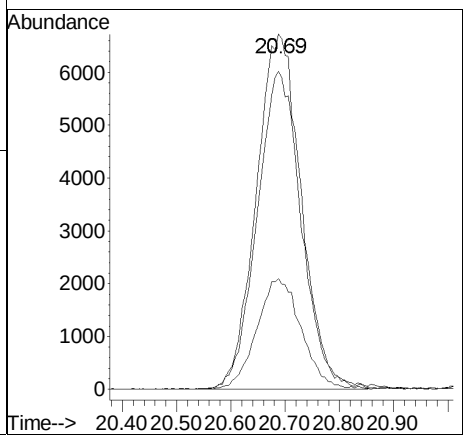


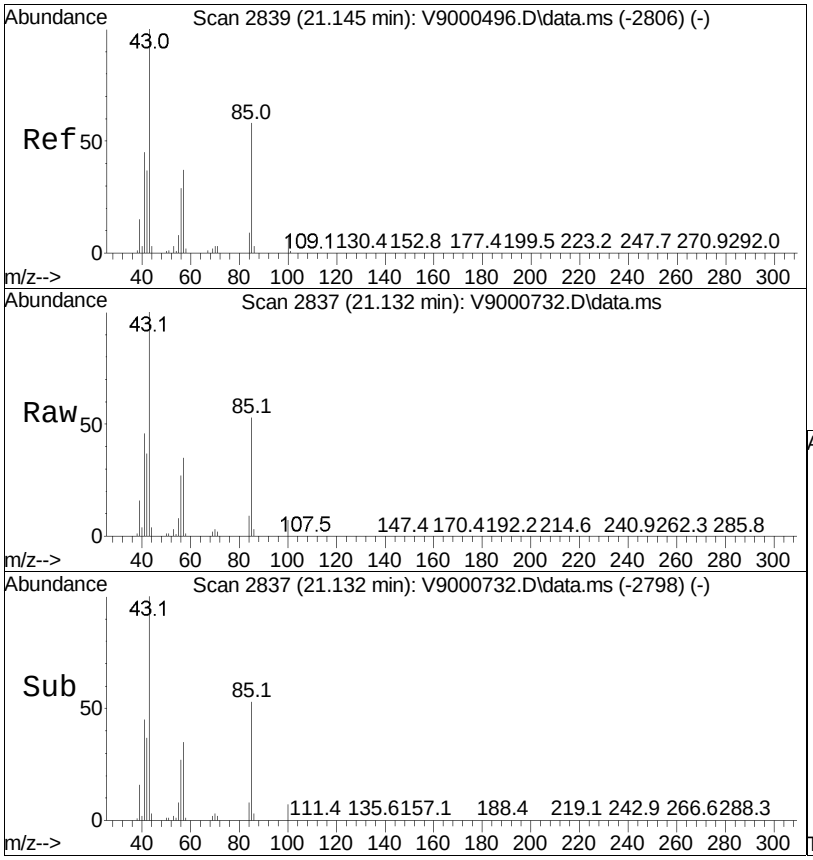


#32
Cyclohexane
Concen: 21.08 ug/L
RT: 20.69 min Scan# 2764
Delta R.T. -0.019 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 56 Resp: 38889

Ion	Ratio	Lower	Upper
56	100		
84	89.5	71.3	111.3
69	31.2	12.0	52.0

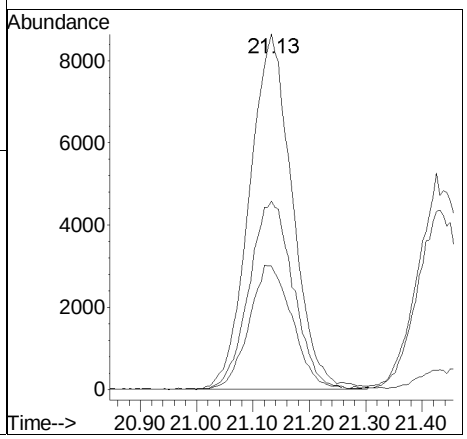


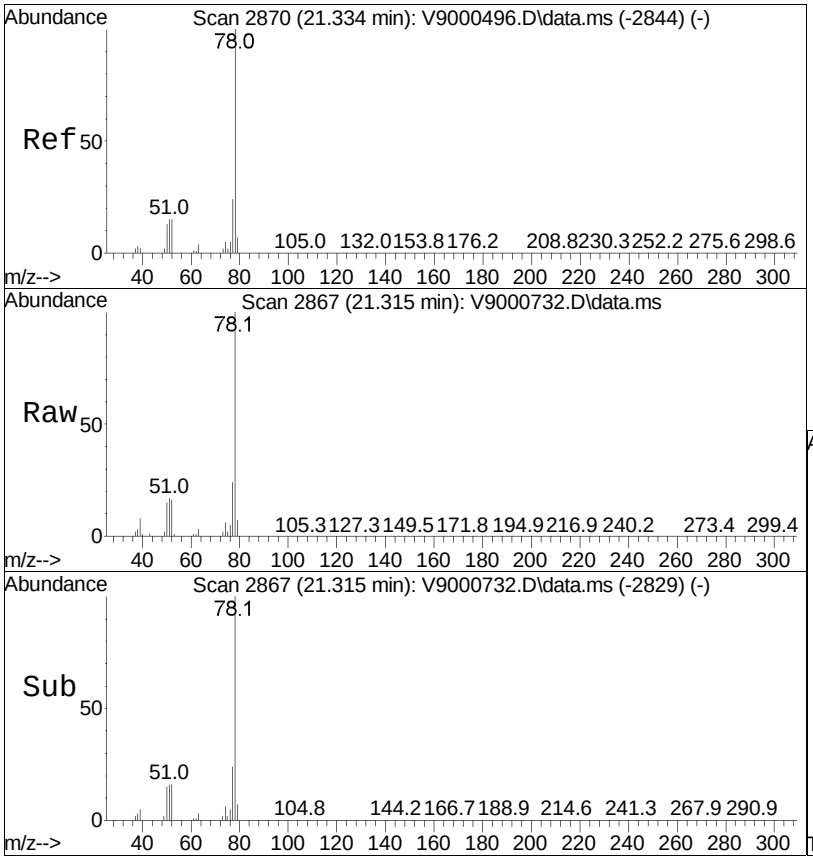


#33
2-Methylhexane
Concen: 21.00 ug/L
RT: 21.13 min Scan# 2837
Delta R.T. -0.013 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 45554

Ion	Ratio	Lower	Upper
43	100		
85	53.0	38.2	78.2
57	34.7	16.7	56.7

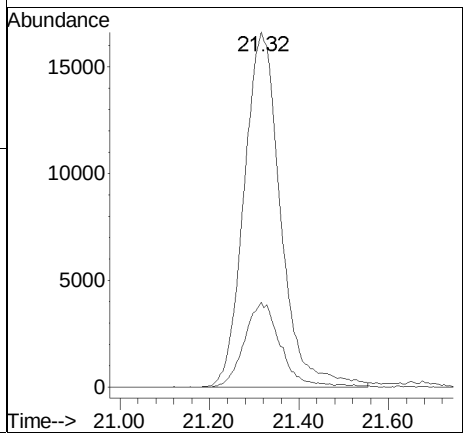


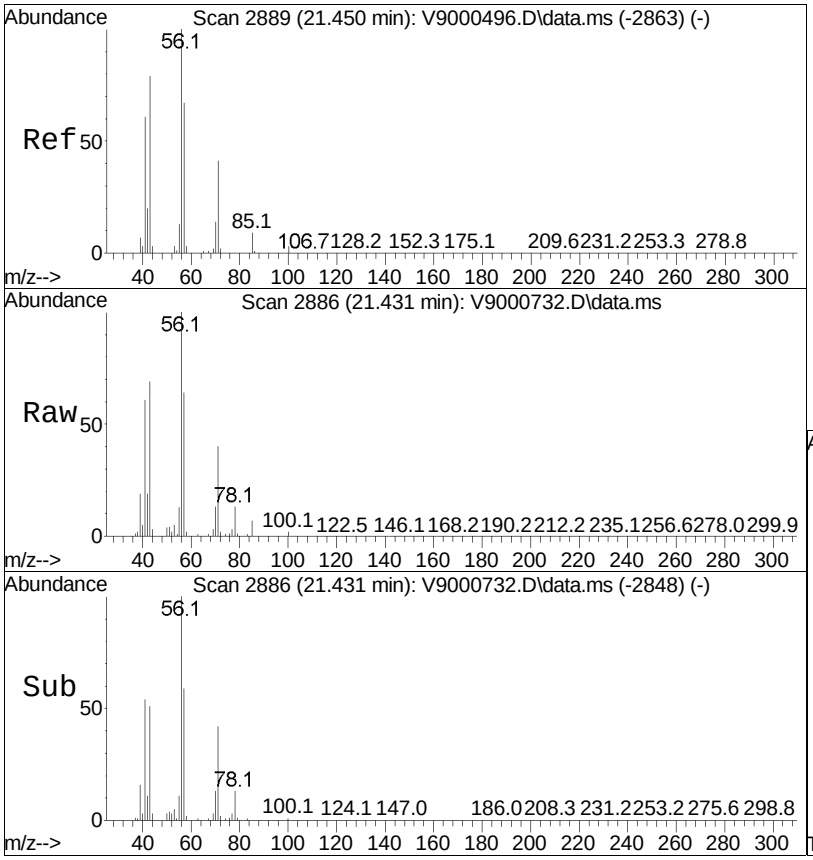


#34
Benzene
Concen: 19.78 ug/L
RT: 21.32 min Scan# 2867
Delta R.T. -0.019 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 78 Resp: 94464

Ion	Ratio	Lower	Upper
78	100		
77	23.9	3.7	43.7

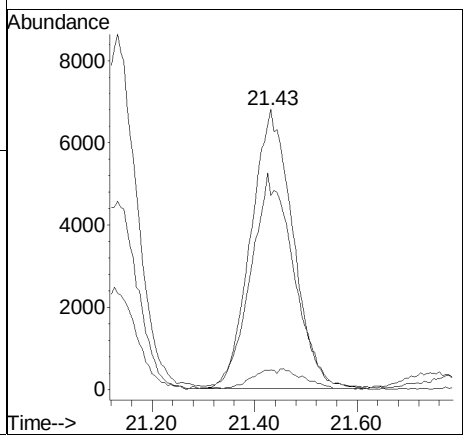


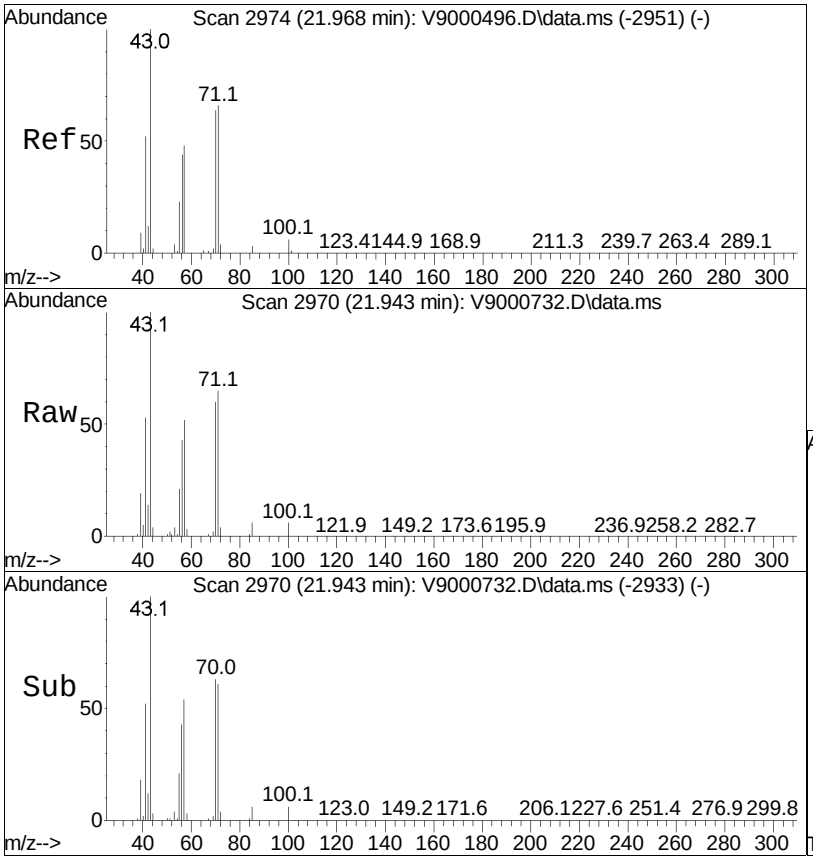


#35
2,3-Dimethylpentane
Concen: 21.22 ug/L
RT: 21.43 min Scan# 2886
Delta R.T. -0.019 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 56 Resp: 38711

Ion	Ratio	Lower	Upper
56	100		
43	69.2	60.3	100.3
85	7.0	0.0	29.6

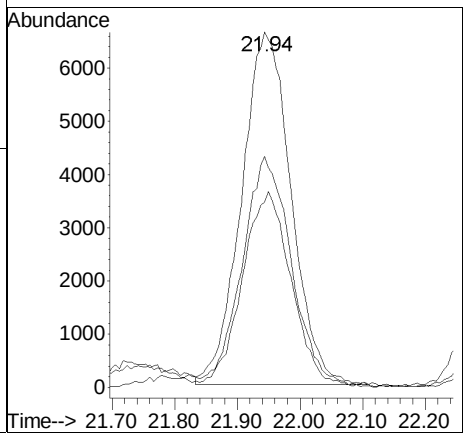


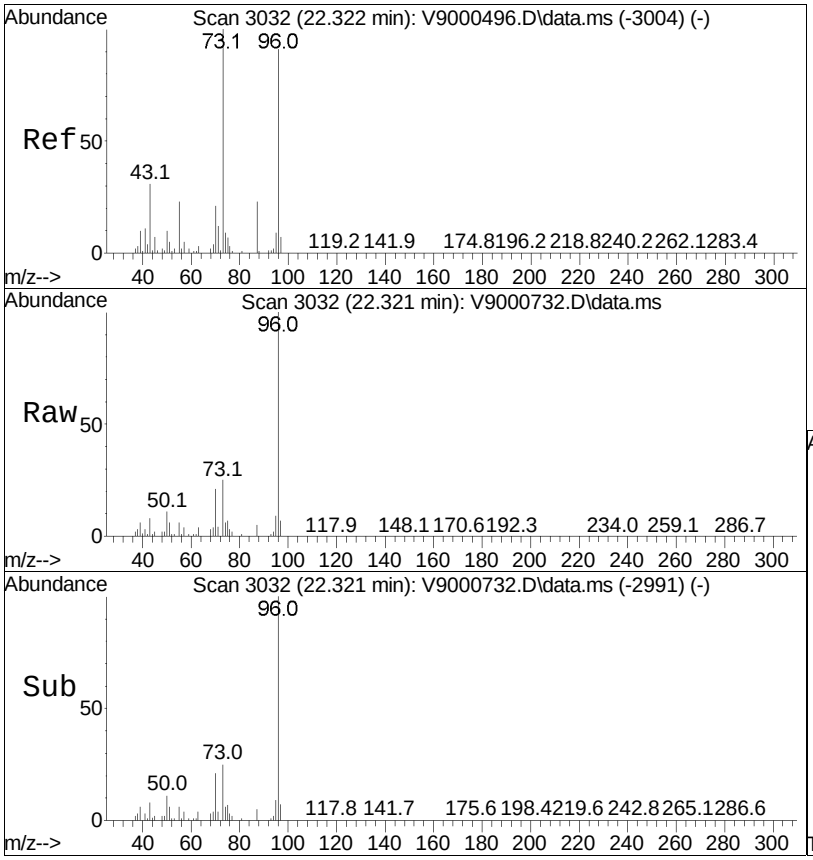


#38
3-Methylhexane
Concen: 19.72 ug/L
RT: 21.94 min Scan# 2970
Delta R.T. -0.025 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 36604

Ion	Ratio	Lower	Upper
43	100		
57	52.2	38.1	78.1
71	65.0	45.7	85.7

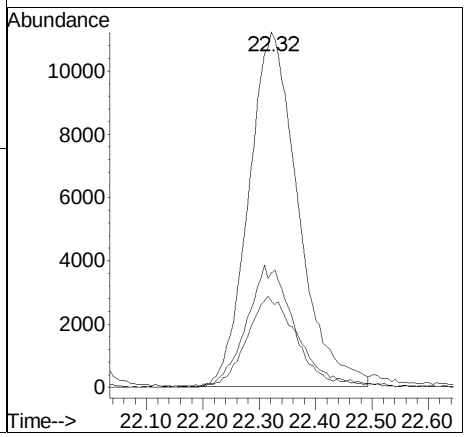


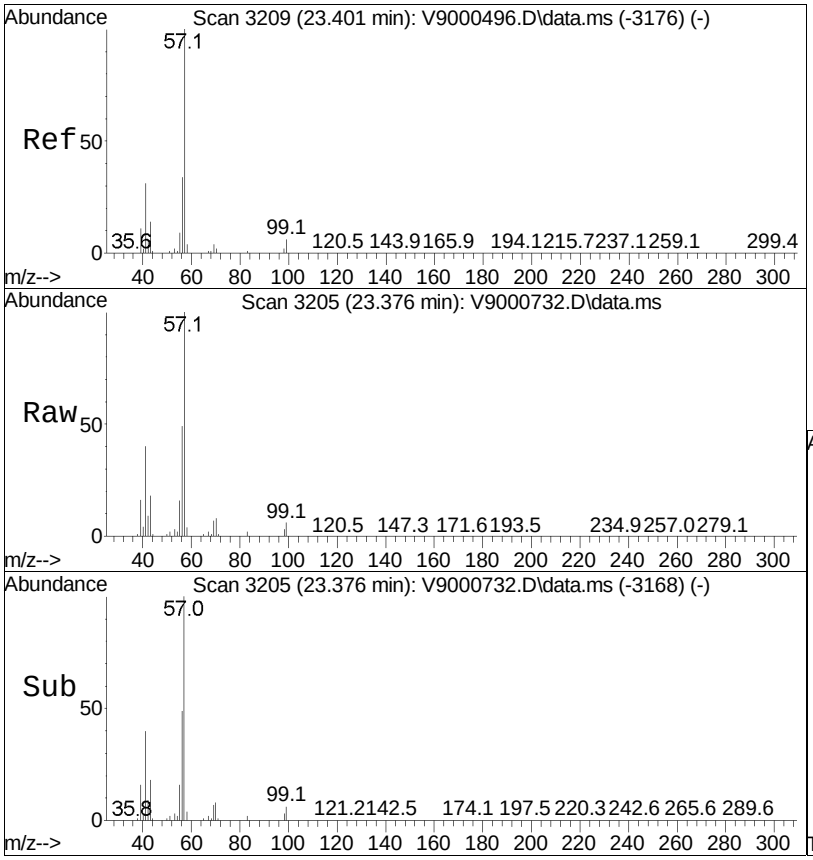


#39
TAME
Concen: 17.63 ug/L
RT: 22.32 min Scan# 3032
Delta R.T. -0.000 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 73 Resp: 68347

Ion	Ratio	Lower	Upper
73	100		
43	32.2	11.3	51.3
55	24.2	3.2	43.2

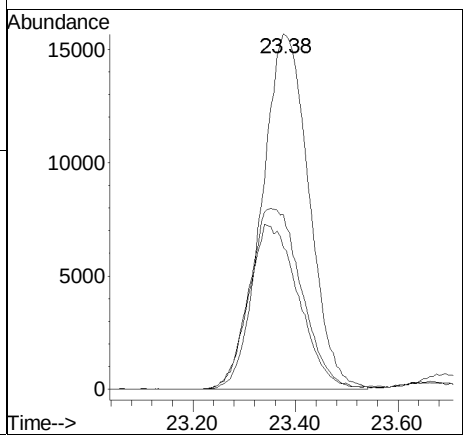


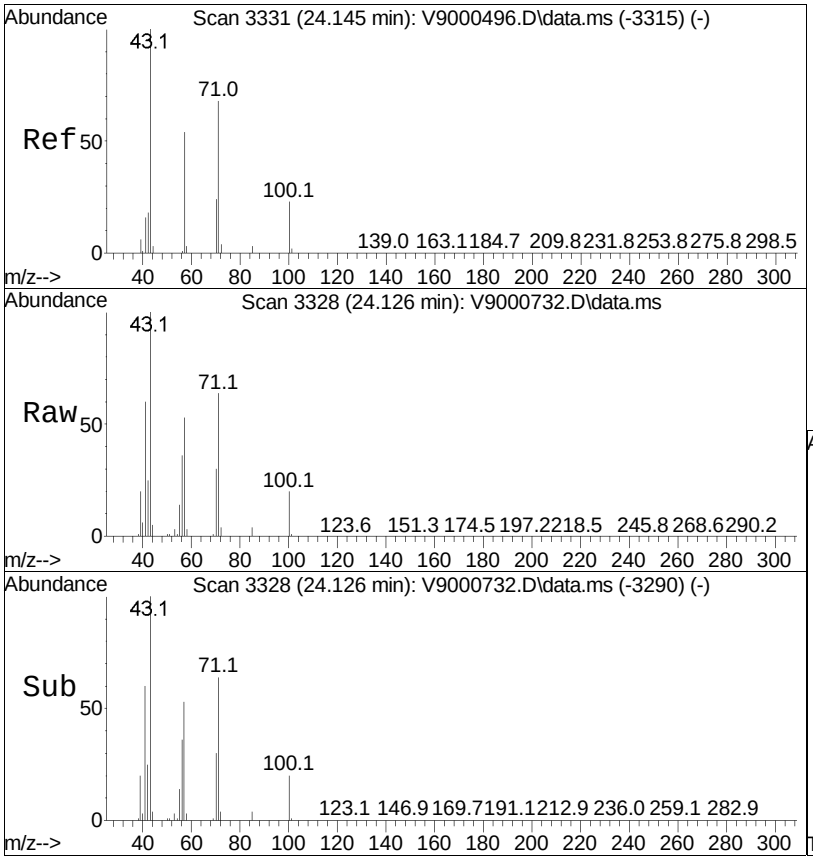


#44
Isooctane
Concen: 21.20 ug/L
RT: 23.38 min Scan# 3205
Delta R.T. -0.025 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 57 Resp: 99303

Ion	Ratio	Lower	Upper
57	100		
41	40.0	16.9	56.9
56	49.2	27.1	67.1

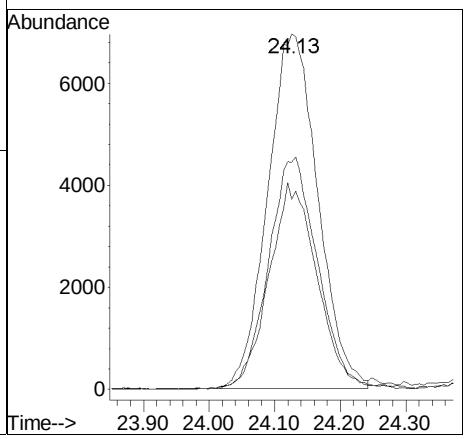


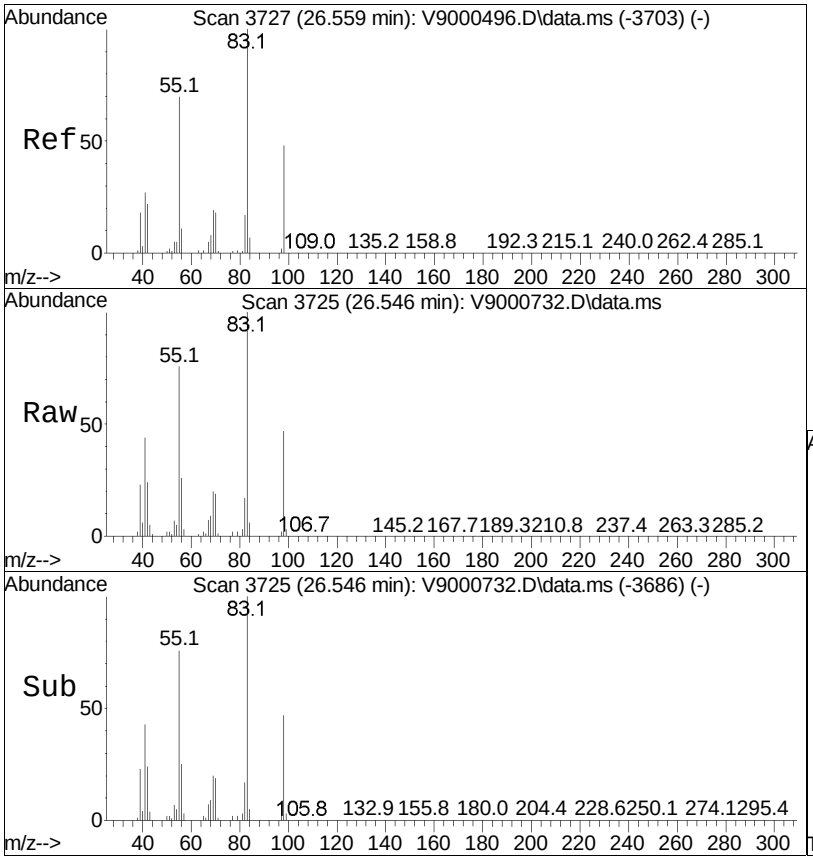


#46
Heptane
Concen: 22.66 ug/L
RT: 24.13 min Scan# 3328
Delta R.T. -0.019 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 37099

Ion	Ratio	Lower	Upper
43	100		
57	53.5	35.3	75.3
71	63.9	45.9	85.9

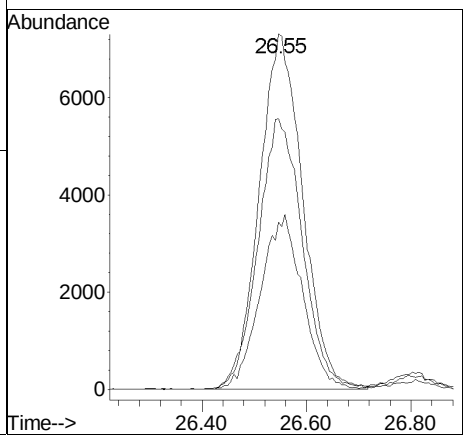


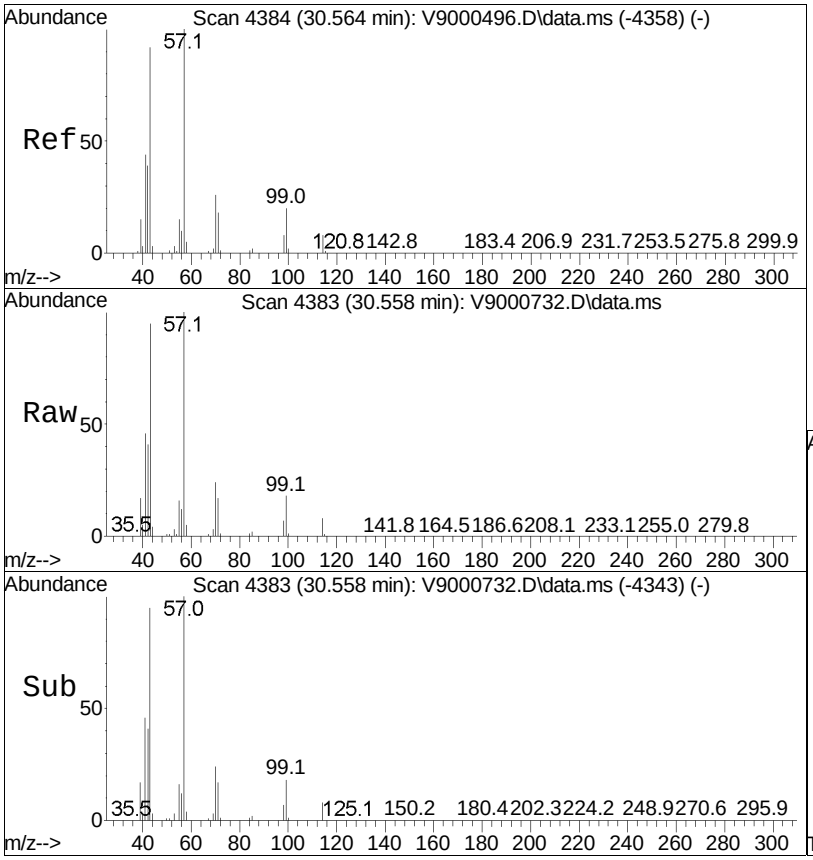


#51
Methylcyclohexane
Concen: 19.68 ug/L
RT: 26.55 min Scan# 3725
Delta R.T. -0.013 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 83 Resp: 42372

Ion	Ratio	Lower	Upper
83	100		
55	76.2	52.6	92.6
98	47.0	27.8	67.8

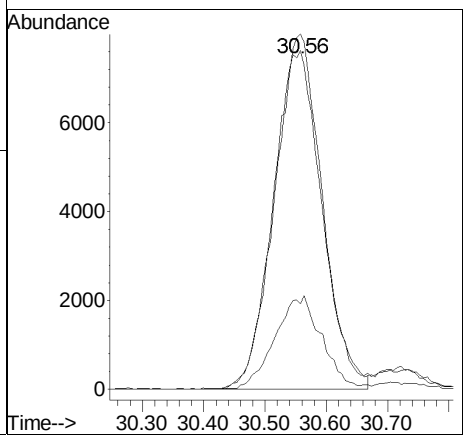


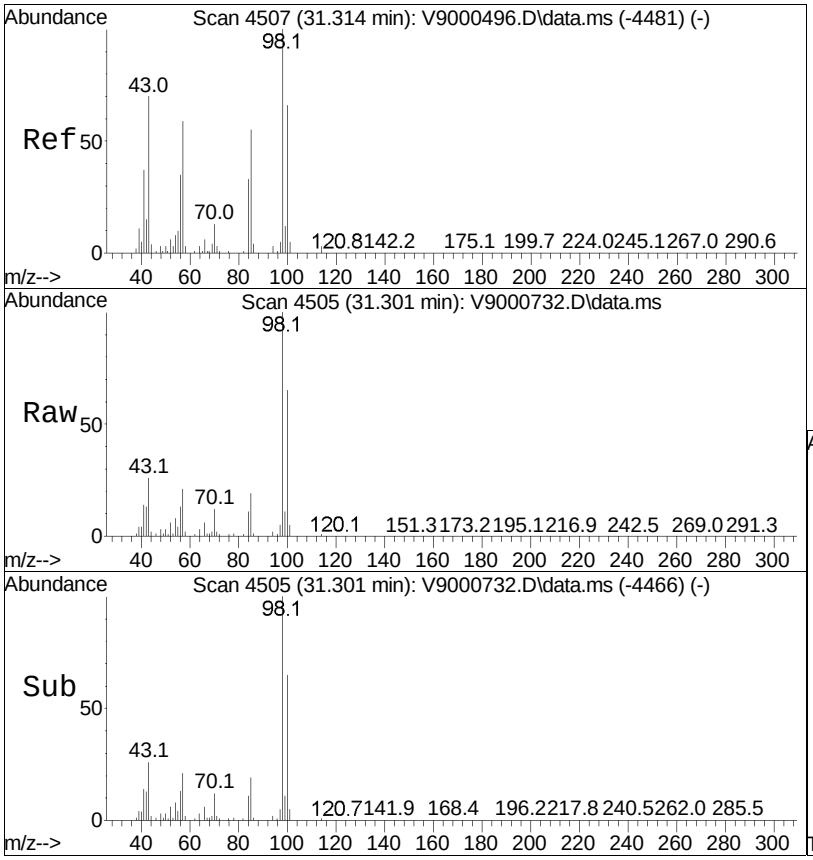


#60
2-Methylheptane
Concen: 19.92 ug/L
RT: 30.56 min Scan# 4383
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 57 Resp: 43347

Ion	Ratio	Lower	Upper
57	100		
43	95.3	72.4	112.4
70	24.1	6.3	46.3

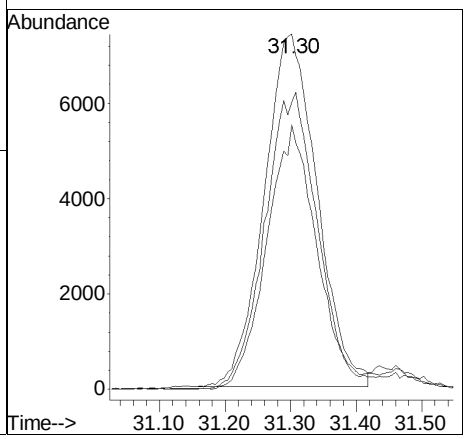


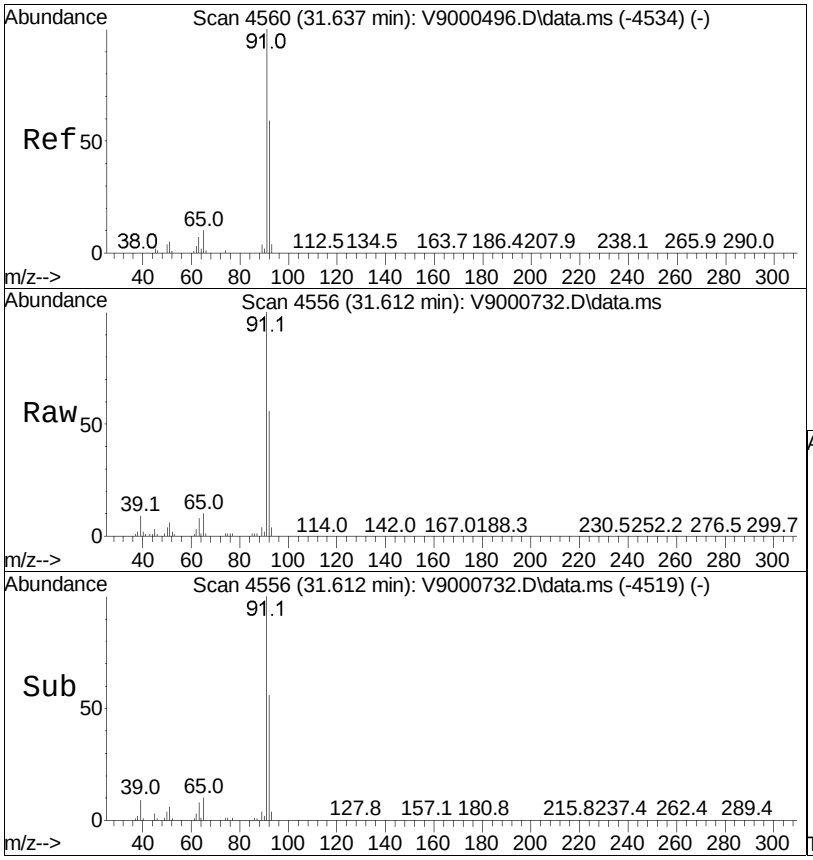


#63
3-Methylheptane
Concen: 20.80 ug/L
RT: 31.30 min Scan# 4505
Delta R.T. -0.013 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 41767

Ion	Ratio	Lower	Upper
43	100		
57	80.9	65.0	105.0
85	74.4	58.5	98.5

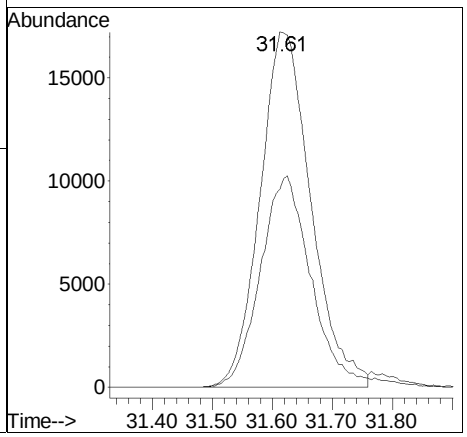


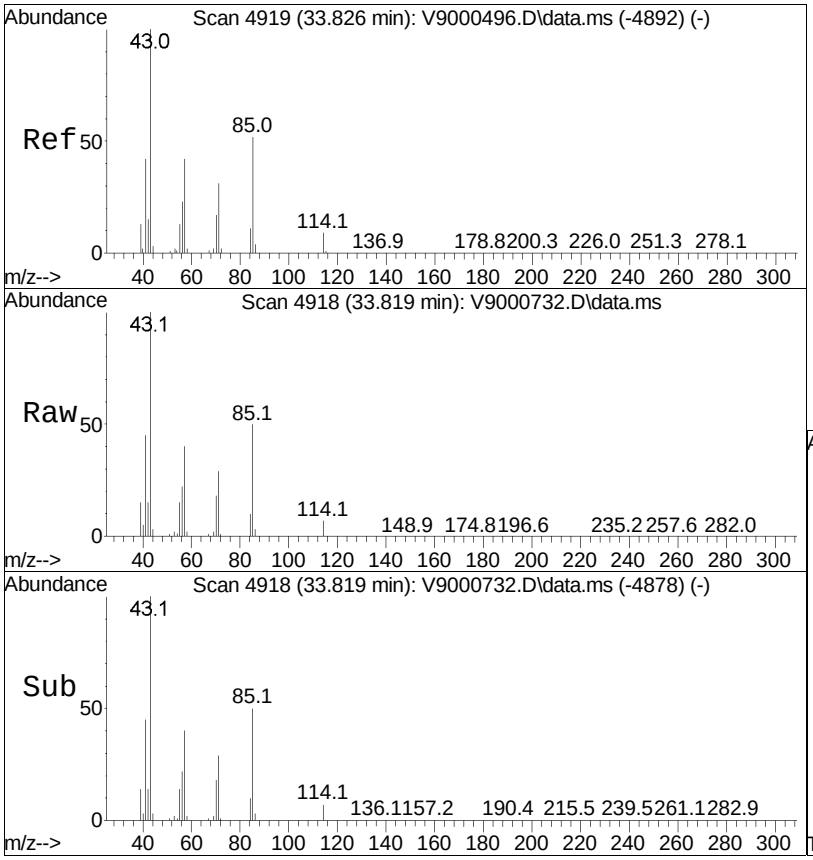


#66
Toluene
Concen: 19.13 ug/L
RT: 31.61 min Scan# 4556
Delta R.T. -0.025 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 91 Resp: 101532

Ion	Ratio	Lower	Upper
91	100		
92	55.8	38.5	78.5

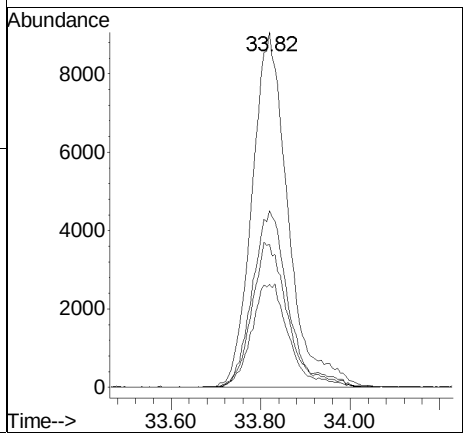


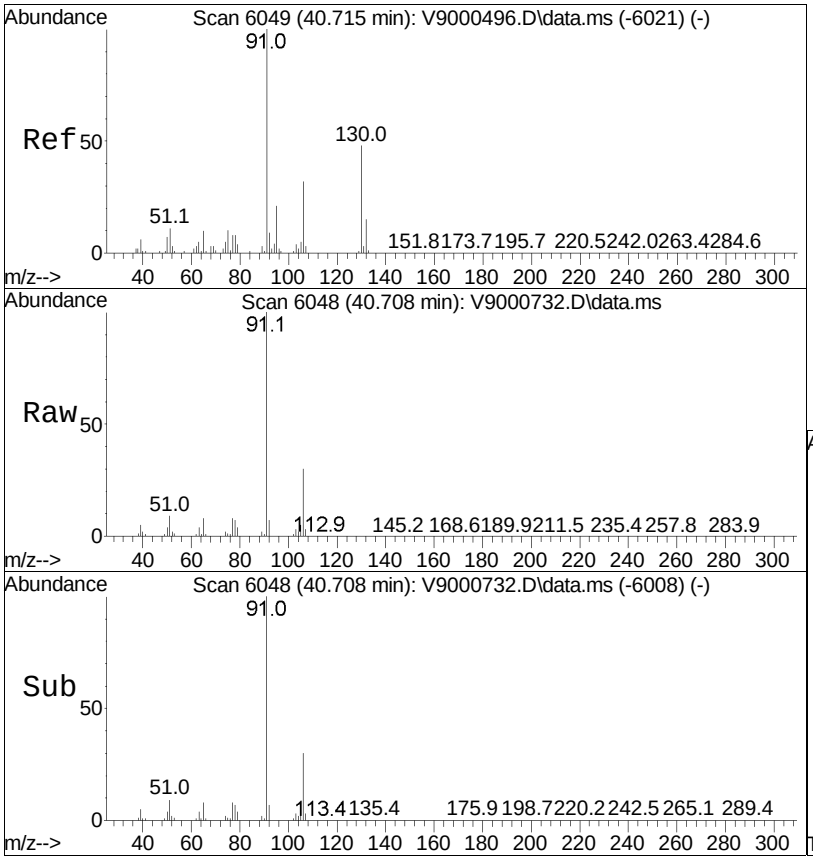


#71
Octane
Concen: 22.28 ug/L
RT: 33.82 min Scan# 4918
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 50620

Ion	Ratio	Lower	Upper
43	100		
57	40.3	22.3	62.3
85	49.7	32.0	72.0
71	29.0	10.9	50.9

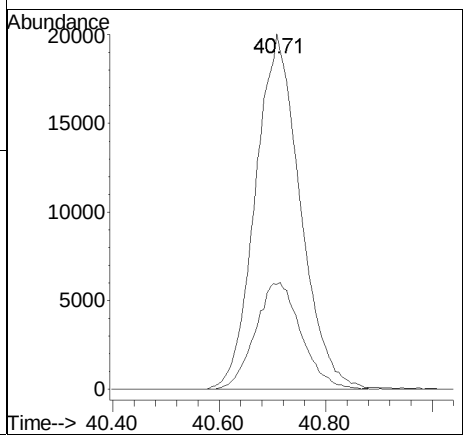


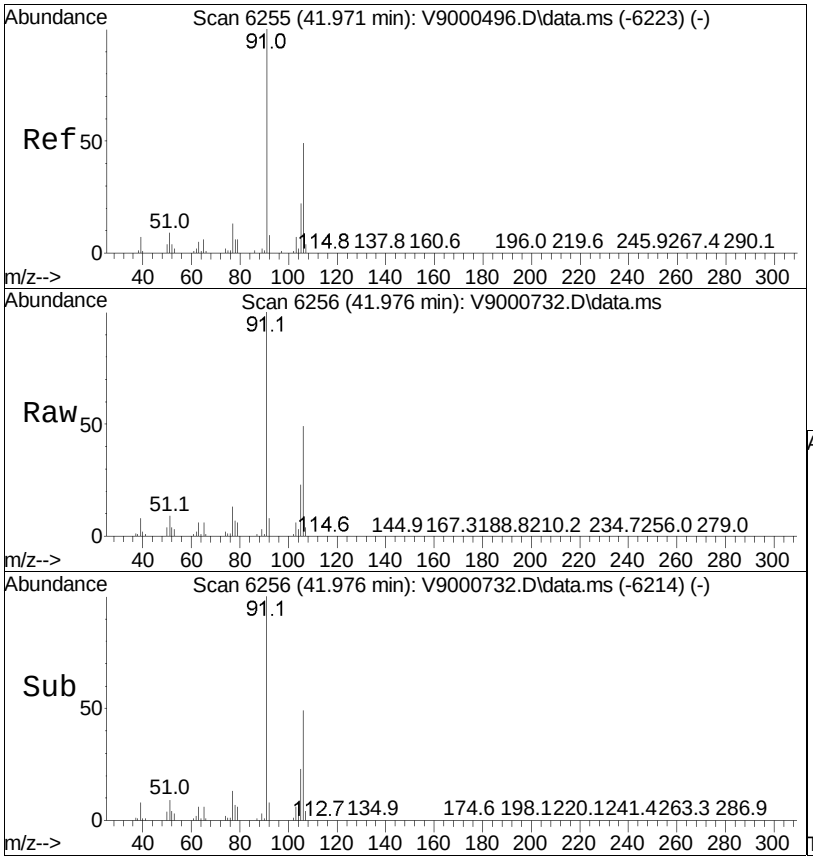


#86
Ethylbenzene
Concen: 18.81 ug/L
RT: 40.71 min Scan# 6048
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 91 Resp: 117178

Ion	Ratio	Lower	Upper
91	100		
106	29.6	12.0	52.0

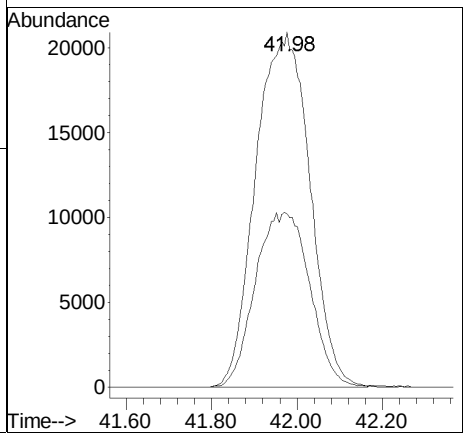


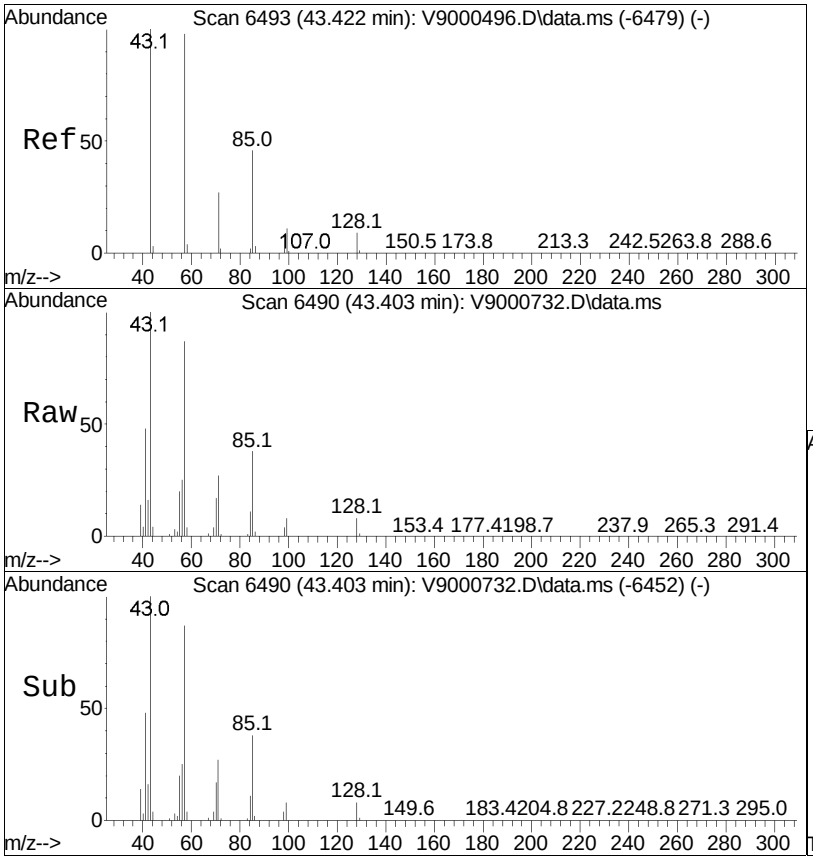


#91
p/m-Xylene
Concen: 38.29 ug/L
RT: 41.98 min Scan# 6256
Delta R.T. 0.006 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 91 Resp: 183069

Ion	Ratio	Lower	Upper
91	100		
106	48.9	29.5	69.5

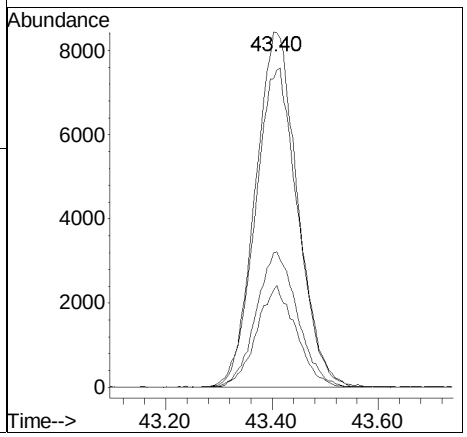


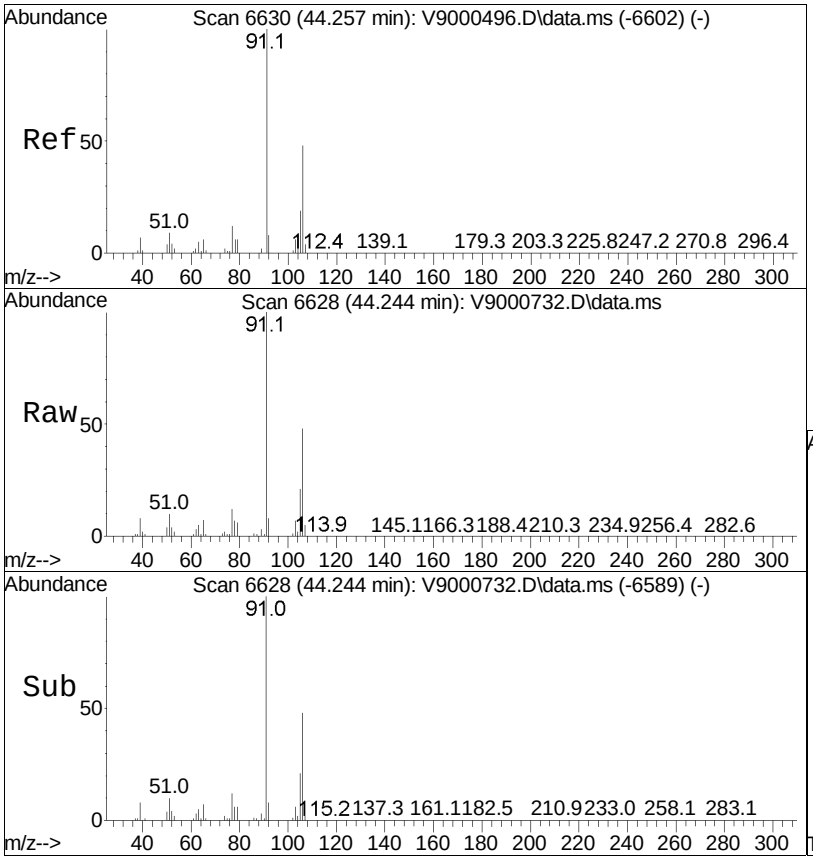


#95
Nonane
Concen: 19.68 ug/L
RT: 43.40 min Scan# 6490
Delta R.T. -0.019 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 46655

Ion	Ratio	Lower	Upper
43	100		
57	86.9	70.7	110.7
85	37.9	18.9	58.9
71	27.3	8.1	48.1

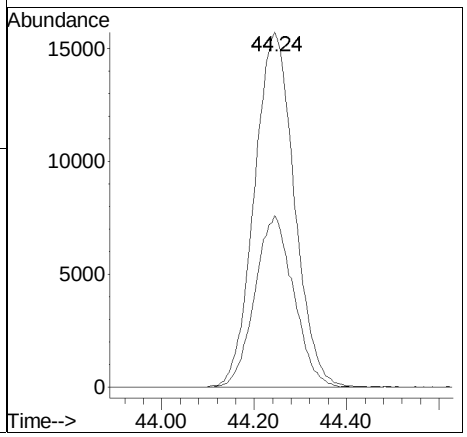


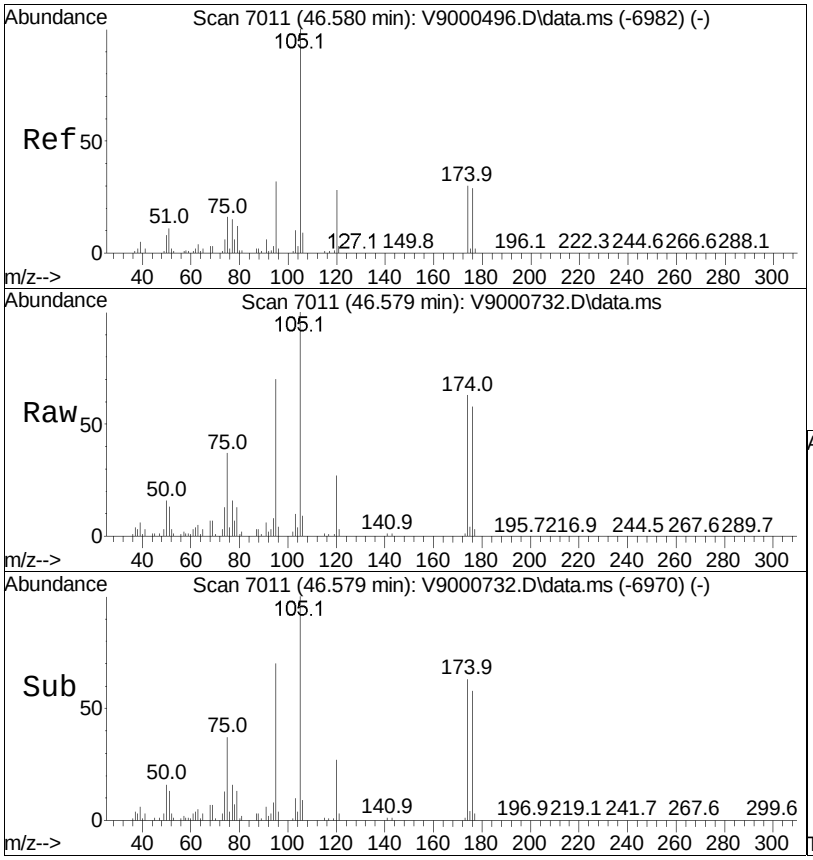


#98
o-Xylene
Concen: 19.32 ug/L
RT: 44.24 min Scan# 6628
Delta R.T. -0.013 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 91 Resp: 94265

Ion	Ratio	Lower	Upper
91	100		
106	48.4	27.8	67.8

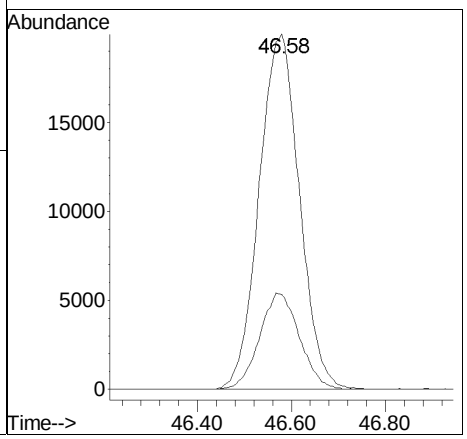


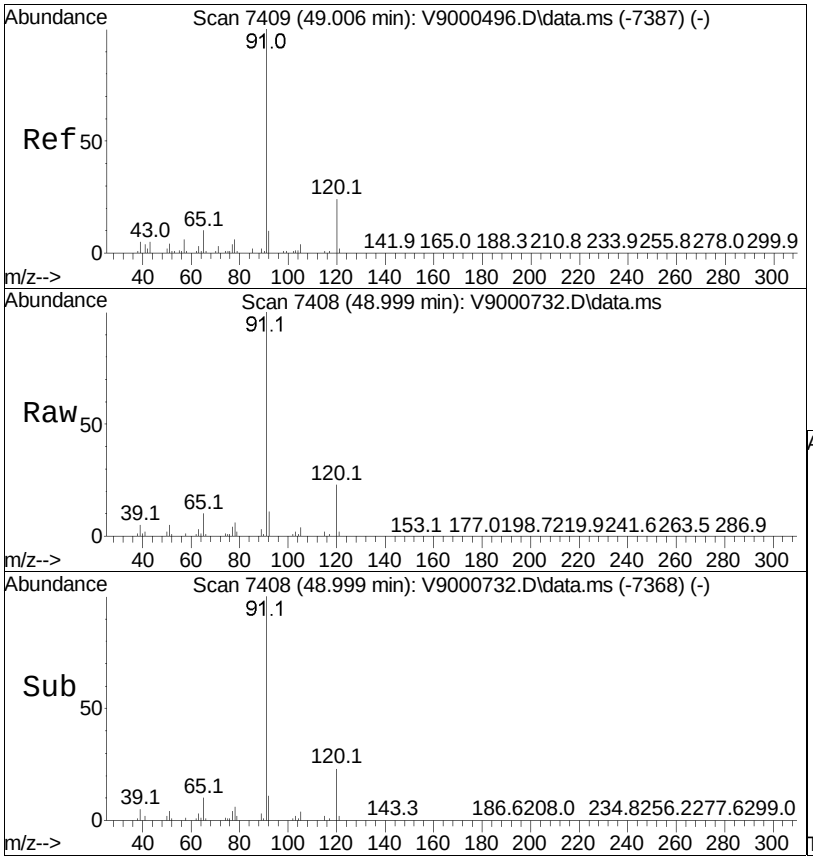


#102
Isopropylbenzene
Concen: 18.78 ug/L
RT: 46.58 min Scan# 7011
Delta R.T. -0.000 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:105 Resp: 118875

Ion	Ratio	Lower	Upper
105	100		
120	26.7	7.7	47.7

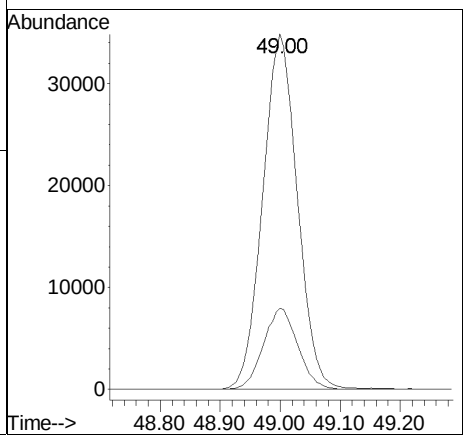


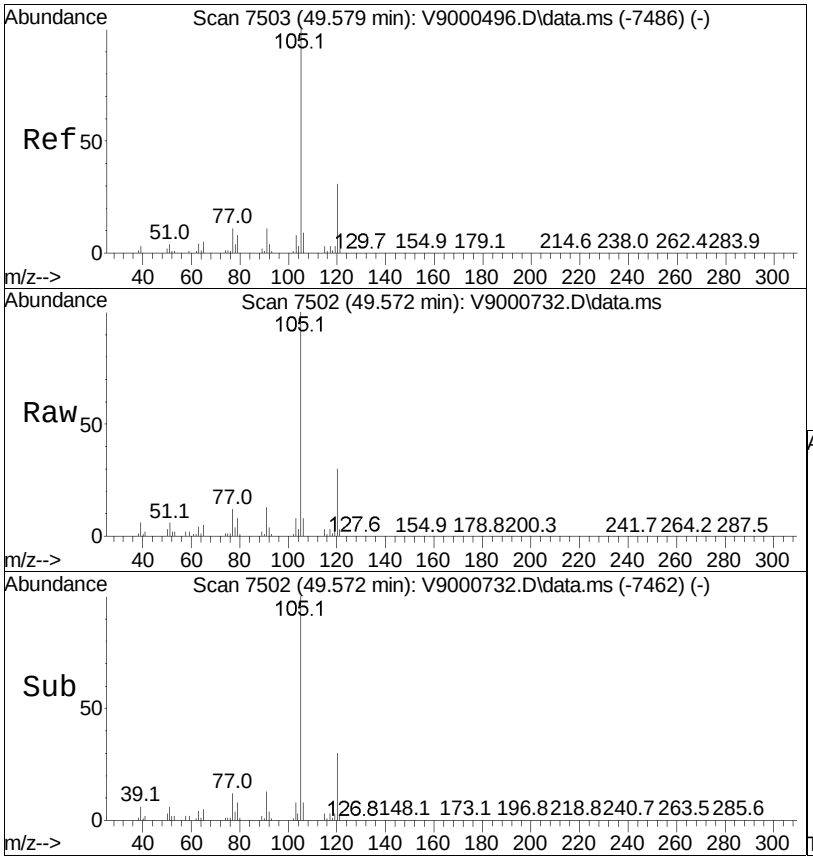


#104
n-Propylbenzene
Concen: 18.74 ug/L
RT: 49.00 min Scan# 7408
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 91 Resp: 139547

Ion	Ratio	Lower	Upper
91	100		
120	22.8	3.8	43.8

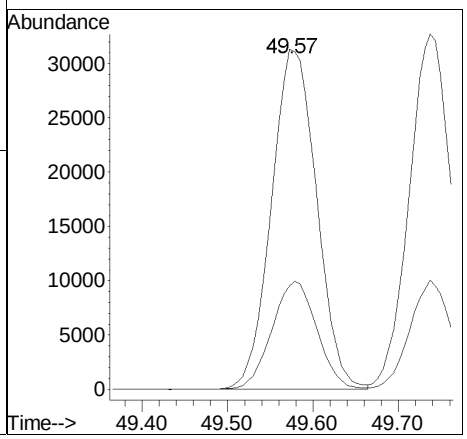


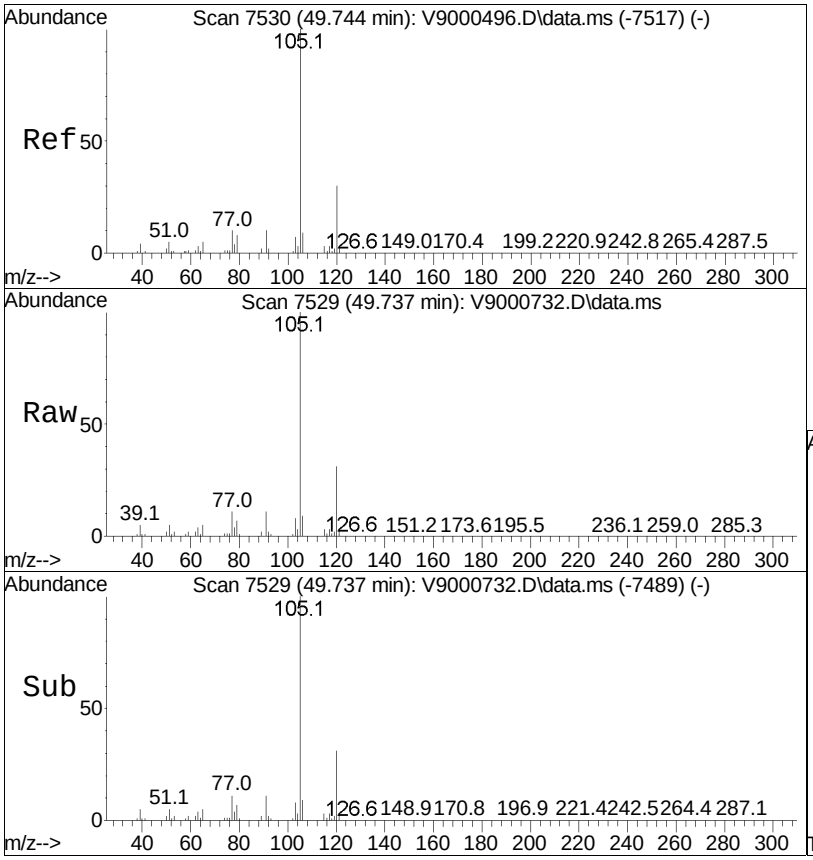


#107
1-Methyl-3-ethylbenzene
Concen: 18.25 ug/L
RT: 49.57 min Scan# 7502
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:105 Resp: 115030

Ion	Ratio	Lower	Upper
105	100		
120	30.4	11.0	51.0

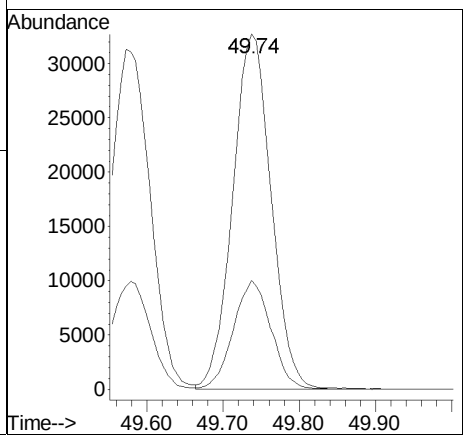


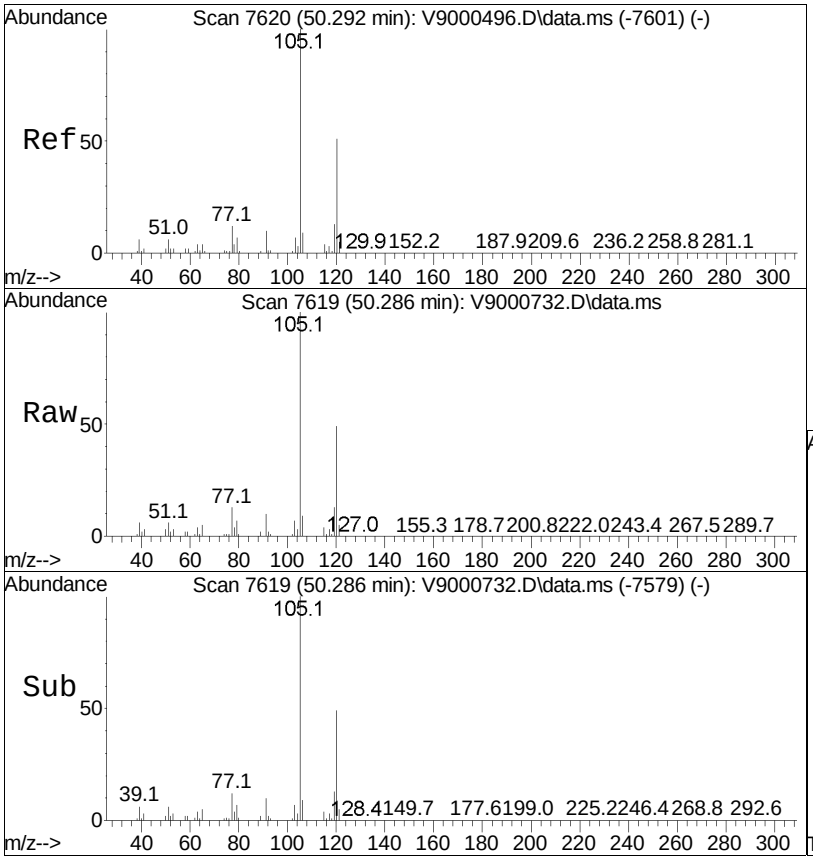


#108
1-Methyl-4-ethylbenzene
Concen: 19.02 ug/L
RT: 49.74 min Scan# 7529
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:105 Resp: 114688

Ion	Ratio	Lower	Upper
105	100		
120	30.8	9.8	49.8

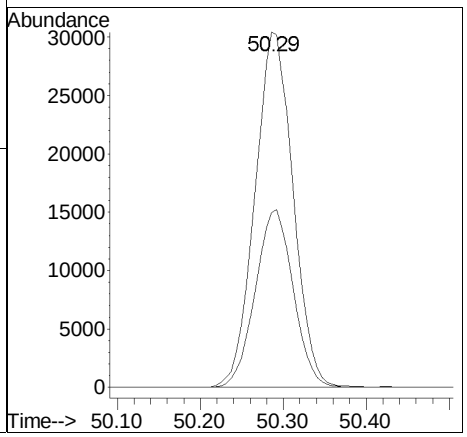


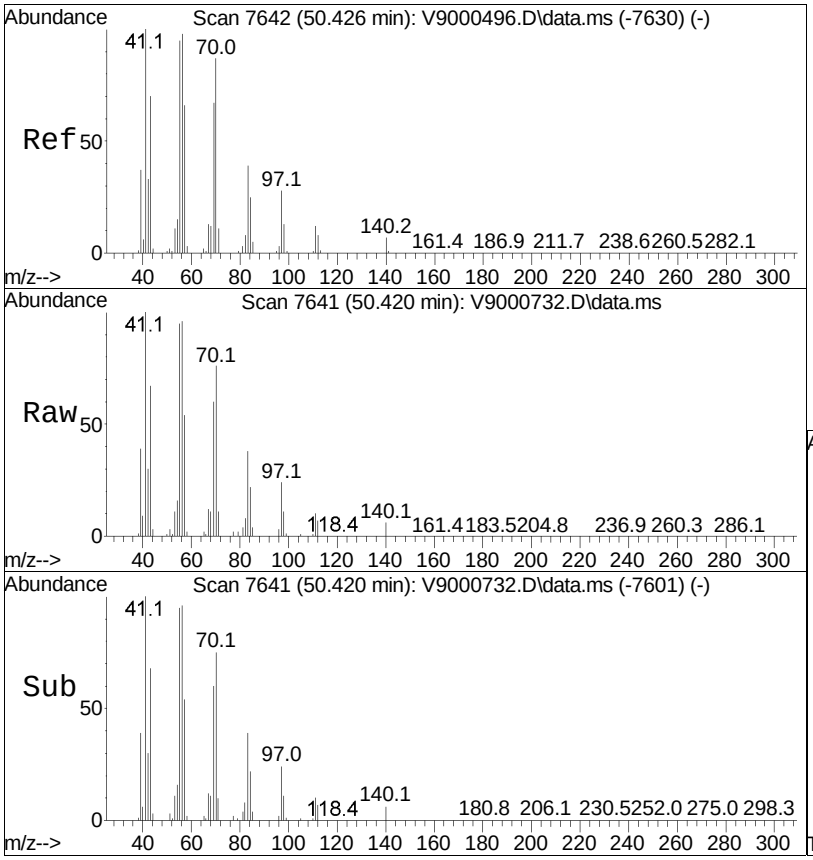


#109
1,3,5-Trimethylbenzene
Concen: 18.39 ug/L
RT: 50.29 min Scan# 7619
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:105 Resp: 96939

Ion	Ratio	Lower	Upper
105	100		
120	49.2	30.6	70.6

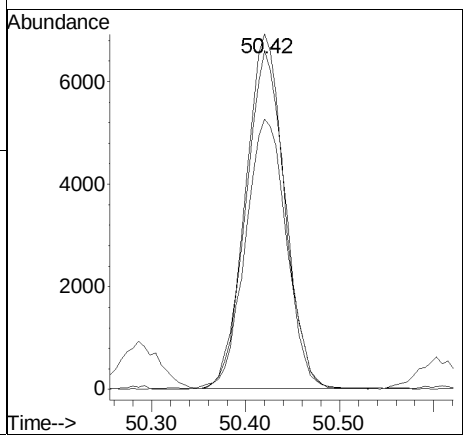


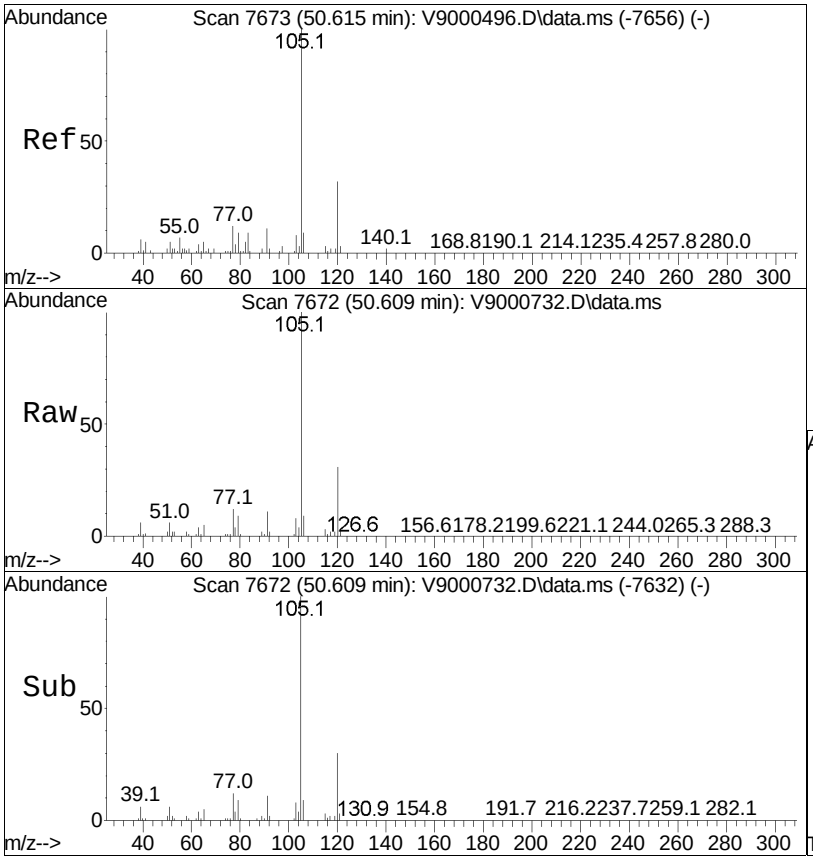


#110
1-Decene
Concen: 17.11 ug/L
RT: 50.42 min Scan# 7641
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 41 Resp: 20205

Ion	Ratio	Lower	Upper
41	100		
55	95.4	74.3	114.3
70	76.0	66.5	106.5

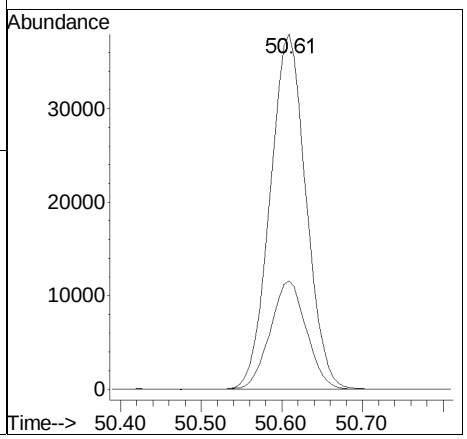


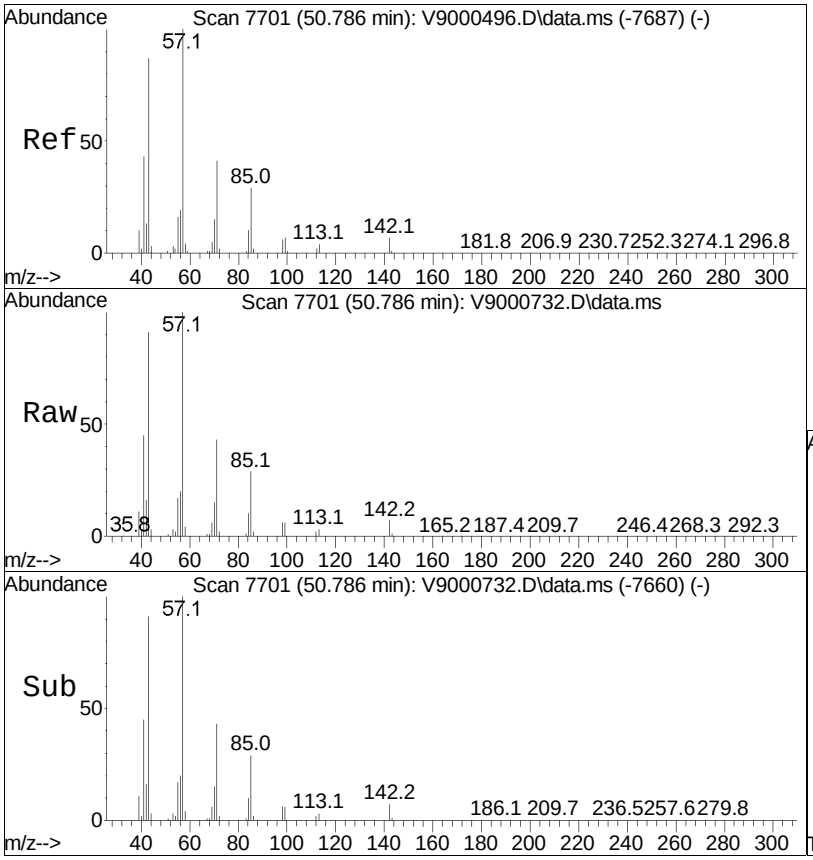


#112
1-Methyl-2-ethylbenzene
Concen: 18.71 ug/L
RT: 50.61 min Scan# 7672
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:105 Resp: 117488

Ion	Ratio	Lower	Upper
105	100		
120	30.6	11.7	51.7

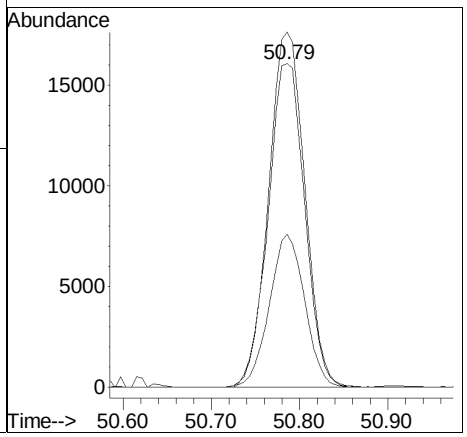


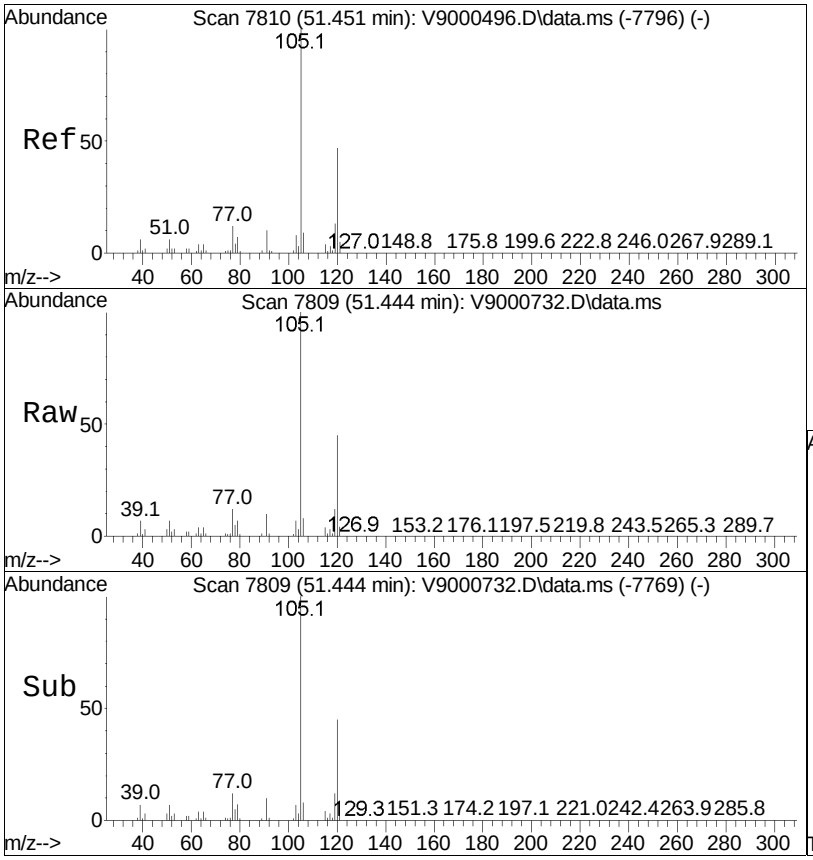


#113
Decane
Concen: 22.99 ug/L
RT: 50.79 min Scan# 7701
Delta R.T. -0.000 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 46341

Ion	Ratio	Lower	Upper
43	100		
57	109.8	94.6	134.6
71	47.3	27.1	67.1

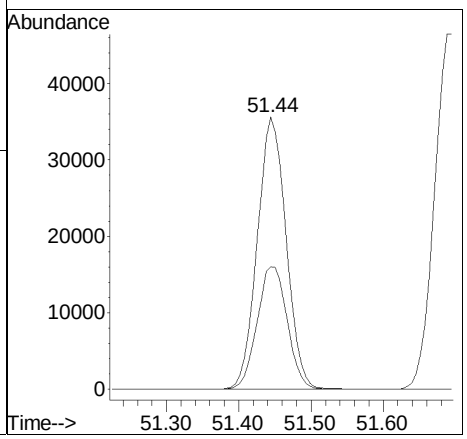


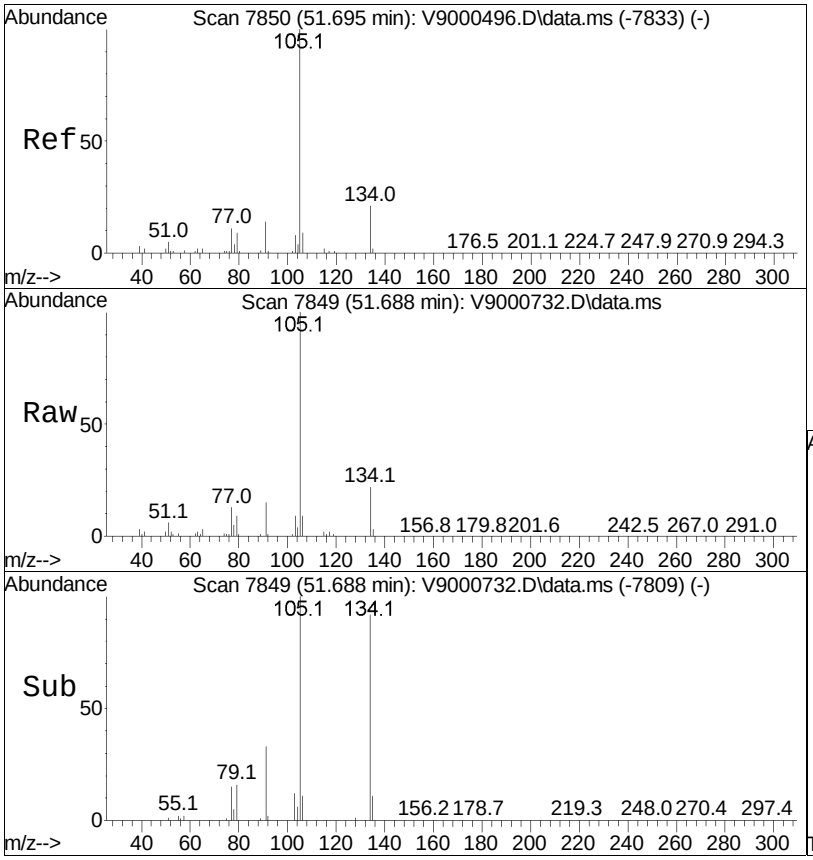


#115
1,2,4-Trimethylbenzene
Concen: 17.79 ug/L
RT: 51.44 min Scan# 7809
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:105 Resp: 98719

Ion	Ratio	Lower	Upper
105	100		
120	45.1	27.3	67.3

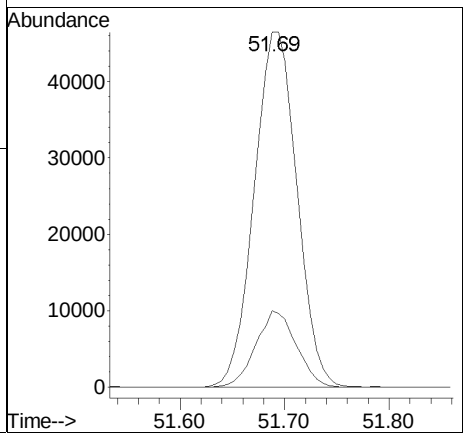


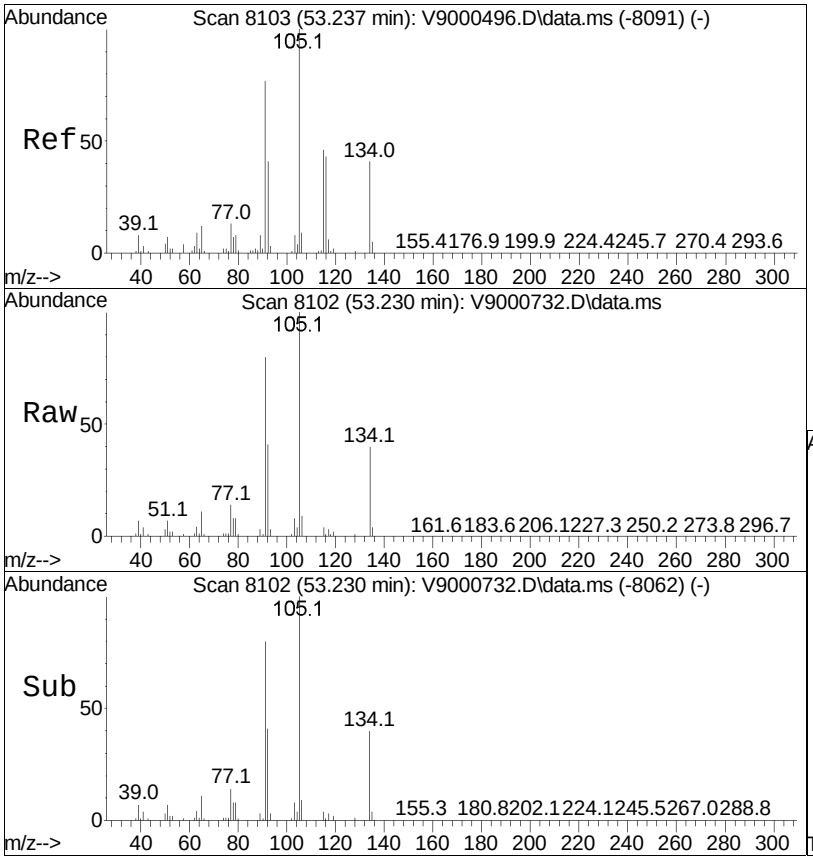


#117
sec-Butylbenzene
Concen: 19.22 ug/L
RT: 51.69 min Scan# 7849
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:105 Resp: 132052

Ion	Ratio	Lower	Upper
105	100		
134	21.6	1.1	41.1

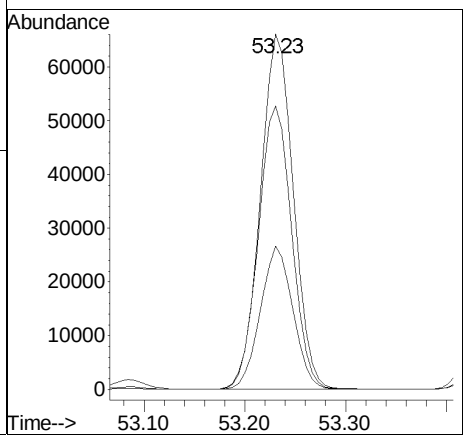


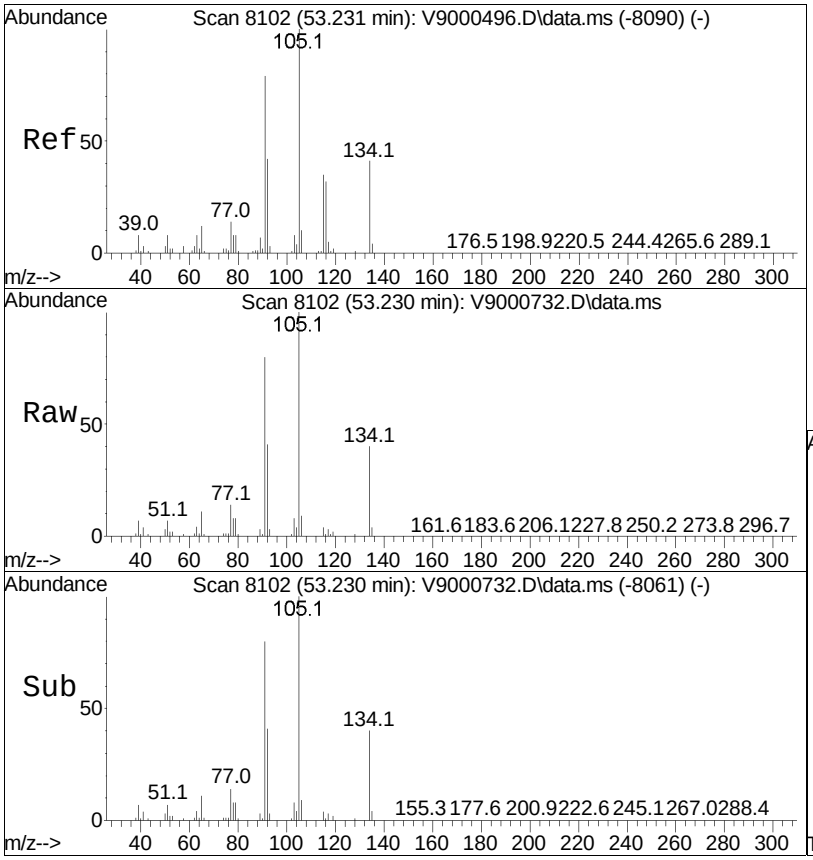


#126
1-Methyl-4-propylbenzene
Concen: 18.24 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:105 Resp: 150430

Ion	Ratio	Lower	Upper
105	100		
134	40.3	21.1	61.1
91	79.7	56.9	96.9

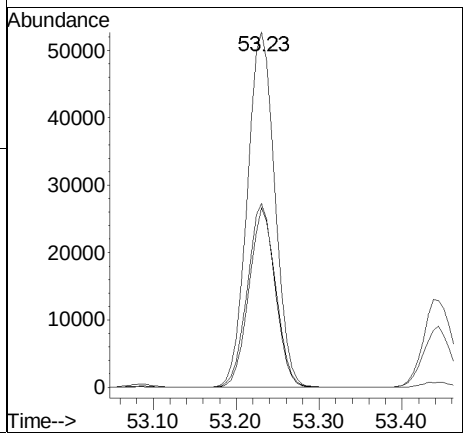


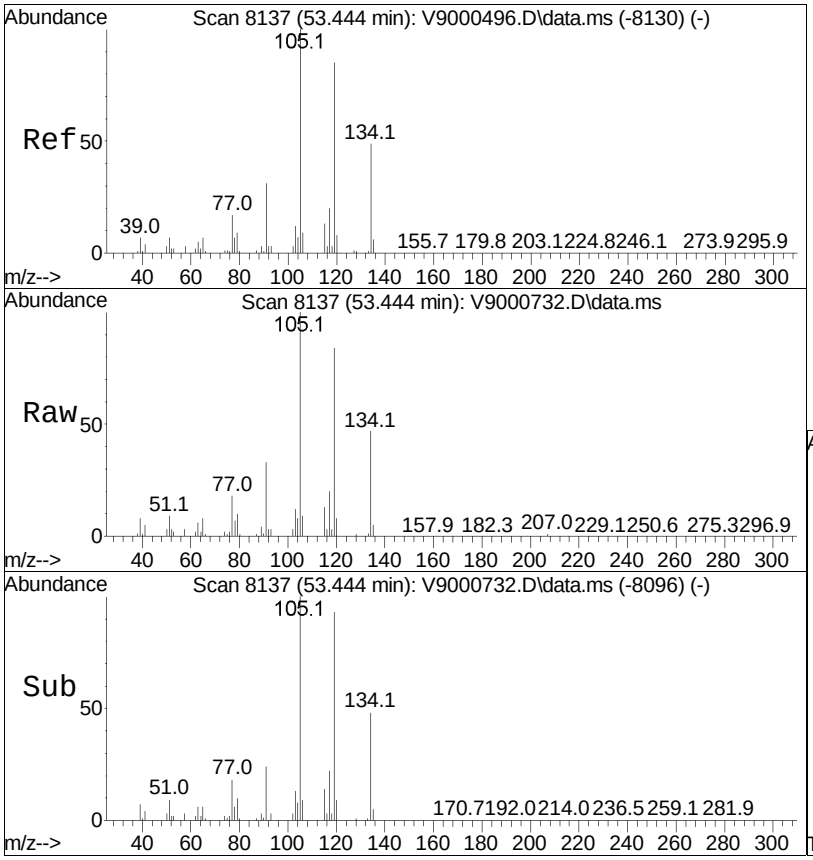


#127
n-Butylbenzene
Concen: 18.90 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. -0.000 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 91 Resp: 121907

Ion	Ratio	Lower	Upper
91	100		
92	51.7	32.9	72.9
134	50.6	31.9	71.9

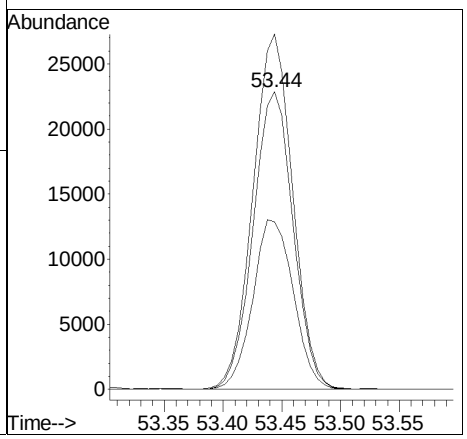


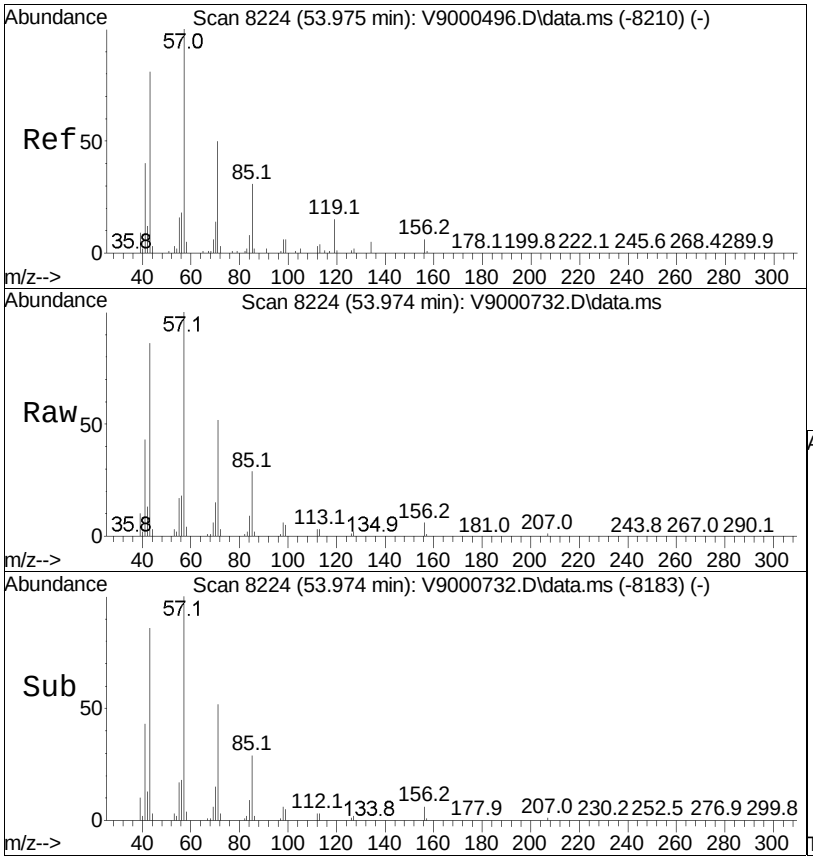


#129
1,2-Diethylbenzene
Concen: 18.24 ug/L
RT: 53.44 min Scan# 8137
Delta R.T. -0.000 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:119 Resp: 54009

Ion	Ratio	Lower	Upper
119	100		
105	119.4	95.9	135.9
134	56.3	38.0	78.0

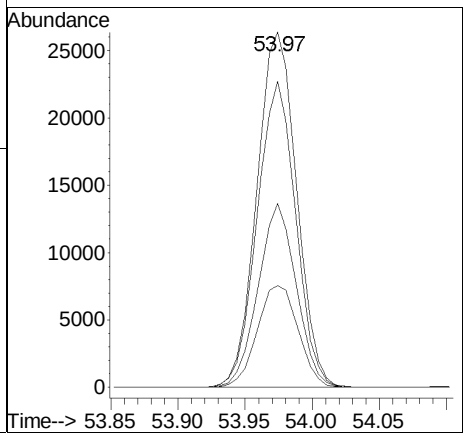


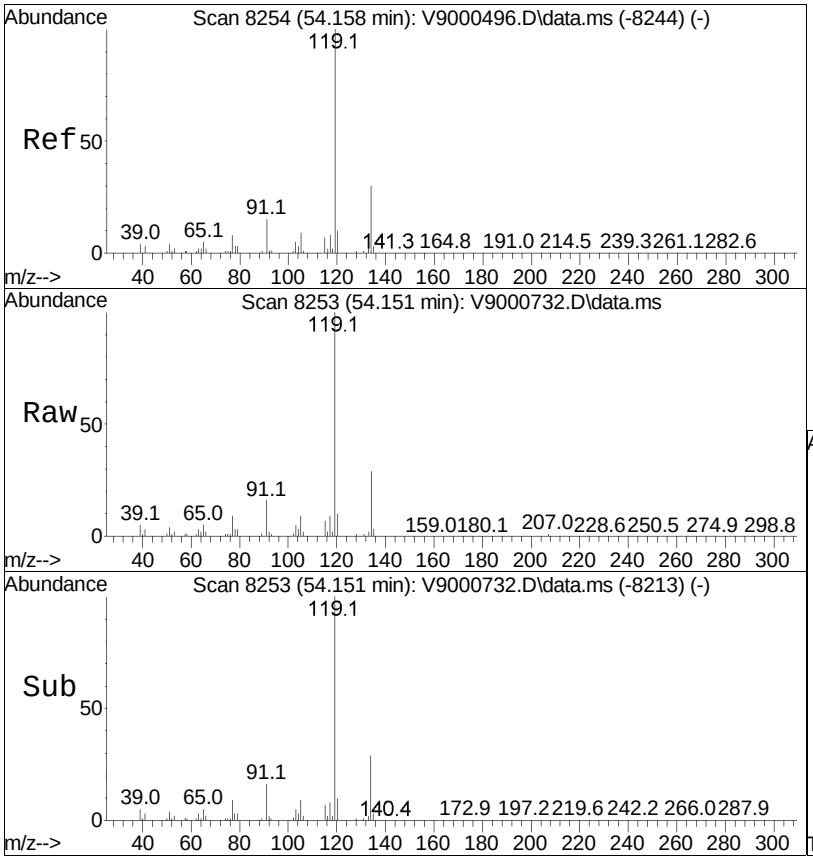


#132
Undecane
Concen: 21.36 ug/L
RT: 53.97 min Scan# 8224
Delta R.T. -0.000 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 57 Resp: 54328

Ion	Ratio	Lower	Upper
57	100		
43	86.2	61.2	101.2
71	51.8	29.8	69.8
85	28.7	11.5	51.5

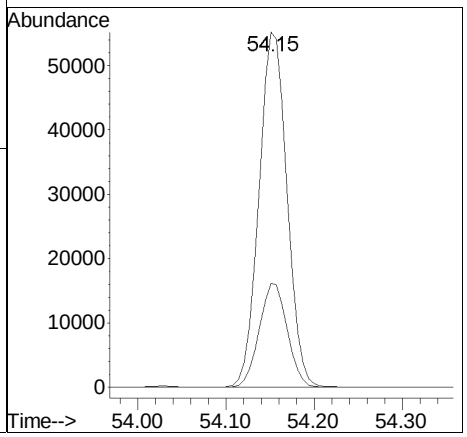


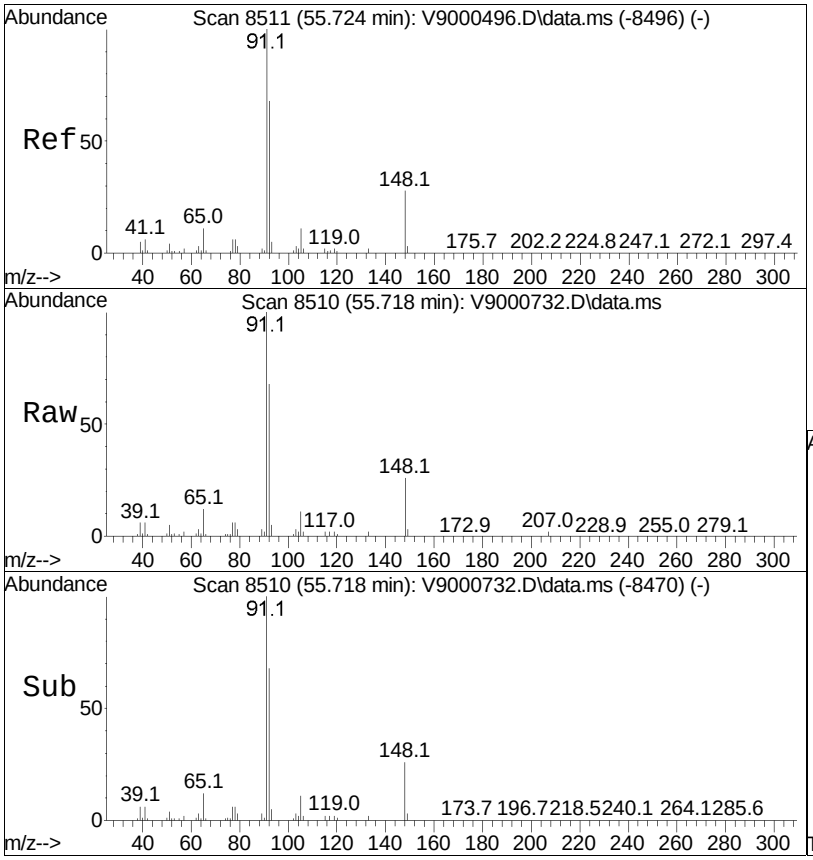


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 19.26 ug/L
RT: 54.15 min Scan# 8253
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion:119 Resp: 121892

Ion	Ratio	Lower	Upper
119	100		
134	29.3	10.1	50.1

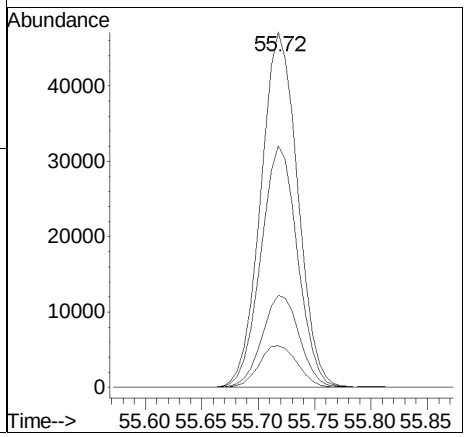


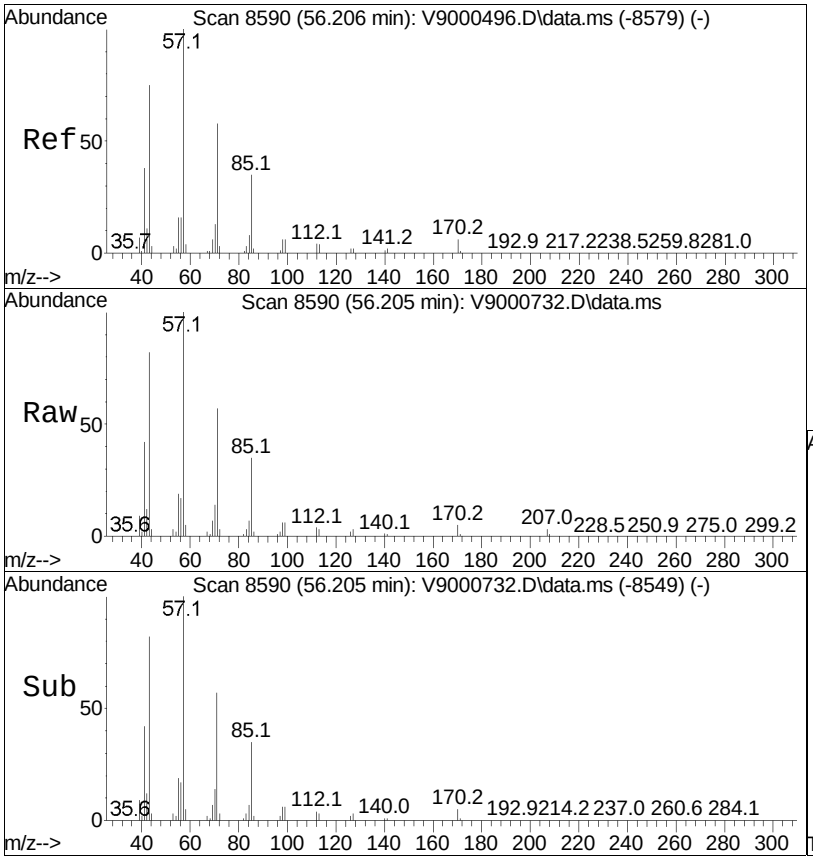


#139
Pentylbenzene
Concen: 19.23 ug/L
RT: 55.72 min Scan# 8510
Delta R.T. -0.007 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 91 Resp: 107153

Ion	Ratio	Lower	Upper
91	100		
92	68.0	47.9	87.9
65	11.7	0.0	31.4
148	25.9	8.4	48.4

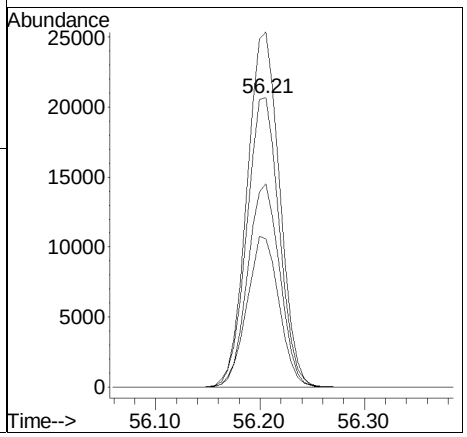




#142
Dodecane
Concen: 26.11 ug/L
RT: 56.21 min Scan# 8590
Delta R.T. -0.000 min
Lab File: V9000732.D
Acq: 07 Dec 2021 06:30 pm

Tgt Ion: 43 Resp: 44755

Ion	Ratio	Lower	Upper
43	100		
57	122.6	113.3	153.3
71	70.3	57.3	97.3
41	51.3	31.2	71.2



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000773.D
Acq On : 13 Dec 2021 11:08 am
Operator : VOA9:RY
Sample : WG1582700-3,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 13 12:44:33 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	258118	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.17	113	66183	49.868	ug/L	-0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.74%			
62) Toluene-d8 (surr)	31.25	98	310364	50.407	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.81%			
101) 4-Bromofluorobenzene (...	46.54	95	129111	49.636	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.27%			
Target Compounds						Qvalue
4) 1-Pentene	8.93	42	26386	20.886	ug/L	96
6) Pentane	9.31	43	36349	18.707	ug/L	98
10) Tertiary butanol	10.79	59	37007M4	94.736	ug/L	
13) Cyclopentane	13.01	70	17005	19.892	ug/L #	31
15) 2-Methylpentane	13.23	43	44587	19.964	ug/L	99
16) MTBE	13.57	73	62258	19.627	ug/L	98
17) 3-Methylpentane	14.22	57	41836	21.371	ug/L	98
18) 1-Hexene	14.80	56	24594	21.670	ug/L	99
19) Hexane	15.41	57	35407	20.297	ug/L	99
20) Diisopropyl ether	15.74	45	64171	19.315	ug/L	99
25) Ethyl tertiary butyl e...	17.21	59	62817	18.956	ug/L	99
27) Methylcyclopentane	17.76	56	46288	21.377	ug/L	97
28) 2,4-Dimethylpentane	17.91	43	41838	20.997	ug/L	97
32) Cyclohexane	20.67	56	39961	21.869	ug/L	94
33) 2-Methylhexane	21.11	43	46107	20.902	ug/L	94
34) Benzene	21.30	78	90284	20.020	ug/L	99
35) 2,3-Dimethylpentane	21.41	56	39150	21.311	ug/L	99
38) 3-Methylhexane	21.93	43	36276	19.036	ug/L	97
39) TAME	22.31	73	65918	17.736	ug/L	99
44) Isooctane	23.38	57	101693	22.066	ug/L	90
46) Heptane	24.11	43	37680	22.986	ug/L	97
51) Methylcyclohexane	26.54	83	43117	21.207	ug/L	98
60) 2-Methylheptane	30.54	57	43110	20.917	ug/L	99
63) 3-Methylheptane	31.30	43	41354	20.812	ug/L	99
66) Toluene	31.61	91	101534	20.450	ug/L	100
71) Octane	33.81	43	47359	21.310	ug/L	99
86) Ethylbenzene	40.70	91	111975	19.850	ug/L	98
91) p/m-Xylene	41.96	91	172740	40.063	ug/L	99
95) Nonane	43.40	43	43362	18.408	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000773.D
Acq On : 13 Dec 2021 11:08 am
Operator : VOA9:RY
Sample : WG1582700-3,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 13 12:44:33 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) o-Xylene	44.23	91	90339	20.340	ug/L	96
102) Isopropylbenzene	46.57	105	112712	20.017	ug/L	100
104) n-Propylbenzene	49.00	91	132111	19.868	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.57	105	108787	19.644	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.74	105	108814	20.534	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	92601	20.083	ug/L	99
110) 1-Decene	50.42	41	19120	17.167	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.61	105	113657	20.420	ug/L	100
113) Decane	50.78	43	43660	21.086	ug/L	99
115) 1,2,4-Trimethylbenzene	51.44	105	94639	19.512	ug/L	98
117) sec-Butylbenzene	51.69	105	127129	21.096	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	145907	20.210	ug/L	99
127) n-Butylbenzene	53.23	91	117984	20.494	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	52112	20.476	ug/L	98
132) Undecane	53.97	57	52050	20.575	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	118019	21.776	ug/L	98
139) Pentylbenzene	55.72	91	102663	20.847	ug/L	99
142) Dodecane	56.20	43	44064	23.945	ug/L	98

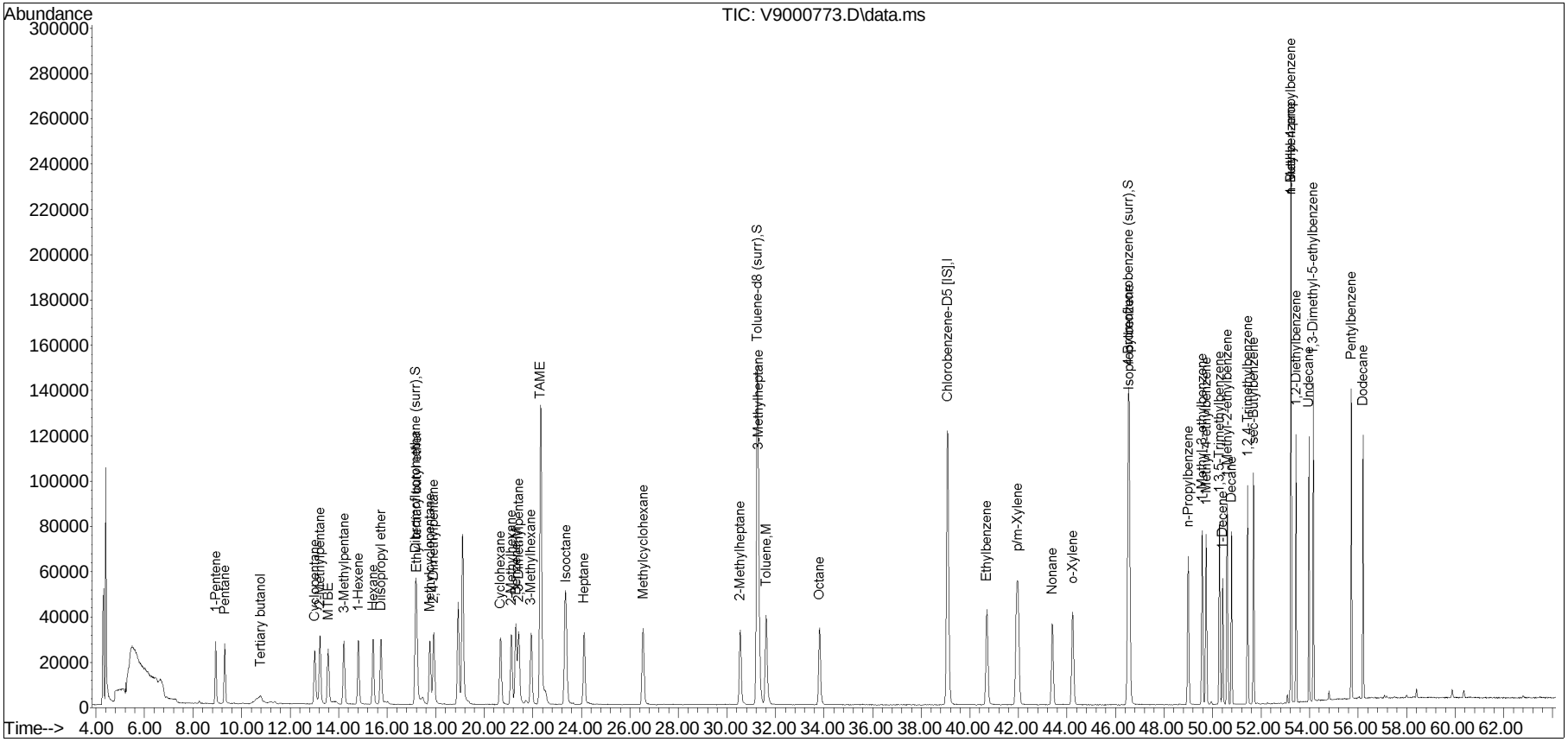
(#) = qualifier out of range (m) = manual integration (+) = signals summed

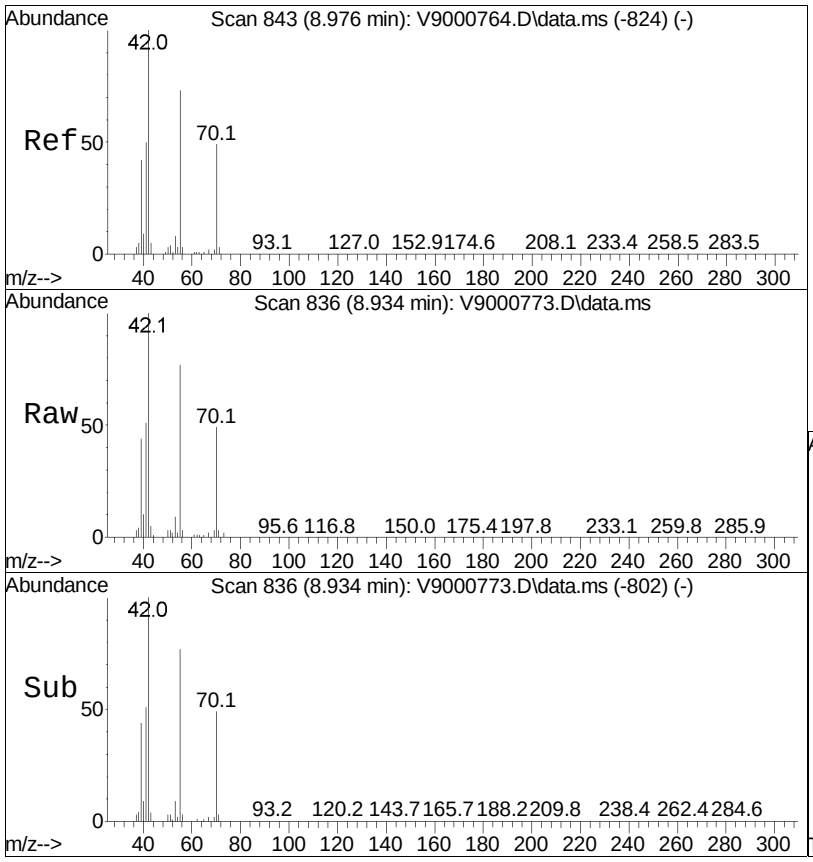
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000773.D
Acq On : 13 Dec 2021 11:08 am
Operator : VOA9:RY
Sample : WG1582700-3,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 13 12:44:33 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

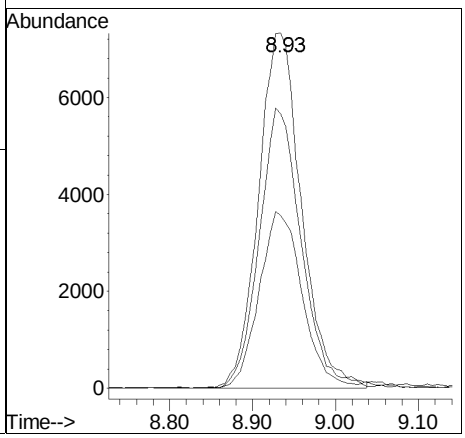


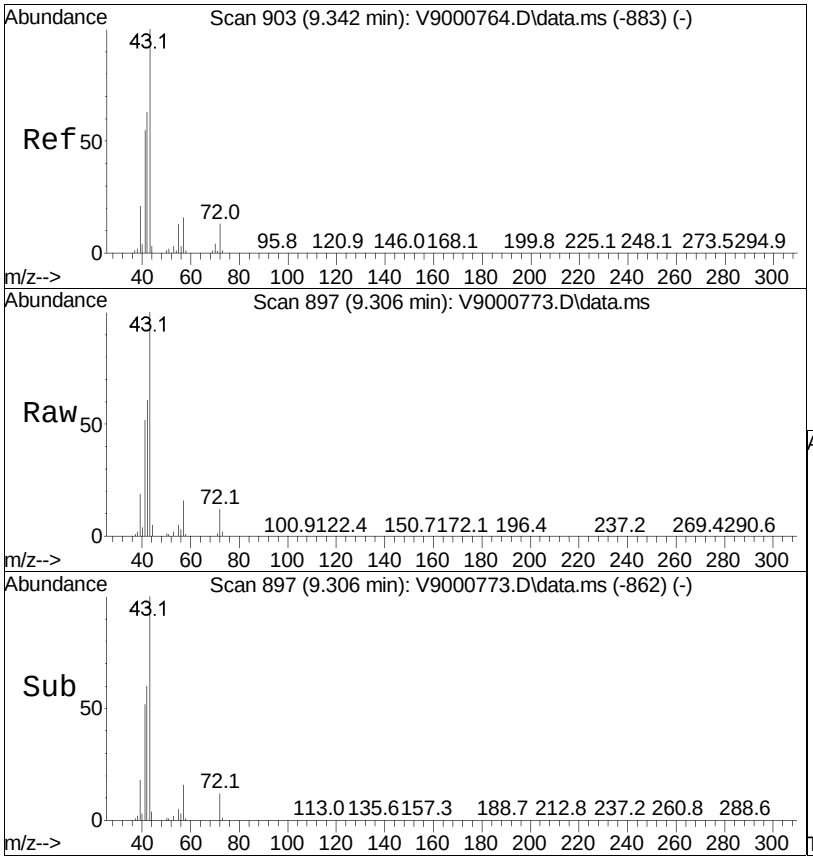


#4
1-Pentene
Concen: 20.89 ug/L
RT: 8.93 min Scan# 836
Delta R.T. -0.042 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 42 Resp: 26386

Ion	Ratio	Lower	Upper
42	100		
55	77.2	52.8	92.8
70	48.6	29.3	69.3

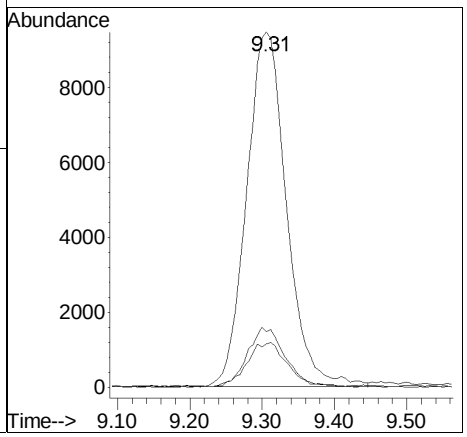


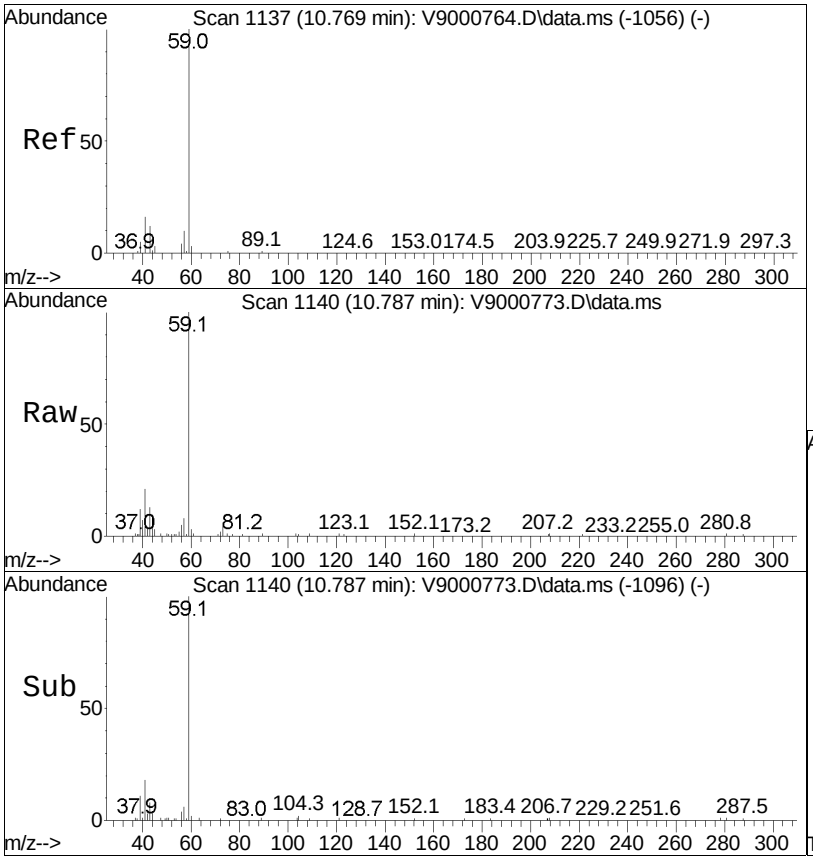


#6
Pentane
Concen: 18.71 ug/L
RT: 9.31 min Scan# 897
Delta R.T. -0.036 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 36349

Ion	Ratio	Lower	Upper
43	100		
57	15.7	0.0	36.4
72	12.2	0.0	32.9

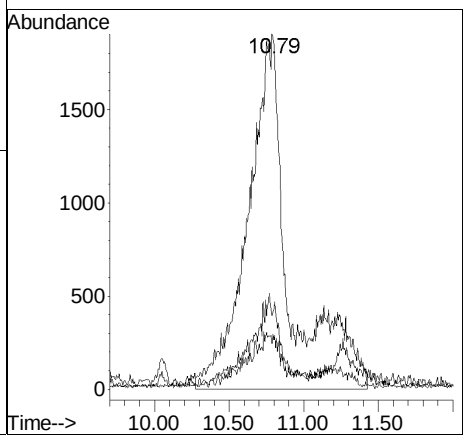


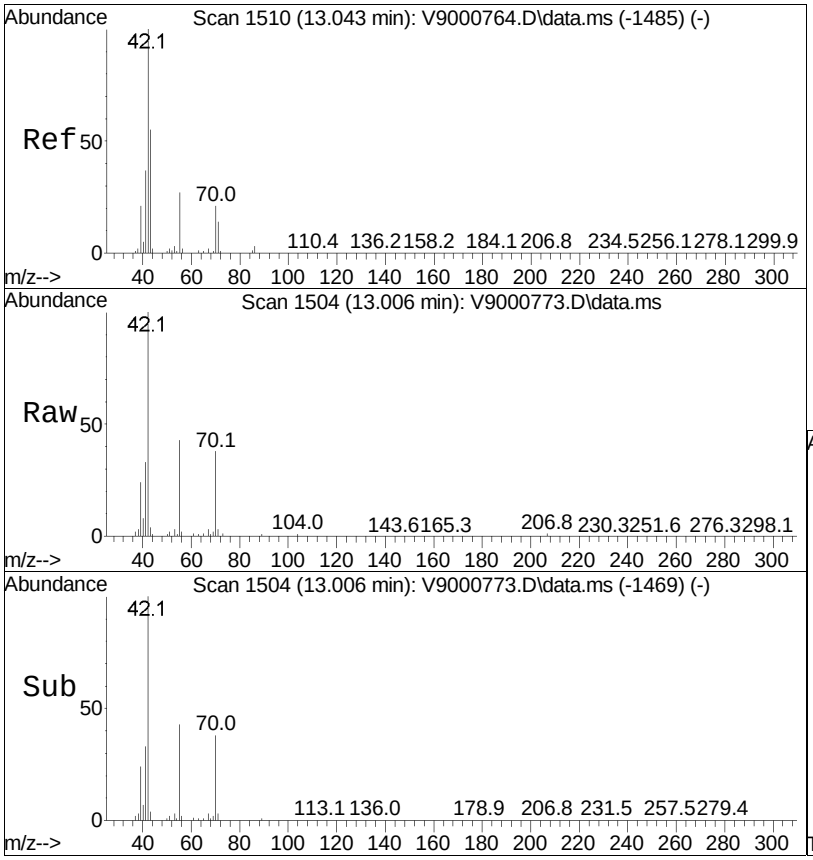


#10
Tertiary butanol
Concen: 94.74 ug/L m
RT: 10.79 min Scan# 1140
Delta R.T. 0.019 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 59 Resp: 37007

Ion	Ratio	Lower	Upper
59	100		
41	20.8	0.0	39.6
43	12.9	0.0	32.8

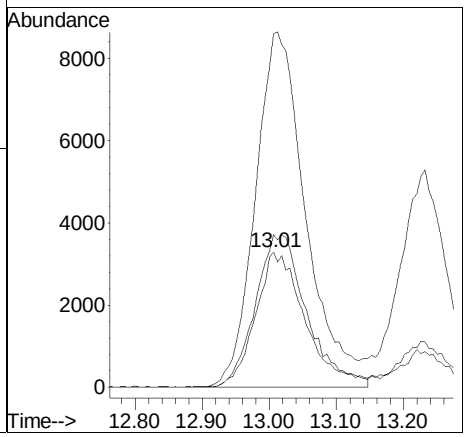


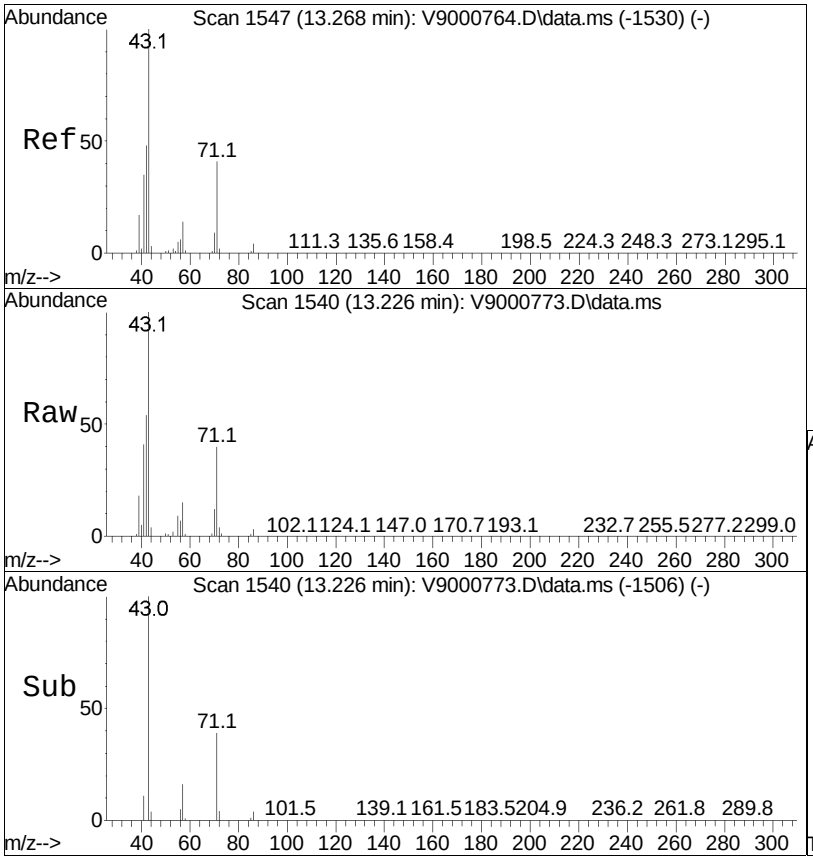


#13
Cyclopentane
Concen: 19.89 ug/L
RT: 13.01 min Scan# 1504
Delta R.T. -0.036 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 70 Resp: 17005

Ion	Ratio	Lower	Upper
70	100		
42	261.5	467.5	507.5#
55	113.0	111.6	151.6

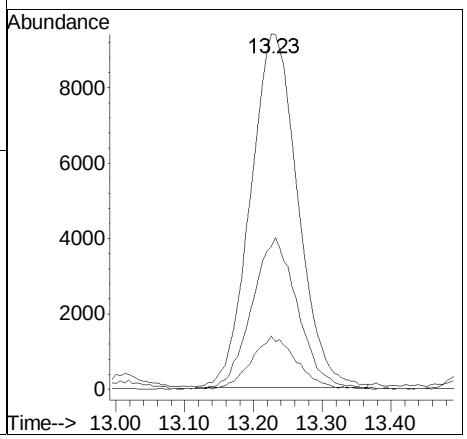


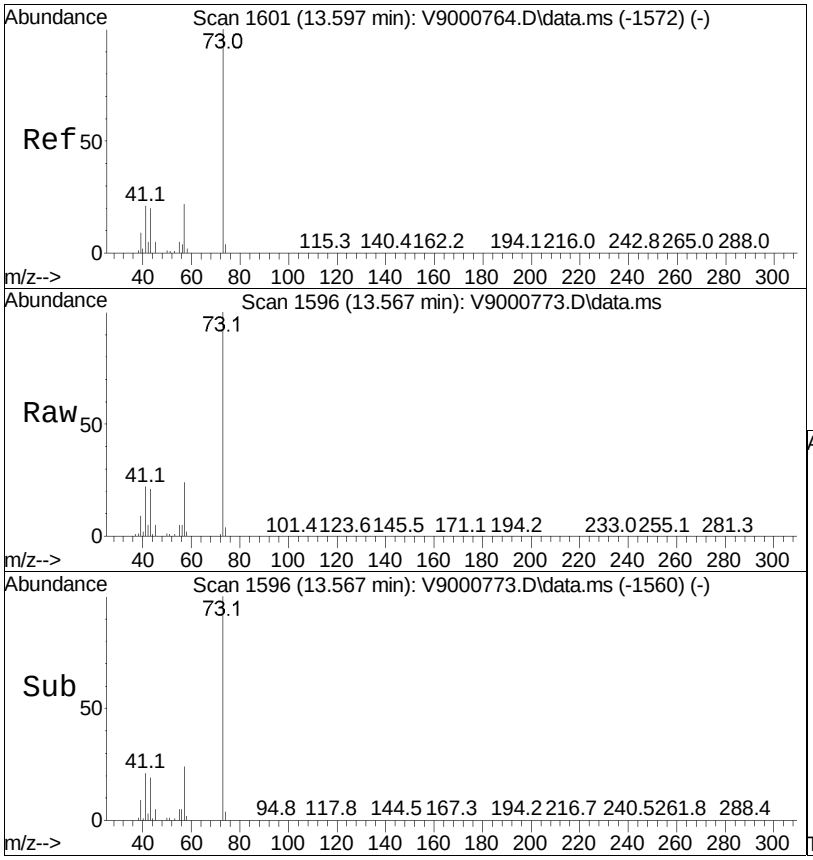


#15
2-Methylpentane
Concen: 19.96 ug/L
RT: 13.23 min Scan# 1540
Delta R.T. -0.042 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 44587

Ion	Ratio	Lower	Upper
43	100		
71	40.2	20.4	60.4
57	15.0	0.0	33.3

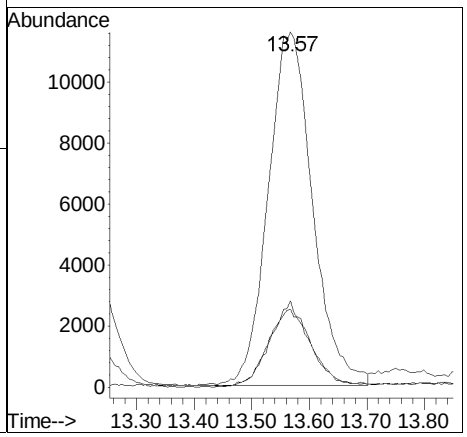


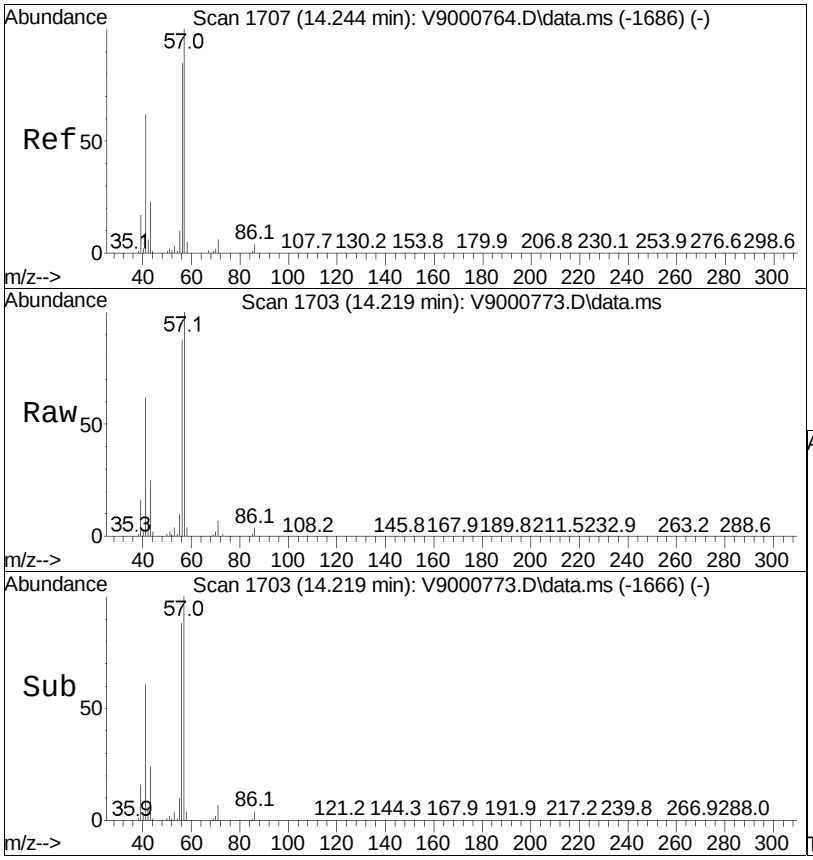


#16
MTBE
Concen: 19.63 ug/L
RT: 13.57 min Scan# 1596
Delta R.T. -0.030 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 73 Resp: 62258

Ion	Ratio	Lower	Upper
73	100		
57	24.3	2.5	42.5
41	22.0	1.8	41.8

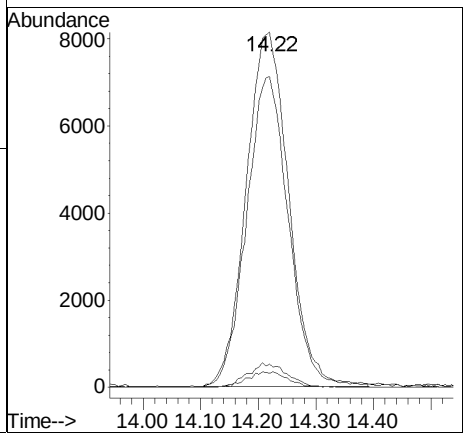


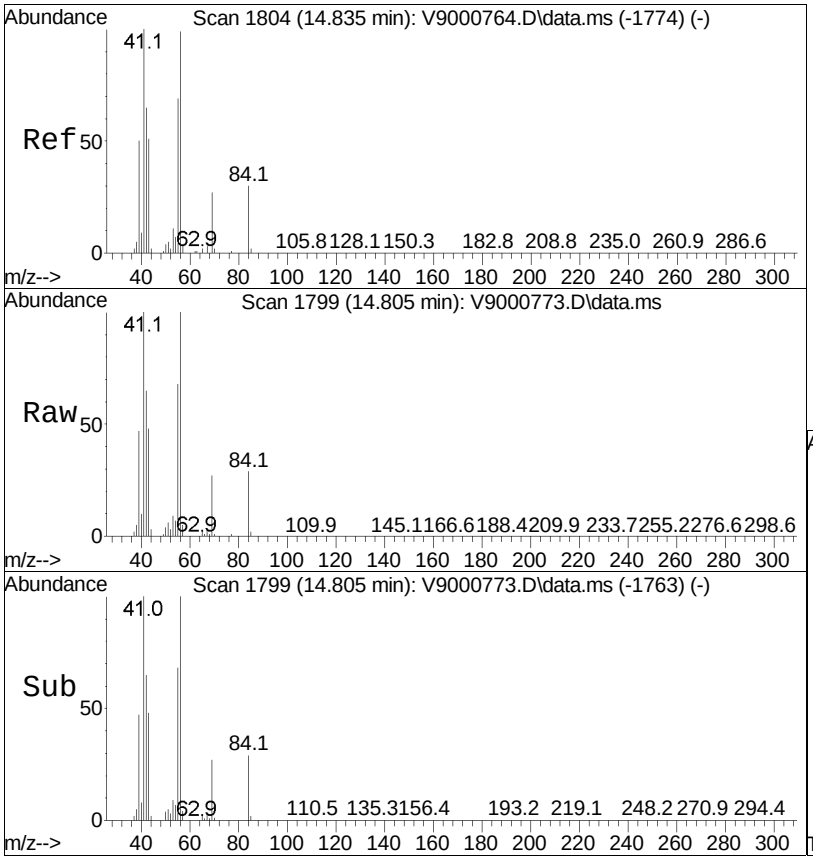


#17
3-Methylpentane
Concen: 21.37 ug/L
RT: 14.22 min Scan# 1703
Delta R.T. -0.024 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 57 Resp: 41836

Ion	Ratio	Lower	Upper
57	100		
56	87.5	65.5	105.5
71	6.6	0.0	26.3
86	4.0	0.0	23.9

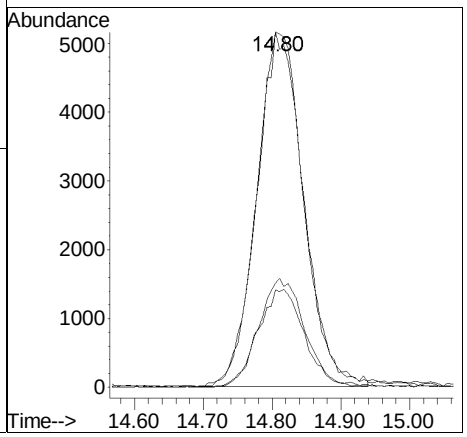


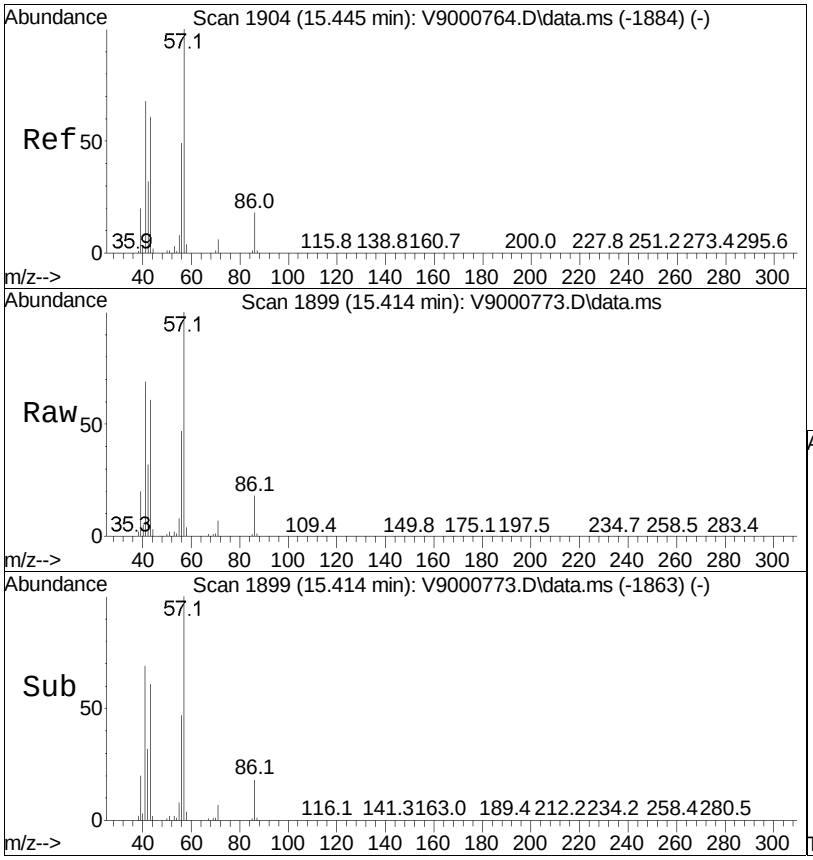


#18
1-Hexene
Concen: 21.67 ug/L
RT: 14.80 min Scan# 1799
Delta R.T. -0.030 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 56 Resp: 24594

Ion	Ratio	Lower	Upper
56	100		
41	100.0	81.0	121.0
84	29.3	10.5	50.5
69	27.5	6.9	46.9

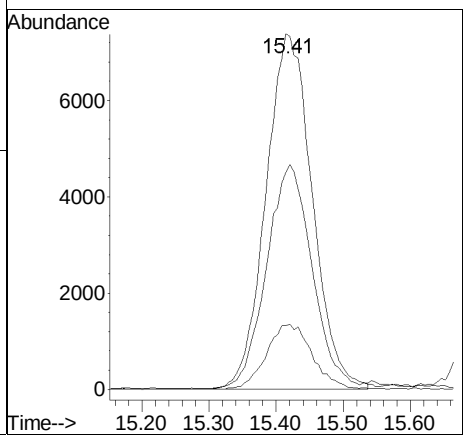


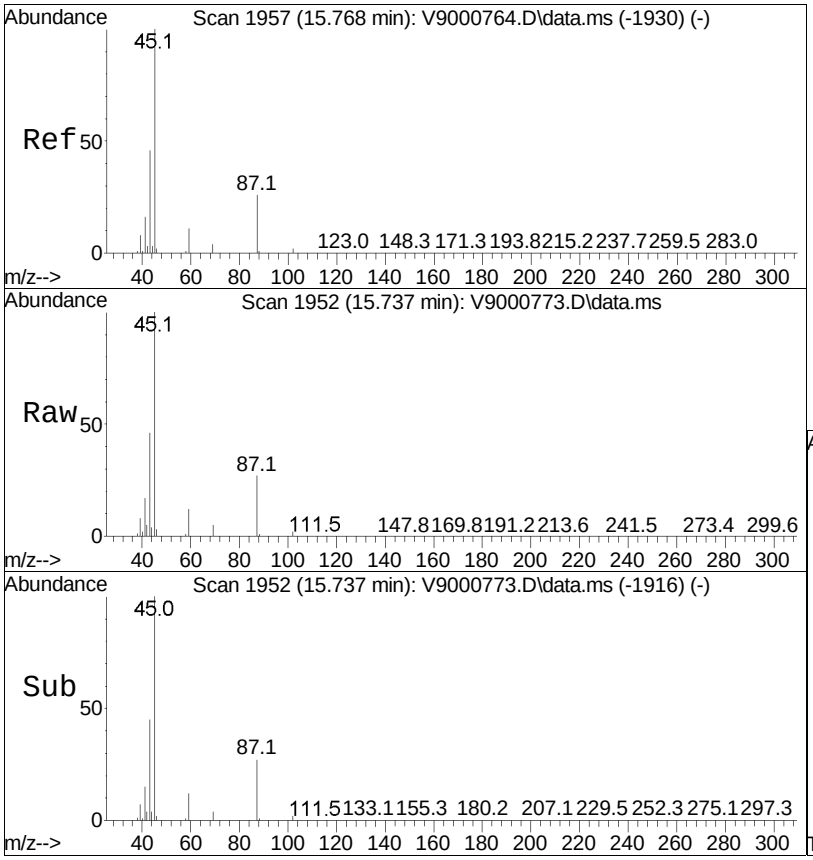


#19
Hexane
Concen: 20.30 ug/L
RT: 15.41 min Scan# 1899
Delta R.T. -0.030 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 57 Resp: 35407

Ion	Ratio	Lower	Upper
57	100		
43	61.1	42.0	82.0
86	18.0	0.0	38.4

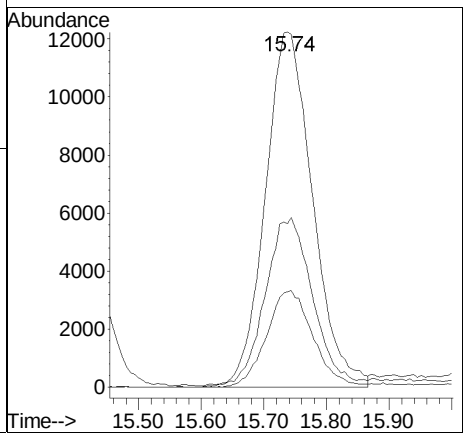


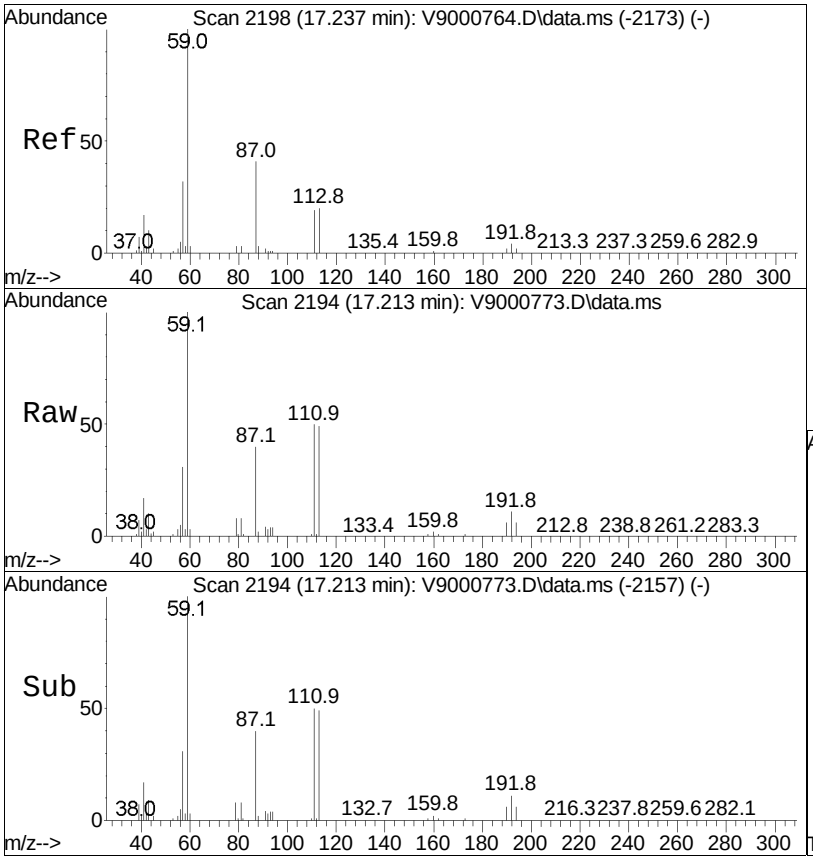


#20
Diisopropyl ether
Concen: 19.31 ug/L
RT: 15.74 min Scan# 1952
Delta R.T. -0.030 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 45 Resp: 64171

Ion	Ratio	Lower	Upper
45	100		
87	26.9	6.3	46.3
43	46.1	27.0	67.0

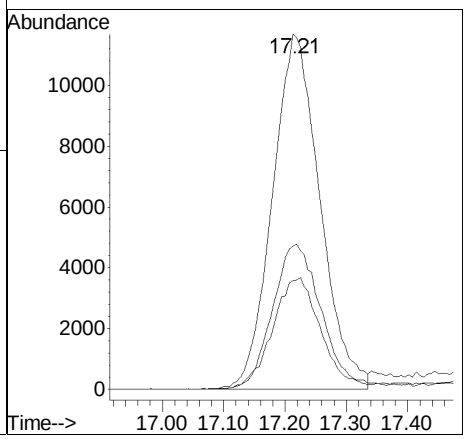


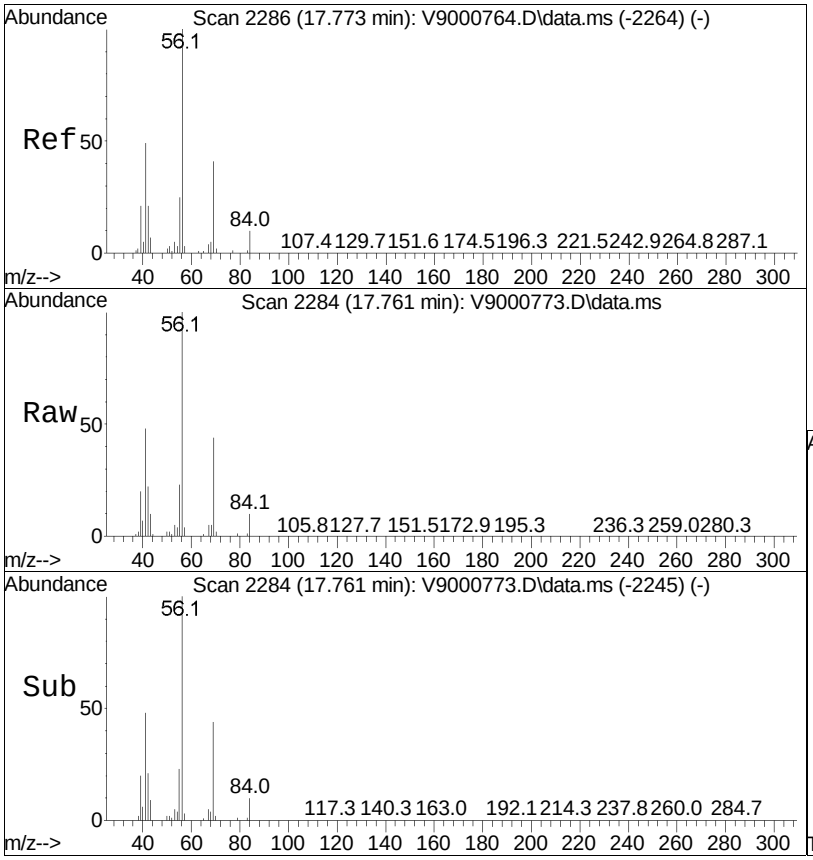


#25
Ethyl tertiary butyl ether
Concen: 18.96 ug/L
RT: 17.21 min Scan# 2194
Delta R.T. -0.024 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 59 Resp: 62817

Ion	Ratio	Lower	Upper
59	100		
87	40.3	20.5	60.5
57	30.6	11.7	51.7

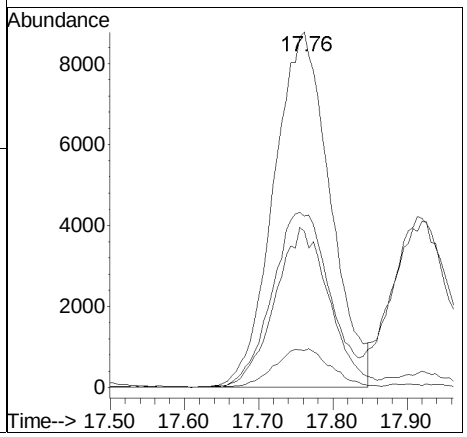


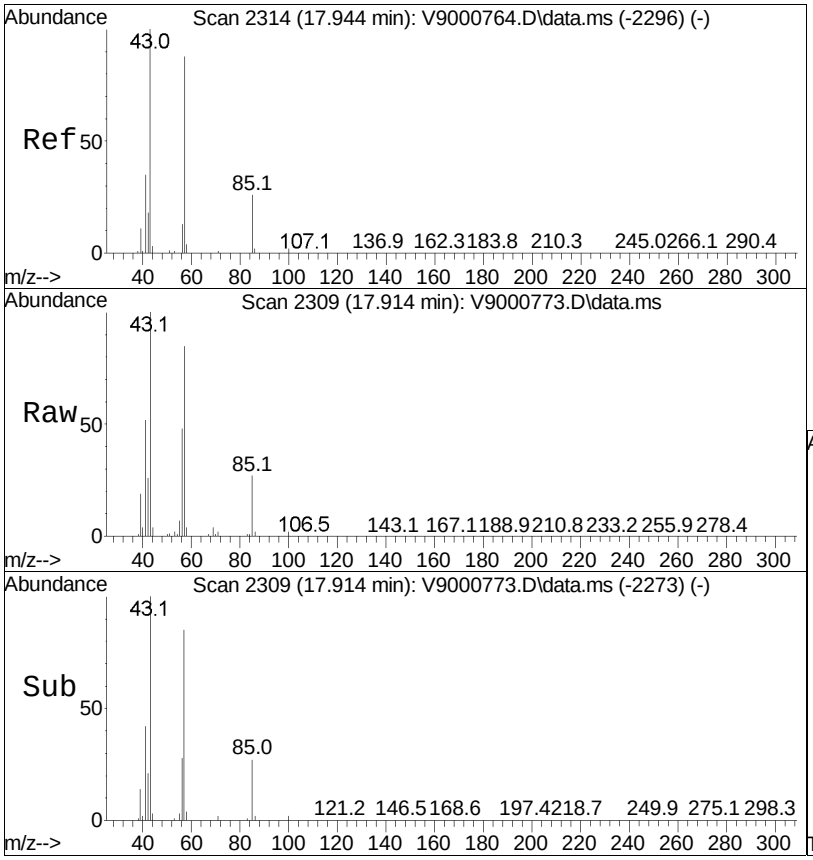


#27
Methylcyclopentane
Concen: 21.38 ug/L
RT: 17.76 min Scan# 2284
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 56 Resp: 46288

Ion	Ratio	Lower	Upper
56	100		
69	43.9	20.9	60.9
41	48.2	29.4	69.4
84	10.4	0.0	29.6

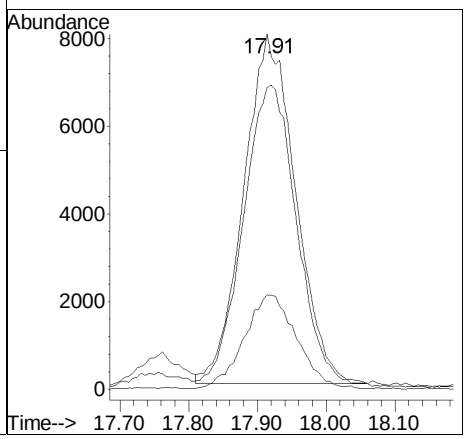


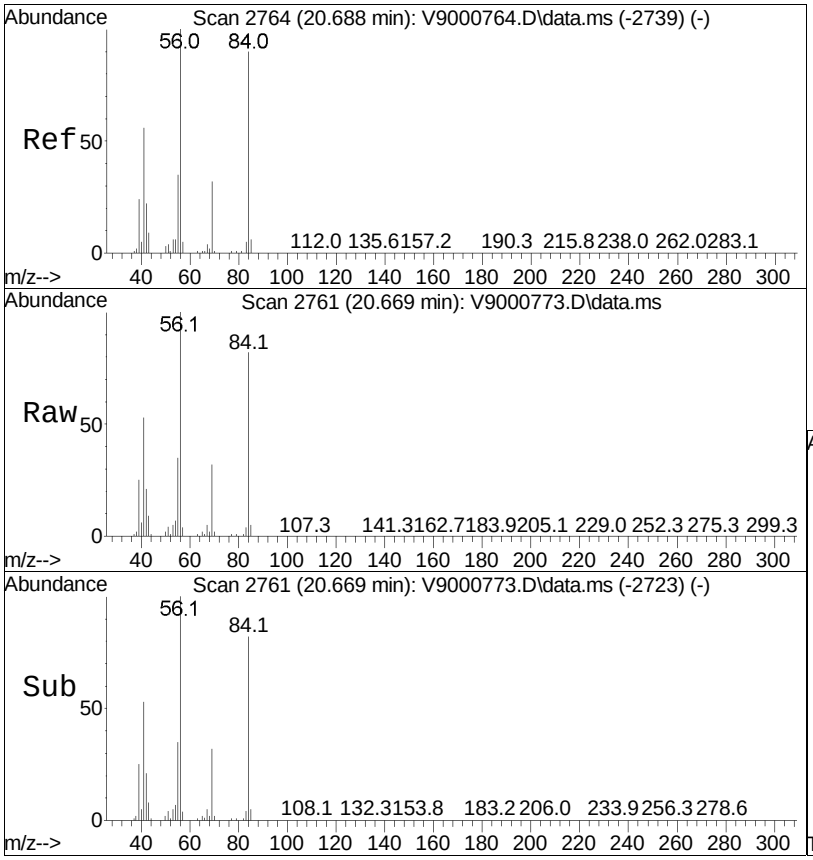


#28
2,4-Dimethylpentane
Concen: 21.00 ug/L
RT: 17.91 min Scan# 2309
Delta R.T. -0.030 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 41838

Ion	Ratio	Lower	Upper
43	100		
57	85.0	67.4	107.4
85	26.6	5.1	45.1

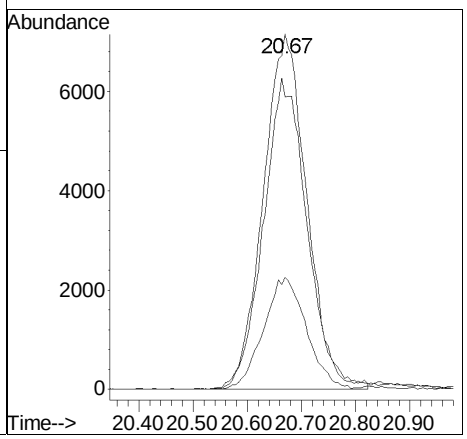


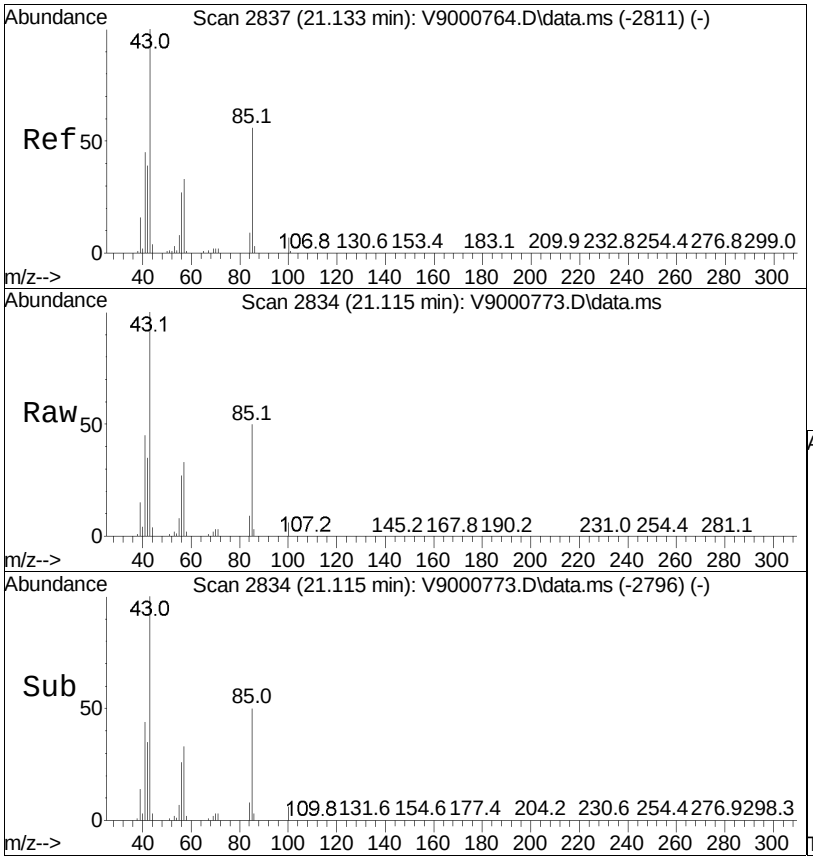


#32
Cyclohexane
Concen: 21.87 ug/L
RT: 20.67 min Scan# 2761
Delta R.T. -0.018 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 56 Resp: 39961

Ion	Ratio	Lower	Upper
56	100		
84	82.4	69.8	109.8
69	31.6	11.7	51.7

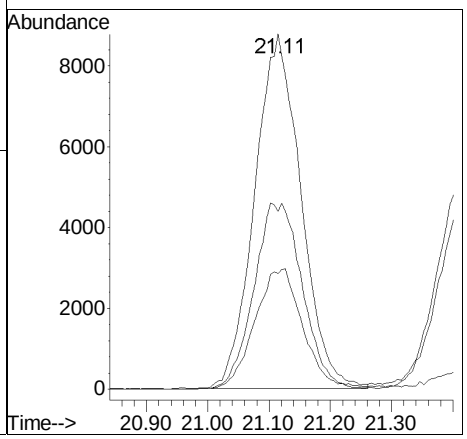


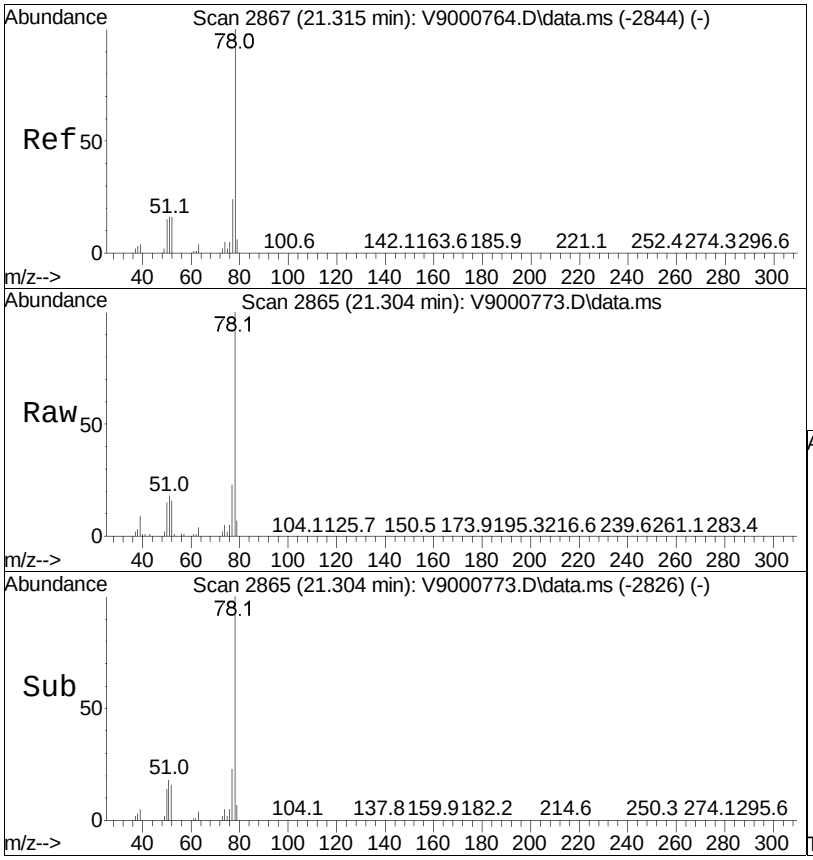


#33
2-Methylhexane
Concen: 20.90 ug/L
RT: 21.11 min Scan# 2834
Delta R.T. -0.018 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 46107

Ion	Ratio	Lower	Upper
43	100		
85	50.1	36.0	76.0
57	32.6	13.4	53.4

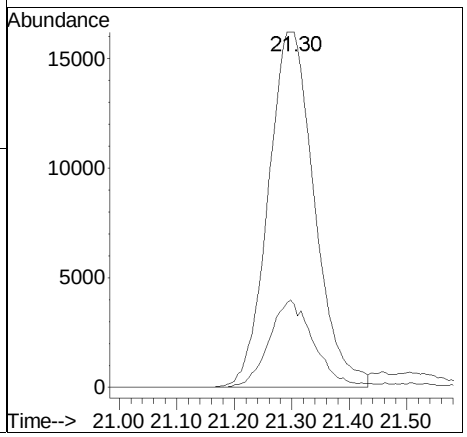


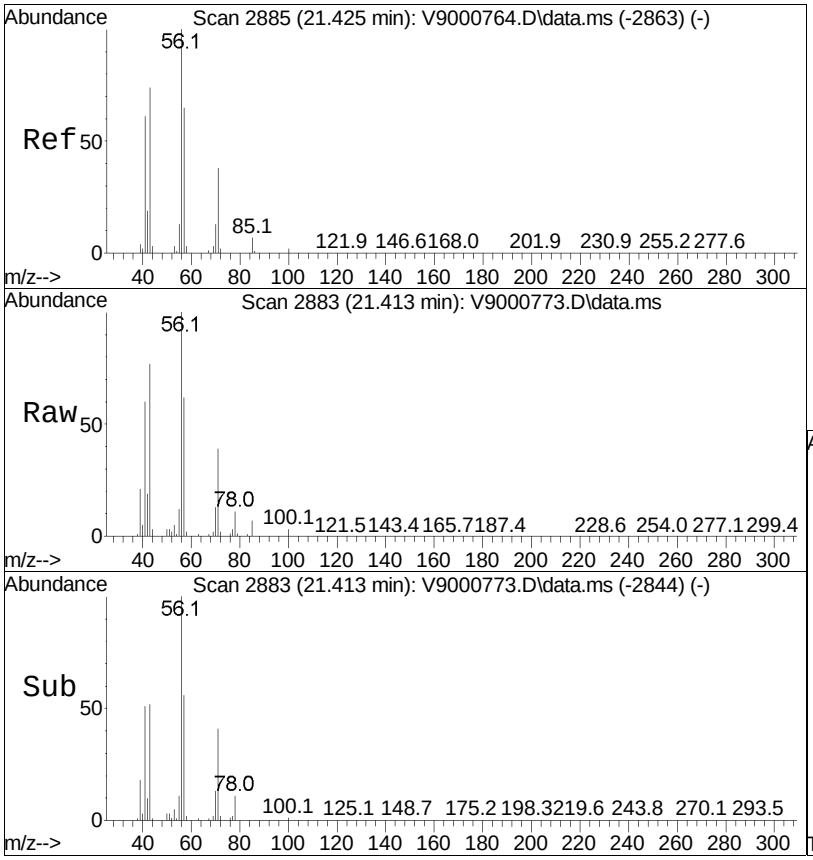


#34
Benzene
Concen: 20.02 ug/L
RT: 21.30 min Scan# 2865
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 78 Resp: 90284

Ion	Ratio	Lower	Upper
78	100		
77	23.5	3.9	43.9

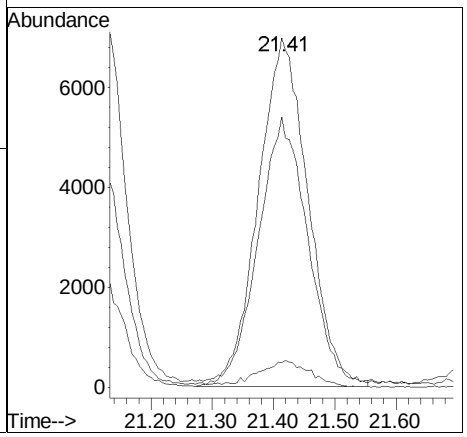


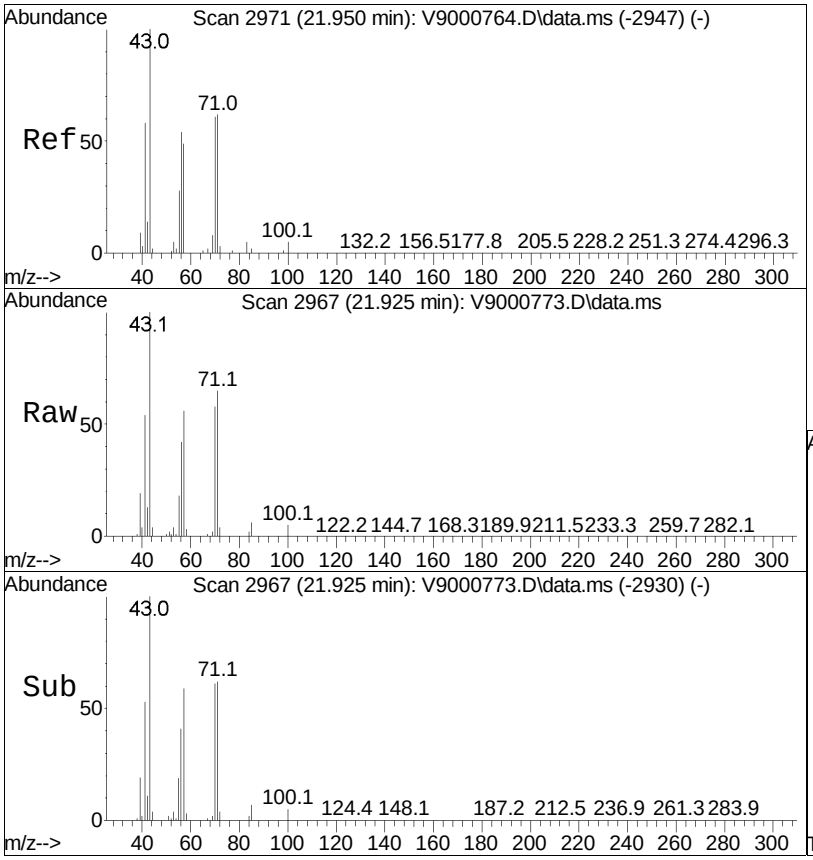


#35
2,3-Dimethylpentane
Concen: 21.31 ug/L
RT: 21.41 min Scan# 2883
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 56 Resp: 39150

Ion	Ratio	Lower	Upper
56	100		
43	77.4	56.3	96.3
85	7.1	0.0	28.0

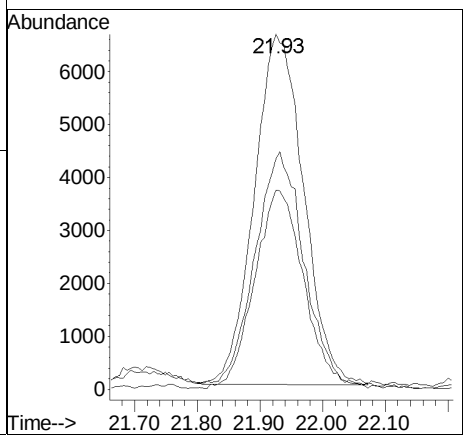


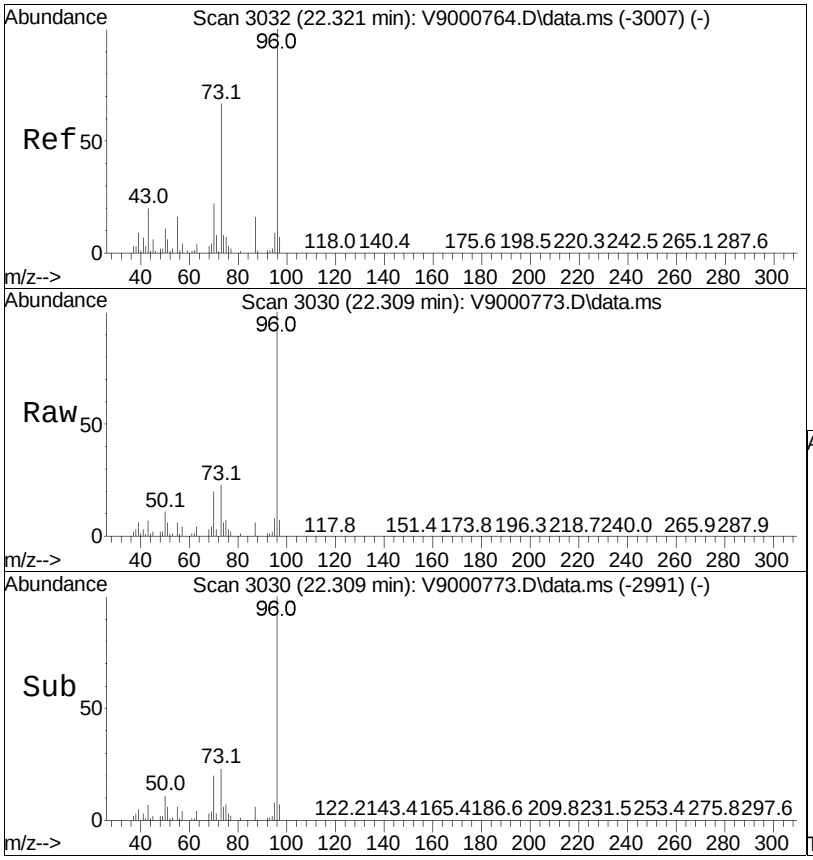


#38
3-Methylhexane
Concen: 19.04 ug/L
RT: 21.93 min Scan# 2967
Delta R.T. -0.024 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 36276

Ion	Ratio	Lower	Upper
43	100		
57	56.1	38.7	78.7
71	65.0	42.6	82.6

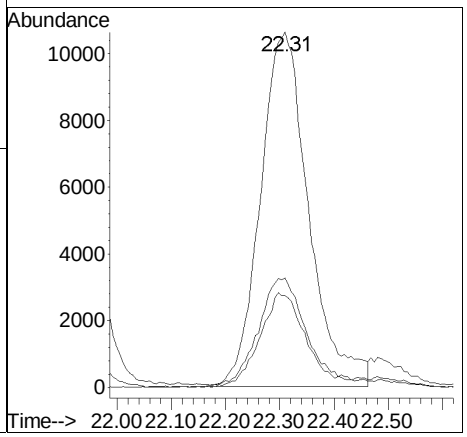


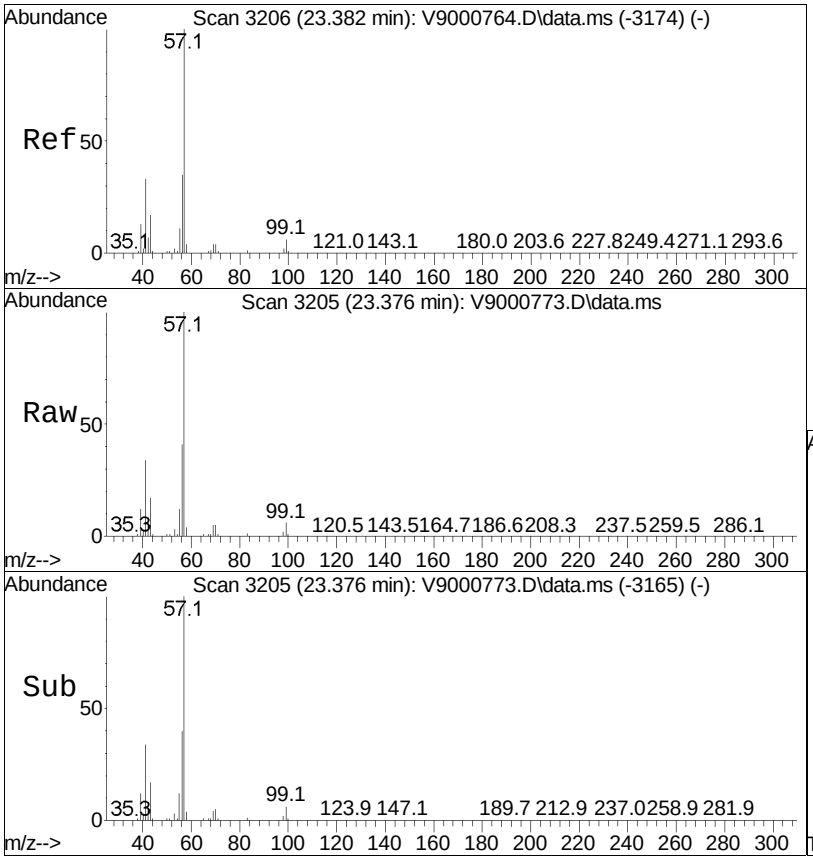


#39
TAME
Concen: 17.74 ug/L
RT: 22.31 min Scan# 3030
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 73 Resp: 65918

Ion	Ratio	Lower	Upper
73	100		
43	30.8	11.1	51.1
55	25.8	5.4	45.4

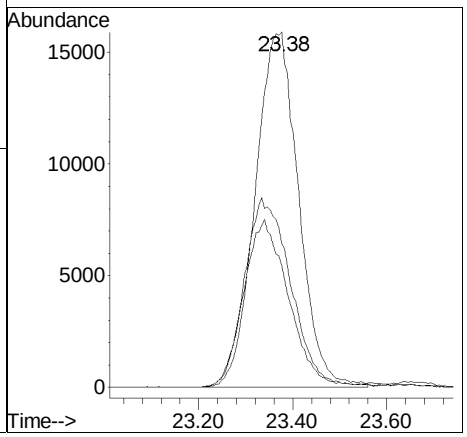


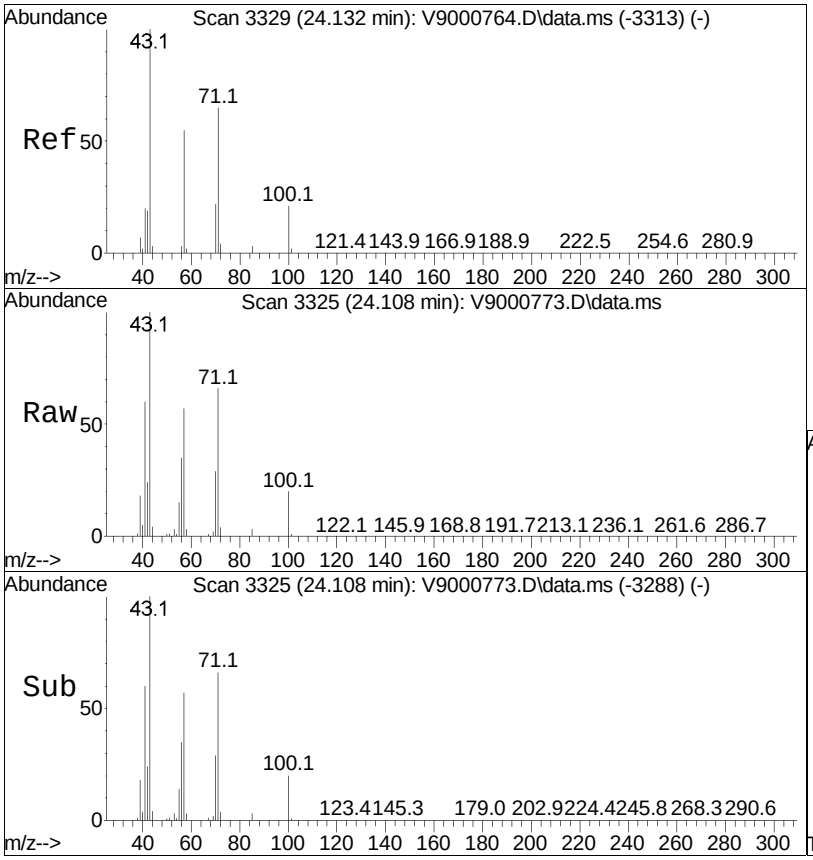


#44
Isooctane
Concen: 22.07 ug/L
RT: 23.38 min Scan# 3205
Delta R.T. -0.006 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 57 Resp: 101693

Ion	Ratio	Lower	Upper
57	100		
41	34.3	19.1	59.1
56	40.5	27.9	67.9

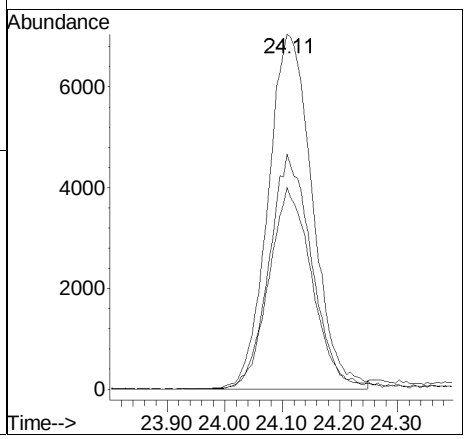


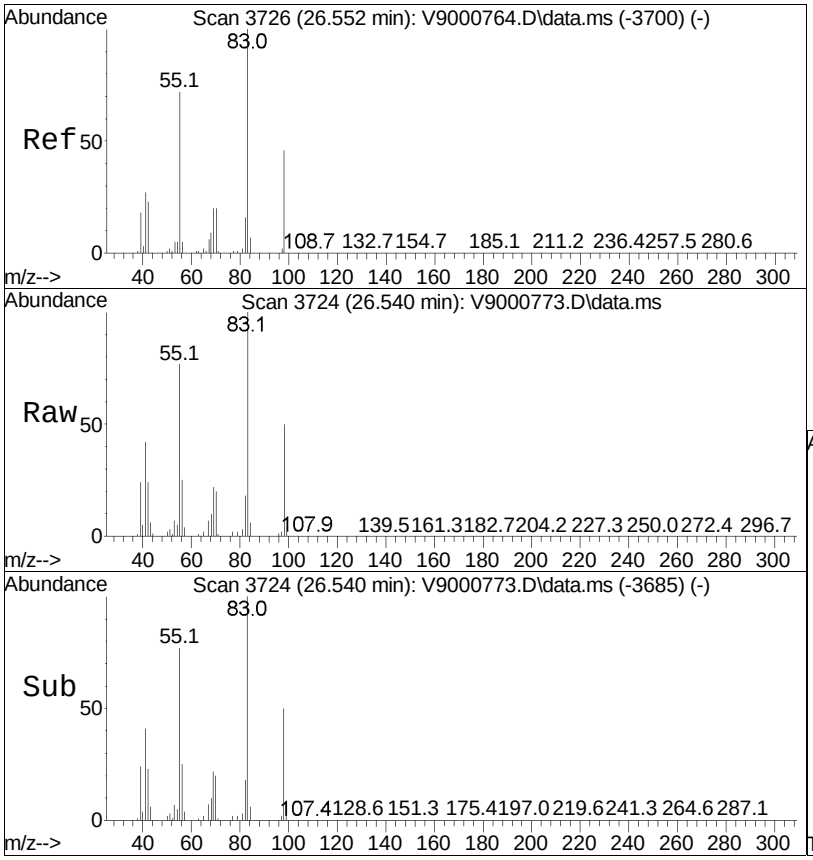


#46
Heptane
Concen: 22.99 ug/L
RT: 24.11 min Scan# 3325
Delta R.T. -0.024 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 37680

Ion	Ratio	Lower	Upper
43	100		
57	56.9	35.5	75.5
71	66.2	42.8	82.8

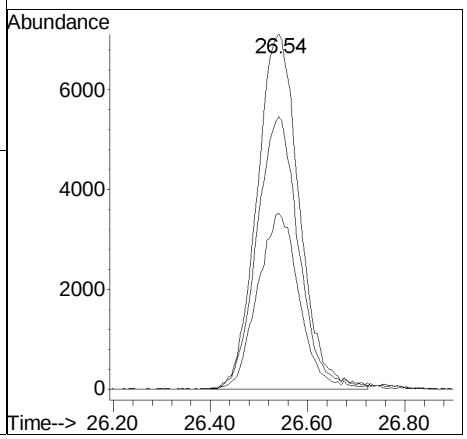


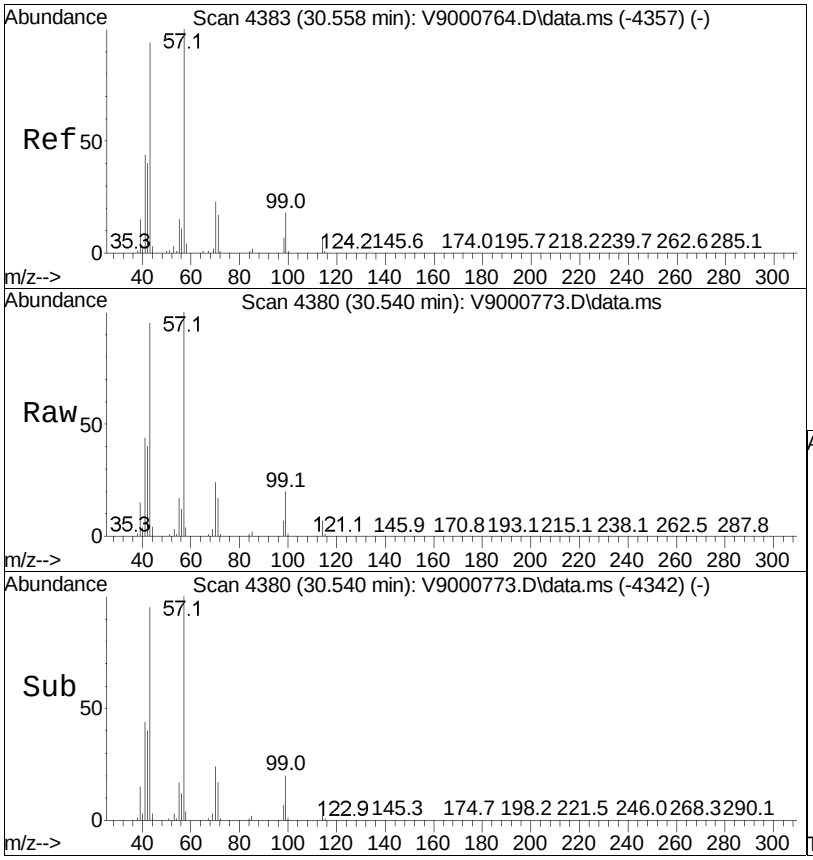


#51
Methylcyclohexane
Concen: 21.21 ug/L
RT: 26.54 min Scan# 3724
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 83 Resp: 43117

Ion	Ratio	Lower	Upper
83	100		
55	76.7	56.2	96.2
98	49.6	26.0	66.0

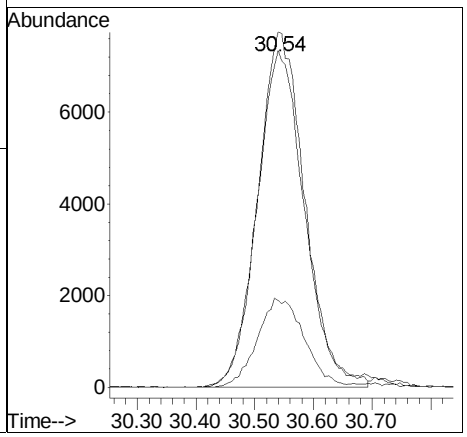


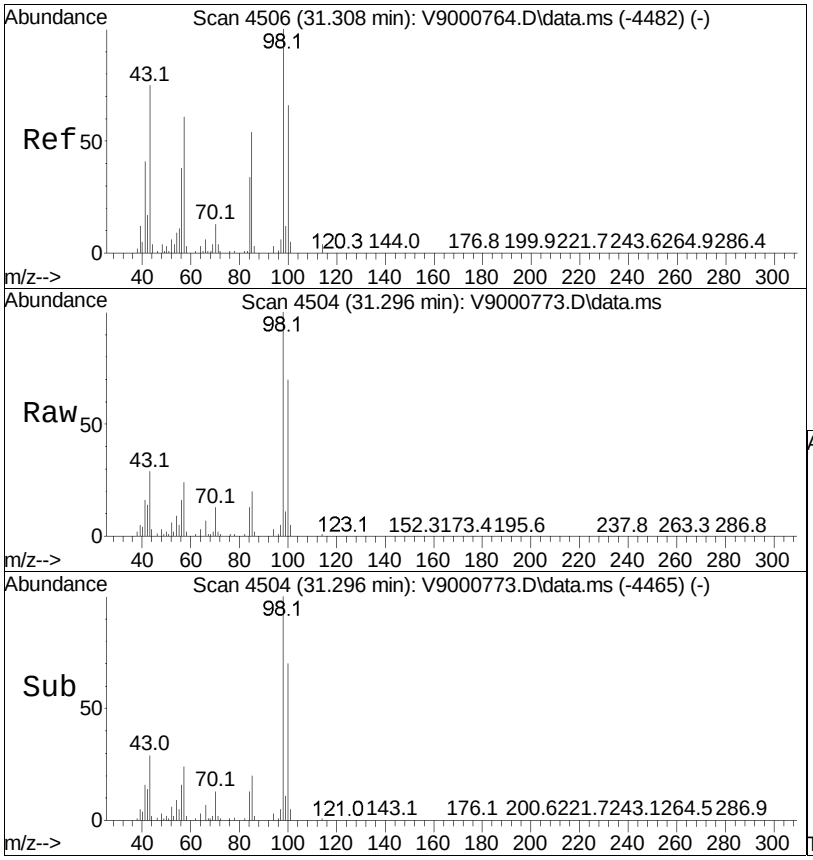


#60
2-Methylheptane
Concen: 20.92 ug/L
RT: 30.54 min Scan# 4380
Delta R.T. -0.018 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 57 Resp: 43110

Ion	Ratio	Lower	Upper
57	100		
43	94.8	74.2	114.2
70	24.5	3.6	43.6

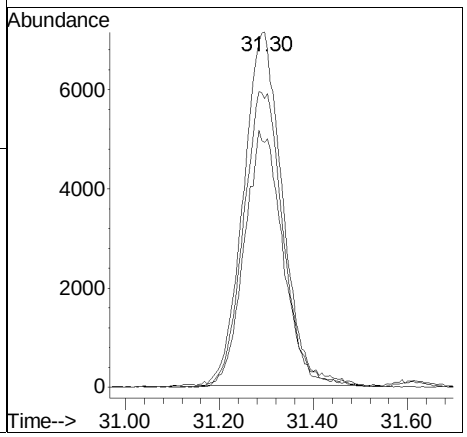


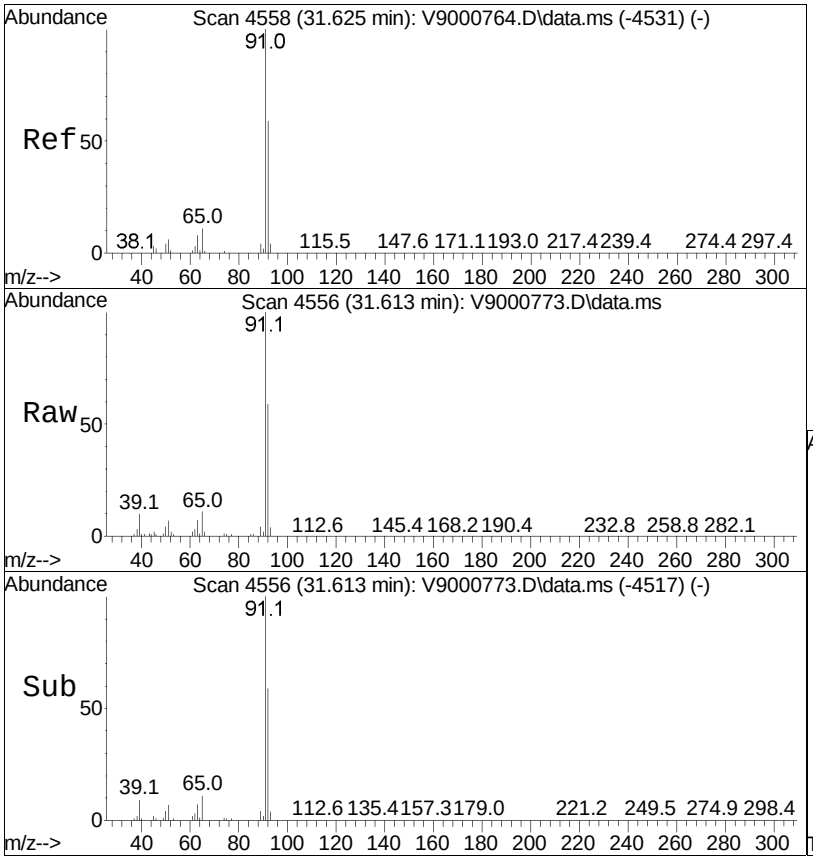


#63
3-Methylheptane
Concen: 20.81 ug/L
RT: 31.30 min Scan# 4504
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 41354

Ion	Ratio	Lower	Upper
43	100		
57	81.3	61.1	101.1
85	69.0	51.1	91.1

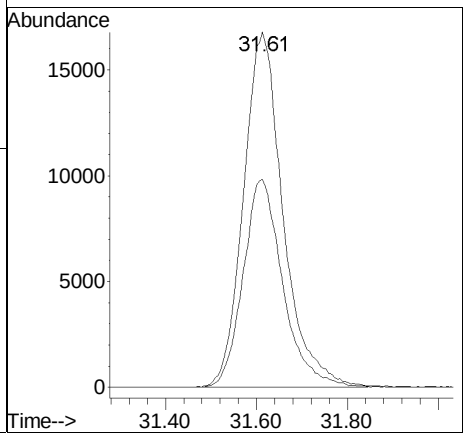


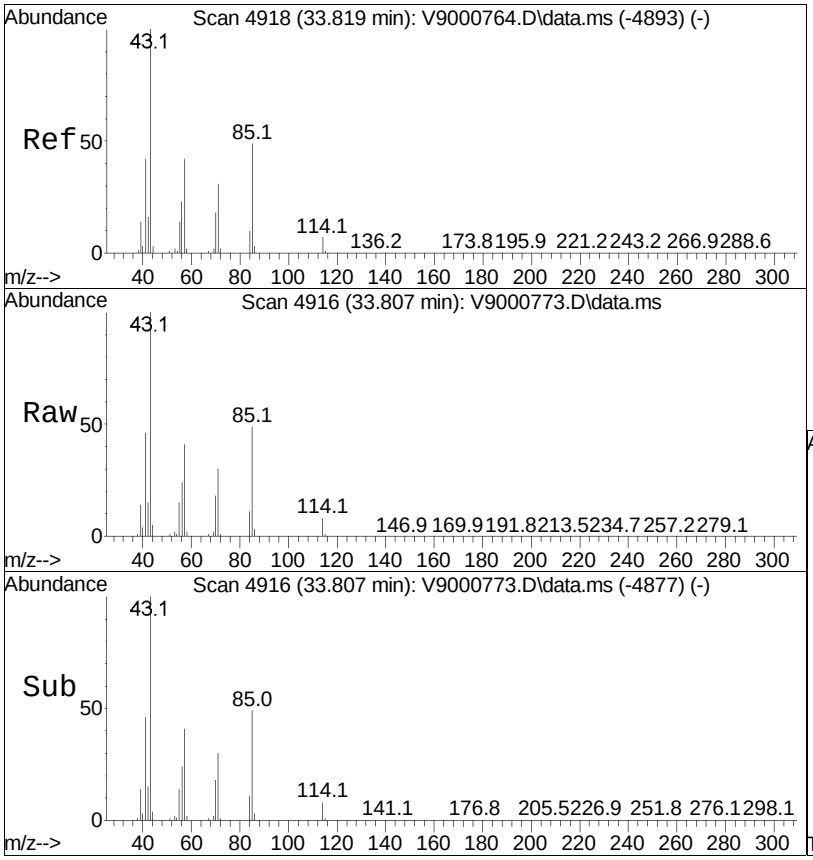


#66
Toluene
Concen: 20.45 ug/L
RT: 31.61 min Scan# 4556
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 91 Resp: 101534

Ion	Ratio	Lower	Upper
91	100		
92	58.5	38.6	78.6

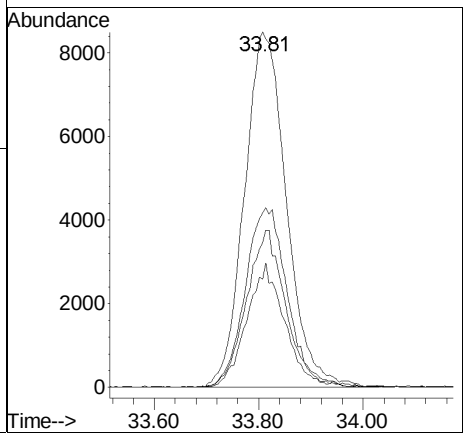


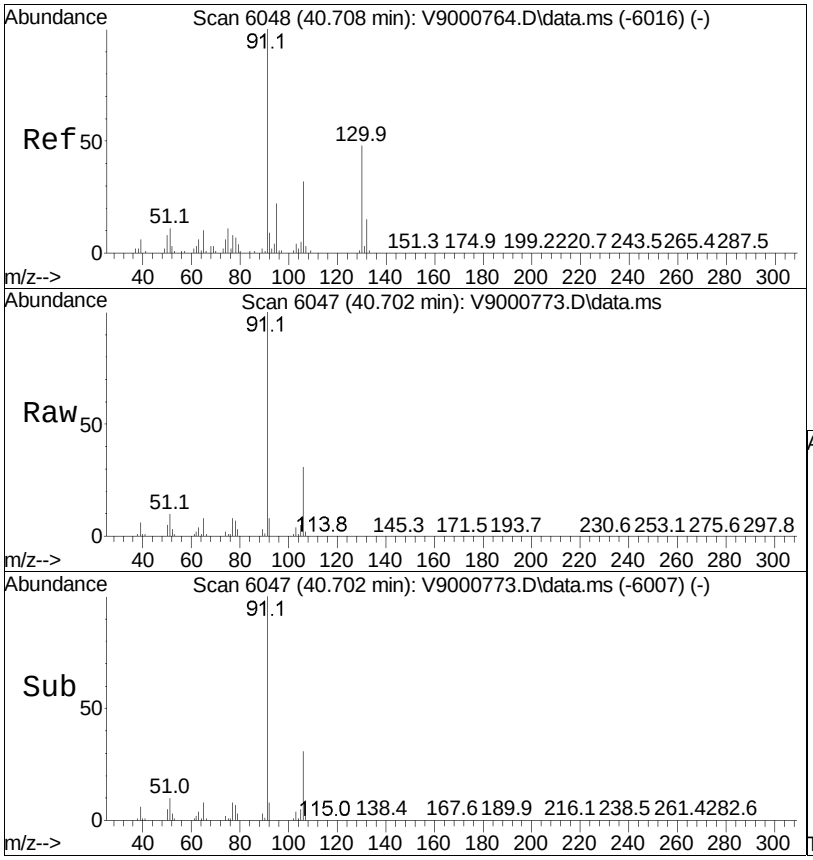


#71
Octane
Concen: 21.31 ug/L
RT: 33.81 min Scan# 4916
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 47359

Ion	Ratio	Lower	Upper
43	100		
57	40.8	21.9	61.9
85	49.1	29.0	69.0
71	30.5	10.6	50.6

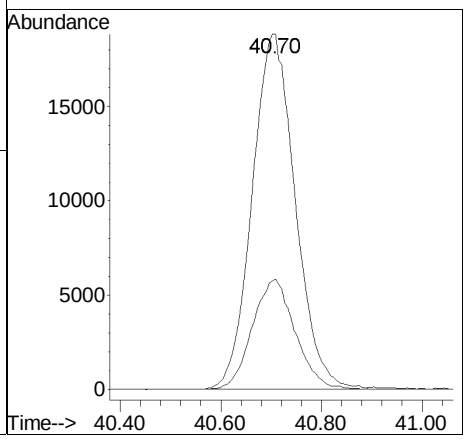


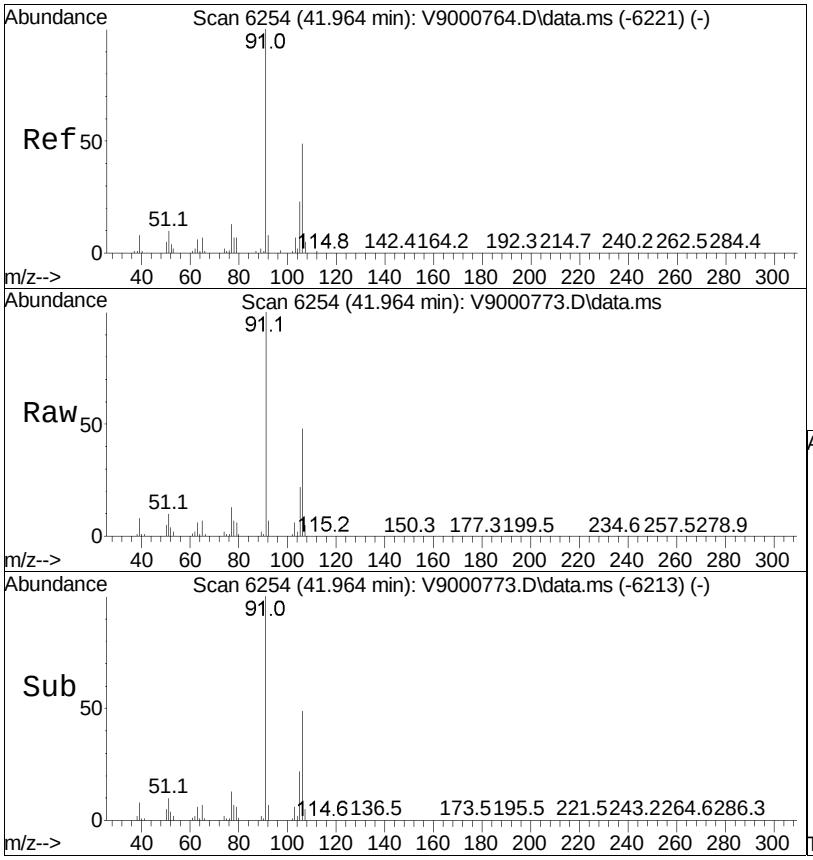


#86
Ethylbenzene
Concen: 19.85 ug/L
RT: 40.70 min Scan# 6047
Delta R.T. -0.006 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 91 Resp: 111975

Ion	Ratio	Lower	Upper
91	100		
106	30.5	11.7	51.7

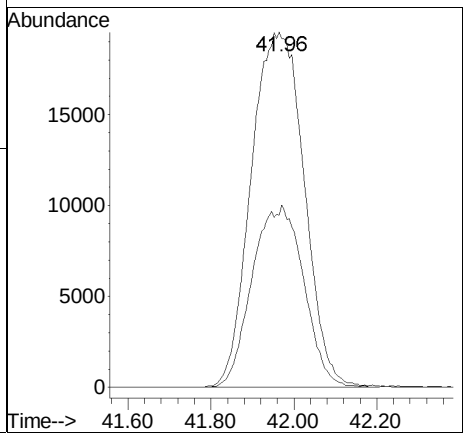


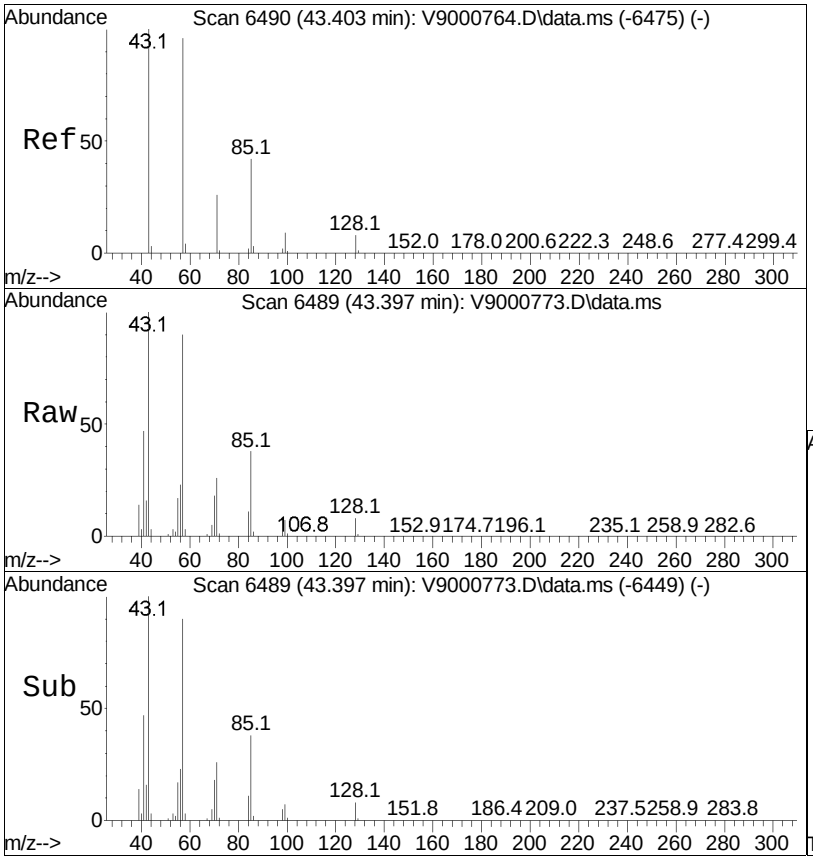


#91
p/m-Xylene
Concen: 40.06 ug/L
RT: 41.96 min Scan# 6254
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 91 Resp: 172740

Ion	Ratio	Lower	Upper
91	100		
106	48.5	29.3	69.3

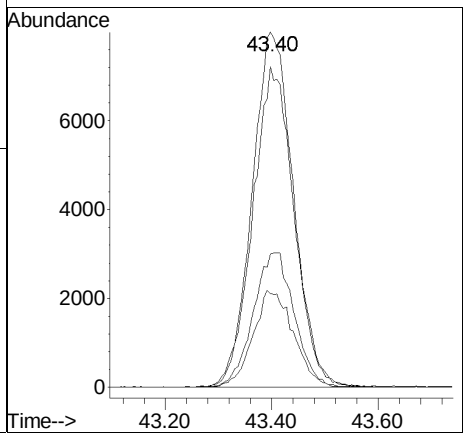


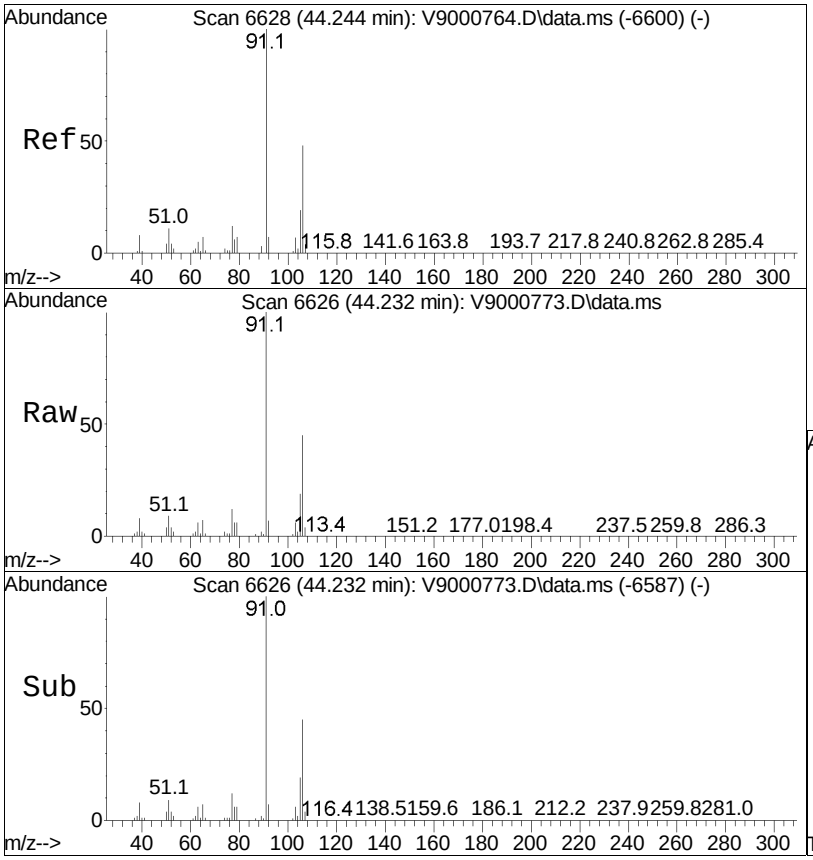


#95
Nonane
Concen: 18.41 ug/L
RT: 43.40 min Scan# 6489
Delta R.T. -0.006 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 43362

Ion	Ratio	Lower	Upper
43	100		
57	90.3	68.7	108.7
85	37.5	15.4	55.4
71	26.3	6.9	46.9

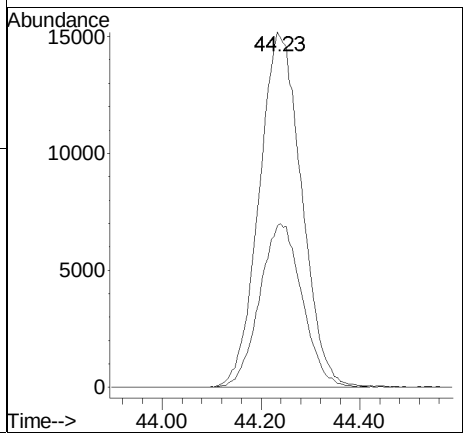


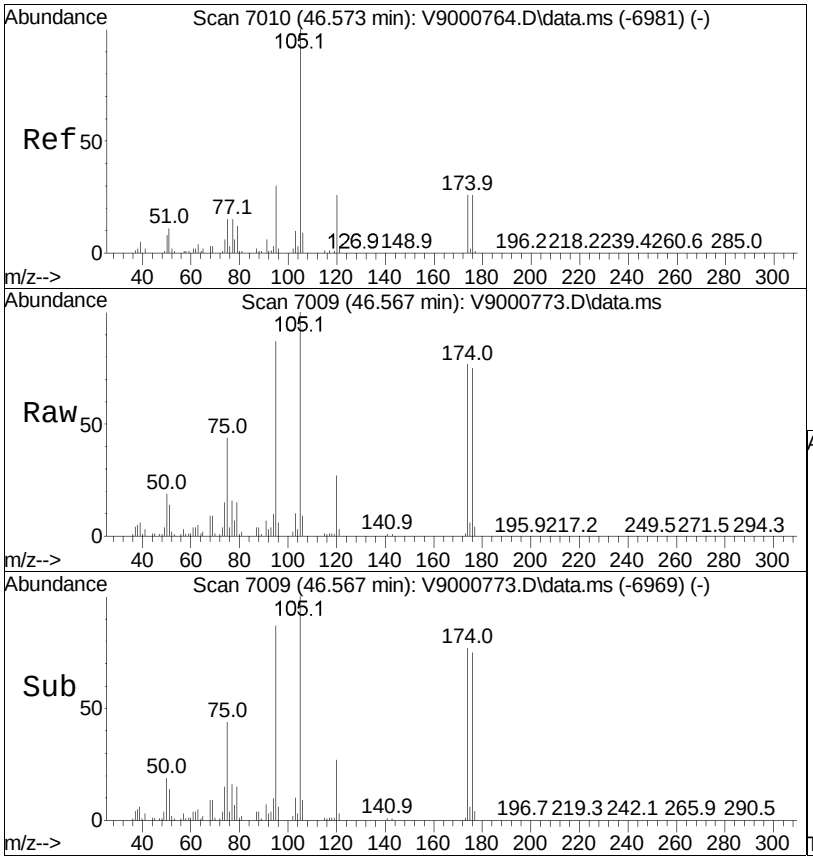


#98
o-Xylene
Concen: 20.34 ug/L
RT: 44.23 min Scan# 6626
Delta R.T. -0.012 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 91 Resp: 90339

Ion	Ratio	Lower	Upper
91	100		
106	45.4	28.1	68.1

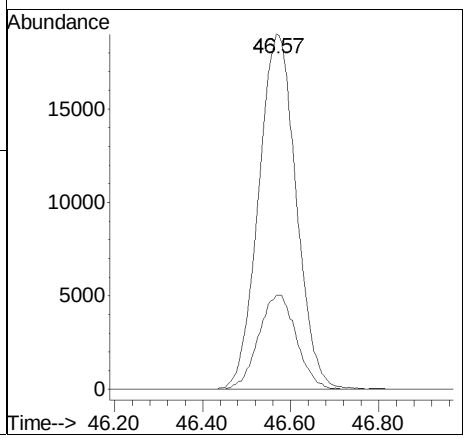


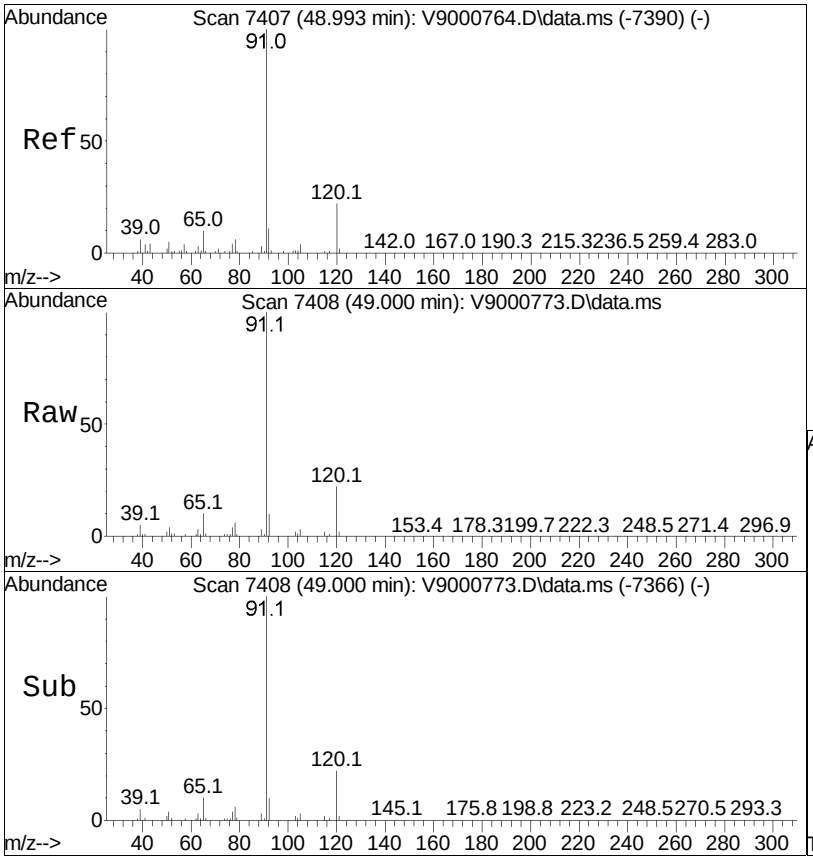


#102
Isopropylbenzene
Concen: 20.02 ug/L
RT: 46.57 min Scan# 7009
Delta R.T. -0.006 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:105 Resp: 112712

Ion	Ratio	Lower	Upper
105	100		
120	26.6	6.5	46.5

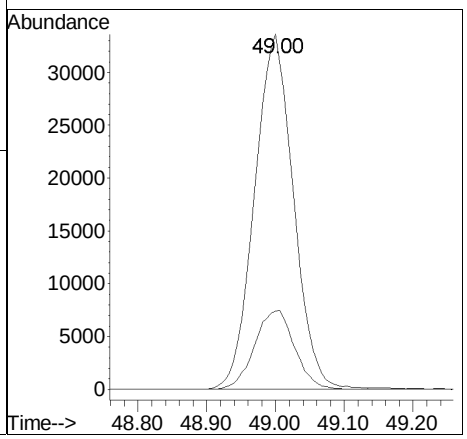


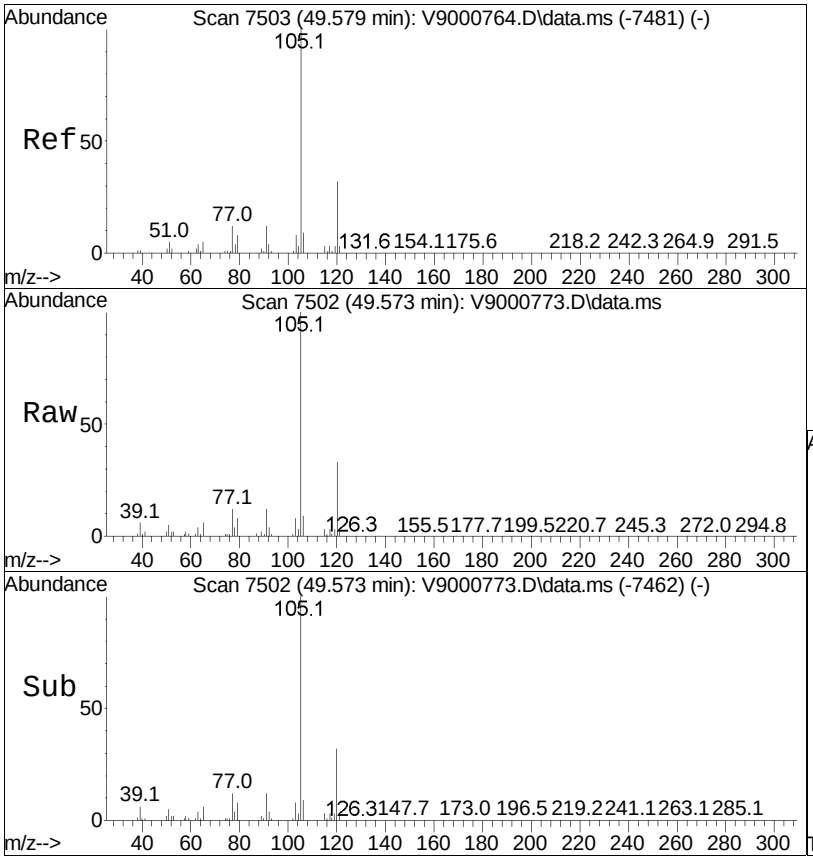


#104
n-Propylbenzene
Concen: 19.87 ug/L
RT: 49.00 min Scan# 7408
Delta R.T. 0.006 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 91 Resp: 132111

Ion	Ratio	Lower	Upper
91	100		
120	22.0	2.4	42.4

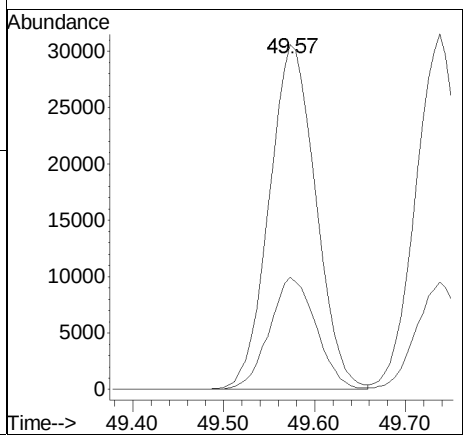


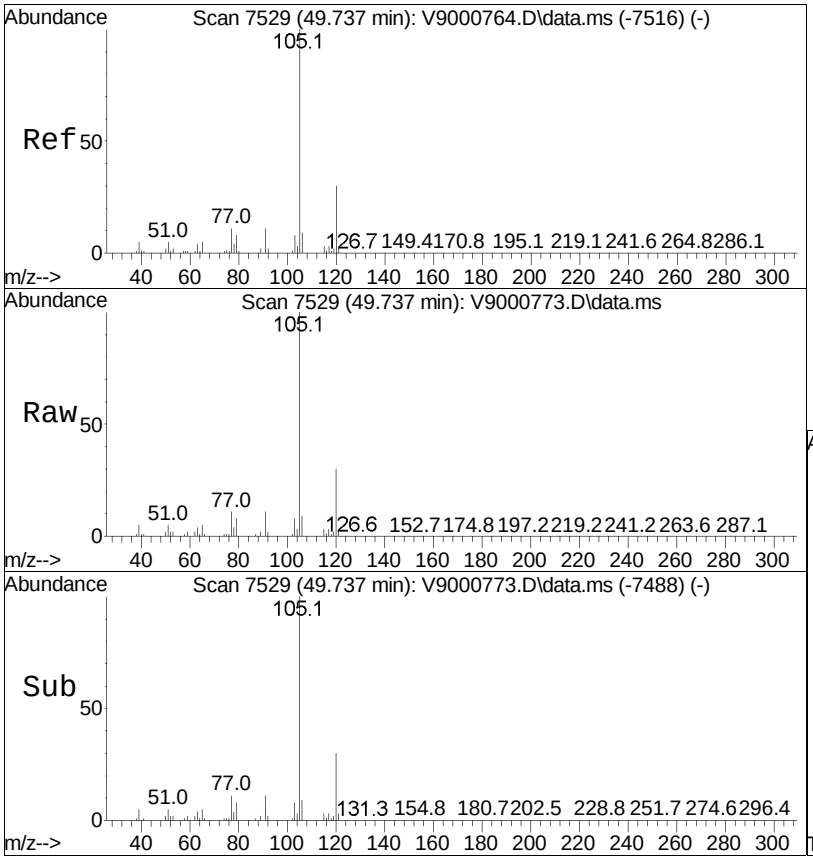


#107
1-Methyl-3-ethylbenzene
Concen: 19.64 ug/L
RT: 49.57 min Scan# 7502
Delta R.T. -0.006 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:105 Resp: 108787

Ion	Ratio	Lower	Upper
105	100		
120	32.5	11.8	51.8

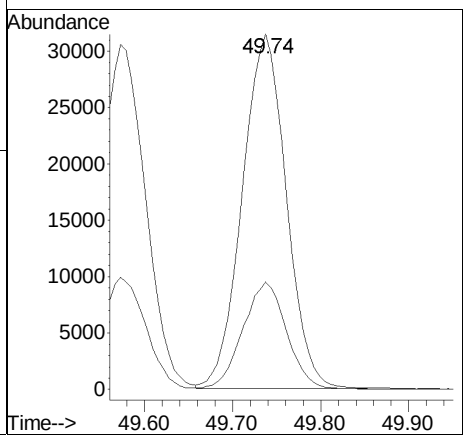


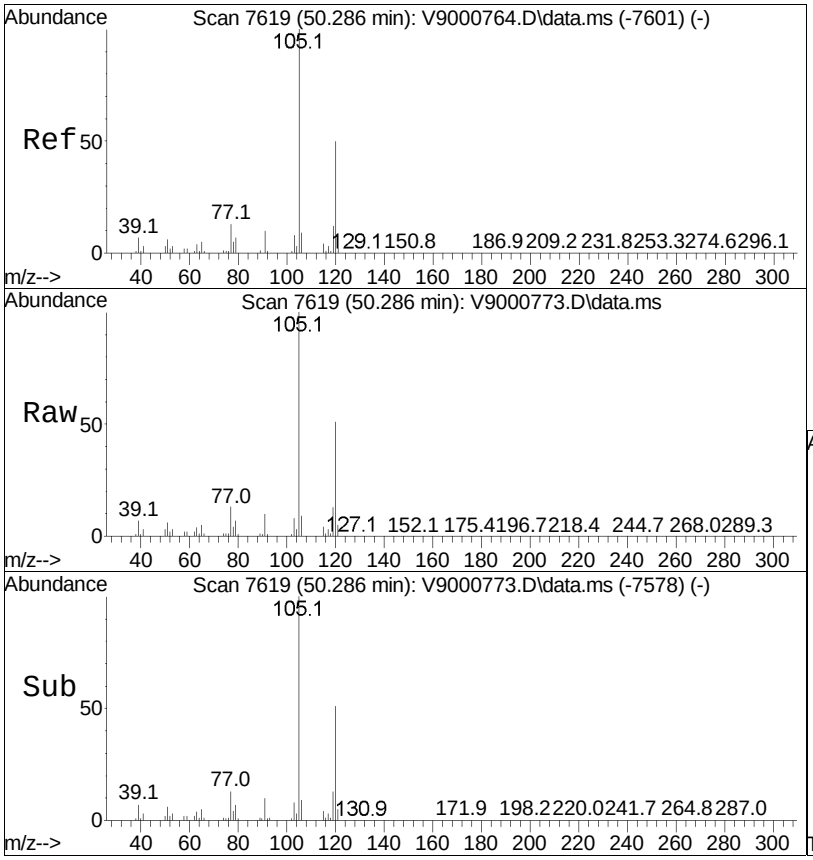


#108
1-Methyl-4-ethylbenzene
Concen: 20.53 ug/L
RT: 49.74 min Scan# 7529
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:105 Resp: 108814

Ion	Ratio	Lower	Upper
105	100		
120	30.2	9.9	49.9

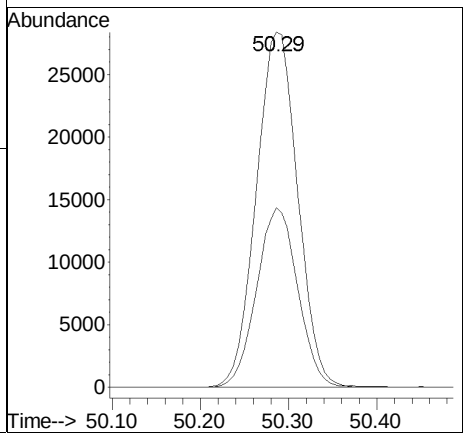


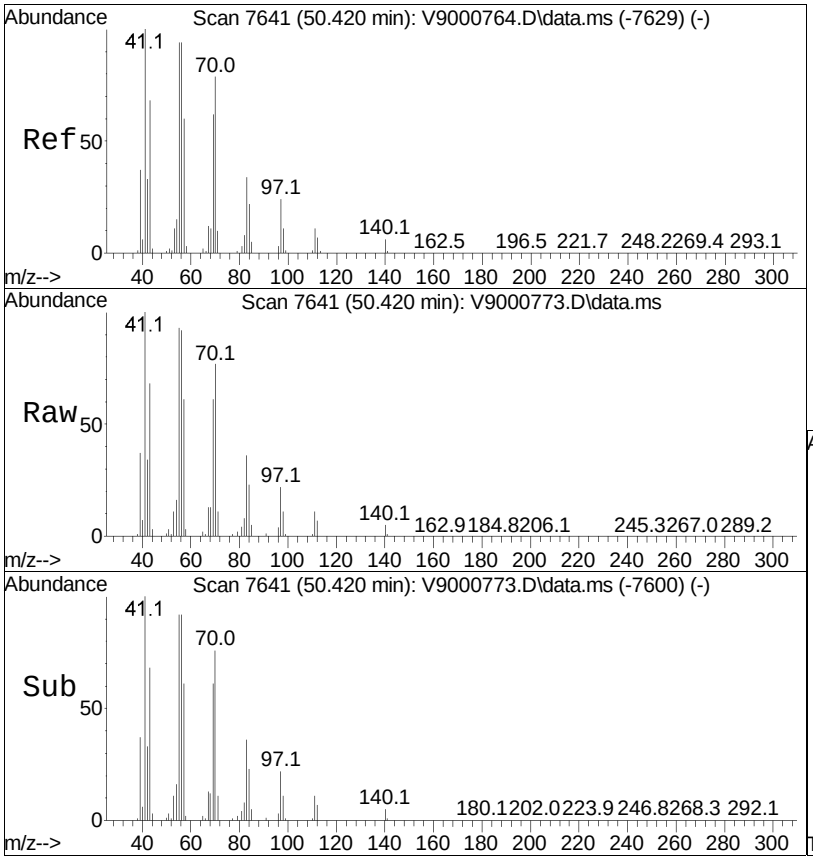


#109
1,3,5-Trimethylbenzene
Concen: 20.08 ug/L
RT: 50.29 min Scan# 7619
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:105 Resp: 92601

Ion	Ratio	Lower	Upper
105	100		
120	50.6	30.2	70.2

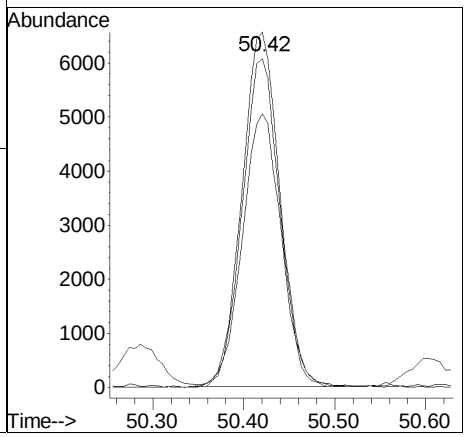


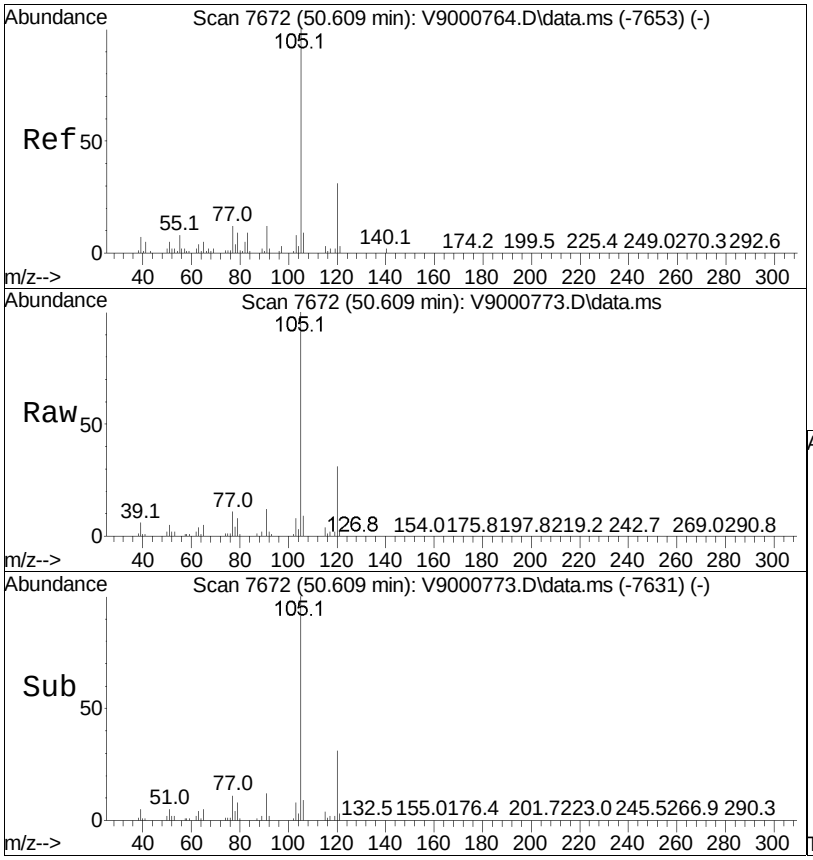


#110
1-Decene
Concen: 17.17 ug/L
RT: 50.42 min Scan# 7641
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 41 Resp: 19120

Ion	Ratio	Lower	Upper
41	100		
55	92.5	73.4	113.4
70	77.0	58.6	98.6

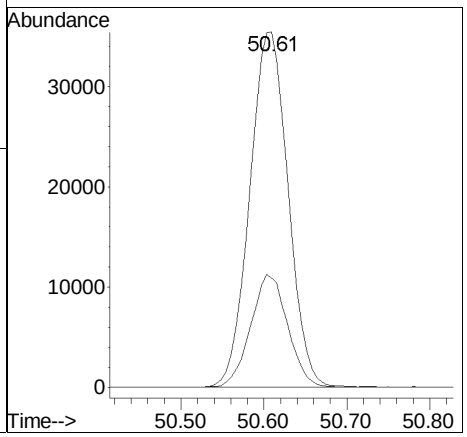


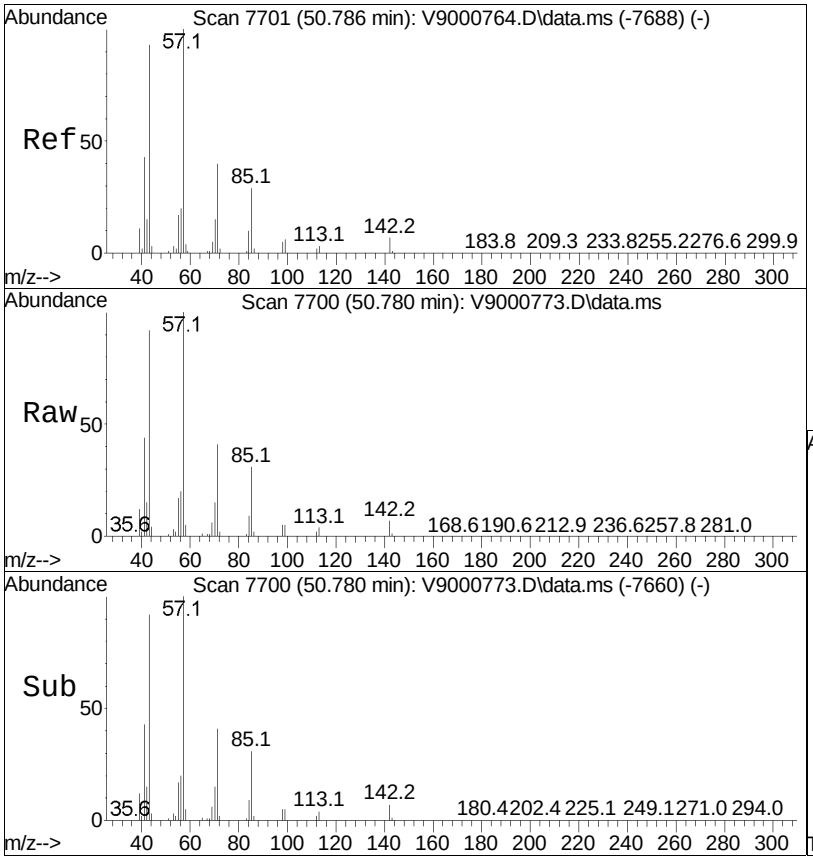


#112
1-Methyl-2-ethylbenzene
Concen: 20.42 ug/L
RT: 50.61 min Scan# 7672
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:105 Resp: 113657

Ion	Ratio	Lower	Upper
105	100		
120	30.7	10.7	50.7

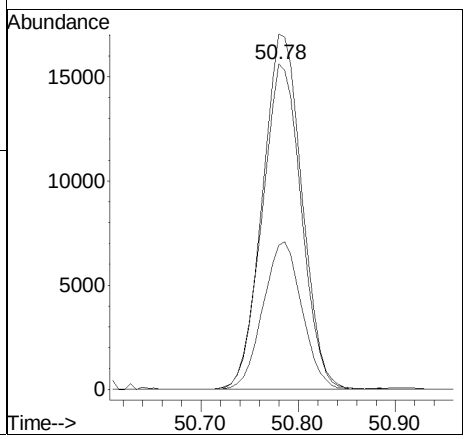


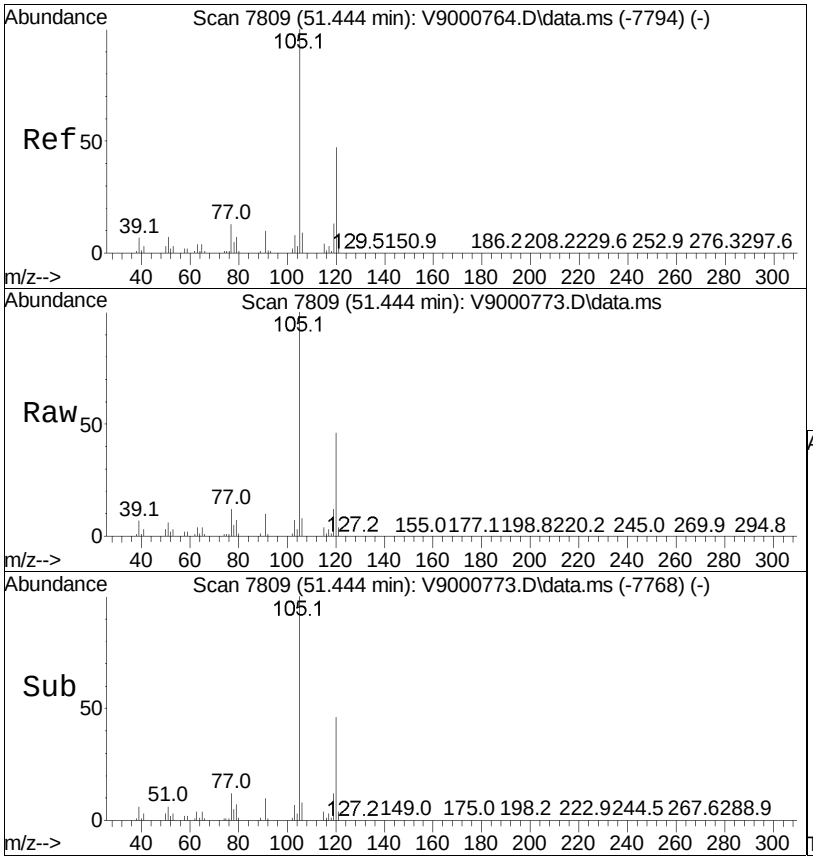


#113
Decane
Concen: 21.09 ug/L
RT: 50.78 min Scan# 7700
Delta R.T. -0.006 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 43660

Ion	Ratio	Lower	Upper
43	100		
57	109.1	88.0	128.0
71	44.3	23.6	63.6

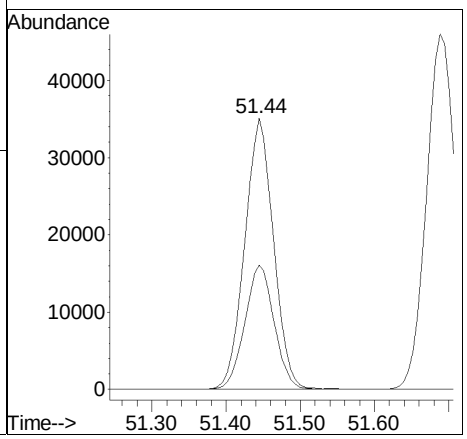


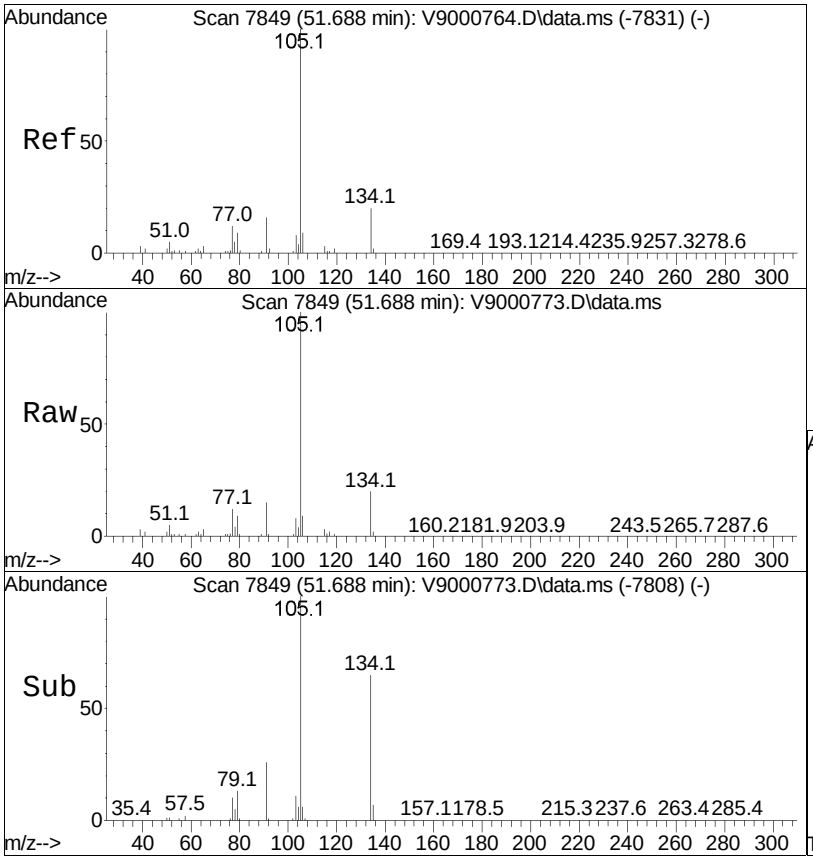


#115
1,2,4-Trimethylbenzene
Concen: 19.51 ug/L
RT: 51.44 min Scan# 7809
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:105 Resp: 94639

Ion	Ratio	Lower	Upper
105	100		
120	45.8	27.4	67.4

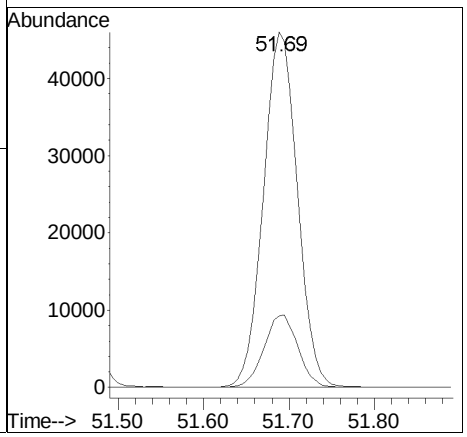


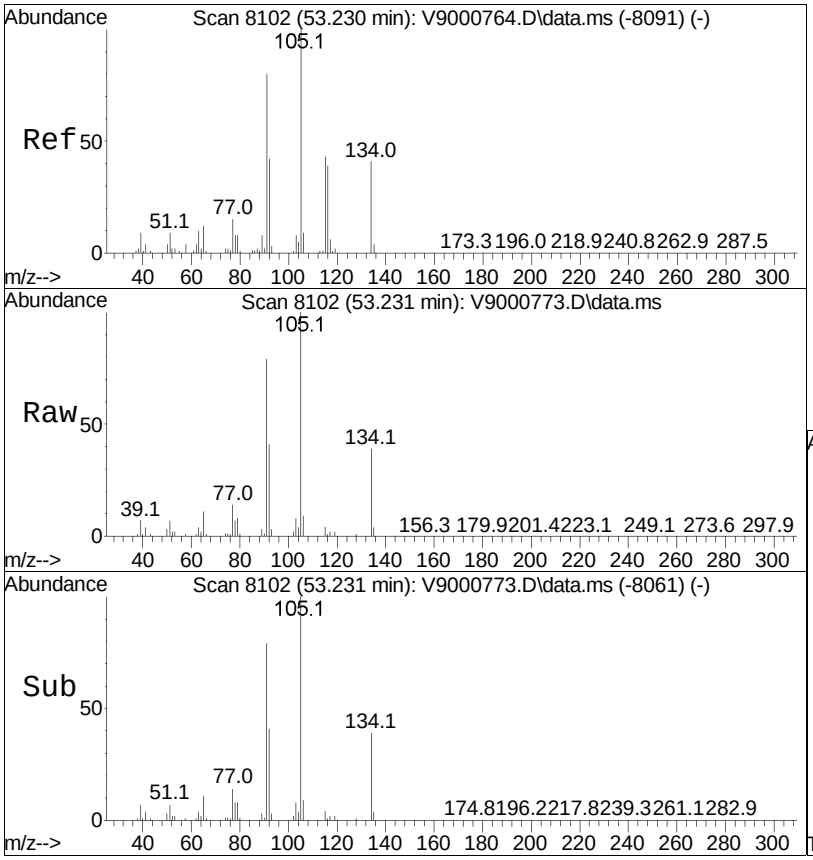


#117
sec-Butylbenzene
Concen: 21.10 ug/L
RT: 51.69 min Scan# 7849
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:105 Resp: 127129

Ion	Ratio	Lower	Upper
105	100		
134	20.1	0.6	40.6

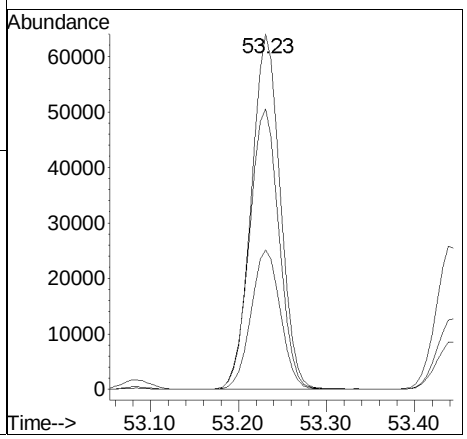


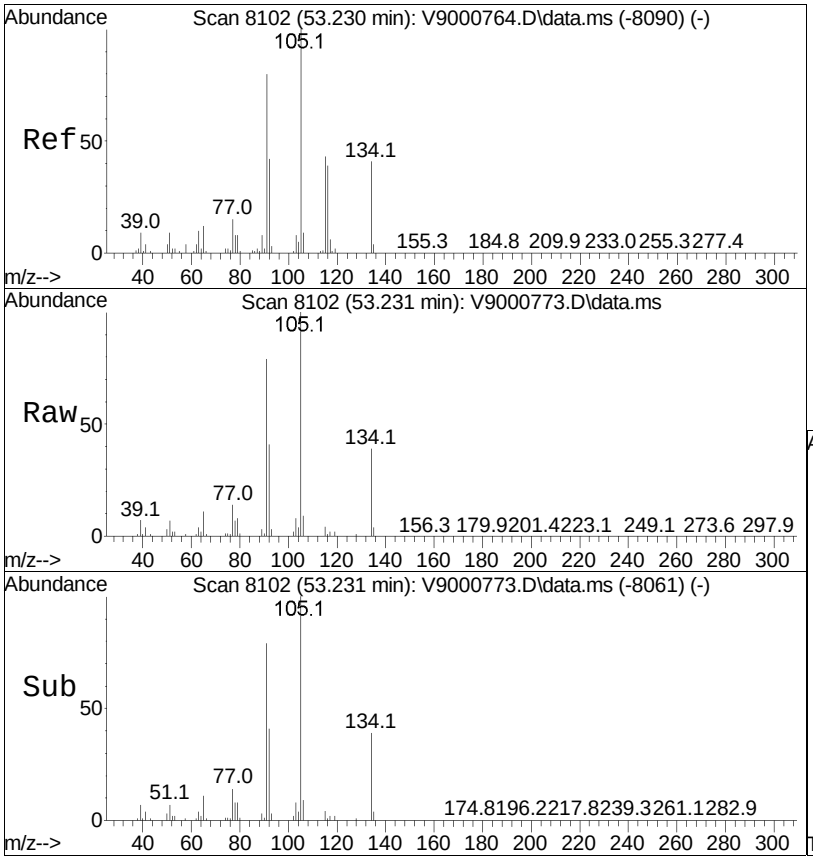


#126
1-Methyl-4-propylbenzene
Concen: 20.21 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:105 Resp: 145907

Ion	Ratio	Lower	Upper
105	100		
134	39.3	20.7	60.7
91	78.9	59.6	99.6

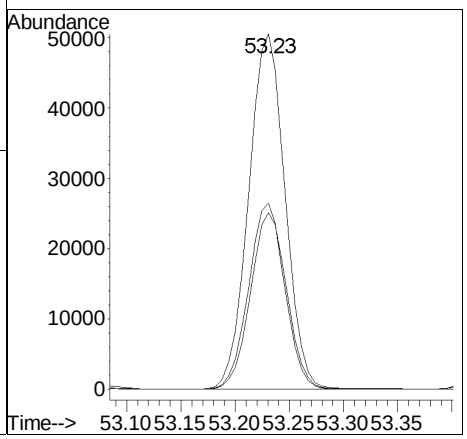


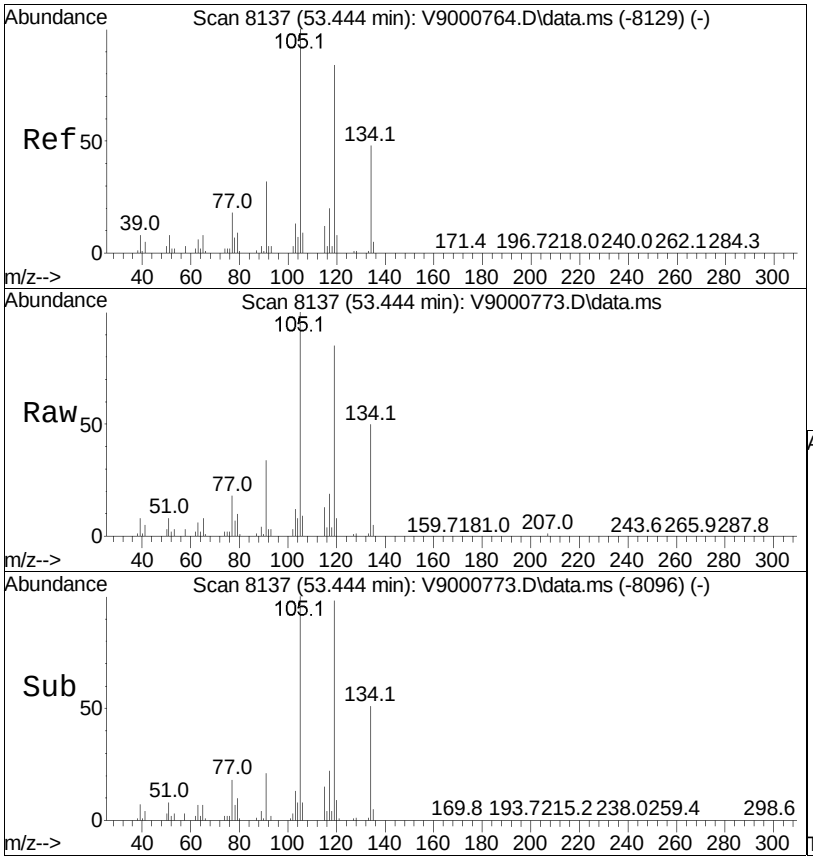


#127
n-Butylbenzene
Concen: 20.49 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 91 Resp: 117984

Ion	Ratio	Lower	Upper
91	100		
92	52.4	32.7	72.7
134	49.7	31.2	71.2

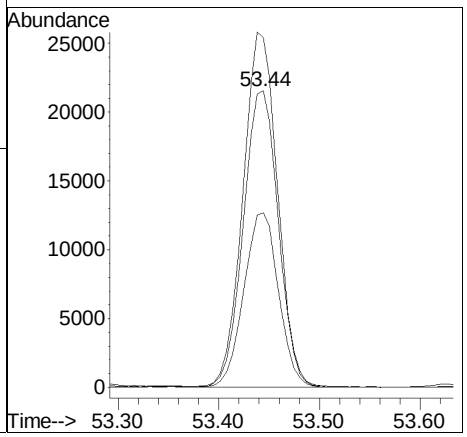


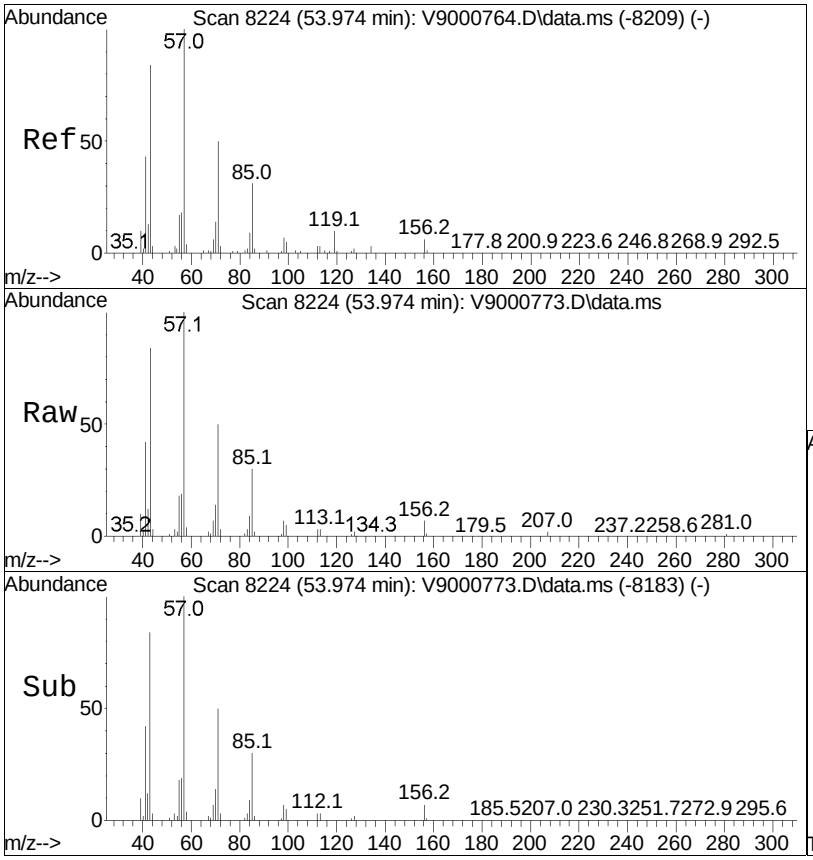


#129
1,2-Diethylbenzene
Concen: 20.48 ug/L
RT: 53.44 min Scan# 8137
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:119 Resp: 52112

Ion	Ratio	Lower	Upper
119	100		
105	117.9	96.4	136.4
134	58.9	37.2	77.2

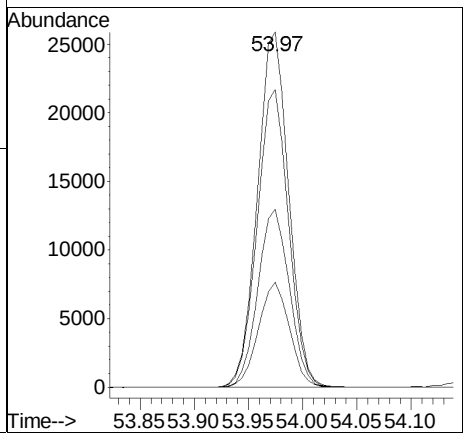


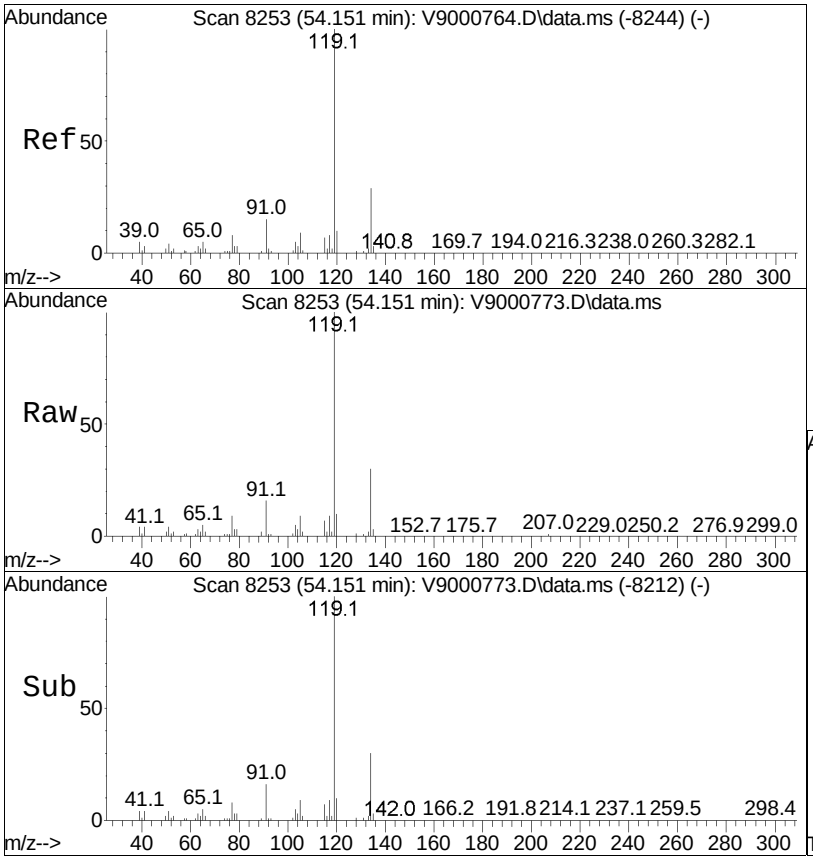


#132
Undecane
Concen: 20.57 ug/L
RT: 53.97 min Scan# 8224
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 57 Resp: 52050

Ion	Ratio	Lower	Upper
57	100		
43	83.8	63.7	103.7
71	50.2	30.1	70.1
85	29.6	11.2	51.2

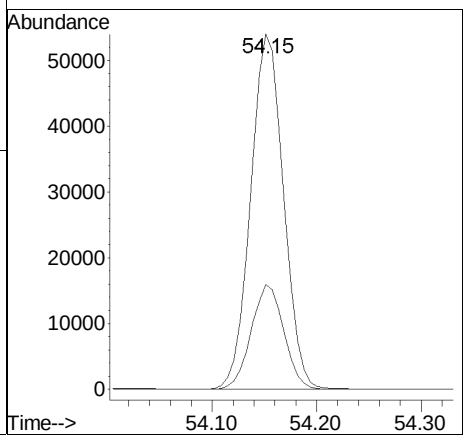


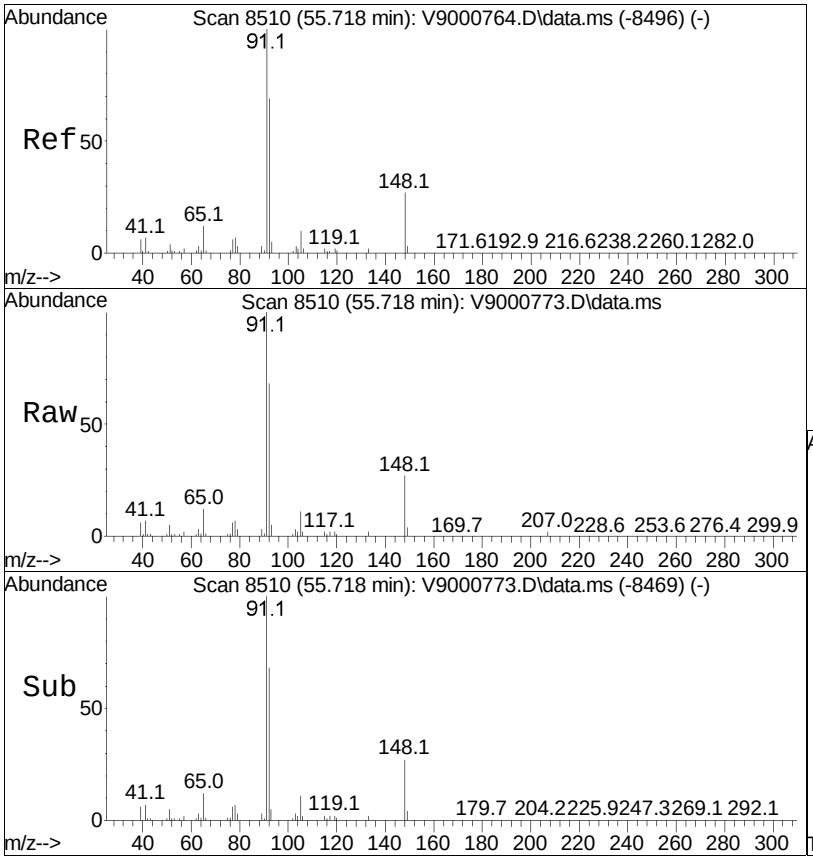


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 21.78 ug/L
RT: 54.15 min Scan# 8253
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion:119 Resp: 118019

Ion	Ratio	Lower	Upper
119	100		
134	29.6	8.5	48.5

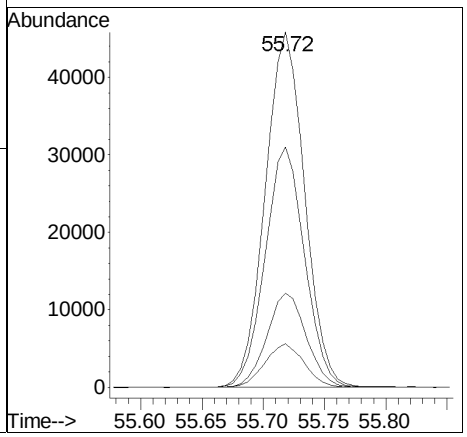


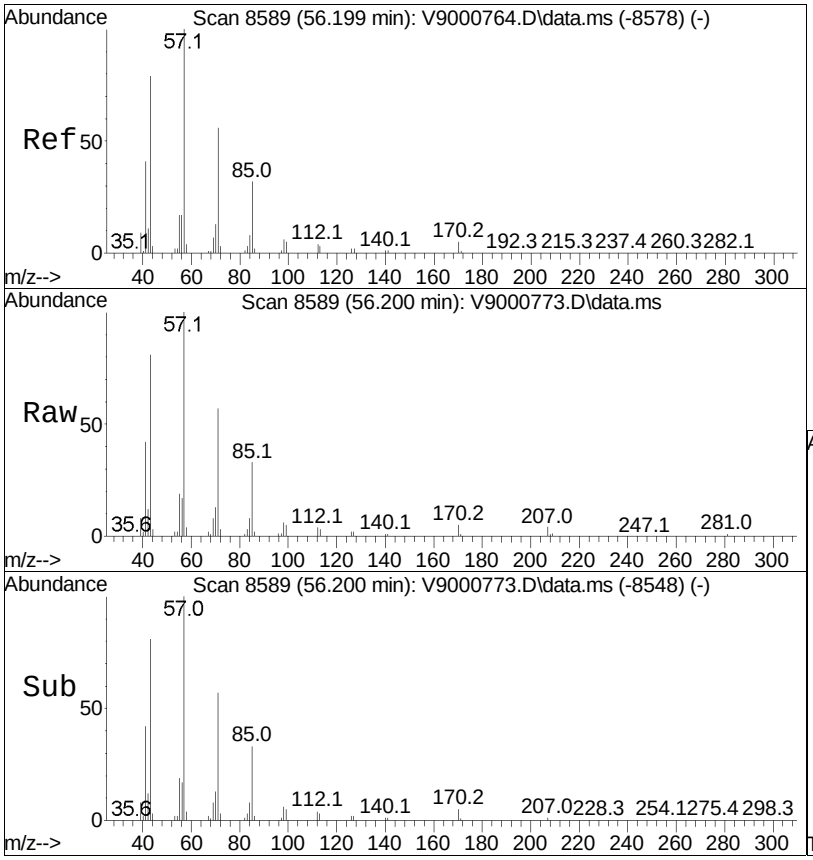


#139
Pentylbenzene
Concen: 20.85 ug/L
RT: 55.72 min Scan# 8510
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 91 Resp: 102663

Ion	Ratio	Lower	Upper
91	100		
92	67.7	49.2	89.2
65	12.3	0.0	32.4
148	26.5	6.8	46.8

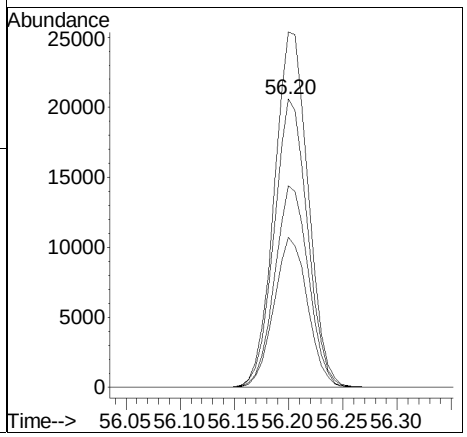




#142
Dodecane
Concen: 23.94 ug/L
RT: 56.20 min Scan# 8589
Delta R.T. 0.000 min
Lab File: V9000773.D
Acq: 13 Dec 2021 11:08 am

Tgt Ion: 43 Resp: 44064

Ion	Ratio	Lower	Upper
43	100		
57	123.1	106.2	146.2
71	69.8	51.3	91.3
41	52.0	31.9	71.9



LCS Duplicate Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000733.D
Acq On : 07 Dec 2021 07:42 pm
Operator : VOA9:RY
Sample : WG1581735-4,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 08 08:46:24 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	257192	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.22	113	67028	50.637	ug/L	0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 101.27%			
62) Toluene-d8 (surr)	31.27	98	310070	56.305	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 112.61%			
101) 4-Bromofluorobenzene (...	46.54	95	129885	46.916	ug/L	-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 93.83%			
Target Compounds						Qvalue
4) 1-Pentene	9.02	42	21585	19.346	ug/L	96
6) Pentane	9.39	43	27718	16.932	ug/L	98
10) Tertiary butanol	10.76	59	35863M4	117.330	ug/L	
13) Cyclopentane	13.07	70	14346	17.865	ug/L #	46
15) 2-Methylpentane	13.29	43	38465	19.330	ug/L	94
16) MTBE	13.61	73	59353	18.443	ug/L	99
17) 3-Methylpentane	14.27	57	36417	19.594	ug/L	99
18) 1-Hexene	14.87	56	21631	19.296	ug/L	97
19) Hexane	15.47	57	30309	18.424	ug/L	98
20) Diisopropyl ether	15.78	45	62475	19.657	ug/L	98
25) Ethyl tertiary butyl e...	17.26	59	62470	18.654	ug/L	97
27) Methylcyclopentane	17.81	56	42325	20.066	ug/L	99
28) 2,4-Dimethylpentane	17.96	43	39116	21.195	ug/L	96
32) Cyclohexane	20.71	56	37057	21.032	ug/L	94
33) 2-Methylhexane	21.16	43	42731	20.630	ug/L	99
34) Benzene	21.33	78	87031	19.080	ug/L	99
35) 2,3-Dimethylpentane	21.46	56	36022	20.681	ug/L	96
38) 3-Methylhexane	21.96	43	35026	19.763	ug/L	98
39) TAME	22.33	73	67285	18.175	ug/L	97
44) Isooctane	23.39	57	96069	21.476	ug/L	97
46) Heptane	24.14	43	35668	22.819	ug/L	96
51) Methylcyclohexane	26.56	83	40660	19.775	ug/L	96
60) 2-Methylheptane	30.57	57	41623	20.034	ug/L	94
63) 3-Methylheptane	31.30	43	40575	21.157	ug/L	91
66) Toluene	31.64	91	98233	19.377	ug/L	96
71) Octane	33.83	43	46643	21.501	ug/L	98
86) Ethylbenzene	40.71	91	110016	18.496	ug/L	98
91) p/m-Xylene	41.96	91	170287M4	37.294	ug/L	
95) Nonane	43.42	43	42866	18.939	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000733.D
Acq On : 07 Dec 2021 07:42 pm
Operator : VOA9:RY
Sample : WG1581735-4,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 08 08:46:24 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) o-Xylene	44.24	91	88644	19.027	ug/L	95
102) Isopropylbenzene	46.57	105	110791	18.332	ug/L	98
104) n-Propylbenzene	49.00	91	131271	18.460	ug/L	98
107) 1-Methyl-3-ethylbenzene	49.58	105	109490	18.189	ug/L	98
108) 1-Methyl-4-ethylbenzene	49.74	105	107633	18.693	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	93141	18.505	ug/L	99
110) 1-Decene	50.42	41	19145	16.975	ug/L	97
112) 1-Methyl-2-ethylbenzene	50.61	105	112679	18.793	ug/L	98
113) Decane	50.79	43	43569	22.636	ug/L	94
115) 1,2,4-Trimethylbenzene	51.44	105	94291	17.794	ug/L	100
117) sec-Butylbenzene	51.69	105	127091	19.366	ug/L	98
126) 1-Methyl-4-propylbenzene	53.23	105	147133	18.686	ug/L	96
127) n-Butylbenzene	53.23	91	118750	19.282	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	52478	18.555	ug/L	100
132) Undecane	53.97	57	52383	21.565	ug/L	97
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	119109	19.706	ug/L	99
139) Pentylbenzene	55.72	91	106106	19.944	ug/L	98
142) Dodecane	56.21	43	45393	27.734	ug/L	91

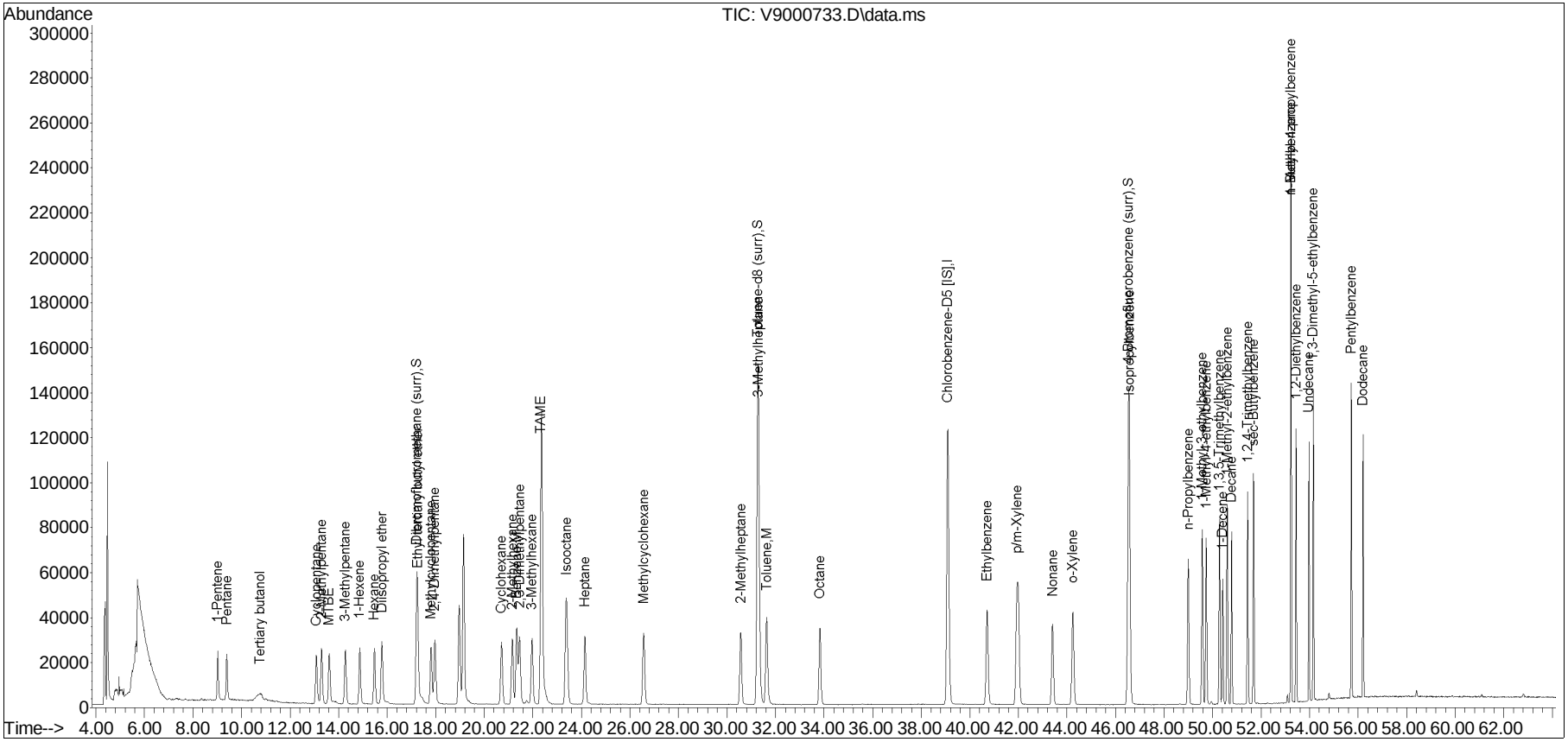
(#) = qualifier out of range (m) = manual integration (+) = signals summed

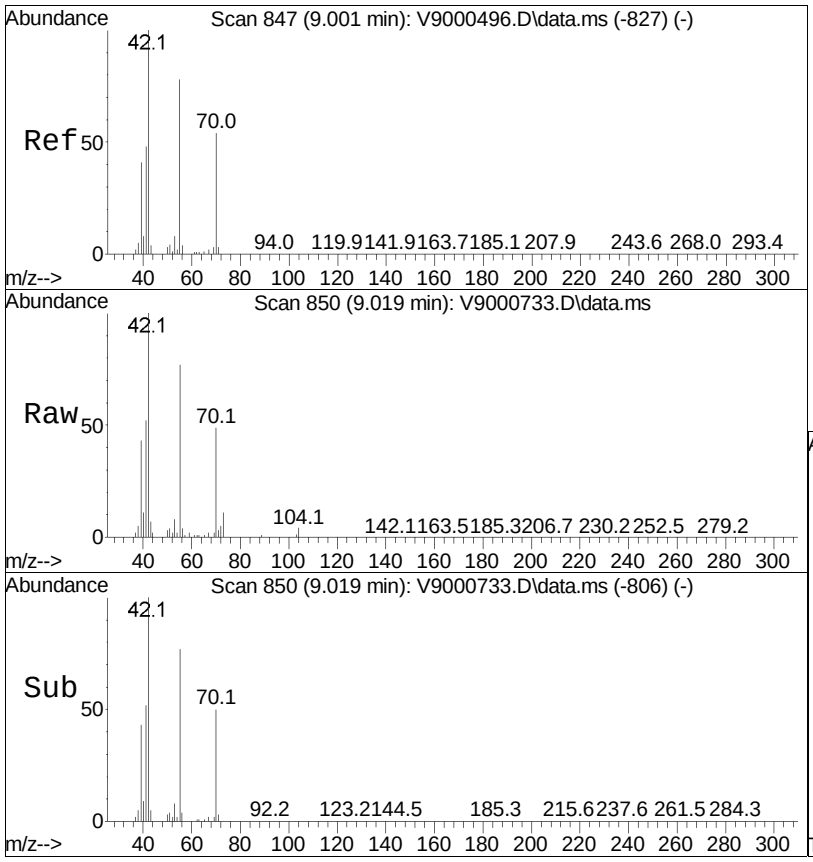
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211207\
Data File : V9000733.D
Acq On : 07 Dec 2021 07:42 pm
Operator : VOA9:RY
Sample : WG1581735-4,31,5,5
Misc : WG1581735,ICAL18423
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 08 08:46:24 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211207\P9102921W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Nov 01 10:11:05 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

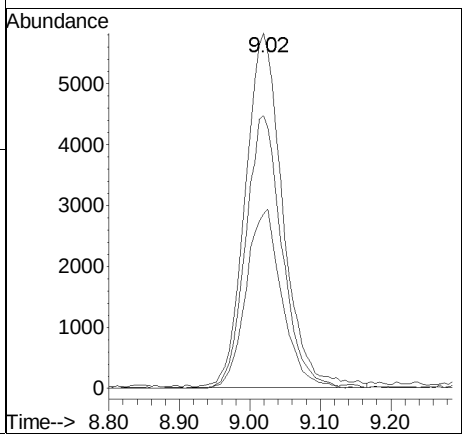


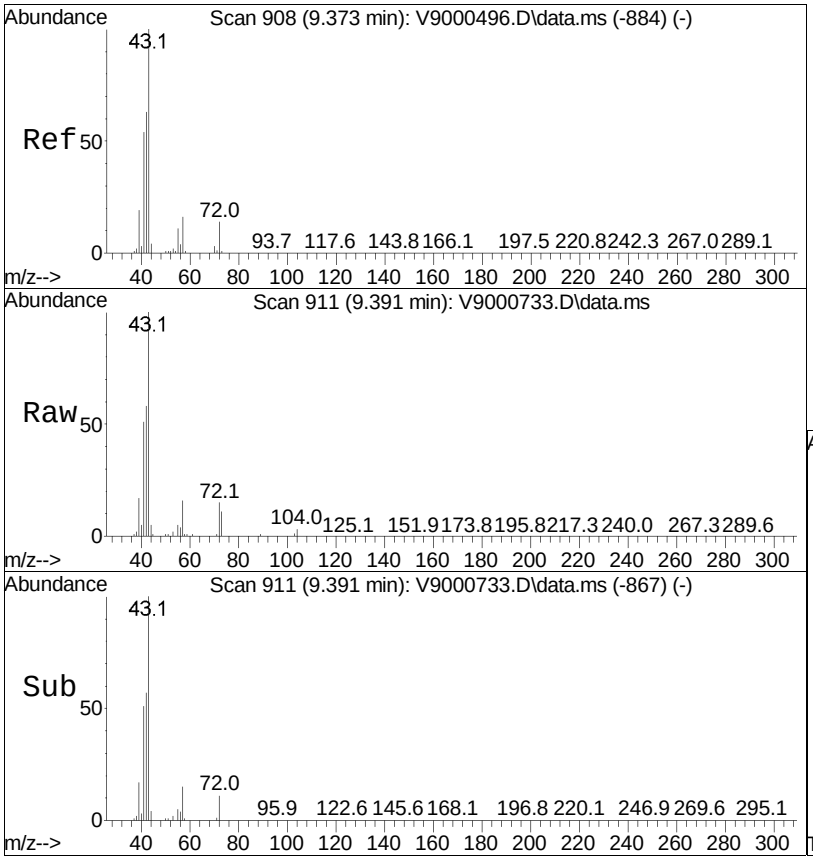


#4
1-Pentene
Concen: 19.35 ug/L
RT: 9.02 min Scan# 850
Delta R.T. 0.018 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 42 Resp: 21585

Ion	Ratio	Lower	Upper
42	100		
55	76.8	57.8	97.8
70	49.1	34.1	74.1

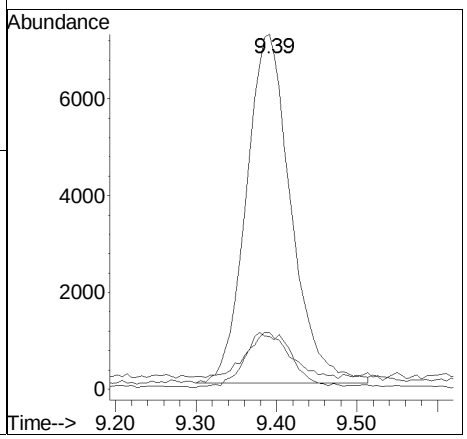


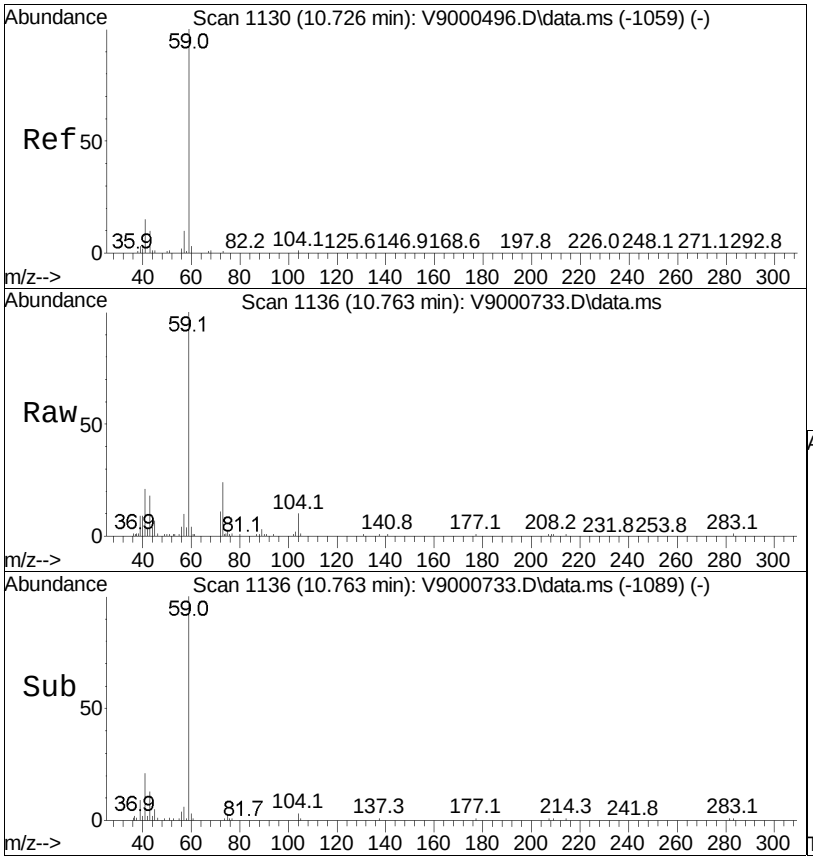


#6
Pentane
Concen: 16.93 ug/L
RT: 9.39 min Scan# 911
Delta R.T. 0.018 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 27718

Ion	Ratio	Lower	Upper
43	100		
57	16.1	0.0	36.2
72	14.9	0.0	33.6

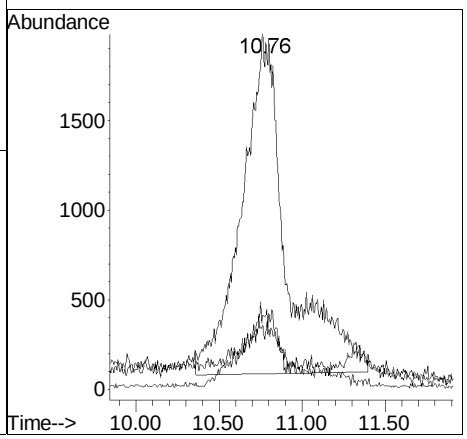


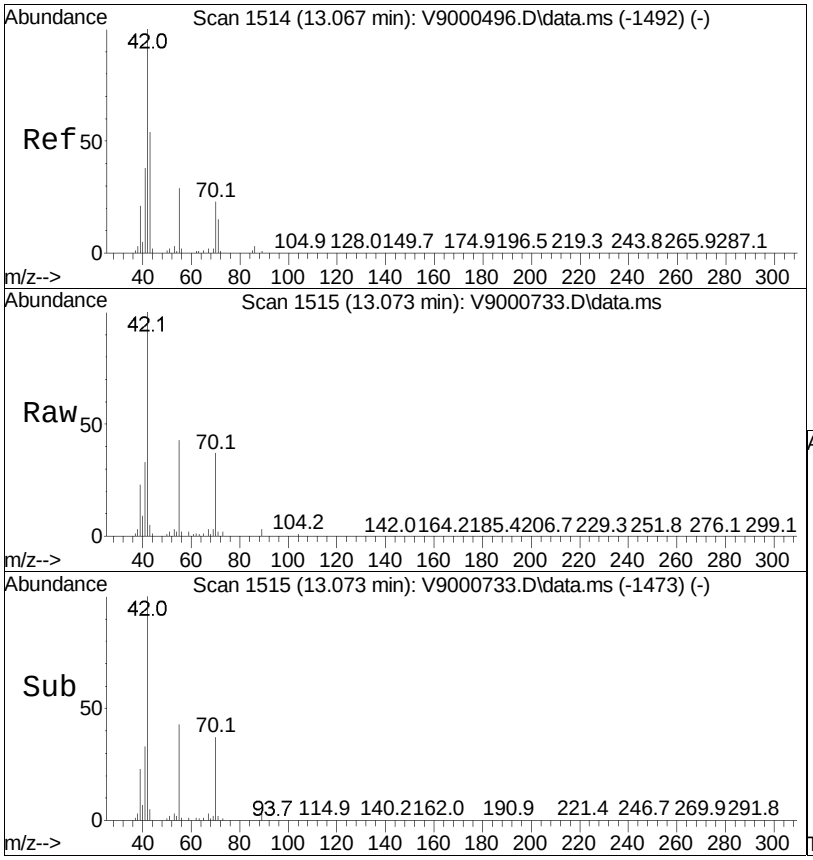


#10
Tertiary butanol
Concen: 117.33 ug/L m
RT: 10.76 min Scan# 1136
Delta R.T. 0.037 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 59 Resp: 35863

Ion	Ratio	Lower	Upper
59	100		
41	20.9	0.6	40.6
43	18.2	0.0	32.3

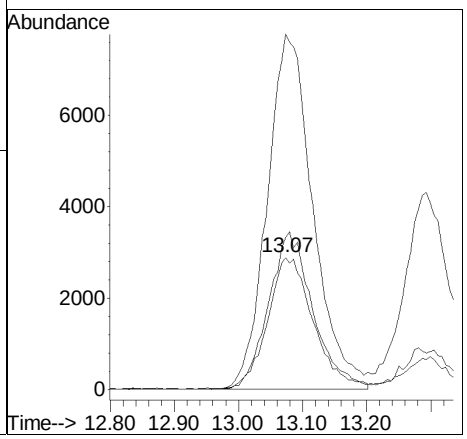


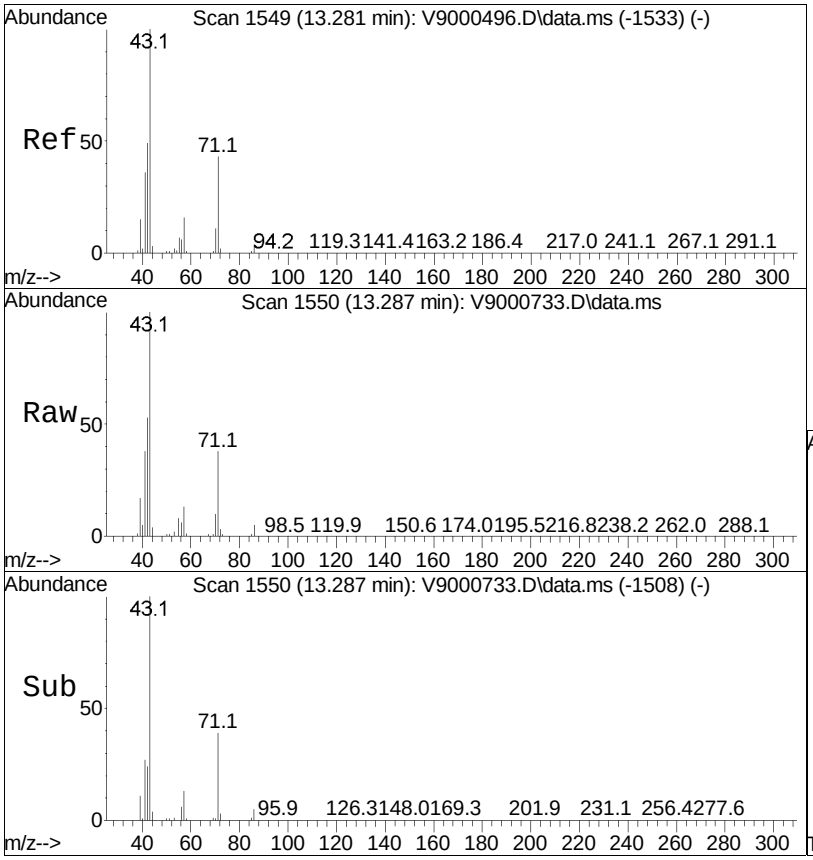


#13
Cyclopentane
Concen: 17.86 ug/L
RT: 13.07 min Scan# 1515
Delta R.T. 0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 70 Resp: 14346

Ion	Ratio	Lower	Upper
70	100		
42	269.5	416.2	456.2#
55	115.3	106.1	146.1

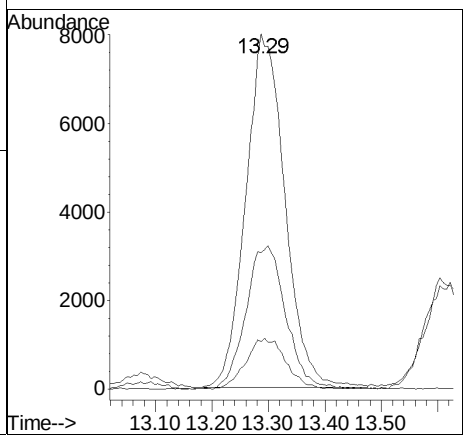


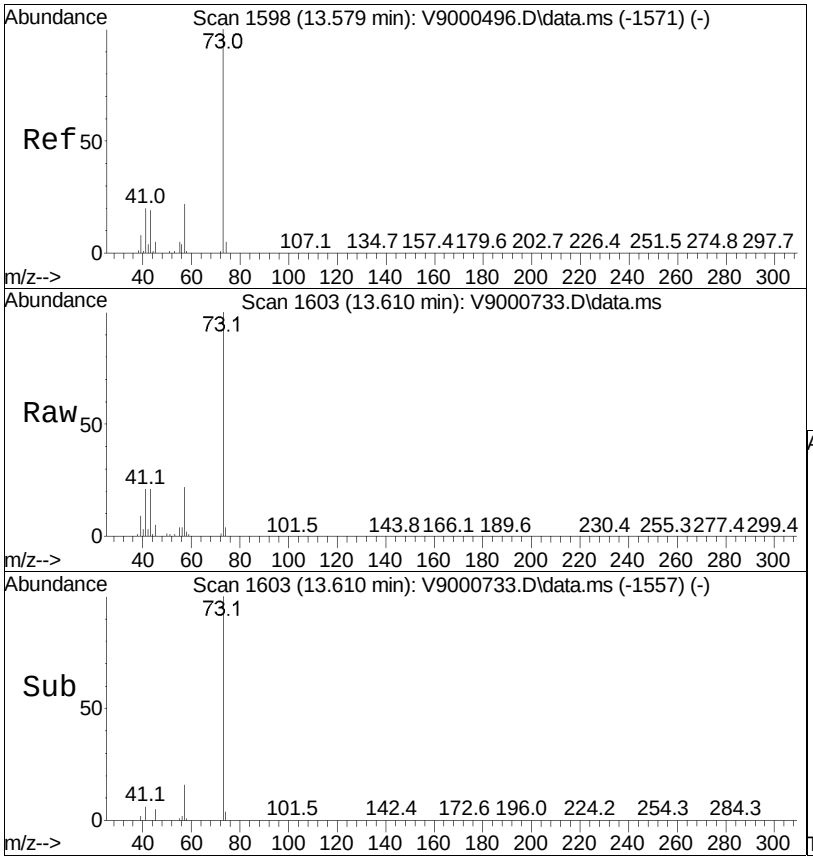


#15
2-Methylpentane
Concen: 19.33 ug/L
RT: 13.29 min Scan# 1550
Delta R.T. 0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 38465

Ion	Ratio	Lower	Upper
43	100		
71	38.4	22.6	62.6
57	13.4	0.0	35.7

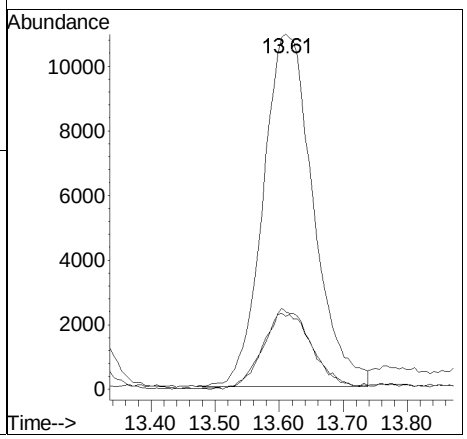


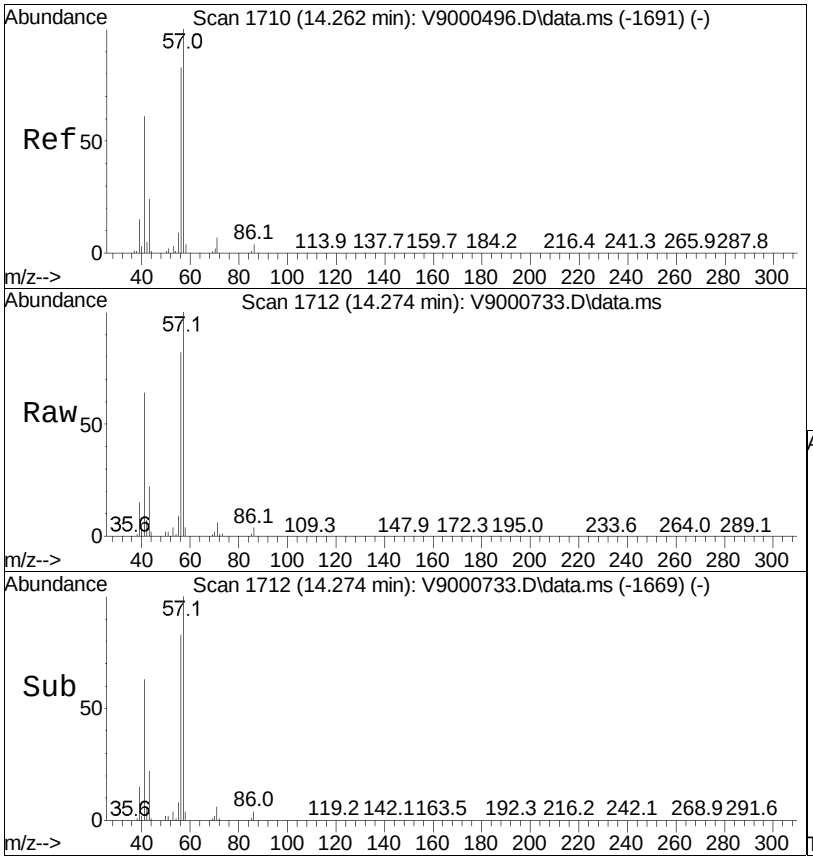


#16
MTBE
Concen: 18.44 ug/L
RT: 13.61 min Scan# 1603
Delta R.T. 0.030 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 73 Resp: 59353

Ion	Ratio	Lower	Upper
73	100		
57	21.9	2.3	42.3
41	20.6	0.5	40.5

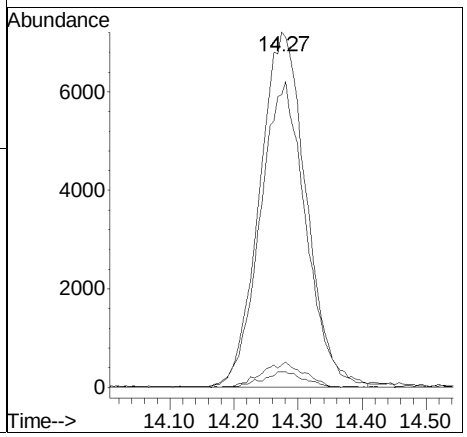


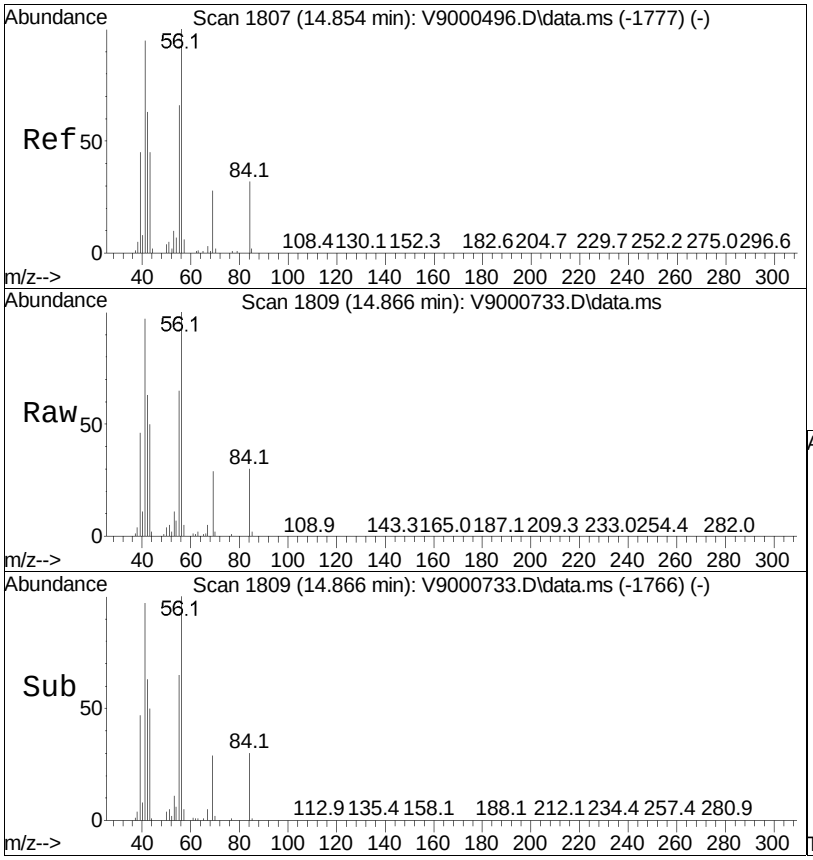


#17
3-Methylpentane
Concen: 19.59 ug/L
RT: 14.27 min Scan# 1712
Delta R.T. 0.012 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 57 Resp: 36417

Ion	Ratio	Lower	Upper
57	100		
56	82.4	63.2	103.2
71	6.4	0.0	27.1
86	4.4	0.0	24.3

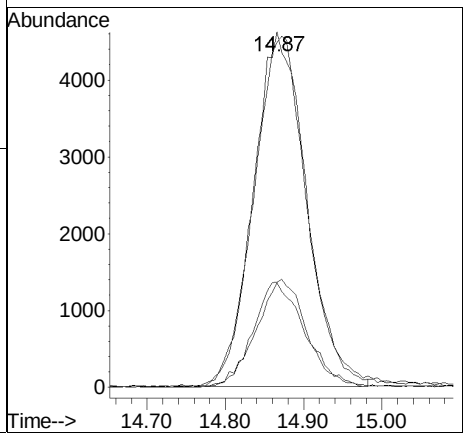


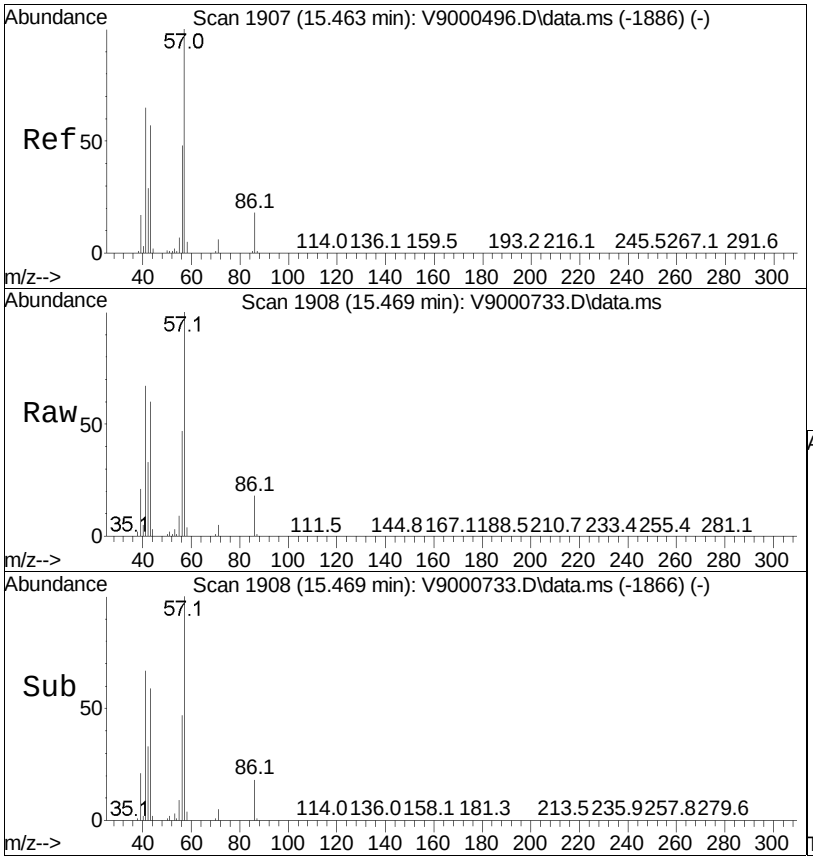


#18
1-Hexene
Concen: 19.30 ug/L
RT: 14.87 min Scan# 1809
Delta R.T. 0.012 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 56 Resp: 21631

Ion	Ratio	Lower	Upper
56	100		
41	97.1	75.1	115.1
84	29.6	11.5	51.5
69	29.4	7.5	47.5

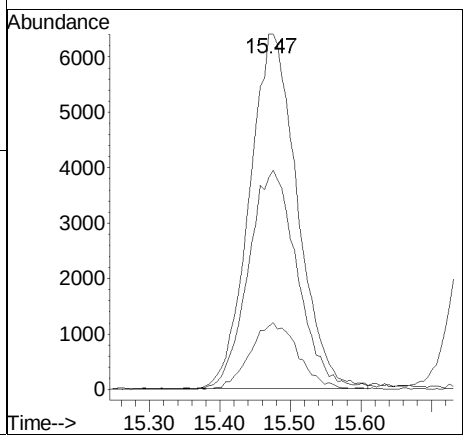


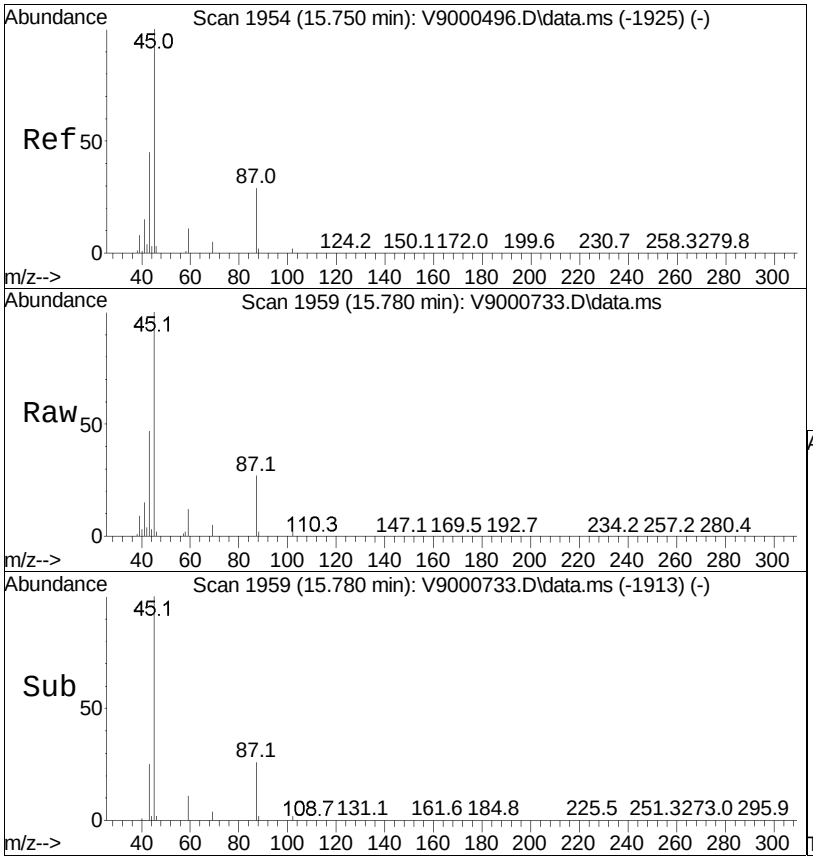


#19
Hexane
Concen: 18.42 ug/L
RT: 15.47 min Scan# 1908
Delta R.T. 0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 57 Resp: 30309

Ion	Ratio	Lower	Upper
57	100		
43	59.6	38.1	78.1
86	17.8	0.0	38.3

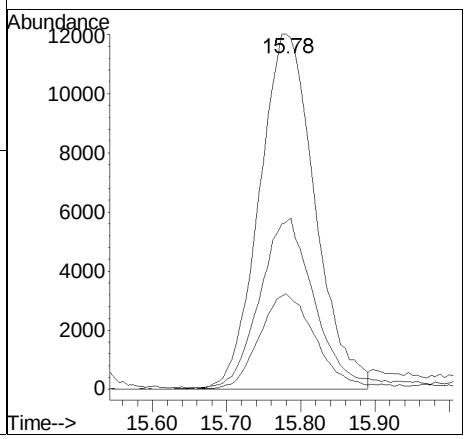


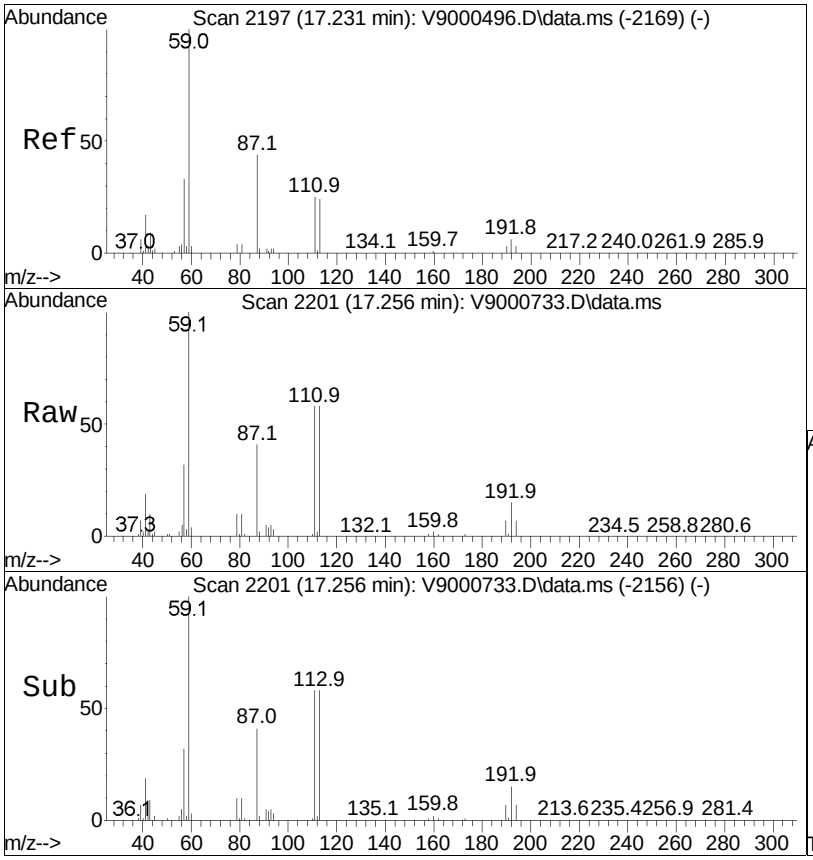


#20
Diisopropyl ether
Concen: 19.66 ug/L
RT: 15.78 min Scan# 1959
Delta R.T. 0.030 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 45 Resp: 62475

Ion	Ratio	Lower	Upper
45	100		
87	26.9	9.2	49.2
43	47.1	26.2	66.2

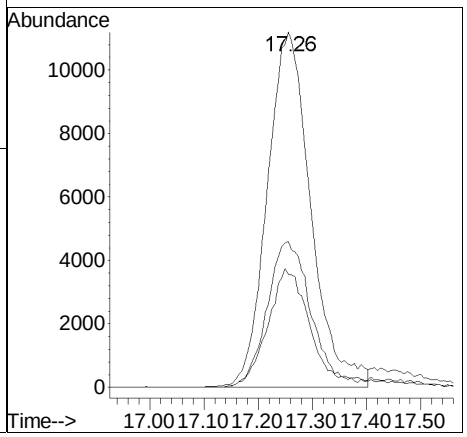


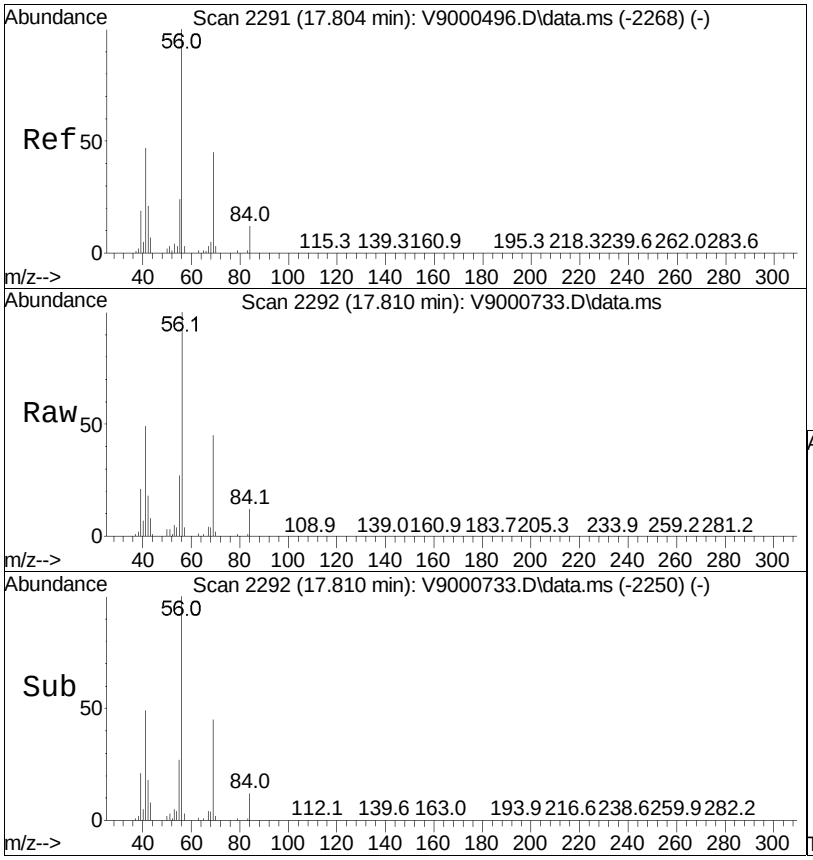


#25
Ethyl tertiary butyl ether
Concen: 18.65 ug/L
RT: 17.26 min Scan# 2201
Delta R.T. 0.024 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 59 Resp: 62470

Ion	Ratio	Lower	Upper
59	100		
87	41.0	23.9	63.9
57	31.8	12.5	52.5

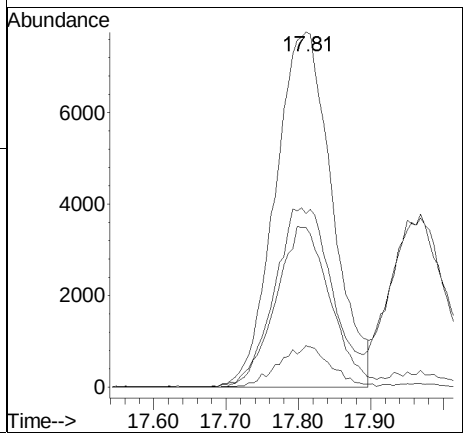


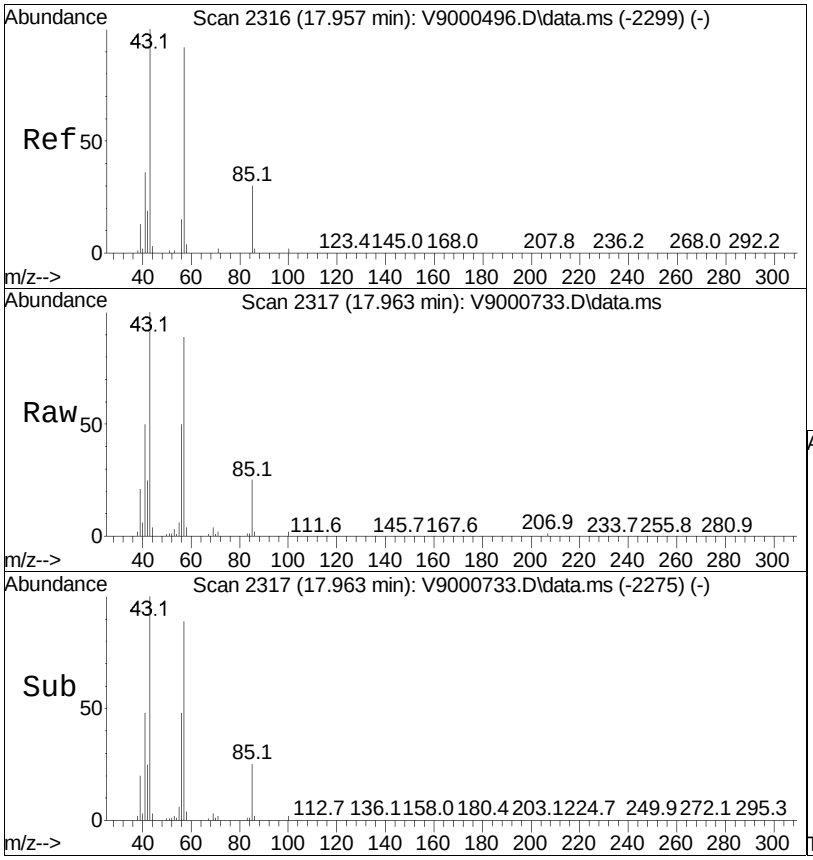


#27
Methylcyclopentane
Concen: 20.07 ug/L
RT: 17.81 min Scan# 2292
Delta R.T. 0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 56 Resp: 42325

Ion	Ratio	Lower	Upper
56	100		
69	45.0	25.2	65.2
41	49.0	27.6	67.6
84	11.8	0.0	31.8

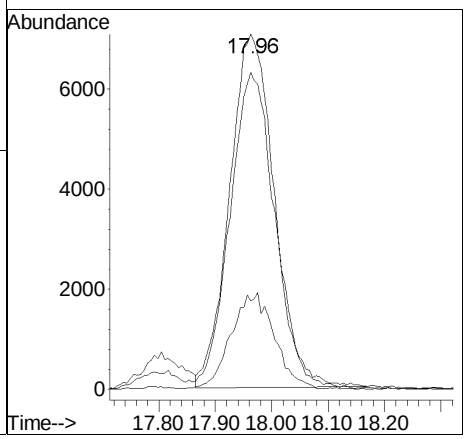


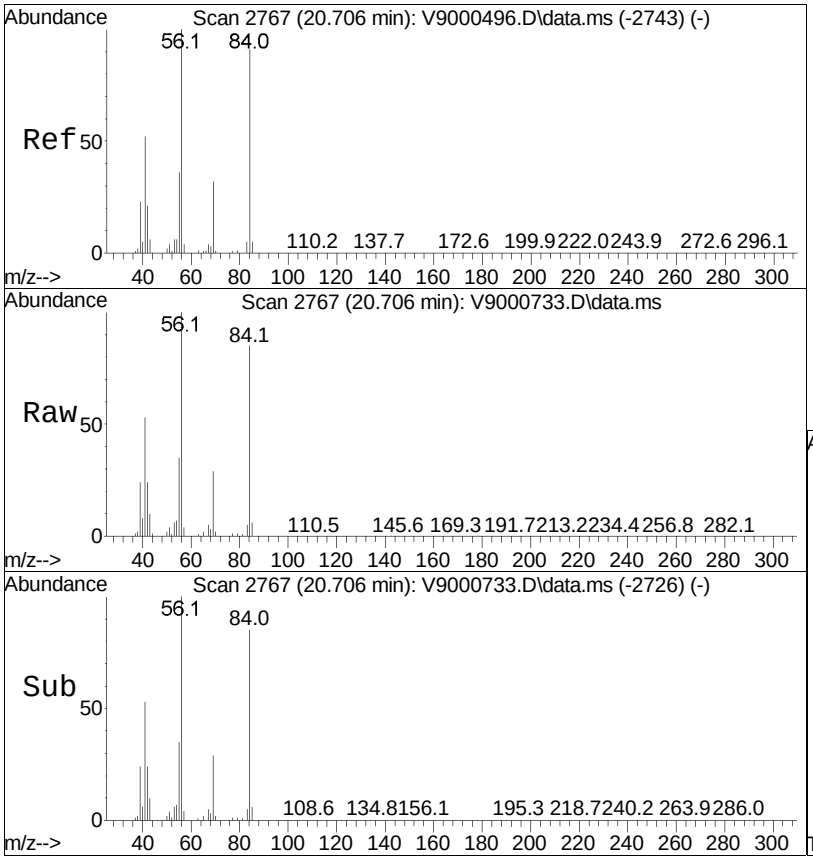


#28
2,4-Dimethylpentane
Concen: 21.20 ug/L
RT: 17.96 min Scan# 2317
Delta R.T. 0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 39116

Ion	Ratio	Lower	Upper
43	100		
57	89.2	71.4	111.4
85	24.9	9.0	49.0

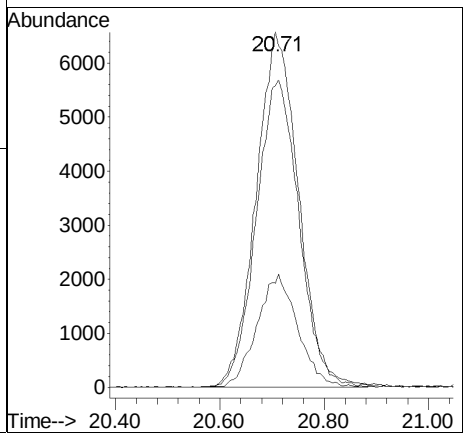


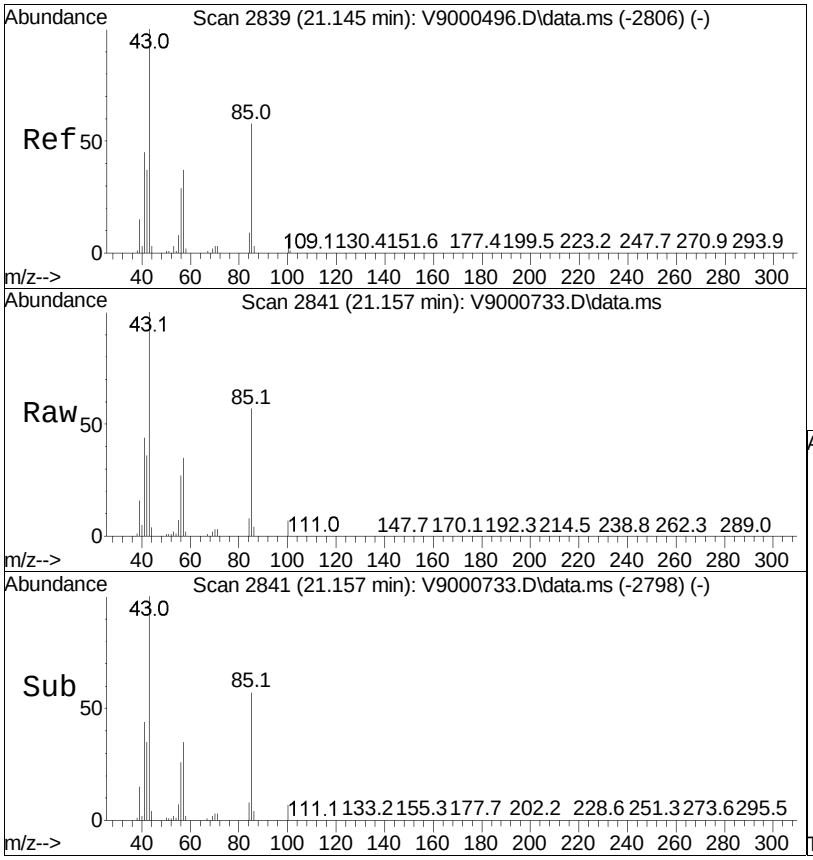


#32
Cyclohexane
Concen: 21.03 ug/L
RT: 20.71 min Scan# 2767
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 56 Resp: 37057

Ion	Ratio	Lower	Upper
56	100		
84	84.9	71.3	111.3
69	29.3	12.0	52.0

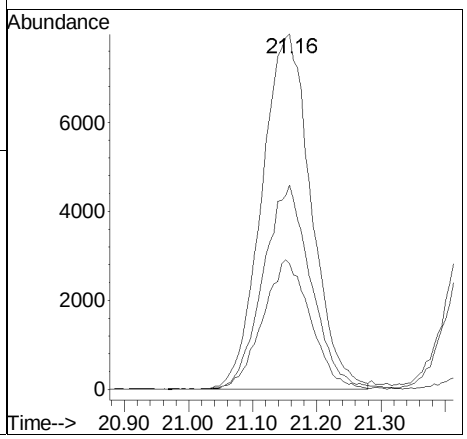


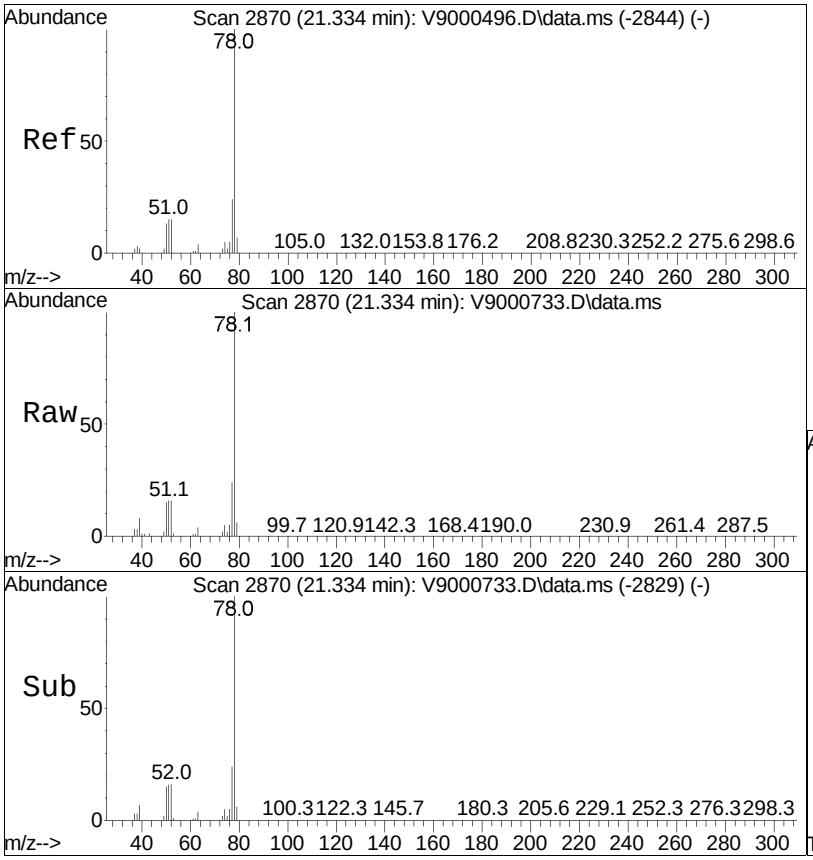


#33
2-Methylhexane
Concen: 20.63 ug/L
RT: 21.16 min Scan# 2841
Delta R.T. 0.012 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 42731

Ion	Ratio	Lower	Upper
43	100		
85	57.5	38.2	78.2
57	35.3	16.7	56.7

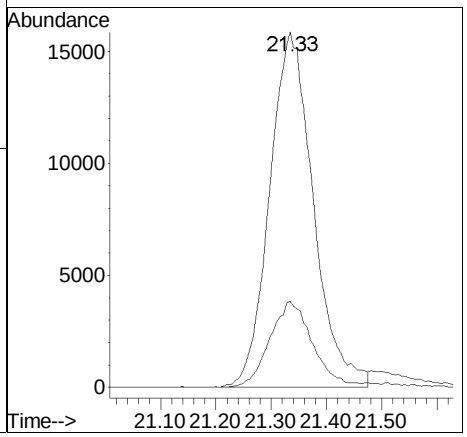


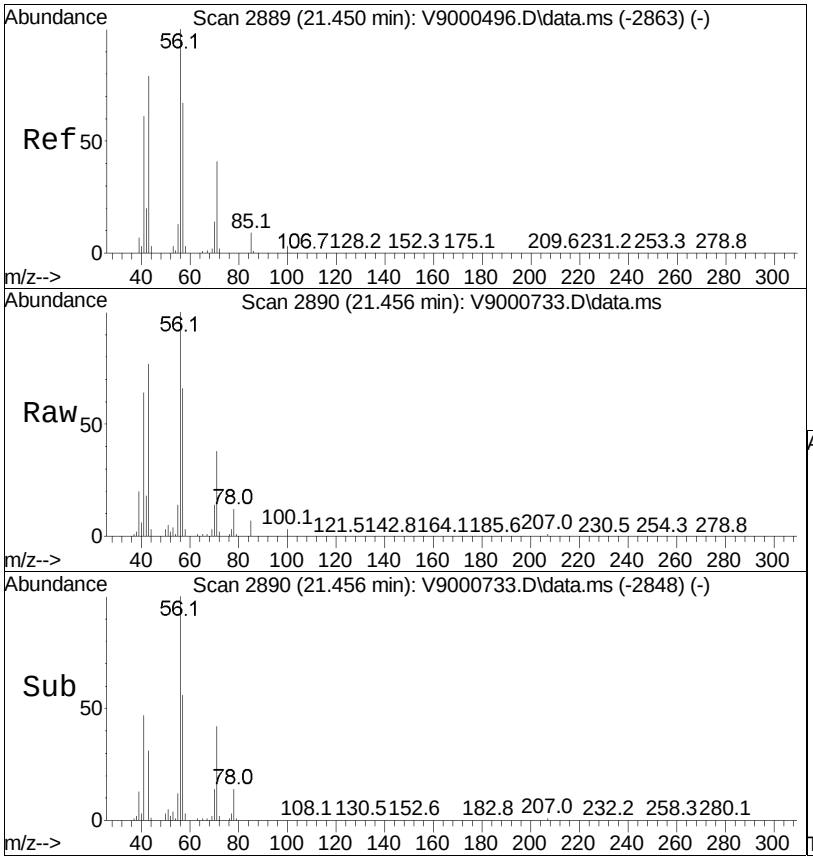


#34
Benzene
Concen: 19.08 ug/L
RT: 21.33 min Scan# 2870
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 78 Resp: 87031

Ion	Ratio	Lower	Upper
78	100		
77	24.2	3.7	43.7

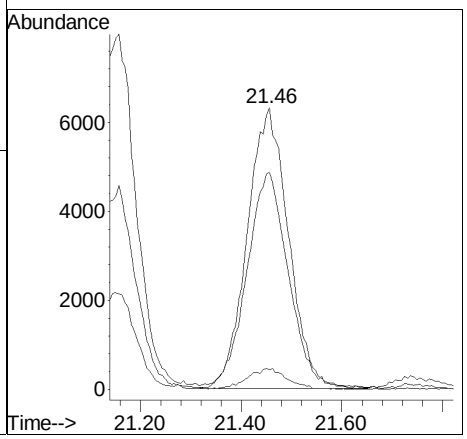


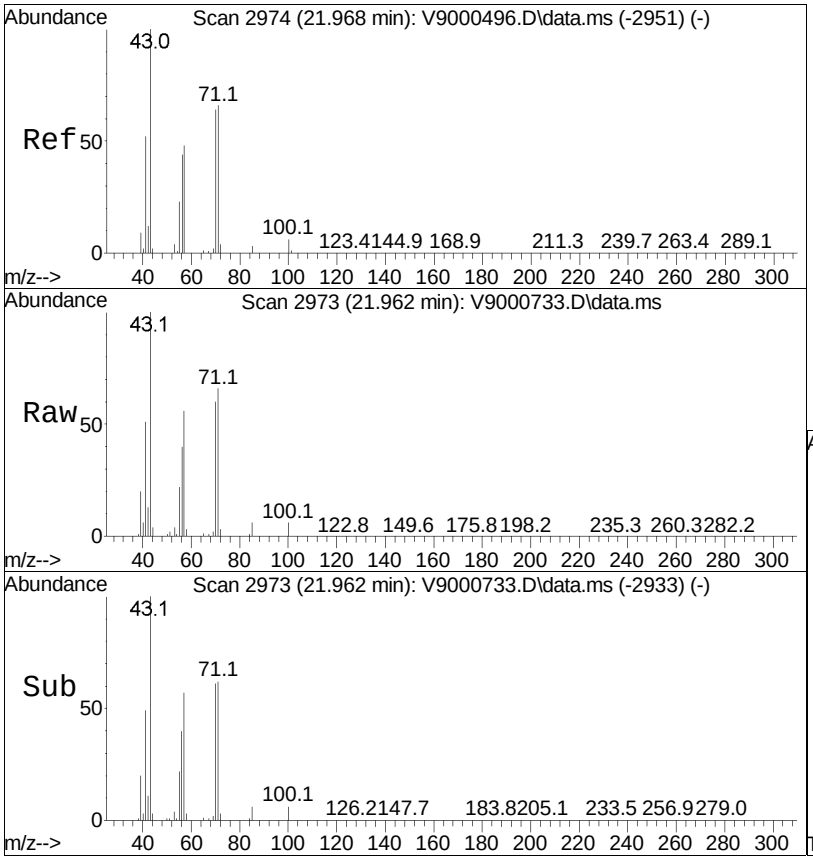


#35
2,3-Dimethylpentane
Concen: 20.68 ug/L
RT: 21.46 min Scan# 2890
Delta R.T. 0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 56 Resp: 36022

Ion	Ratio	Lower	Upper
56	100		
43	77.1	60.3	100.3
85	7.0	0.0	29.6

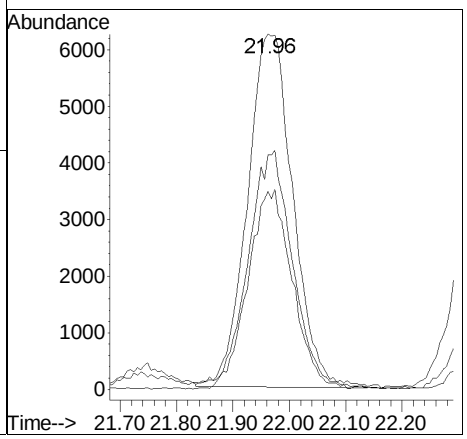


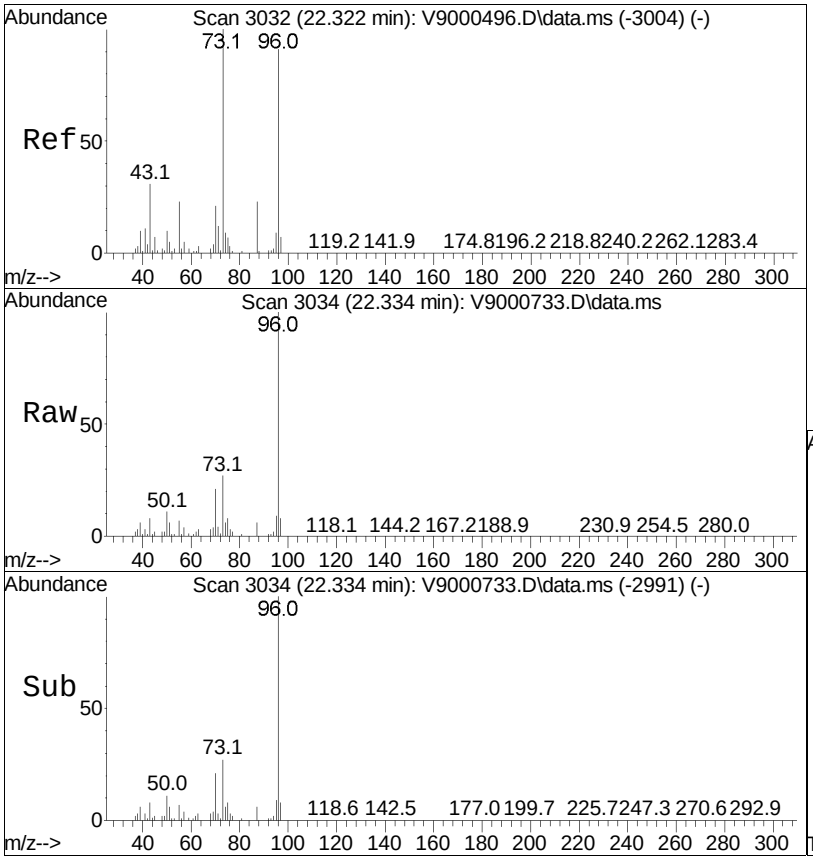


#38
3-Methylhexane
Concen: 19.76 ug/L
RT: 21.96 min Scan# 2973
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 35026

Ion	Ratio	Lower	Upper
43	100		
57	55.7	38.1	78.1
71	66.1	45.7	85.7

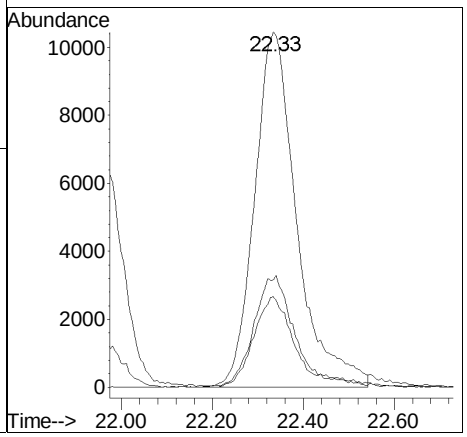


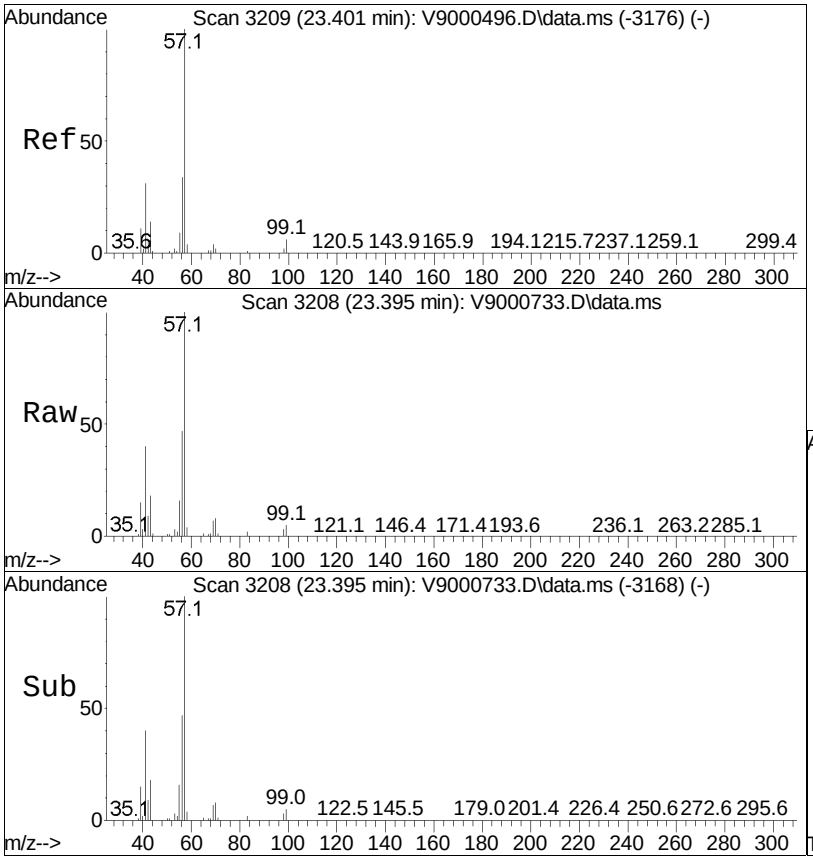


#39
TAME
Concen: 18.18 ug/L
RT: 22.33 min Scan# 3034
Delta R.T. 0.012 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 73 Resp: 67285

Ion	Ratio	Lower	Upper
73	100		
43	30.3	11.3	51.3
55	25.5	3.2	43.2

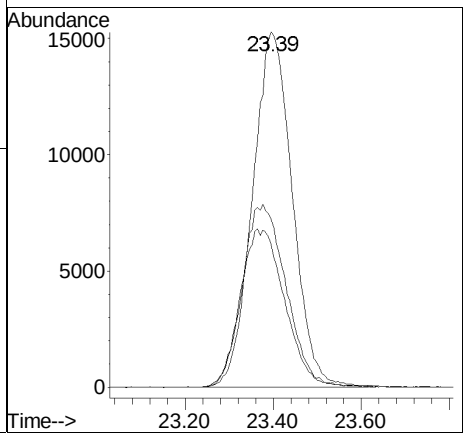


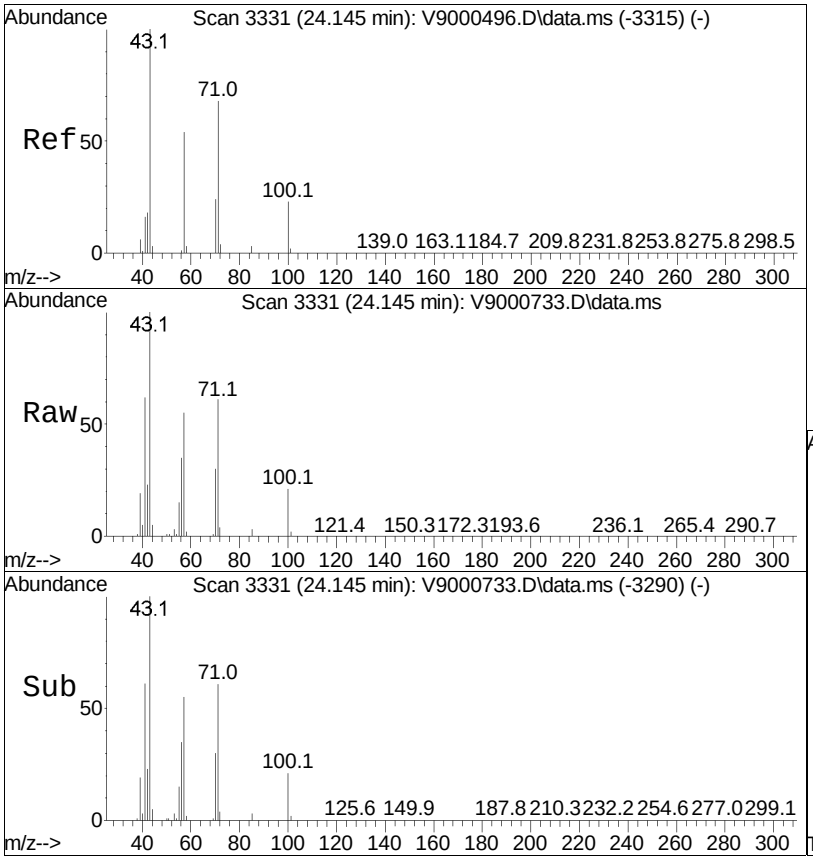


#44
Isooctane
Concen: 21.48 ug/L
RT: 23.39 min Scan# 3208
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 57 Resp: 96069

Ion	Ratio	Lower	Upper
57	100		
41	40.4	16.9	56.9
56	47.4	27.1	67.1

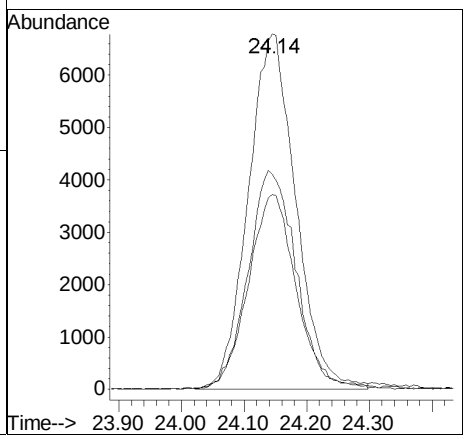


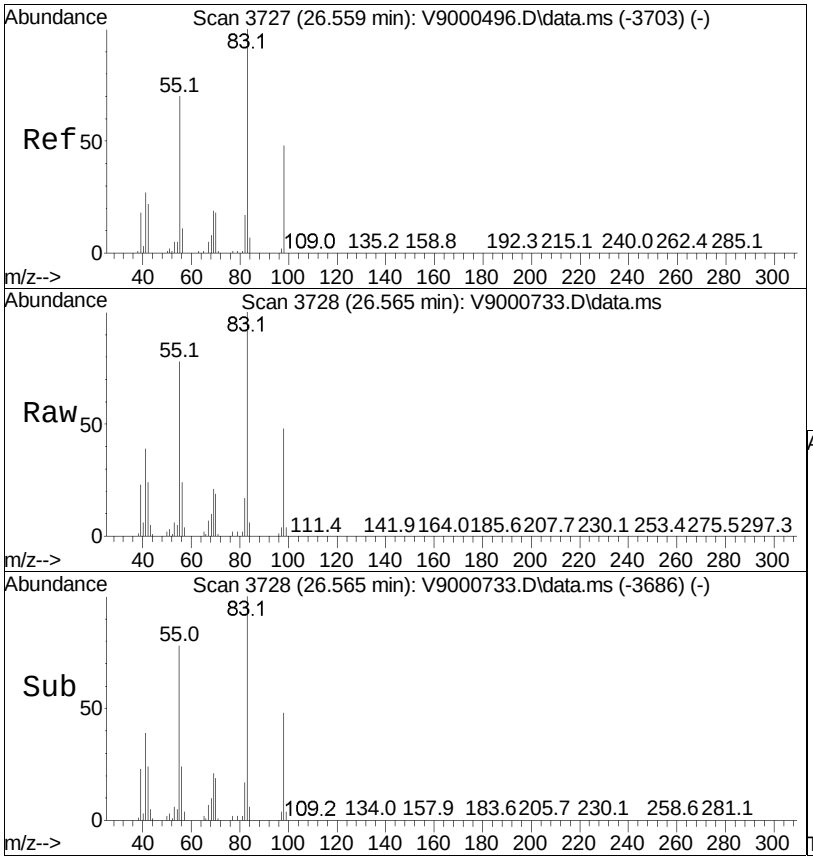


#46
Heptane
Concen: 22.82 ug/L
RT: 24.14 min Scan# 3331
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 35668

Ion	Ratio	Lower	Upper
43	100		
57	54.8	35.3	75.3
71	60.6	45.9	85.9

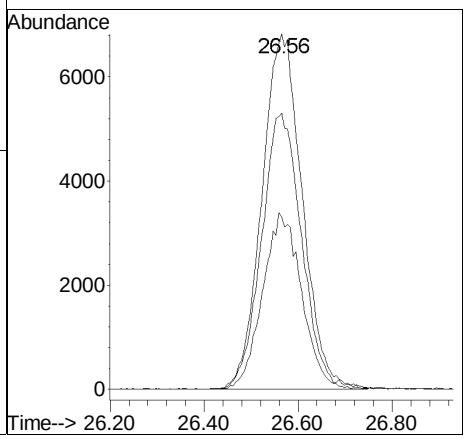


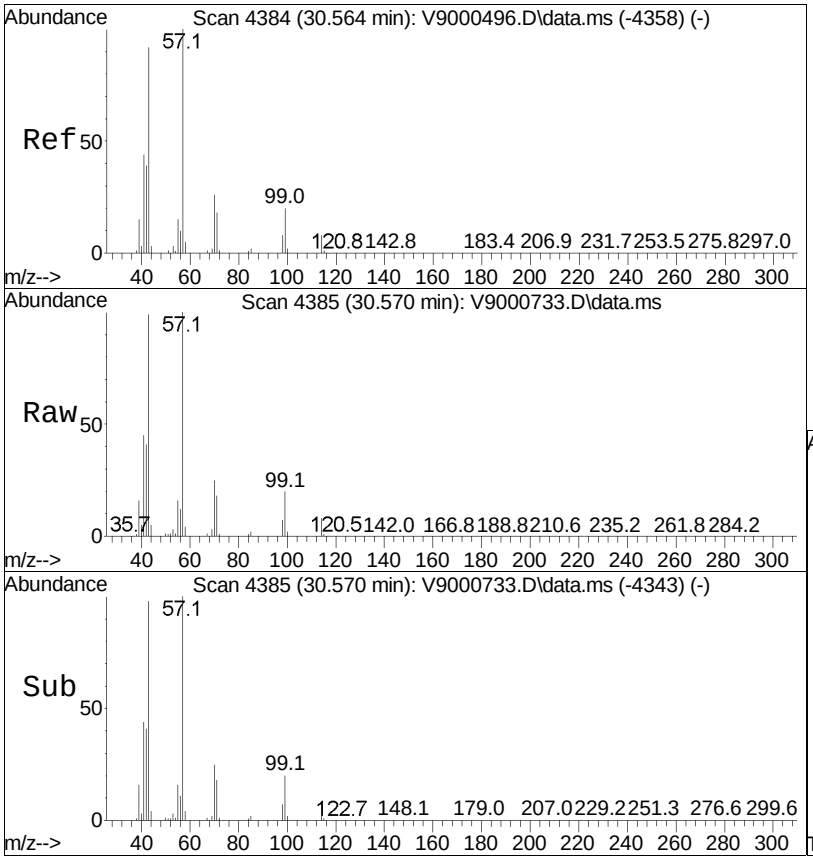


#51
Methylcyclohexane
Concen: 19.78 ug/L
RT: 26.56 min Scan# 3728
Delta R.T. 0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 83 Resp: 40660

Ion	Ratio	Lower	Upper
83	100		
55	77.7	52.6	92.6
98	48.4	27.8	67.8

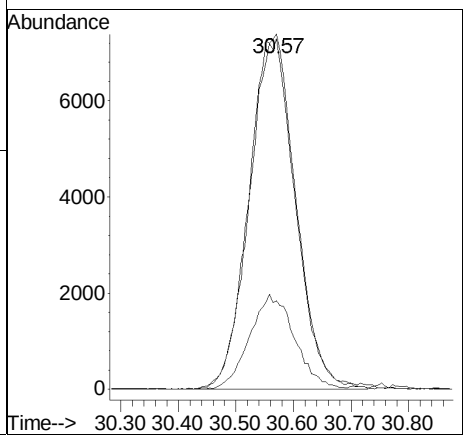


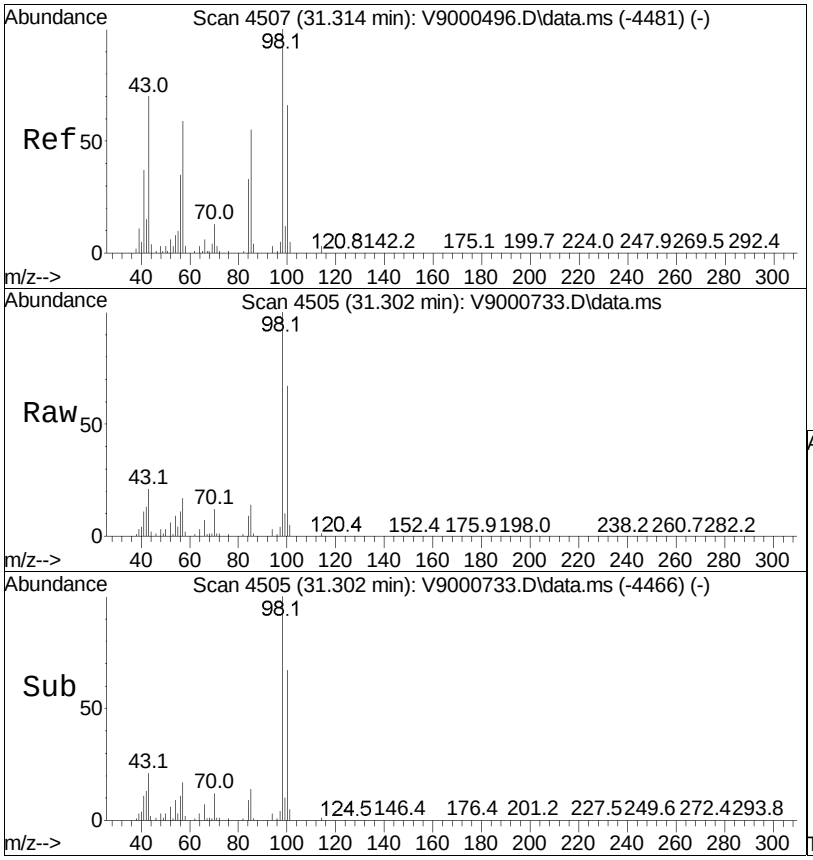


#60
2-Methylheptane
Concen: 20.03 ug/L
RT: 30.57 min Scan# 4385
Delta R.T. 0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 57 Resp: 41623

Ion	Ratio	Lower	Upper
57	100		
43	98.7	72.4	112.4
70	25.0	6.3	46.3

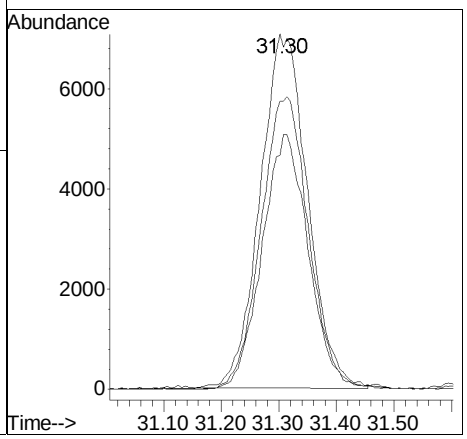


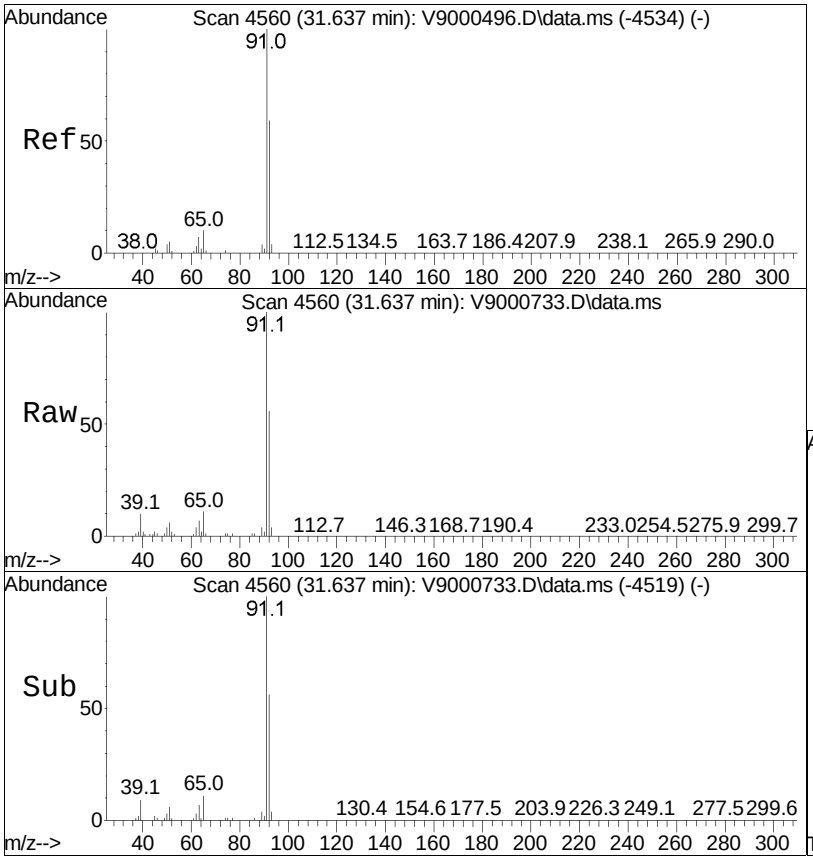


#63
3-Methylheptane
Concen: 21.16 ug/L
RT: 31.30 min Scan# 4505
Delta R.T. -0.012 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 40575

Ion	Ratio	Lower	Upper
43	100		
57	81.1	65.0	105.0
85	65.9	58.5	98.5

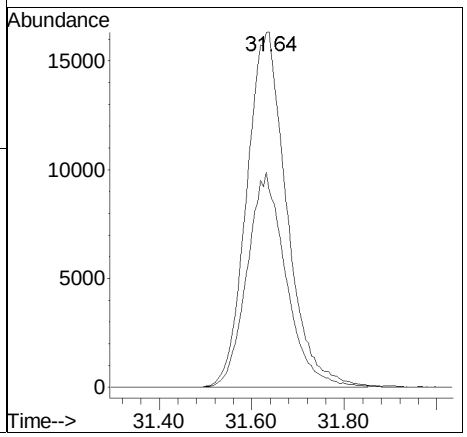


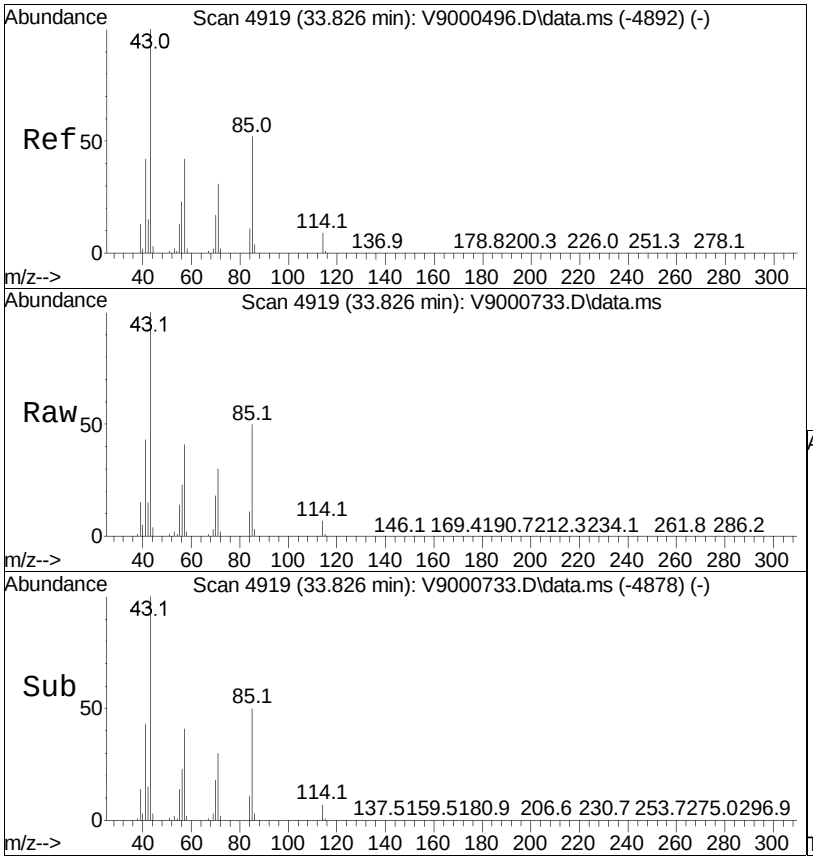


#66
Toluene
Concen: 19.38 ug/L
RT: 31.64 min Scan# 4560
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 91 Resp: 98233

Ion	Ratio	Lower	Upper
91	100		
92	55.6	38.5	78.5

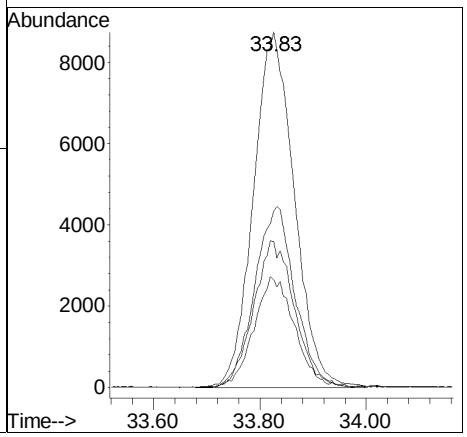


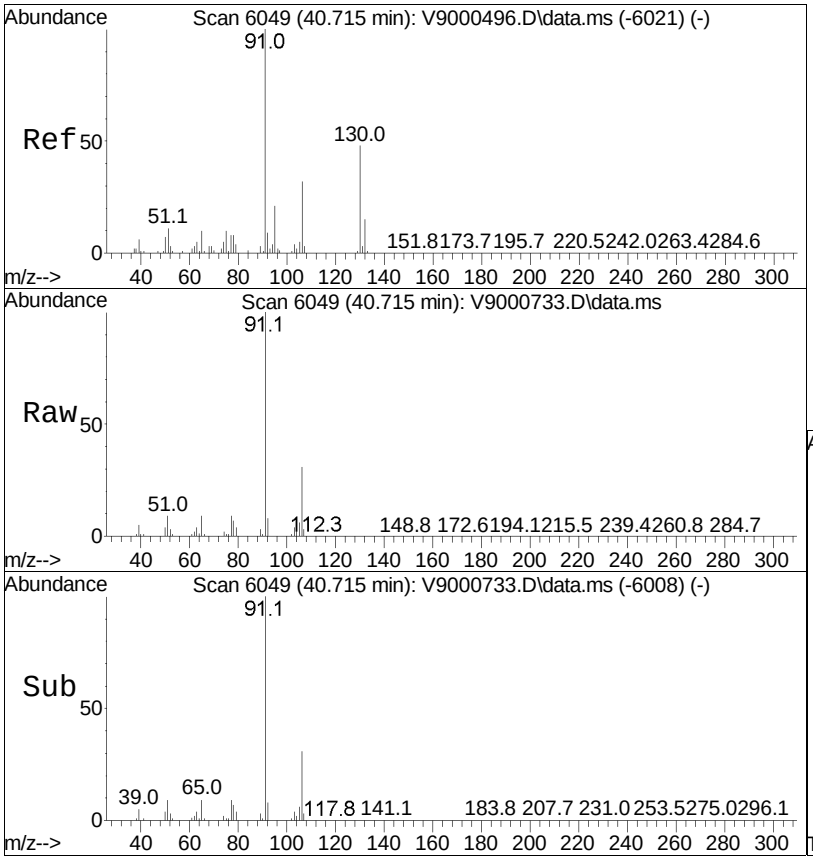


#71
Octane
Concen: 21.50 ug/L
RT: 33.83 min Scan# 4919
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 46643

Ion	Ratio	Lower	Upper
43	100		
57	41.1	22.3	62.3
85	49.6	32.0	72.0
71	30.3	10.9	50.9

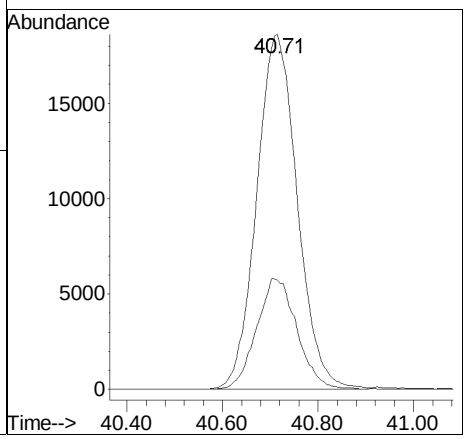


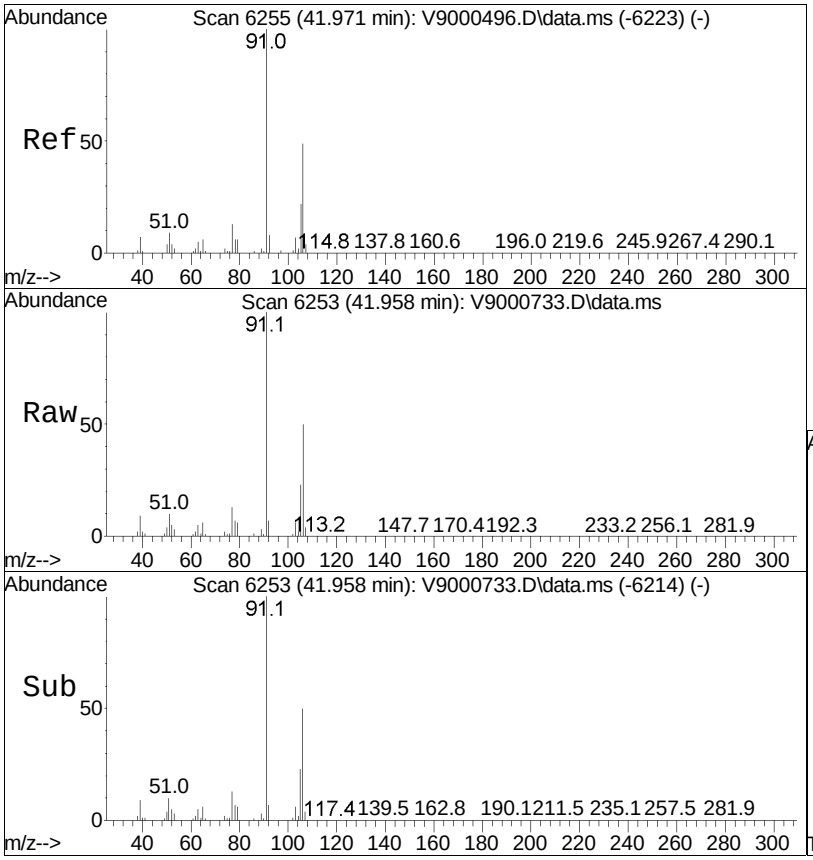


#86
Ethylbenzene
Concen: 18.50 ug/L
RT: 40.71 min Scan# 6049
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 91 Resp: 110016

Ion	Ratio	Lower	Upper
91	100		
106	30.8	12.0	52.0

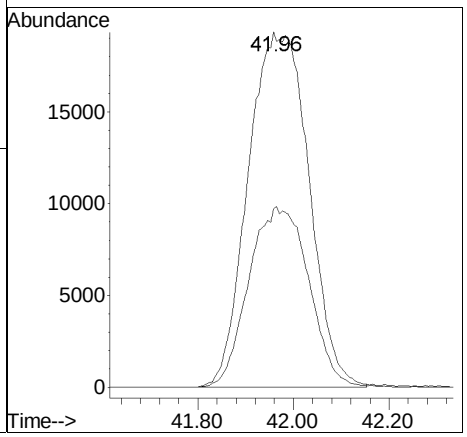


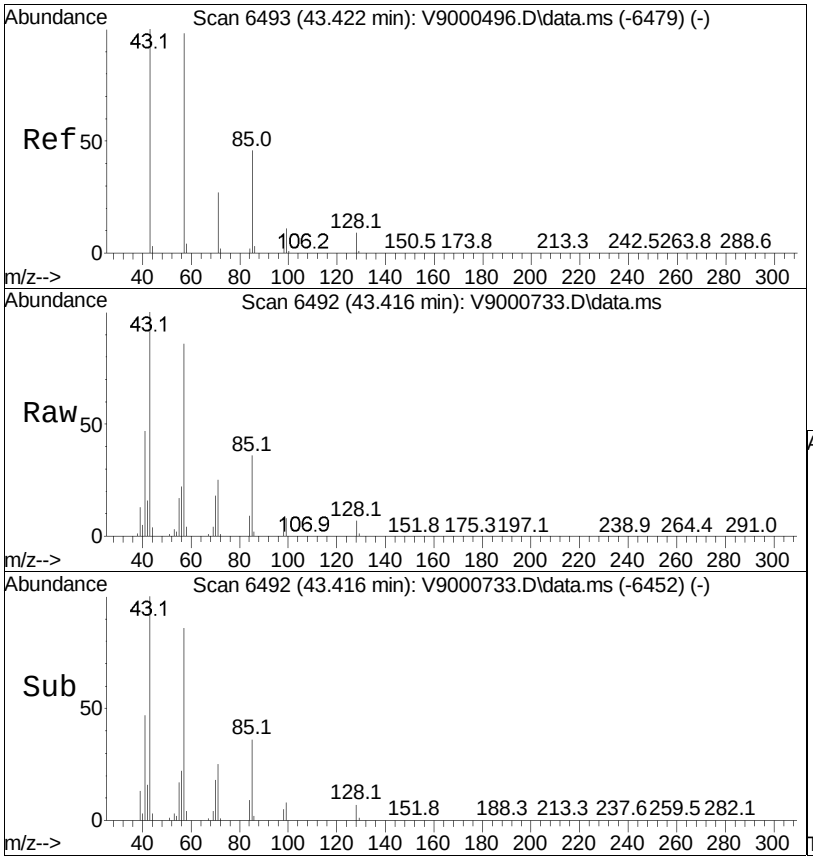


#91
p/m-Xylene
Concen: 37.29 ug/L m
RT: 41.96 min Scan# 6253
Delta R.T. -0.012 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 91 Resp: 170287

Ion	Ratio	Lower	Upper
91	100		
106	50.3	29.5	69.5

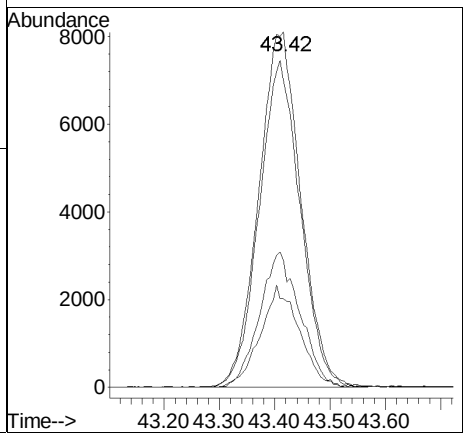


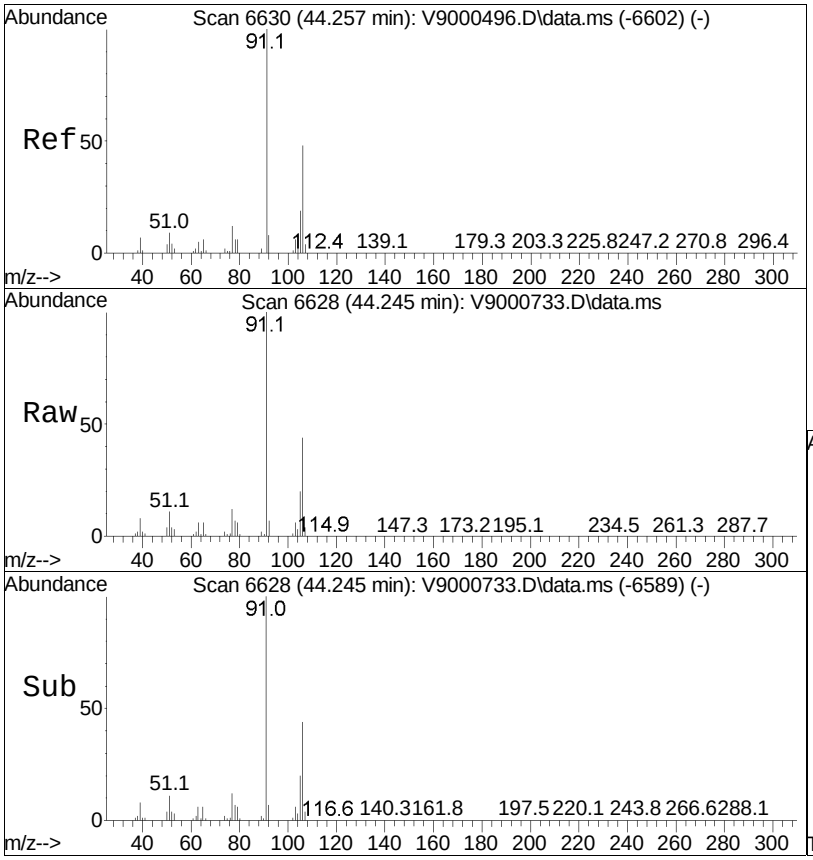


#95
Nonane
Concen: 18.94 ug/L
RT: 43.42 min Scan# 6492
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 42866

Ion	Ratio	Lower	Upper
43	100		
57	86.3	70.7	110.7
85	35.8	18.9	58.9
71	24.9	8.1	48.1

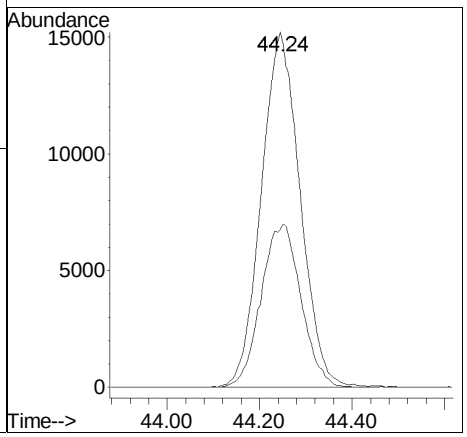


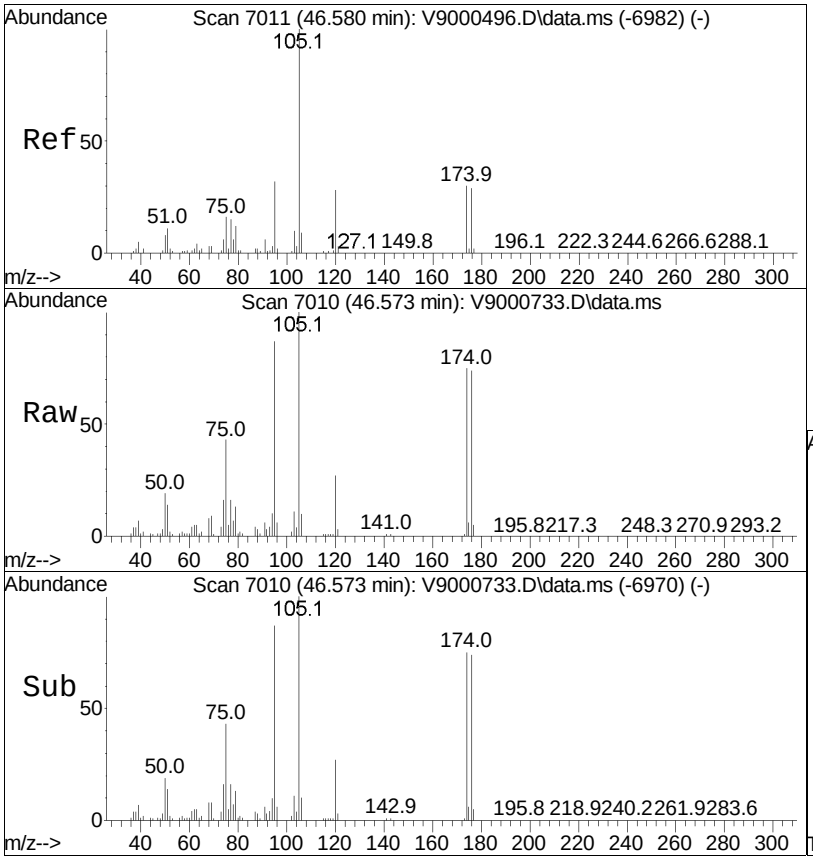


#98
o-Xylene
Concen: 19.03 ug/L
RT: 44.24 min Scan# 6628
Delta R.T. -0.012 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 91 Resp: 88644

Ion	Ratio	Lower	Upper
91	100		
106	44.5	27.8	67.8

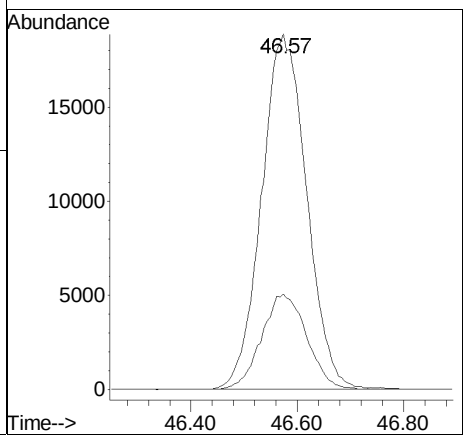


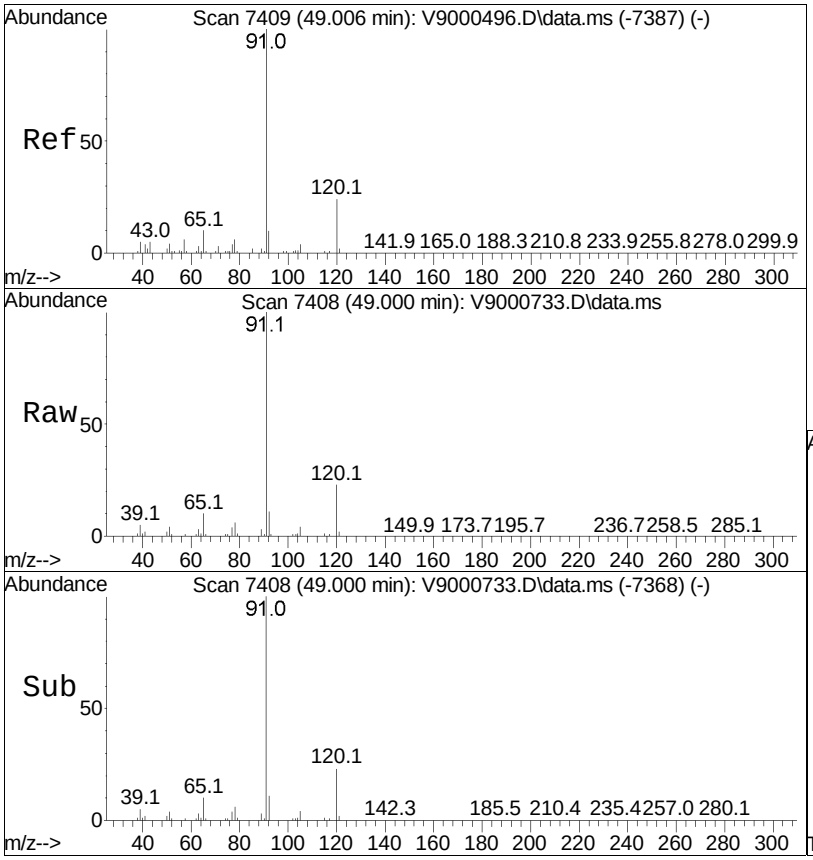


#102
Isopropylbenzene
Concen: 18.33 ug/L
RT: 46.57 min Scan# 7010
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:105 Resp: 110791

Ion	Ratio	Lower	Upper
105	100		
120	26.8	7.7	47.7

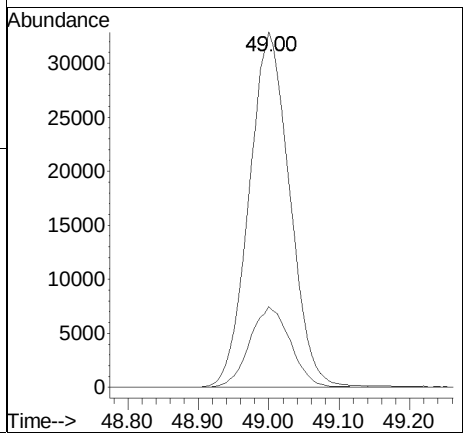


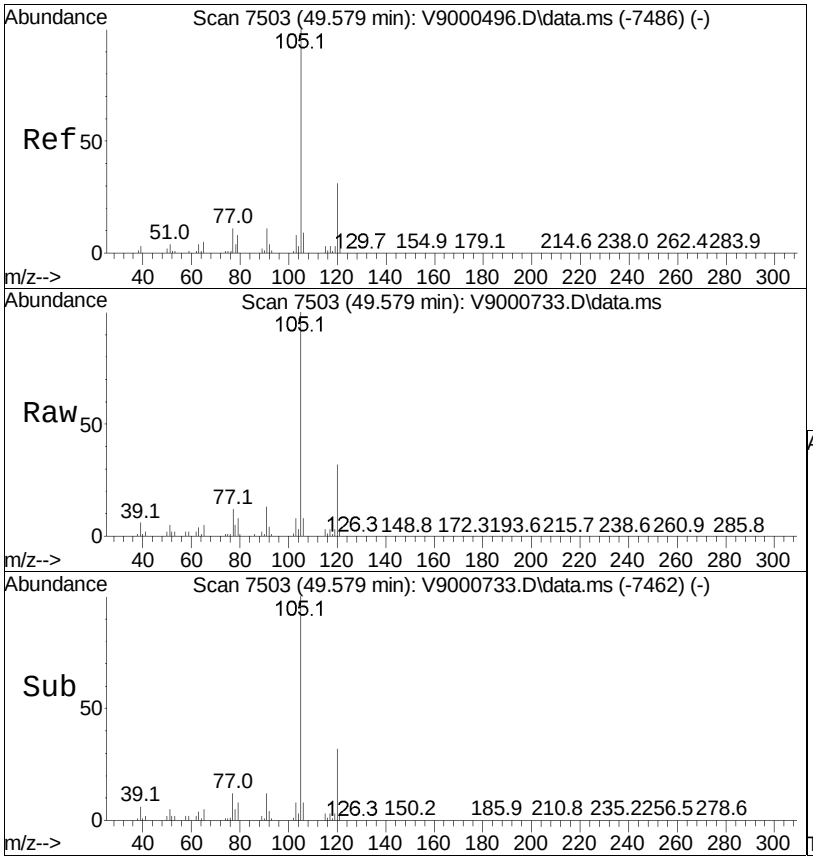


#104
n-Propylbenzene
Concen: 18.46 ug/L
RT: 49.00 min Scan# 7408
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 91 Resp: 131271

Ion	Ratio	Lower	Upper
91	100		
120	22.8	3.8	43.8

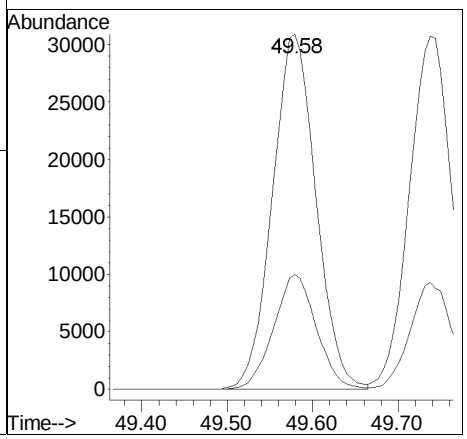


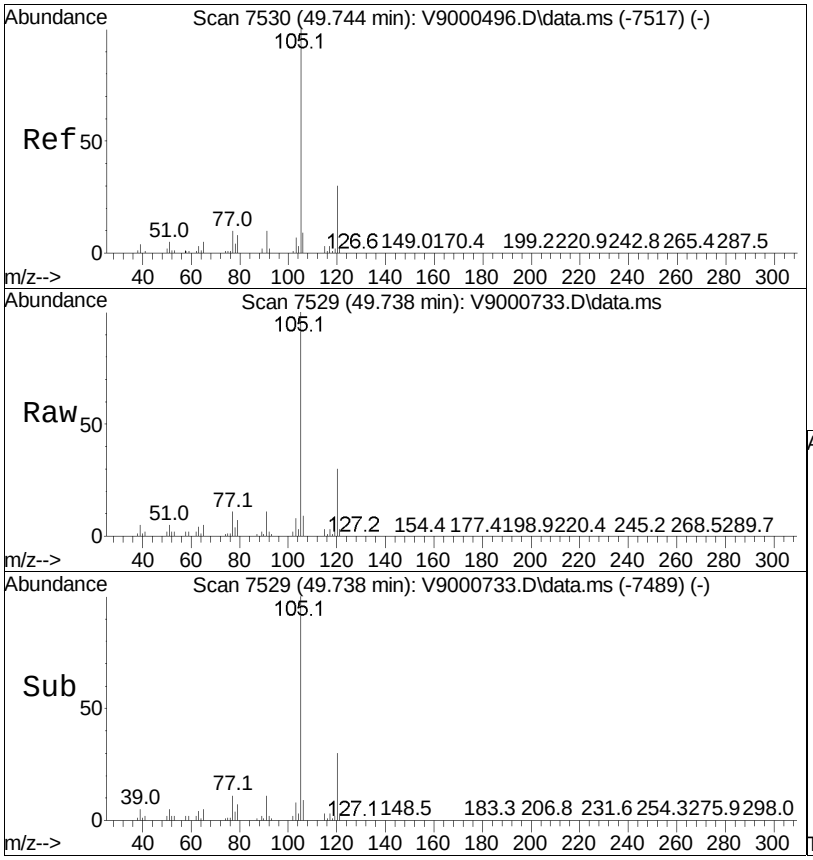


#107
1-Methyl-3-ethylbenzene
Concen: 18.19 ug/L
RT: 49.58 min Scan# 7503
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:105 Resp: 109490

Ion	Ratio	Lower	Upper
105	100		
120	32.4	11.0	51.0

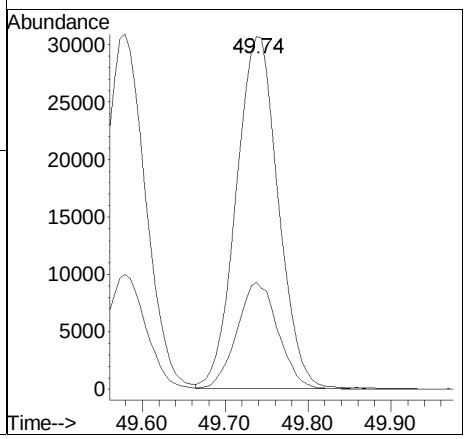


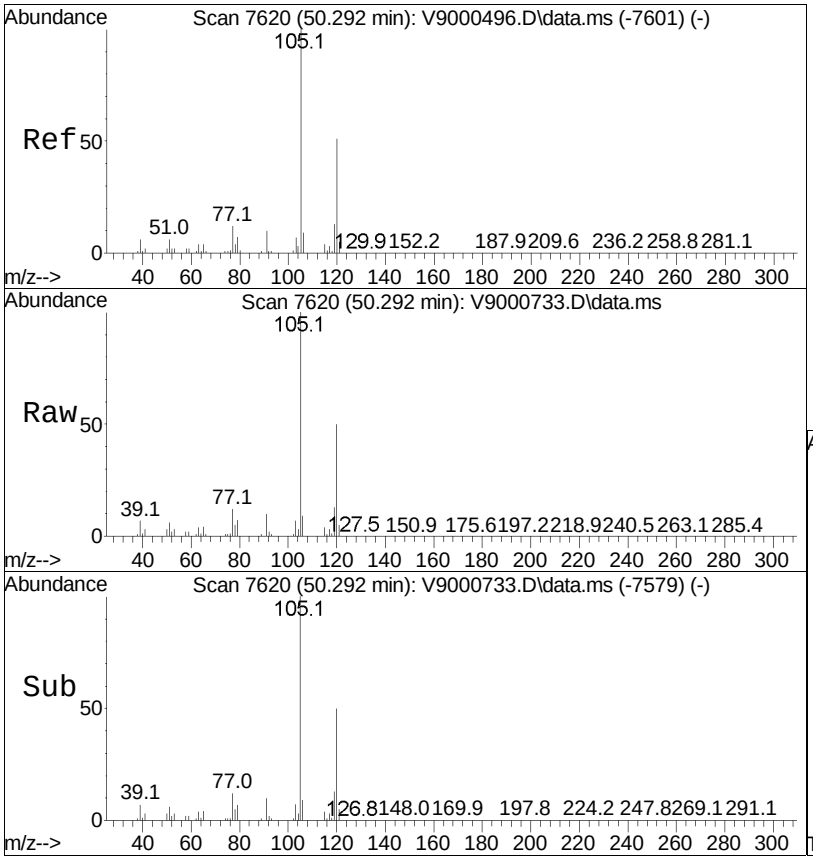


#108
1-Methyl-4-ethylbenzene
Concen: 18.69 ug/L
RT: 49.74 min Scan# 7529
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:105 Resp: 107633

Ion	Ratio	Lower	Upper
105	100		
120	30.3	9.8	49.8

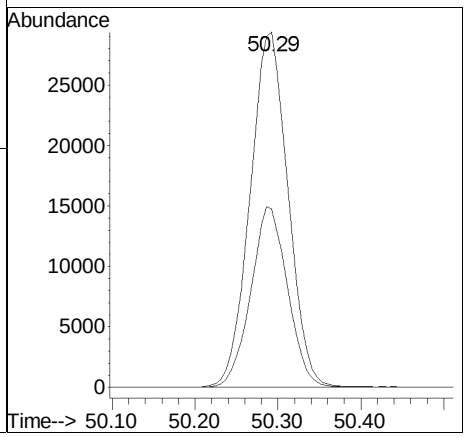


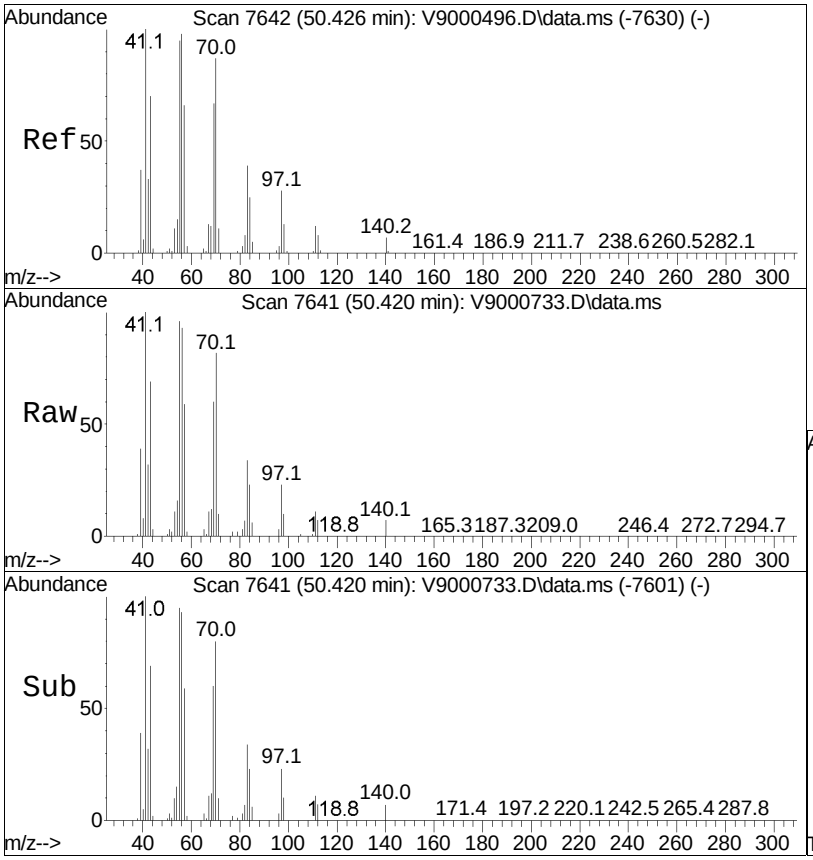


#109
1,3,5-Trimethylbenzene
Concen: 18.50 ug/L
RT: 50.29 min Scan# 7620
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:105 Resp: 93141

Ion	Ratio	Lower	Upper
105	100		
120	50.2	30.6	70.6

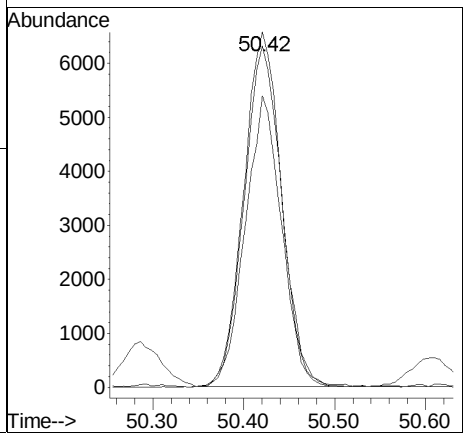


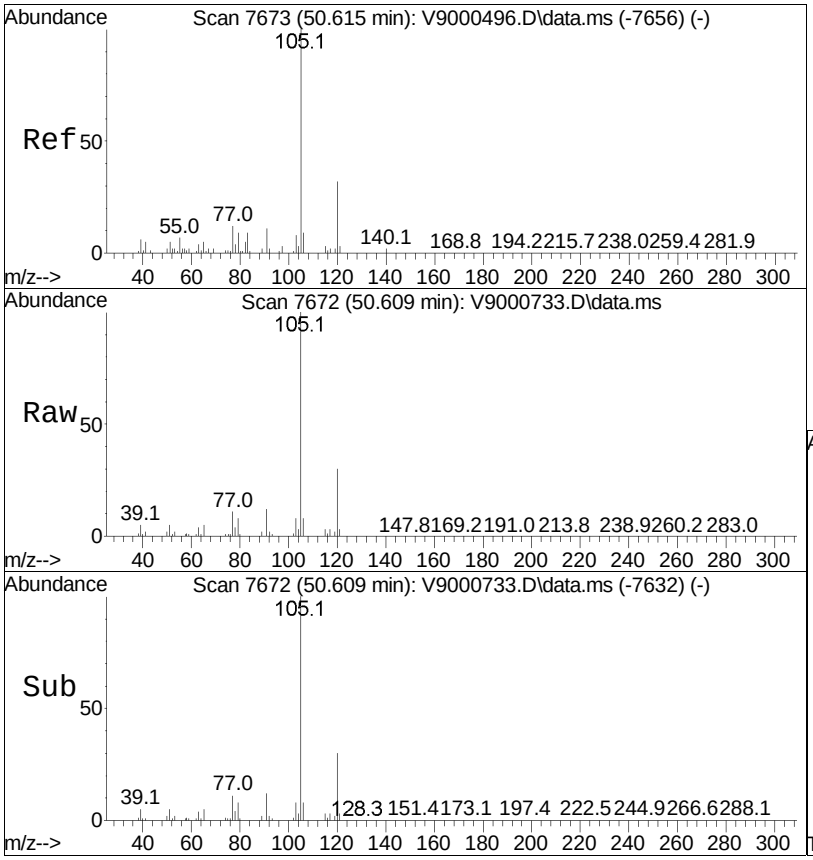


#110
1-Decene
Concen: 16.97 ug/L
RT: 50.42 min Scan# 7641
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 41 Resp: 19145

Ion	Ratio	Lower	Upper
41	100		
55	96.1	74.3	114.3
70	82.1	66.5	106.5

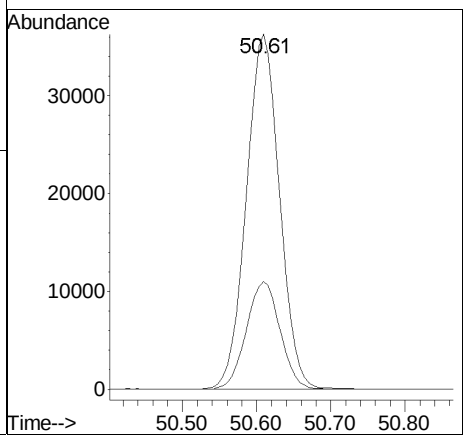


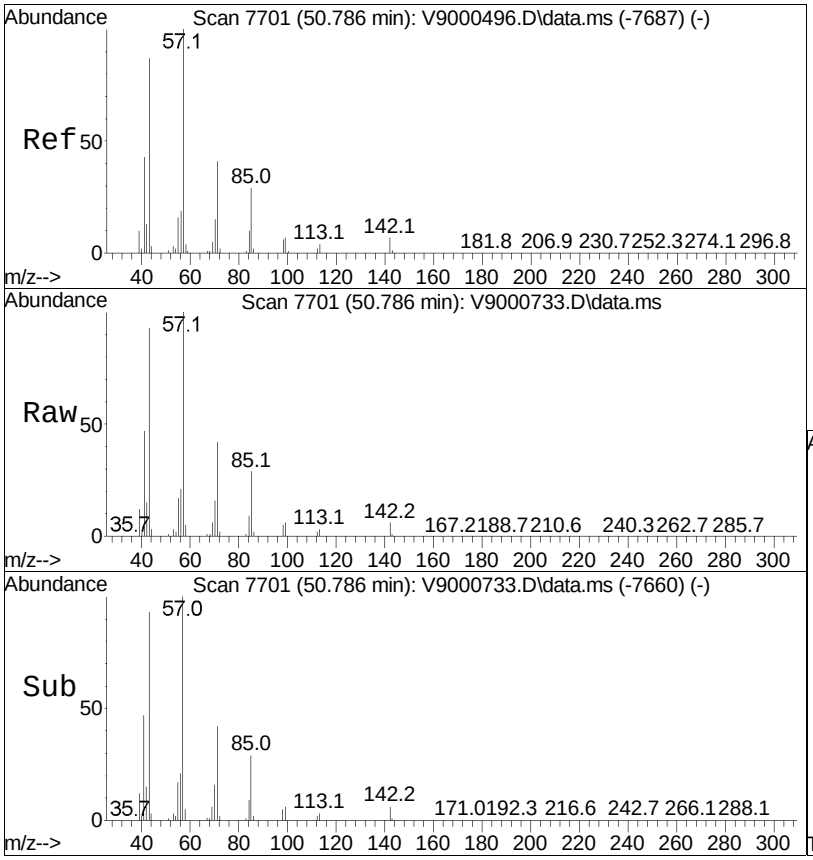


#112
1-Methyl-2-ethylbenzene
Concen: 18.79 ug/L
RT: 50.61 min Scan# 7672
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:105 Resp: 112679

Ion	Ratio	Lower	Upper
105	100		
120	30.4	11.7	51.7

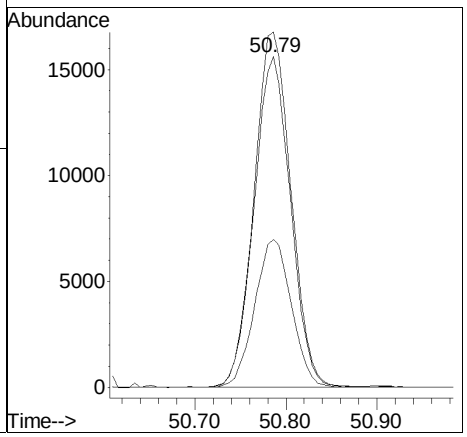


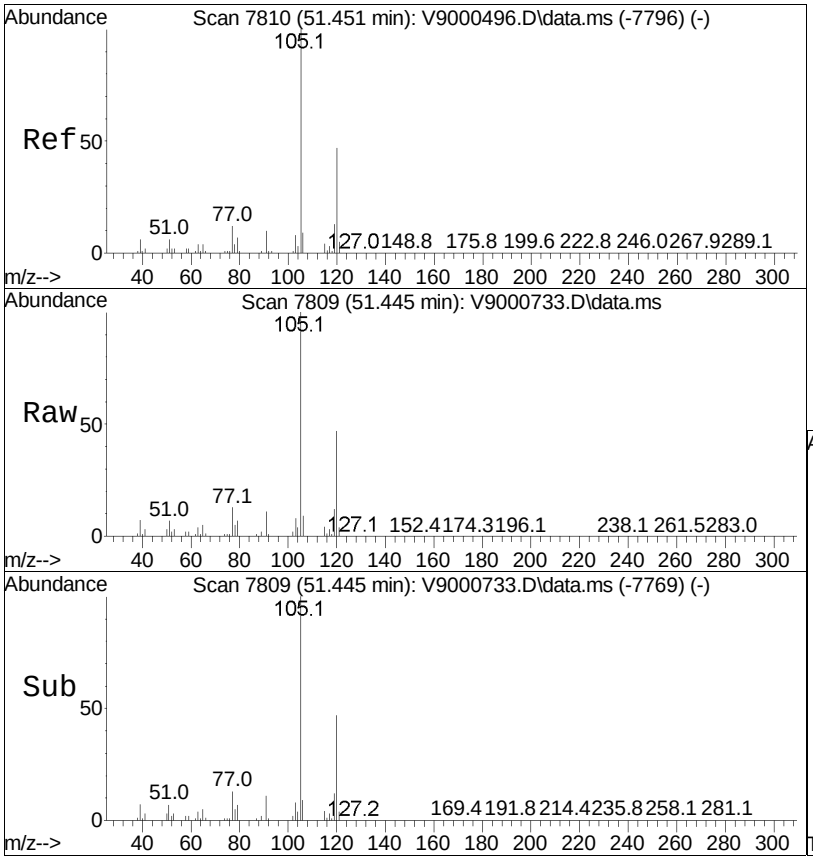


#113
Decane
Concen: 22.64 ug/L
RT: 50.79 min Scan# 7701
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 43569

Ion	Ratio	Lower	Upper
43	100		
57	107.4	94.6	134.6
71	44.7	27.1	67.1

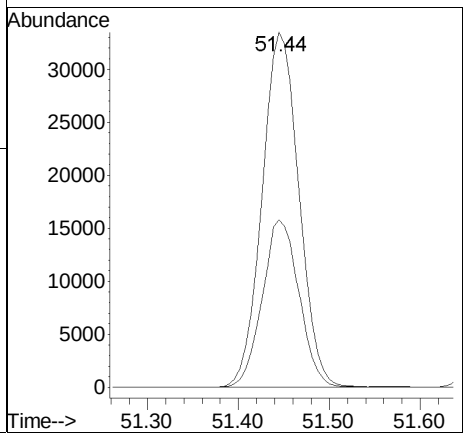


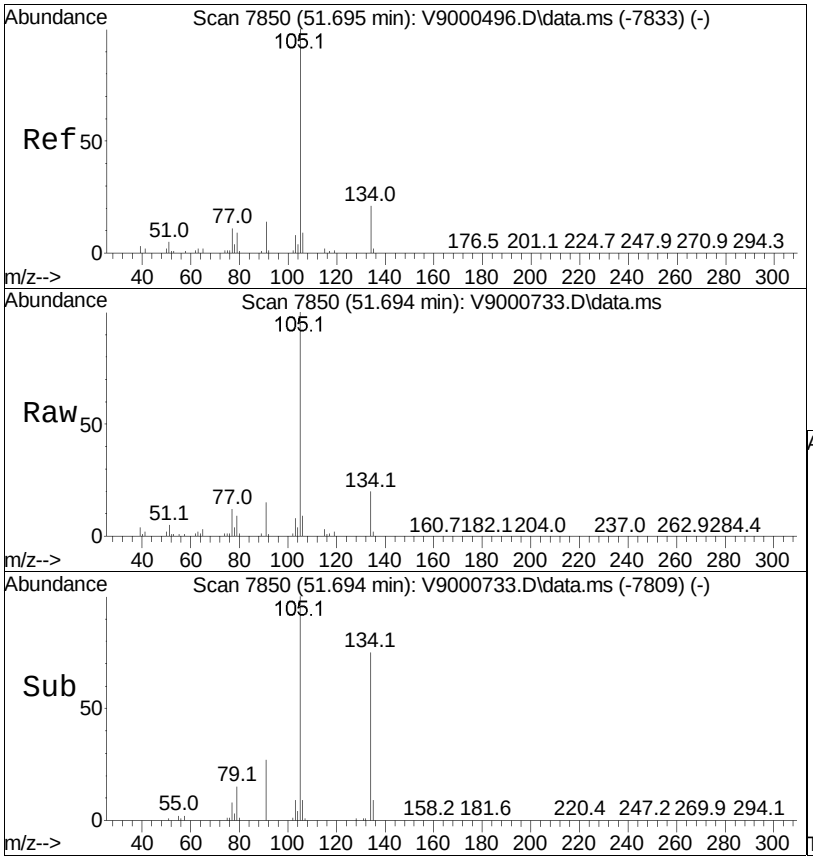


#115
1,2,4-Trimethylbenzene
Concen: 17.79 ug/L
RT: 51.44 min Scan# 7809
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:105 Resp: 94291

Ion	Ratio	Lower	Upper
105	100		
120	47.2	27.3	67.3

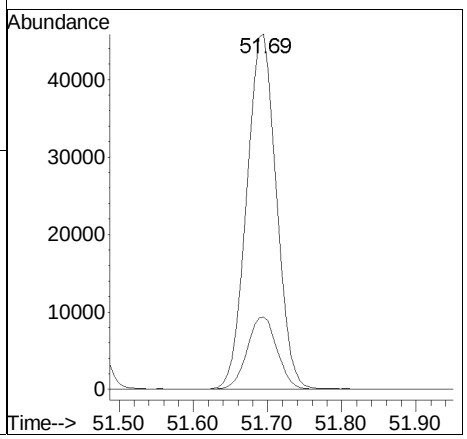


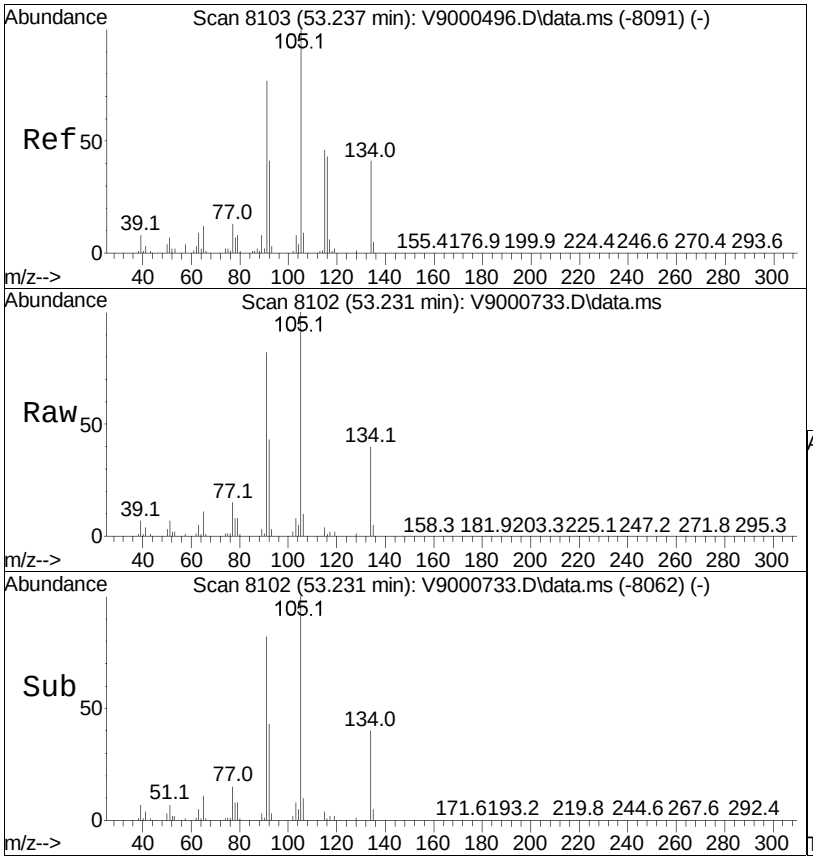


#117
sec-Butylbenzene
Concen: 19.37 ug/L
RT: 51.69 min Scan# 7850
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:105 Resp: 127091

Ion	Ratio	Lower	Upper
105	100		
134	20.3	1.1	41.1

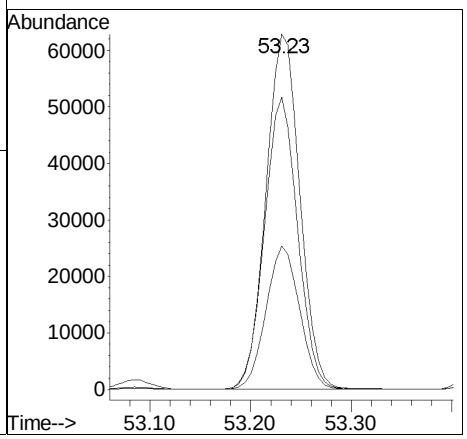


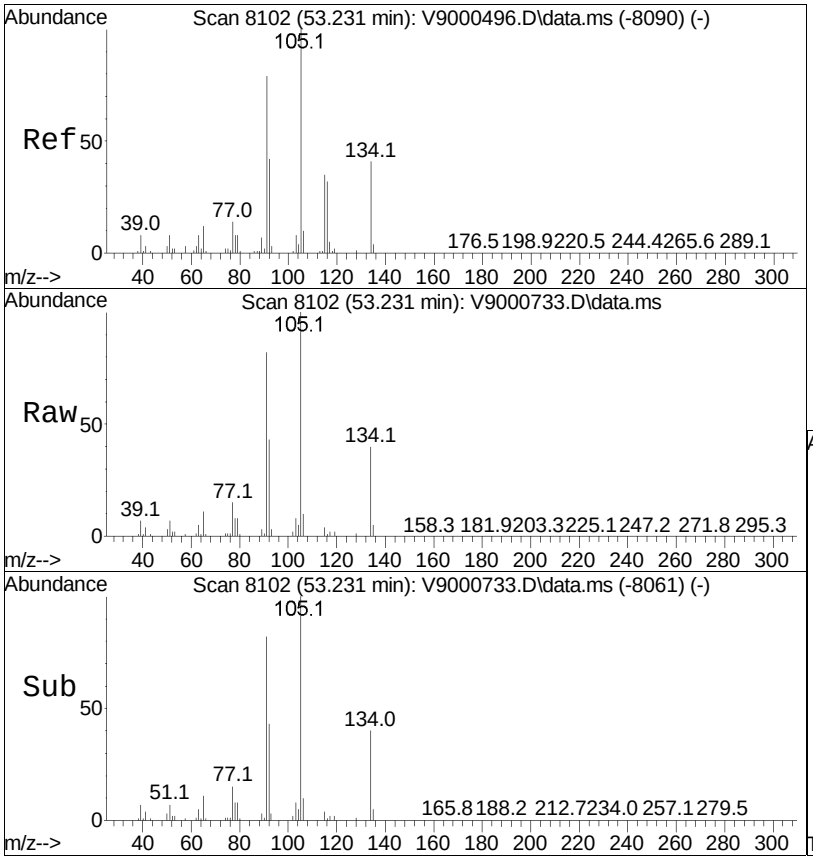


#126
1-Methyl-4-propylbenzene
Concen: 18.69 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:105 Resp: 147133

Ion	Ratio	Lower	Upper
105	100		
134	40.4	21.1	61.1
91	82.3	56.9	96.9

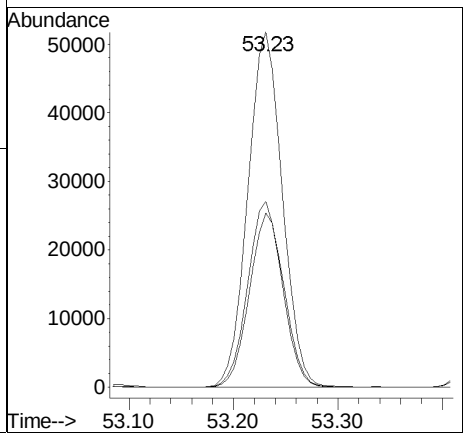


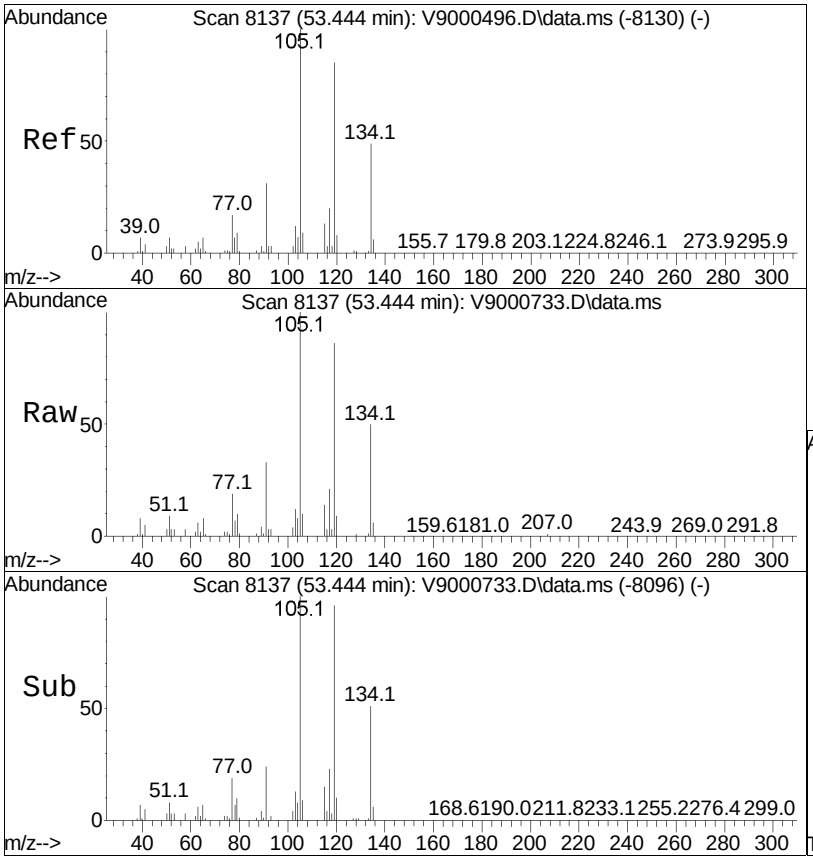


#127
n-Butylbenzene
Concen: 19.28 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 91 Resp: 118750

Ion	Ratio	Lower	Upper
91	100		
92	52.4	32.9	72.9
134	49.1	31.9	71.9

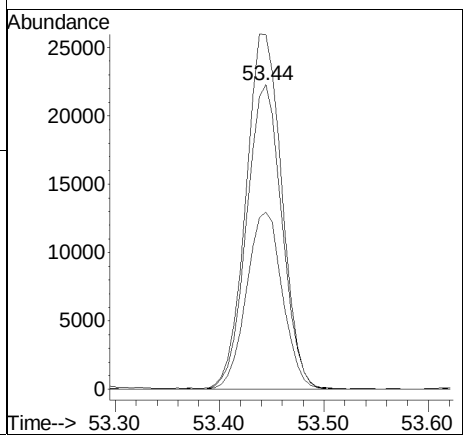


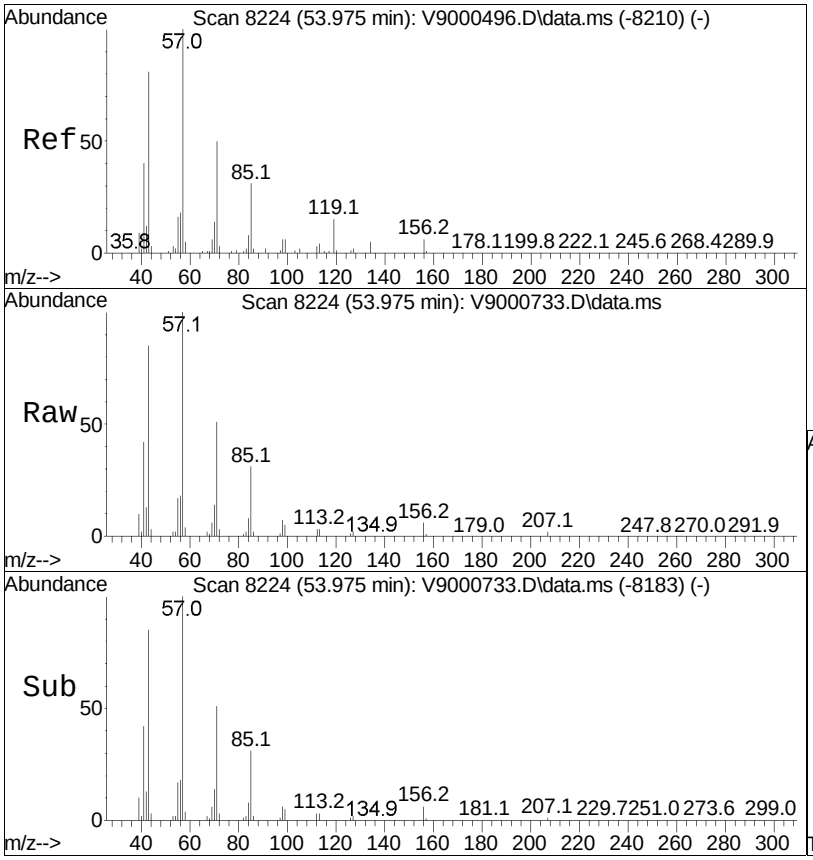


#129
1,2-Diethylbenzene
Concen: 18.55 ug/L
RT: 53.44 min Scan# 8137
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:119 Resp: 52478

Ion	Ratio	Lower	Upper
119	100		
105	116.3	95.9	135.9
134	58.1	38.0	78.0

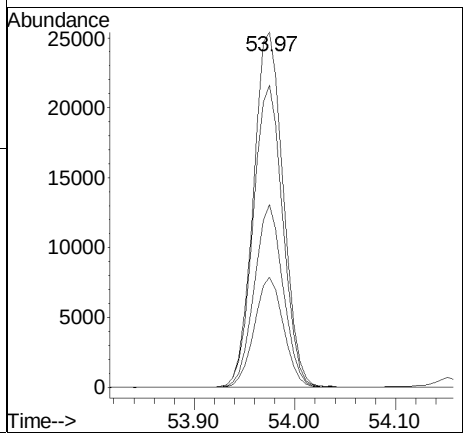


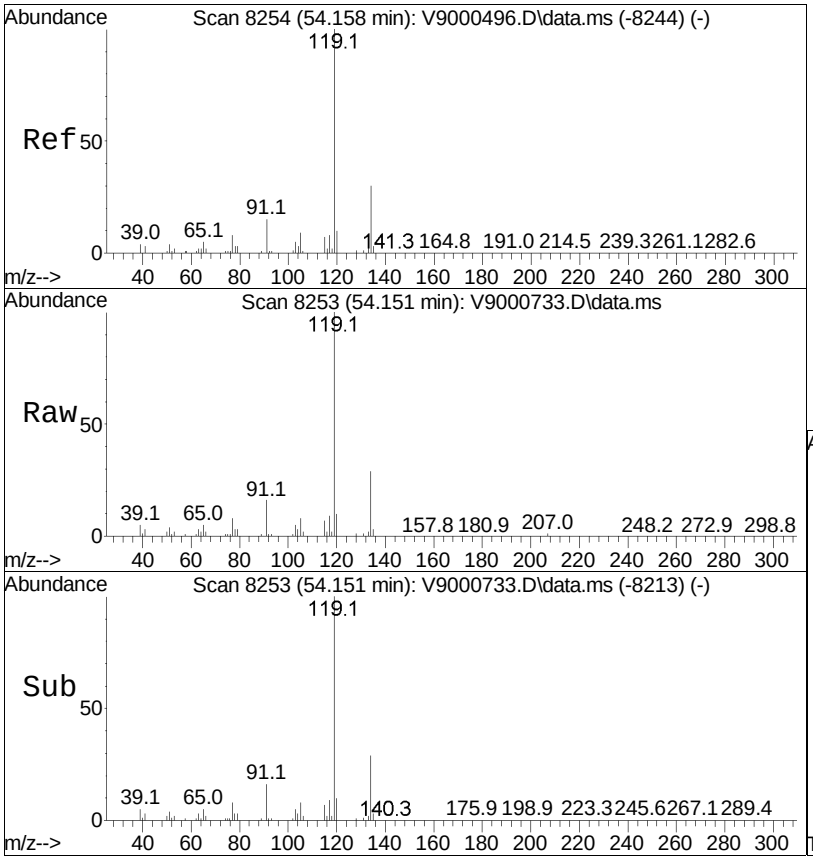


#132
Undecane
Concen: 21.57 ug/L
RT: 53.97 min Scan# 8224
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 57 Resp: 52383

Ion	Ratio	Lower	Upper
57	100		
43	85.1	61.2	101.2
71	51.4	29.8	69.8
85	31.0	11.5	51.5

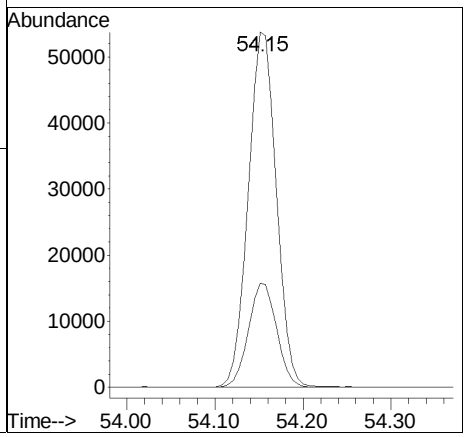


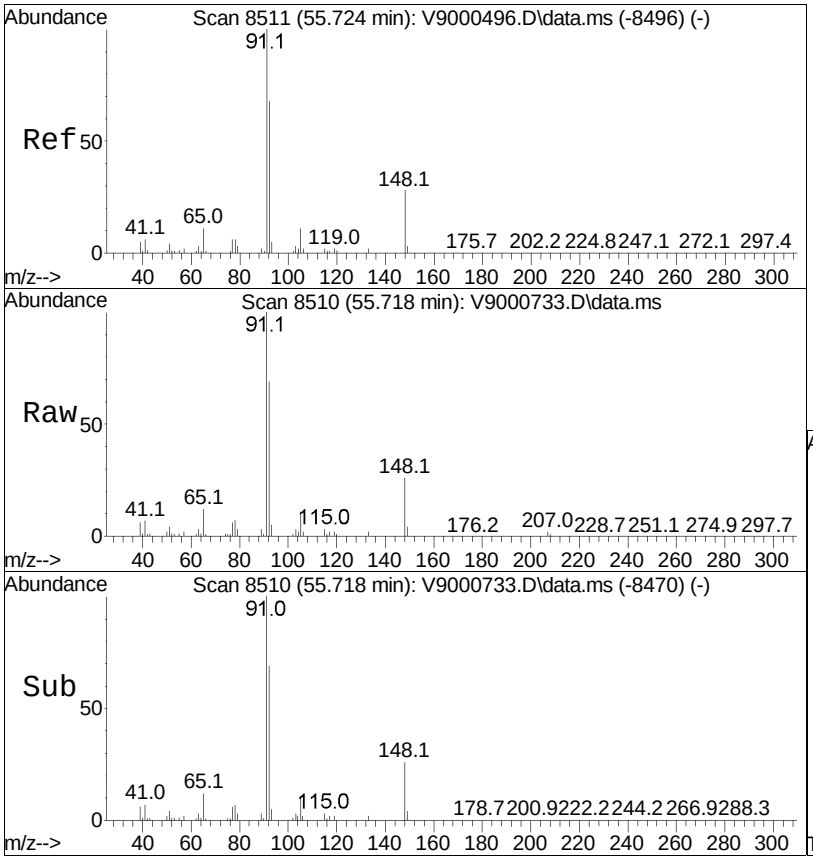


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 19.71 ug/L
RT: 54.15 min Scan# 8253
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion:119 Resp: 119109

Ion	Ratio	Lower	Upper
119	100		
134	29.4	10.1	50.1

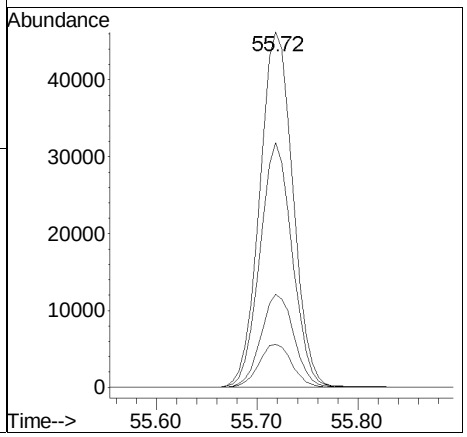


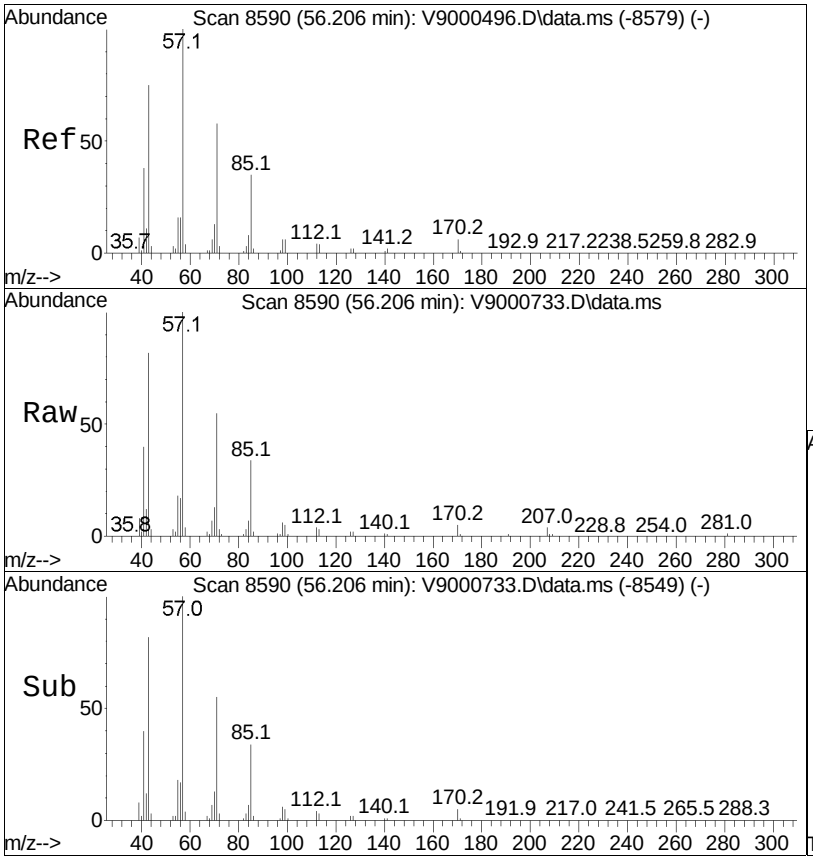


#139
Pentylbenzene
Concen: 19.94 ug/L
RT: 55.72 min Scan# 8510
Delta R.T. -0.006 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 91 Resp: 106106

Ion	Ratio	Lower	Upper
91	100		
92	68.9	47.9	87.9
65	12.1	0.0	31.4
148	26.2	8.4	48.4

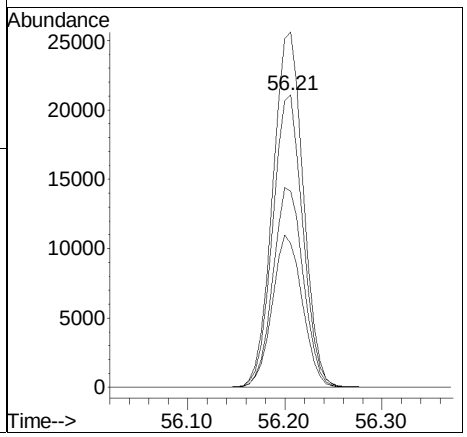




#142
Dodecane
Concen: 27.73 ug/L
RT: 56.21 min Scan# 8590
Delta R.T. -0.000 min
Lab File: V9000733.D
Acq: 07 Dec 2021 07:42 pm

Tgt Ion: 43 Resp: 45393

Ion	Ratio	Lower	Upper
43	100		
57	121.3	113.3	153.3
71	67.0	57.3	97.3
41	49.1	31.2	71.2



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000774.D
Acq On : 13 Dec 2021 12:19 pm
Operator : VOA9:RY
Sample : WG1582700-4,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 13 13:57:56 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Chlorobenzene-D5 [IS]	39.09	117	249896M4	50.000	ug/L		0.00
System Monitoring Compounds							
24) Dibromofluoromethane (...	17.21	113	59486	46.297	ug/L		0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 92.59%				
62) Toluene-d8 (surr)	31.27	98	282354	47.367	ug/L		0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 94.73%				
101) 4-Bromofluorobenzene (...	46.54	95	131822	52.346	ug/L		0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 104.69%				
Target Compounds							Qvalue
4) 1-Pentene	9.00	42	22142	18.103	ug/L		98
6) Pentane	9.37	43	29943	15.917	ug/L		99
10) Tertiary butanol	10.80	59	37206M4	98.379	ug/L		
13) Cyclopentane	13.06	70	14844	17.935	ug/L	#	28
15) 2-Methylpentane	13.29	43	37324	17.262	ug/L		99
16) MTBE	13.62	73	56459	18.385	ug/L		99
17) 3-Methylpentane	14.27	57	35468	18.714	ug/L		97
18) 1-Hexene	14.86	56	20553	18.705	ug/L		98
19) Hexane	15.46	57	29562	17.504	ug/L		99
20) Diisopropyl ether	15.79	45	56556	17.583	ug/L		98
25) Ethyl tertiary butyl e...	17.27	59	55640	17.343	ug/L		99
27) Methylcyclopentane	17.79	56	38873	18.543	ug/L		95
28) 2,4-Dimethylpentane	17.95	43	35381	18.341	ug/L		98
32) Cyclohexane	20.70	56	33794	19.103	ug/L		98
33) 2-Methylhexane	21.15	43	38822	18.179	ug/L		98
34) Benzene	21.33	78	83641	19.157	ug/L		99
35) 2,3-Dimethylpentane	21.45	56	32869	18.481	ug/L		99
38) 3-Methylhexane	21.96	43	29034	15.737	ug/L		96
39) TAME	22.33	73	62367	17.333	ug/L		98
44) Isooctane	23.39	57	84750	18.995	ug/L		98
46) Heptane	24.13	43	31180	19.647	ug/L		99
51) Methylcyclohexane	26.56	83	35991	18.284	ug/L		96
60) 2-Methylheptane	30.56	57	36093	18.088	ug/L		98
63) 3-Methylheptane	31.31	43	35192	18.293	ug/L		99
66) Toluene	31.62	91	92530	19.249	ug/L		97
71) Octane	33.83	43	41116	19.110	ug/L		97
86) Ethylbenzene	40.70	91	105052	19.236	ug/L		100
91) p/m-Xylene	41.97	91	164576	39.426	ug/L		100
95) Nonane	43.41	43	38288	16.788	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000774.D
Acq On : 13 Dec 2021 12:19 pm
Operator : VOA9:RY
Sample : WG1582700-4,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 13 13:57:56 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) o-Xylene	44.24	91	87135	20.264	ug/L	96
102) Isopropylbenzene	46.57	105	109309	20.052	ug/L	97
104) n-Propylbenzene	49.00	91	131742	20.465	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.57	105	109953	20.507	ug/L	98
108) 1-Methyl-4-ethylbenzene	49.74	105	110294	21.499	ug/L	97
109) 1,3,5-Trimethylbenzene	50.29	105	95349	21.359	ug/L	100
110) 1-Decene	50.42	41	18422	17.084	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.61	105	115895	21.507	ug/L	100
113) Decane	50.79	43	42175	21.038	ug/L	98
115) 1,2,4-Trimethylbenzene	51.44	105	98483	20.972	ug/L	97
117) sec-Butylbenzene	51.69	105	130704	22.403	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	154278	22.073	ug/L	99
127) n-Butylbenzene	53.23	91	125771	22.566	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	55811	22.651	ug/L	99
132) Undecane	53.97	57	55897	22.822	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	126606	24.128	ug/L	98
139) Pentylbenzene	55.72	91	110036	23.080	ug/L	98
142) Dodecane	56.20	43	46259	25.964	ug/L	96

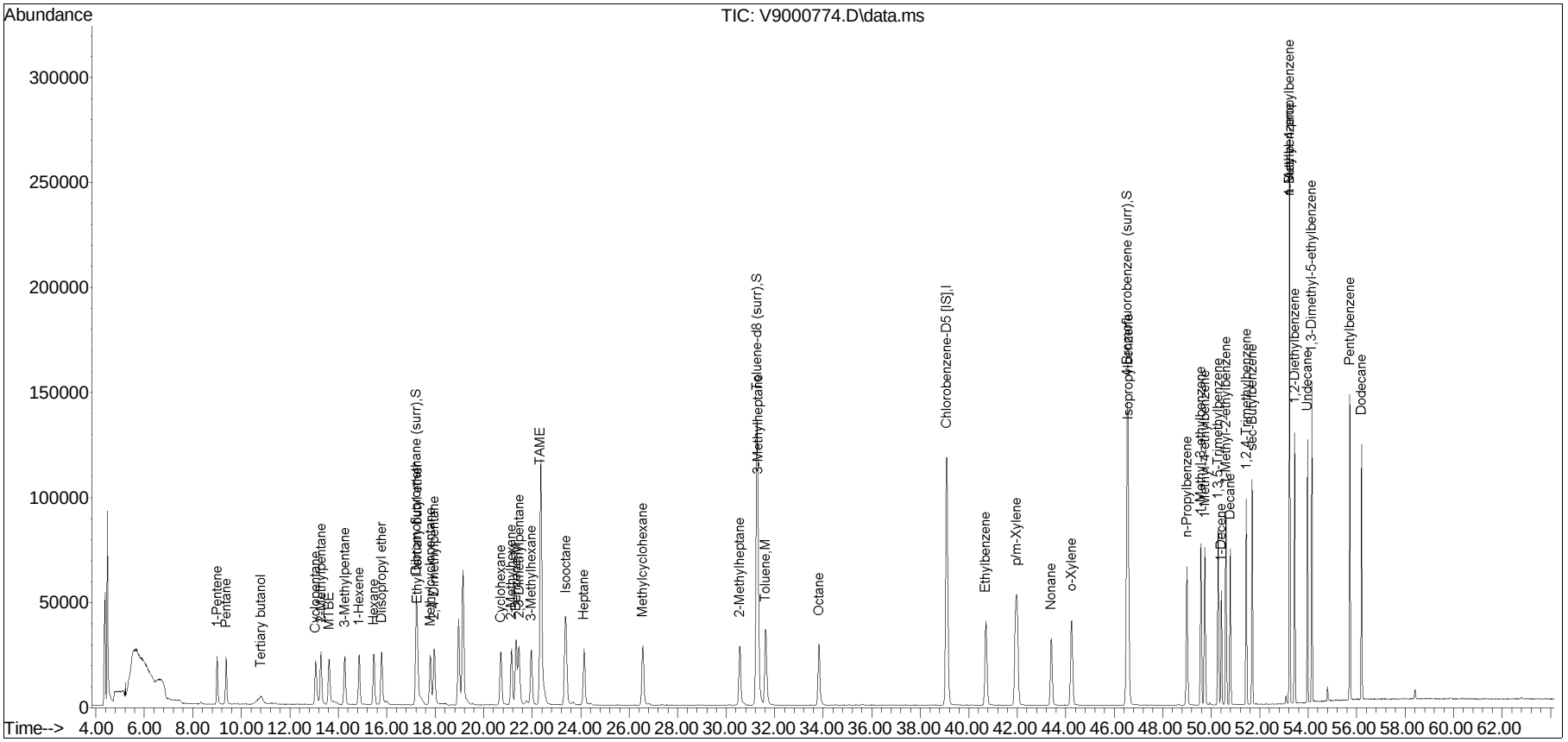
(#) = qualifier out of range (m) = manual integration (+) = signals summed

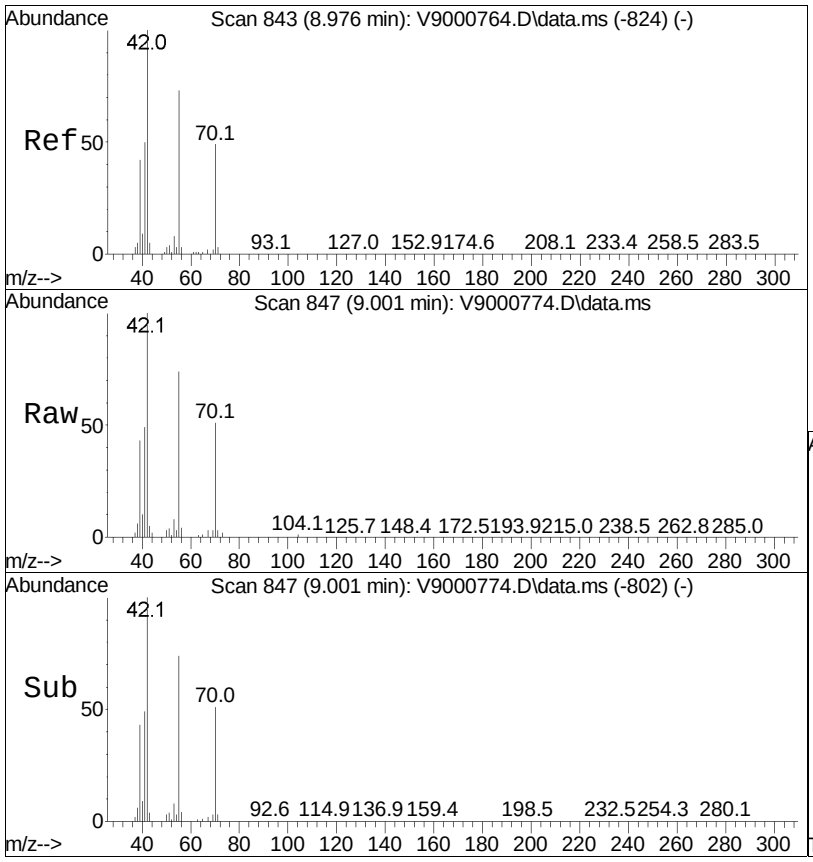
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2021\12-DEC\211213\
Data File : V9000774.D
Acq On : 13 Dec 2021 12:19 pm
Operator : VOA9:RY
Sample : WG1582700-4,31,0.1,10,0.1
Misc : WG1582700,ICAL18544
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 13 13:57:56 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211213\P9121121W.M
Quant Title : PIANO VOLATILES
QLast Update : Sun Dec 12 09:32:29 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

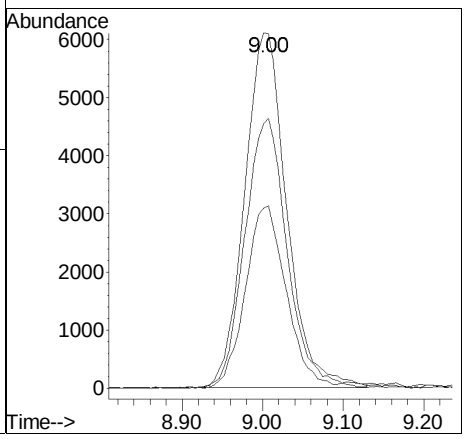


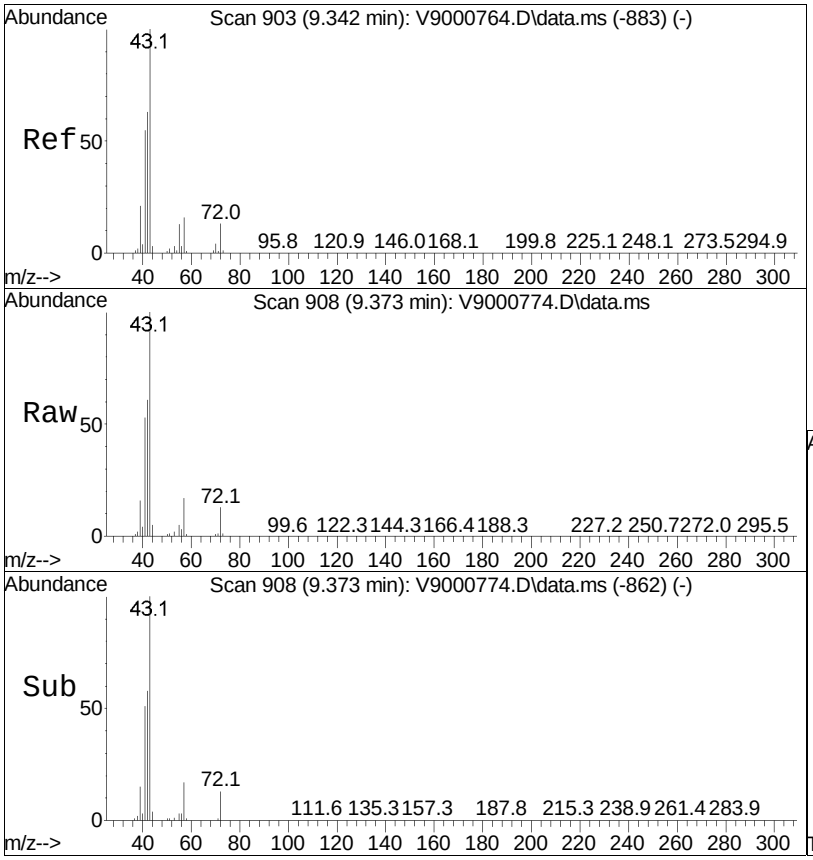


#4
1-Pentene
Concen: 18.10 ug/L
RT: 9.00 min Scan# 847
Delta R.T. 0.025 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 42 Resp: 22142

Ion	Ratio	Lower	Upper
42	100		
55	74.4	52.8	92.8
70	50.7	29.3	69.3

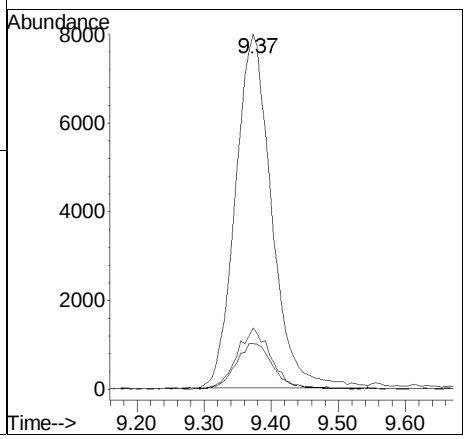


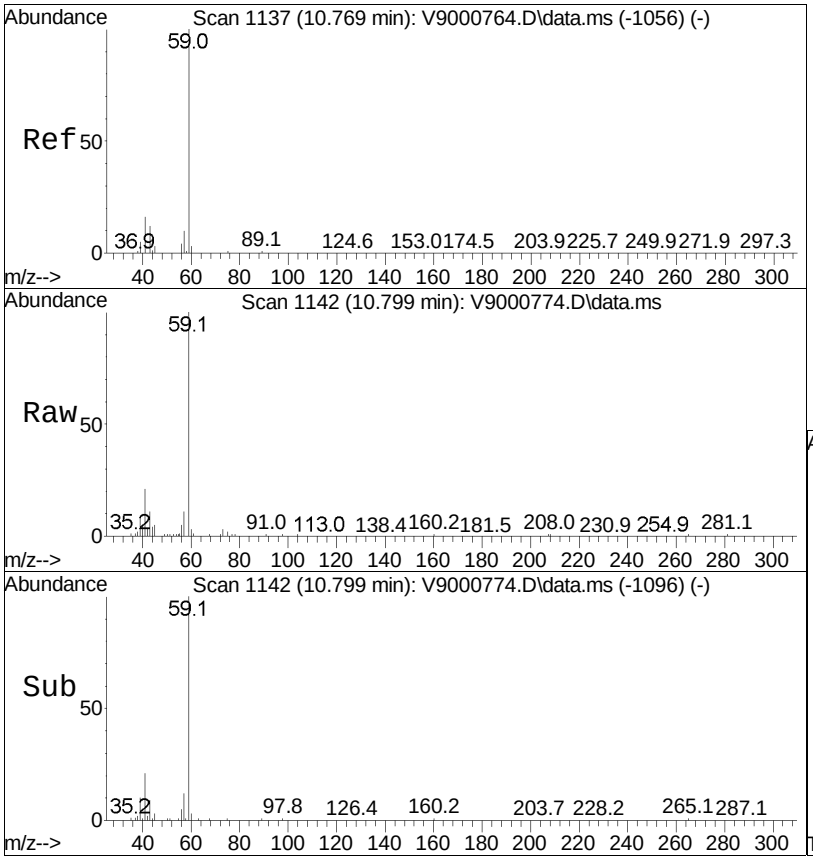


#6
Pentane
Concen: 15.92 ug/L
RT: 9.37 min Scan# 908
Delta R.T. 0.031 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 29943

Ion	Ratio	Lower	Upper
43	100		
57	17.4	0.0	36.4
72	12.9	0.0	32.9

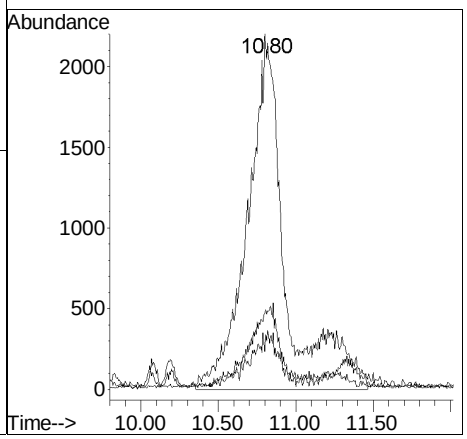


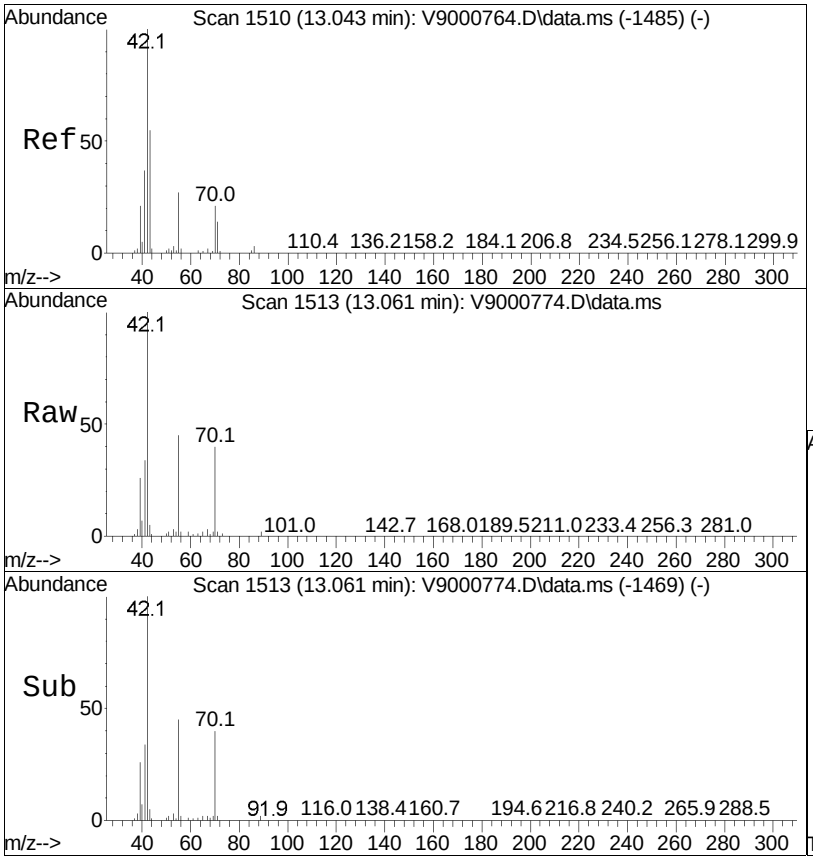


#10
Tertiary butanol
Concen: 98.38 ug/L m
RT: 10.80 min Scan# 1142
Delta R.T. 0.031 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 59 Resp: 37206

Ion	Ratio	Lower	Upper
59	100		
41	21.5	0.0	39.6
43	10.6	0.0	32.8

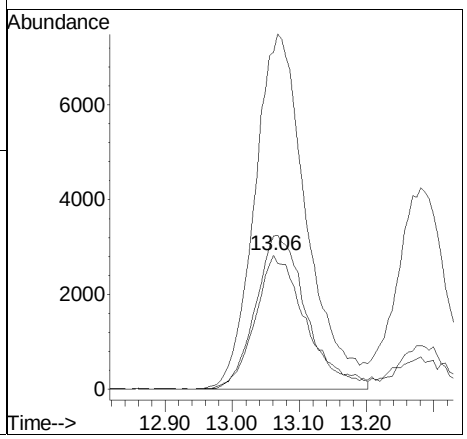


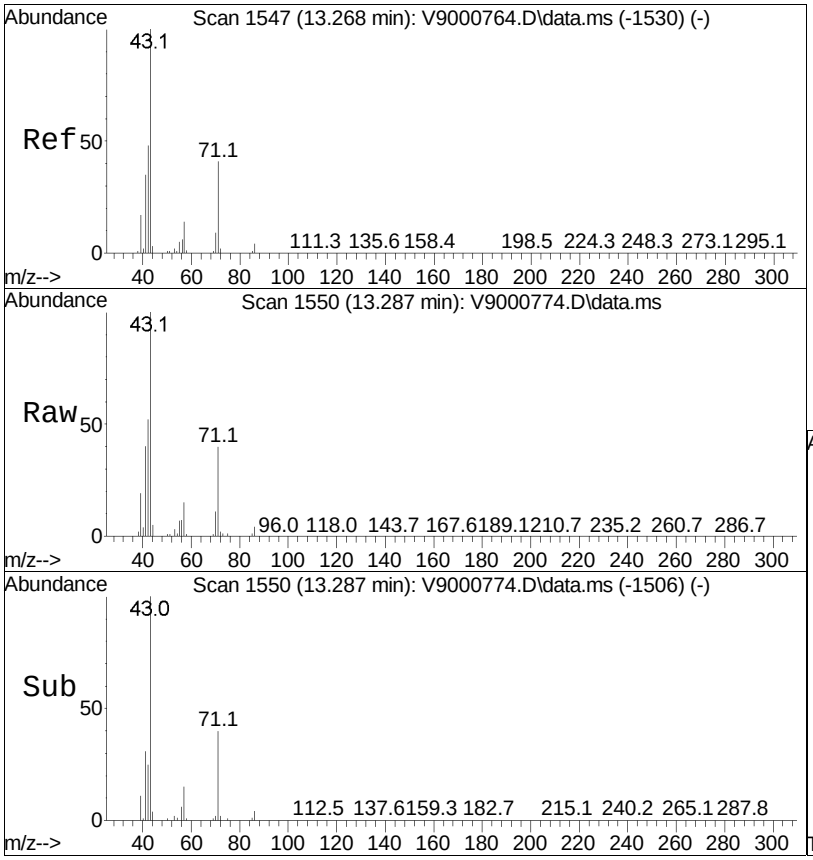


#13
Cyclopentane
Concen: 17.94 ug/L
RT: 13.06 min Scan# 1513
Delta R.T. 0.019 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 70 Resp: 14844

Ion	Ratio	Lower	Upper
70	100		
42	251.5	467.5	507.5#
55	114.4	111.6	151.6

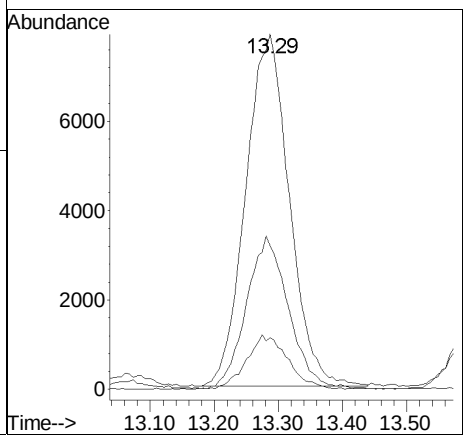


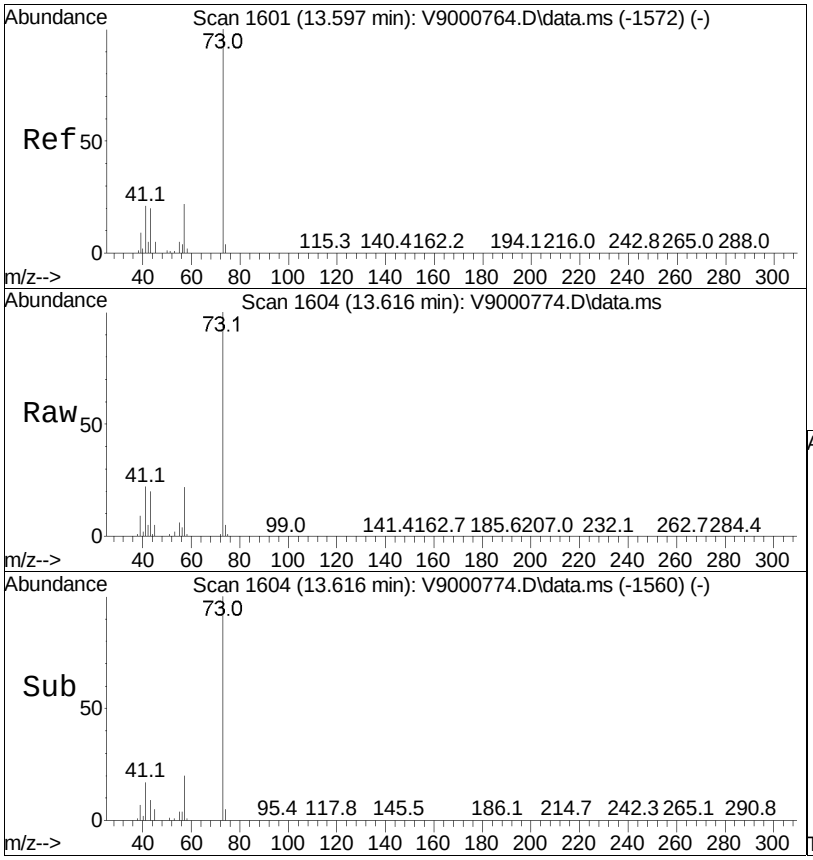


#15
2-Methylpentane
Concen: 17.26 ug/L
RT: 13.29 min Scan# 1550
Delta R.T. 0.019 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 37324

Ion	Ratio	Lower	Upper
43	100		
71	40.5	20.4	60.4
57	14.6	0.0	33.3

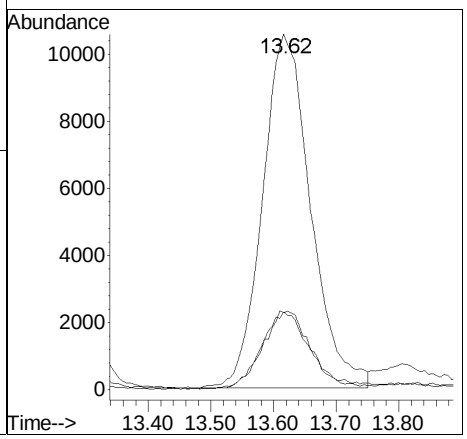


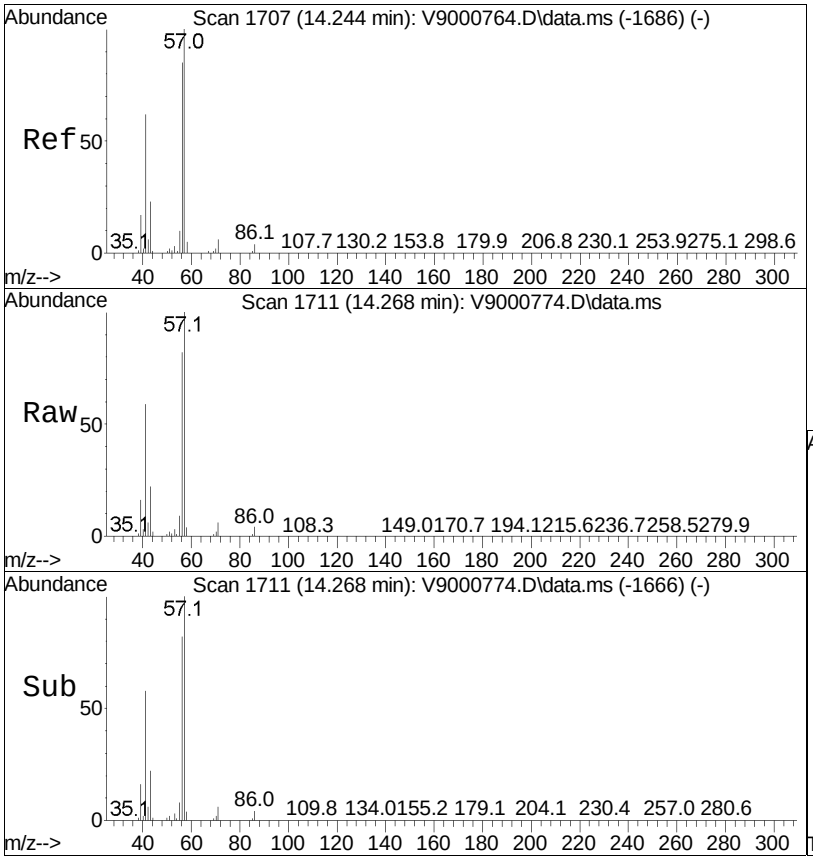


#16
MTBE
Concen: 18.38 ug/L
RT: 13.62 min Scan# 1604
Delta R.T. 0.019 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 73 Resp: 56459

Ion	Ratio	Lower	Upper
73	100		
57	21.7	2.5	42.5
41	21.8	1.8	41.8

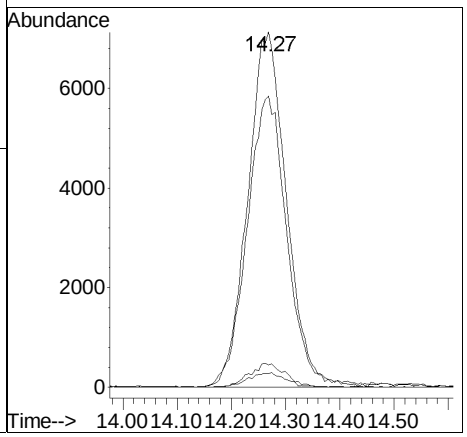


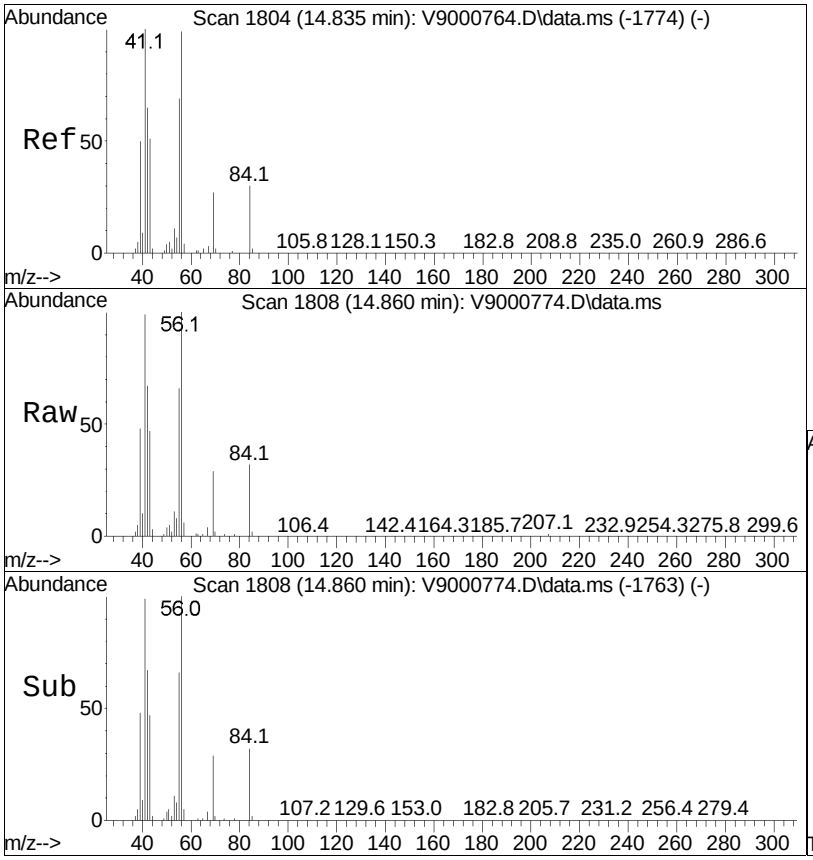


#17
3-Methylpentane
Concen: 18.71 ug/L
RT: 14.27 min Scan# 1711
Delta R.T. 0.025 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 57 Resp: 35468

Ion	Ratio	Lower	Upper
57	100		
56	82.0	65.5	105.5
71	6.3	0.0	26.3
86	3.9	0.0	23.9

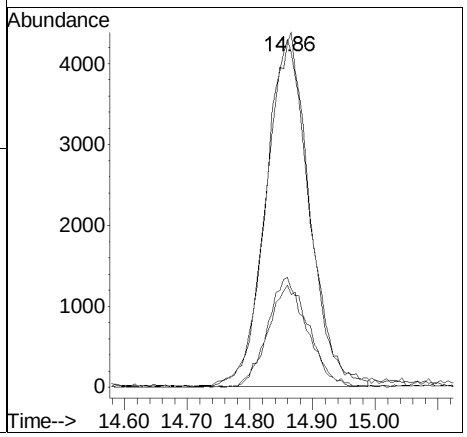


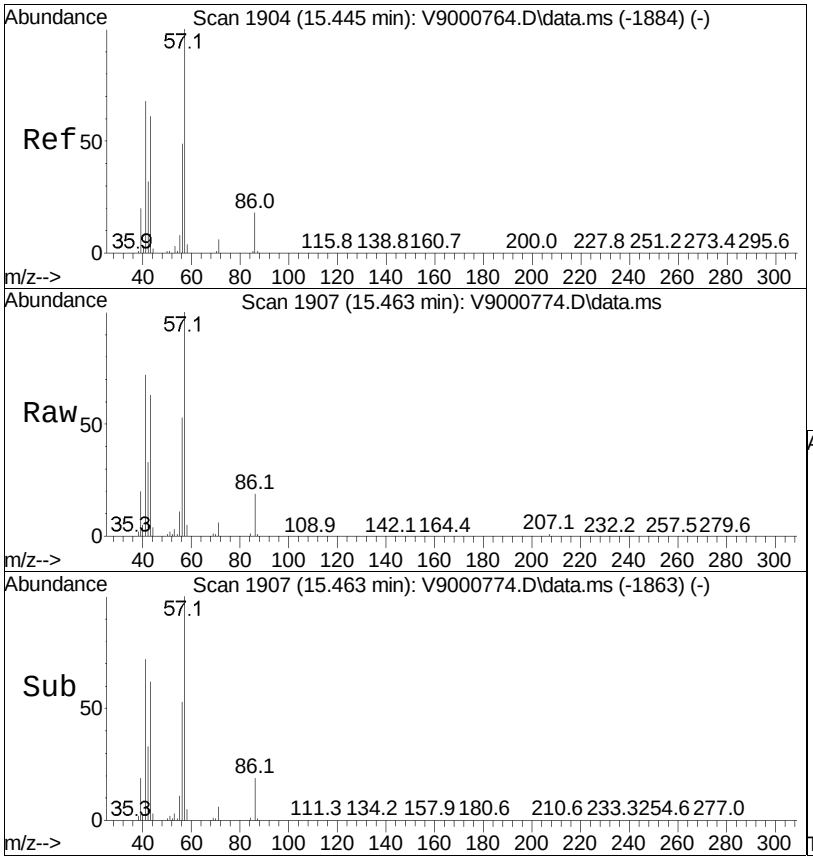


#18
1-Hexene
Concen: 18.71 ug/L
RT: 14.86 min Scan# 1808
Delta R.T. 0.025 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 56 Resp: 20553

Ion	Ratio	Lower	Upper
56	100		
41	99.0	81.0	121.0
84	31.6	10.5	50.5
69	29.3	6.9	46.9

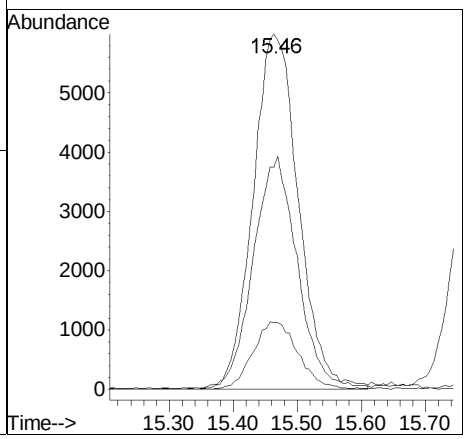


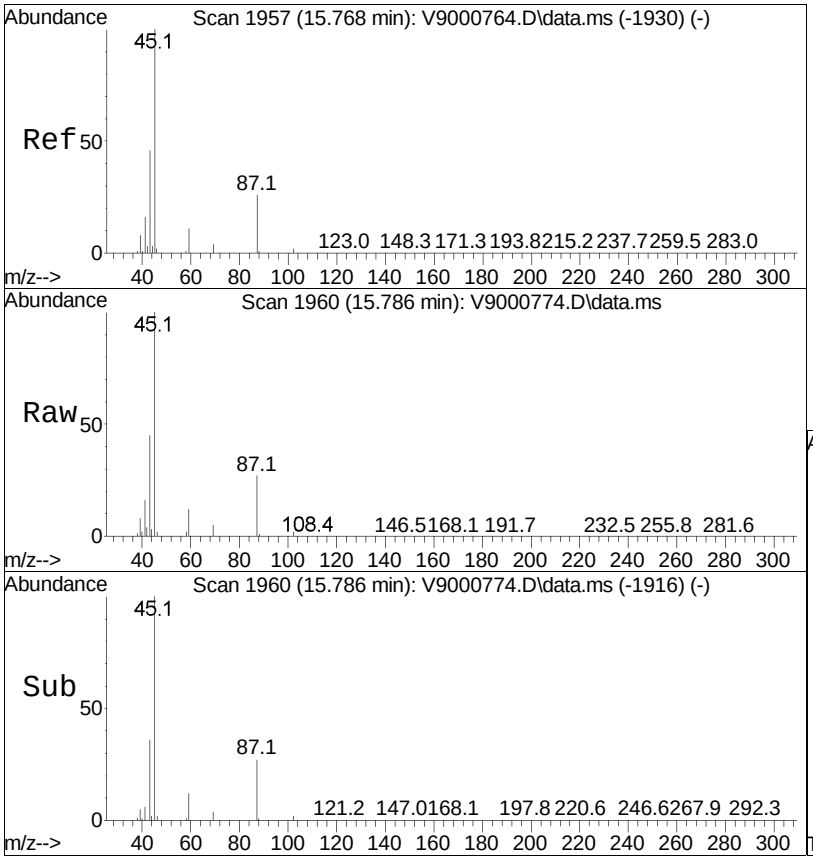


#19
Hexane
Concen: 17.50 ug/L
RT: 15.46 min Scan# 1907
Delta R.T. 0.019 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 57 Resp: 29562

Ion	Ratio	Lower	Upper
57	100		
43	62.5	42.0	82.0
86	18.8	0.0	38.4

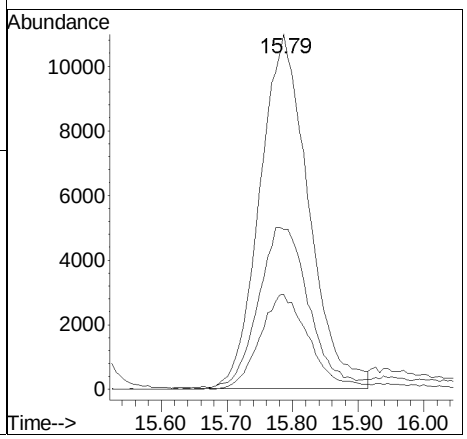


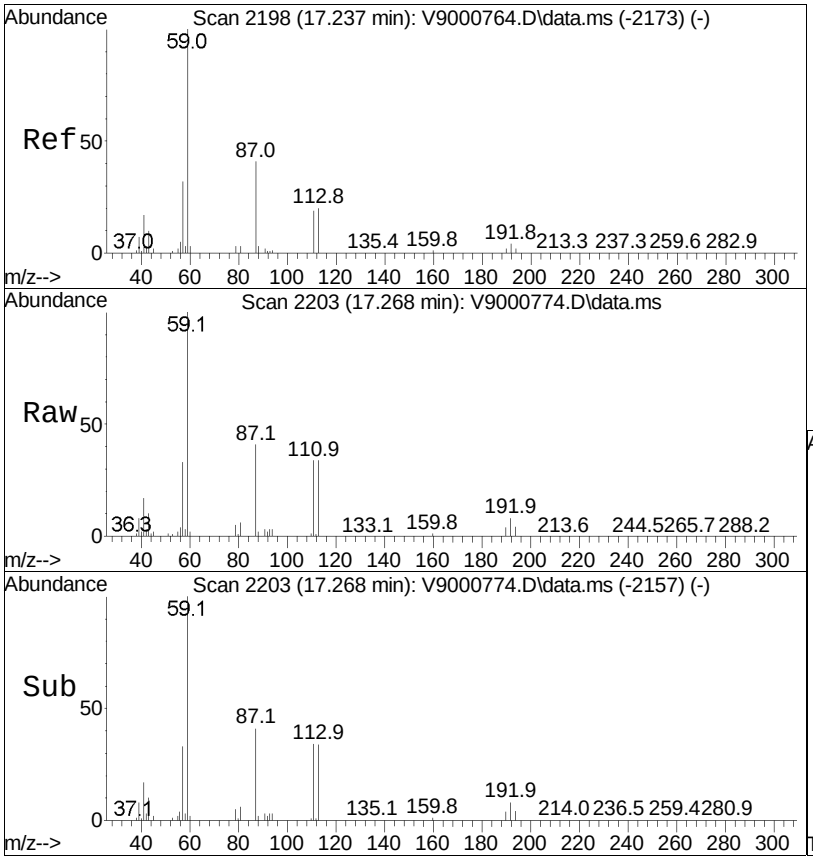


#20
Diisopropyl ether
Concen: 17.58 ug/L
RT: 15.79 min Scan# 1960
Delta R.T. 0.019 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 45 Resp: 56556

Ion	Ratio	Lower	Upper
45	100		
87	26.7	6.3	46.3
43	45.0	27.0	67.0

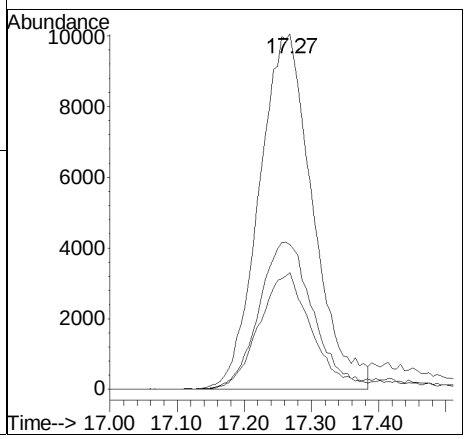


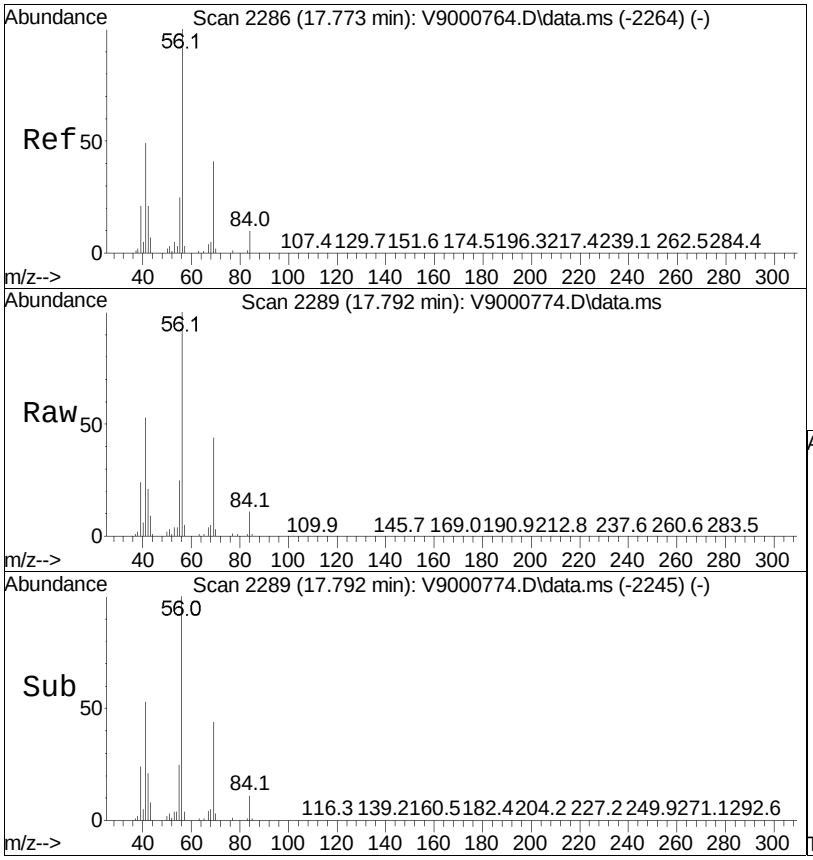


#25
Ethyl tertiary butyl ether
Concen: 17.34 ug/L
RT: 17.27 min Scan# 2203
Delta R.T. 0.031 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 59 Resp: 55640

Ion	Ratio	Lower	Upper
59	100		
87	40.7	20.5	60.5
57	32.8	11.7	51.7

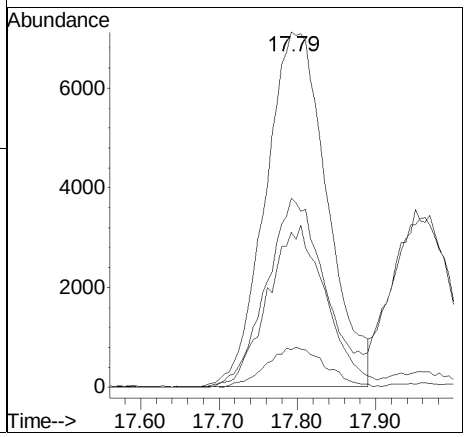


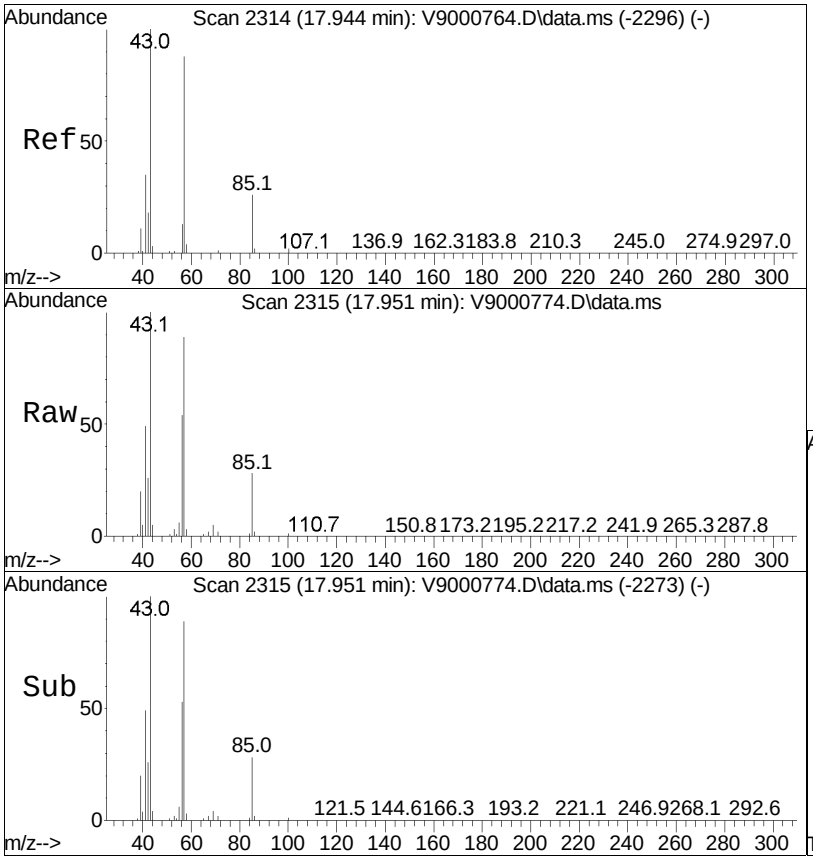


#27
Methylcyclopentane
Concen: 18.54 ug/L
RT: 17.79 min Scan# 2289
Delta R.T. 0.019 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 56 Resp: 38873

Ion	Ratio	Lower	Upper
56	100		
69	43.7	20.9	60.9
41	53.2	29.4	69.4
84	10.7	0.0	29.6

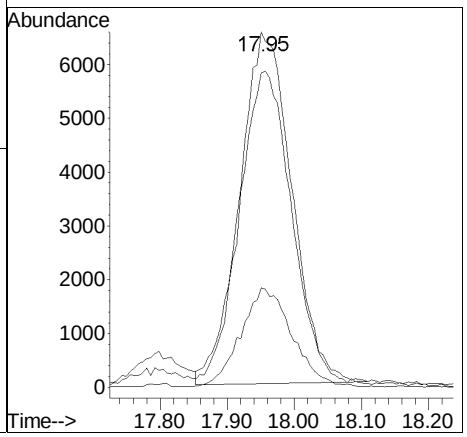


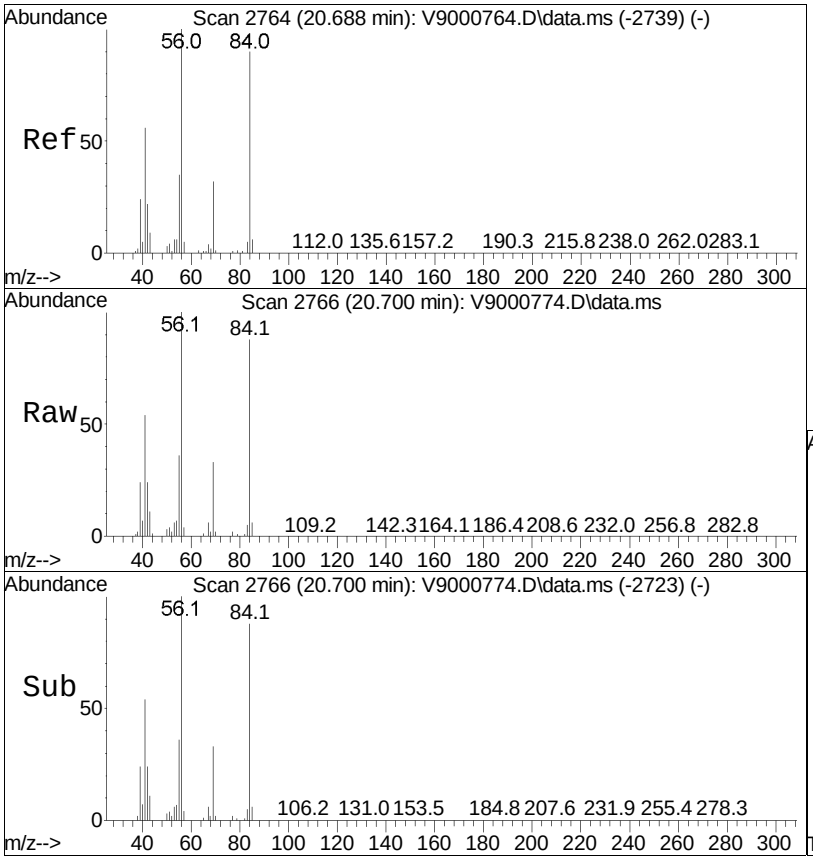


#28
2,4-Dimethylpentane
Concen: 18.34 ug/L
RT: 17.95 min Scan# 2315
Delta R.T. 0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 35381

Ion	Ratio	Lower	Upper
43	100		
57	88.5	67.4	107.4
85	28.0	5.1	45.1

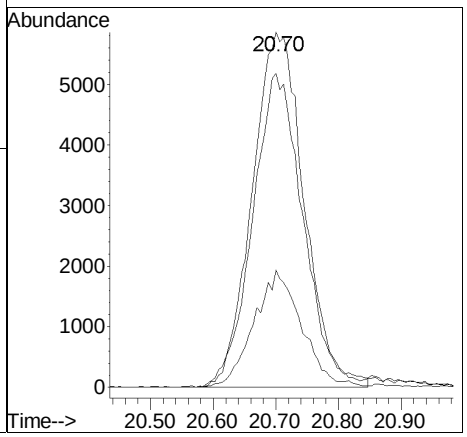


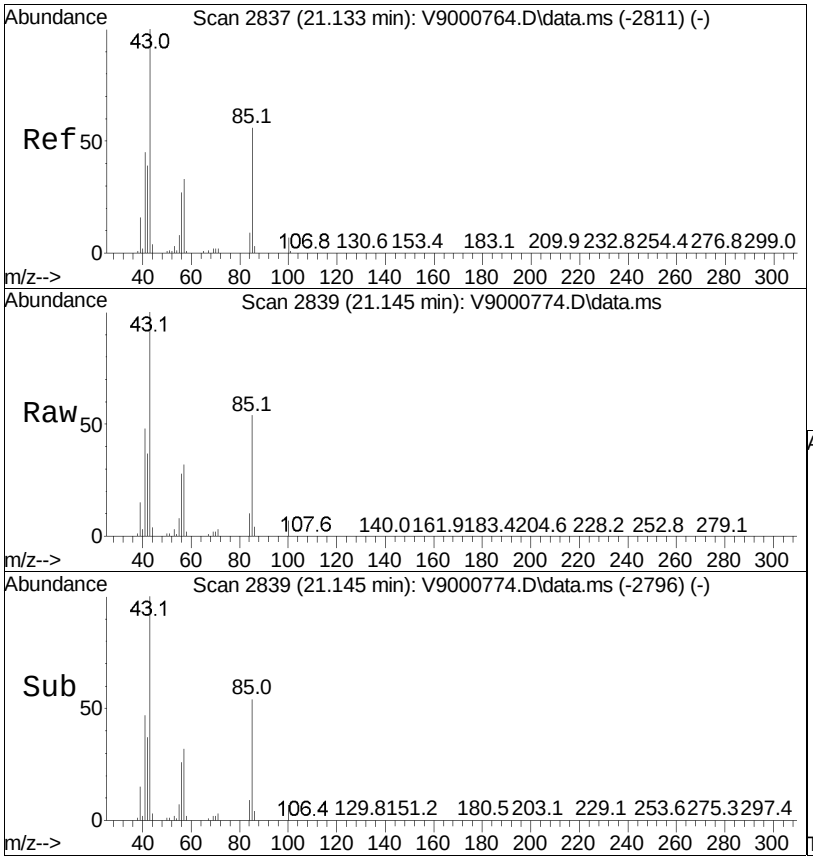


#32
Cyclohexane
Concen: 19.10 ug/L
RT: 20.70 min Scan# 2766
Delta R.T. 0.013 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 56 Resp: 33794

Ion	Ratio	Lower	Upper
56	100		
84	88.4	69.8	109.8
69	33.0	11.7	51.7

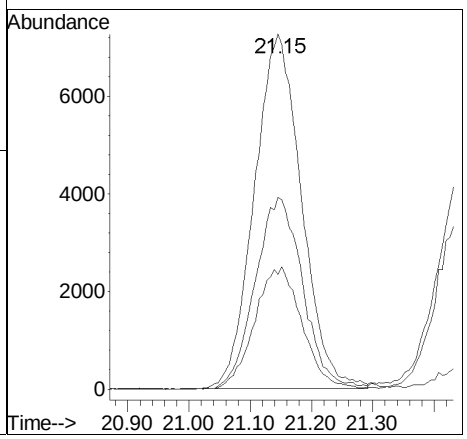


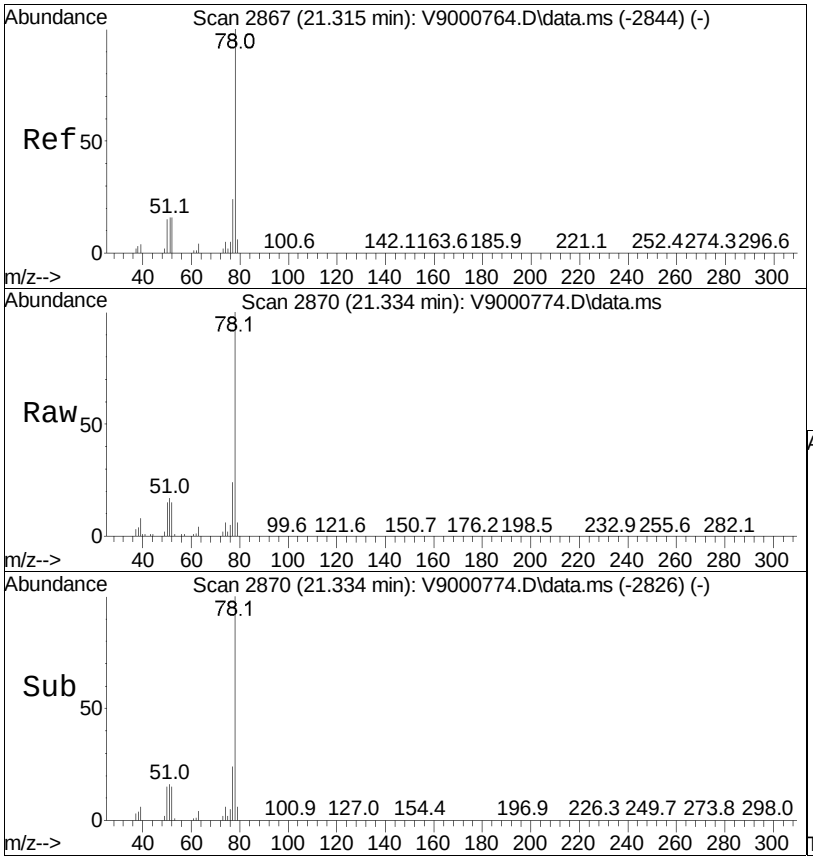


#33
2-Methylhexane
Concen: 18.18 ug/L
RT: 21.15 min Scan# 2839
Delta R.T. 0.013 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 38822

Ion	Ratio	Lower	Upper
43	100		
85	54.1	36.0	76.0
57	32.4	13.4	53.4

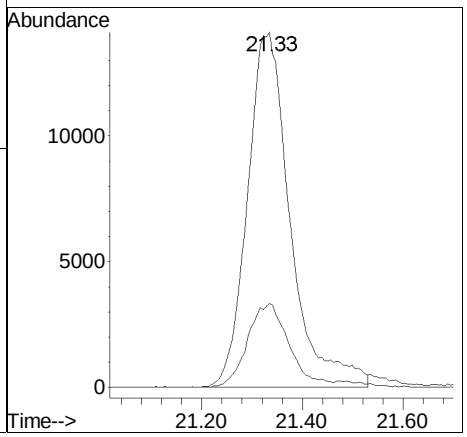


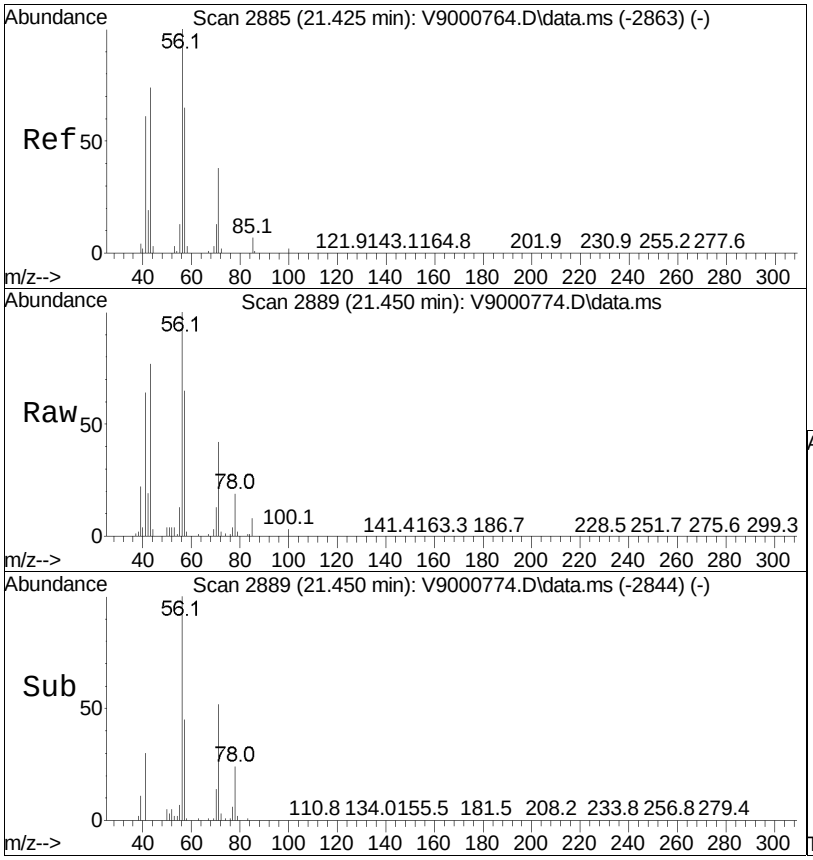


#34
Benzene
Concen: 19.16 ug/L
RT: 21.33 min Scan# 2870
Delta R.T. 0.019 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 78 Resp: 83641

Ion	Ratio	Lower	Upper
78	100		
77	23.6	3.9	43.9

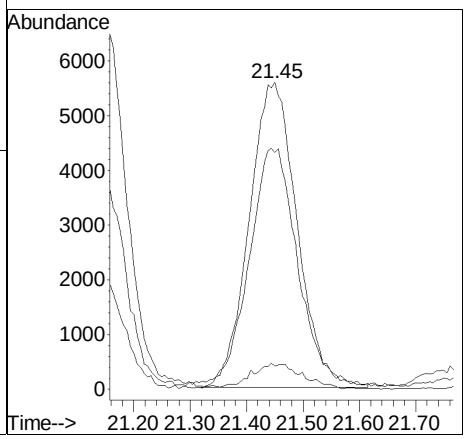


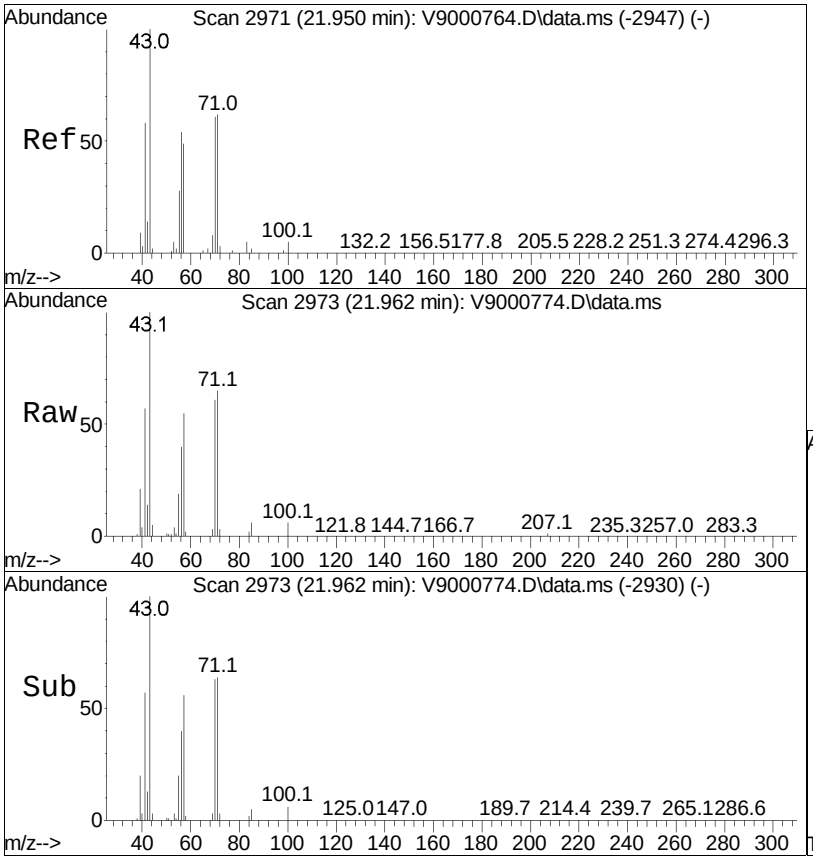


#35
2,3-Dimethylpentane
Concen: 18.48 ug/L
RT: 21.45 min Scan# 2889
Delta R.T. 0.025 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 56 Resp: 32869

Ion	Ratio	Lower	Upper
56	100		
43	77.1	56.3	96.3
85	7.6	0.0	28.0

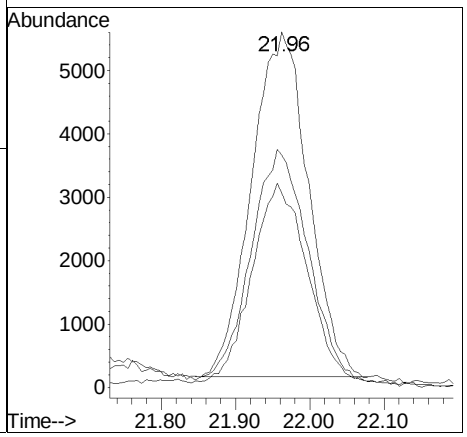


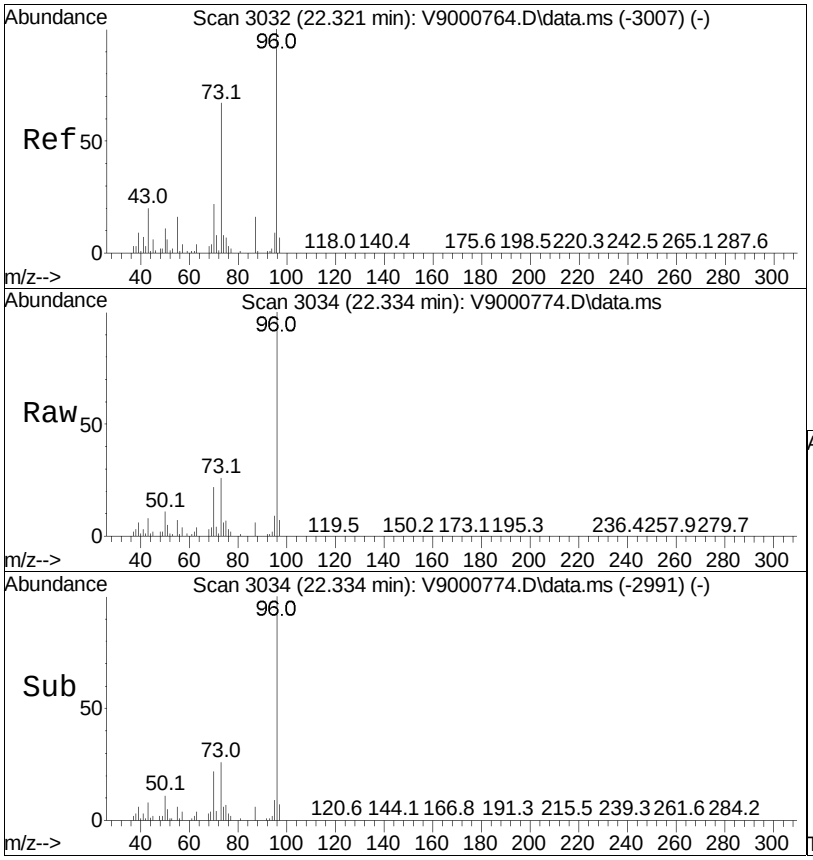


#38
3-Methylhexane
Concen: 15.74 ug/L
RT: 21.96 min Scan# 2973
Delta R.T. 0.013 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 29034

Ion	Ratio	Lower	Upper
43	100		
57	54.7	38.7	78.7
71	65.4	42.6	82.6

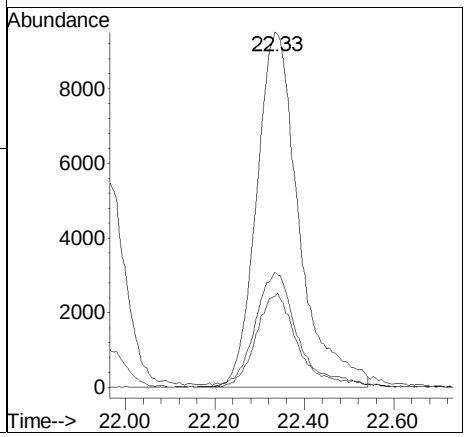


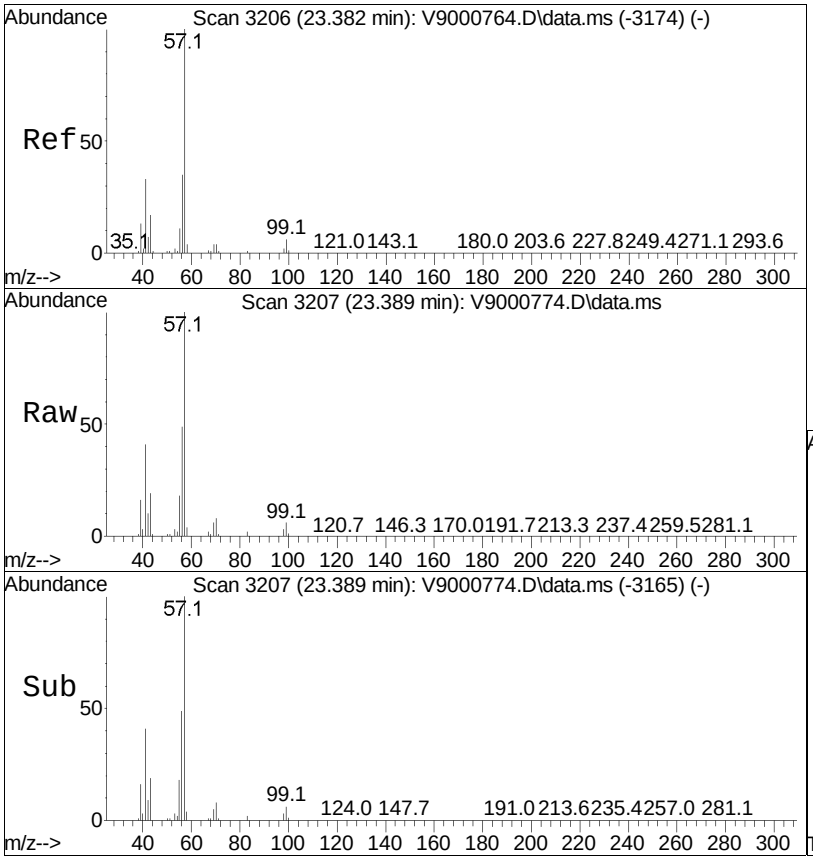


#39
TAME
Concen: 17.33 ug/L
RT: 22.33 min Scan# 3034
Delta R.T. 0.013 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 73 Resp: 62367

Ion	Ratio	Lower	Upper
73	100		
43	32.5	11.1	51.1
55	25.6	5.4	45.4

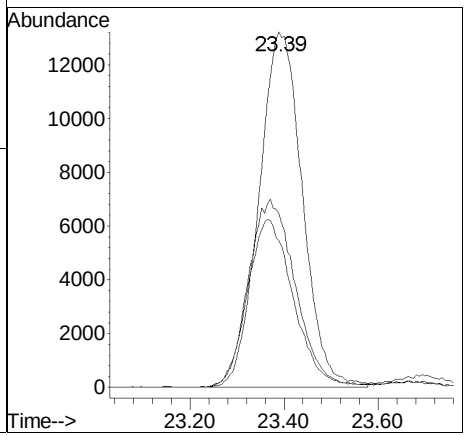


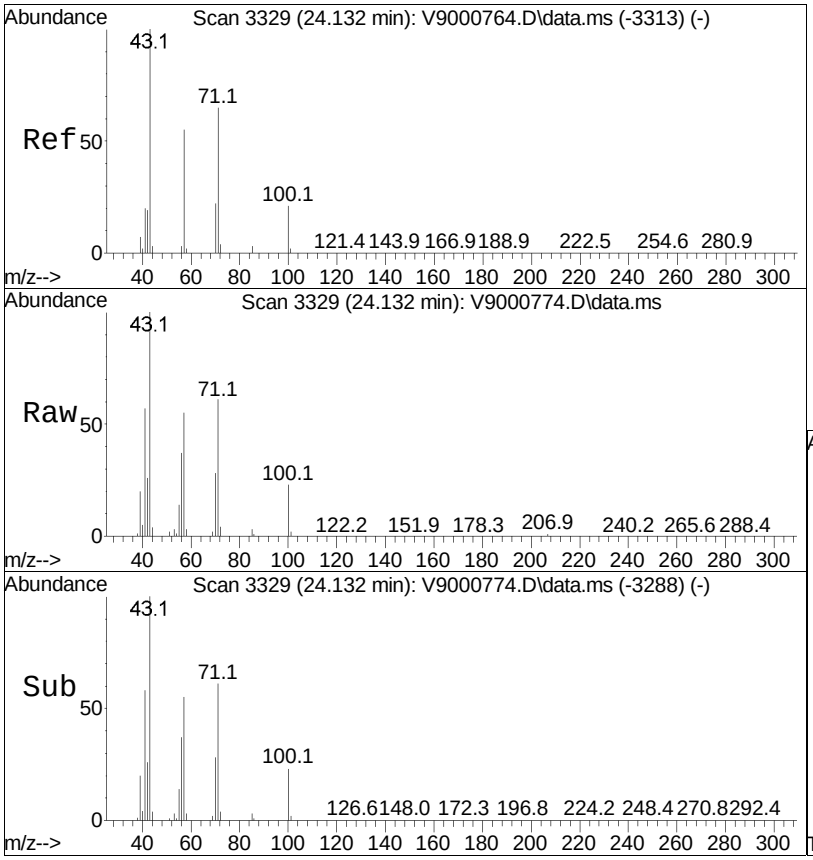


#44
Isooctane
Concen: 18.99 ug/L
RT: 23.39 min Scan# 3207
Delta R.T. 0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 57 Resp: 84750

Ion	Ratio	Lower	Upper
57	100		
41	41.2	19.1	59.1
56	48.9	27.9	67.9

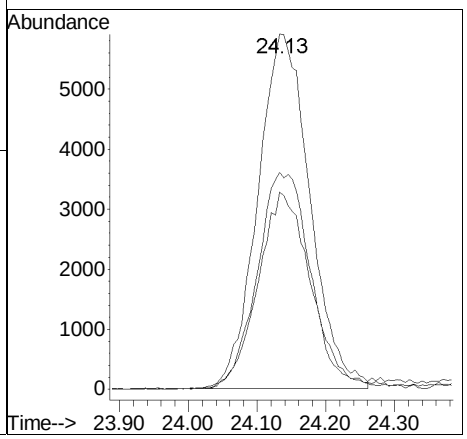


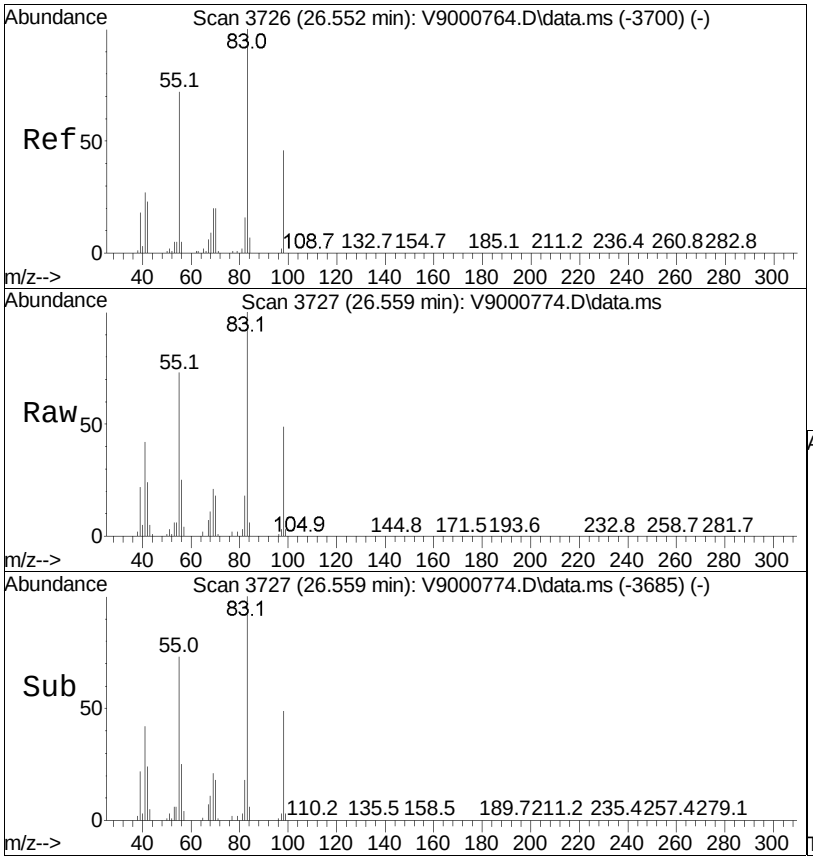


#46
Heptane
Concen: 19.65 ug/L
RT: 24.13 min Scan# 3329
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 31180

Ion	Ratio	Lower	Upper
43	100		
57	55.5	35.5	75.5
71	61.1	42.8	82.8

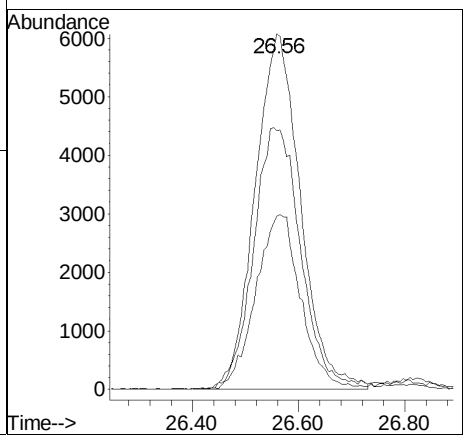


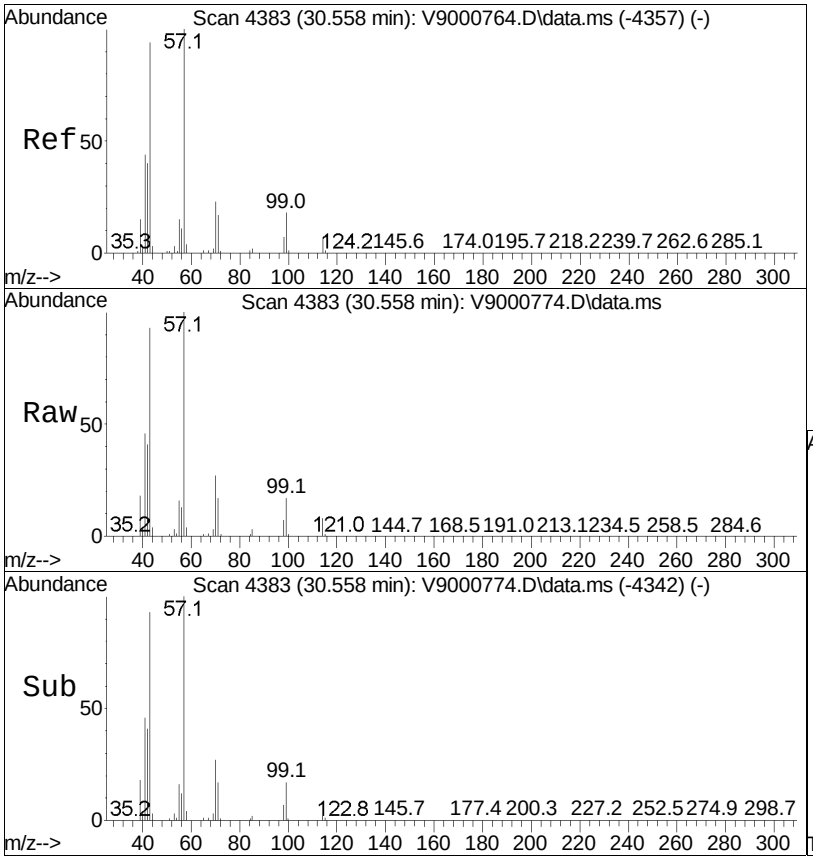


#51
Methylcyclohexane
Concen: 18.28 ug/L
RT: 26.56 min Scan# 3727
Delta R.T. 0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 83 Resp: 35991

Ion	Ratio	Lower	Upper
83	100		
55	72.8	56.2	96.2
98	48.8	26.0	66.0

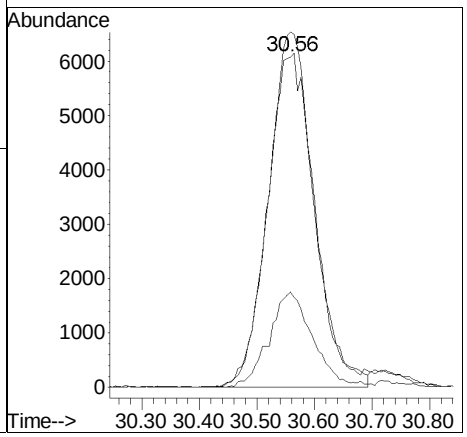


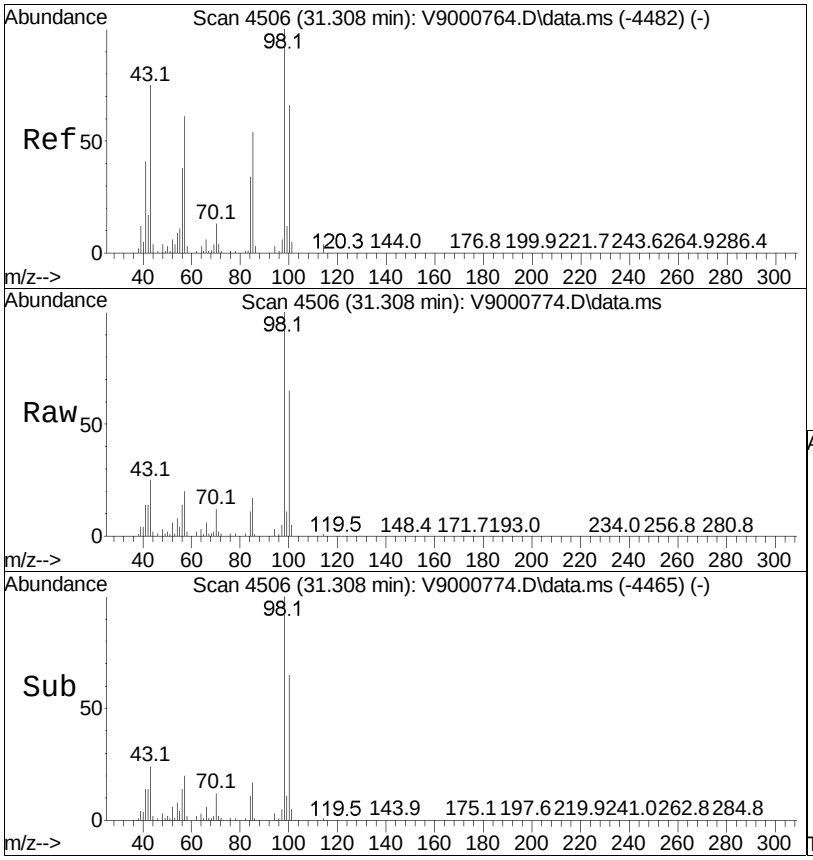


#60
2-Methylheptane
Concen: 18.09 ug/L
RT: 30.56 min Scan# 4383
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 57 Resp: 36093

Ion	Ratio	Lower	Upper
57	100		
43	92.9	74.2	114.2
70	26.8	3.6	43.6

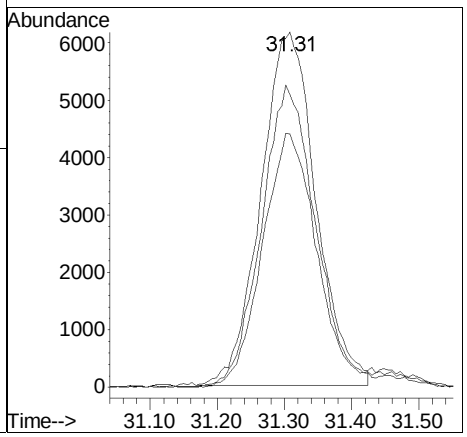


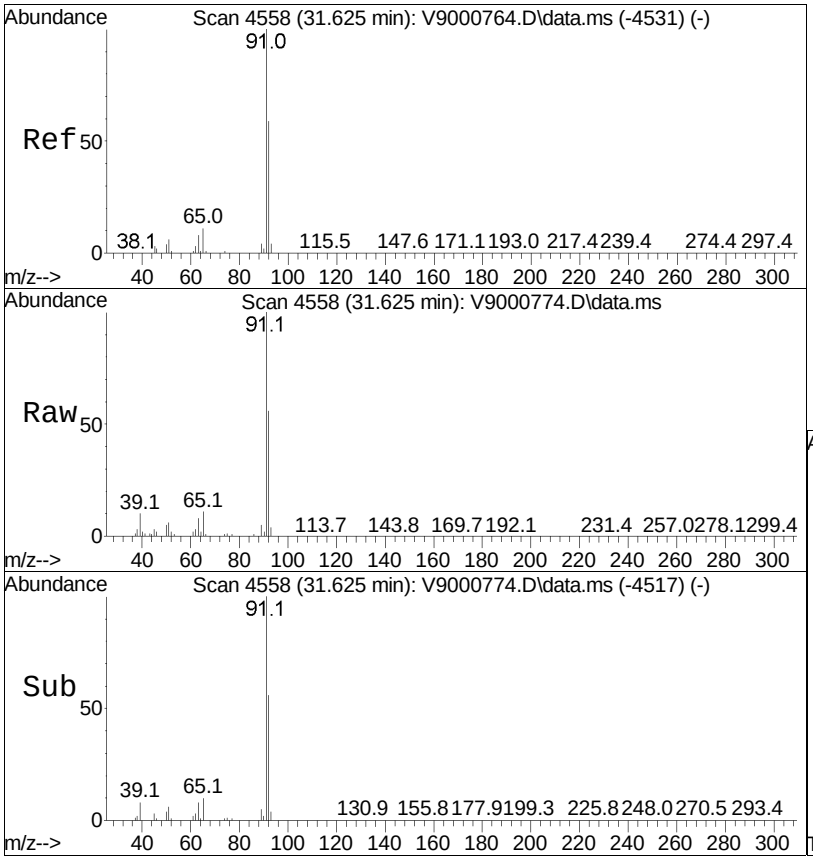


#63
3-Methylheptane
Concen: 18.29 ug/L
RT: 31.31 min Scan# 4506
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 35192

Ion	Ratio	Lower	Upper
43	100		
57	82.4	61.1	101.1
85	71.4	51.1	91.1

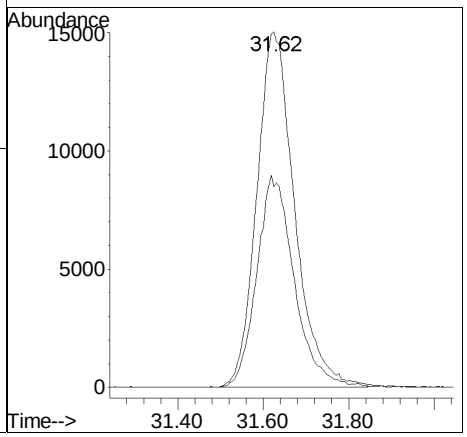


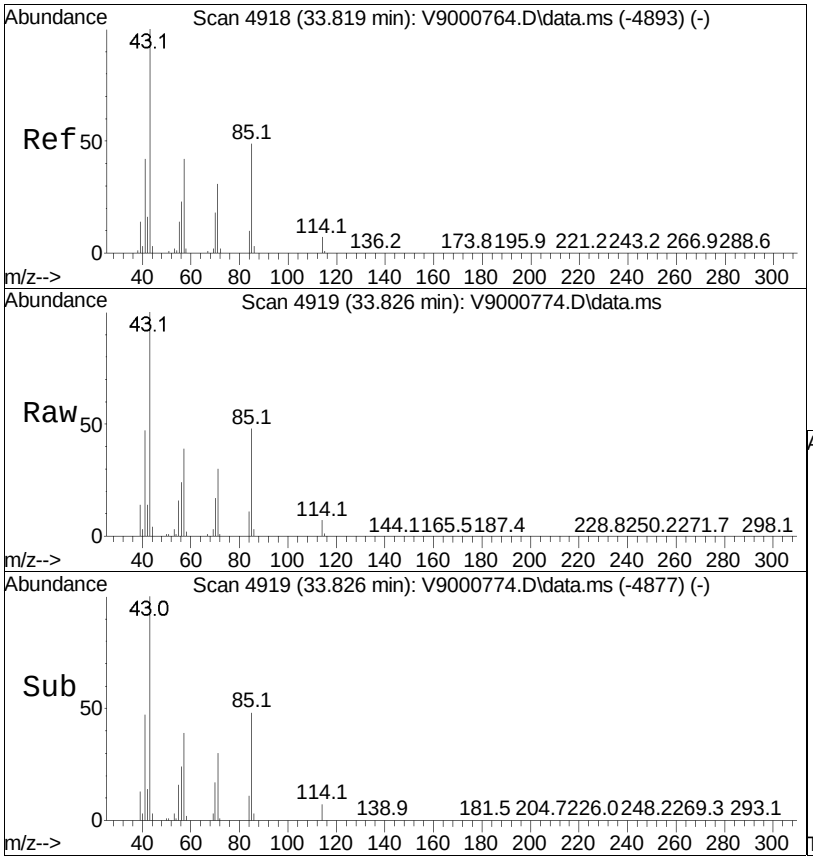


#66
Toluene
Concen: 19.25 ug/L
RT: 31.62 min Scan# 4558
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 91 Resp: 92530

Ion	Ratio	Lower	Upper
91	100		
92	56.4	38.6	78.6

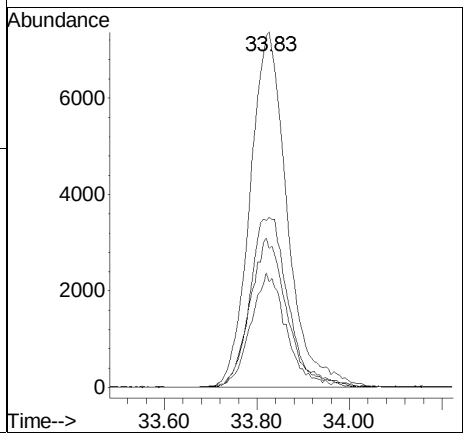


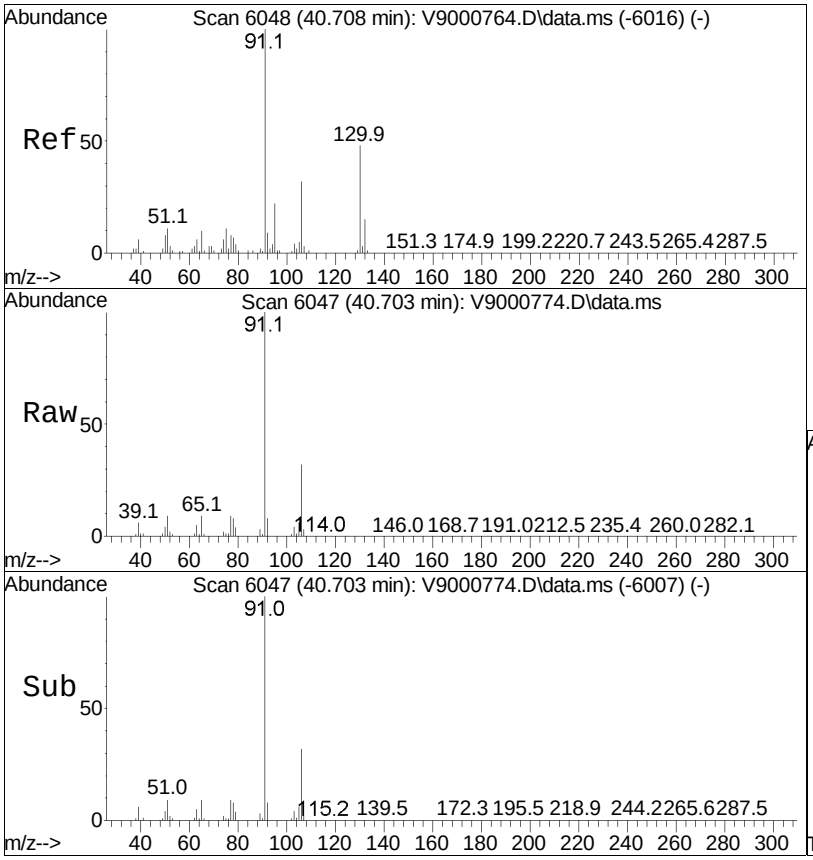


#71
Octane
Concen: 19.11 ug/L
RT: 33.83 min Scan# 4919
Delta R.T. 0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 41116

Ion	Ratio	Lower	Upper
43	100		
57	39.1	21.9	61.9
85	47.9	29.0	69.0
71	29.8	10.6	50.6

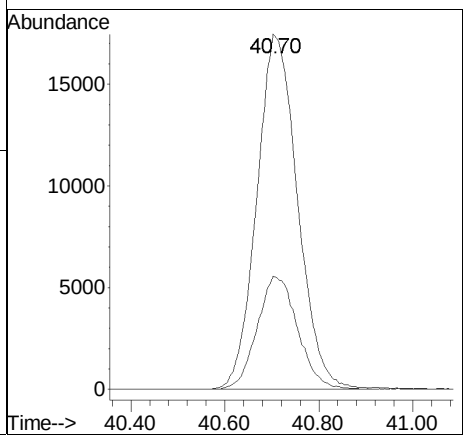


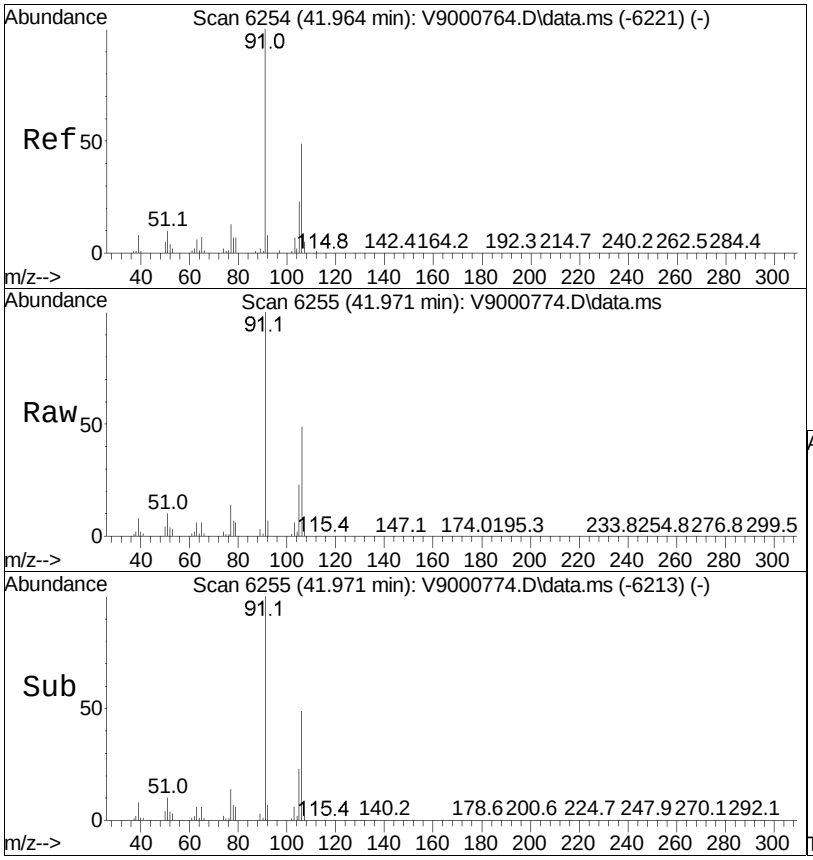


#86
Ethylbenzene
Concen: 19.24 ug/L
RT: 40.70 min Scan# 6047
Delta R.T. -0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 91 Resp: 105052

Ion	Ratio	Lower	Upper
91	100		
106	31.8	11.7	51.7

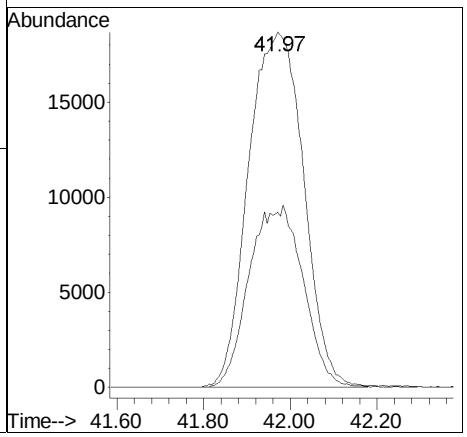


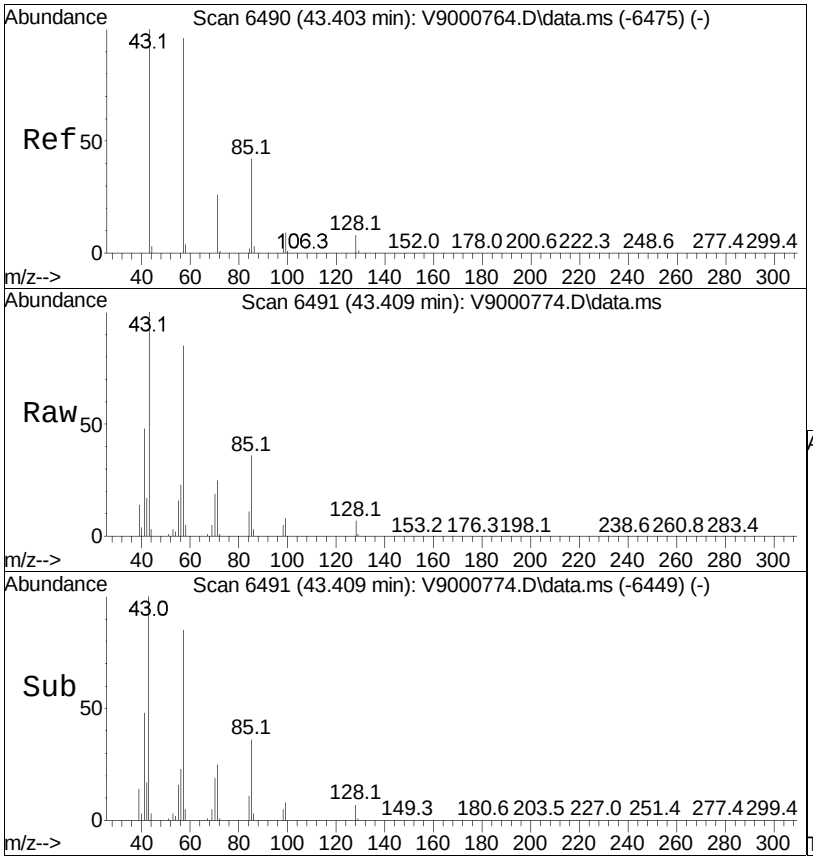


#91
p/m-Xylene
Concen: 39.43 ug/L
RT: 41.97 min Scan# 6255
Delta R.T. 0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 91 Resp: 164576

Ion	Ratio	Lower	Upper
91	100		
106	49.3	29.3	69.3

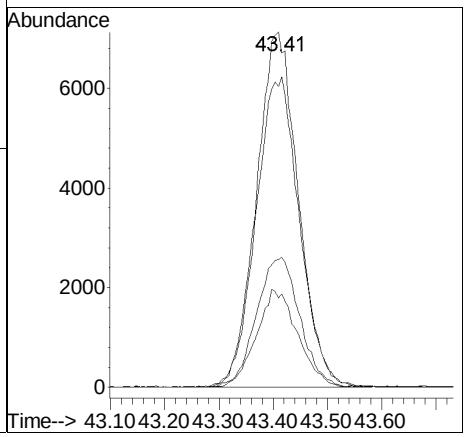


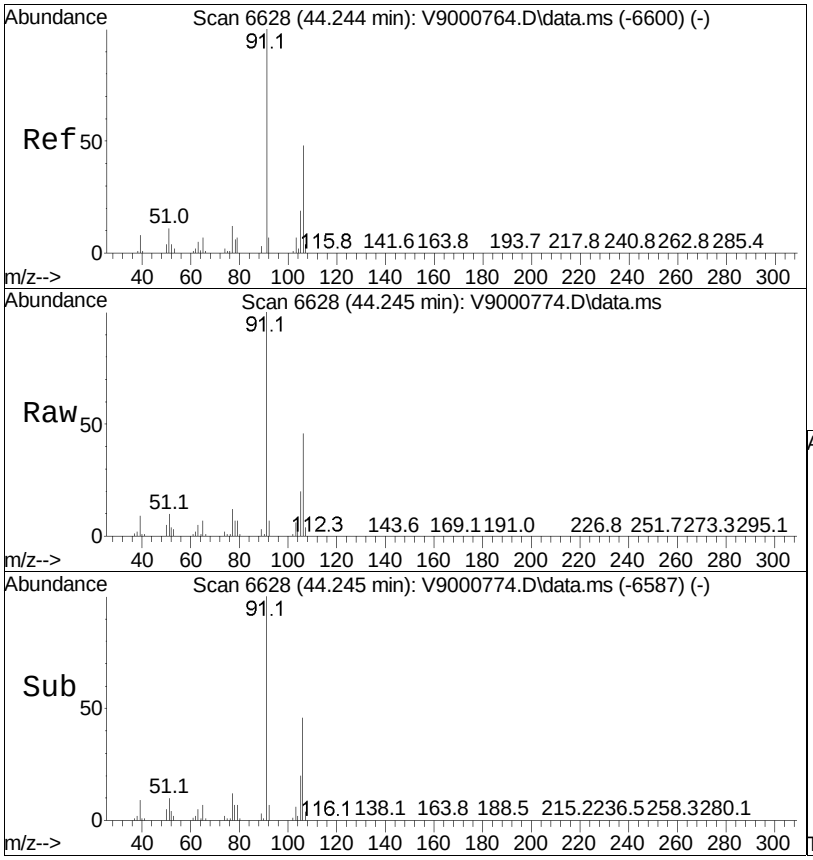


#95
Nonane
Concen: 16.79 ug/L
RT: 43.41 min Scan# 6491
Delta R.T. 0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 38288

Ion	Ratio	Lower	Upper
43	100		
57	84.7	68.7	108.7
85	36.0	15.4	55.4
71	25.2	6.9	46.9

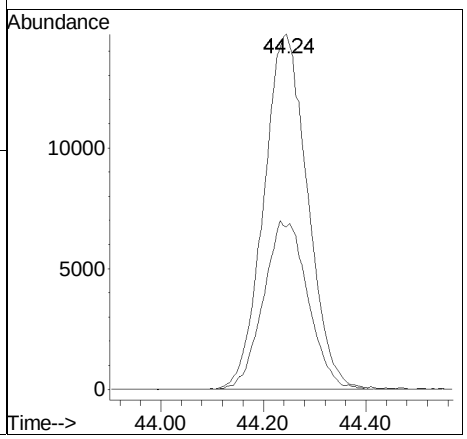


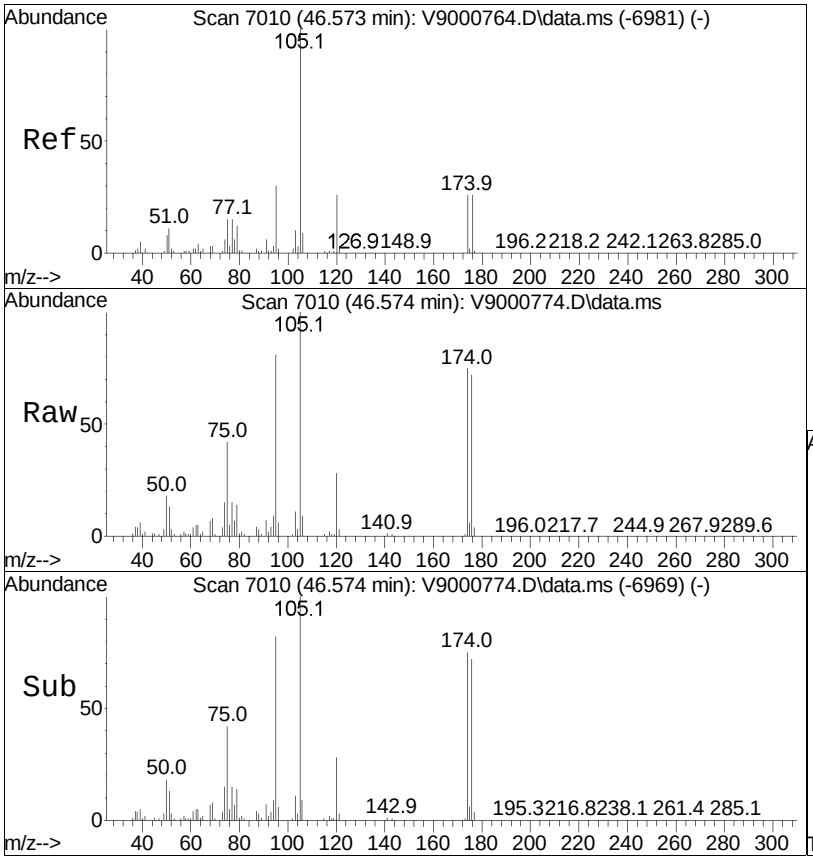


#98
o-Xylene
Concen: 20.26 ug/L
RT: 44.24 min Scan# 6628
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 91 Resp: 87135

Ion	Ratio	Lower	Upper
91	100		
106	45.7	28.1	68.1

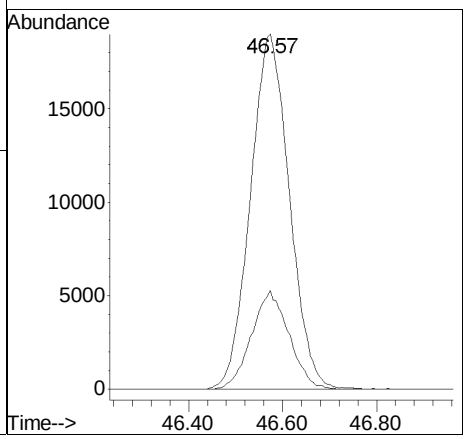


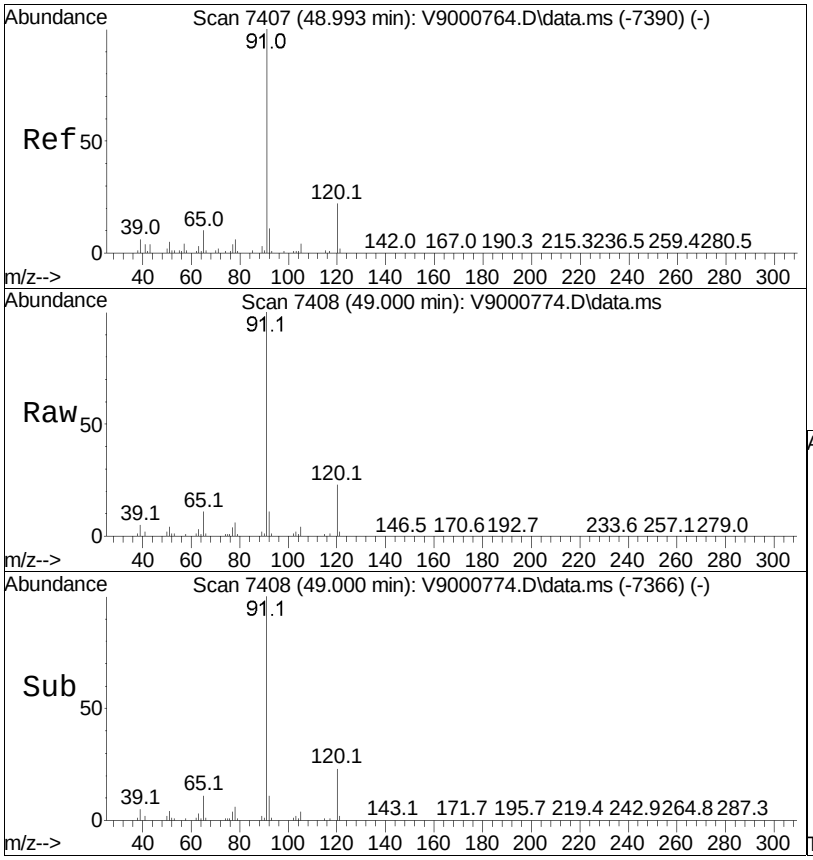


#102
Isopropylbenzene
Concen: 20.05 ug/L
RT: 46.57 min Scan# 7010
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:105 Resp: 109309

Ion	Ratio	Lower	Upper
105	100		
120	27.8	6.5	46.5

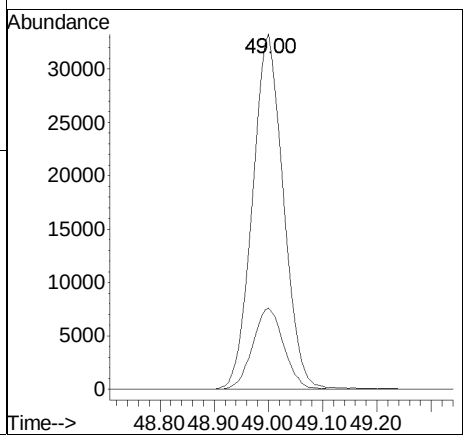


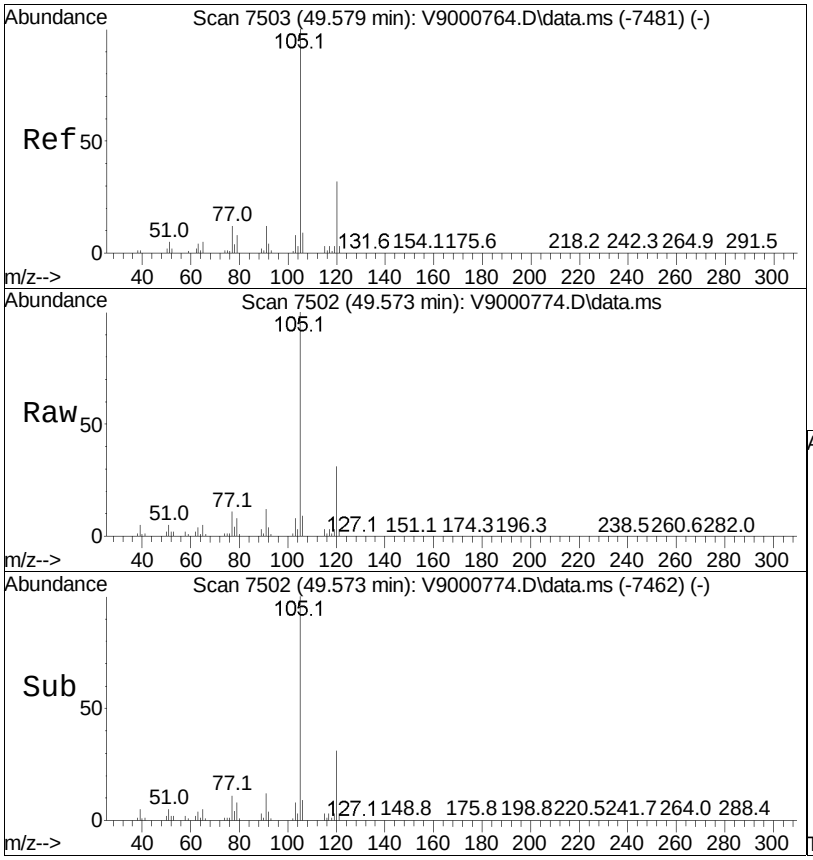


#104
n-Propylbenzene
Concen: 20.46 ug/L
RT: 49.00 min Scan# 7408
Delta R.T. 0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 91 Resp: 131742

Ion	Ratio	Lower	Upper
91	100		
120	22.9	2.4	42.4

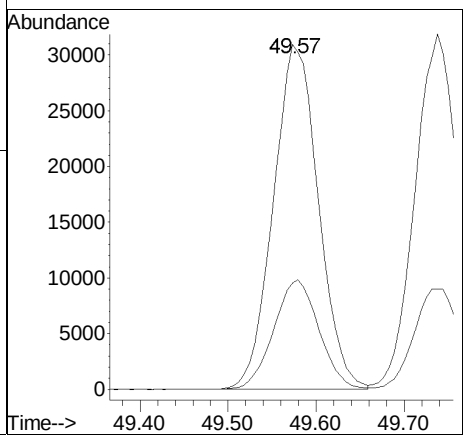


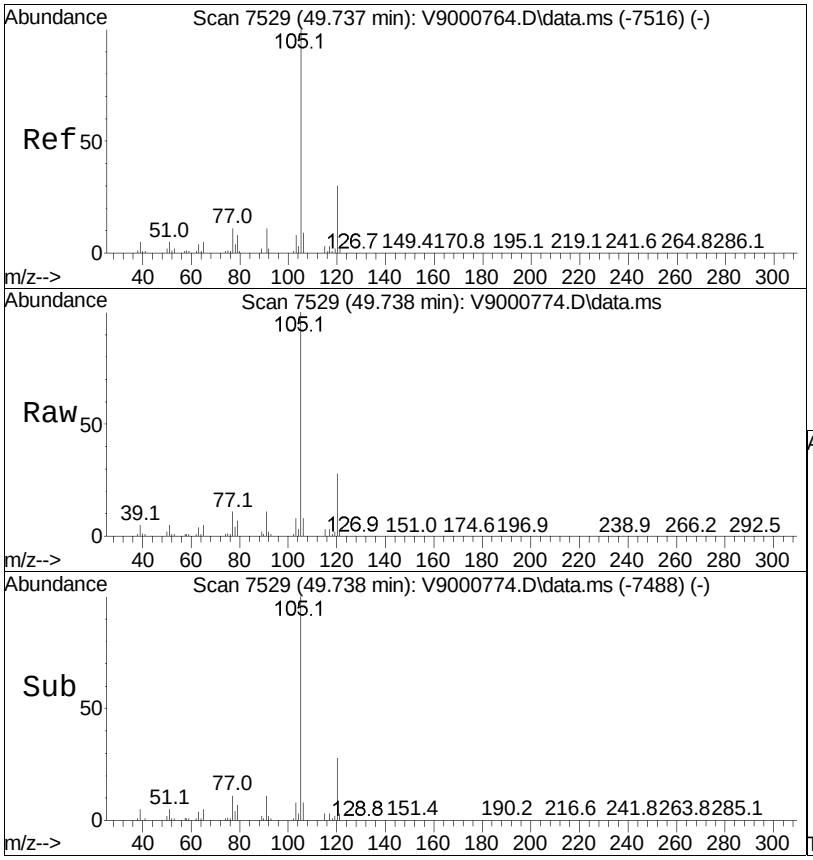


#107
1-Methyl-3-ethylbenzene
Concen: 20.51 ug/L
RT: 49.57 min Scan# 7502
Delta R.T. -0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:105 Resp: 109953

Ion	Ratio	Lower	Upper
105	100		
120	30.8	11.8	51.8

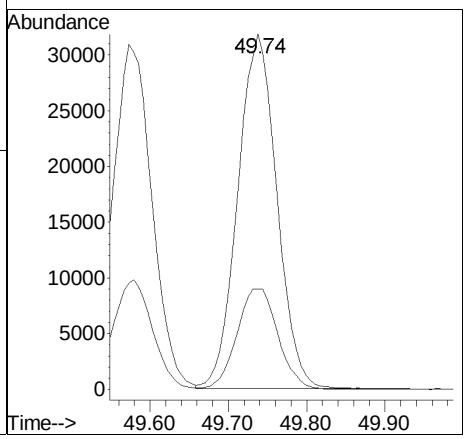


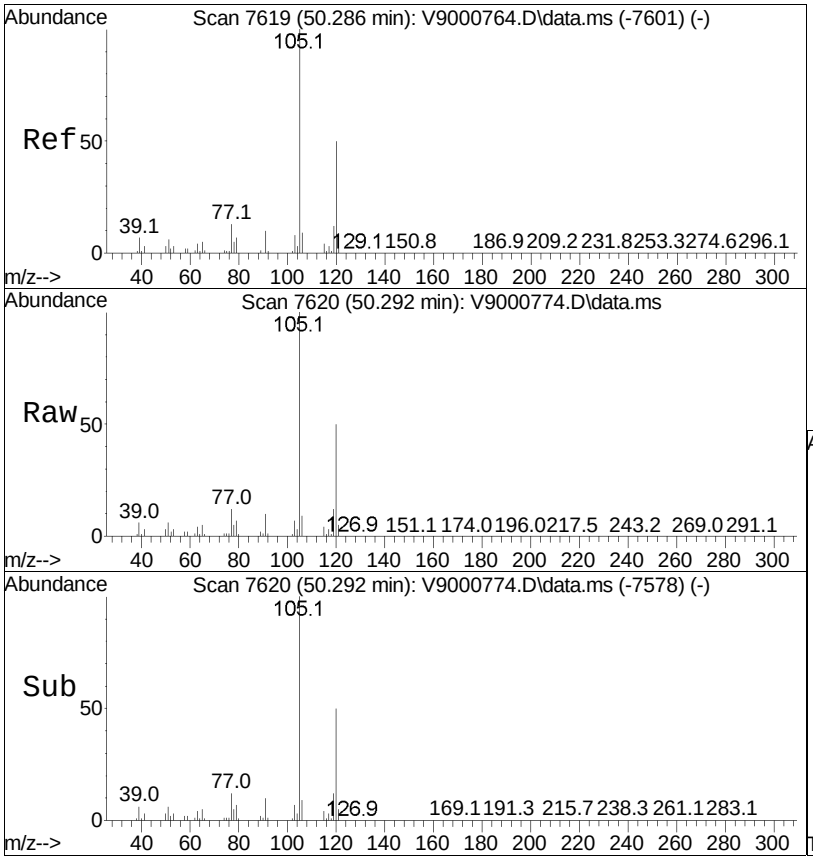


#108
1-Methyl-4-ethylbenzene
Concen: 21.50 ug/L
RT: 49.74 min Scan# 7529
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:105 Resp: 110294

Ion	Ratio	Lower	Upper
105	100		
120	28.2	9.9	49.9

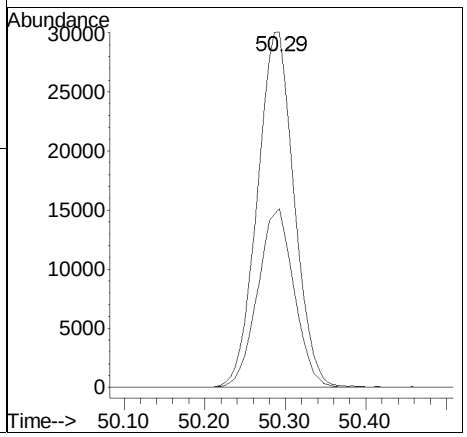


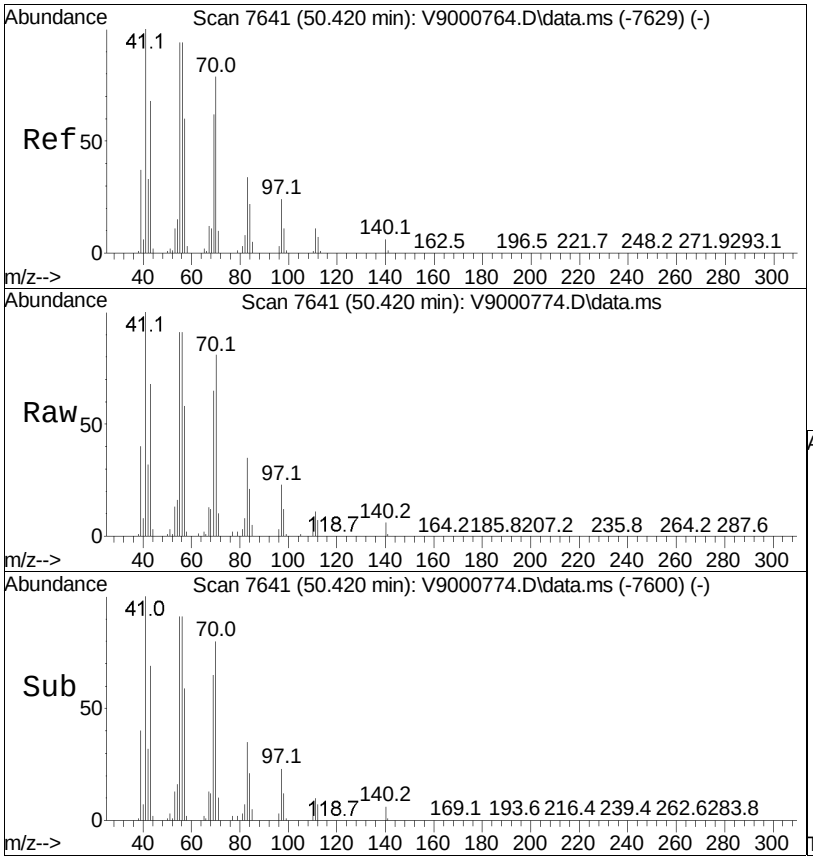


#109
1,3,5-Trimethylbenzene
Concen: 21.36 ug/L
RT: 50.29 min Scan# 7620
Delta R.T. 0.006 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:105 Resp: 95349

Ion	Ratio	Lower	Upper
105	100		
120	50.4	30.2	70.2

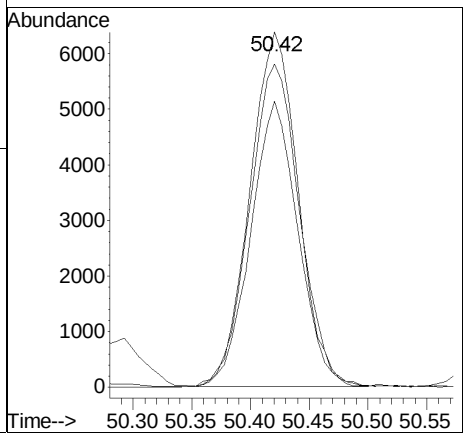


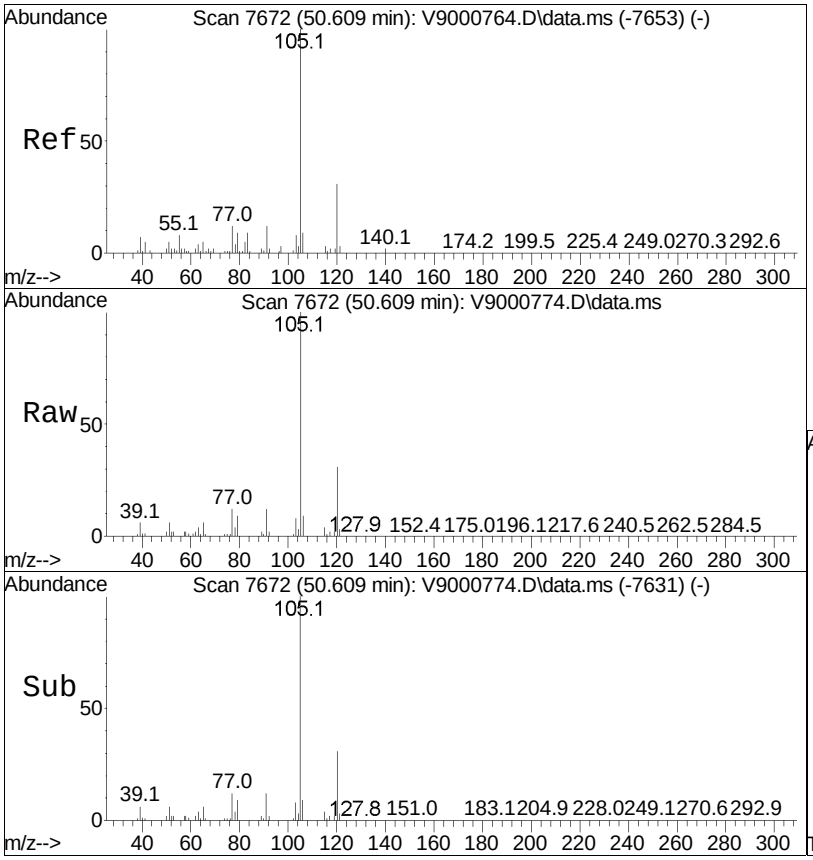


#110
1-Decene
Concen: 17.08 ug/L
RT: 50.42 min Scan# 7641
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 41 Resp: 18422

Ion	Ratio	Lower	Upper
41	100		
55	91.0	73.4	113.4
70	80.6	58.6	98.6

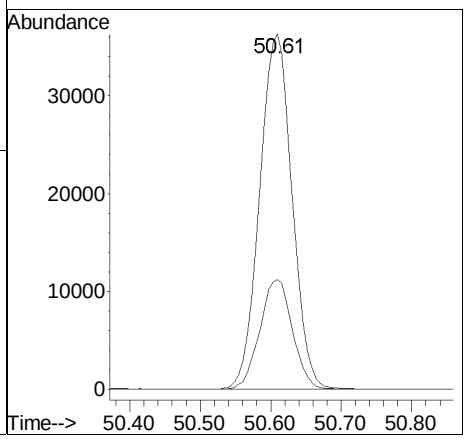


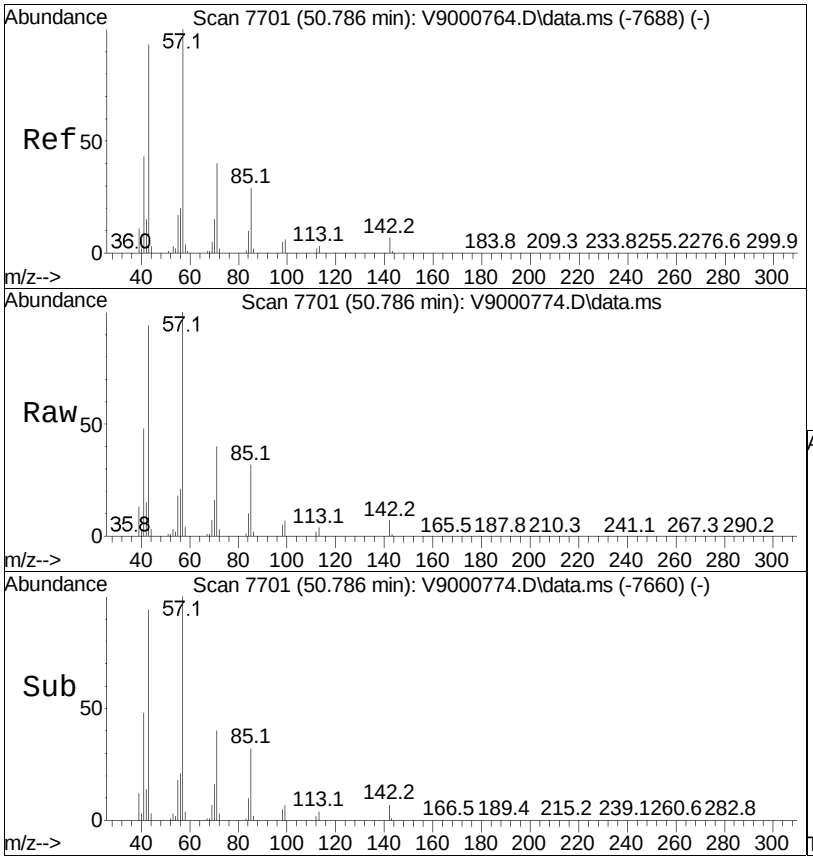


#112
1-Methyl-2-ethylbenzene
Concen: 21.51 ug/L
RT: 50.61 min Scan# 7672
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:105 Resp: 115895

Ion	Ratio	Lower	Upper
105	100		
120	30.9	10.7	50.7

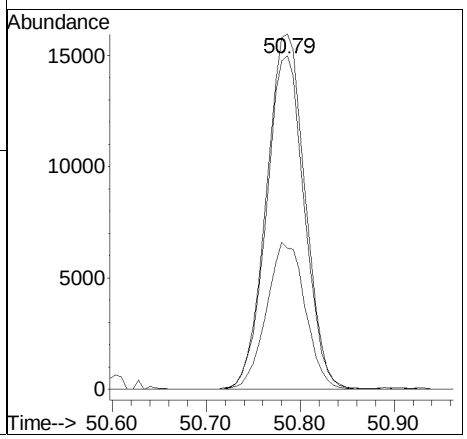


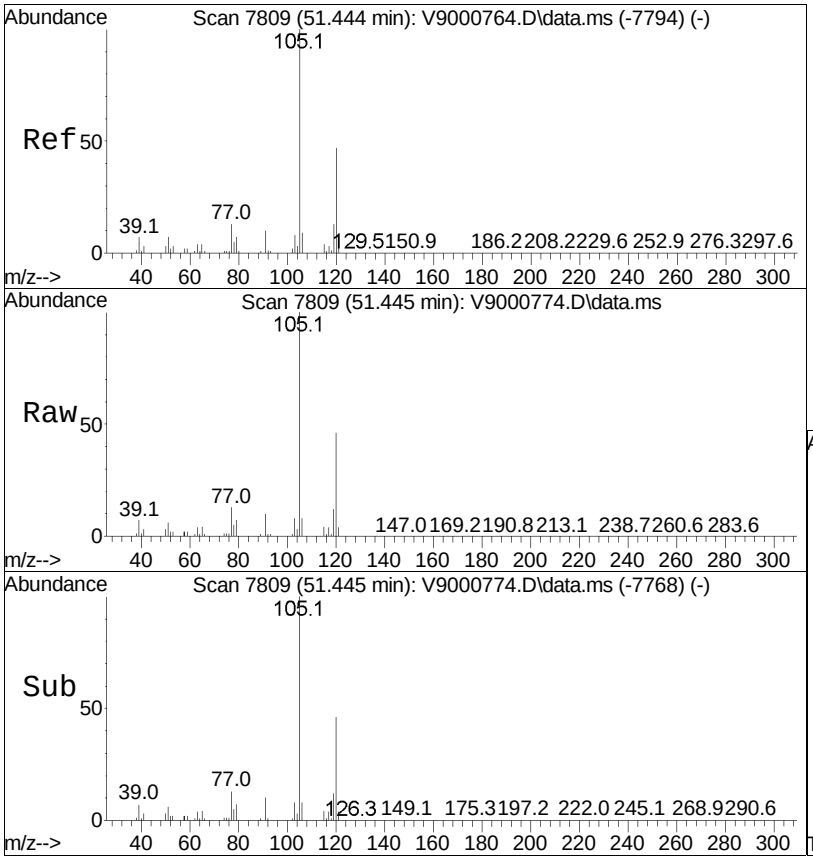


#113
Decane
Concen: 21.04 ug/L
RT: 50.79 min Scan# 7701
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 42175

Ion	Ratio	Lower	Upper
43	100		
57	106.5	88.0	128.0
71	42.4	23.6	63.6

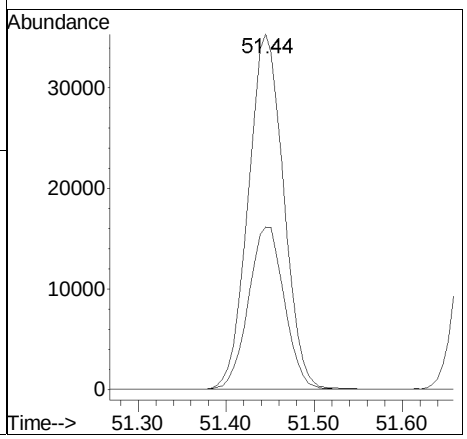


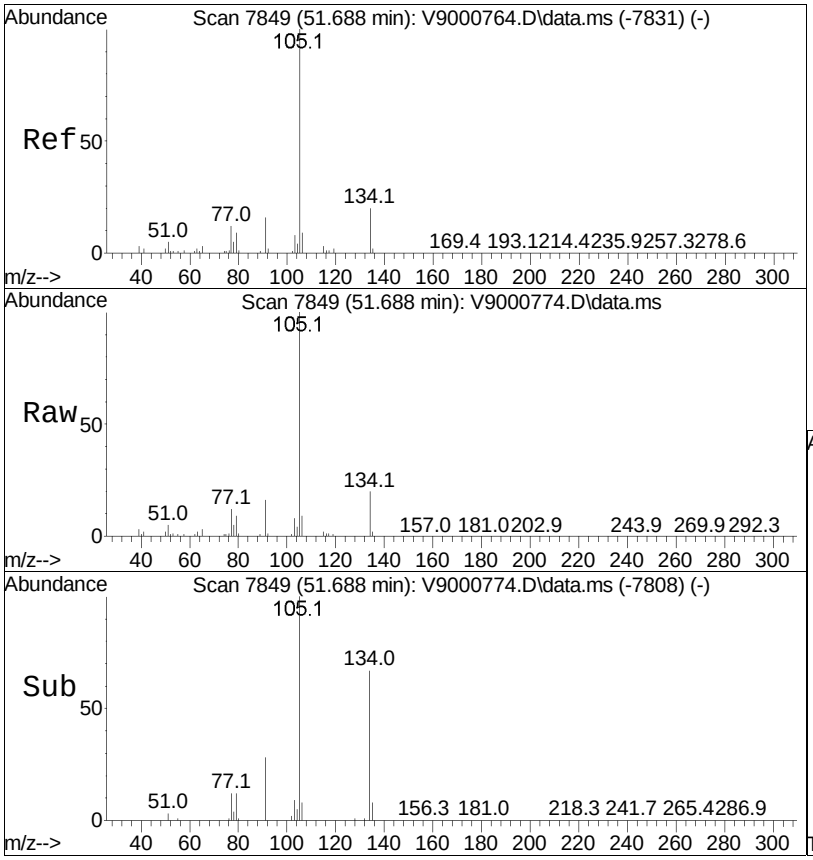


#115
1,2,4-Trimethylbenzene
Concen: 20.97 ug/L
RT: 51.44 min Scan# 7809
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:105 Resp: 98483

Ion	Ratio	Lower	Upper
105	100		
120	45.7	27.4	67.4

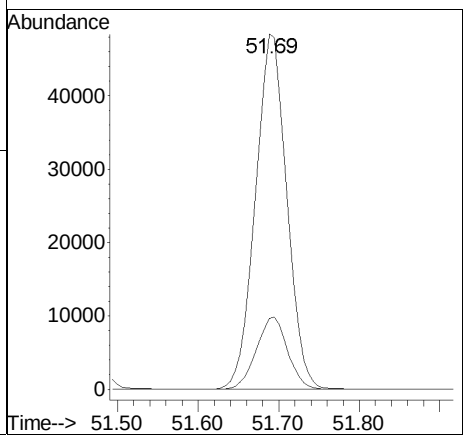


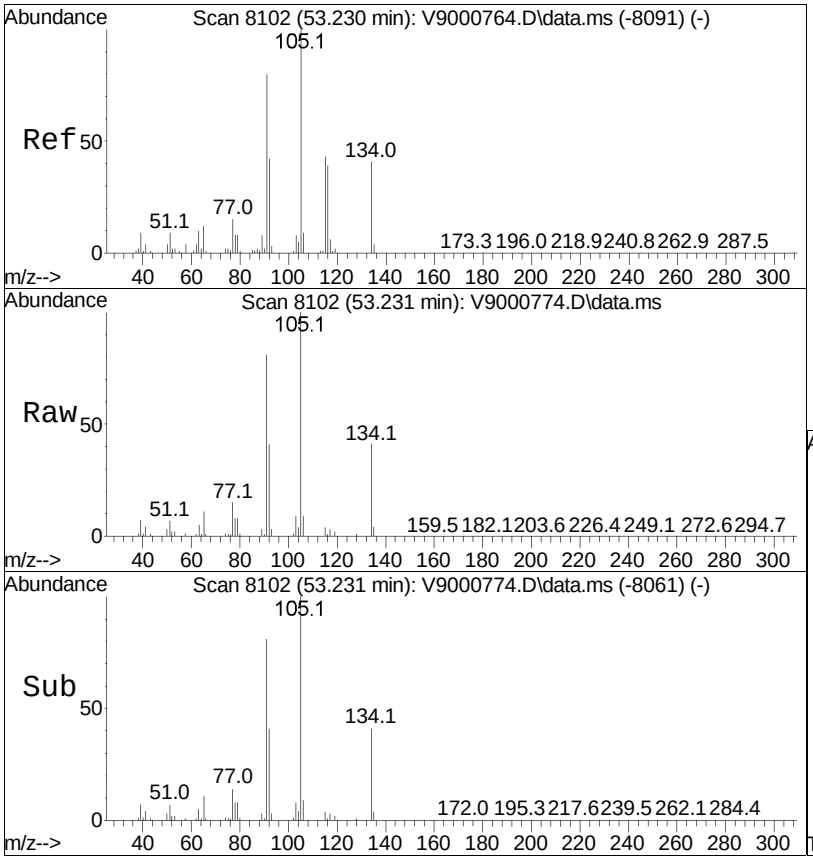


#117
sec-Butylbenzene
Concen: 22.40 ug/L
RT: 51.69 min Scan# 7849
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:105 Resp: 130704

Ion	Ratio	Lower	Upper
105	100		
134	20.0	0.6	40.6

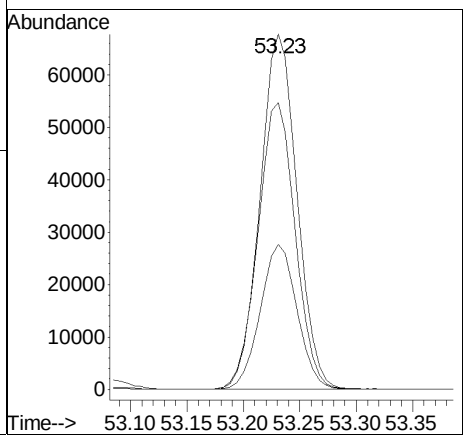


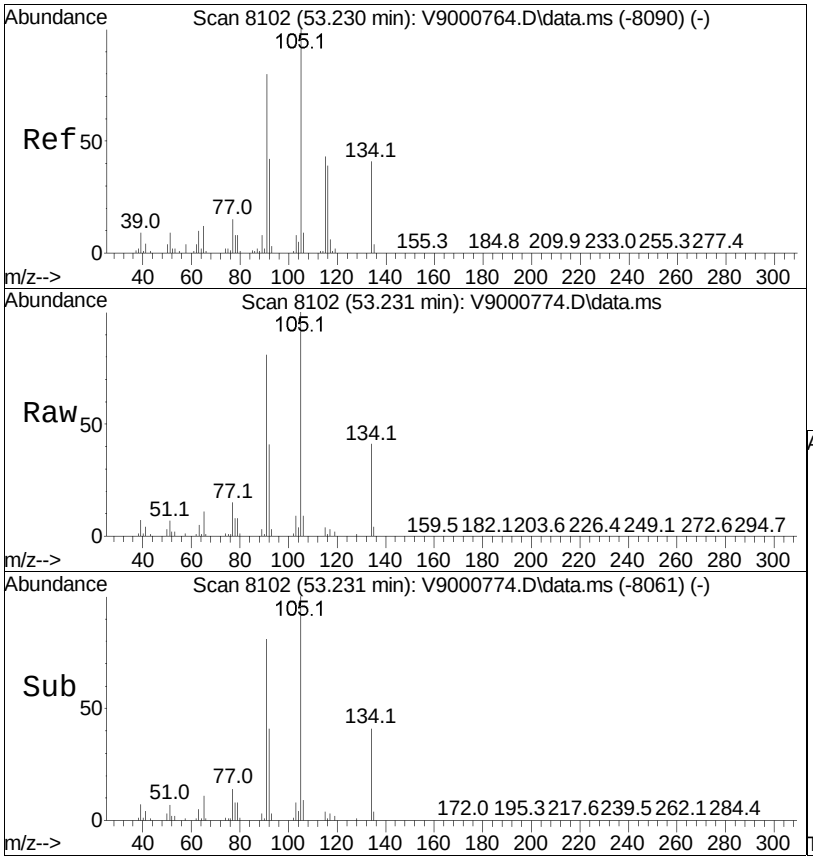


#126
1-Methyl-4-propylbenzene
Concen: 22.07 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:105 Resp: 154278

Ion	Ratio	Lower	Upper
105	100		
134	40.8	20.7	60.7
91	80.7	59.6	99.6

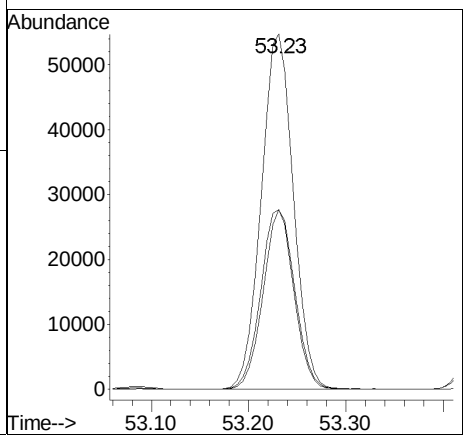


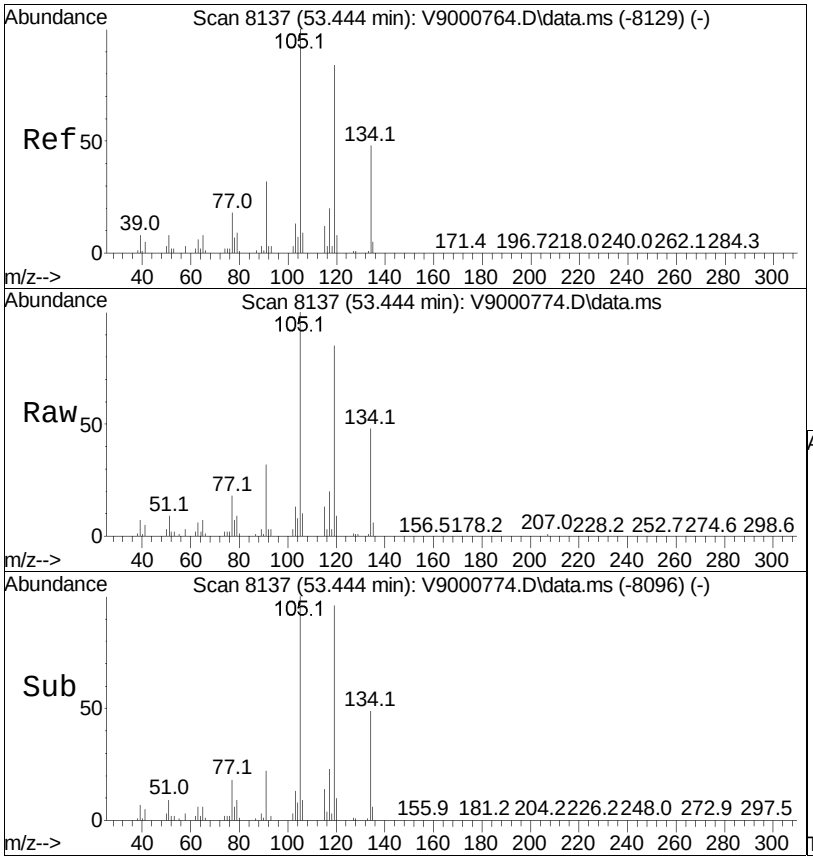


#127
n-Butylbenzene
Concen: 22.57 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 91 Resp: 125771

Ion	Ratio	Lower	Upper
91	100		
92	50.6	32.7	72.7
134	50.6	31.2	71.2

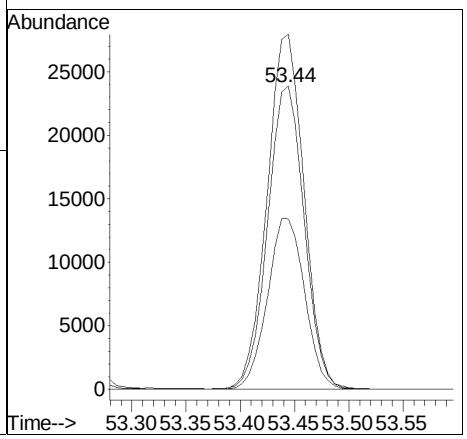


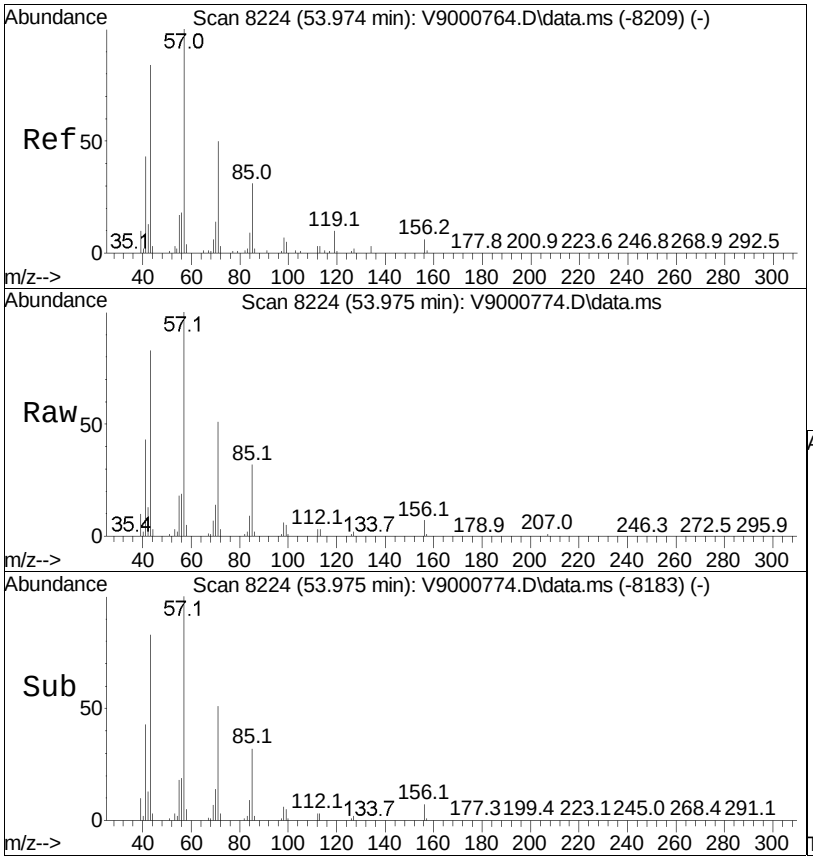


#129
1,2-Diethylbenzene
Concen: 22.65 ug/L
RT: 53.44 min Scan# 8137
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:119 Resp: 55811

Ion	Ratio	Lower	Upper
119	100		
105	117.1	96.4	136.4
134	56.3	37.2	77.2

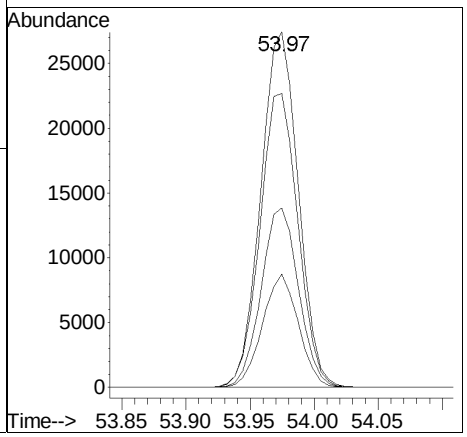


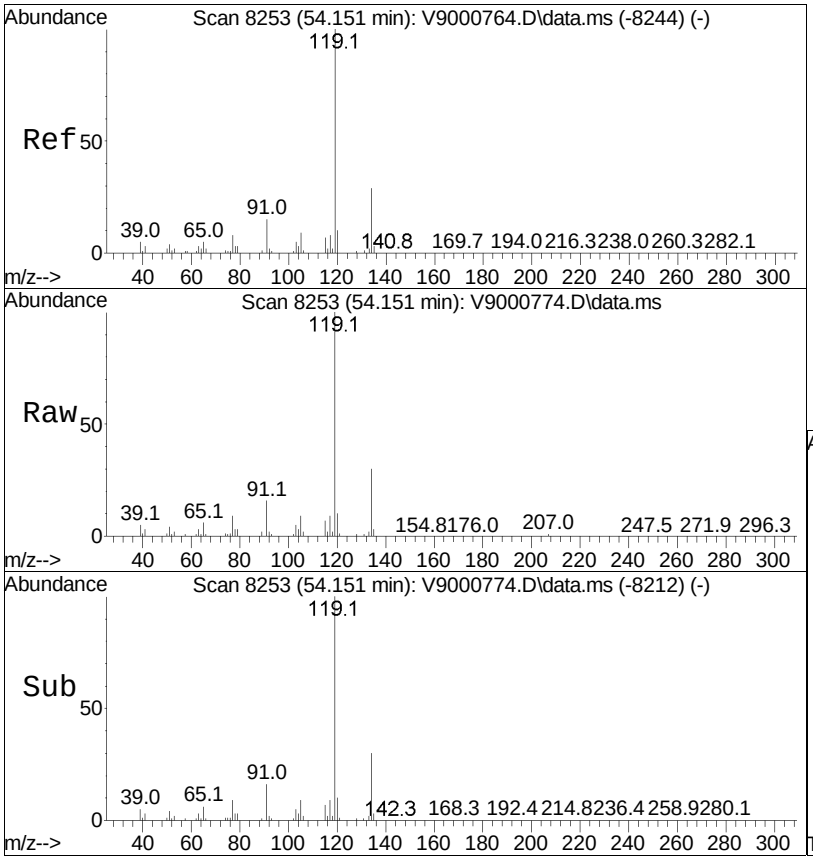


#132
Undecane
Concen: 22.82 ug/L
RT: 53.97 min Scan# 8224
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 57 Resp: 55897

Ion	Ratio	Lower	Upper
57	100		
43	82.7	63.7	103.7
71	50.5	30.1	70.1
85	31.9	11.2	51.2

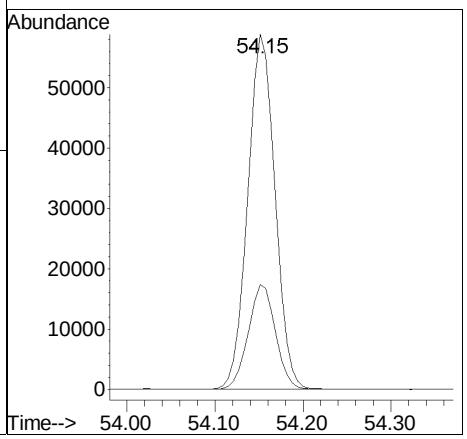


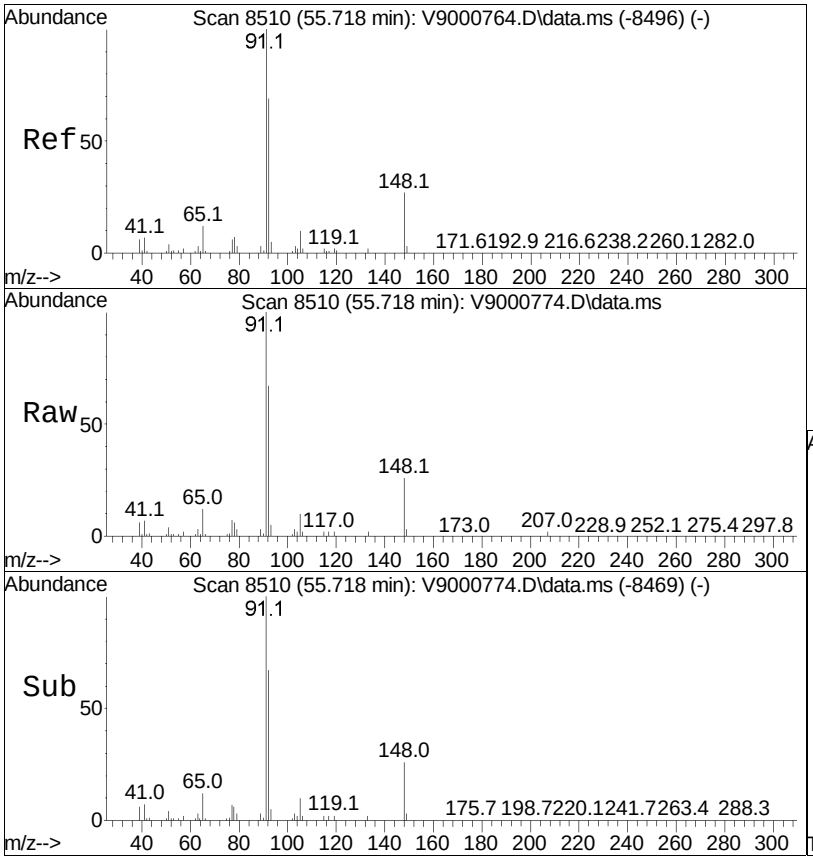


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 24.13 ug/L
RT: 54.15 min Scan# 8253
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion:119 Resp: 126606

Ion	Ratio	Lower	Upper
119	100		
134	29.5	8.5	48.5

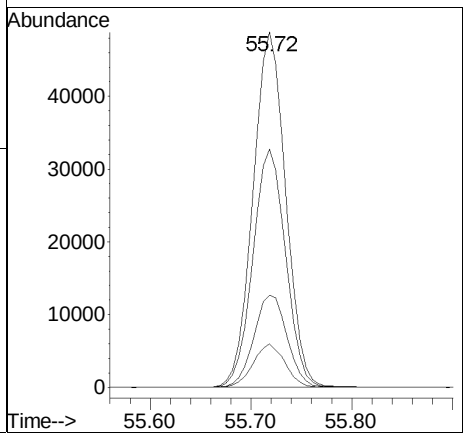


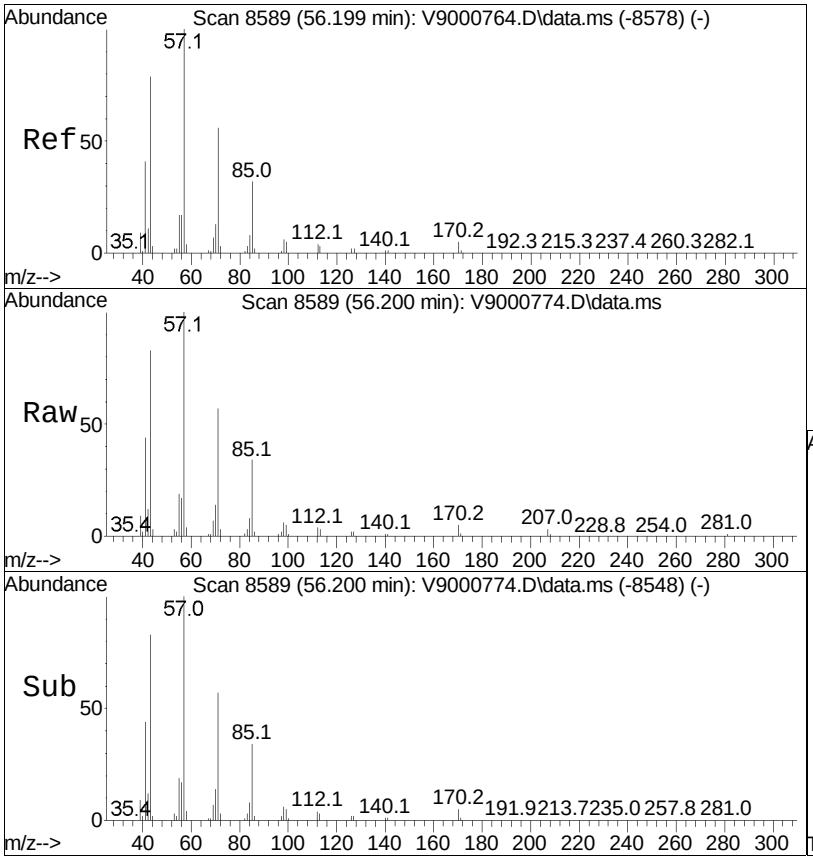


#139
Pentylbenzene
Concen: 23.08 ug/L
RT: 55.72 min Scan# 8510
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 91 Resp: 110036

Ion	Ratio	Lower	Upper
91	100		
92	67.1	49.2	89.2
65	12.3	0.0	32.4
148	26.0	6.8	46.8

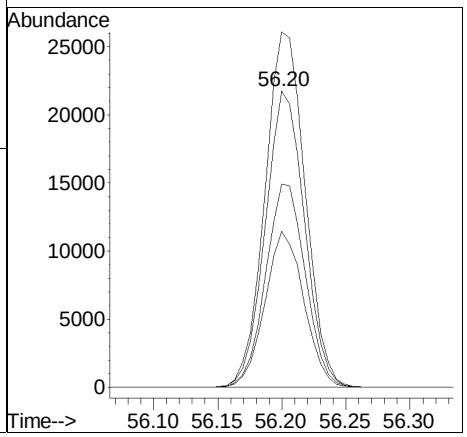




#142
Dodecane
Concen: 25.96 ug/L
RT: 56.20 min Scan# 8589
Delta R.T. 0.000 min
Lab File: V9000774.D
Acq: 13 Dec 2021 12:19 pm

Tgt Ion: 43 Resp: 46259

Ion	Ratio	Lower	Upper
43	100		
57	119.9	106.2	146.2
71	68.6	51.3	91.3
41	52.7	31.9	71.9



Supporting Documentation

VOA Weights for High Level Soils

Date	Analyst	Sample ID	Initial Vial Weight	Final Weight Vial + Sample	Sample Weight
12/8/2021	JB	L2166503-01			0.1135g

Alpha Analytical, Inc.

Page:_____

Saturated Hydrocarbon Analysis

Initial Calibration

Response Factor Report FID 18

Method Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Method File : HC18031921R_DRO.M
Title : FID Forensics
Last Update : Fri Mar 26 11:35:29 2021
Response Via : Initial Calibration

Calibration Files
1 =f18031921013.D 10 =f18031921015.D 50 =f18031921017.D 100 =f18031921019.D 200 =f18031921021.D
500 =f18031921023.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.827	0.792	0.792	0.783	0.786		0.796	2.24
3)	t	n-Nonane (C9)	0.912	0.855	0.862	0.826	0.840		0.859	3.79
4)	t	n-Decane (C10)	0.963	0.931	0.937	0.884	0.906		0.924	3.30
5)	t	n-Undecane (C11)	0.943	0.928	0.946	0.889	0.917		0.925	2.50
6)	t	n-Dodecane (C12)	0.950	0.943	0.959	0.902	0.932		0.937	2.35
7)	t	n-Tridecane (...	0.957	0.943	0.959	0.903	0.935		0.939	2.41
8)	t	1380	0.984	0.971	0.985	0.927	0.961		0.966	2.44
9)	t	n-Tetradecane...	0.984	0.971	0.985	0.927	0.961		0.966	2.44
10)	t	1470	0.988	0.971	0.988	0.931	0.968		0.969	2.38
11)	t	n-Pentadecane...	0.988	0.971	0.988	0.931	0.968		0.969	2.38
12)	t	n-Hexadecane ...	0.965	0.958	0.978	0.925	0.962		0.957	2.06
13)	t	1650	0.967	0.969	0.991	0.936	0.978		0.968	2.10
14)	t	n-Heptadecane...	0.967	0.969	0.991	0.936	0.978		0.968	2.10
15)	t	Pristane	1.050	1.012	1.018	0.958	0.991		1.006	3.36
16)	t	n-Octadecane ...	0.969	0.979	1.001	0.946	0.986		0.976	2.09
17)	t	Phytane	0.948	0.923	0.933	0.879	0.910		0.919	2.85
18)	t	n-Nonadecane ...	0.985	0.993	1.010	0.950	0.984		0.984	2.24
19)	s	ortho-terphenyl	1.192	1.101	1.154	1.026	1.089	1.124	1.114	5.14
20)	t	n-Eicosane (C20)	0.991	1.000	1.016	0.957	0.990		0.991	2.17
21)	t	n-Heneicosane...	1.016	1.010	1.025	0.964	0.997		1.002	2.36
22)	t	n-Docosane (C22)	1.058	1.015	1.026	0.965	1.001		1.013	3.38
23)	t	n-Tricosane (...	1.018	1.014	1.029	0.967	1.004		1.006	2.35
24)	s	d50-Tetracosane	0.949	0.890	0.936	0.832	0.879	0.911	0.899	4.74
25)	t	n-Tetracosane...	1.008	1.013	1.030	0.966	1.005		1.004	2.36
26)	t	n-Pentacosane...	1.022	1.001	1.014	0.951	0.990		0.995	2.77
27)	t	n-Hexacosane ...	1.051	1.029	1.042	0.979	1.018		1.024	2.76
28)	t	n-Heptacosane...	1.082	1.034	1.044	0.981	1.018		1.032	3.57
29)	t	n-Octacosane ...	1.086	1.052	1.068	1.004	1.042		1.050	2.94
30)	t	n-Nonacosane ...	1.064	1.048	1.065	1.001	1.039		1.043	2.49
31)	t	n-Triacontane...	1.083	1.052	1.071	1.007	1.045		1.052	2.76

Response Factor Report FID 18

Method Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Method File : HC18031921R_DRO.M
Title : FID Forensics
Last Update : Fri Mar 26 11:35:29 2021
Response Via : Initial Calibration

Calibration Files
1 =f18031921013.D 10 =f18031921015.D 50 =f18031921017.D 100 =f18031921019.D 200 =f18031921021.D
500 =f18031921023.D

	Compound	1	10	50	100	200	500	Avg	%RSD
32) t	n-Hentriacont...	1.062	1.020	1.034	0.973	1.009		1.020	3.19
33) t	n-Dotriaconta...	1.098	1.068	1.088	1.024	1.061		1.068	2.66
34) t	n-Tritriacont...	1.071	1.040	1.059	0.996	1.034		1.040	2.75
35) t	n-tetratriaco...	1.083	1.039	1.055	0.994	1.032		1.041	3.13
36) t	n-Pentatriaco...	1.027	0.976	0.987	0.930	0.968		0.978	3.57
37) t	n-Hexatriacon...	1.213	1.183	1.190	1.123	1.169		1.176	2.83
38) t	n-Heptatriaco...	1.101	1.077	1.085	1.024	1.067		1.071	2.70
39) t	n-Octatriacon...	1.114	1.090	1.098	1.037	1.080		1.084	2.67
40) t	n-Nonatriacon...	1.104	1.074	1.080	1.021	1.061		1.068	2.87
41) t	n-Tetracontan...	1.104	1.074	1.080	1.021	1.061		1.068	2.87
42) h	C9-C44 Total ...	1.028	1.006	1.020	0.961	0.997		1.003	2.60
43) h	C9-C40 Total ...	1.028	1.006	1.020	0.961	0.997		1.003	2.60
44) h	C10-C28 DRO	1.000	0.987	1.002	0.944	0.979		0.982	2.42
45) h	C28-C40 ORO	1.093	1.061	1.074	1.012	1.051		1.058	2.85
46) h	Total Resolve...	1.028	1.006	1.020	0.961	0.997		1.003	2.60

(#) = Out of Range

rfupdate

RSF Update Summary Report

Method Path.....: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Method File.....: HC18031921R_DRO.M
Method Title.....: FID Forensics
Last Update.....: Fri Mar 26 11:35:29 2021

Generating Average Response Factor For: C9-C44 Total Petroleum Hydrocarbons

No	Compound	Level	Conc	Response
1	n-Nonane (C9)	1	1.00000	779230.448
2	n-Decane (C10)	1	1.00000	823155.664
3	n-Undecane (C11)	1	1.00000	806257.856
4	n-Dodecane (C12)	1	1.00000	812047.293
5	n-Tridecane (C13)	1	1.00000	817898.067
6	n-Tetradecane (C14)	1	1.00000	841134.836
7	n-Pentadecane (C15)	1	1.00000	844263.767
8	n-Hexadecane (C16)	1	1.00000	824446.216
9	n-Heptadecane (C17)	1	1.00000	826161.752
10	Pristane	1	1.00000	897112.657
11	n-Octadecane (C18)	1	1.00000	827896.320
12	Phytane	1	1.00000	810394.683
13	n-Nonadecane (C19)	1	1.00000	842136.884
14	n-Eicosane (C20)	1	1.00000	846690.016
15	n-Heneicosane (C21)	1	1.00000	868028.835
16	n-Docosane (C22)	1	1.00000	904694.989
17	n-Tricosane (C23)	1	1.00000	870147.254
18	n-Tetracosane (C24)	1	1.00000	861437.868
19	n-Pentacosane (C25)	1	1.00000	873428.334
20	n-Hexacosane (C26)	1	1.00000	898769.189
21	n-Heptacosane (C27)	1	1.00000	924815.068
22	n-Octacosane (C28)	1	1.00000	928592.545
23	n-Nonacosane (C29)	1	1.00000	909776.954
24	n-Triacontane (C30)	1	1.00000	925987.077
25	n-Hentriacontane (C31)	1	1.00000	907693.654
26	n-Dotriacontane (C32)	1	1.00000	938130.708
27	n-Tritriacontane (C33)	1	1.00000	915034.108
28	n-tetratriacontane (C34)	1	1.00000	925582.139
29	n-Pentatriacontane (C35)	1	1.00000	877988.551
30	n-Hexatriacontane (C36)	1	1.00000	1036656.743
31	n-Heptatriacontane (C37)	1	1.00000	940847.834
32	n-Octatriacontane (C38)	1	1.00000	952233.408
33	n-Tetracontane (C40)	1	1.00000	944012.466
Avg RSF For: C9-C44 Total Petroleum			1.00000	878869.218
1	n-Nonane (C9)	2	10.00000	7591251.937
2	n-Decane (C10)	2	10.00000	8261750.647
3	n-Undecane (C11)	2	10.00000	8232972.985
4	n-Dodecane (C12)	2	10.00000	8373189.063
5	n-Tridecane (C13)	2	10.00000	8368880.684
6	n-Tetradecane (C14)	2	10.00000	8615410.127
7	n-Pentadecane (C15)	2	10.00000	8619320.918
8	n-Hexadecane (C16)	2	10.00000	8505814.835
9	n-Heptadecane (C17)	2	10.00000	8604272.102

		rfupdate		
10	Pristane	2	10.00000	8983249.699
11	n-Octadecane (C18)	2	10.00000	8690311.431
12	Phytane	2	10.00000	8193474.169
13	n-Nonadecane (C19)	2	10.00000	8809375.719
14	n-Eicosane (C20)	2	10.00000	8874998.277
15	n-Heneicosane (C21)	2	10.00000	8961282.258
16	n-Docosane (C22)	2	10.00000	9004443.088
17	n-Tricosane (C23)	2	10.00000	9000173.163
18	n-Tetracosane (C24)	2	10.00000	8988313.696
19	n-Pentacosane (C25)	2	10.00000	8881420.406
20	n-Hexacosane (C26)	2	10.00000	9134277.521
21	n-Heptacosane (C27)	2	10.00000	9177573.175
22	n-Octacosane (C28)	2	10.00000	9334318.041
23	n-Nonacosane (C29)	2	10.00000	9303636.888
24	n-Triacontane (C30)	2	10.00000	9335027.340
25	n-Hentriacontane (C31)	2	10.00000	9048824.410
26	n-Dotriacontane (C32)	2	10.00000	9483298.664
27	n-Tritriacontane (C33)	2	10.00000	9231671.900
28	n-tetratriacontane (C34)	2	10.00000	9219497.217
29	n-Pentatriacontane (C35)	2	10.00000	8658726.564
30	n-Hexatriacontane (C36)	2	10.00000	10497934.310
31	n-Heptatriacontane (C37)	2	10.00000	9557180.427
32	n-Octatriacontane (C38)	2	10.00000	9676426.394
33	n-Tetracontane (C40)	2	10.00000	9531221.482
Avg RSF For: C9-C44 Total Petroleum			10.00000	8931803.622

1	n-Nonane (C9)	3	50.00000	42294864.192
2	n-Decane (C10)	3	50.00000	45992434.650
3	n-Undecane (C11)	3	50.00000	46425796.350
4	n-Dodecane (C12)	3	50.00000	47074162.901
5	n-Tridecane (C13)	3	50.00000	47033732.481
6	n-Tetradecane (C14)	3	50.00000	48325987.740
7	n-Pentadecane (C15)	3	50.00000	48466650.425
8	n-Hexadecane (C16)	3	50.00000	47987134.739
9	n-Heptadecane (C17)	3	50.00000	48633325.633
10	Pristane	3	50.00000	49940031.804
11	n-Octadecane (C18)	3	50.00000	49098304.282
12	Phytane	3	50.00000	45776478.960
13	n-Nonadecane (C19)	3	50.00000	49564919.073
14	n-Eicosane (C20)	3	50.00000	49870114.377
15	n-Heneicosane (C21)	3	50.00000	50291211.808
16	n-Docosane (C22)	3	50.00000	50332626.837
17	n-Tricosane (C23)	3	50.00000	50485449.906
18	n-Tetracosane (C24)	3	50.00000	50546443.688
19	n-Pentacosane (C25)	3	50.00000	49745550.353
20	n-Hexacosane (C26)	3	50.00000	51143790.900
21	n-Heptacosane (C27)	3	50.00000	51234380.041
22	n-Octacosane (C28)	3	50.00000	52384821.412
23	n-Nonacosane (C29)	3	50.00000	52248654.220
24	n-Triacontane (C30)	3	50.00000	52541410.957
25	n-Hentriacontane (C31)	3	50.00000	50732462.398
26	n-Dotriacontane (C32)	3	50.00000	53372390.744
27	n-Tritriacontane (C33)	3	50.00000	51955010.192
28	n-tetratriacontane (C34)	3	50.00000	51771065.151
29	n-Pentatriacontane (C35)	3	50.00000	48449649.442
30	n-Hexatriacontane (C36)	3	50.00000	58388194.002
31	n-Heptatriacontane (C37)	3	50.00000	53240198.377
32	n-Octatriacontane (C38)	3	50.00000	53881436.292
33	n-Tetracontane (C40)	3	50.00000	53016704.345
Avg RSF For: C9-C44 Total Petroleum			50.00000	50068042.081

1	n-Nonane (C9)	4	100.00000	76234581.701
2	n-Decane (C10)	4	100.00000	81554233.964
3	n-Undecane (C11)	4	100.00000	82085818.522
4	n-Dodecane (C12)	4	100.00000	83287129.740
5	n-Tridecane (C13)	4	100.00000	83321760.026
6	n-Tetradecane (C14)	4	100.00000	85595539.388
7	n-Pentadecane (C15)	4	100.00000	85963835.457
8	n-Hexadecane (C16)	4	100.00000	85364773.899
9	n-Heptadecane (C17)	4	100.00000	86421243.663
10	Pristane	4	100.00000	88468347.489
11	n-Octadecane (C18)	4	100.00000	87329323.612
12	Phytane	4	100.00000	81131043.397
13	n-Nonadecane (C19)	4	100.00000	87651759.280
14	n-Eicosane (C20)	4	100.00000	88381518.846
15	n-Heneicosane (C21)	4	100.00000	88980710.324
16	n-Docosane (C22)	4	100.00000	89062312.468
17	n-Tricosane (C23)	4	100.00000	89267819.318
18	n-Tetracosane (C24)	4	100.00000	89124227.891
19	n-Pentacosane (C25)	4	100.00000	87813979.474
20	n-Hexacosane (C26)	4	100.00000	90361064.198
21	n-Heptacosane (C27)	4	100.00000	90566635.406
22	n-Octacosane (C28)	4	100.00000	92683260.297
23	n-Nonacosane (C29)	4	100.00000	92433781.730
24	n-Triacontane (C30)	4	100.00000	92984899.236
25	n-Hentriacontane (C31)	4	100.00000	89855875.839
26	n-Dotriacontane (C32)	4	100.00000	94530275.674
27	n-Tritriacontane (C33)	4	100.00000	91915378.529
28	n-tetratriacontane (C34)	4	100.00000	91749013.815
29	n-Pentatriacontane (C35)	4	100.00000	85885953.619
30	n-Hexatriacontane (C36)	4	100.00000	103679164.933
31	n-Heptatriacontane (C37)	4	100.00000	94509377.167
32	n-Octatriacontane (C38)	4	100.00000	95729183.615
33	n-Tetracontane (C40)	4	100.00000	94263508.582
Avg RSF For: C9-C44 Total Petroleum			100.00000	88732949.427

1	n-Nonane (C9)	5	200.00000	142611678.613
2	n-Decane (C10)	5	200.00000	153711734.745
3	n-Undecane (C11)	5	200.00000	155583839.646
4	n-Dodecane (C12)	5	200.00000	158208836.809
5	n-Tridecane (C13)	5	200.00000	158732095.392
6	n-Tetradecane (C14)	5	200.00000	163184688.347
7	n-Pentadecane (C15)	5	200.00000	164285632.793
8	n-Hexadecane (C16)	5	200.00000	163203984.720
9	n-Heptadecane (C17)	5	200.00000	166049332.210
10	Pristane	5	200.00000	168164570.260
11	n-Octadecane (C18)	5	200.00000	167402049.211
12	Phytane	5	200.00000	154486736.770
13	n-Nonadecane (C19)	5	200.00000	167010876.742
14	n-Eicosane (C20)	5	200.00000	168068413.221
15	n-Heneicosane (C21)	5	200.00000	169298800.830
16	n-Docosane (C22)	5	200.00000	169912302.170
17	n-Tricosane (C23)	5	200.00000	170482238.635
18	n-Tetracosane (C24)	5	200.00000	170550296.036
19	n-Pentacosane (C25)	5	200.00000	167996186.202
20	n-Hexacosane (C26)	5	200.00000	172738228.998
21	n-Heptacosane (C27)	5	200.00000	172865555.926
22	n-Octacosane (C28)	5	200.00000	176805496.511
23	n-Nonacosane (C29)	5	200.00000	176268305.672
24	n-Triacontane (C30)	5	200.00000	177343149.990

rfupdate

25	n-Hentriacontane (C31)	5	200.00000	171336916.272
26	n-Dotriacontane (C32)	5	200.00000	180068941.789
27	n-Tritriacontane (C33)	5	200.00000	175463080.397
28	n-tetratriacontane (C34)	5	200.00000	175175845.671
29	n-Pentatriacontane (C35)	5	200.00000	164224191.161
30	n-Hexatriacontane (C36)	5	200.00000	198476373.081
31	n-Heptatriacontane (C37)	5	200.00000	181053979.230
32	n-Octatriacontane (C38)	5	200.00000	183230484.964
33	n-Tetracontane (C40)	5	200.00000	180072982.957
Avg RSF For: C9-C44 Total Petroleum			200.00000	169214176.545

Generating Average Response Factor For: C10-C28 DRO

No	Compound	Level	Conc	Response
1	n-Decane (C10)	1	1.00000	823155.664
2	n-Undecane (C11)	1	1.00000	806257.856
3	n-Dodecane (C12)	1	1.00000	812047.293
4	n-Tridecane (C13)	1	1.00000	817898.067
5	n-Tetradecane (C14)	1	1.00000	841134.836
6	n-Pentadecane (C15)	1	1.00000	844263.767
7	n-Hexadecane (C16)	1	1.00000	824446.216
8	n-Heptadecane (C17)	1	1.00000	826161.752
9	n-Octadecane (C18)	1	1.00000	827896.320
10	n-Nonadecane (C19)	1	1.00000	842136.884
11	n-Eicosane (C20)	1	1.00000	846690.016
12	n-Heneicosane (C21)	1	1.00000	868028.835
13	n-Docosane (C22)	1	1.00000	904694.989
14	n-Tricosane (C23)	1	1.00000	870147.254
15	n-Tetracosane (C24)	1	1.00000	861437.868
16	n-Pentacosane (C25)	1	1.00000	873428.334
17	n-Hexacosane (C26)	1	1.00000	898769.189
18	n-Heptacosane (C27)	1	1.00000	924815.068
19	n-Octacosane (C28)	1	1.00000	928592.545
Avg RSF For: C10-C28 DRO			1.00000	854842.250
1	n-Decane (C10)	2	10.00000	8261750.647
2	n-Undecane (C11)	2	10.00000	8232972.985
3	n-Dodecane (C12)	2	10.00000	8373189.063
4	n-Tridecane (C13)	2	10.00000	8368880.684
5	n-Tetradecane (C14)	2	10.00000	8615410.127
6	n-Pentadecane (C15)	2	10.00000	8619320.918
7	n-Hexadecane (C16)	2	10.00000	8505814.835
8	n-Heptadecane (C17)	2	10.00000	8604272.102
9	n-Octadecane (C18)	2	10.00000	8690311.431
10	n-Nonadecane (C19)	2	10.00000	8809375.719
11	n-Eicosane (C20)	2	10.00000	8874998.277
12	n-Heneicosane (C21)	2	10.00000	8961282.258
13	n-Docosane (C22)	2	10.00000	9004443.088
14	n-Tricosane (C23)	2	10.00000	9000173.163
15	n-Tetracosane (C24)	2	10.00000	8988313.696
16	n-Pentacosane (C25)	2	10.00000	8881420.406
17	n-Hexacosane (C26)	2	10.00000	9134277.521
18	n-Heptacosane (C27)	2	10.00000	9177573.175
19	n-Octacosane (C28)	2	10.00000	9334318.041
Avg RSF For: C10-C28 DRO			10.00000	8759899.902

1	n-Decane (C10)	3	50.00000	45992434.650
2	n-Undecane (C11)	3	50.00000	46425796.350
3	n-Dodecane (C12)	3	50.00000	47074162.901
4	n-Tridecane (C13)	3	50.00000	47033732.481
5	n-Tetradecane (C14)	3	50.00000	48325987.740
6	n-Pentadecane (C15)	3	50.00000	48466650.425
7	n-Hexadecane (C16)	3	50.00000	47987134.739
8	n-Heptadecane (C17)	3	50.00000	48633325.633
9	n-Octadecane (C18)	3	50.00000	49098304.282
10	n-Nonadecane (C19)	3	50.00000	49564919.073
11	n-Eicosane (C20)	3	50.00000	49870114.377
12	n-Heneicosane (C21)	3	50.00000	50291211.808
13	n-Docosane (C22)	3	50.00000	50332626.837
14	n-Tricosane (C23)	3	50.00000	50485449.906
15	n-Tetracosane (C24)	3	50.00000	50546443.688
16	n-Pentacosane (C25)	3	50.00000	49745550.353
17	n-Hexacosane (C26)	3	50.00000	51143790.900
18	n-Heptacosane (C27)	3	50.00000	51234380.041
19	n-Octacosane (C28)	3	50.00000	52384821.412
Avg RSF For: C10-C28 DRO			50.00000	49191412.505

1	n-Decane (C10)	4	100.00000	81554233.964
2	n-Undecane (C11)	4	100.00000	82085818.522
3	n-Dodecane (C12)	4	100.00000	83287129.740
4	n-Tridecane (C13)	4	100.00000	83321760.026
5	n-Tetradecane (C14)	4	100.00000	85595539.388
6	n-Pentadecane (C15)	4	100.00000	85963835.457
7	n-Hexadecane (C16)	4	100.00000	85364773.899
8	n-Heptadecane (C17)	4	100.00000	86421243.663
9	n-Octadecane (C18)	4	100.00000	87329323.612
10	n-Nonadecane (C19)	4	100.00000	87651759.280
11	n-Eicosane (C20)	4	100.00000	88381518.846
12	n-Heneicosane (C21)	4	100.00000	88980710.324
13	n-Docosane (C22)	4	100.00000	89062312.468
14	n-Tricosane (C23)	4	100.00000	89267819.318
15	n-Tetracosane (C24)	4	100.00000	89124227.891
16	n-Pentacosane (C25)	4	100.00000	87813979.474
17	n-Hexacosane (C26)	4	100.00000	90361064.198
18	n-Heptacosane (C27)	4	100.00000	90566635.406
19	n-Octacosane (C28)	4	100.00000	92683260.297
Avg RSF For: C10-C28 DRO			100.00000	87095628.725

1	n-Decane (C10)	5	200.00000	153711734.745
2	n-Undecane (C11)	5	200.00000	155583839.646
3	n-Dodecane (C12)	5	200.00000	158208836.809
4	n-Tridecane (C13)	5	200.00000	158732095.392
5	n-Tetradecane (C14)	5	200.00000	163184688.347
6	n-Pentadecane (C15)	5	200.00000	164285632.793
7	n-Hexadecane (C16)	5	200.00000	163203984.720
8	n-Heptadecane (C17)	5	200.00000	166049332.210
9	n-Octadecane (C18)	5	200.00000	167402049.211
10	n-Nonadecane (C19)	5	200.00000	167010876.742
11	n-Eicosane (C20)	5	200.00000	168068413.221
12	n-Heneicosane (C21)	5	200.00000	169298800.830
13	n-Docosane (C22)	5	200.00000	169912302.170
14	n-Tricosane (C23)	5	200.00000	170482238.635
15	n-Tetracosane (C24)	5	200.00000	170550296.036

rfupdate

16	n-Pentacosane (C25)	5	200.00000	167996186.202
17	n-Hexacosane (C26)	5	200.00000	172738228.998
18	n-Heptacosane (C27)	5	200.00000	172865555.926
19	n-Octacosane (C28)	5	200.00000	176805496.511
Avg RSF For: C10-C28 DRO			200.00000	166110031.008

Generating Average Response Factor For: C28-C40 ORO

No	Compound	Level	Conc	Response
1	n-Octacosane (C28)	1	1.00000	928592.545
2	n-Nonacosane (C29)	1	1.00000	909776.954
3	n-Triacontane (C30)	1	1.00000	925987.077
4	n-Hentriacontane (C31)	1	1.00000	907693.654
5	n-Dotriacontane (C32)	1	1.00000	938130.708
6	n-Tritriacontane (C33)	1	1.00000	915034.108
7	n-tetratriacontane (C34)	1	1.00000	925582.139
8	n-Pentatriacontane (C35)	1	1.00000	877988.551
9	n-Hexatriacontane (C36)	1	1.00000	1036656.743
10	n-Heptatriacontane (C37)	1	1.00000	940847.834
11	n-Octatriacontane (C38)	1	1.00000	952233.408
12	n-Nonatriacontane (C39)	1	1.00000	944012.466
13	n-Tetracontane (C40)	1	1.00000	944012.466
Avg RSF For: C28-C40 ORO			1.00000	934349.896
1	n-Octacosane (C28)	2	10.00000	9334318.041
2	n-Nonacosane (C29)	2	10.00000	9303636.888
3	n-Triacontane (C30)	2	10.00000	9335027.340
4	n-Hentriacontane (C31)	2	10.00000	9048824.410
5	n-Dotriacontane (C32)	2	10.00000	9483298.664
6	n-Tritriacontane (C33)	2	10.00000	9231671.900
7	n-tetratriacontane (C34)	2	10.00000	9219497.217
8	n-Pentatriacontane (C35)	2	10.00000	8658726.564
9	n-Hexatriacontane (C36)	2	10.00000	10497934.310
10	n-Heptatriacontane (C37)	2	10.00000	9557180.427
11	n-Octatriacontane (C38)	2	10.00000	9676426.394
12	n-Nonatriacontane (C39)	2	10.00000	9531221.482
13	n-Tetracontane (C40)	2	10.00000	9531221.482
Avg RSF For: C28-C40 ORO			10.00000	9416075.778
1	n-Octacosane (C28)	3	50.00000	52384821.412
2	n-Nonacosane (C29)	3	50.00000	52248654.220
3	n-Triacontane (C30)	3	50.00000	52541410.957
4	n-Hentriacontane (C31)	3	50.00000	50732462.398
5	n-Dotriacontane (C32)	3	50.00000	53372390.744
6	n-Tritriacontane (C33)	3	50.00000	51955010.192
7	n-tetratriacontane (C34)	3	50.00000	51771065.151
8	n-Pentatriacontane (C35)	3	50.00000	48449649.442
9	n-Hexatriacontane (C36)	3	50.00000	58388194.002
10	n-Heptatriacontane (C37)	3	50.00000	53240198.377
11	n-Octatriacontane (C38)	3	50.00000	53881436.292
12	n-Nonatriacontane (C39)	3	50.00000	53016704.345
13	n-Tetracontane (C40)	3	50.00000	53016704.345
Avg RSF For: C28-C40 ORO			50.00000	52692207.837

1	n-Octacosane (C28)	4	100.00000	92683260.297
2	n-Nonacosane (C29)	4	100.00000	92433781.730
3	n-Triacontane (C30)	4	100.00000	92984899.236
4	n-Hentriacontane (C31)	4	100.00000	89855875.839
5	n-Dotriacontane (C32)	4	100.00000	94530275.674
6	n-Tritriacontane (C33)	4	100.00000	91915378.529
7	n-tetratriacontane (C34)	4	100.00000	91749013.815
8	n-Pentatriacontane (C35)	4	100.00000	85885953.619
9	n-Hexatriacontane (C36)	4	100.00000	103679164.933
10	n-Heptatriacontane (C37)	4	100.00000	94509377.167
11	n-Octatriacontane (C38)	4	100.00000	95729183.615
12	n-Nonatriacontane (C39)	4	100.00000	94263508.582
13	n-Tetracontane (C40)	4	100.00000	94263508.582
Avg RSF For: C28-C40 ORO			100.00000	93421783.201

1	n-Octacosane (C28)	5	200.00000	176805496.511
2	n-Nonacosane (C29)	5	200.00000	176268305.672
3	n-Triacontane (C30)	5	200.00000	177343149.990
4	n-Hentriacontane (C31)	5	200.00000	171336916.272
5	n-Dotriacontane (C32)	5	200.00000	180068941.789
6	n-Tritriacontane (C33)	5	200.00000	175463080.397
7	n-tetratriacontane (C34)	5	200.00000	175175845.671
8	n-Pentatriacontane (C35)	5	200.00000	164224191.161
9	n-Hexatriacontane (C36)	5	200.00000	198476373.081
10	n-Heptatriacontane (C37)	5	200.00000	181053979.230
11	n-Octatriacontane (C38)	5	200.00000	183230484.964
12	n-Nonatriacontane (C39)	5	200.00000	180072982.957
13	n-Tetracontane (C40)	5	200.00000	180072982.957
Avg RSF For: C28-C40 ORO			200.00000	178430210.050

Generating Reference Response Factors

No	Compound	No	Refrence Compound
8	1380	9	n-Tetradecane (C14)
10	1470	11	n-Pentadecane (C15)
13	1650	14	n-Heptadecane (C17)
40	n-Nonatriacontane (C39)	41	n-Tetracontane (C40)
43	C9-C40 Total Petroleum Hydrocarbons	42	C9-C44 Total Petroleum Hydrocarbons
46	Total Resolved Hydrocarbons	42	C9-C44 Total Petroleum Hydrocarbons

Abacus Response Factor Update Macro Ver. 1.0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921013.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 01:25
Operator : FID18:WR
Sample : I1803192101R
Misc : WG1479204,FRBC80
ALS Vial : 57 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 10:55:43 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 10:50:25 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.354	42738323	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.321	1019065	1.085 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	2.17%#
24) s	d50-Tetracosane	35.955	811446	1.083 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	2.17%#
	Target Compounds			
2) t	n-Octane (C8)	5.656	707010	1.015 ug/mL M4
3) t	n-Nonane (C9)	7.896	779230	1.079 ug/mL M4
4) t	n-Decane (C10)	10.393	823156	1.086 ug/mL M4
5) t	n-Undecane (C11)	12.906	806258	1.066 ug/mL M4
6) t	n-Dodecane (C12)	15.331	812047	1.056 ug/mL M4
7) t	n-Tridecane (C13)	17.635	817898	1.057 ug/mL M4
9) t	n-Tetradecane (C14)	19.814	841135	1.057 ug/mL M4
11) t	n-Pentadecane (C15)	21.876	844264	1.049 ug/mL M4
12) t	n-Hexadecane (C16)	23.829	824446	1.030 ug/mL M4
14) t	n-Heptadecane (C17)	25.684	826162	1.018 ug/mL M4
15) t	Pristane	25.794	897113	1.073 ug/mL M4
16) t	n-Octadecane (C18)	27.448	827896	1.001 ug/mL M4
17) t	Phytane	27.611	810395	1.049 ug/mL M4
18) t	n-Nonadecane (C19)	29.129	842137	1.015 ug/mL M4
20) t	n-Eicosane (C20)	30.733	846690	1.012 ug/mL M4
21) t	n-Heneicosane (C21)	32.267	868029	1.032 ug/mL M4
22) t	n-Docosane (C22)	33.735	904695	1.074 ug/mL M4
23) t	n-Tricosane (C23)	35.144	870147	1.029 ug/mL M4
25) t	n-Tetracosane (C24)	36.498	861438	1.023 ug/mL M4
26) t	n-Pentacosane (C25)	37.799	873428	1.057 ug/mL M4
27) t	n-Hexacosane (C26)	39.054	898769	1.060 ug/mL M4
28) t	n-Heptacosane (C27)	40.263	924815	1.091 ug/mL M4
29) t	n-Octacosane (C28)	41.430	928593	1.073 ug/mL M4
30) t	n-Nonacosane (C29)	42.558	909777	1.058 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921013.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 01:25
Operator : FID18:WR
Sample : I1803192101R
Misc : WG1479204,FRBC80
ALS Vial : 57 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 10:55:43 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 10:50:25 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

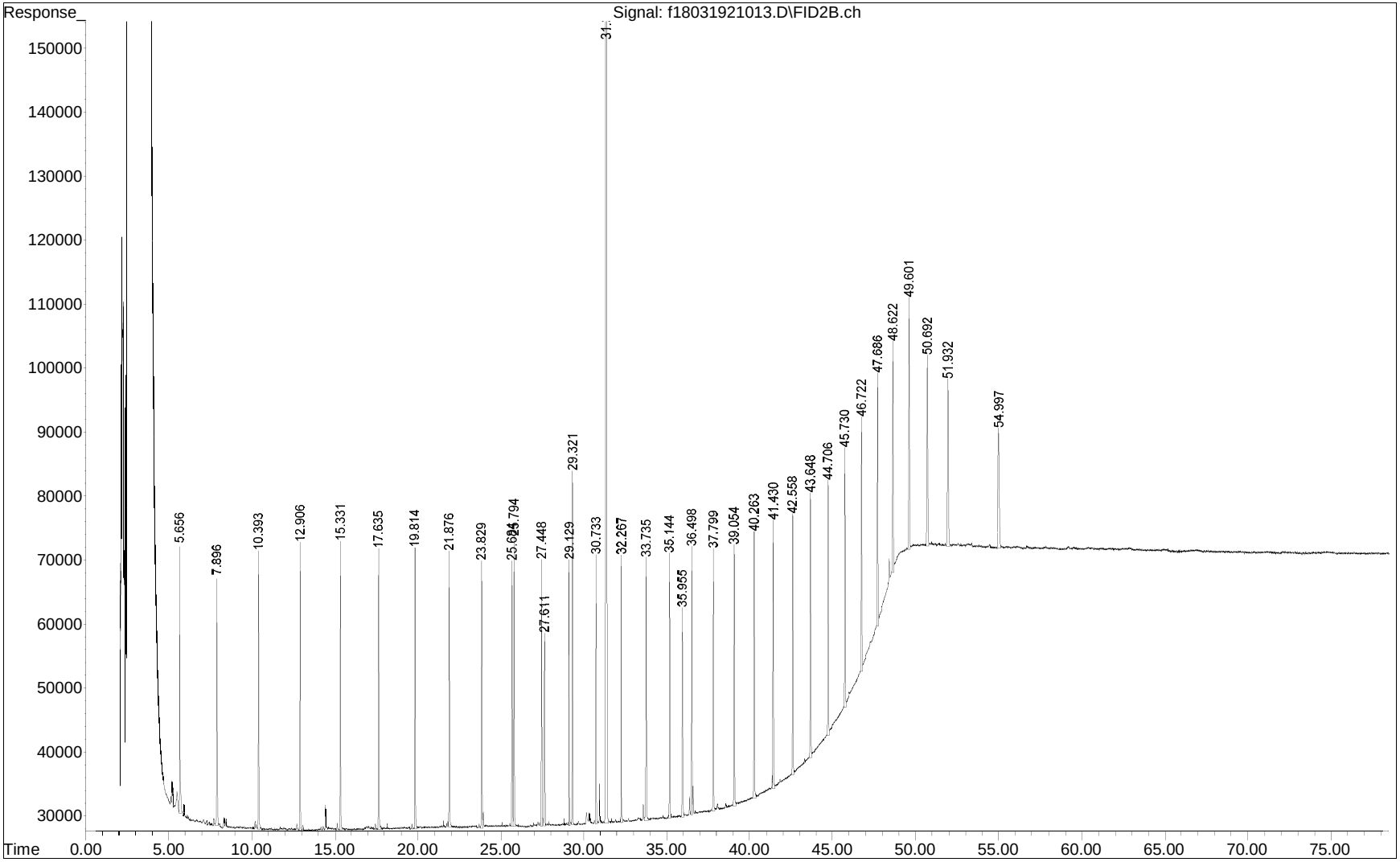
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.648	925987	1.075 ug/mL M4
32) t	n-Hentriacontane (C31)	44.706	907694	1.093 ug/mL M4
33) t	n-Dotriacontane (C32)	45.730	938131	1.078 ug/mL M4
34) t	n-Tritriacontane (C33)	46.722	915034	1.083 ug/mL M4
35) t	n-tetratriacontane (C34)	47.686	925582	1.102 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.622	877989	1.117 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.601	1036657	1.090 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.692	940848	1.086 ug/mL M4
39) t	n-Octatriacontane (C38)	51.932	952233	1.085 ug/mL M4
41) t	n-Tetracontane (C40)	54.997	944012	1.074 ug/mL M4

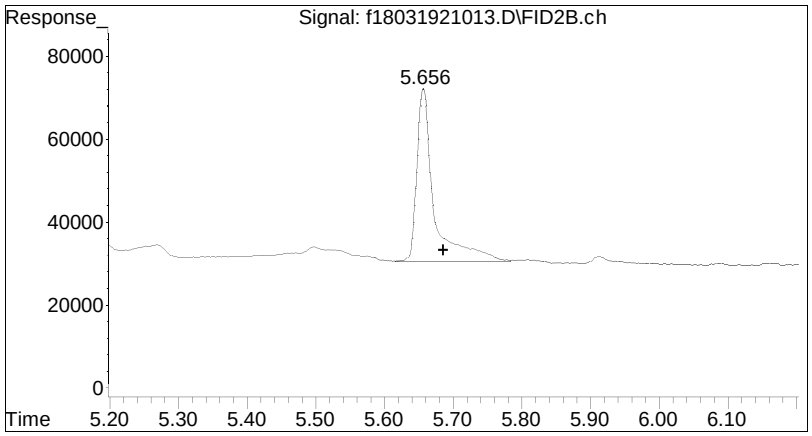
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

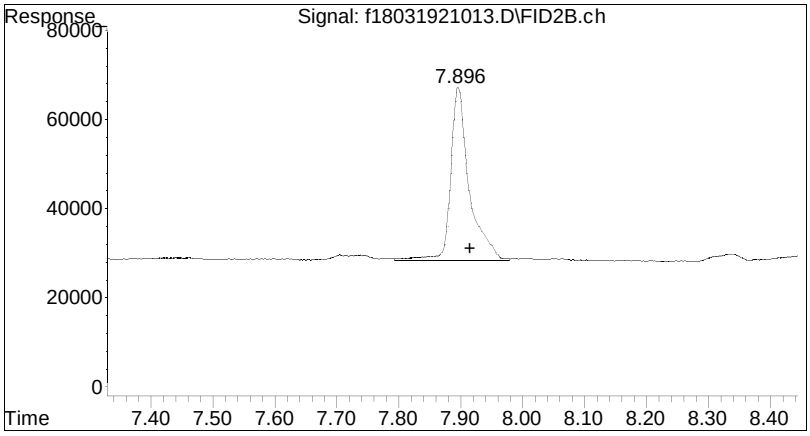
File :O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\f18031921013.D
Operator : FID18:WR
Acquired : 20 Mar 2021 01:25 using AcqMethod FID18.M
Sample Name: I1803192101R
Instrument: FID 18
Misc Info : WG1479204,FRBC80
Vial Number: 57
CurrentMeth: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M





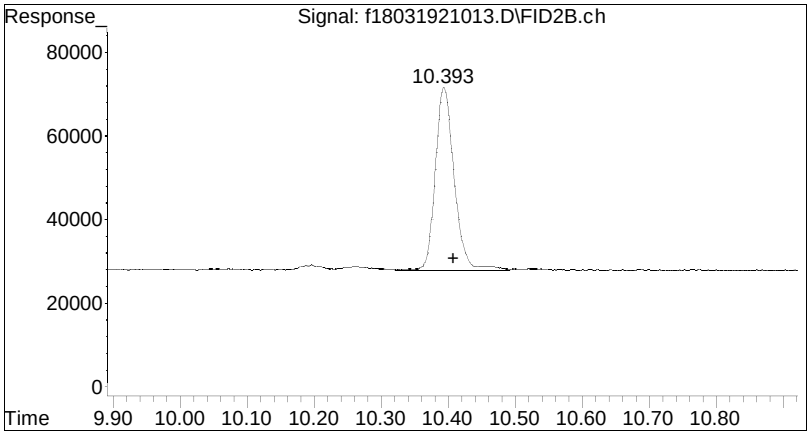
#2 n-Octane (C8)

R.T.:	5.656 min
Delta R.T.:	-0.030 min
Response:	707010
Conc:	1.02 ug/mL M4



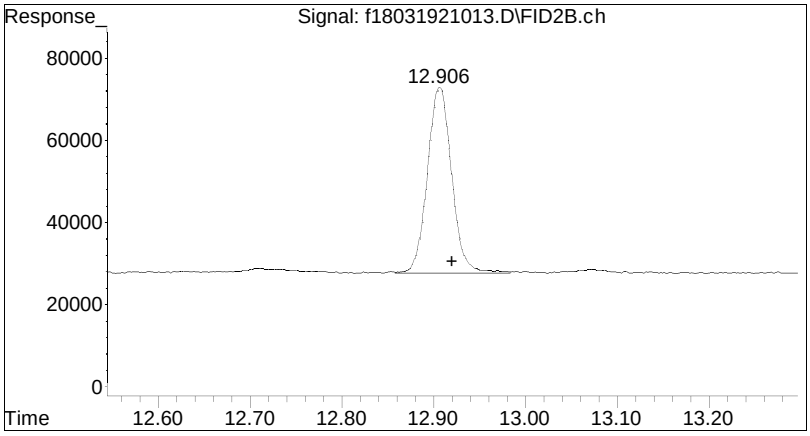
#3 n-Nonane (C9)

R.T.:	7.896 min
Delta R.T.:	-0.019 min
Response:	779230
Conc:	1.08 ug/mL M4



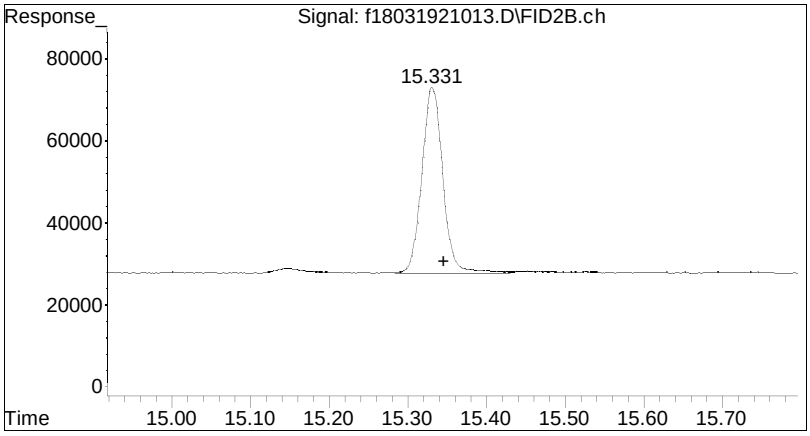
#4 n-Decane (C10)

R.T.:	10.393 min
Delta R.T.:	-0.015 min
Response:	823156
Conc:	1.09 ug/mL M4



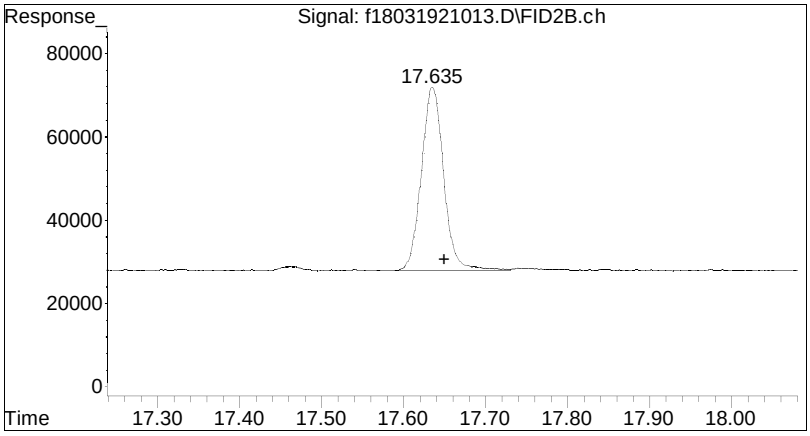
#5 n-Undecane (C11)

R.T.:	12.906 min
Delta R.T.:	-0.014 min
Response:	806258
Conc:	1.07 ug/mL M4



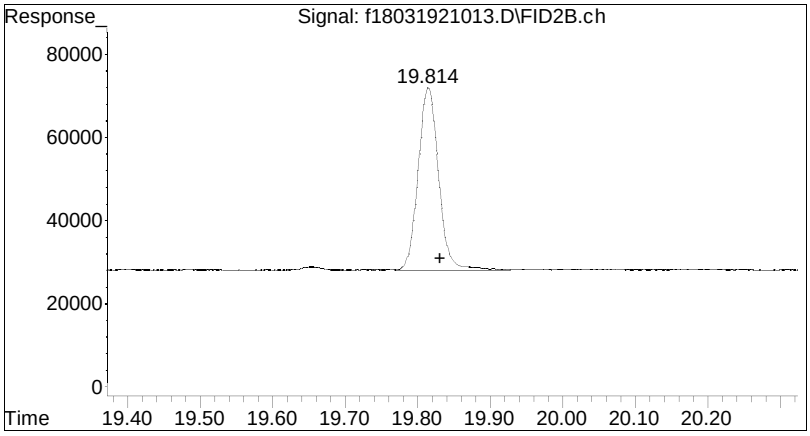
#6 n-Dodecane (C12)

R.T.:	15.331 min
Delta R.T.:	-0.015 min
Response:	812047
Conc:	1.06 ug/mL M4



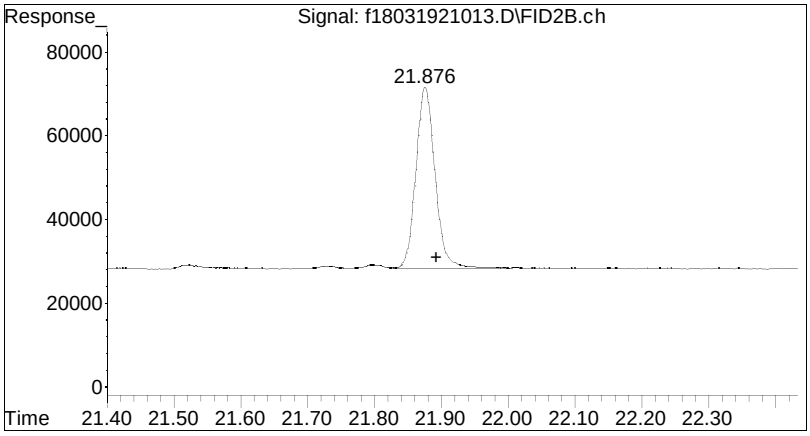
#7 n-Tridecane (C13)

R.T.:	17.635 min
Delta R.T.:	-0.015 min
Response:	817898
Conc:	1.06 ug/mL M4



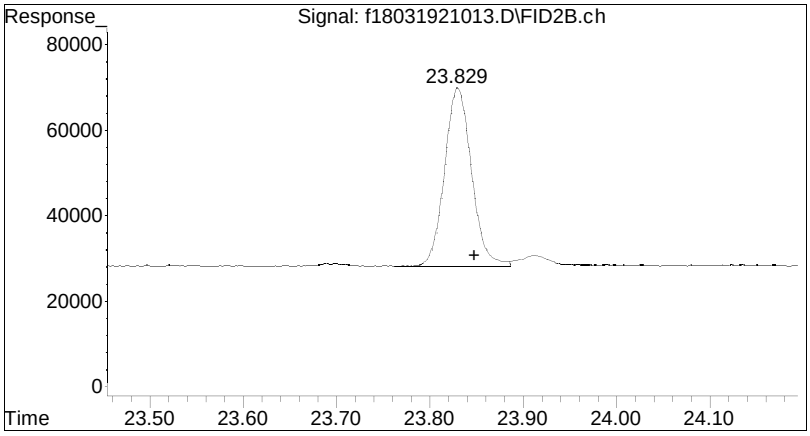
#9 n-Tetradecane (C14)

R.T.:	19.814 min
Delta R.T.:	-0.017 min
Response:	841135
Conc:	1.06 ug/mL M4



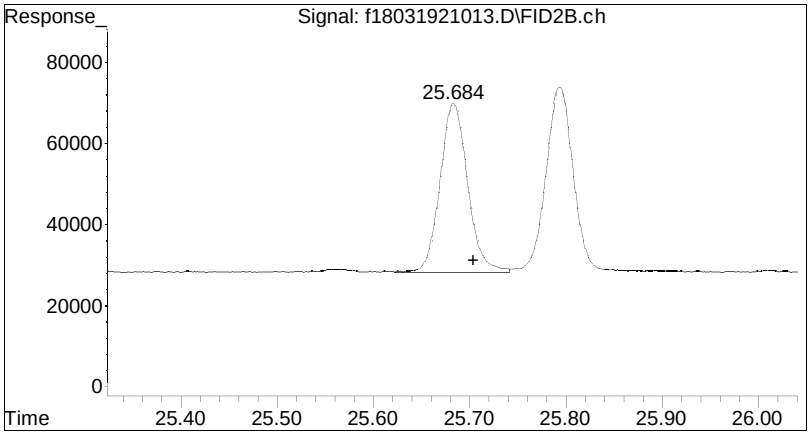
#11 n-Pentadecane (C15)

R.T.:	21.876 min
Delta R.T.:	-0.017 min
Response:	844264
Conc:	1.05 ug/mL M4



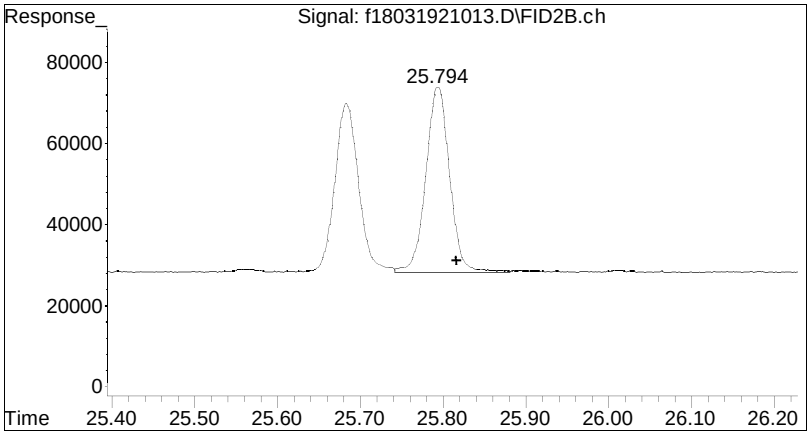
#12 n-Hexadecane (C16)

R.T.:	23.829 min
Delta R.T.:	-0.019 min
Response:	824446
Conc:	1.03 ug/mL M4



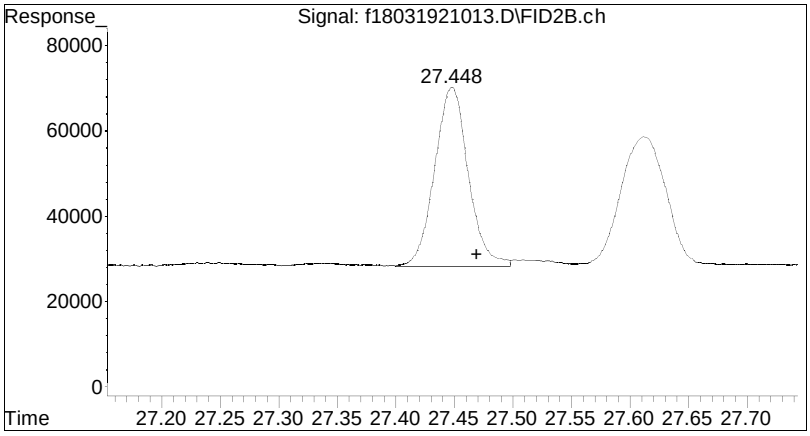
#14 n-Heptadecane (C17)

R.T.:	25.684 min
Delta R.T.:	-0.020 min
Response:	826162
Conc:	1.02 ug/mL M4



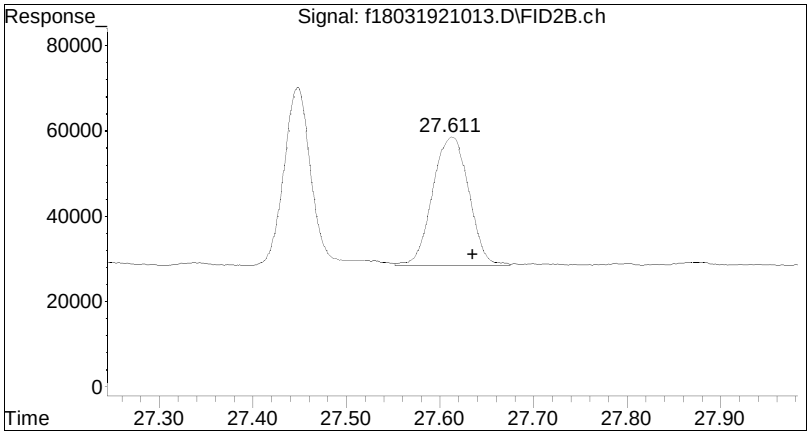
#15 Pristane

R.T.:	25.794 min
Delta R.T.:	-0.022 min
Response:	897113
Conc:	1.07 ug/mL M4



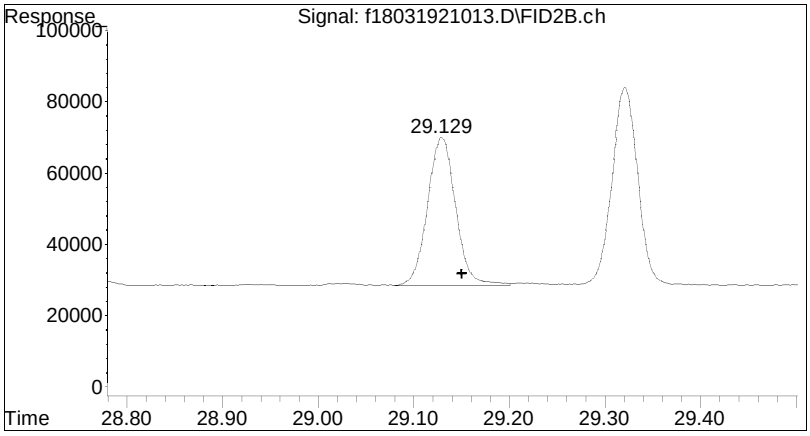
#16 n-Octadecane (C18)

R.T.:	27.448 min
Delta R.T.:	-0.021 min
Response:	827896
Conc:	1.00 ug/mL M4



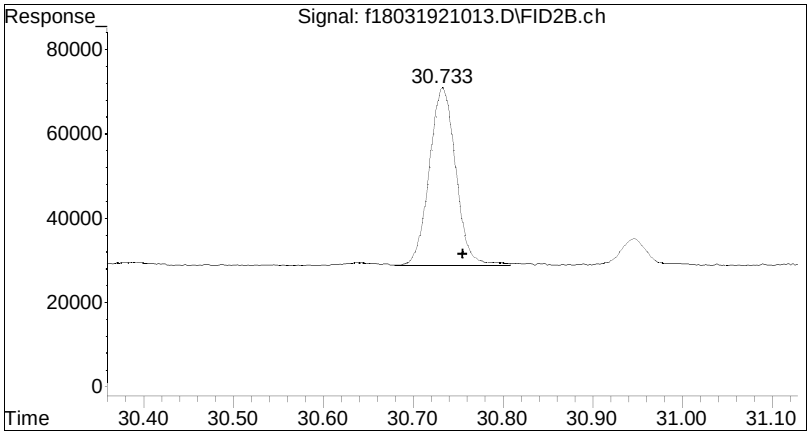
#17 Phytane

R.T.:	27.611 min
Delta R.T.:	-0.024 min
Response:	810395
Conc:	1.05 ug/mL M4



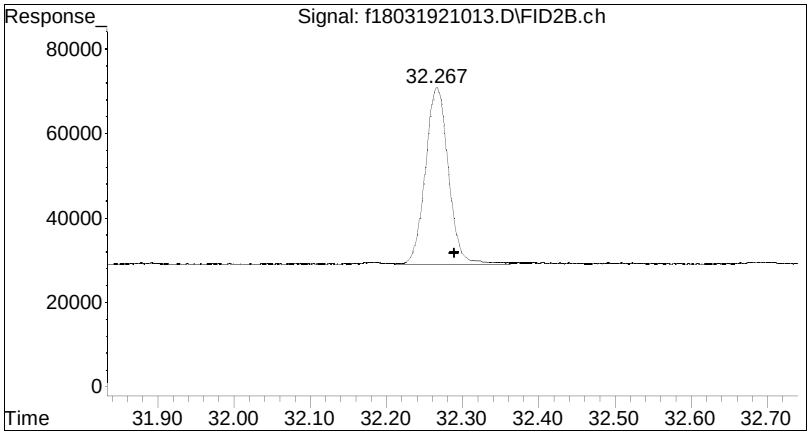
#18 n-Nonadecane (C19)

R.T.:	29.129 min
Delta R.T.:	-0.022 min
Response:	842137
Conc:	1.02 ug/mL M4



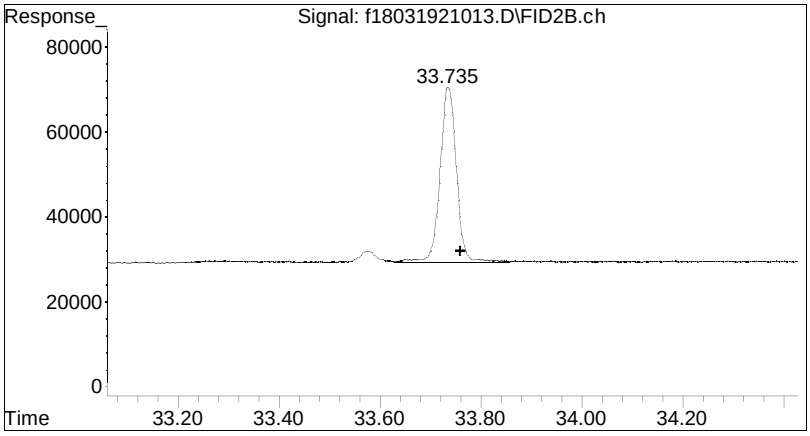
#20 n-Eicosane (C20)

R.T.:	30.733 min
Delta R.T.:	-0.023 min
Response:	846690
Conc:	1.01 ug/mL M4



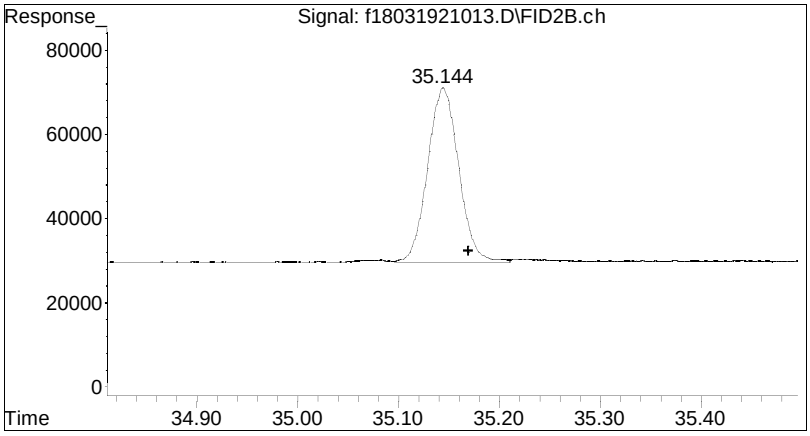
#21 n-Heneicosane (C21)

R.T.:	32.267 min
Delta R.T.:	-0.022 min
Response:	868029
Conc:	1.03 ug/mL M4



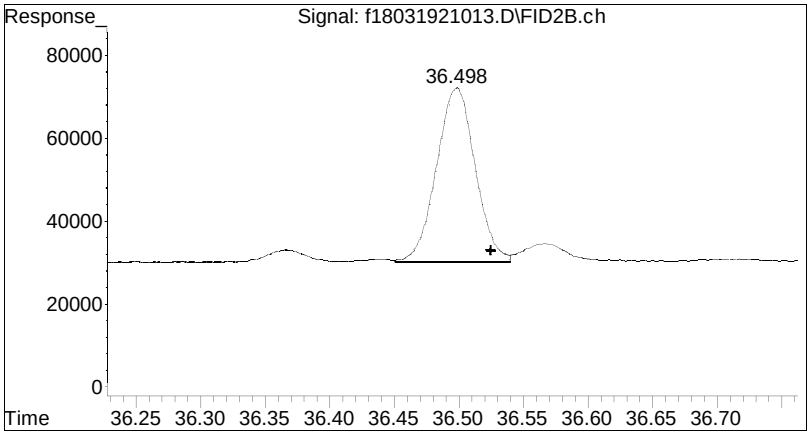
#22 n-Docosane (C22)

R.T.:	33.735 min
Delta R.T.:	-0.024 min
Response:	904695
Conc:	1.07 ug/mL M4



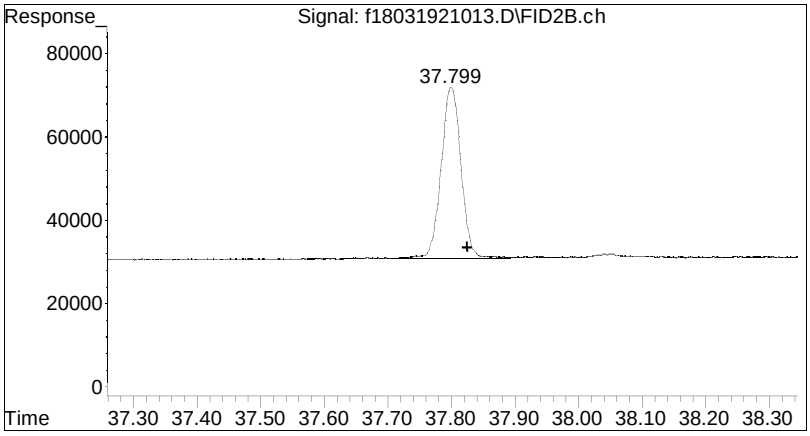
#23 n-Tricosane (C23)

R.T.:	35.144 min
Delta R.T.:	-0.025 min
Response:	870147
Conc:	1.03 ug/mL M4



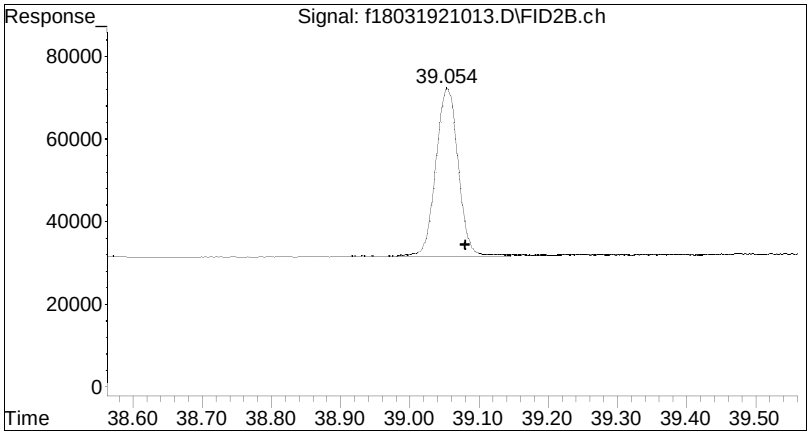
#25 n-Tetracosane (C24)

R.T.:	36.498 min
Delta R.T.:	-0.027 min
Response:	861438
Conc:	1.02 ug/mL M4



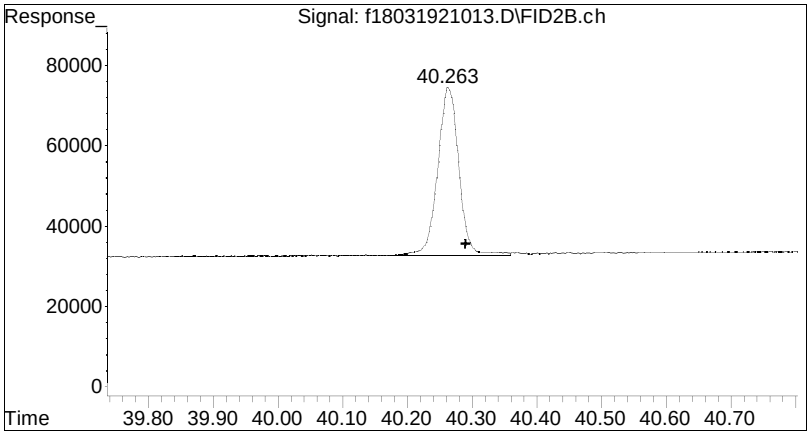
#26 n-Pentacosane (C25)

R.T.:	37.799 min
Delta R.T.:	-0.026 min
Response:	873428
Conc:	1.06 ug/mL M4



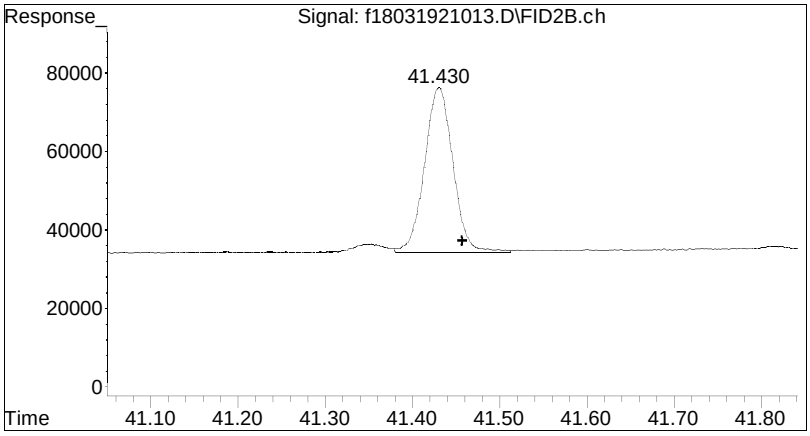
#27 n-Hexacosane (C26)

R.T.:	39.054 min
Delta R.T.:	-0.026 min
Response:	898769
Conc:	1.06 ug/mL M4



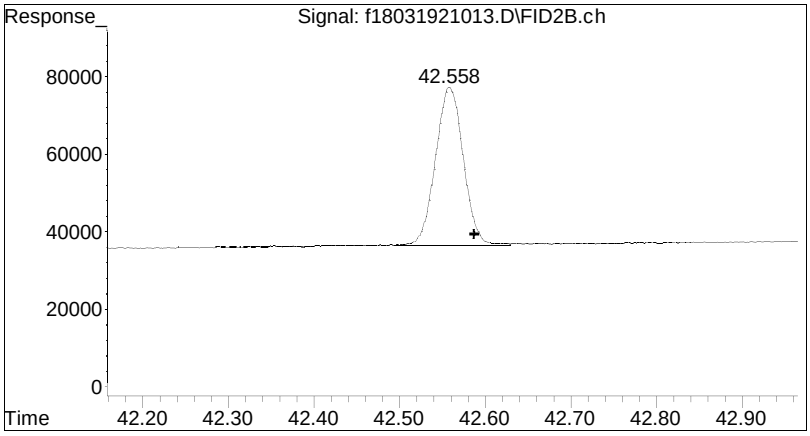
#28 n-Heptacosane (C27)

R.T.:	40.263 min
Delta R.T.:	-0.027 min
Response:	924815
Conc:	1.09 ug/mL M4



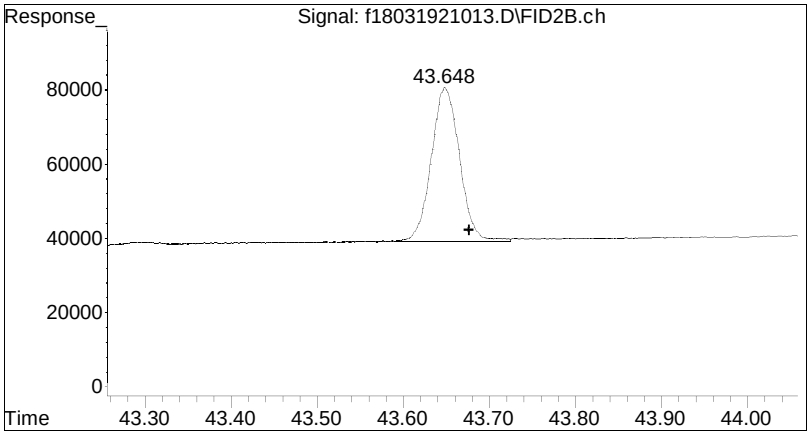
#29 n-Octacosane (C28)

R.T.:	41.430 min
Delta R.T.:	-0.027 min
Response:	928593
Conc:	1.07 ug/mL M4



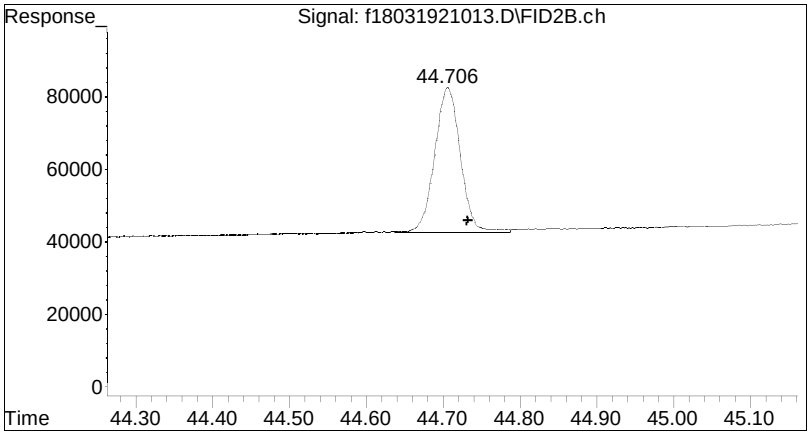
#30 n-Nonacosane (C29)

R.T.:	42.558 min
Delta R.T.:	-0.029 min
Response:	909777
Conc:	1.06 ug/mL M4



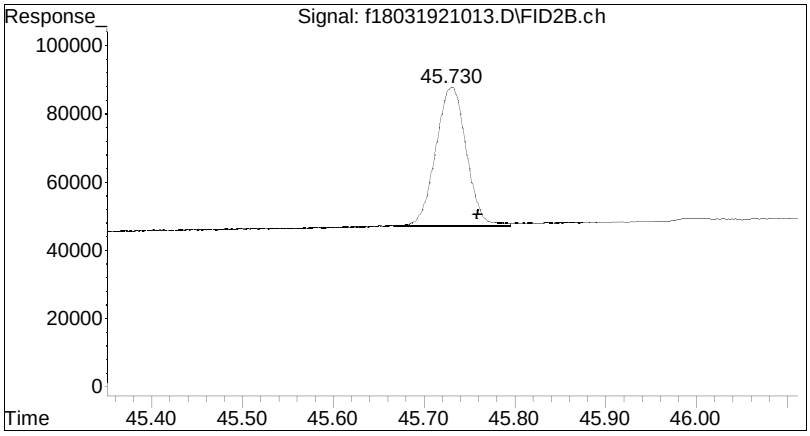
#31 n-Triacontane (C30)

R.T.:	43.648 min
Delta R.T.:	-0.028 min
Response:	925987
Conc:	1.07 ug/mL M4



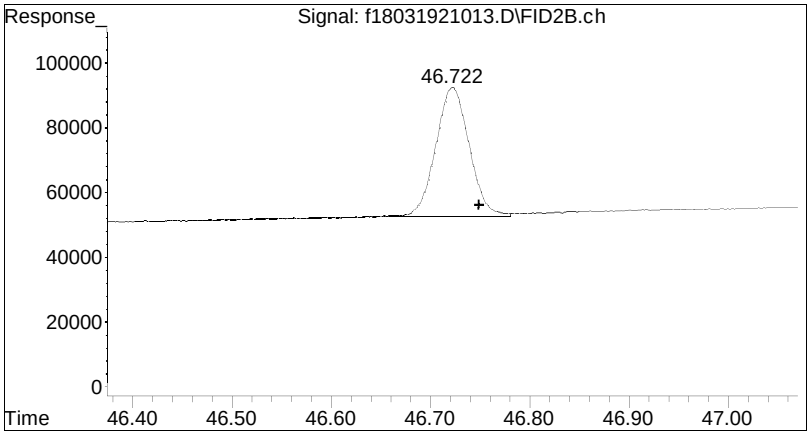
#32 n-Hentriacontane (C31)

R.T.:	44.706 min
Delta R.T.:	-0.026 min
Response:	907694
Conc:	1.09 ug/mL M4



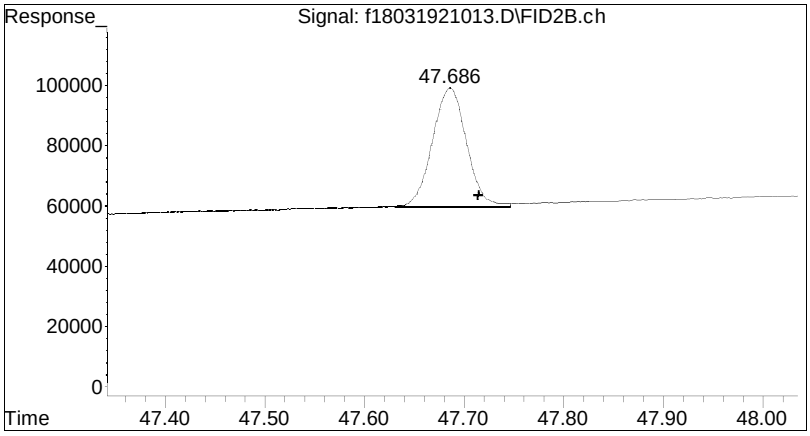
#33 n-Dotriacontane (C32)

R.T.:	45.730 min
Delta R.T.:	-0.029 min
Response:	938131
Conc:	1.08 ug/mL M4



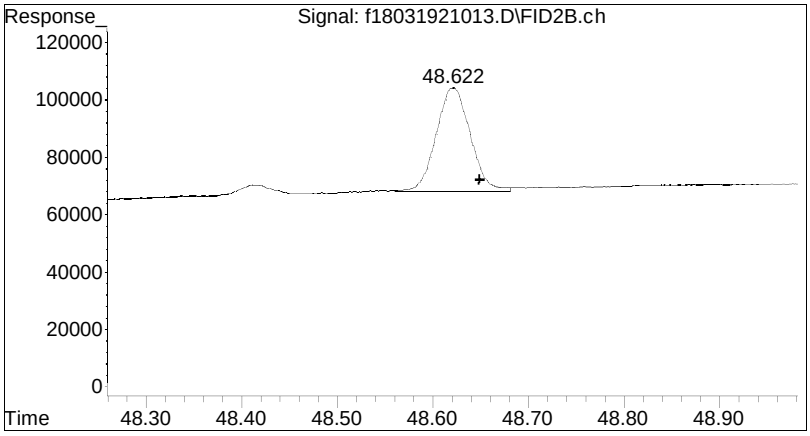
#34 n-Tritriacontane (C33)

R.T.:	46.722 min
Delta R.T.:	-0.027 min
Response:	915034
Conc:	1.08 ug/mL M4



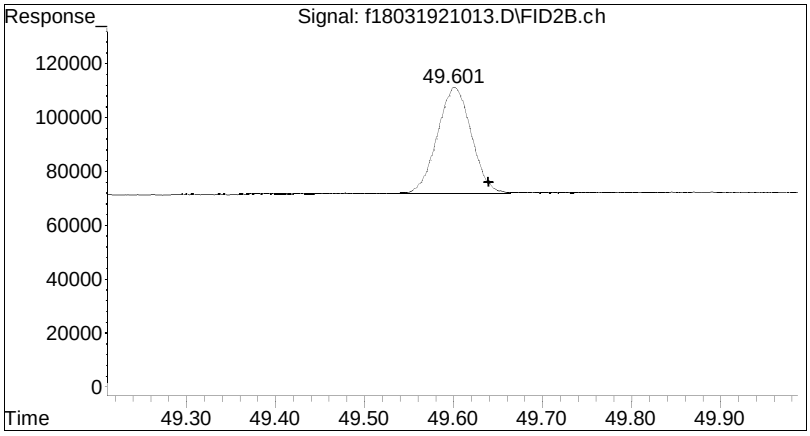
#35 n-tetratriacontane (C34)

R.T.:	47.686 min
Delta R.T.:	-0.029 min
Response:	925582
Conc:	1.10 ug/mL M4



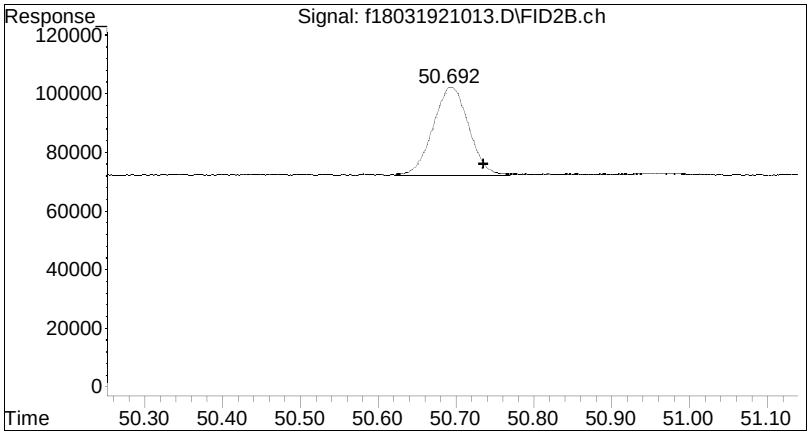
#36 n-Pentatriacontane (C35)

R.T.:	48.622 min
Delta R.T.:	-0.027 min
Response:	877989
Conc:	1.12 ug/mL M4



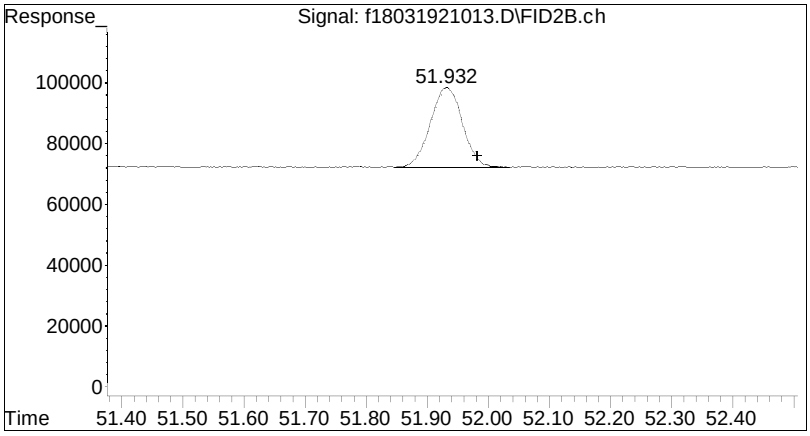
#37 n-Hexatriacontane (C36)

R.T.:	49.601 min
Delta R.T.:	-0.038 min
Response:	1036657
Conc:	1.09 ug/mL M4



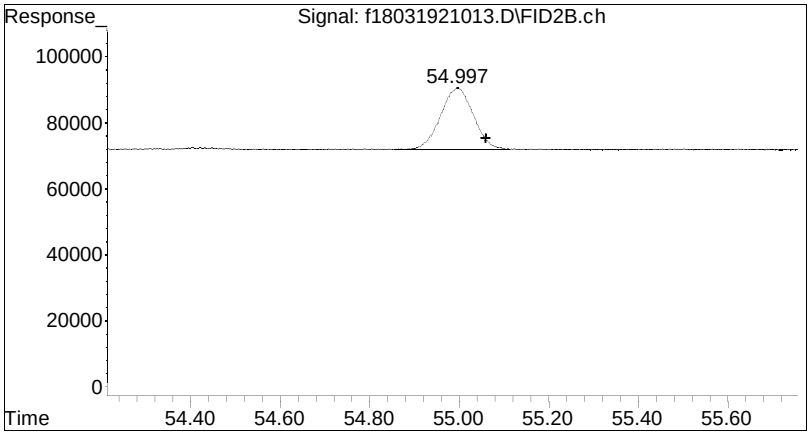
#38 n-Heptatriacontane (C37)

R.T.:	50.692 min
Delta R.T.:	-0.043 min
Response:	940848
Conc:	1.09 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.:	51.932 min
Delta R.T.:	-0.049 min
Response:	952233
Conc:	1.09 ug/mL M4



#41 n-Tetracontane (C40)

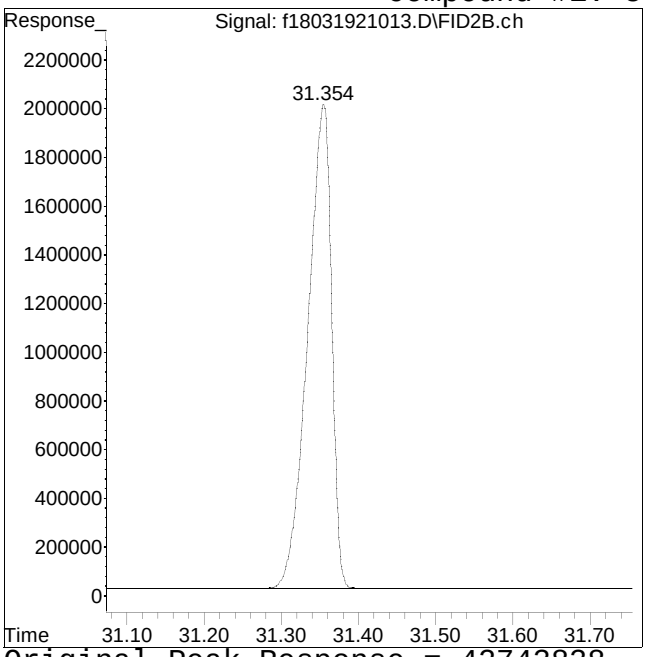
R.T.:	54.997 min
Delta R.T.:	-0.063 min
Response:	944012
Conc:	1.07 ug/mL M4

Manual Integration/Negative Proof Report

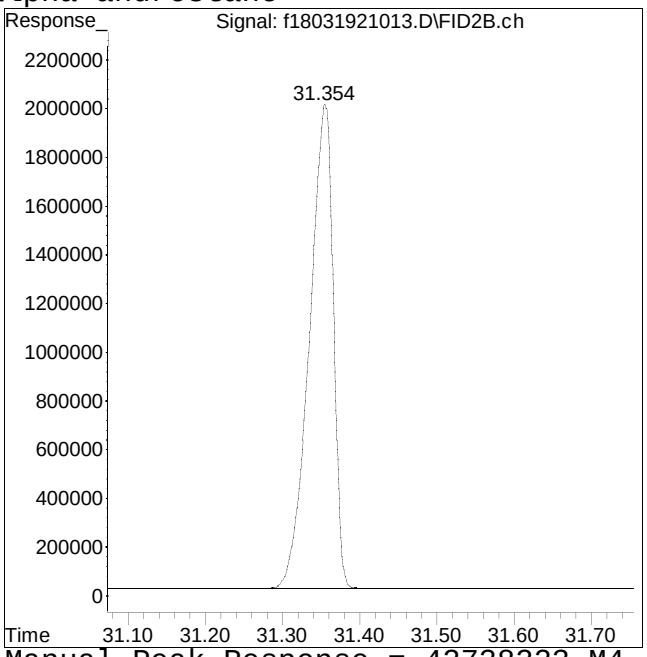
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #1: 5-alpha-androstane



Original Peak Response = 42743838



Manual Peak Response = 42738323 M4

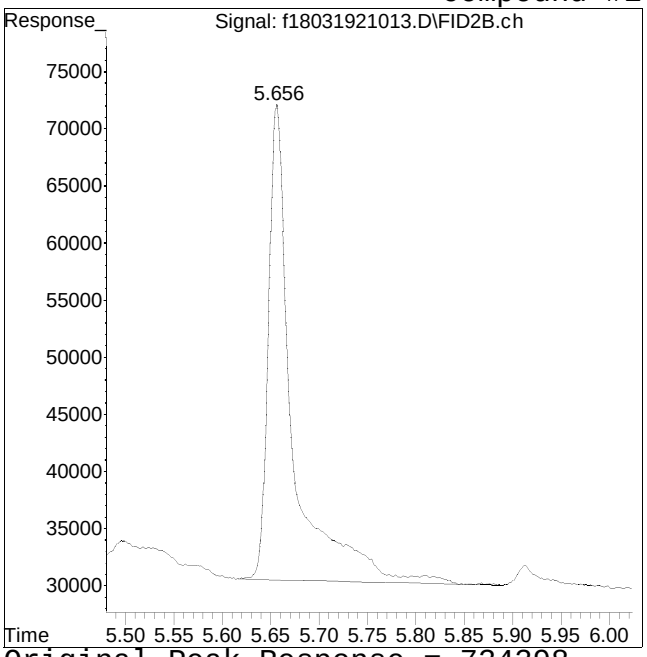
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

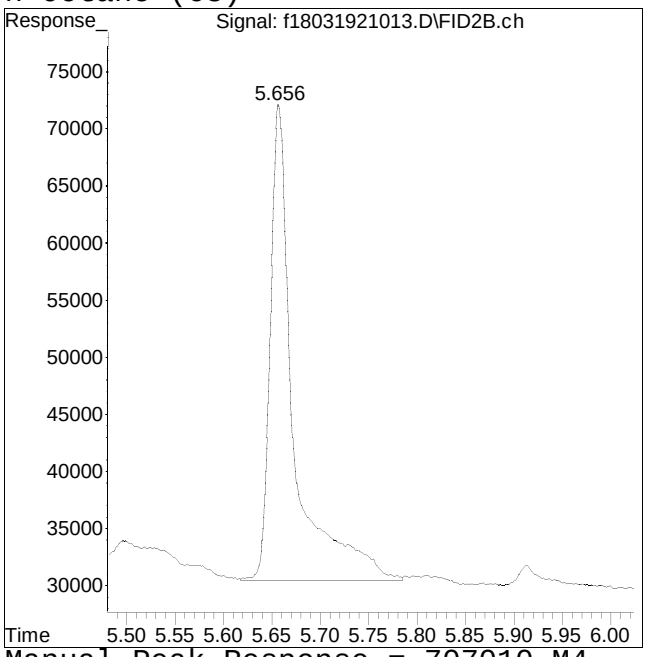
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #2: n-Octane (C8)



Original Peak Response = 734398



Manual Peak Response = 707010 M4

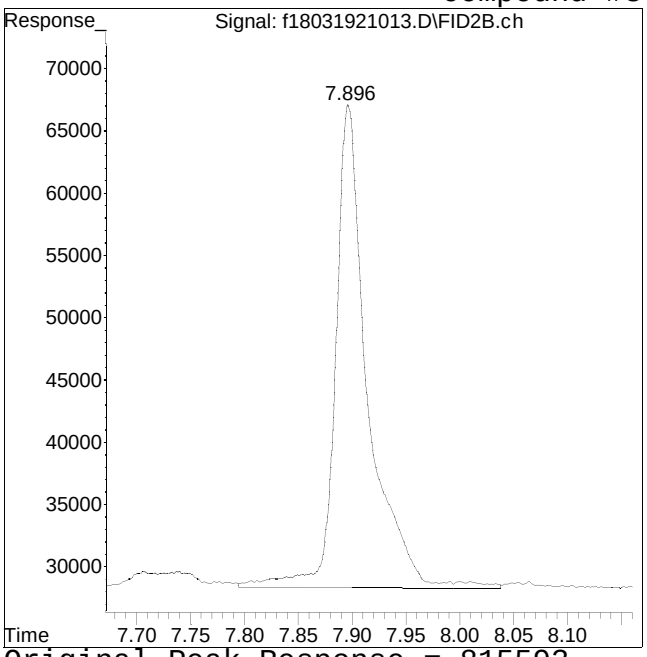
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

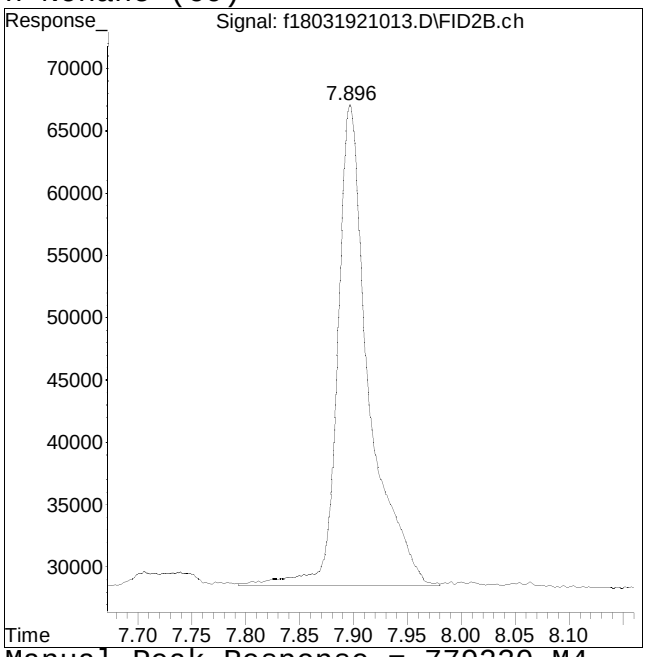
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #3: n-Nonane (C9)



Original Peak Response = 815593



Manual Peak Response = 779230 M4

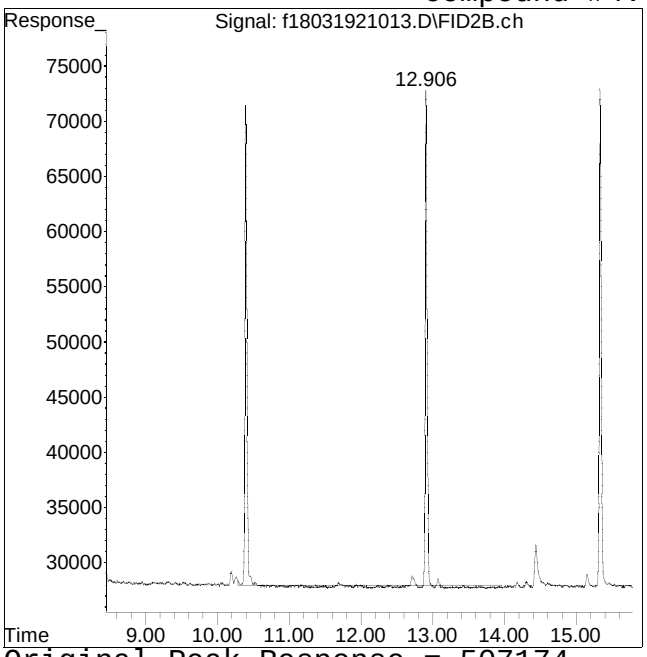
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

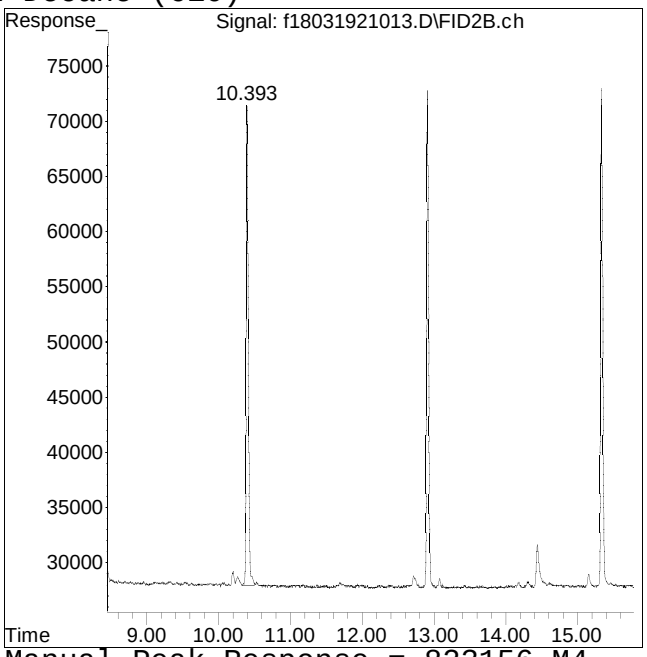
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #4: n-Decane (C10)



Original Peak Response = 507174



Manual Peak Response = 823156 M4

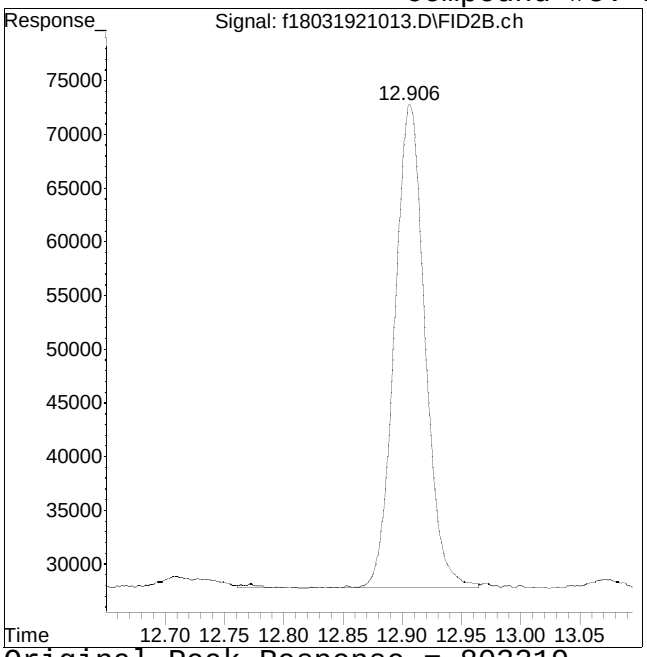
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

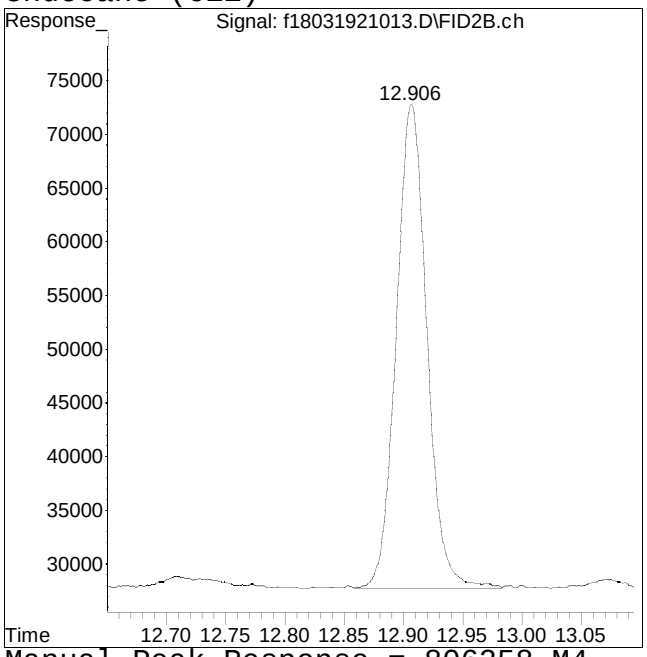
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #5: n-Undecane (C11)



Original Peak Response = 803319



Manual Peak Response = 806258 M4

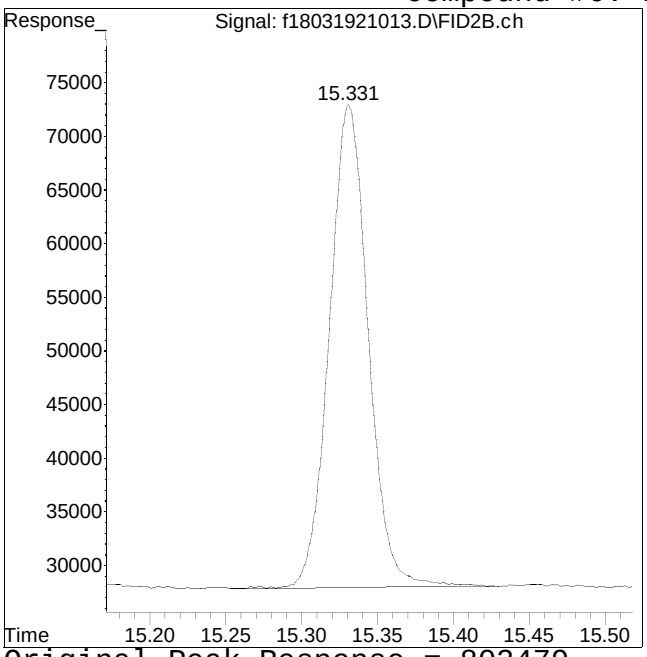
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

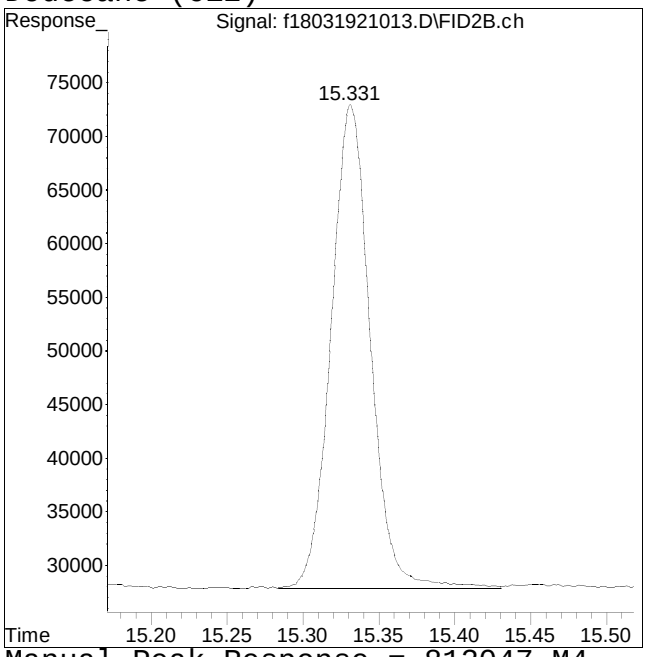
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 802479



Manual Peak Response = 812047 M4

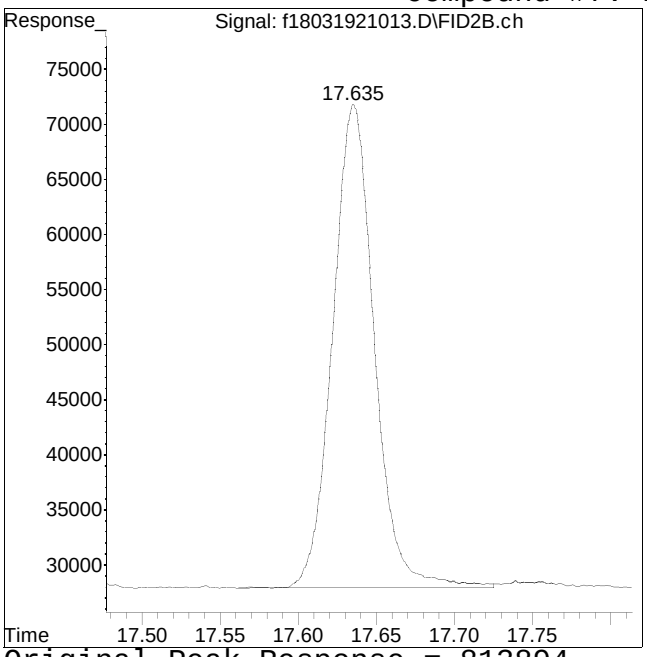
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

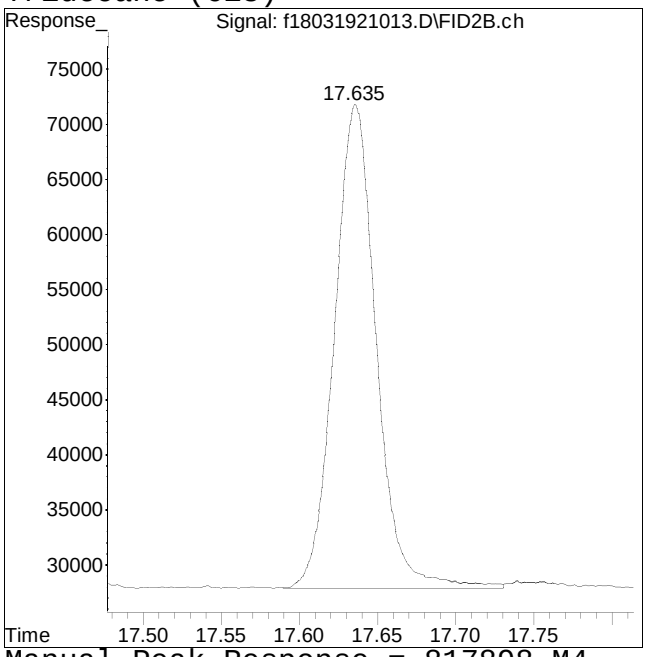
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 813894



Manual Peak Response = 817898 M4

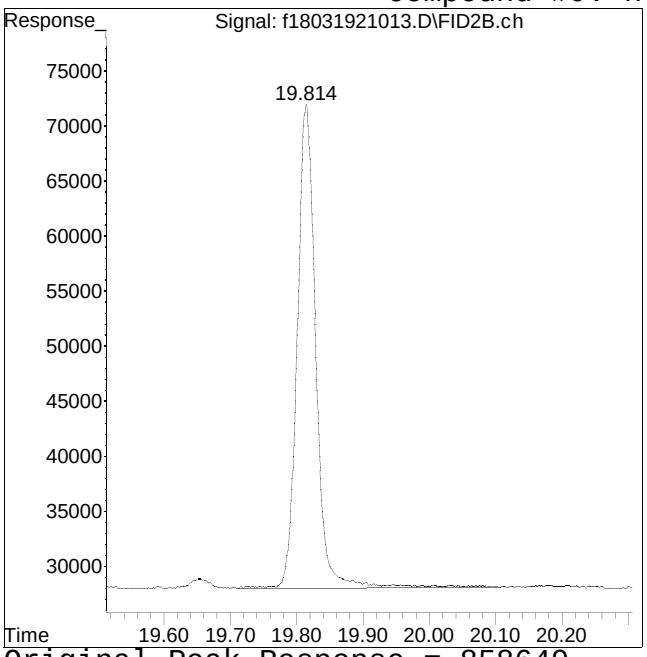
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

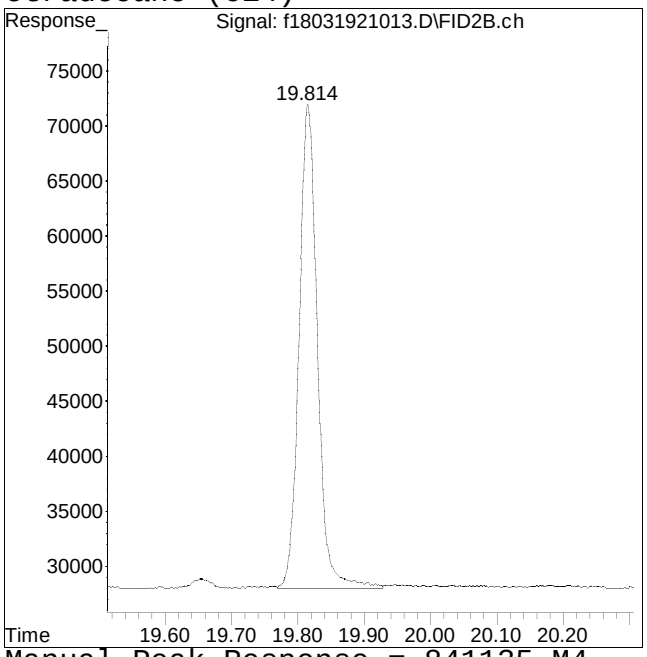
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 858649



Manual Peak Response = 841135 M4

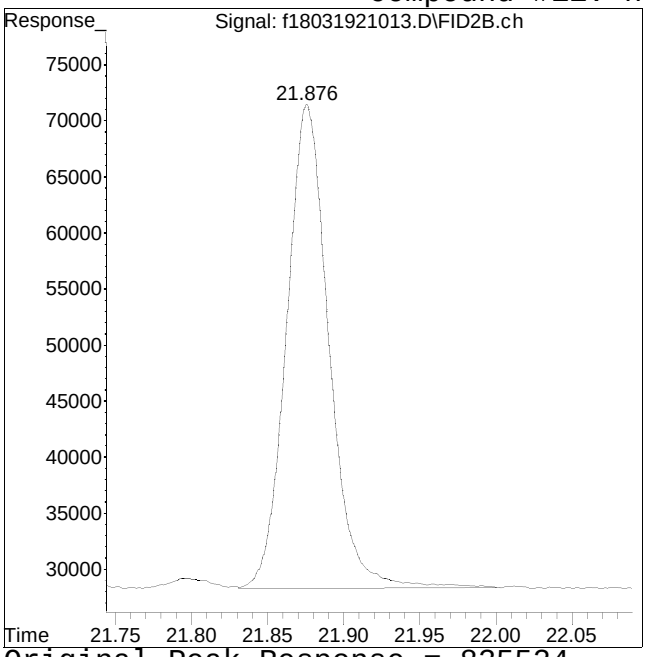
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

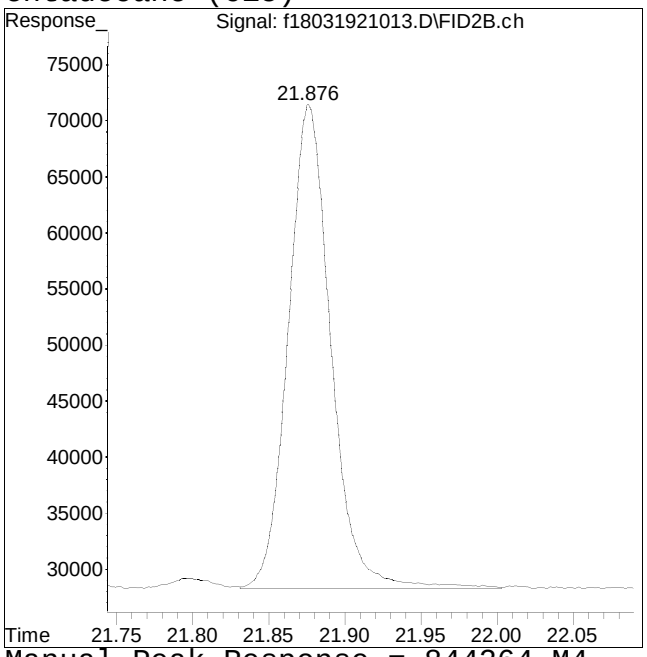
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 835524



Manual Peak Response = 844264 M4

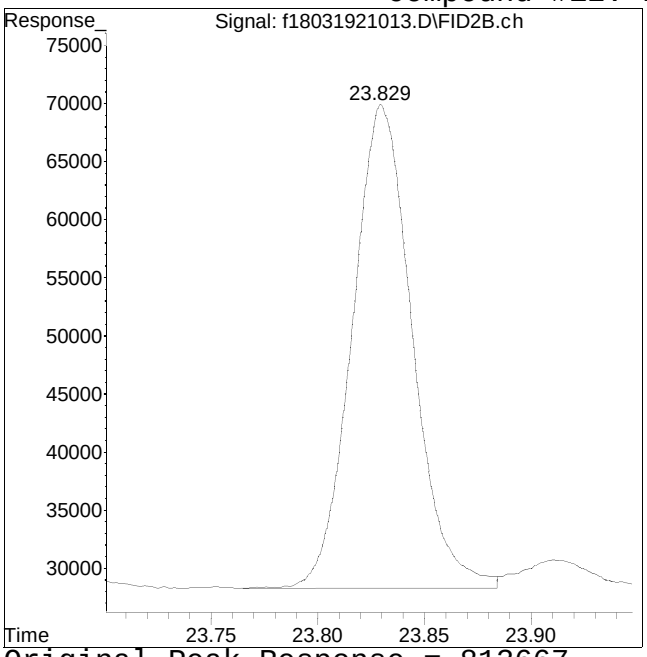
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

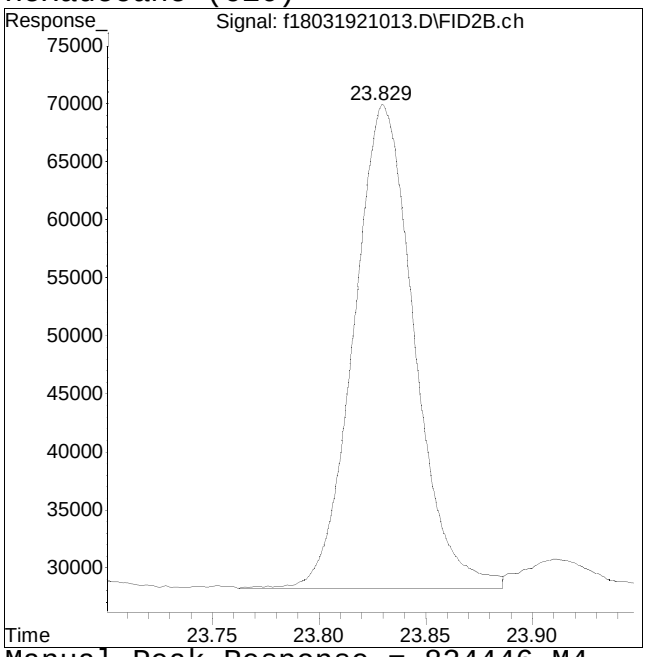
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 813667



Manual Peak Response = 824446 M4

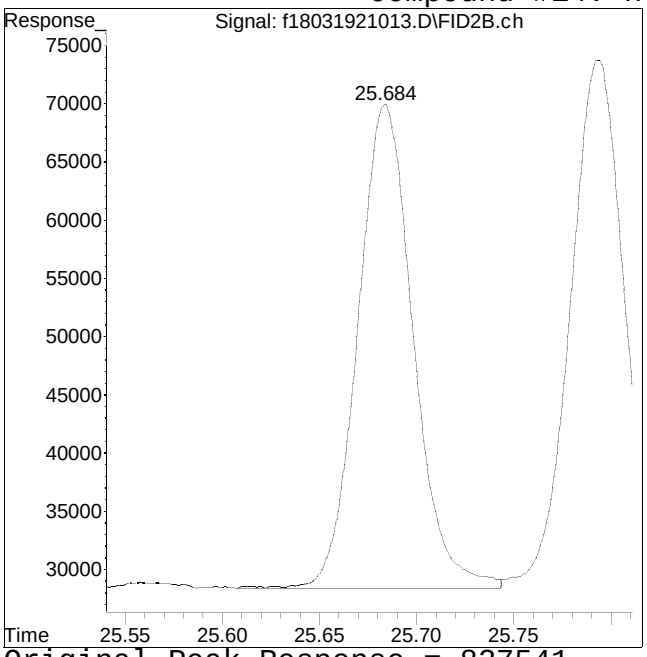
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

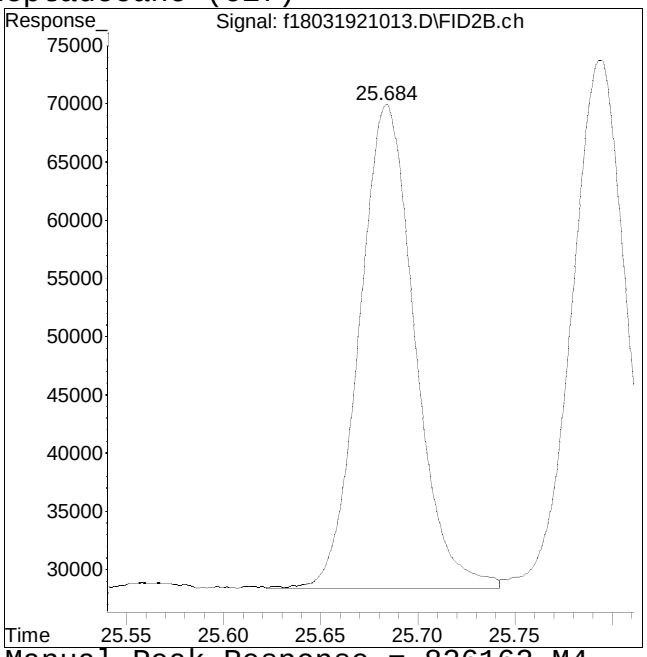
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 827541



Manual Peak Response = 826162 M4

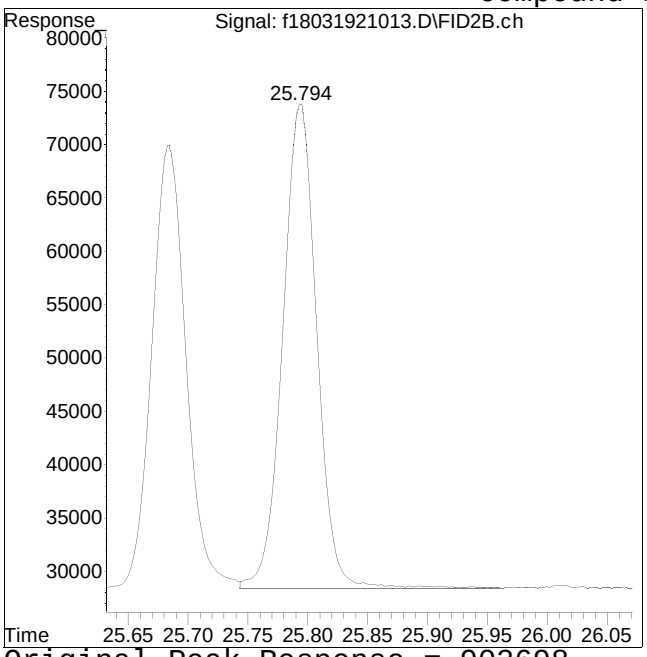
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

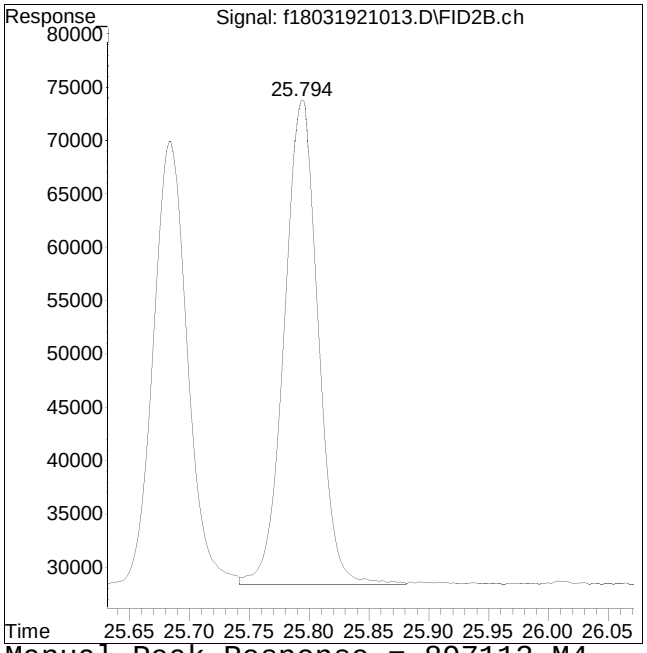
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #15: Pristane



Original Peak Response = 902698



Manual Peak Response = 897113 M4

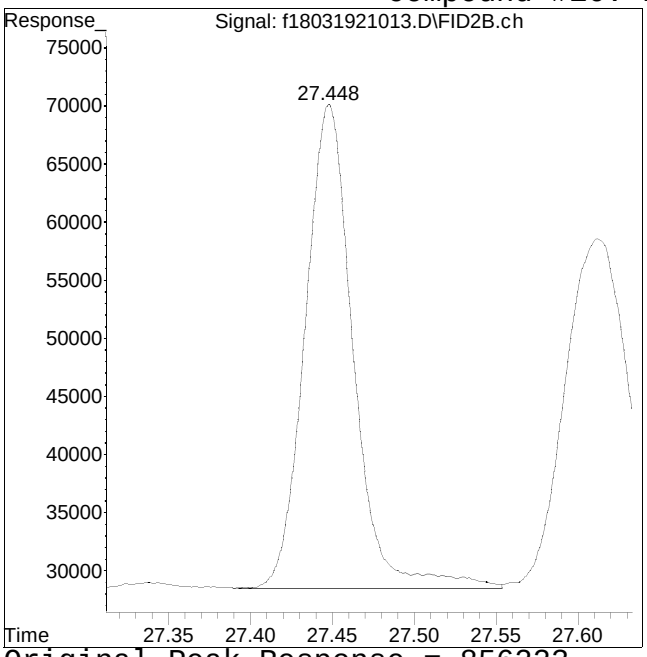
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

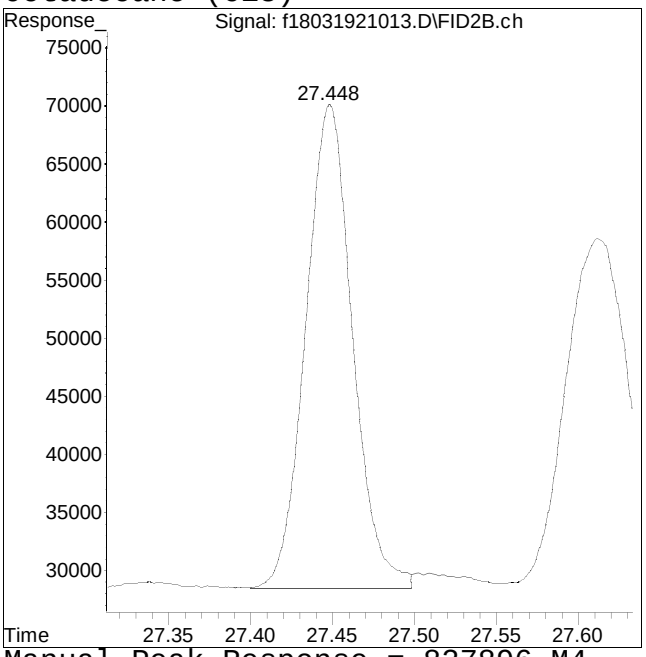
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 856223



Manual Peak Response = 827896 M4

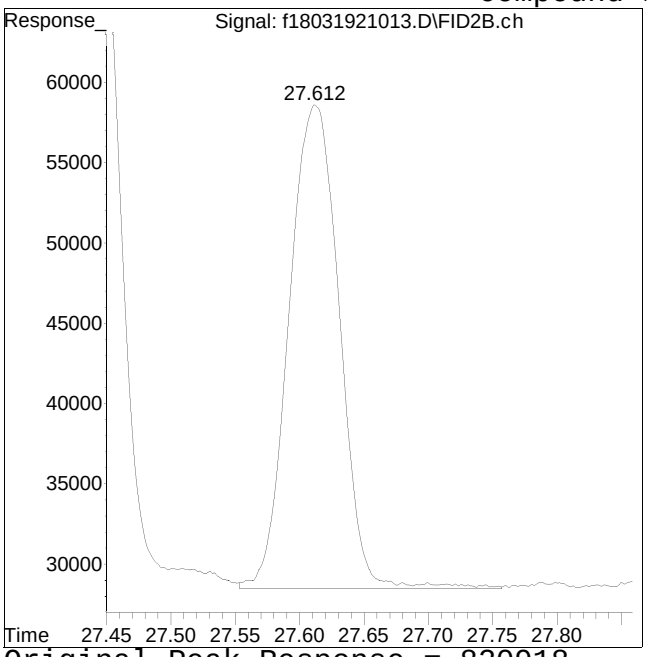
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

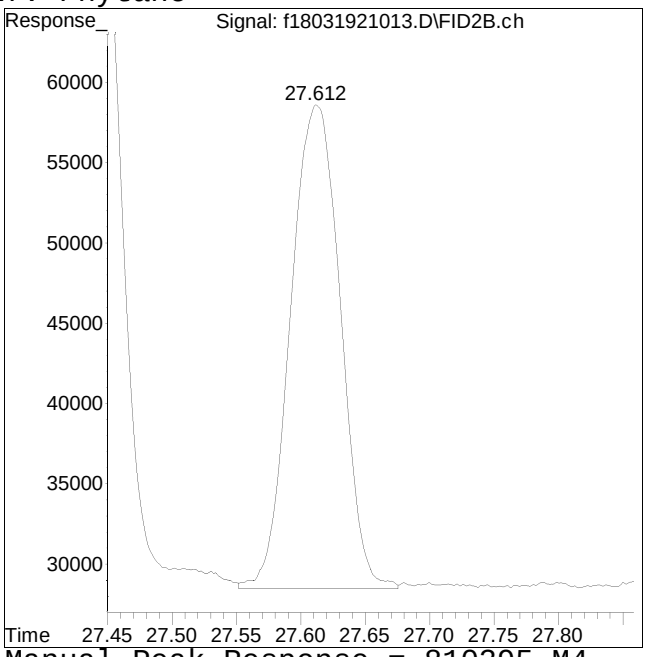
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #17: Phytane



Original Peak Response = 820918



Manual Peak Response = 810395 M4

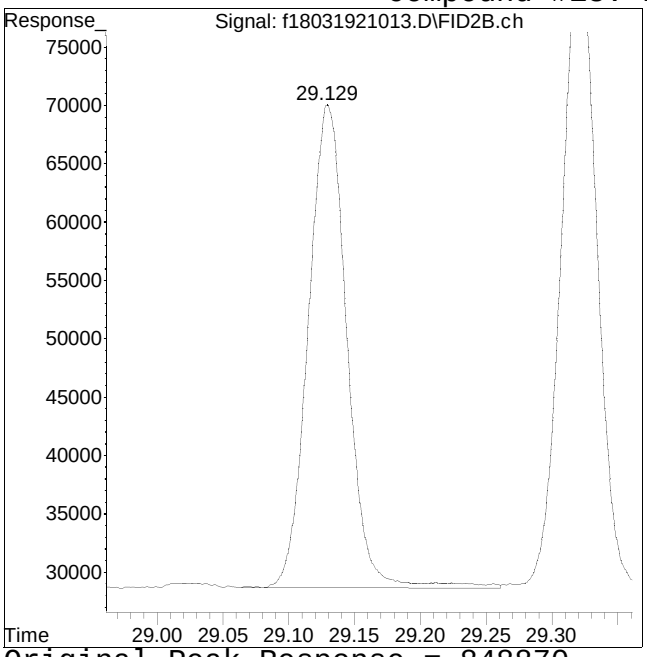
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

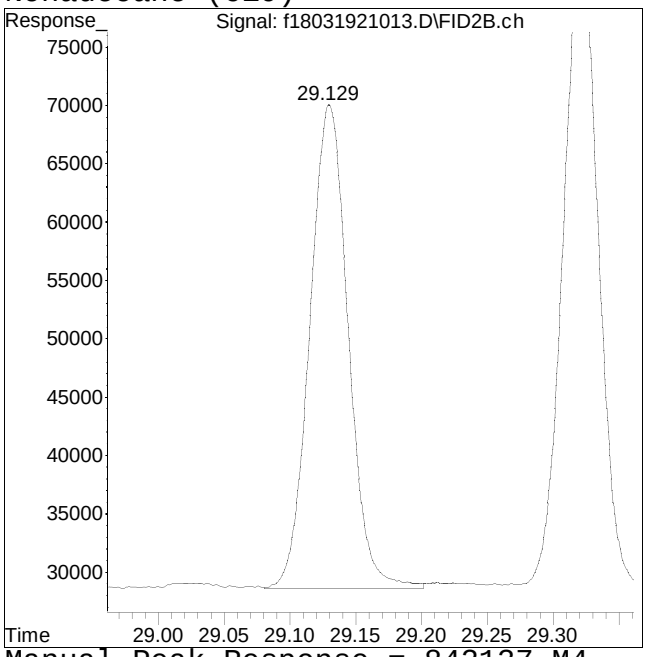
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 848870



Manual Peak Response = 842137 M4

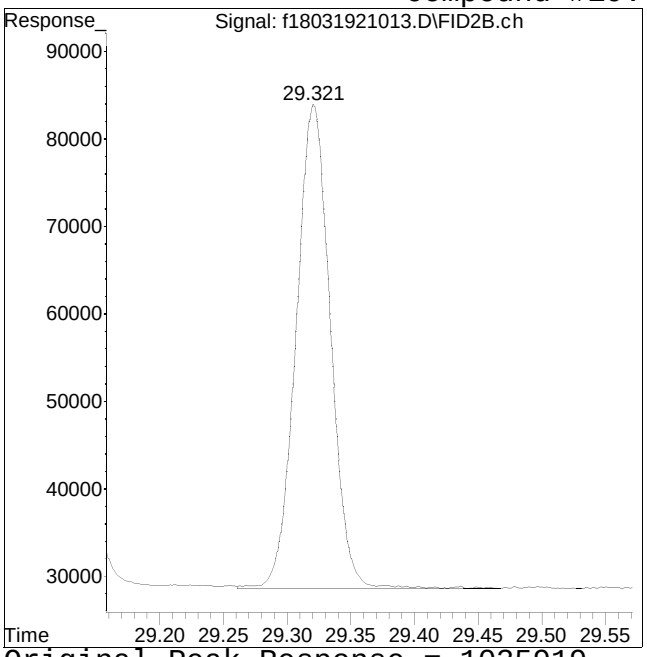
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

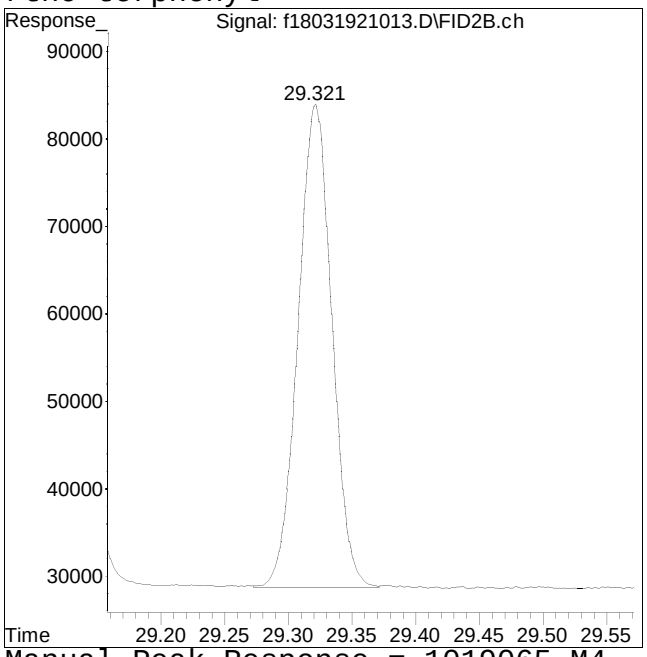
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #19: ortho-terphenyl



Original Peak Response = 1035919



Manual Peak Response = 1019065 M4

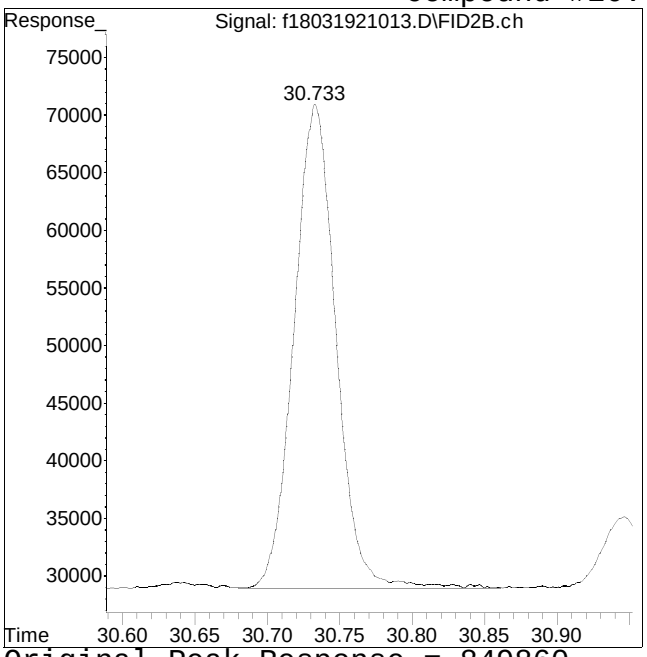
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

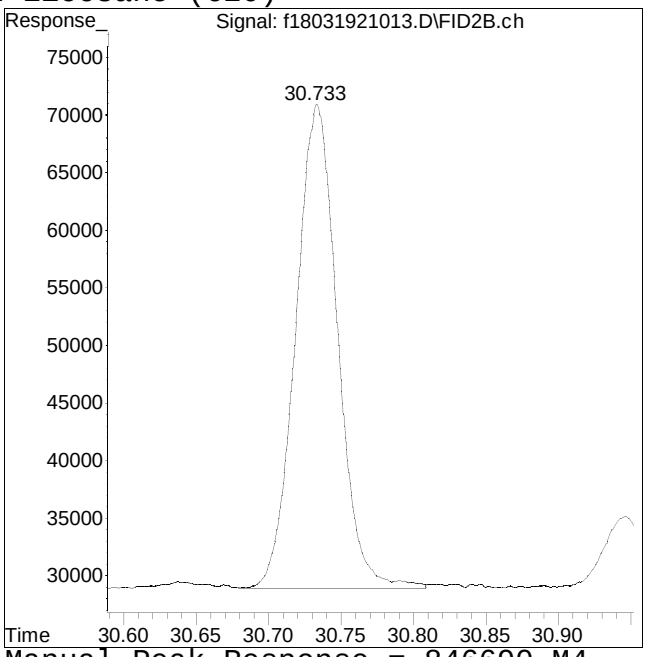
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 849860



Manual Peak Response = 846690 M4

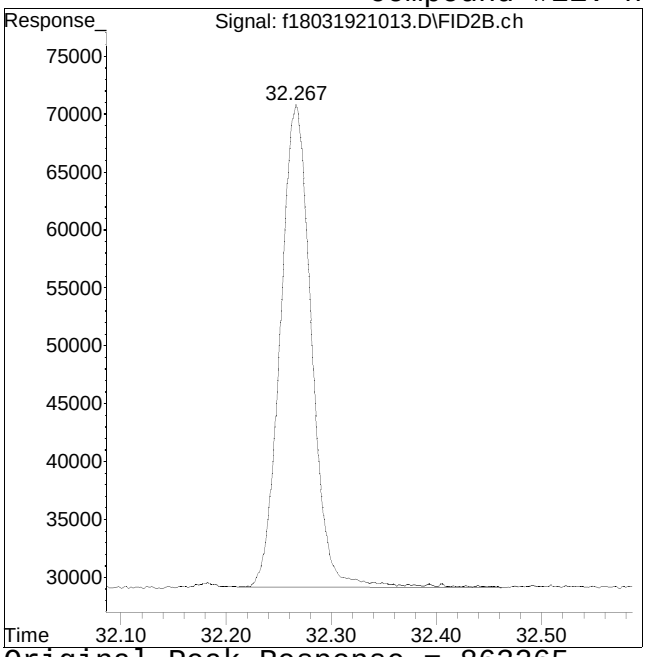
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

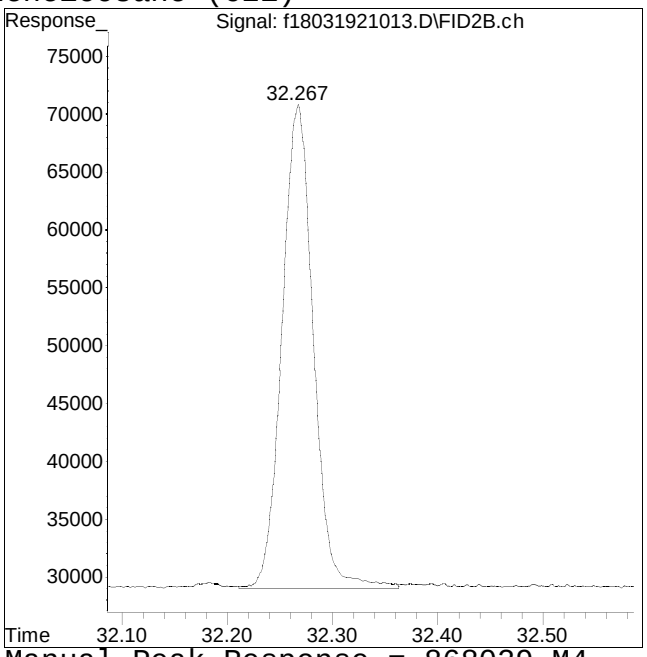
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 863265



Manual Peak Response = 868029 M4

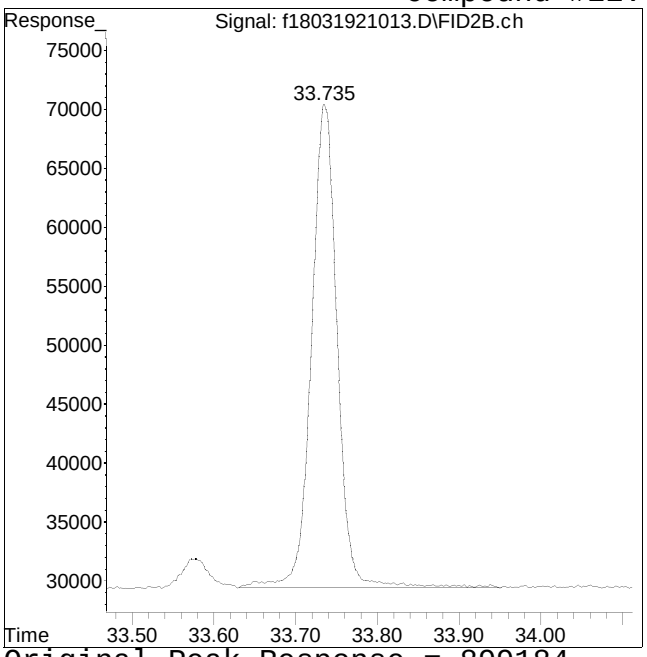
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

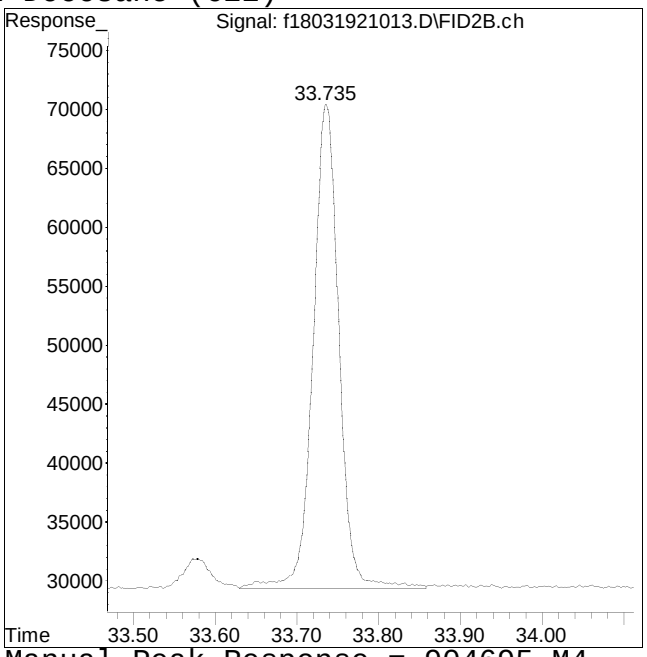
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #22: n-Docosane (C22)



Original Peak Response = 899184



Manual Peak Response = 904695 M4

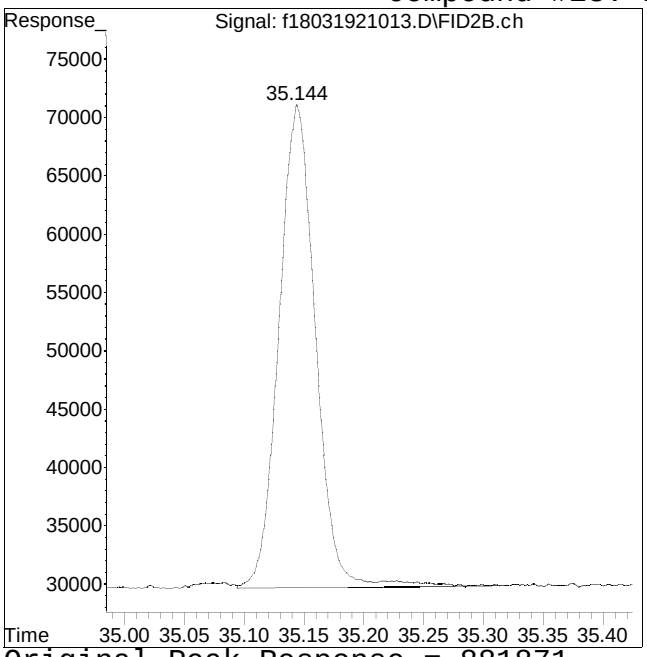
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

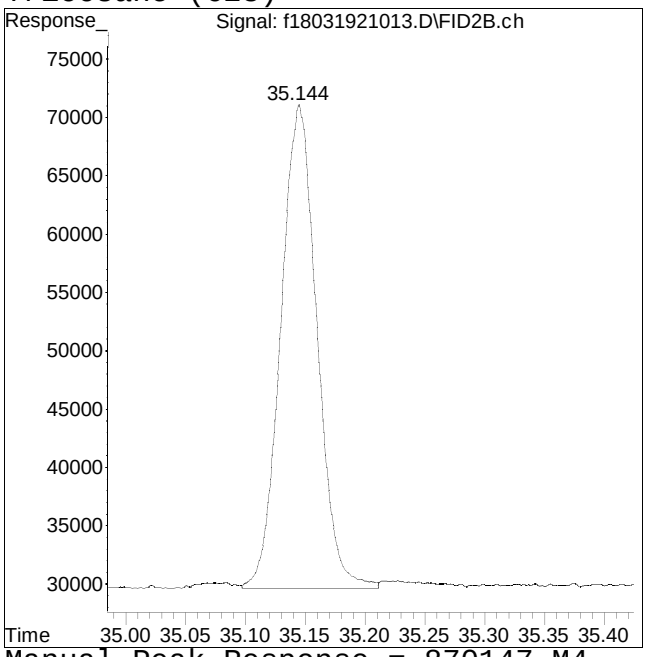
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 881871



Manual Peak Response = 870147 M4

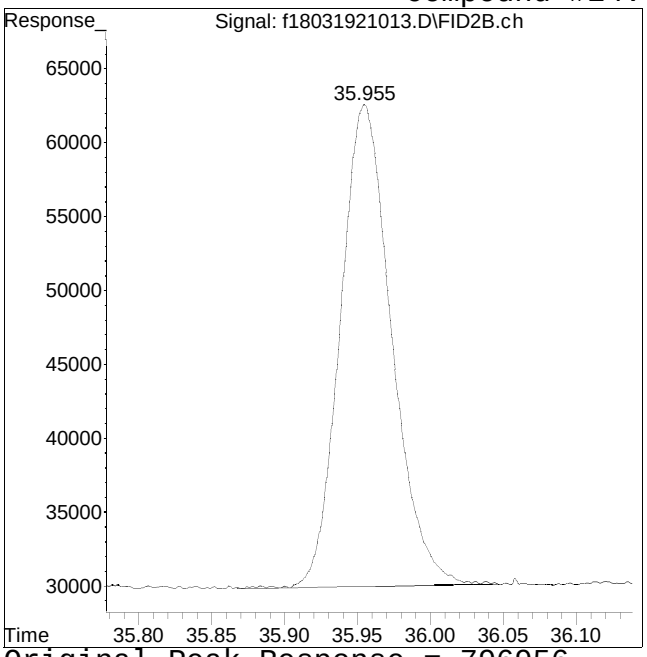
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

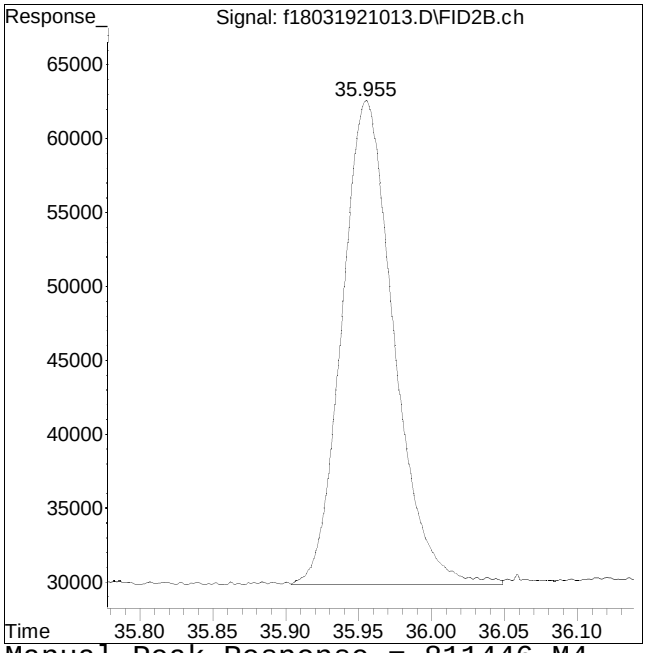
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #24: d50-Tetracosane



Original Peak Response = 796956



Manual Peak Response = 811446 M4

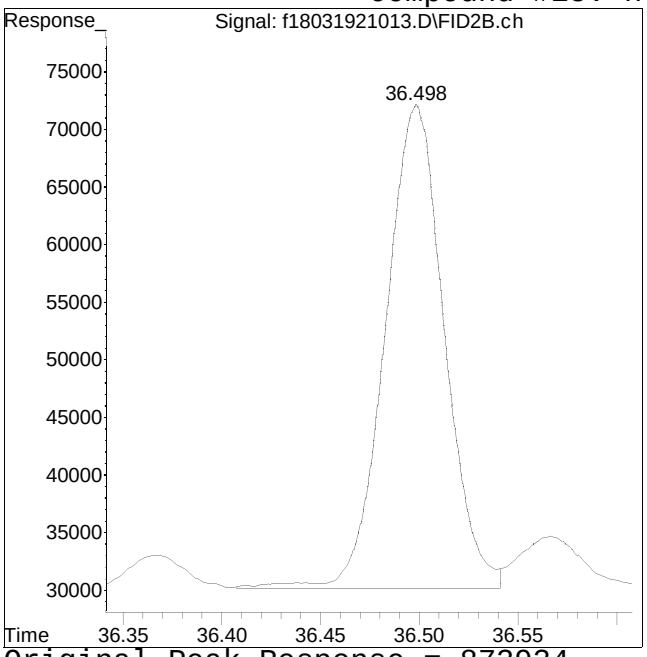
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

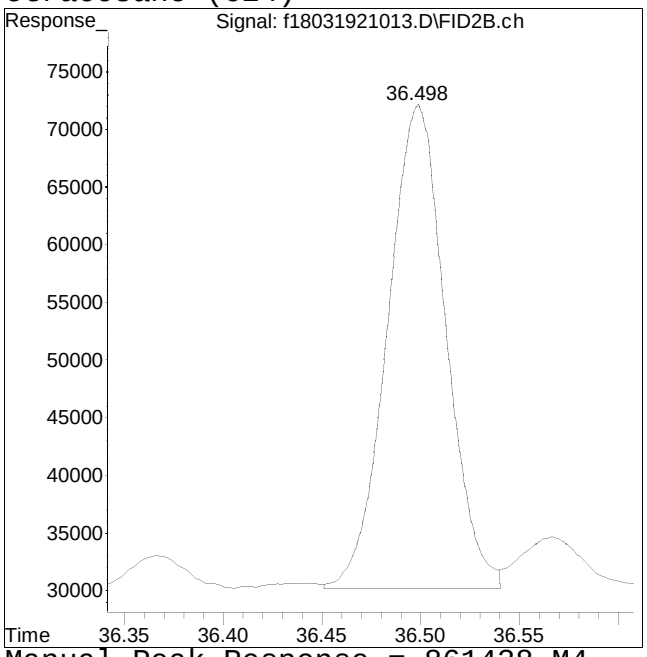
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 873934



Manual Peak Response = 861438 M4

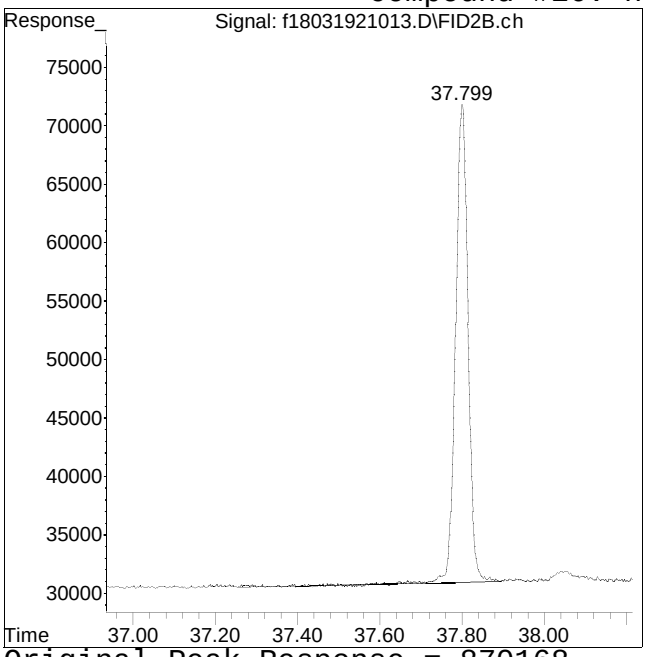
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

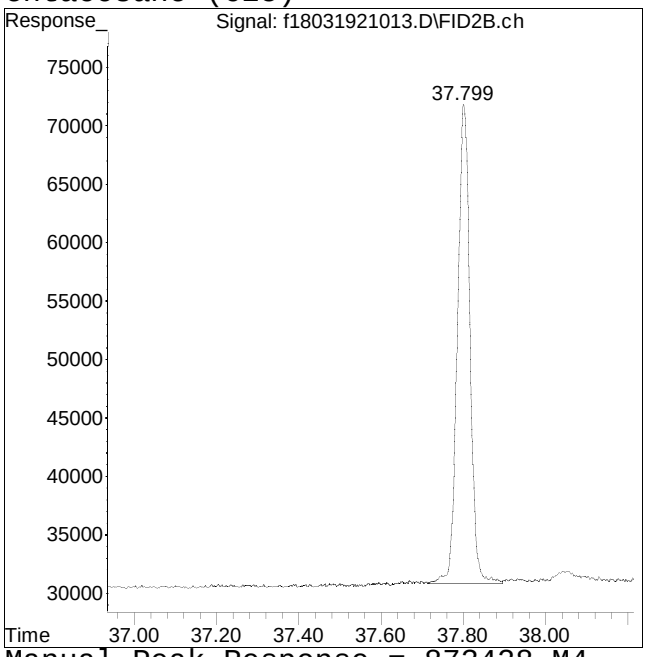
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 870168



Manual Peak Response = 873428 M4

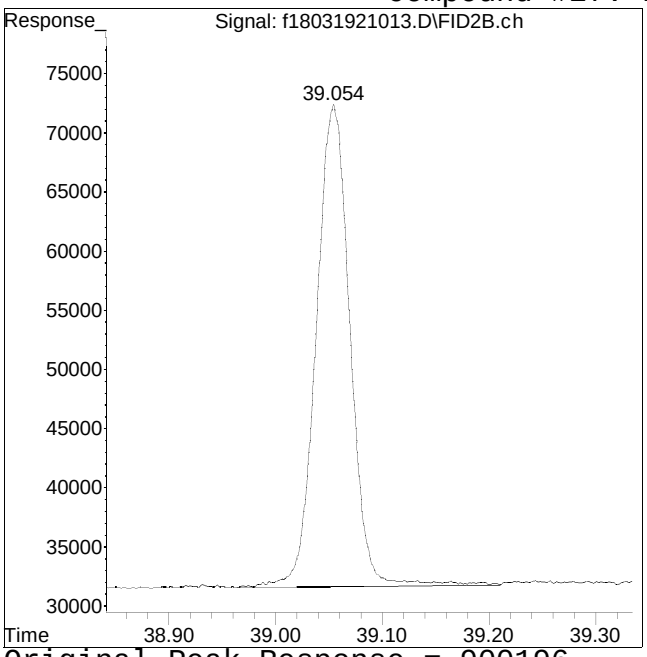
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

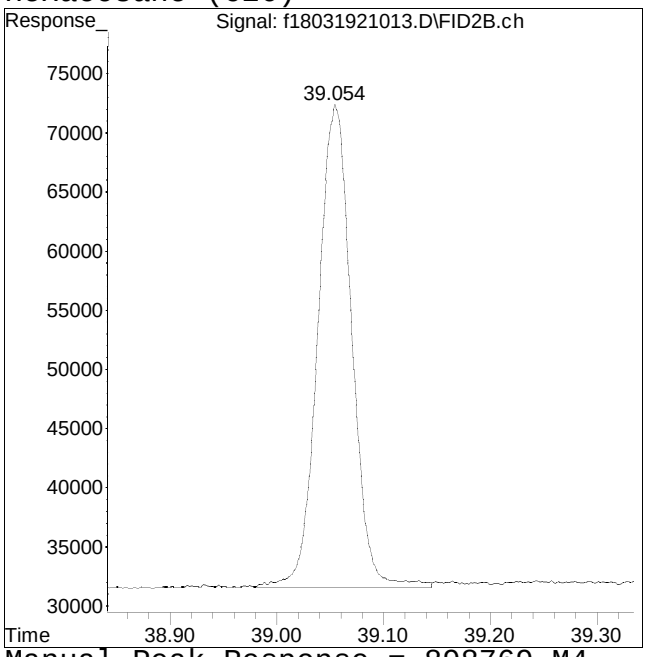
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 900196



Manual Peak Response = 898769 M4

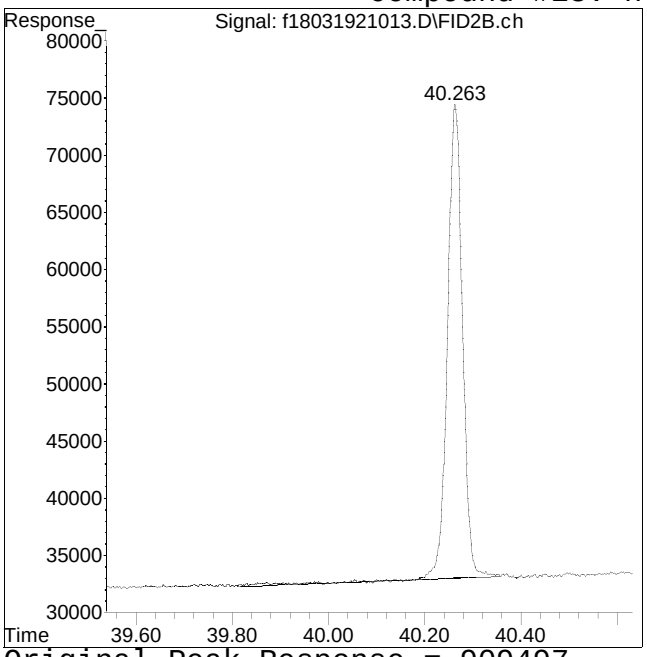
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

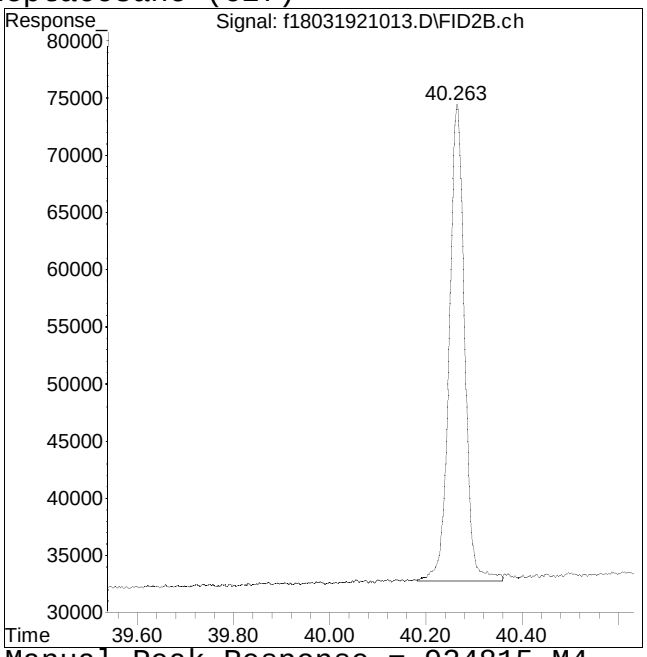
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 909497



Manual Peak Response = 924815 M4

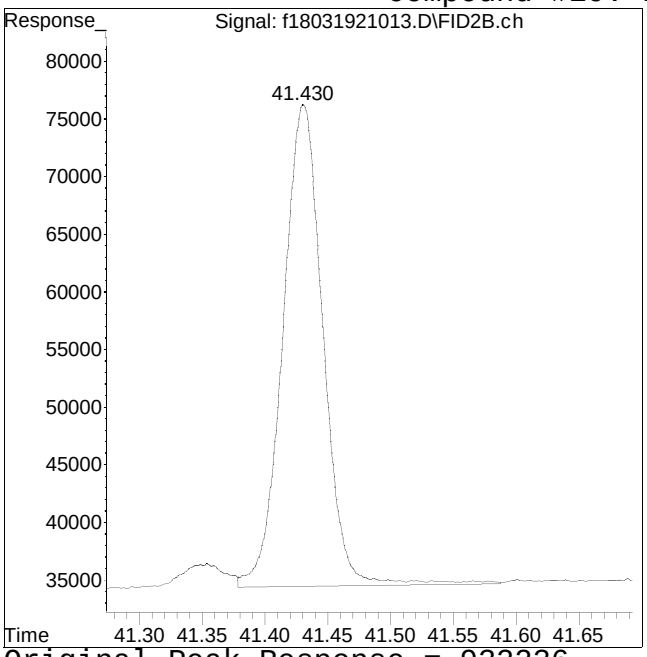
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

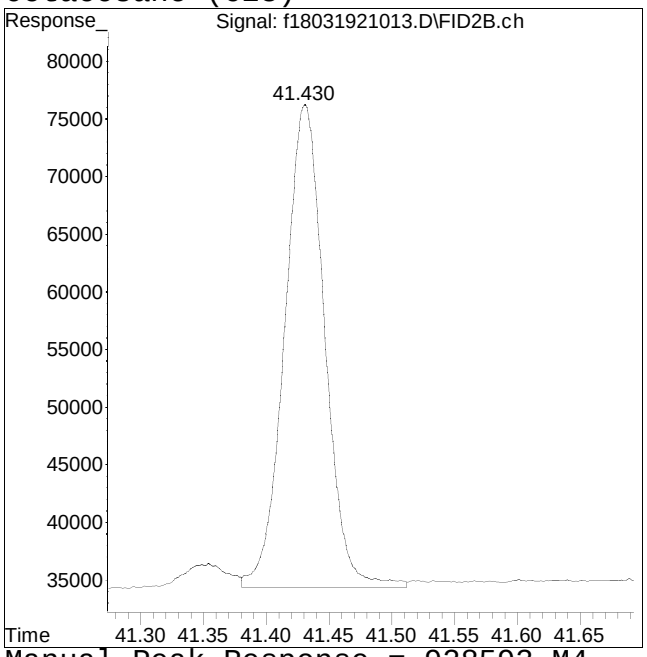
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 932236



Manual Peak Response = 928593 M4

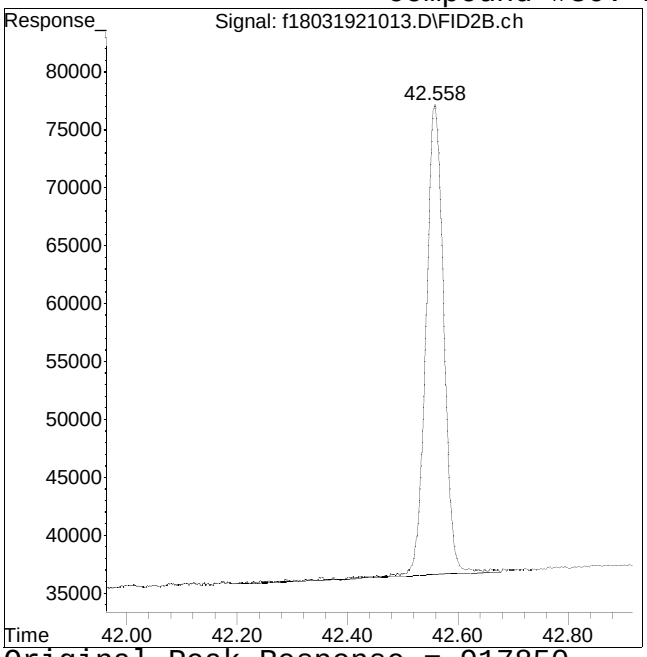
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

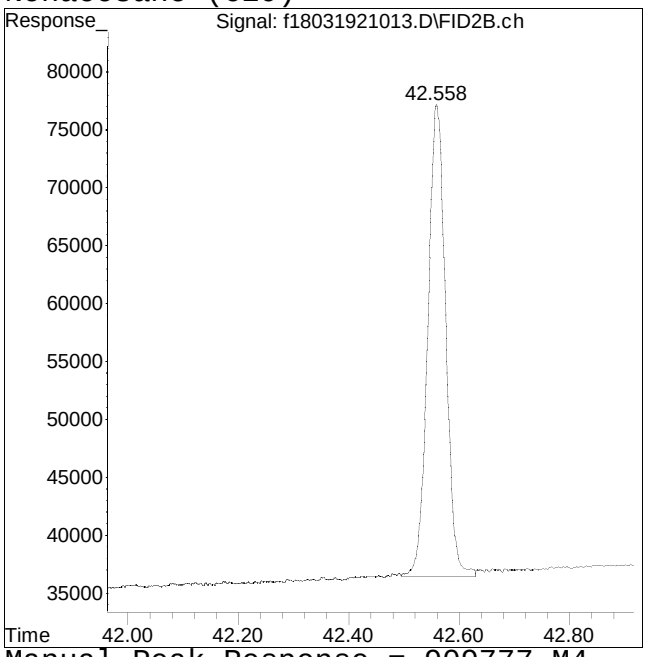
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 917850



Manual Peak Response = 909777 M4

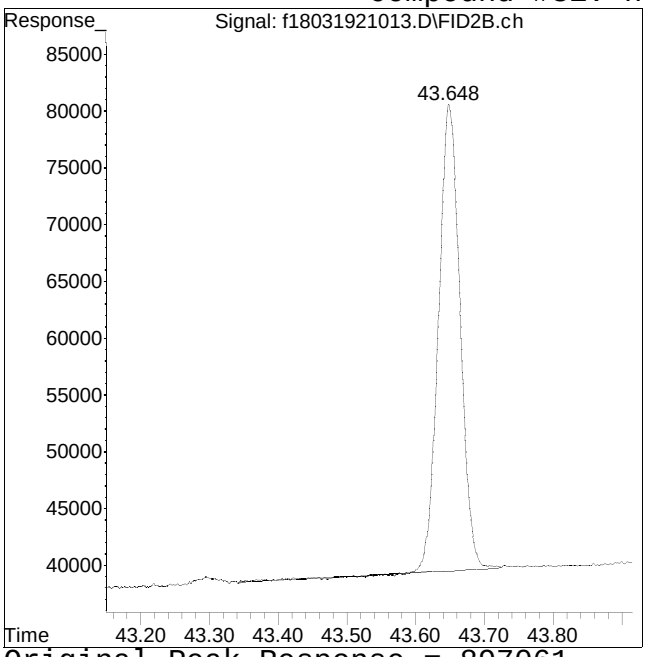
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

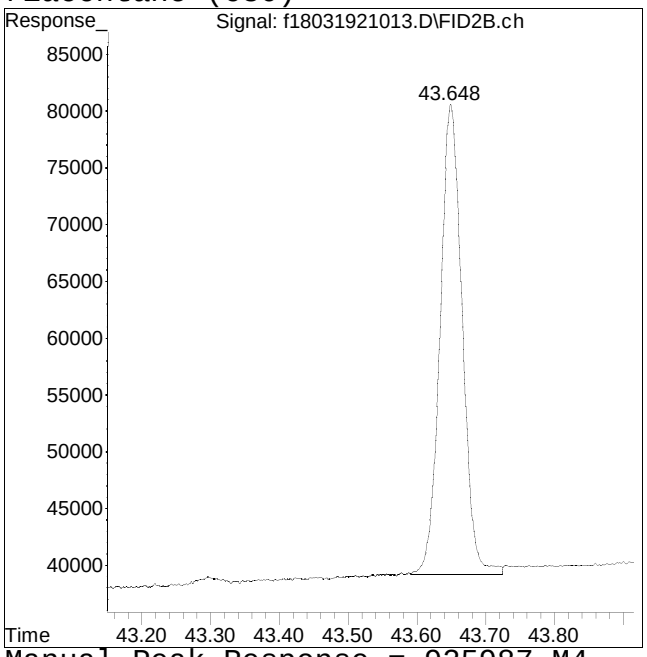
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 897061



Manual Peak Response = 925987 M4

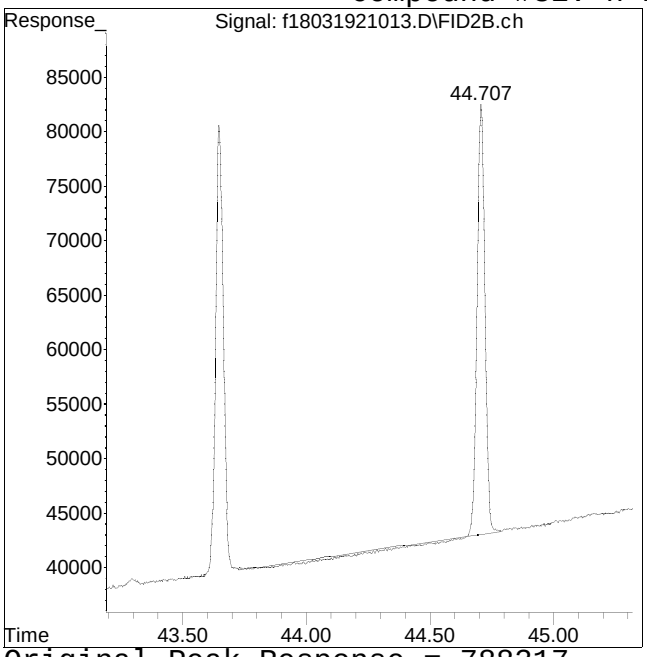
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

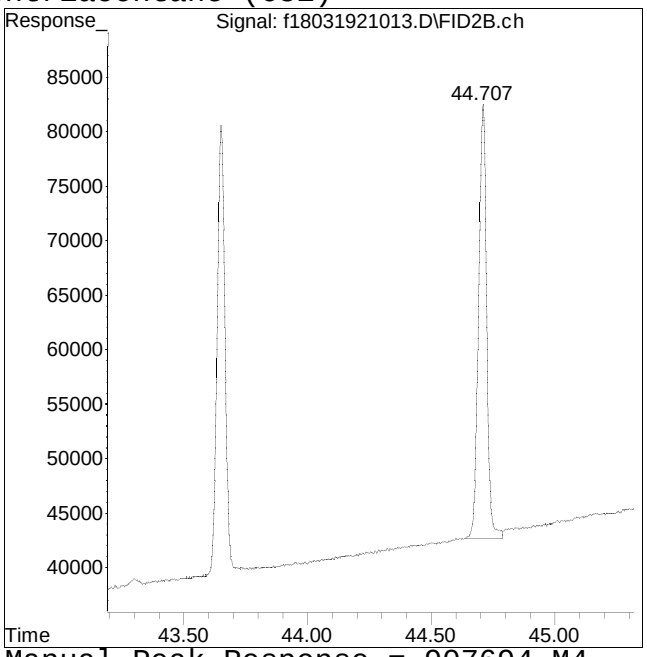
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 788317



Manual Peak Response = 907694 M4

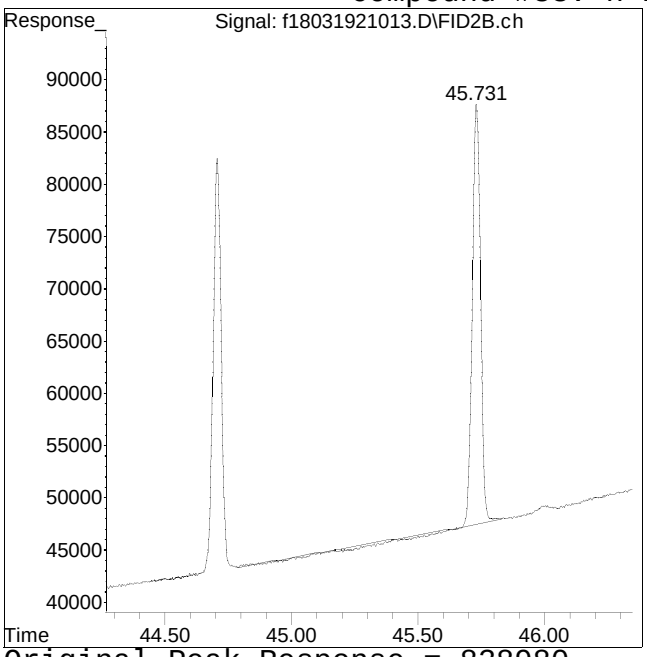
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

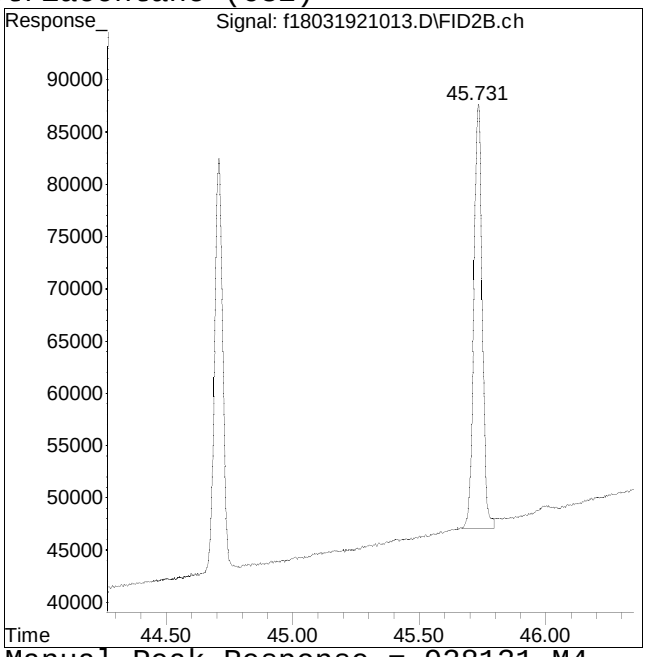
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 838980



Manual Peak Response = 938131 M4

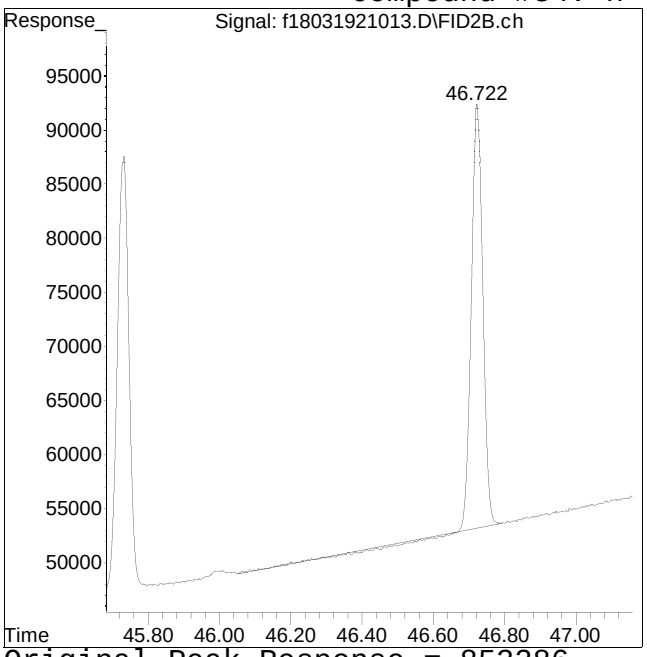
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

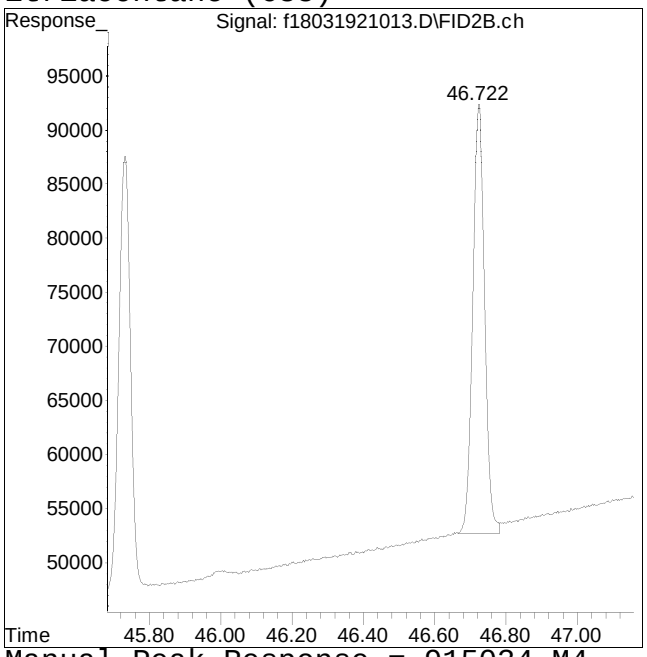
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 853286



Manual Peak Response = 915034 M4

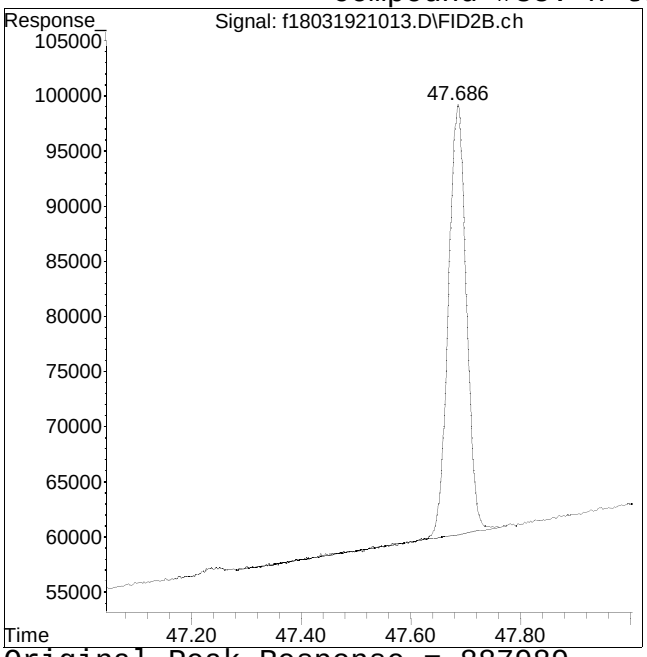
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

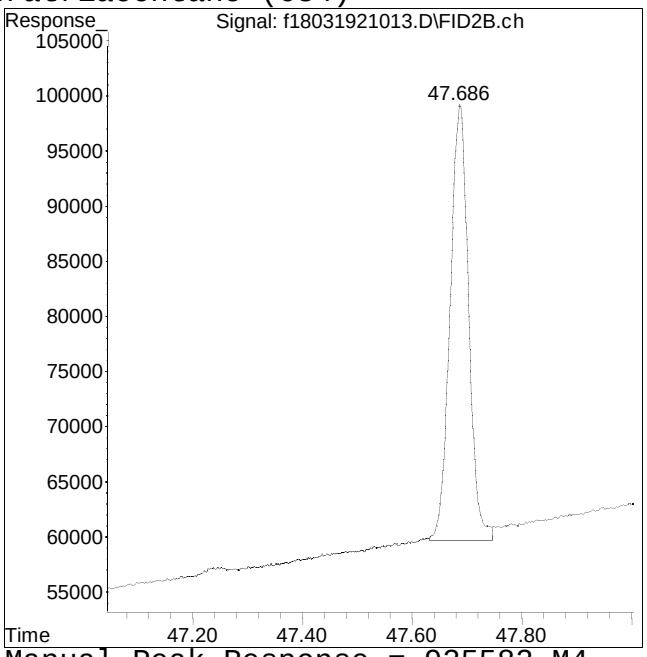
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 887989



Manual Peak Response = 925582 M4

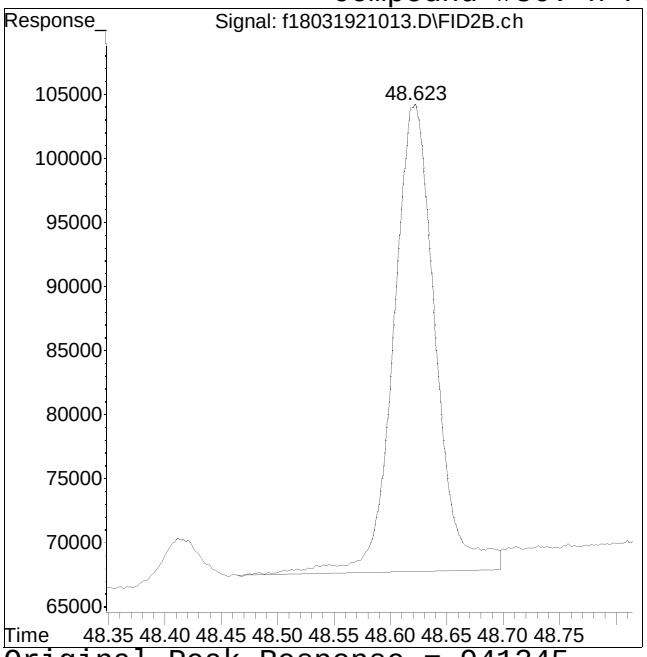
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

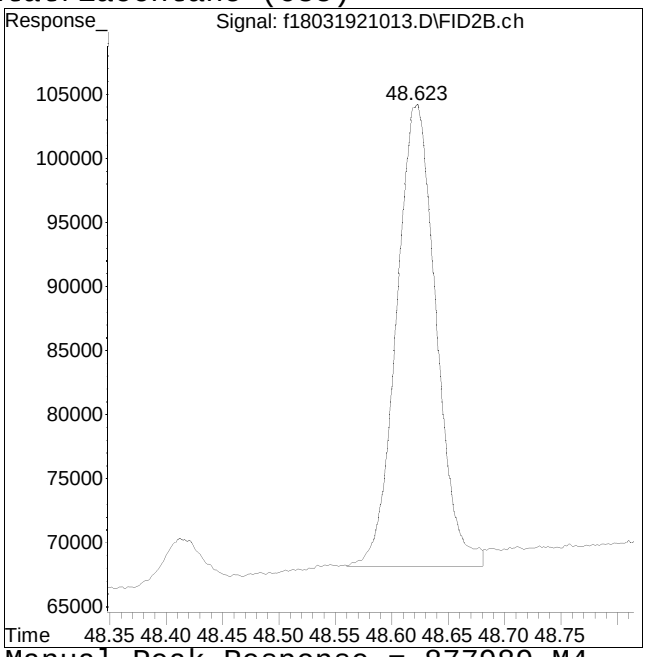
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 941345



Manual Peak Response = 877989 M4

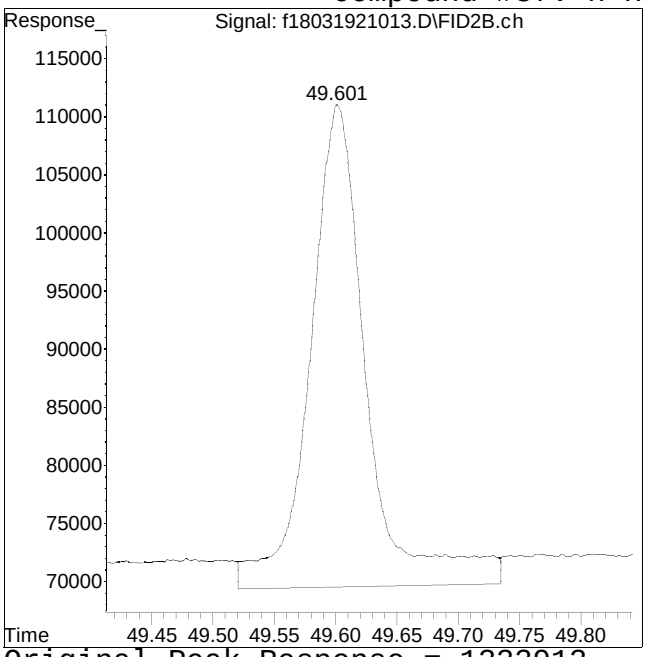
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

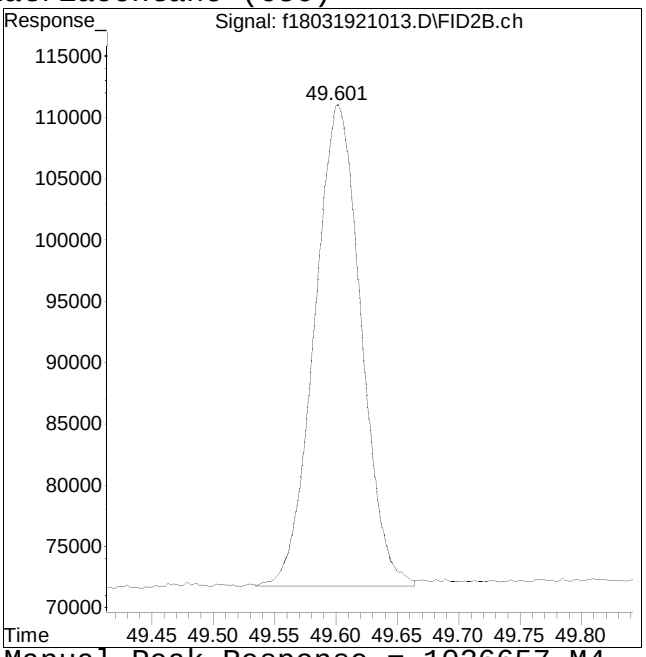
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 1333913



Manual Peak Response = 1036657 M4

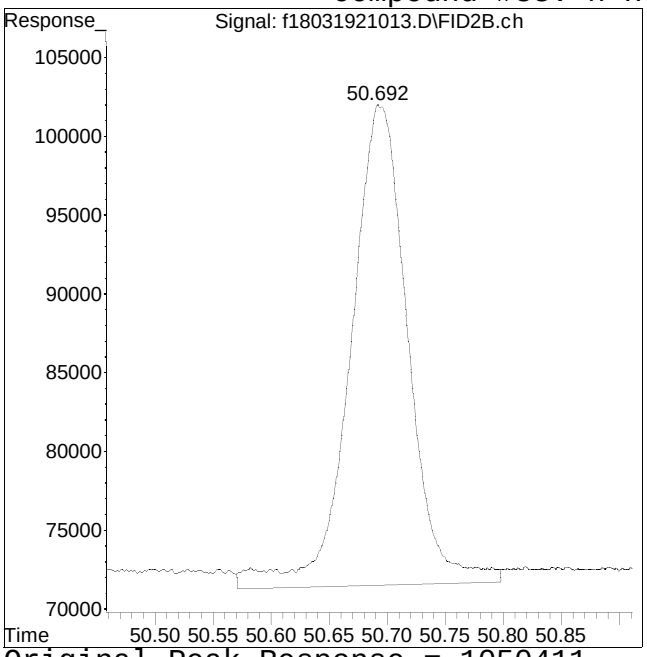
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

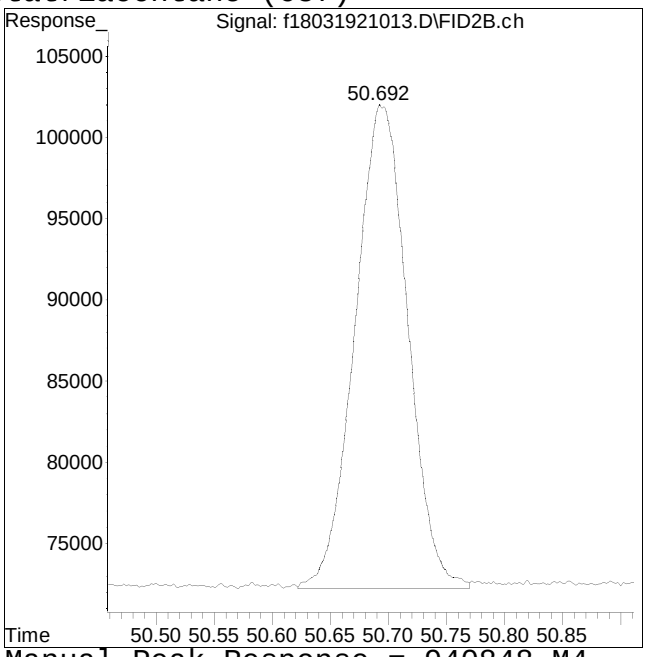
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 1050411



Manual Peak Response = 940848 M4

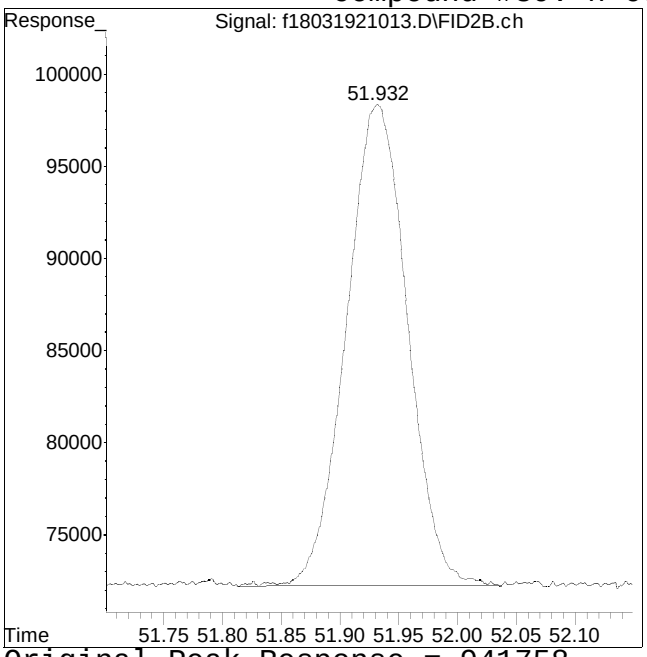
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

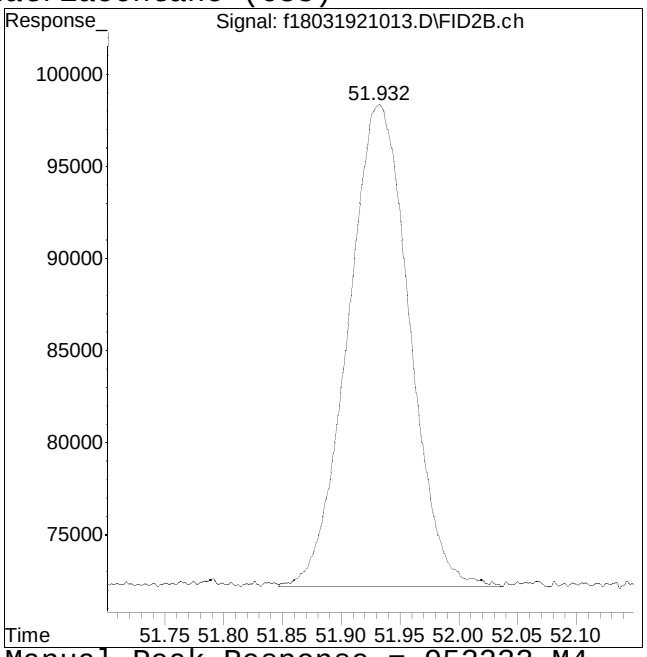
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 941758



Manual Peak Response = 952233 M4

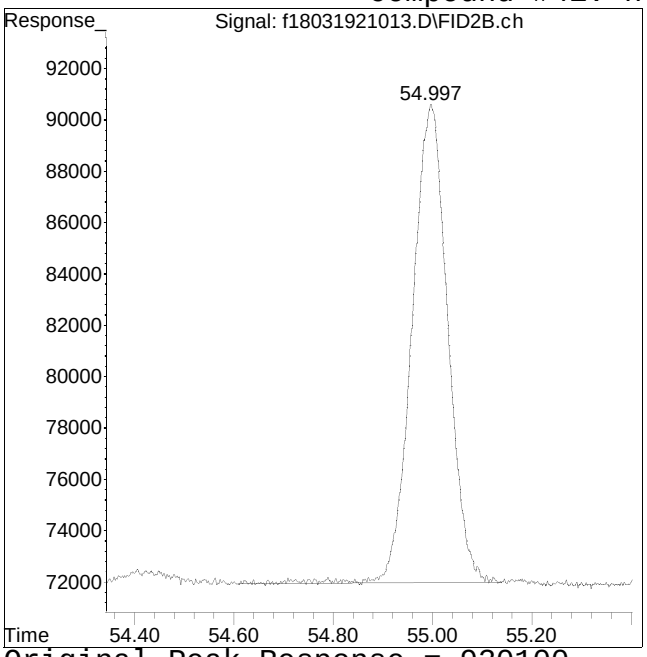
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

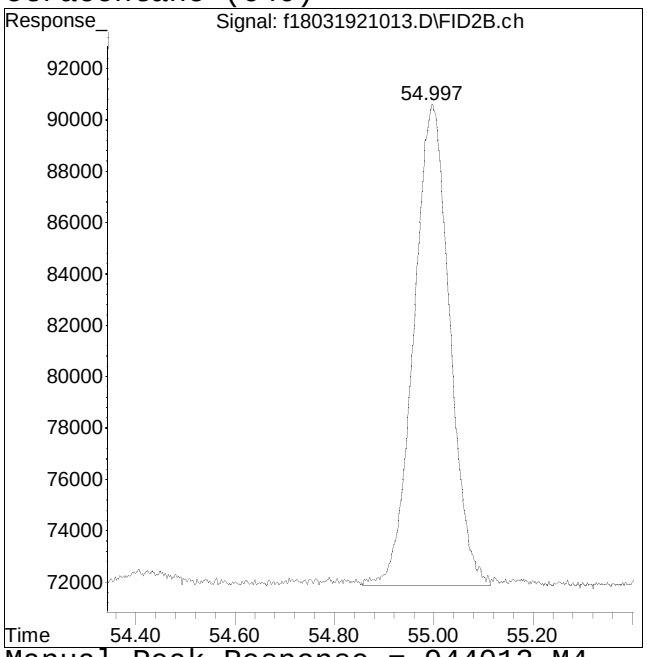
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921013.D
Date Inj'd : 3/20/2021 1:25 __
Sample : I1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:50 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 930100



Manual Peak Response = 944012 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921015.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 02:51
Operator : FID18:WR
Sample : I1803192102R
Misc : WG1479204,FRBC81
ALS Vial : 58 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:13:56 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 10:56:00 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.356	44377292	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.326	9772574	10.019 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	20.04%#
24) s	d50-Tetracosane	35.959	7896015	10.149 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	20.30%#
	Target Compounds			
2) t	n-Octane (C8)	5.662	7027774	9.721 ug/mL M4
3) t	n-Nonane (C9)	7.899	7591252	10.122 ug/mL M4
4) t	n-Decane (C10)	10.396	8261751	10.501 ug/mL M4
5) t	n-Undecane (C11)	12.908	8232973	10.481 ug/mL M4
6) t	n-Dodecane (C12)	15.333	8373189	10.488 ug/mL M4
7) t	n-Tridecane (C13)	17.636	8368881	10.413 ug/mL M4
9) t	n-Tetradecane (C14)	19.817	8615410	10.429 ug/mL M4
11) t	n-Pentadecane (C15)	21.878	8619321	10.318 ug/mL M4
12) t	n-Hexadecane (C16)	23.832	8505815	10.232 ug/mL M4
14) t	n-Heptadecane (C17)	25.687	8604272	10.215 ug/mL M4
15) t	Pristane	25.797	8983250	10.350 ug/mL M4
16) t	n-Octadecane (C18)	27.451	8690311	10.115 ug/mL M4
17) t	Phytane	27.617	8193474	10.216 ug/mL M4
18) t	n-Nonadecane (C19)	29.133	8809376	10.229 ug/mL M4
20) t	n-Eicosane (C20)	30.736	8874998	10.218 ug/mL M4
21) t	n-Heneicosane (C21)	32.269	8961282	10.259 ug/mL M4
22) t	n-Docosane (C22)	33.740	9004443	10.295 ug/mL M4
23) t	n-Tricosane (C23)	35.149	9000173	10.253 ug/mL M4
25) t	n-Tetracosane (C24)	36.501	8988314	10.277 ug/mL M4
26) t	n-Pentacosane (C25)	37.805	8881420	10.348 ug/mL M4
27) t	n-Hexacosane (C26)	39.058	9134278	10.378 ug/mL M4
28) t	n-Heptacosane (C27)	40.268	9177573	10.423 ug/mL M4
29) t	n-Octacosane (C28)	41.435	9334318	10.386 ug/mL M4
30) t	n-Nonacosane (C29)	42.562	9303637	10.423 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921015.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 02:51
Operator : FID18:WR
Sample : I1803192102R
Misc : WG1479204,FRBC81
ALS Vial : 58 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:13:56 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 10:56:00 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

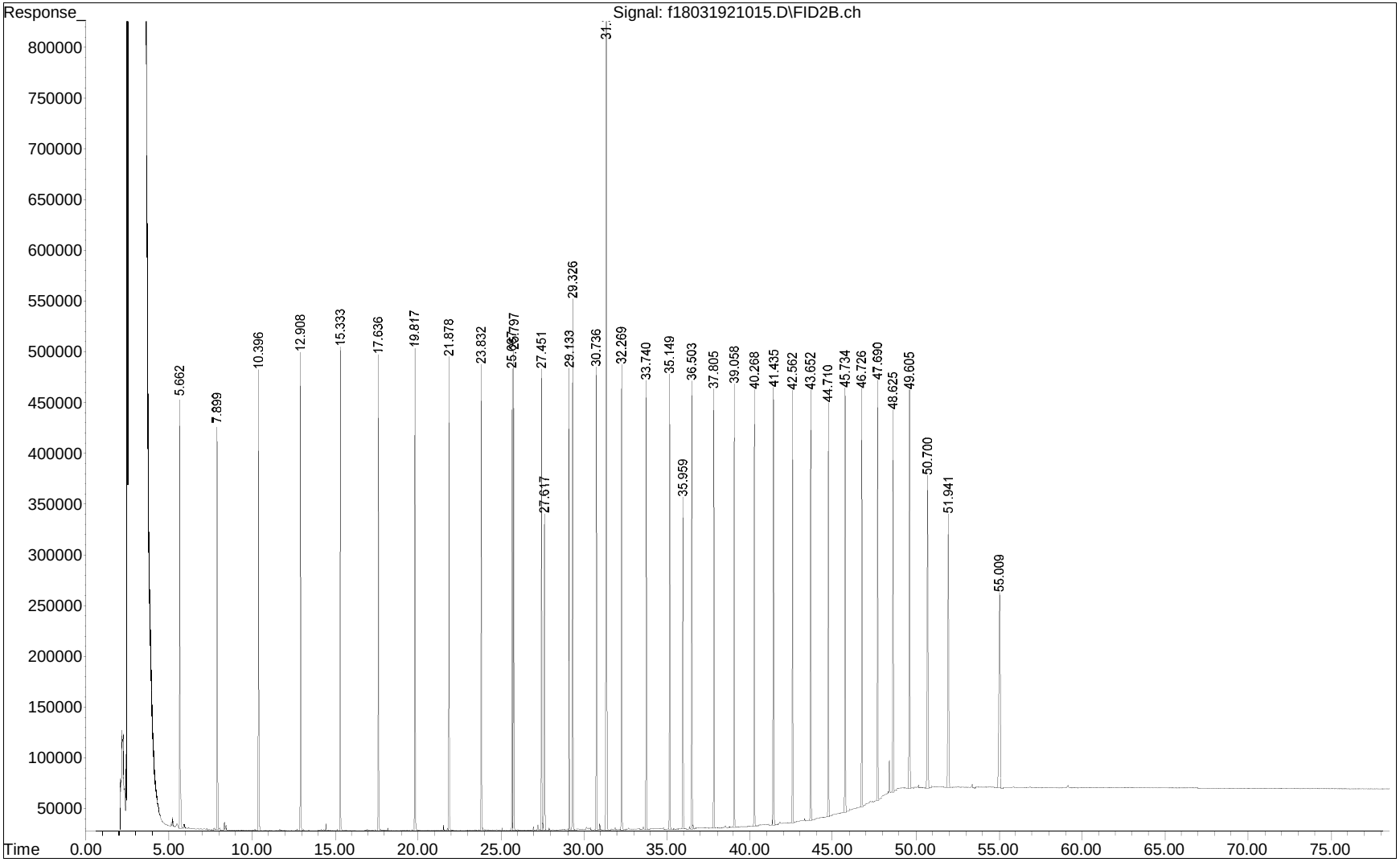
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.652	9335027	10.436 ug/mL M4
32) t	n-Hentriacontane (C31)	44.710	9048824	10.495 ug/mL M4
33) t	n-Dotriacontane (C32)	45.734	9483299	10.490 ug/mL M4
34) t	n-Tritriacontane (C33)	46.726	9231672	10.523 ug/mL M4
35) t	n-tetratriacontane (C34)	47.690	9219497	10.569 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.625	8658727	10.609 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.605	10497934	10.634 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.700	9557180	10.626 ug/mL M4
39) t	n-Octatriacontane (C38)	51.941	9676426	10.619 ug/mL M4
41) t	n-Tetracontane (C40)	55.009	9531221	10.440 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\f18031921015.D
Operator : FID18:WR
Acquired : 20 Mar 2021 02:51 using AcqMethod FID18.M
Sample Name: I1803192102R
Instrument: FID 18
Misc Info : WG1479204,FRBC81
Vial Number: 58
CurrentMeth: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M

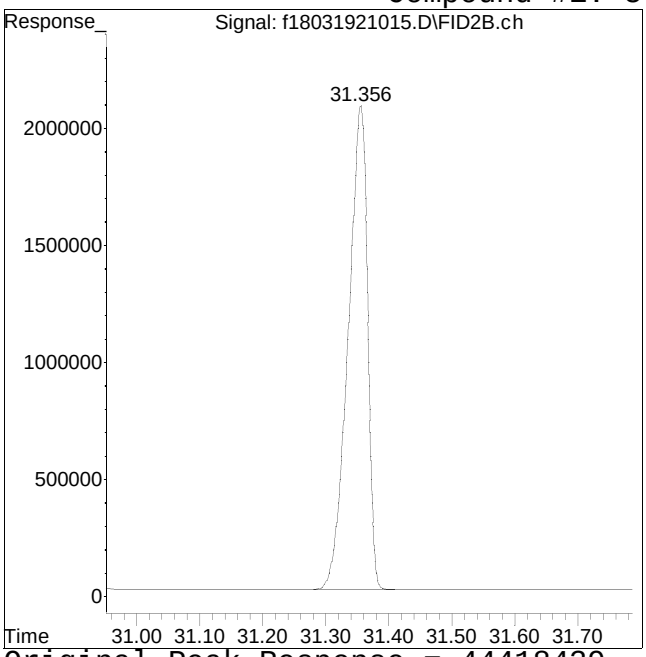


Manual Integration/Negative Proof Report

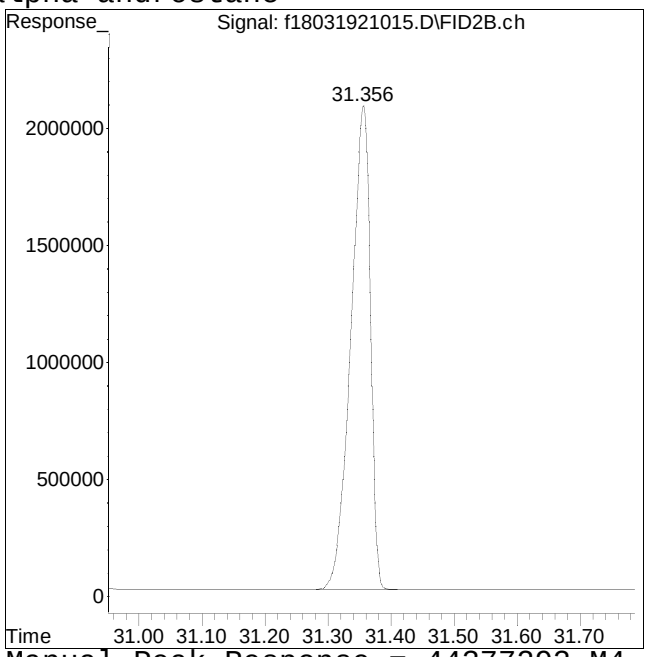
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #1: 5-alpha-androstane



Original Peak Response = 44418439



Manual Peak Response = 44377292 M4

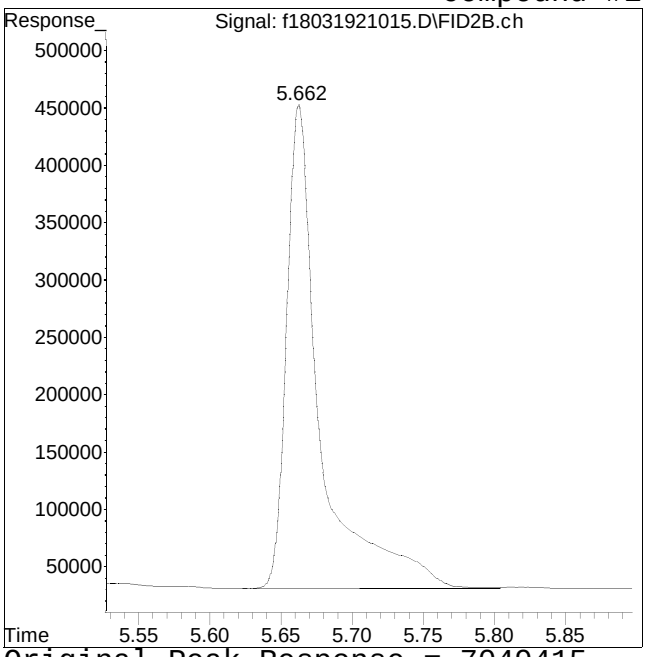
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

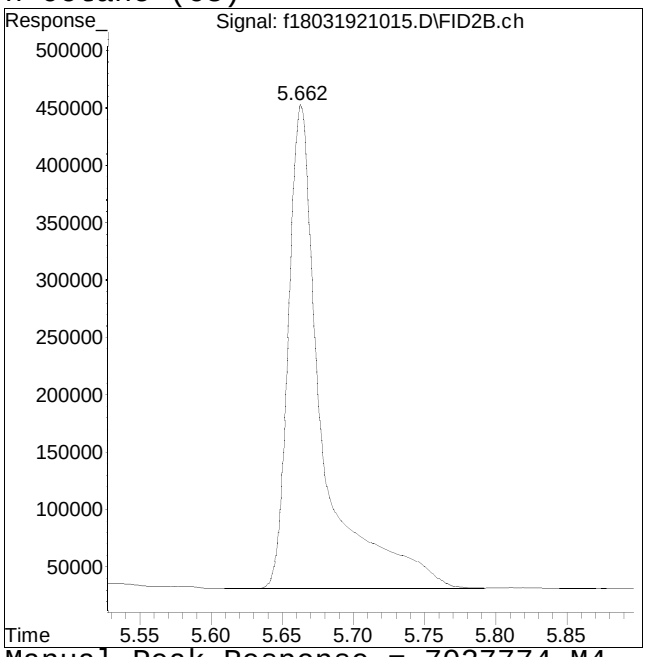
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #2: n-Octane (C8)



Original Peak Response = 7049415



Manual Peak Response = 7027774 M4

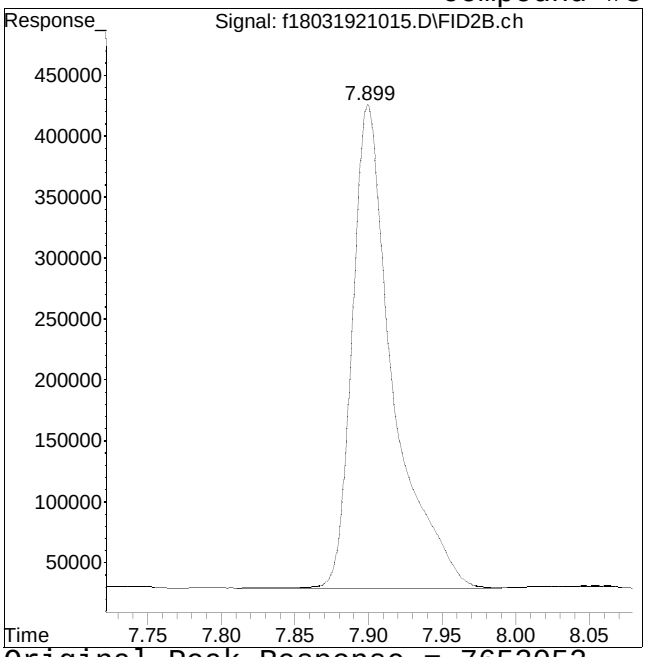
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

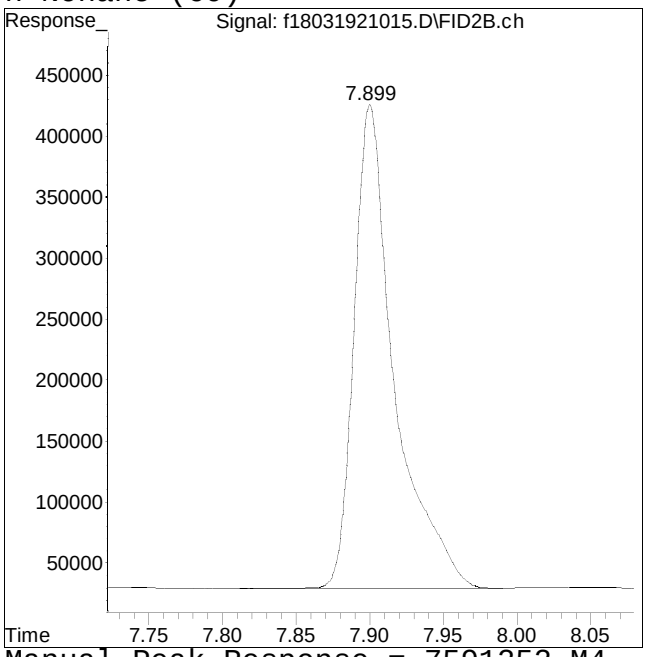
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #3: n-Nonane (C9)



Original Peak Response = 7653052



Manual Peak Response = 7591252 M4

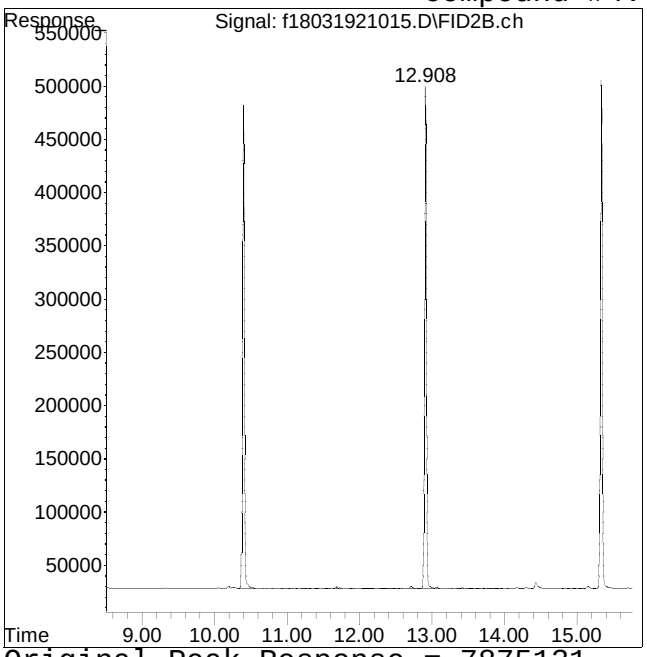
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

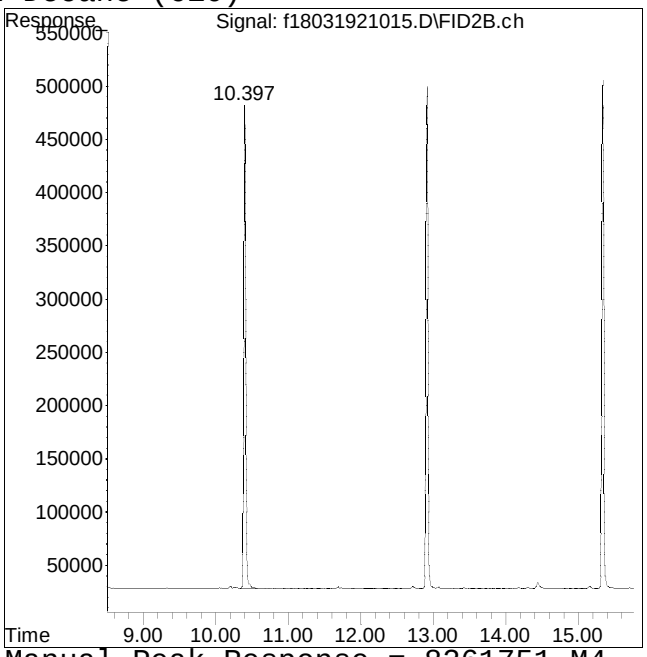
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #4: n-Decane (C10)



Original Peak Response = 7875131



Manual Peak Response = 8261751 M4

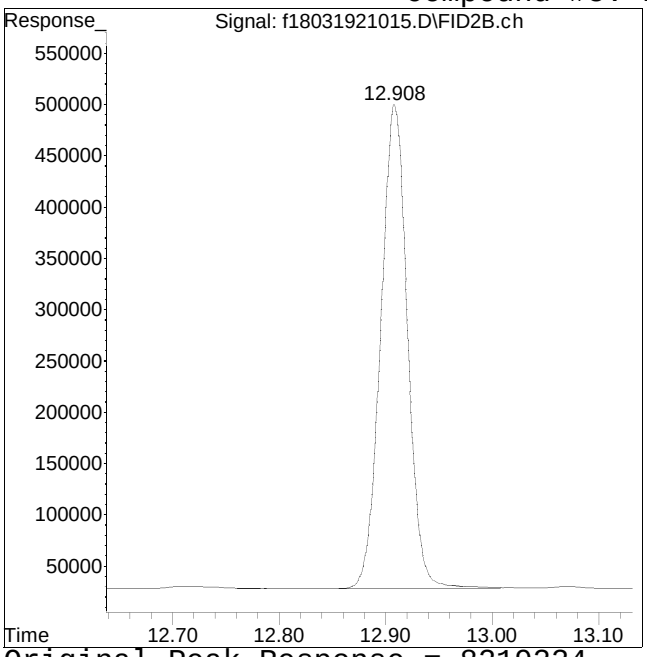
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

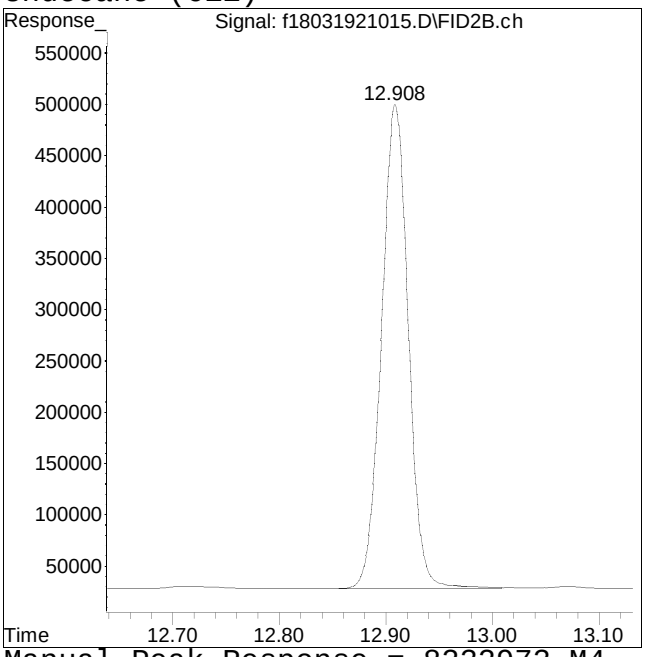
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #5: n-Undecane (C11)



Original Peak Response = 8219224



Manual Peak Response = 8232973 M4

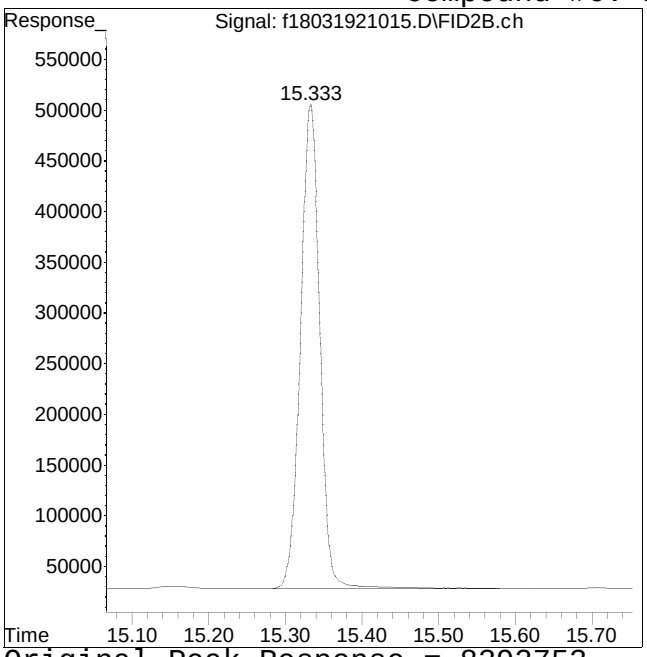
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

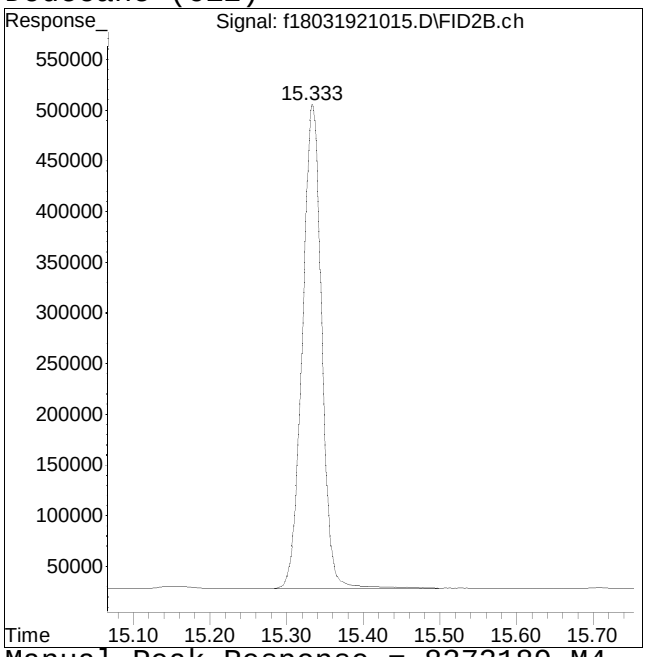
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 8392753



Manual Peak Response = 8373189 M4

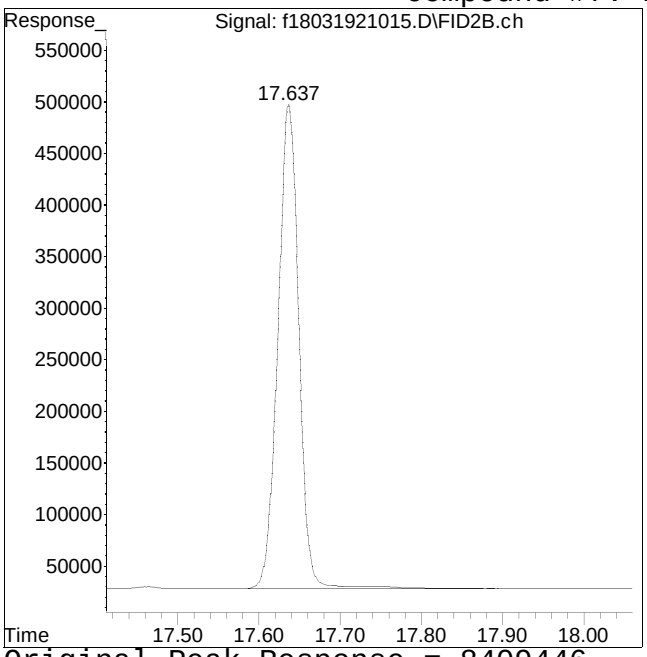
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

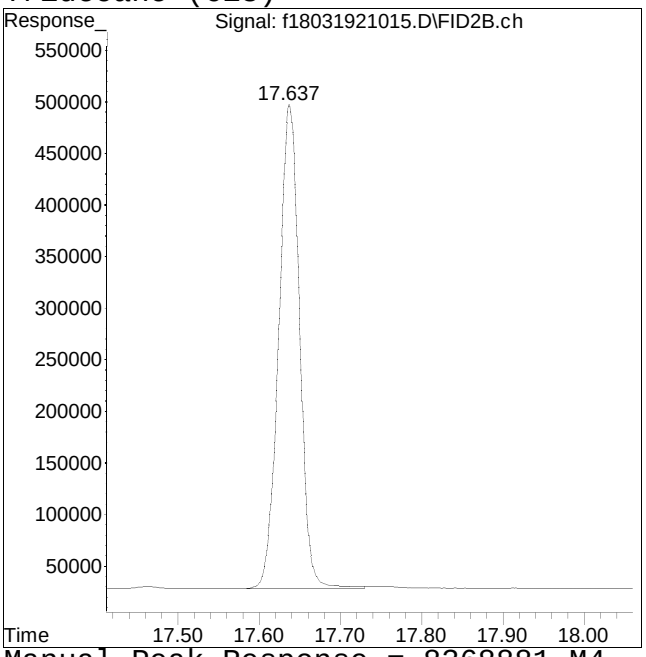
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 8409446



Manual Peak Response = 8368881 M4

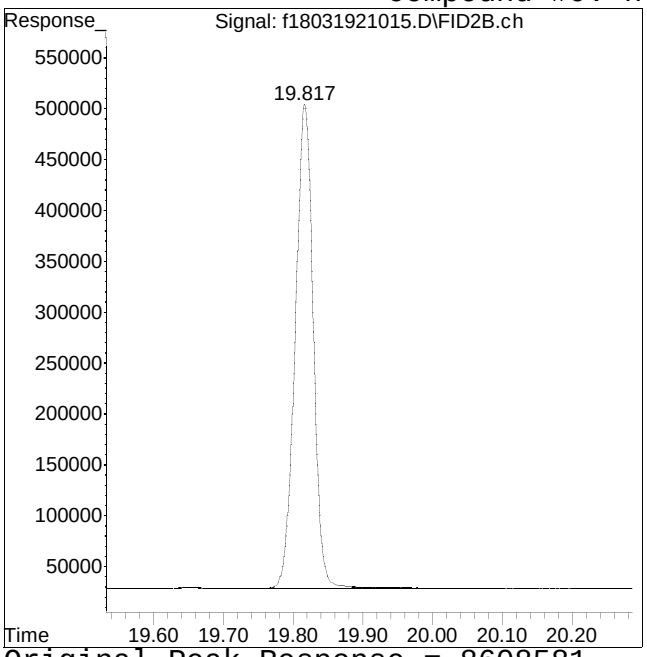
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

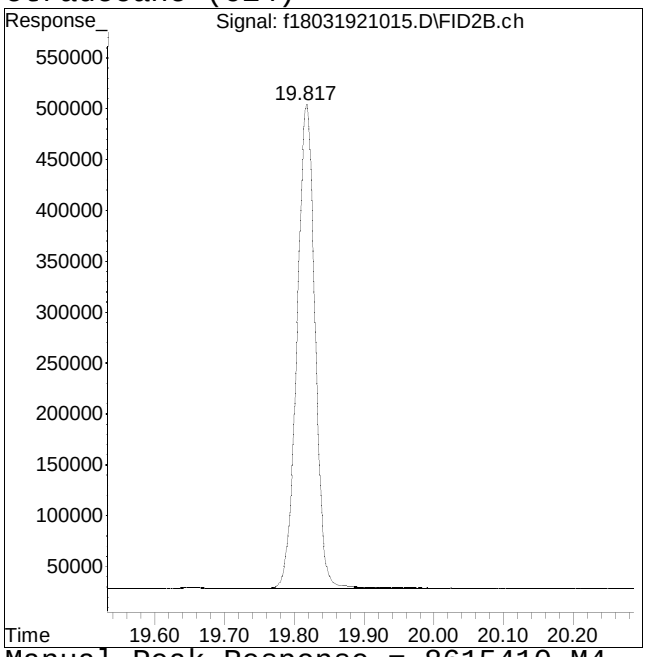
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 8608581



Manual Peak Response = 8615410 M4

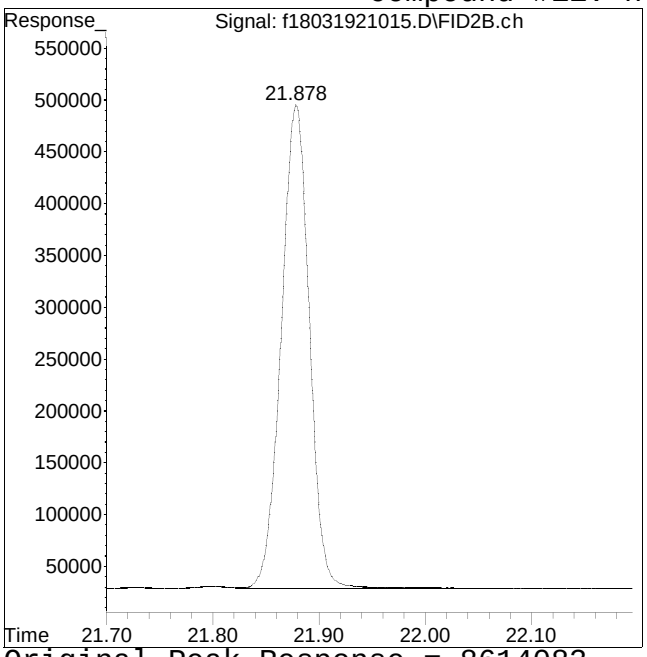
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

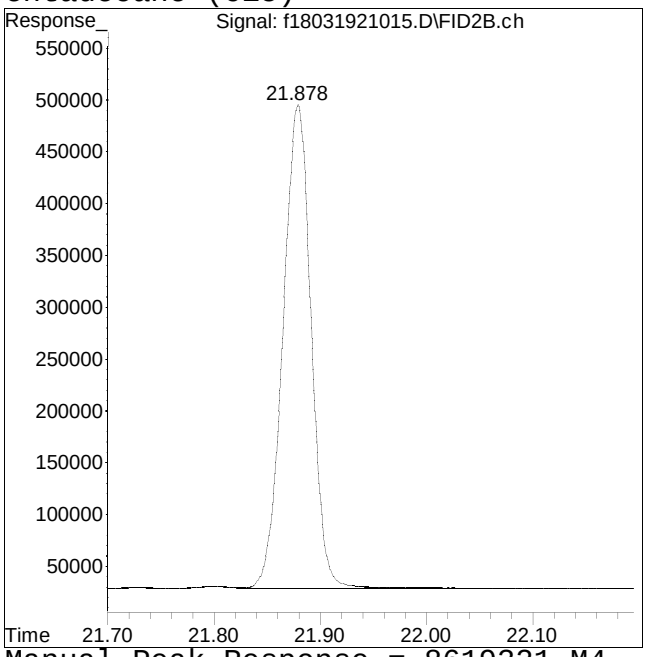
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 8614083



Manual Peak Response = 8619321 M4

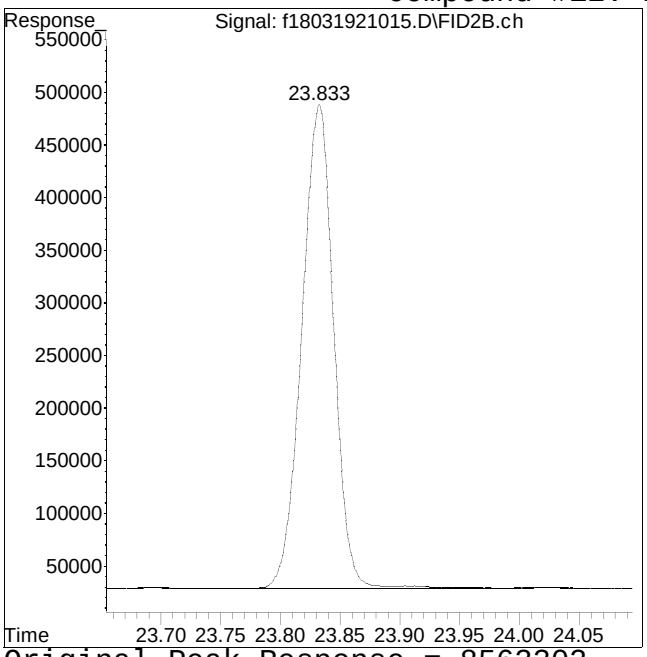
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

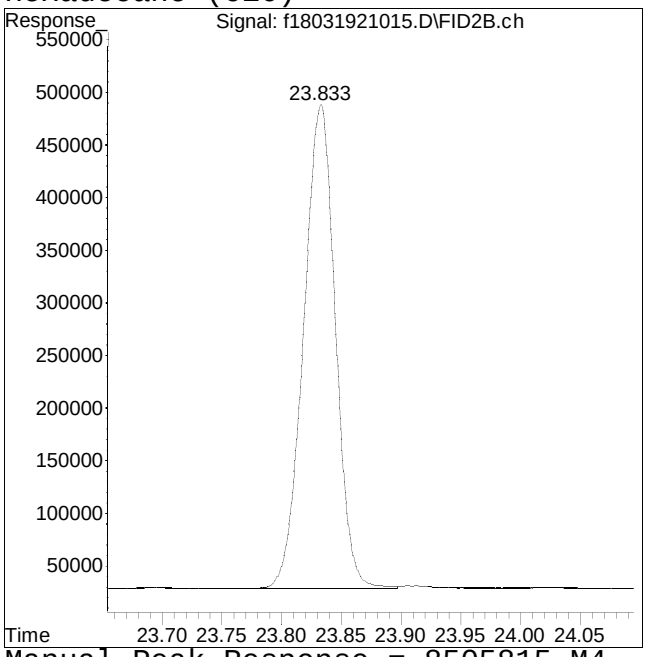
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 8563302



Manual Peak Response = 8505815 M4

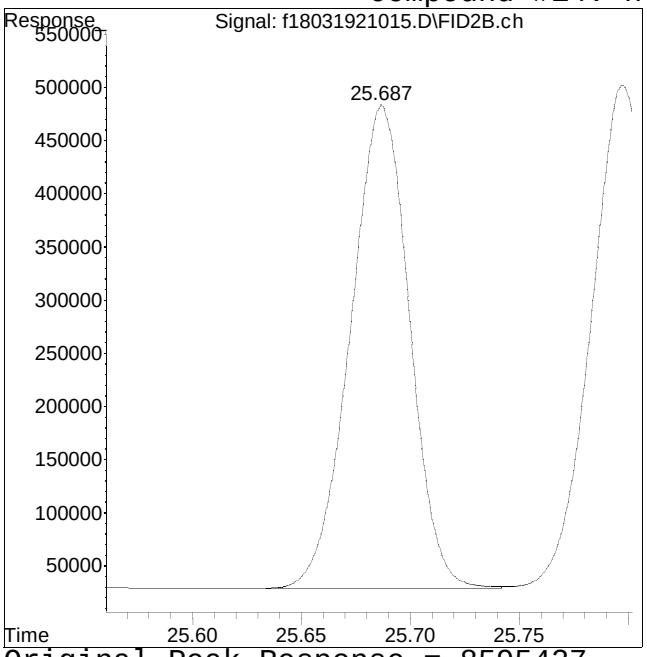
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

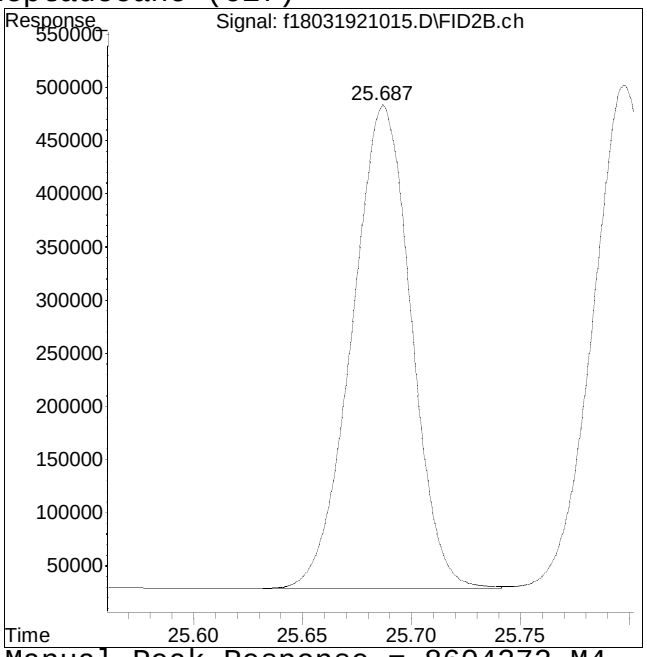
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 8595427



Manual Peak Response = 8604272 M4

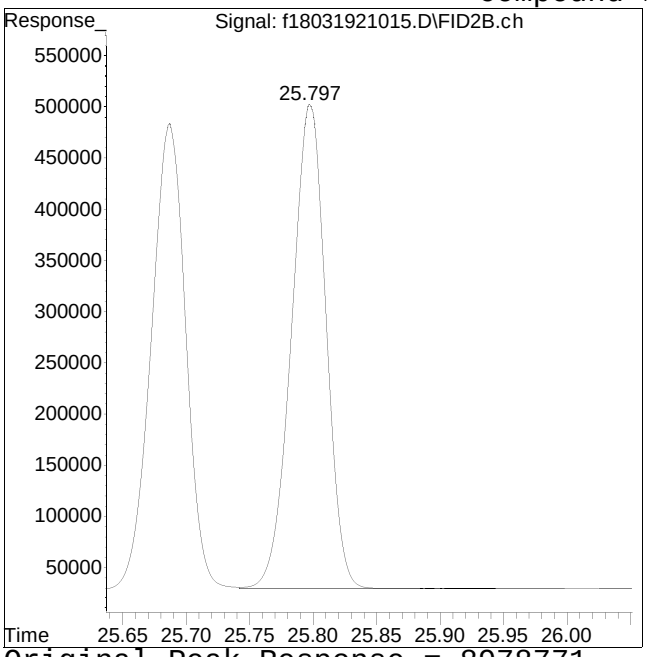
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

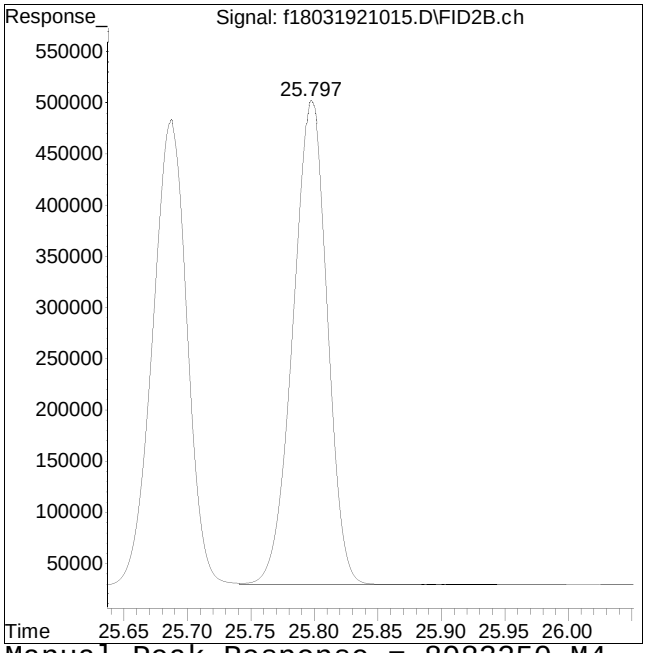
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #15: Pristane



Original Peak Response = 8978771



Manual Peak Response = 8983250 M4

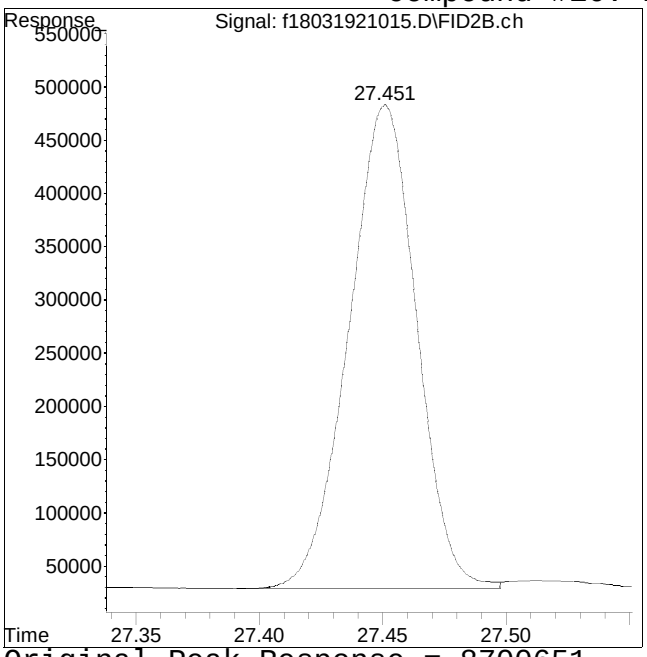
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

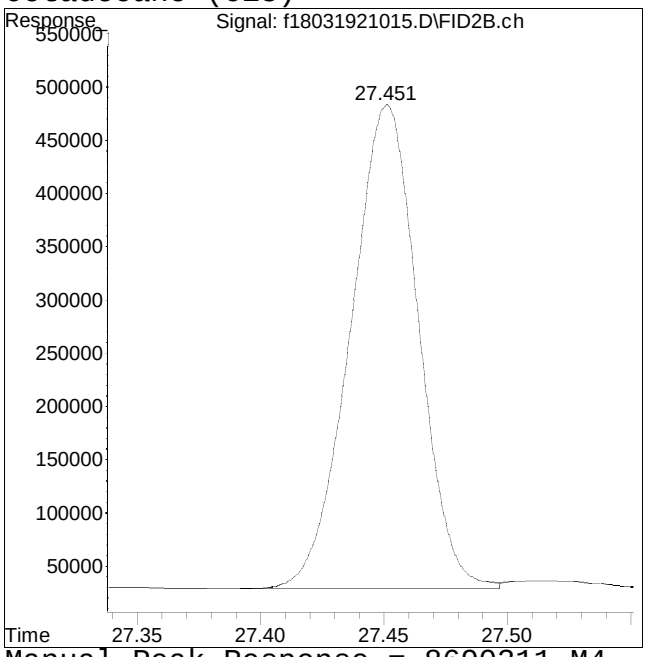
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 8700651



Manual Peak Response = 8690311 M4

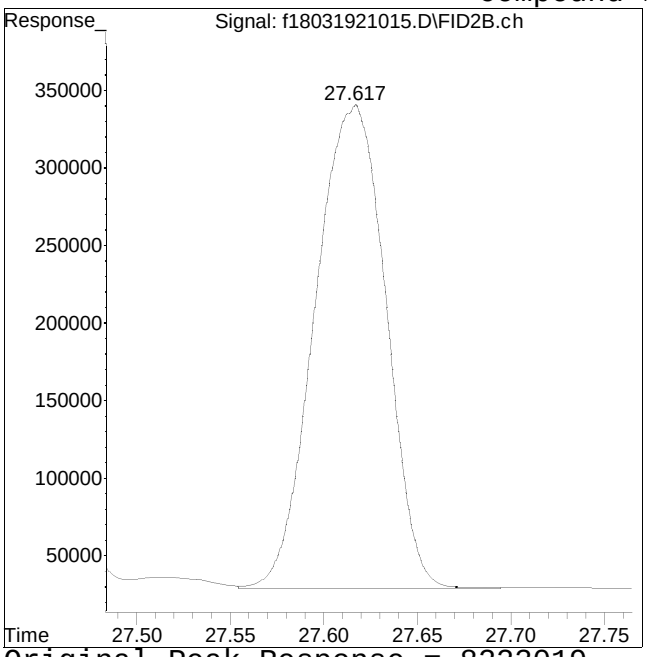
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

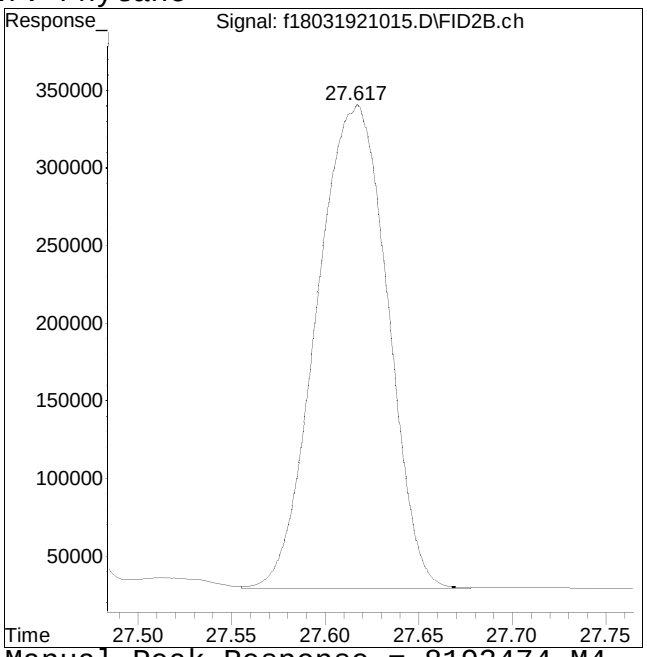
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #17: Phytane



Original Peak Response = 8223019



Manual Peak Response = 8193474 M4

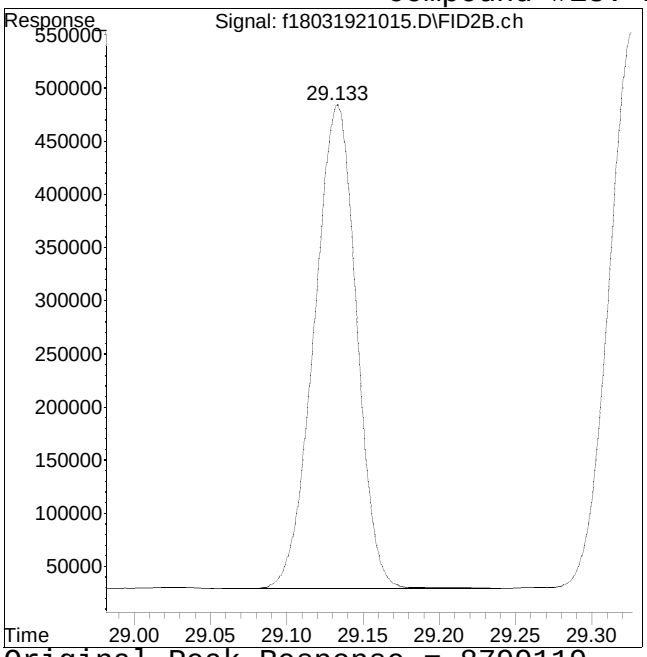
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

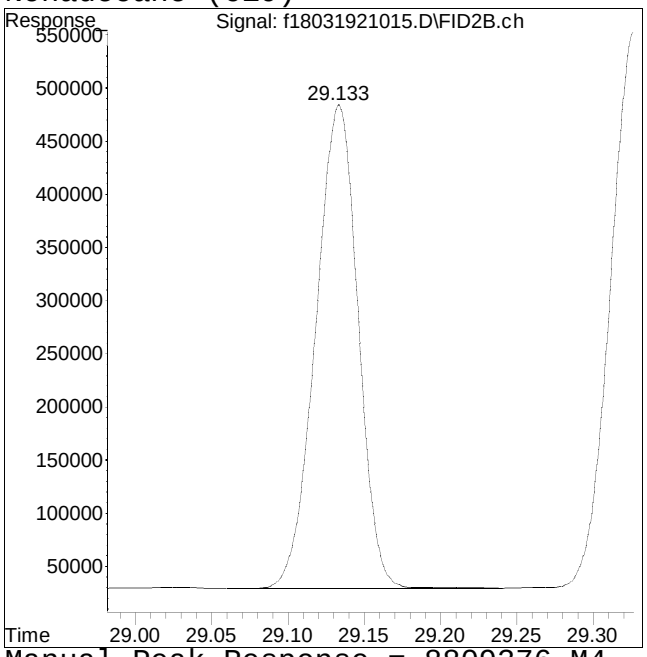
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 8799119



Manual Peak Response = 8809376 M4

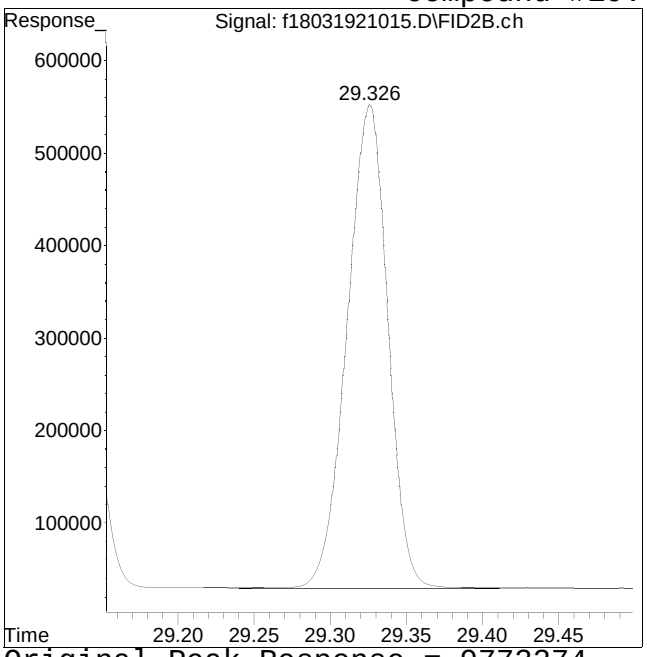
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

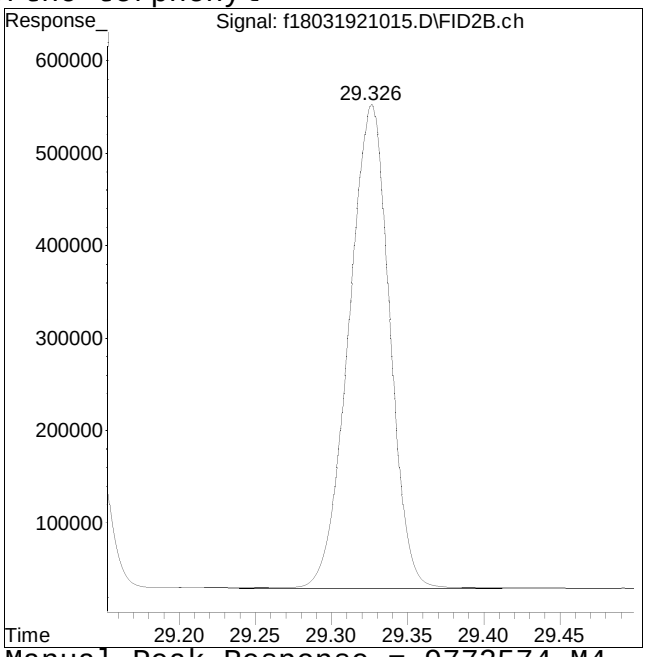
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #19: ortho-terphenyl



Original Peak Response = 9773274



Manual Peak Response = 9772574 M4

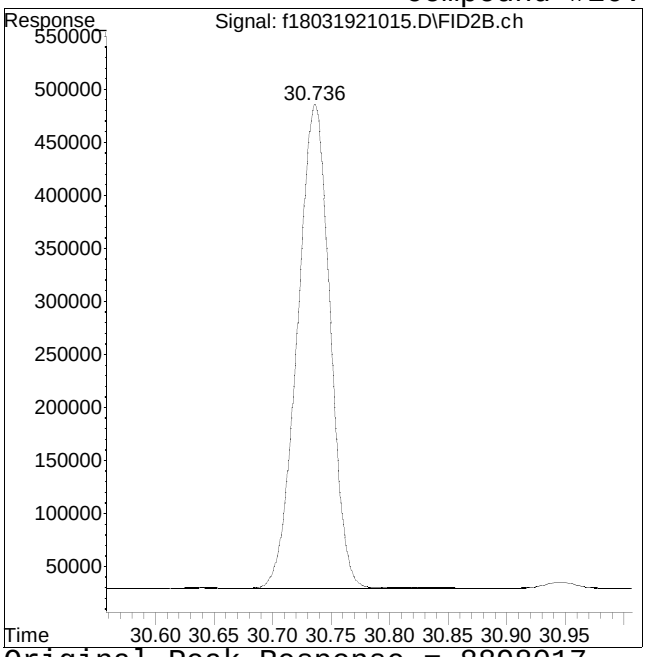
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

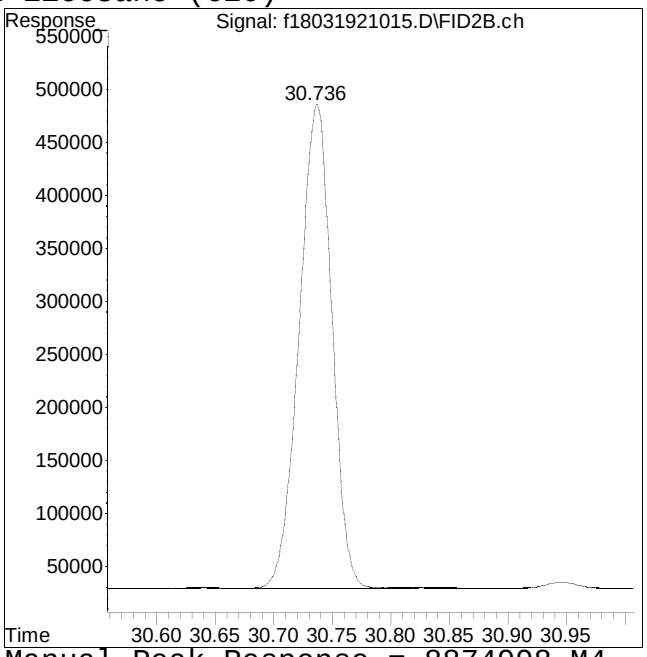
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 8898017



Manual Peak Response = 8874998 M4

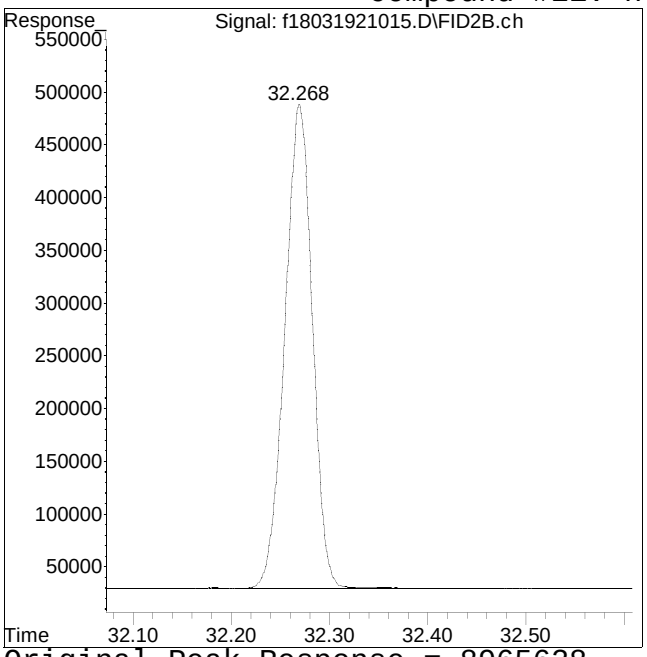
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

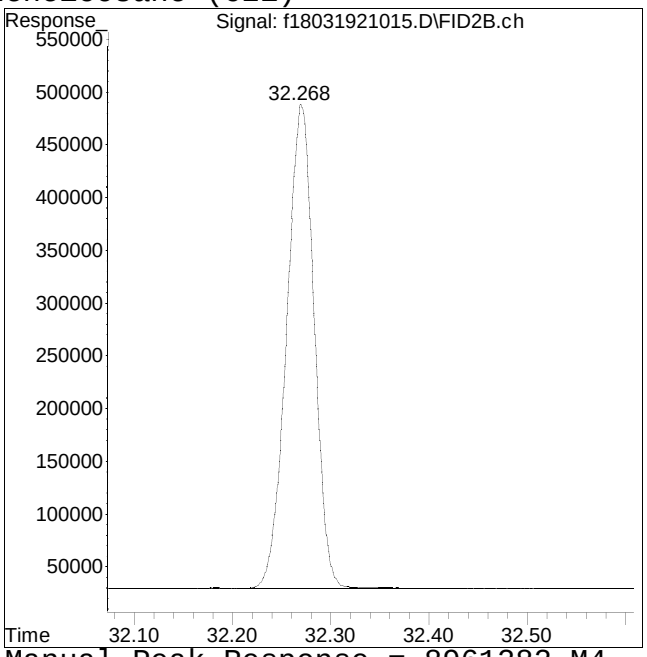
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 8965628



Manual Peak Response = 8961282 M4

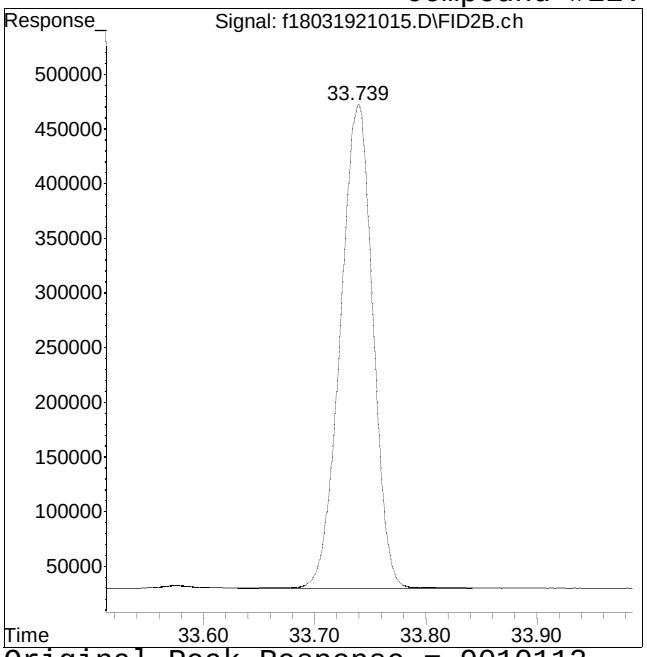
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

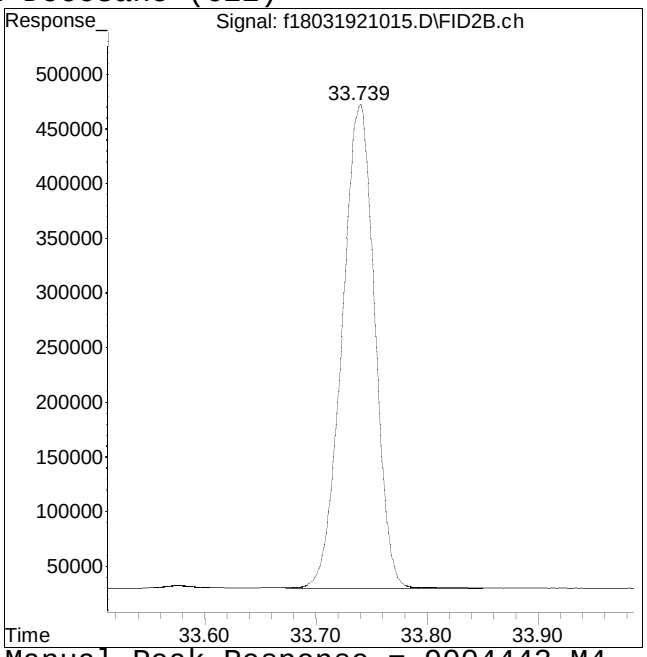
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #22: n-Docosane (C22)



Original Peak Response = 9010112



Manual Peak Response = 9004443 M4

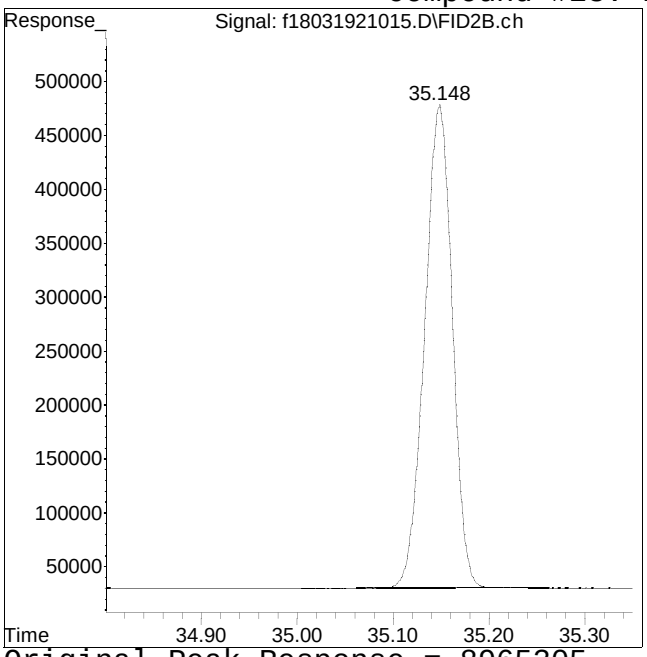
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

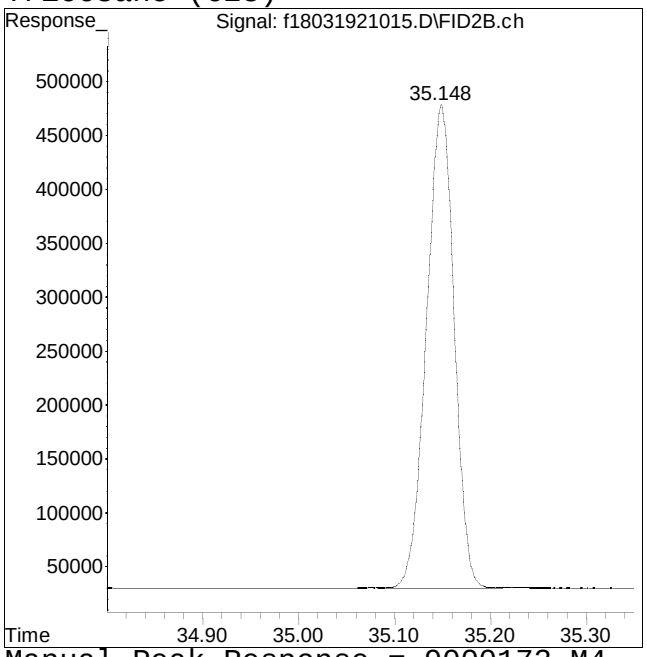
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 8965305



Manual Peak Response = 9000173 M4

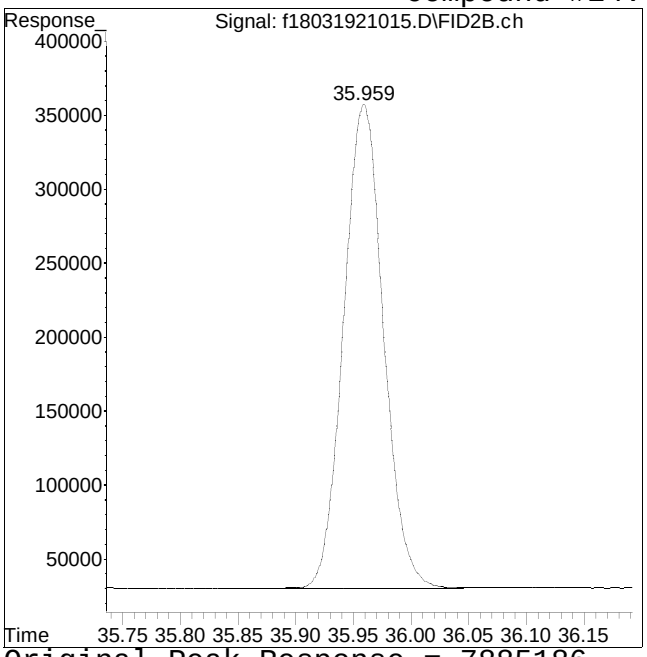
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

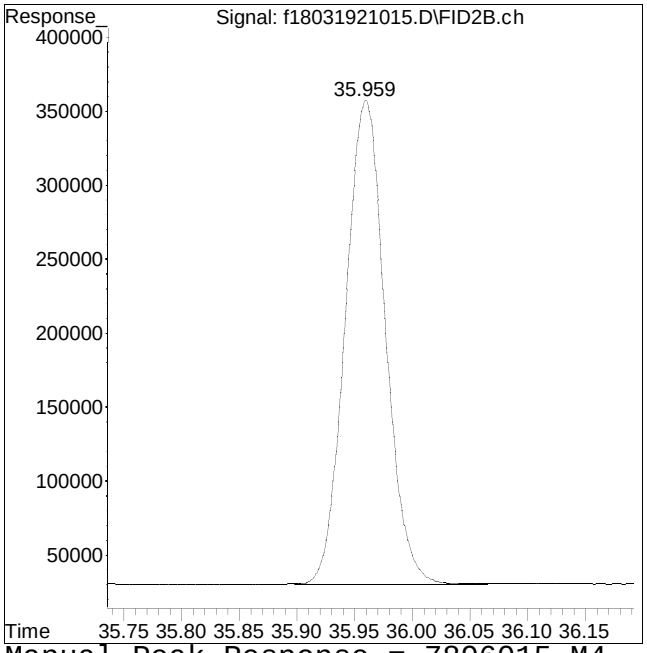
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #24: d50-Tetracosane



Original Peak Response = 7885186



Manual Peak Response = 7896015 M4

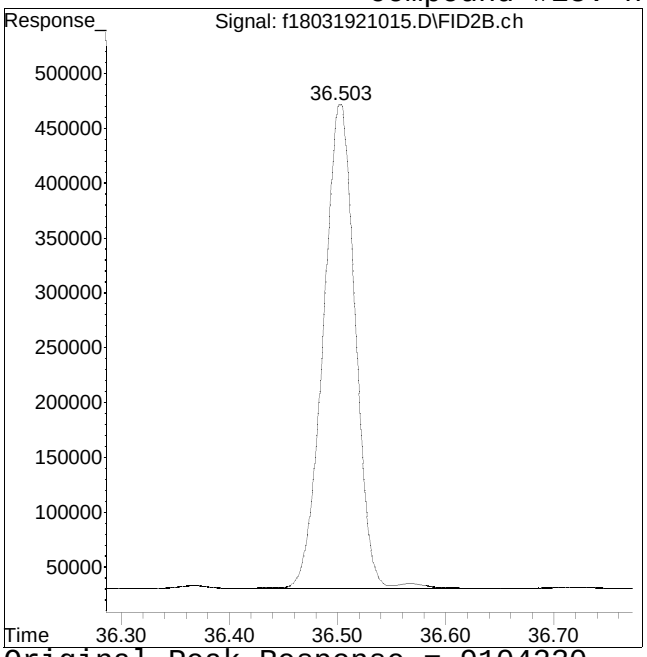
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

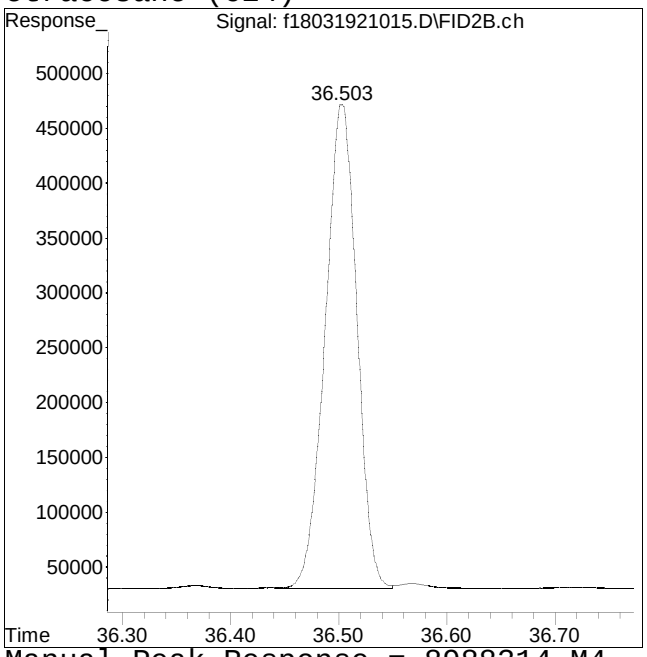
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 9104230



Manual Peak Response = 8988314 M4

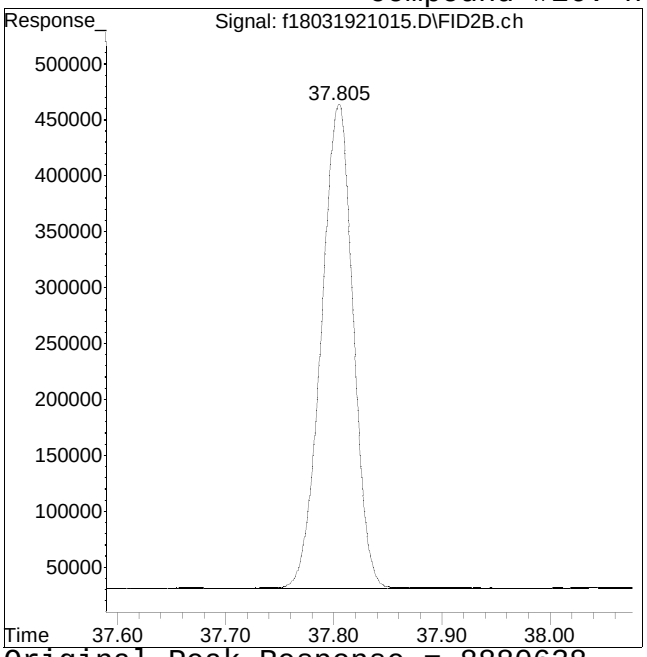
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

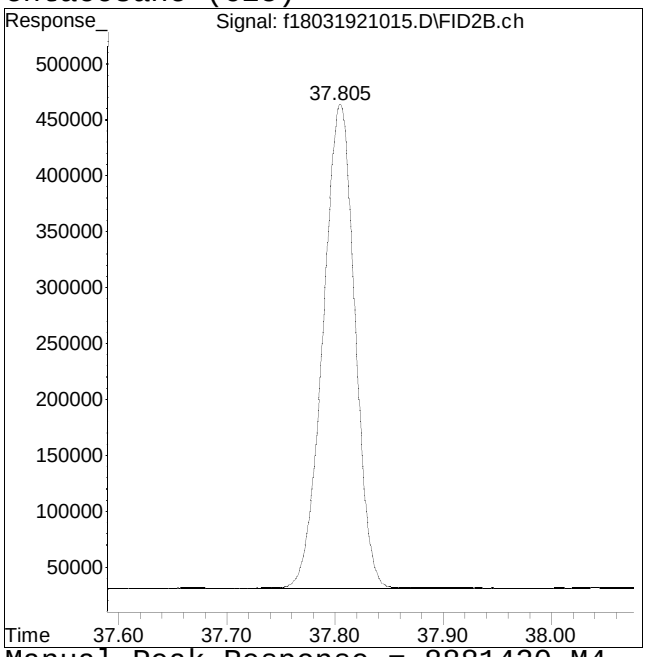
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 8880638



Manual Peak Response = 8881420 M4

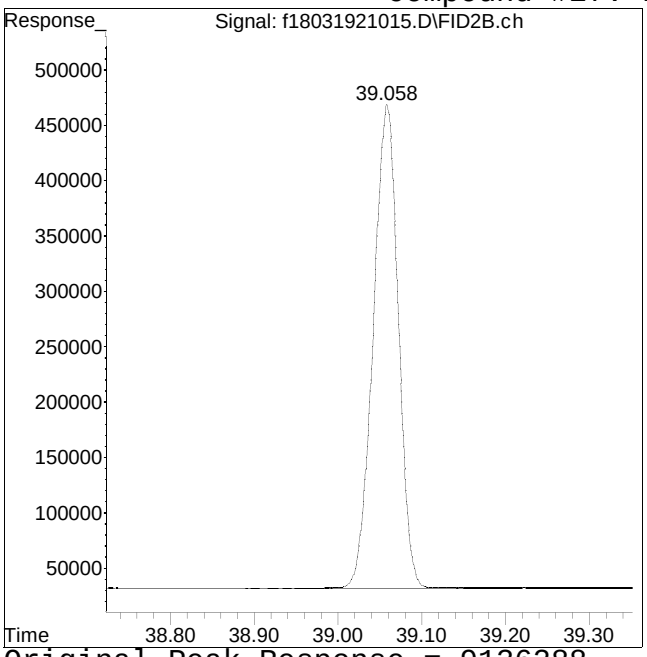
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

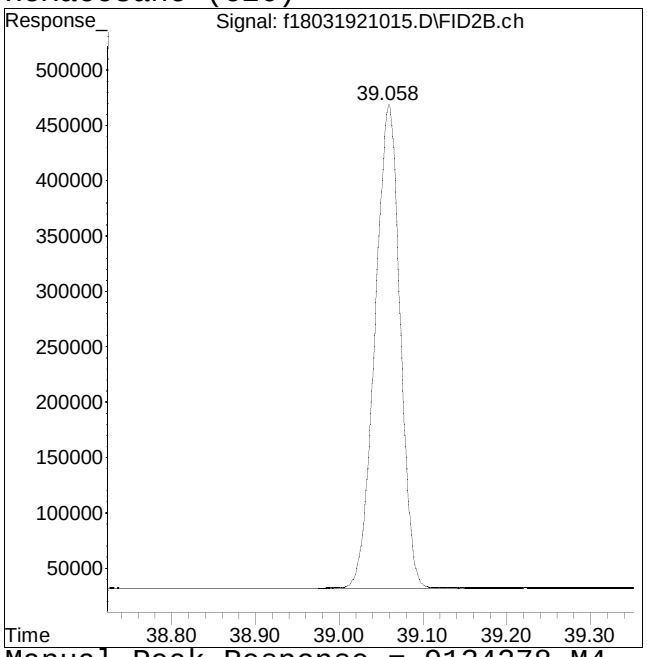
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 9136288



Manual Peak Response = 9134278 M4

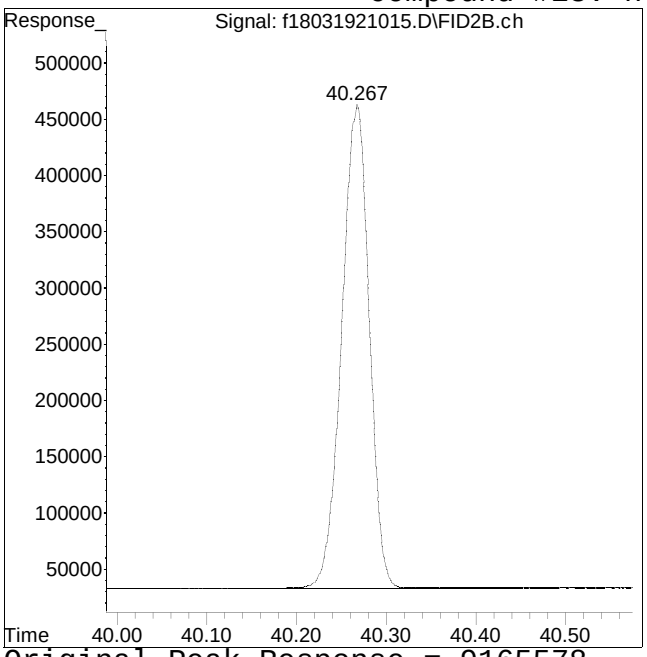
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

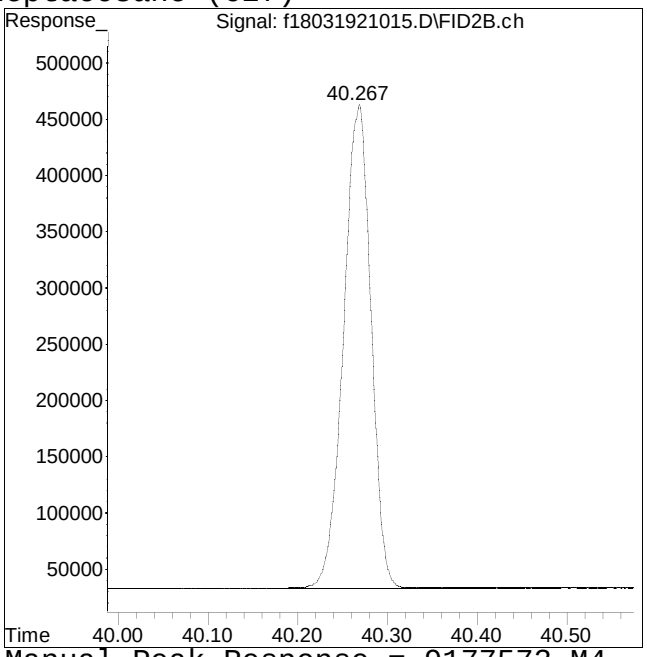
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 9165578



Manual Peak Response = 9177573 M4

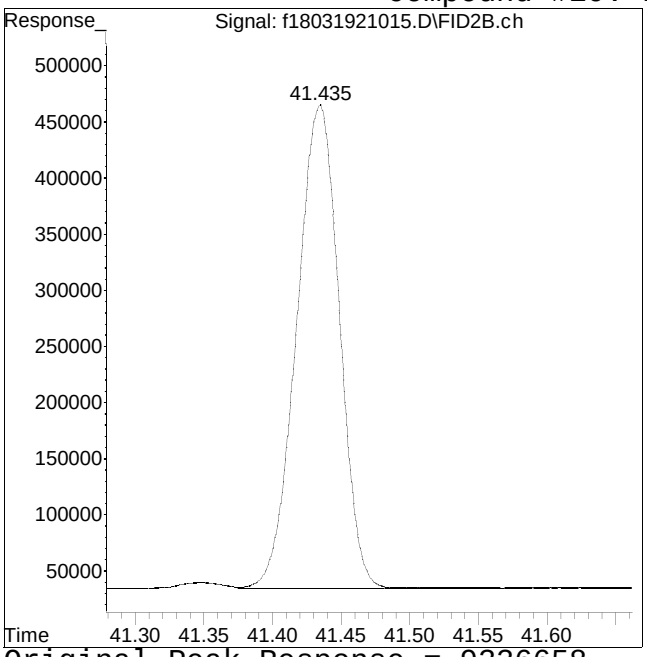
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

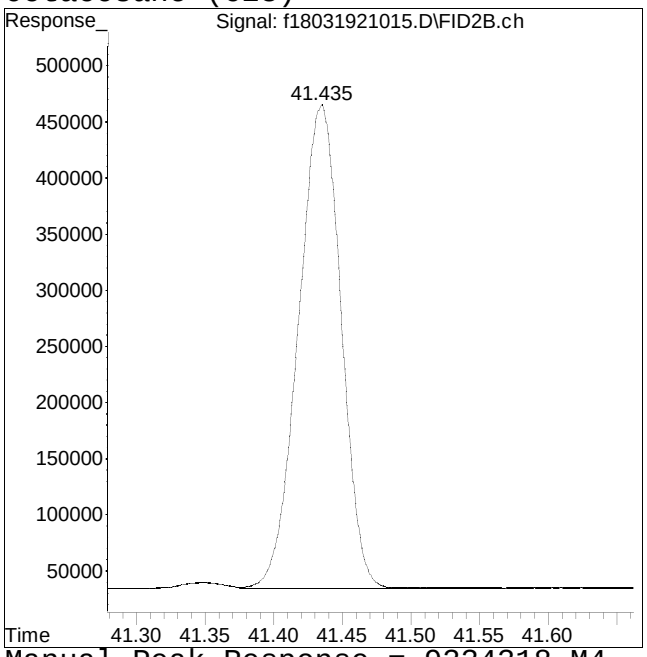
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 9336658



Manual Peak Response = 9334318 M4

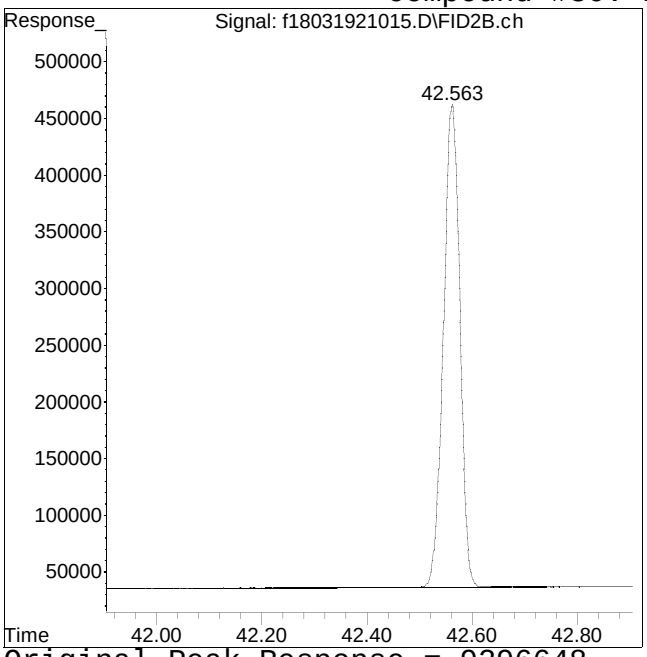
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

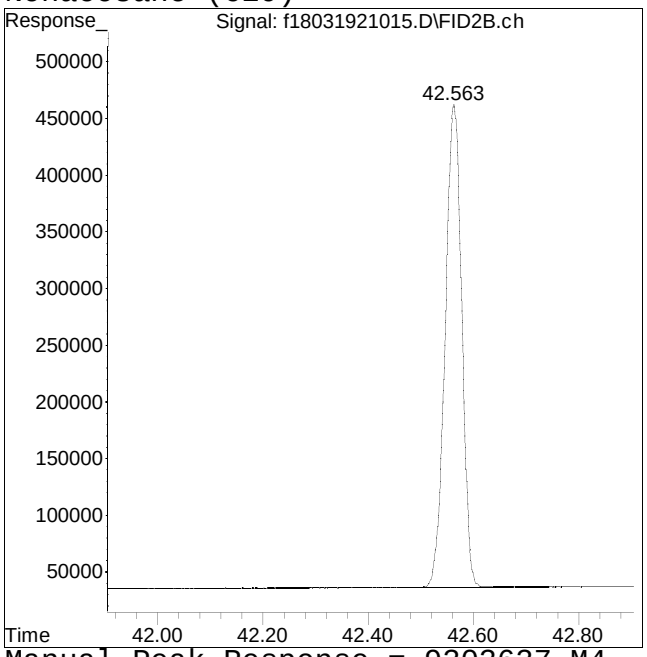
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 9296648



Manual Peak Response = 9303637 M4

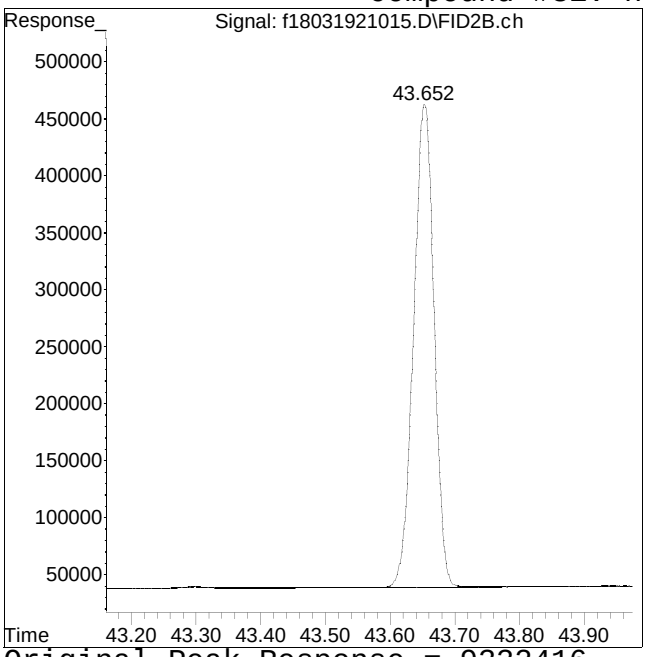
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

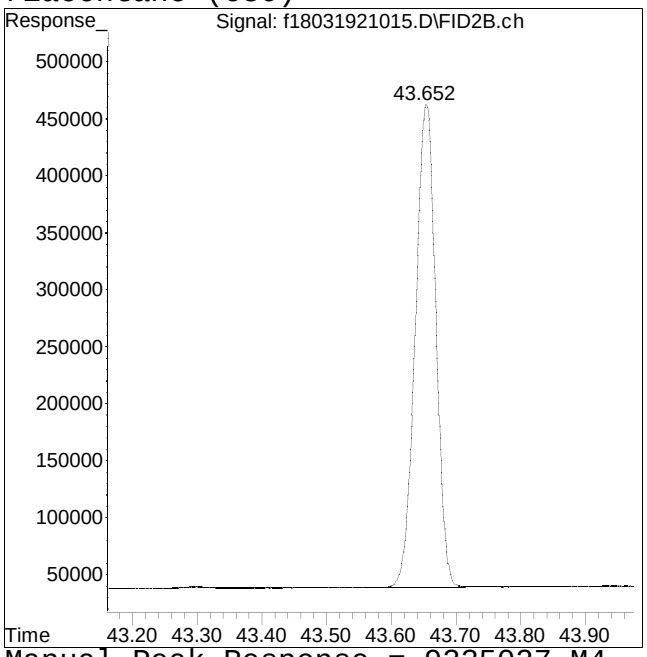
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 9332416



Manual Peak Response = 9335027 M4

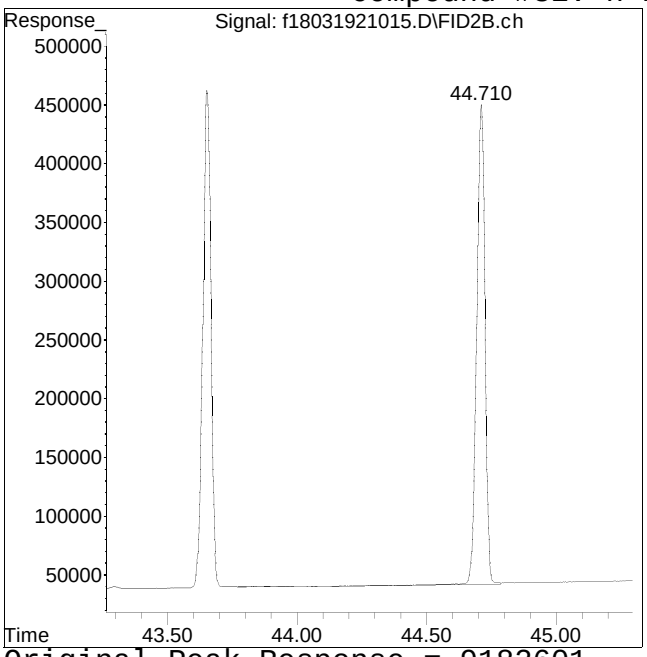
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

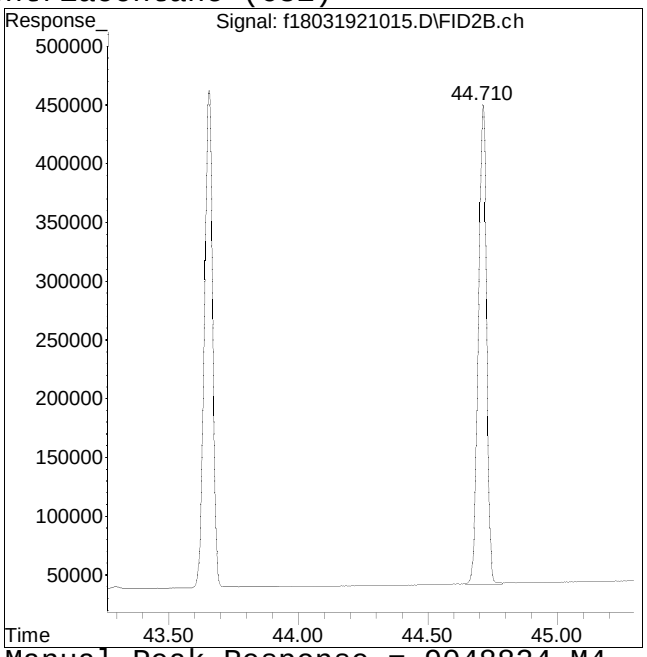
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 9182601



Manual Peak Response = 9048824 M4

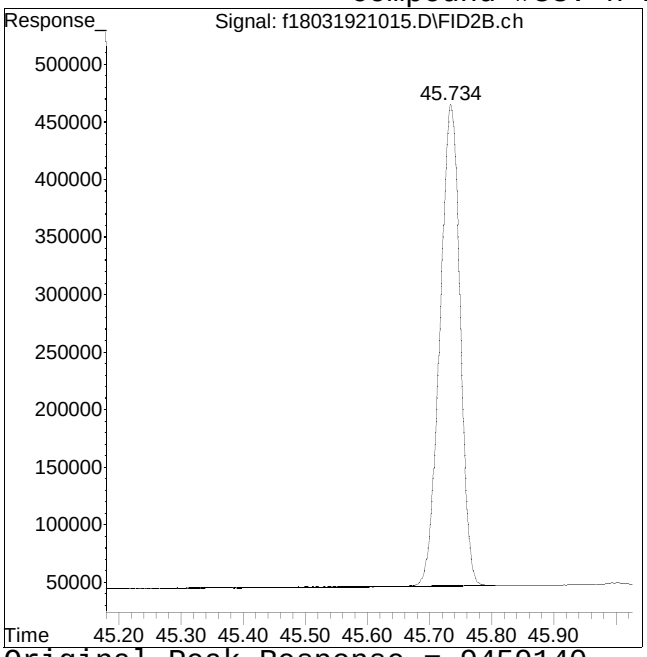
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

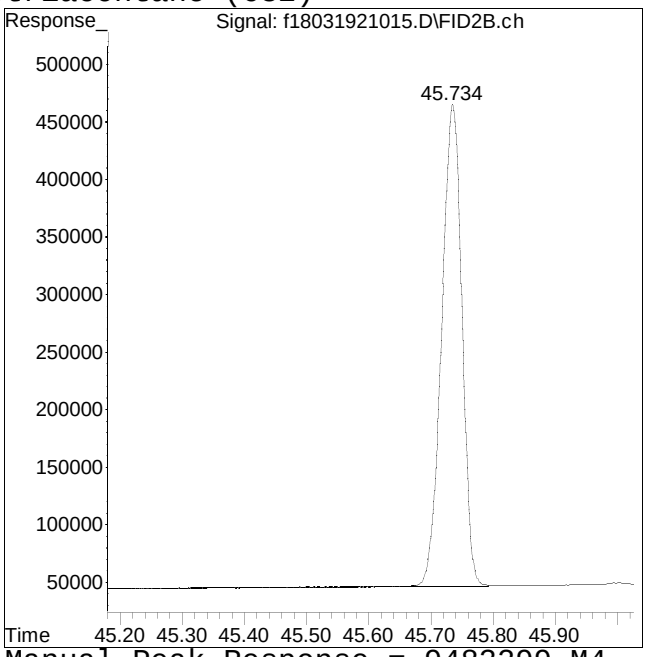
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 9459140



Manual Peak Response = 9483299 M4

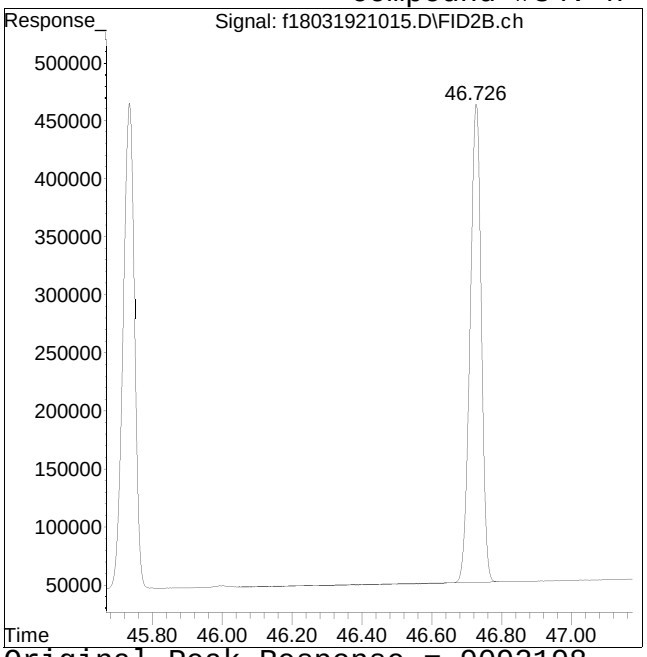
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

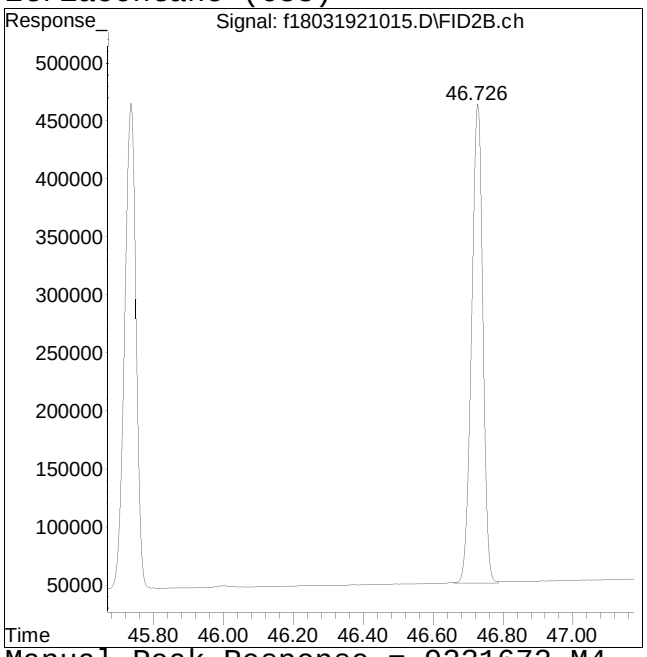
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 9092198



Manual Peak Response = 9231672 M4

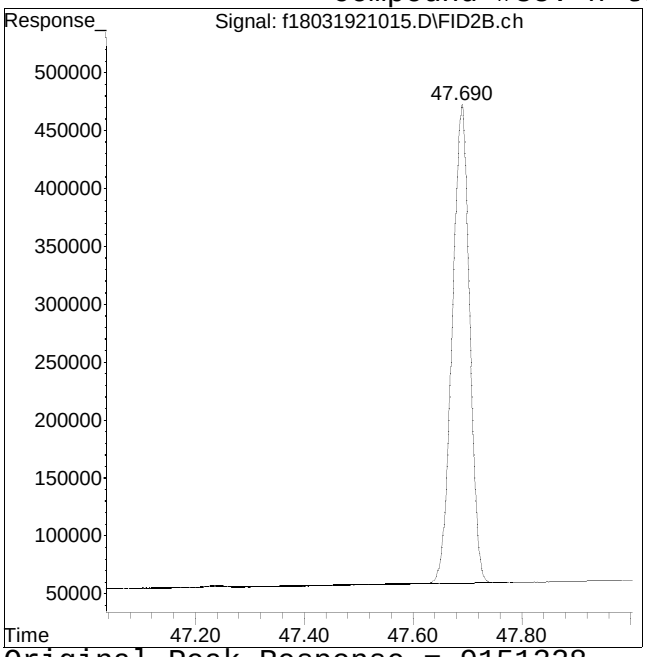
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

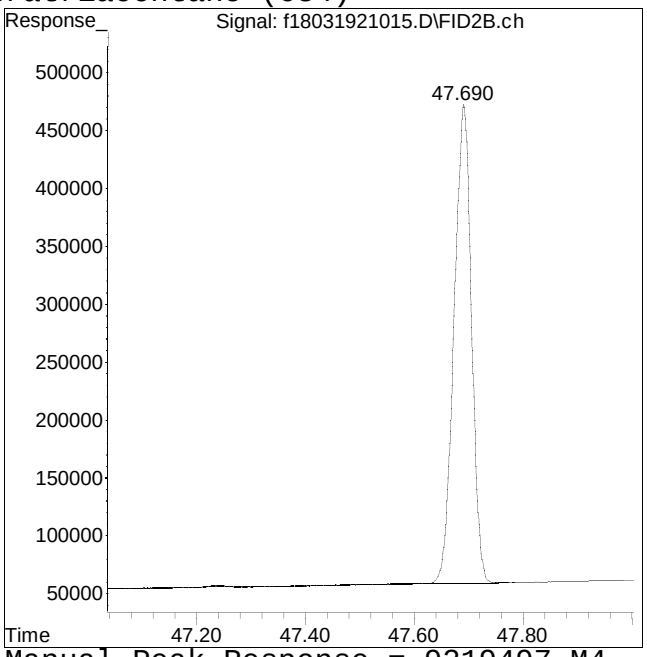
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 9151328



Manual Peak Response = 9219497 M4

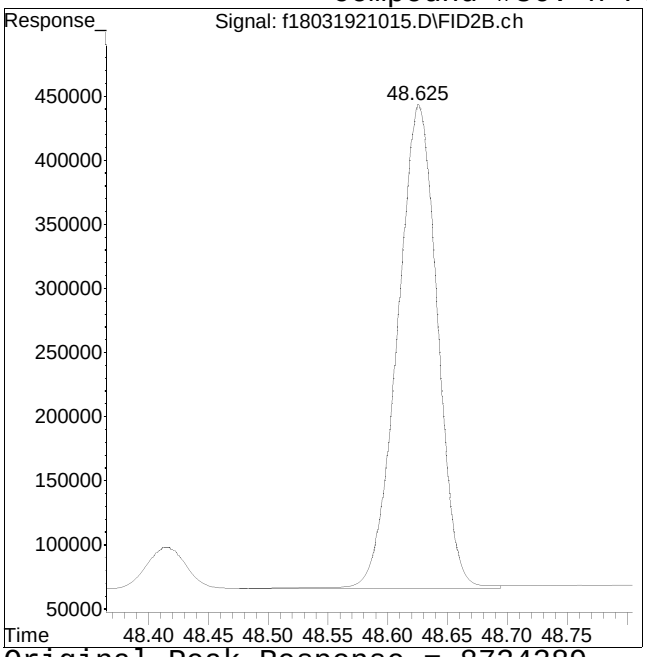
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

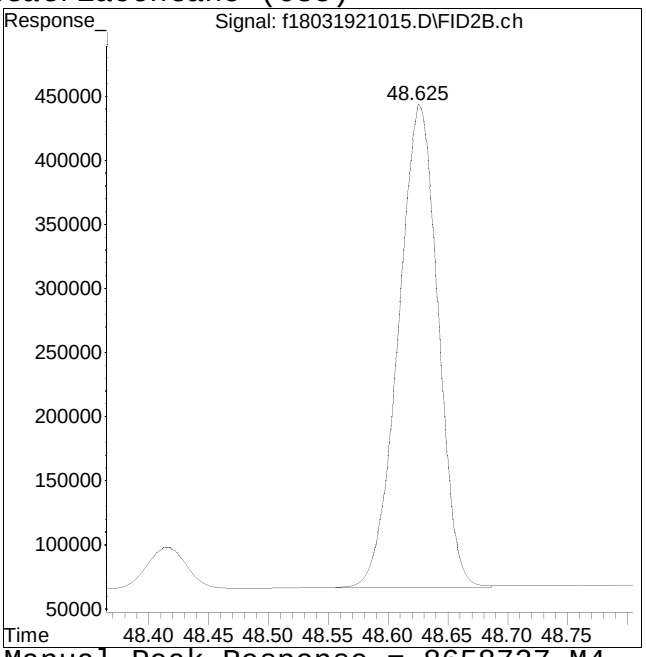
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 8734389



Manual Peak Response = 8658727 M4

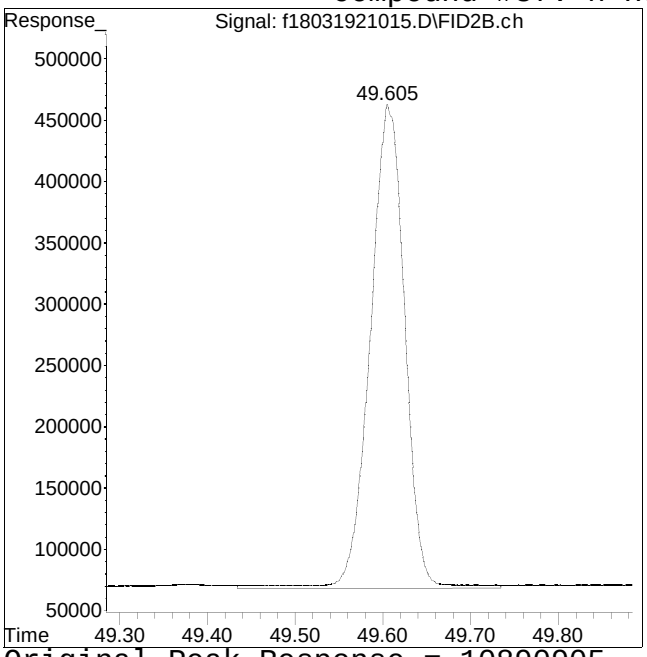
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

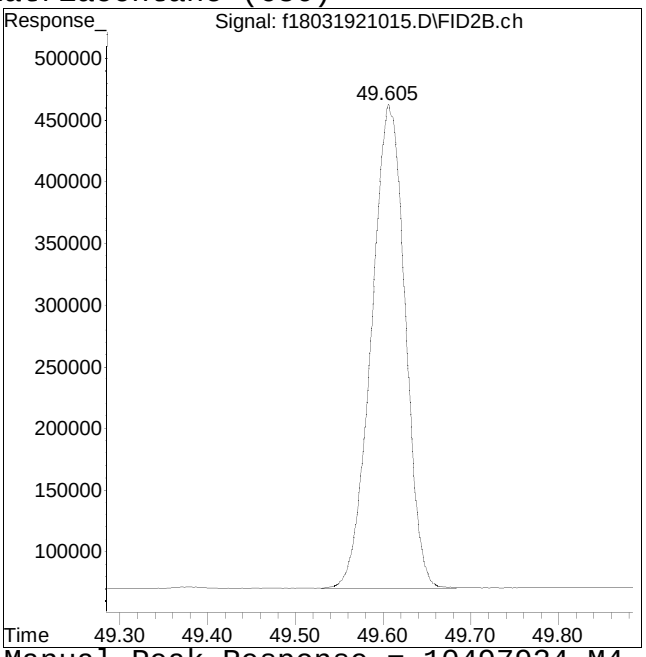
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 10890905



Manual Peak Response = 10497934 M4

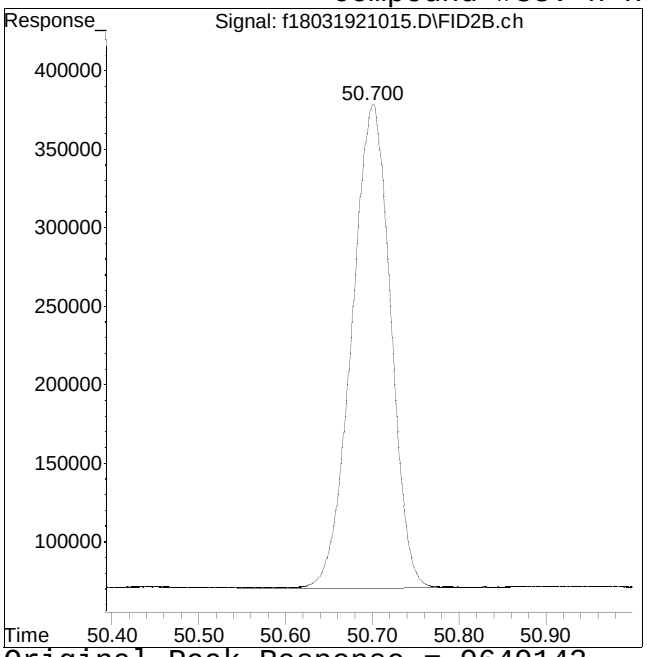
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

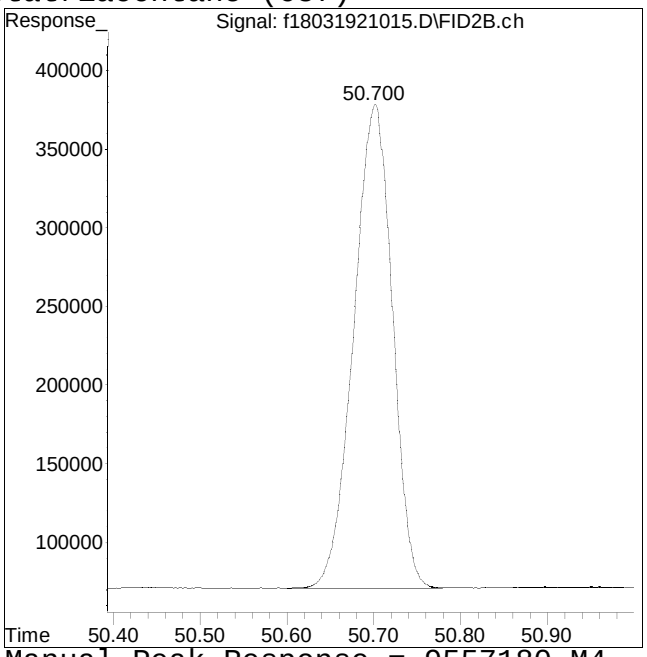
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 9649143



Manual Peak Response = 9557180 M4

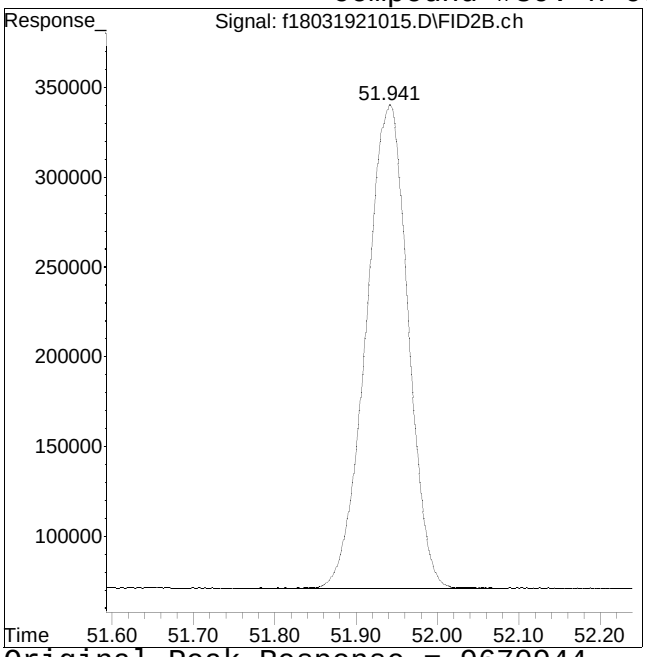
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

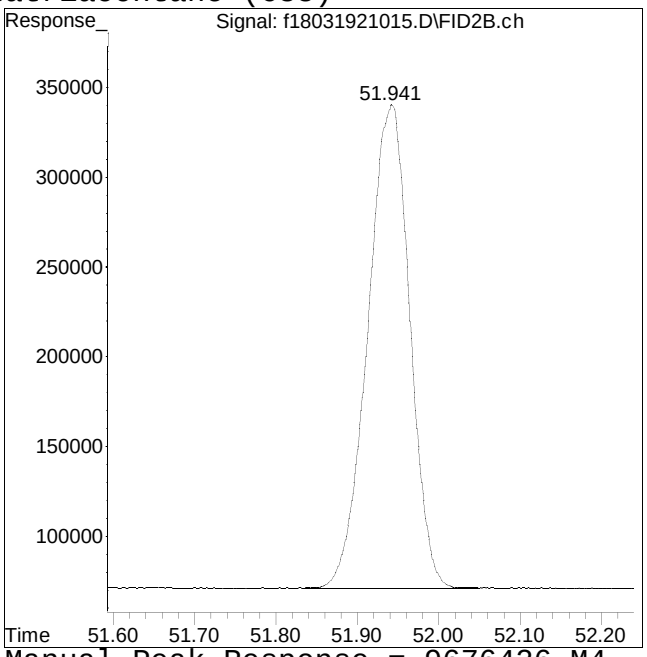
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 9670944



Manual Peak Response = 9676426 M4

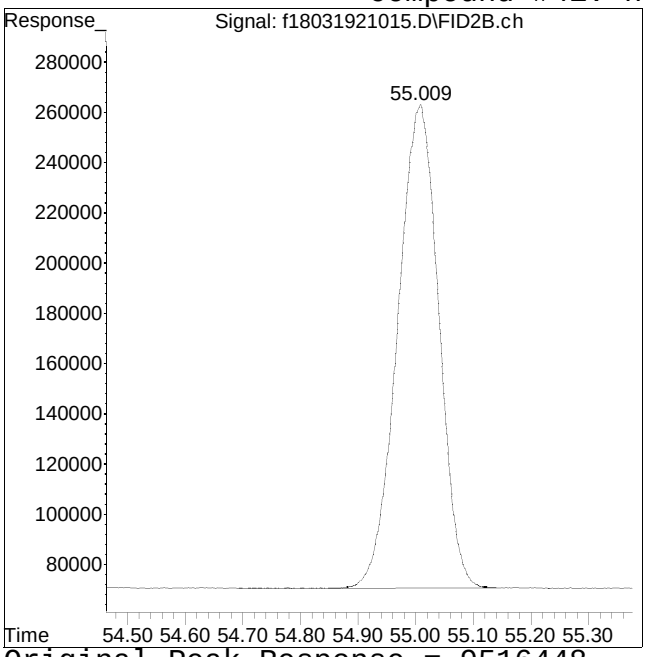
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

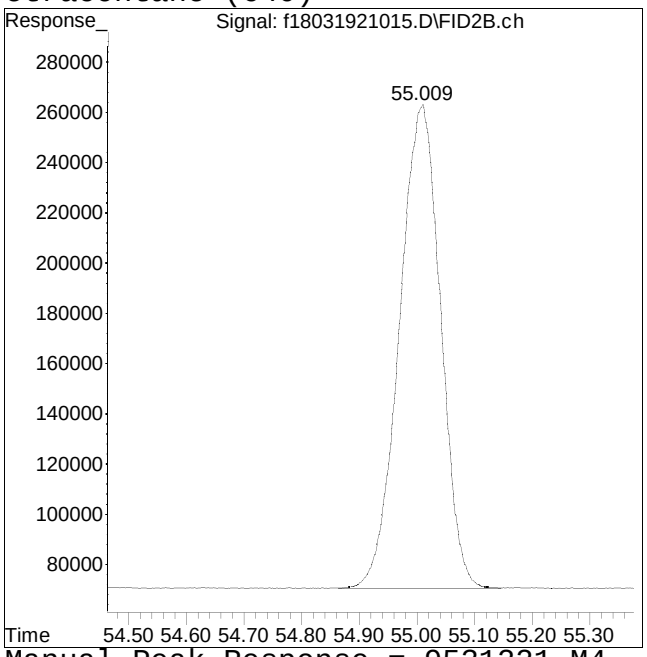
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921015.D
Date Inj'd : 3/20/2021 2:51 __
Sample : I1803192102R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 10:56 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 9516448



Manual Peak Response = 9531221 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921017.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 04:18
Operator : FID18:WR
Sample : I1803192103R
Misc : WG1479204,FRBD61
ALS Vial : 59 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:14:20 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:14:11 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.358	49070014	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.347	56611819	52.486 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 104.97%	
24) s d50-Tetracosane	35.977	45921317	53.381 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 106.76%	
Target Compounds			
2) t n-Octane (C8)	5.686	38849596	48.599 ug/mL M4
3) t n-Nonane (C9)	7.915	42294864	51.000 ug/mL M4
4) t n-Decane (C10)	10.408	45992435	52.868 ug/mL M4
5) t n-Undecane (C11)	12.920	46425796	53.453 ug/mL M4
6) t n-Dodecane (C12)	15.346	47074163	53.325 ug/mL M4
7) t n-Tridecane (C13)	17.650	47033732	52.924 ug/mL M4
9) t n-Tetradecane (C14)	19.831	48325988	52.904 ug/mL M4
11) t n-Pentadecane (C15)	21.893	48466650	52.470 ug/mL M4
12) t n-Hexadecane (C16)	23.848	47987135	52.206 ug/mL M4
14) t n-Heptadecane (C17)	25.704	48633326	52.218 ug/mL M4
15) t Pristane	25.816	49940032	52.037 ug/mL M4
16) t n-Octadecane (C18)	27.469	49098304	51.680 ug/mL M4
17) t Phytane	27.635	45776479	51.616 ug/mL M4
18) t n-Nonadecane (C19)	29.151	49564919	52.046 ug/mL M4
20) t n-Eicosane (C20)	30.756	49870114	51.924 ug/mL M4
21) t n-Heneicosane (C21)	32.289	50291212	52.069 ug/mL M4
22) t n-Docosane (C22)	33.759	50332627	52.043 ug/mL M4
23) t n-Tricosane (C23)	35.169	50485450	52.011 ug/mL M4
25) t n-Tetracosane (C24)	36.525	50546444	52.268 ug/mL M4
26) t n-Pentacosane (C25)	37.825	49745550	52.415 ug/mL M4
27) t n-Hexacosane (C26)	39.080	51143791	52.553 ug/mL M4
28) t n-Heptacosane (C27)	40.290	51234380	52.623 ug/mL M4
29) t n-Octacosane (C28)	41.457	52384821	52.711 ug/mL M4
30) t n-Nonacosane (C29)	42.587	52248654	52.939 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921017.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 04:18
Operator : FID18:WR
Sample : I1803192103R
Misc : WG1479204,FRBD61
ALS Vial : 59 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:14:20 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:14:11 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

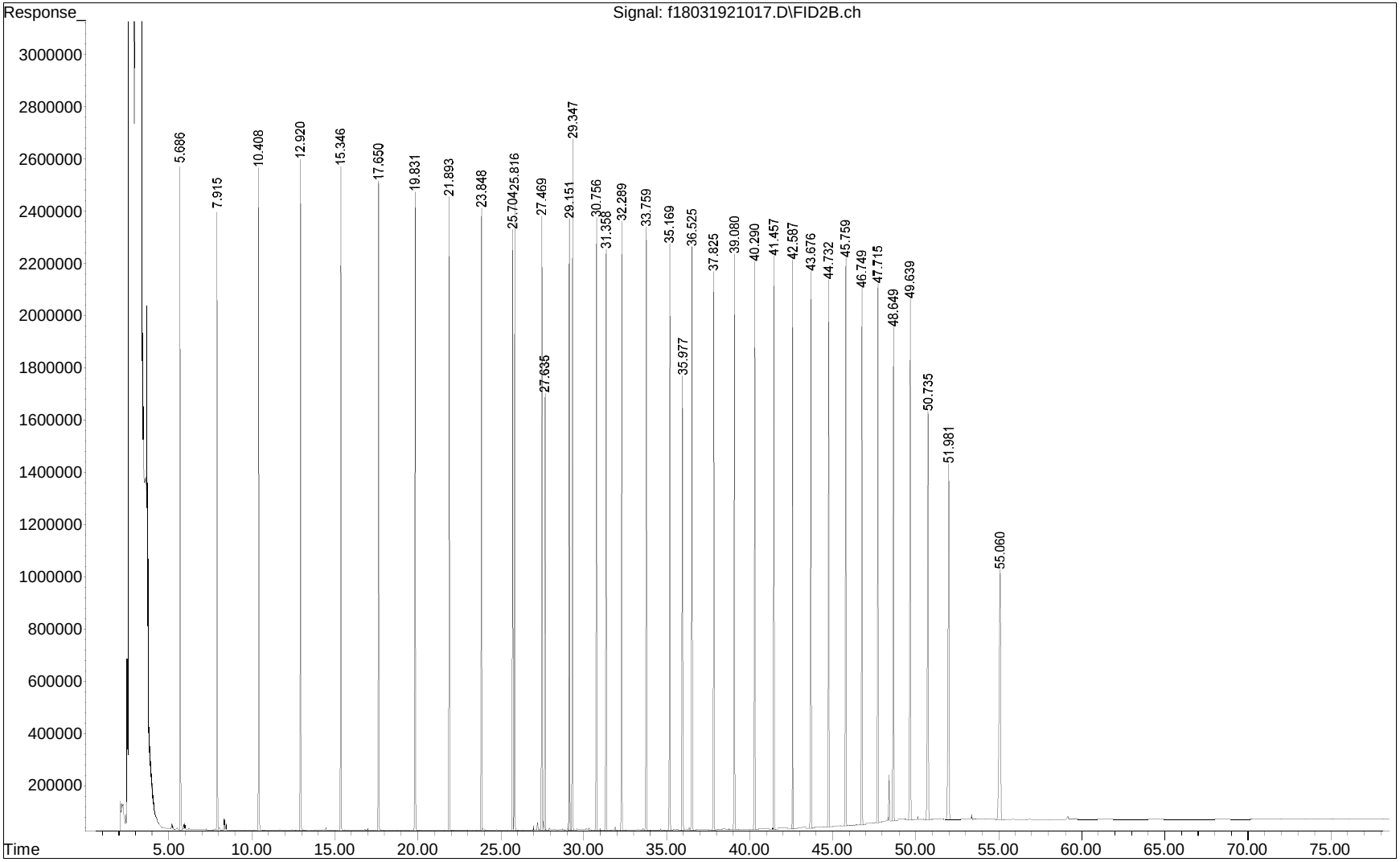
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.676	52541411	53.121 ug/mL M4
32) t	n-Hentriacontane (C31)	44.732	50732462	53.212 ug/mL M4
33) t	n-Dotriacontane (C32)	45.759	53372391	53.394 ug/mL M4
34) t	n-Tritriacontane (C33)	46.749	51955010	53.560 ug/mL M4
35) t	n-tetratriacontane (C34)	47.715	51771065	53.672 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.649	48449649	53.685 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.639	58388194	53.490 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.735	53240198	53.532 ug/mL M4
39) t	n-Octatriacontane (C38)	51.981	53881436	53.475 ug/mL M4
41) t	n-Tetracontane (C40)	55.060	53016704	52.519 ug/mL M4

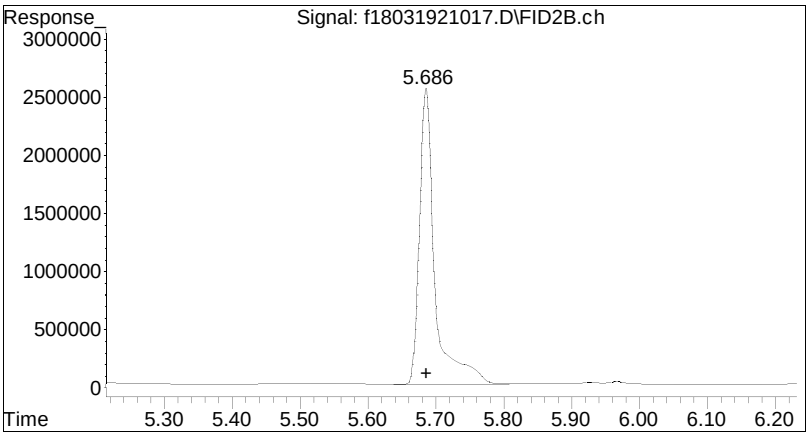
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

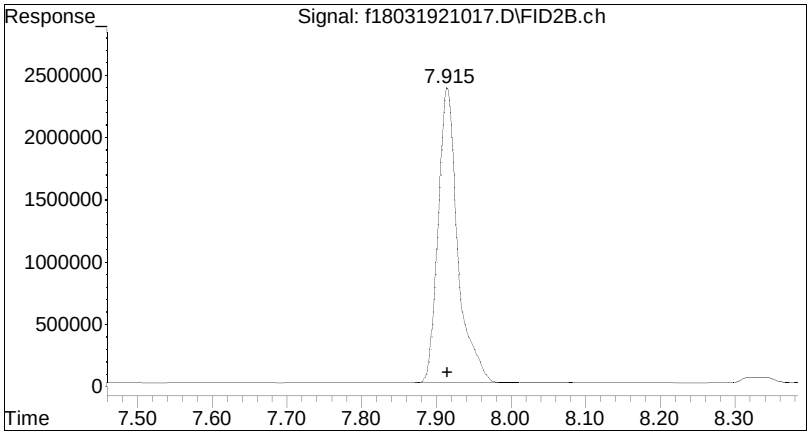
File :O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\f18031921017.D
Operator : FID18:WR
Acquired : 20 Mar 2021 04:18 using AcqMethod FID18.M
Sample Name: I1803192103R
Instrument: FID 18
Misc Info : WG1479204,FRBD61
Vial Number: 59
CurrentMeth: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M





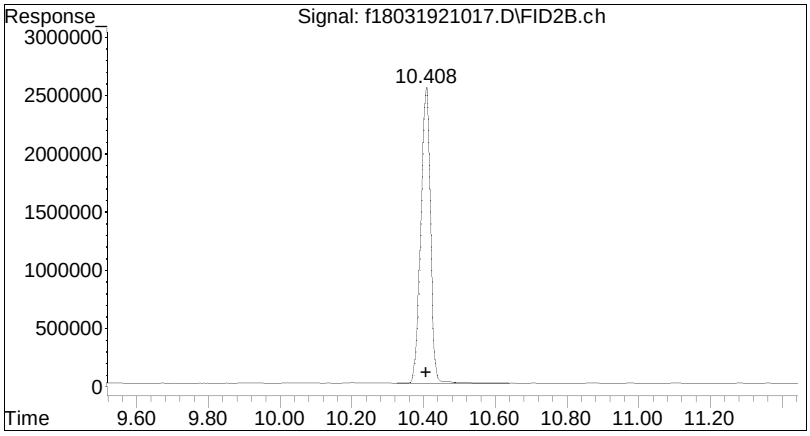
#2 n-Octane (C8)

R.T.: 5.686 min
Delta R.T.: 0.000 min
Response: 38849596
Conc: 48.60 ug/mL M4



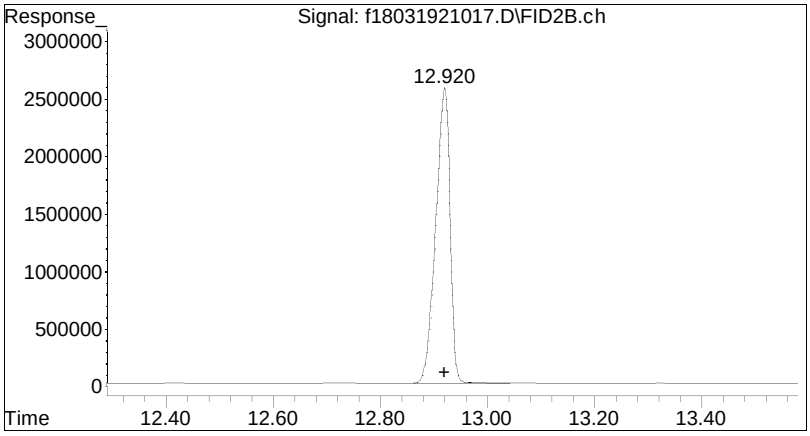
#3 n-Nonane (C9)

R.T.: 7.915 min
Delta R.T.: 0.000 min
Response: 42294864
Conc: 51.00 ug/mL M4



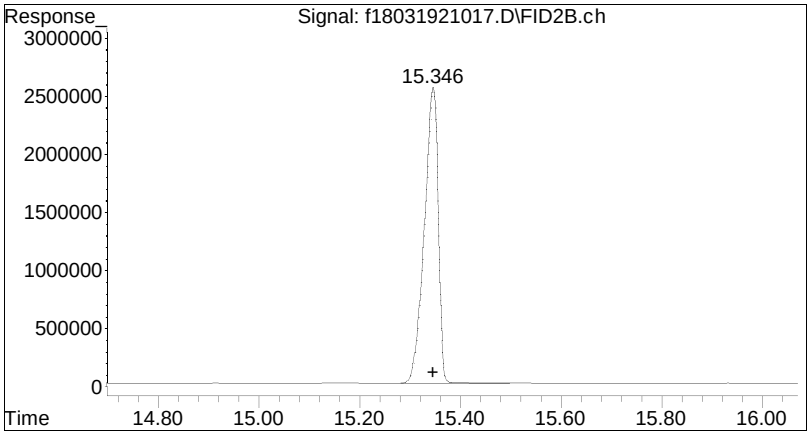
#4 n-Decane (C10)

R.T.: 10.408 min
Delta R.T.: 0.000 min
Response: 45992435
Conc: 52.87 ug/mL M4



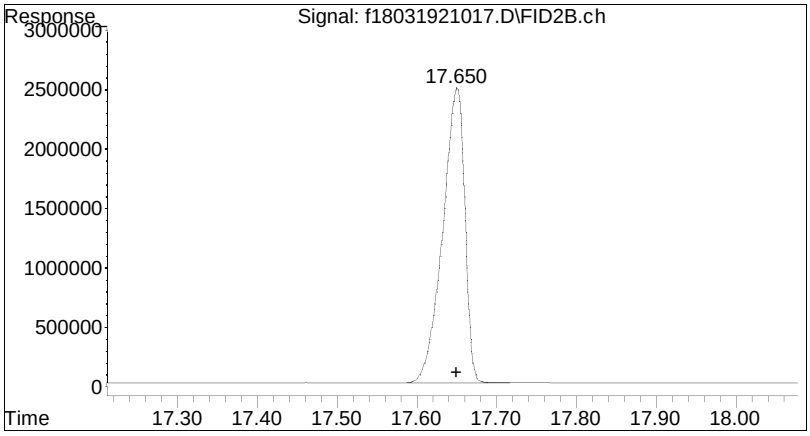
#5 n-Undecane (C11)

R.T.: 12.920 min
Delta R.T.: 0.000 min
Response: 46425796
Conc: 53.45 ug/mL M4



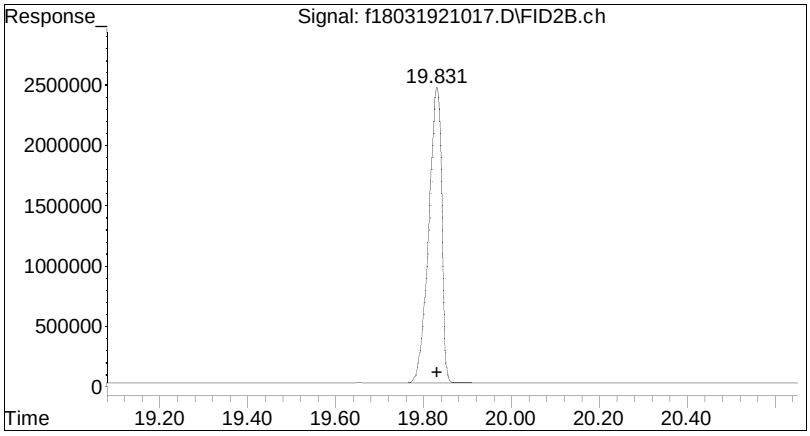
#6 n-Dodecane (C12)

R.T.: 15.346 min
Delta R.T.: 0.000 min
Response: 47074163
Conc: 53.32 ug/mL M4



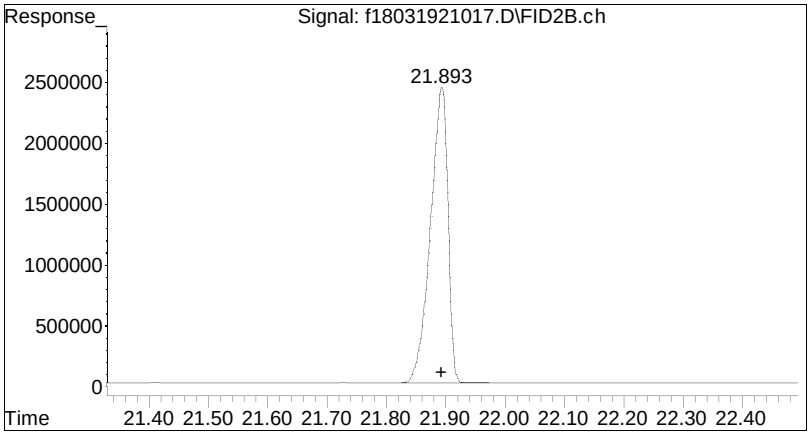
#7 n-Tridecane (C13)

R.T.: 17.650 min
Delta R.T.: 0.000 min
Response: 47033732
Conc: 52.92 ug/mL M4



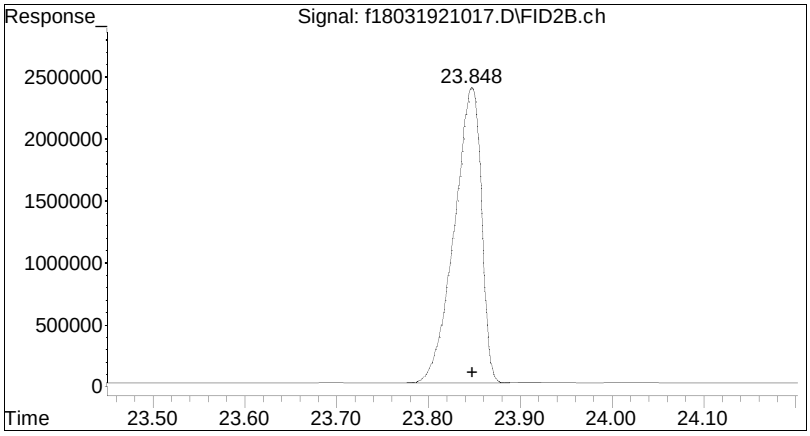
#9 n-Tetradecane (C14)

R.T.: 19.831 min
Delta R.T.: 0.000 min
Response: 48325988
Conc: 52.90 ug/mL M4



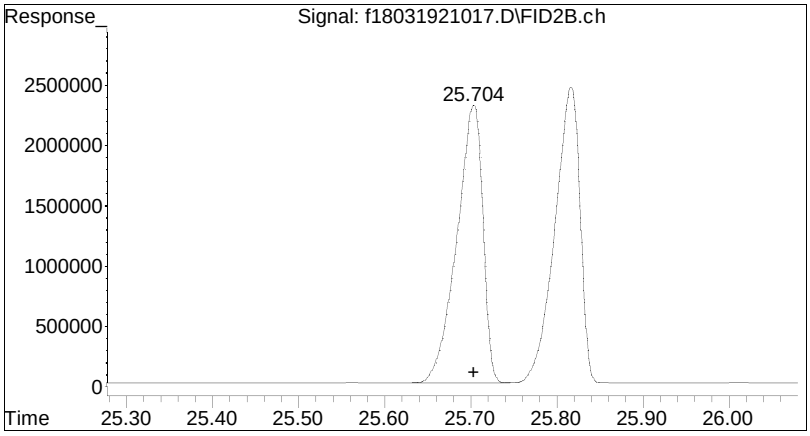
#11 n-Pentadecane (C15)

R.T.: 21.893 min
Delta R.T.: 0.000 min
Response: 48466650
Conc: 52.47 ug/mL M4



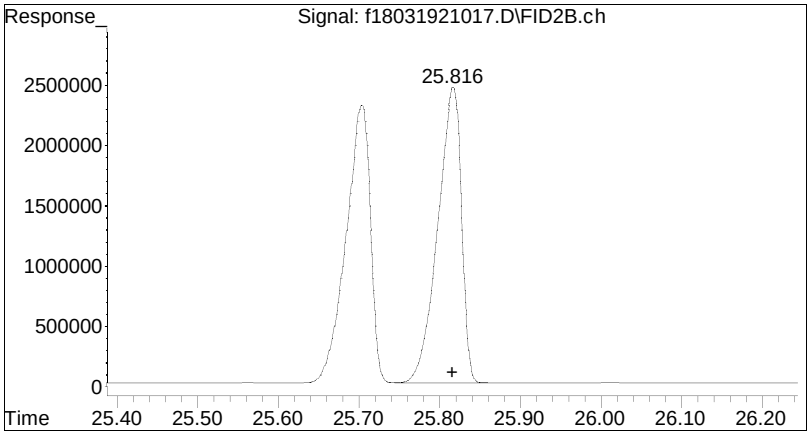
#12 n-Hexadecane (C16)

R.T.: 23.848 min
Delta R.T.: 0.000 min
Response: 47987135
Conc: 52.21 ug/mL M4



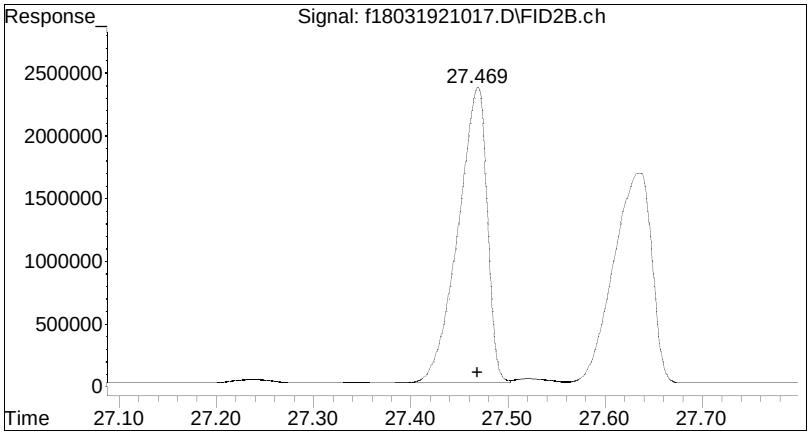
#14 n-Heptadecane (C17)

R.T.: 25.704 min
Delta R.T.: 0.000 min
Response: 48633326
Conc: 52.22 ug/mL M4



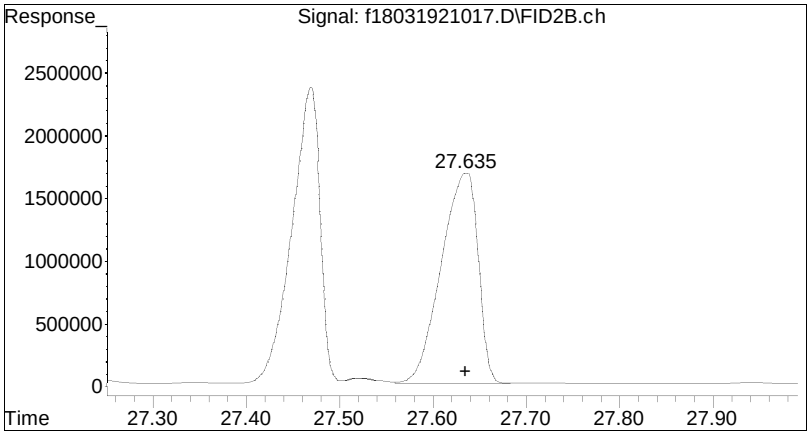
#15 Pristane

R.T.: 25.816 min
Delta R.T.: 0.000 min
Response: 49940032
Conc: 52.04 ug/mL M4



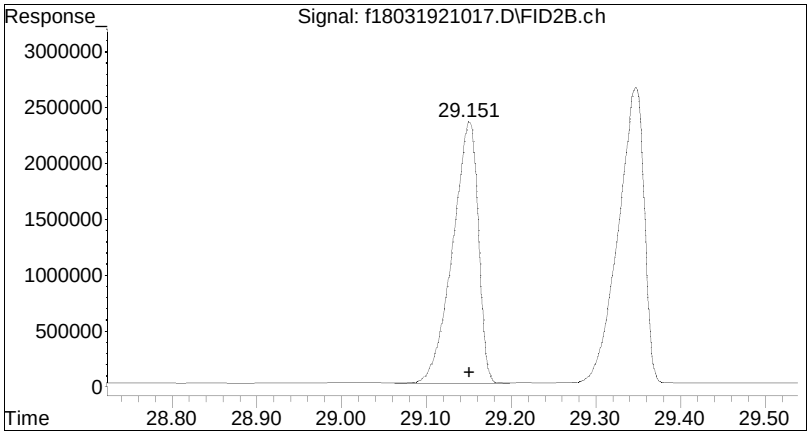
#16 n-Octadecane (C18)

R.T.: 27.469 min
Delta R.T.: 0.000 min
Response: 49098304
Conc: 51.68 ug/mL M4



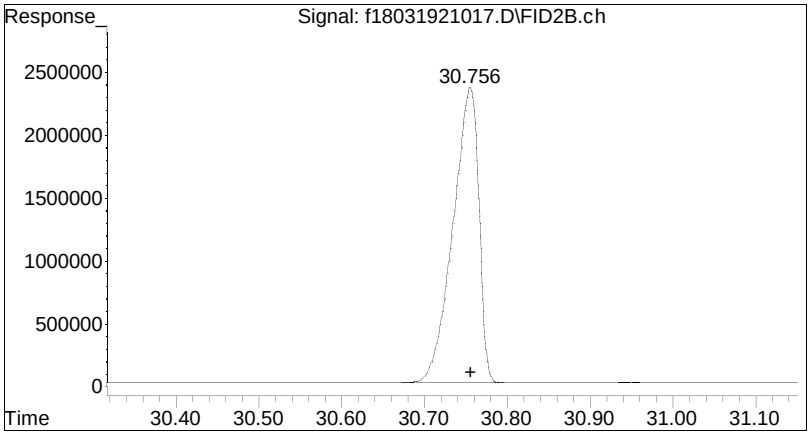
#17 Phytane

R.T.: 27.635 min
Delta R.T.: 0.000 min
Response: 45776479
Conc: 51.62 ug/mL M4



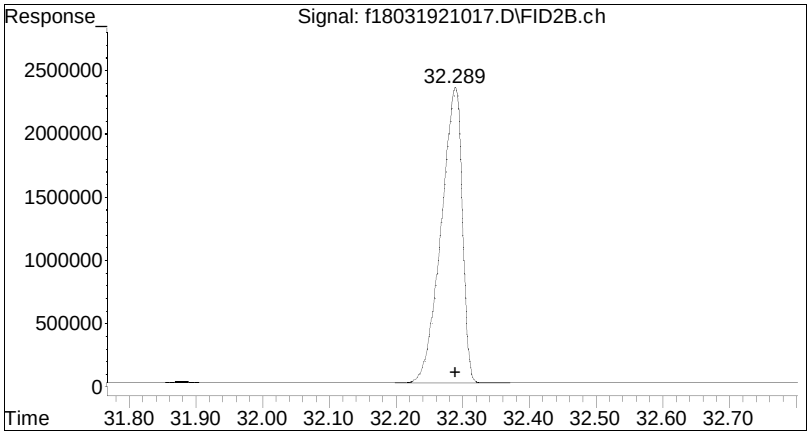
#18 n-Nonadecane (C19)

R.T.: 29.151 min
Delta R.T.: 0.000 min
Response: 49564919
Conc: 52.05 ug/mL M4



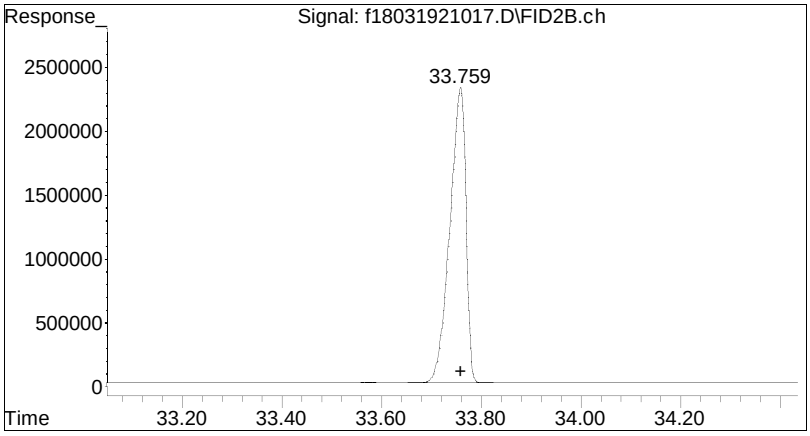
#20 n-Eicosane (C20)

R.T.: 30.756 min
Delta R.T.: 0.000 min
Response: 49870114
Conc: 51.92 ug/mL M4



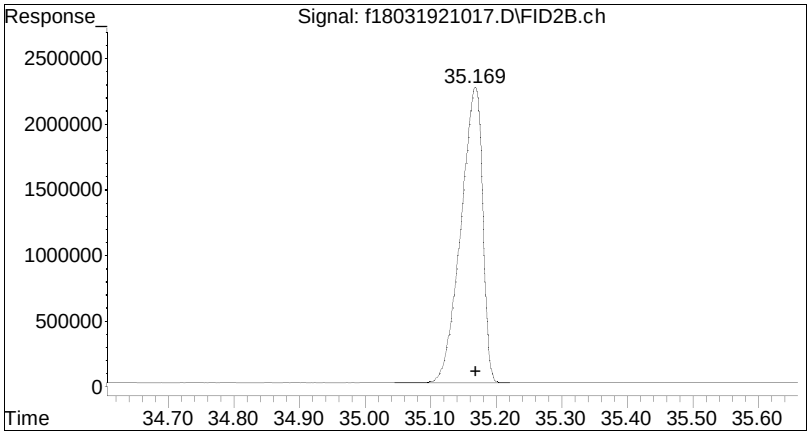
#21 n-Heneicosane (C21)

R.T.: 32.289 min
Delta R.T.: 0.000 min
Response: 50291212
Conc: 52.07 ug/mL M4



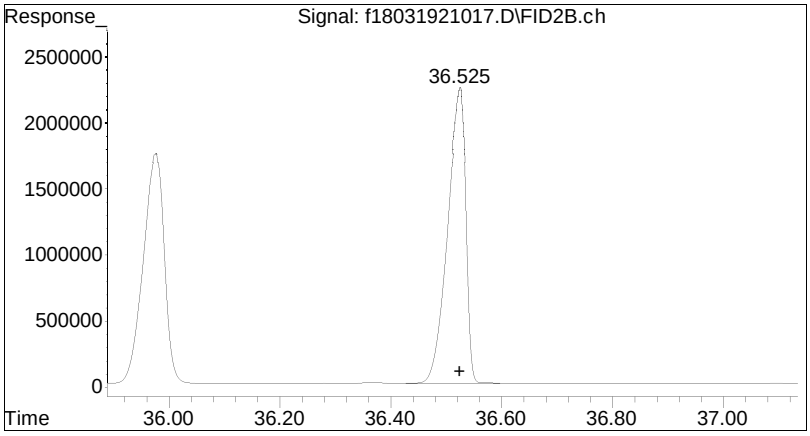
#22 n-Docosane (C22)

R.T.:	33.759 min
Delta R.T.:	0.000 min
Response:	50332627
Conc:	52.04 ug/mL M4



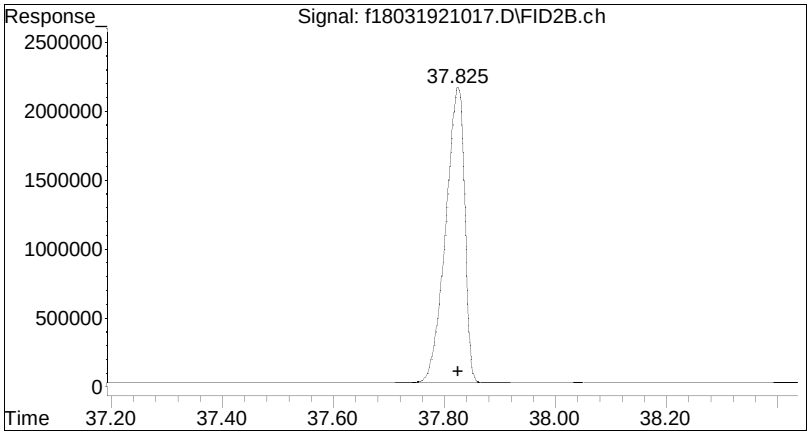
#23 n-Tricosane (C23)

R.T.: 35.169 min
Delta R.T.: 0.000 min
Response: 50485450
Conc: 52.01 ug/mL M4



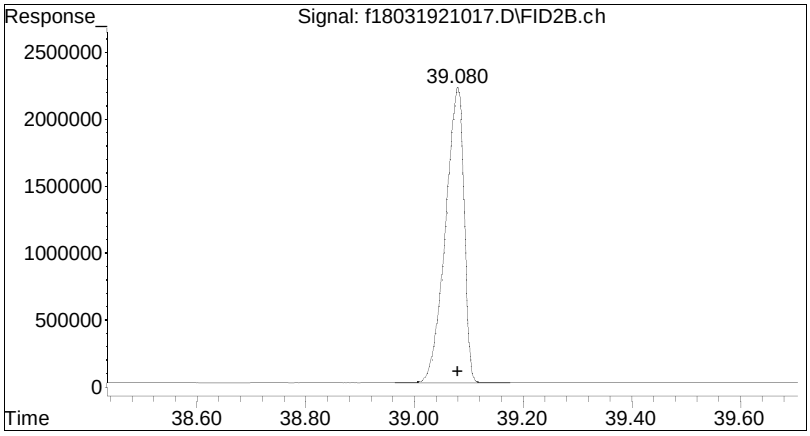
#25 n-Tetracosane (C24)

R.T.:	36.525 min
Delta R.T.:	0.000 min
Response:	50546444
Conc:	52.27 ug/mL M4



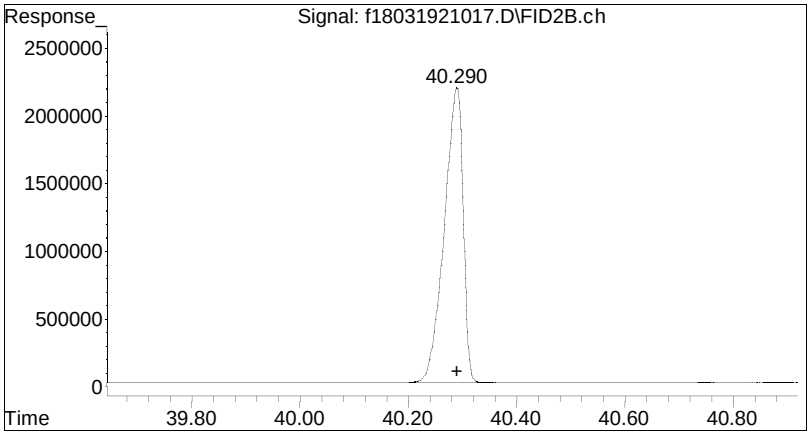
#26 n-Pentacosane (C25)

R.T.: 37.825 min
Delta R.T.: 0.000 min
Response: 49745550
Conc: 52.42 ug/mL M4



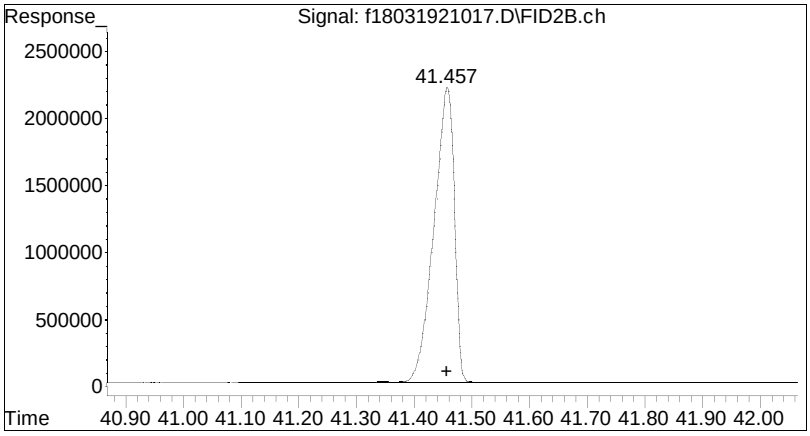
#27 n-Hexacosane (C26)

R.T.: 39.080 min
Delta R.T.: 0.000 min
Response: 51143791
Conc: 52.55 ug/mL M4



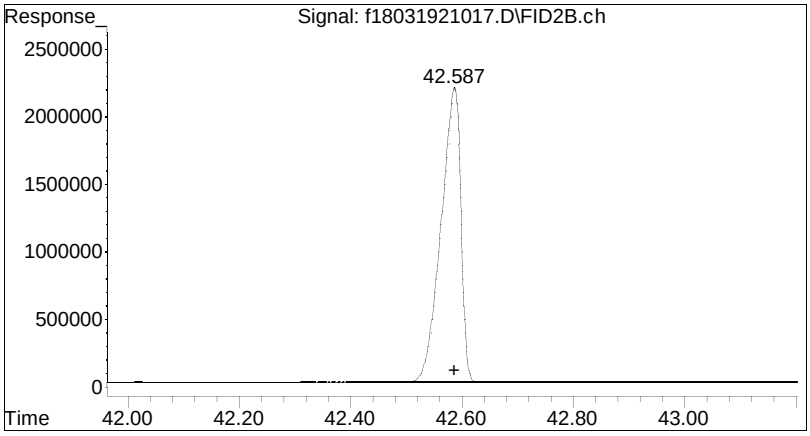
#28 n-Heptacosane (C27)

R.T.: 40.290 min
Delta R.T.: 0.000 min
Response: 51234380
Conc: 52.62 ug/mL M4



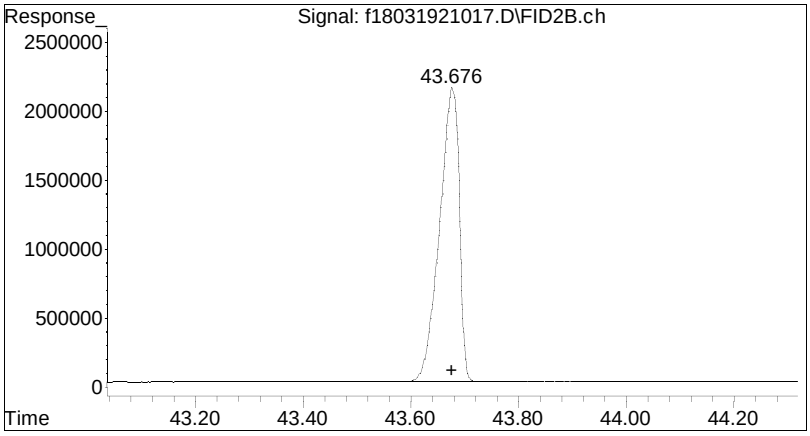
#29 n-Octacosane (C28)

R.T.: 41.457 min
Delta R.T.: 0.000 min
Response: 52384821
Conc: 52.71 ug/mL M4



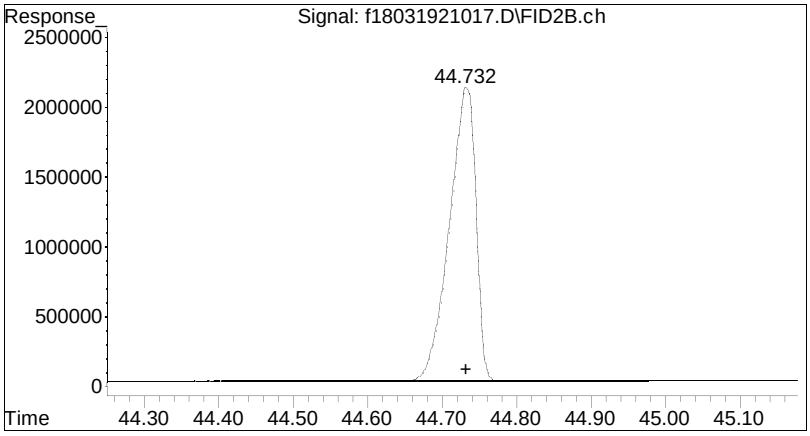
#30 n-Nonacosane (C29)

R.T.:	42.587 min
Delta R.T.:	0.000 min
Response:	52248654
Conc:	52.94 ug/mL M4



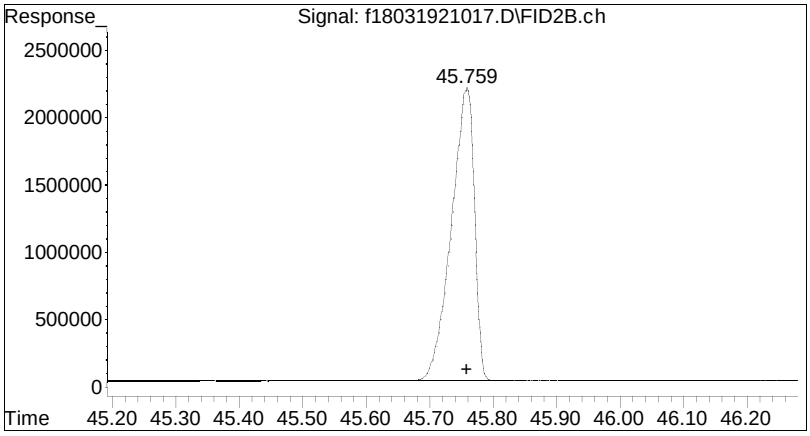
#31 n-Triacontane (C30)

R.T.: 43.676 min
Delta R.T.: 0.000 min
Response: 52541411
Conc: 53.12 ug/mL M4



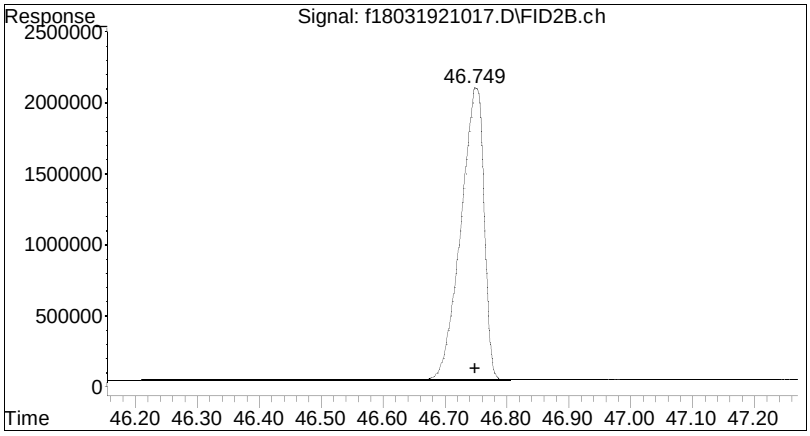
#32 n-Hentriacontane (C31)

R.T.: 44.732 min
Delta R.T.: 0.000 min
Response: 50732462
Conc: 53.21 ug/mL M4



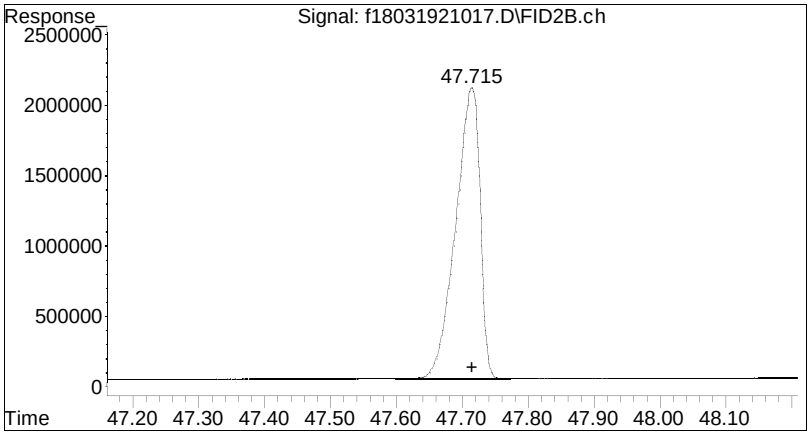
#33 n-Dotriacontane (C32)

R.T.: 45.759 min
Delta R.T.: 0.000 min
Response: 53372391
Conc: 53.39 ug/mL M4



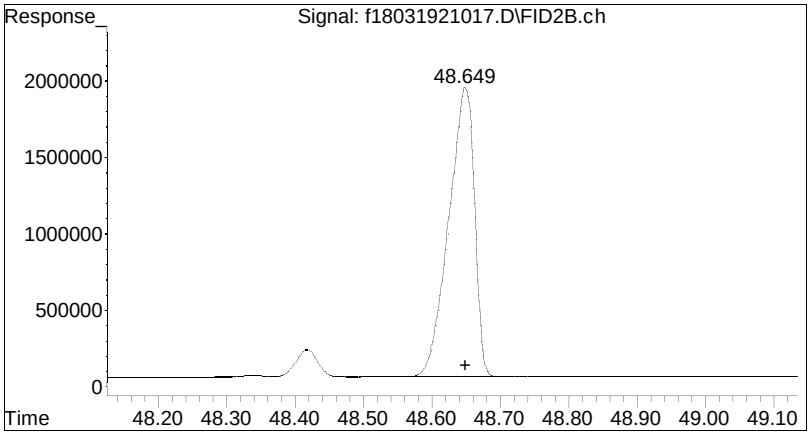
#34 n-Tritriacontane (C33)

R.T.: 46.749 min
Delta R.T.: 0.000 min
Response: 51955010
Conc: 53.56 ug/mL M4



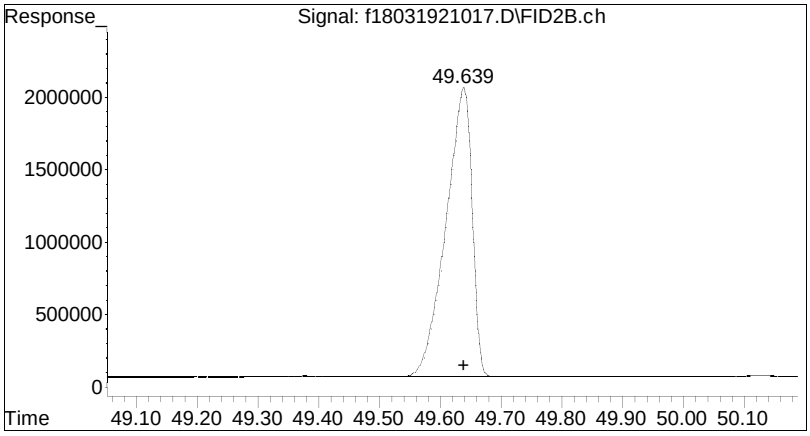
#35 n-tetratriacontane (C34)

R.T.: 47.715 min
Delta R.T.: 0.000 min
Response: 51771065
Conc: 53.67 ug/mL M4



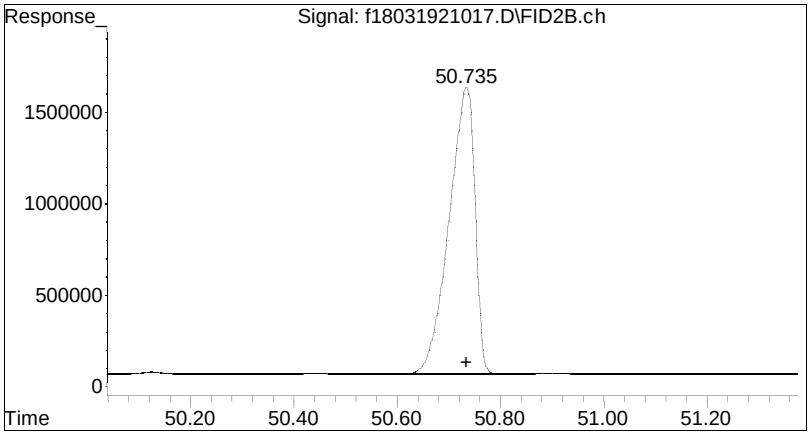
#36 n-Pentatriacontane (C35)

R.T.: 48.649 min
Delta R.T.: 0.000 min
Response: 48449649
Conc: 53.68 ug/mL M4



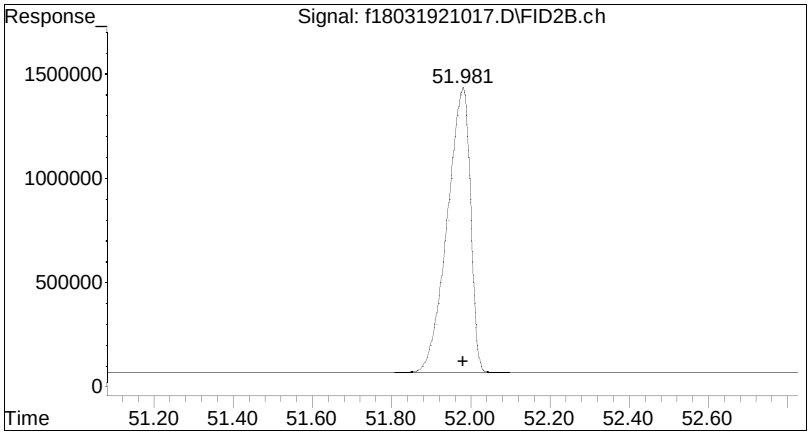
#37 n-Hexatriacontane (C36)

R.T.: 49.639 min
Delta R.T.: 0.000 min
Response: 58388194
Conc: 53.49 ug/mL M4



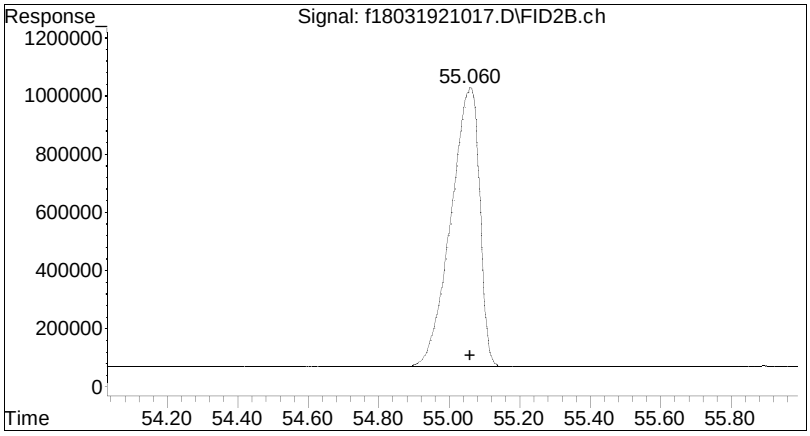
#38 n-Heptatriacontane (C37)

R.T.: 50.735 min
Delta R.T.: 0.000 min
Response: 53240198
Conc: 53.53 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.: 51.981 min
Delta R.T.: 0.000 min
Response: 53881436
Conc: 53.47 ug/mL M4



#41 n-Tetracontane (C40)

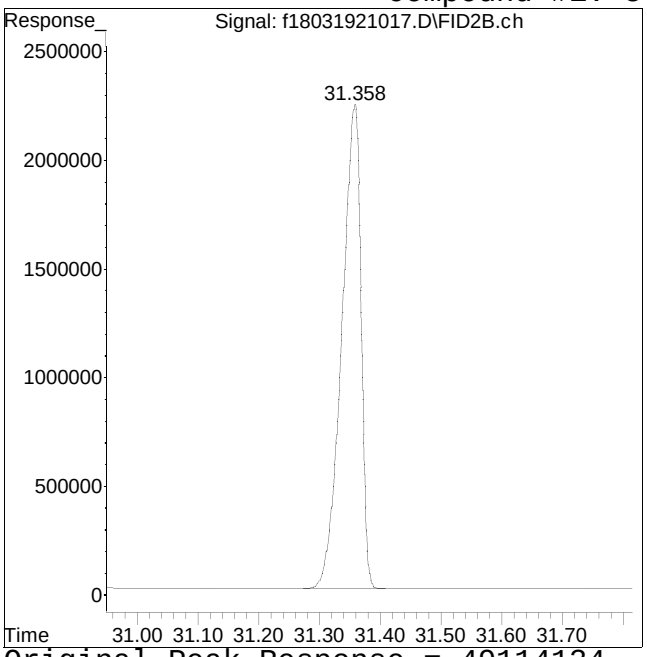
R.T.: 55.060 min
Delta R.T.: 0.000 min
Response: 53016704
Conc: 52.52 ug/mL M4

Manual Integration/Negative Proof Report

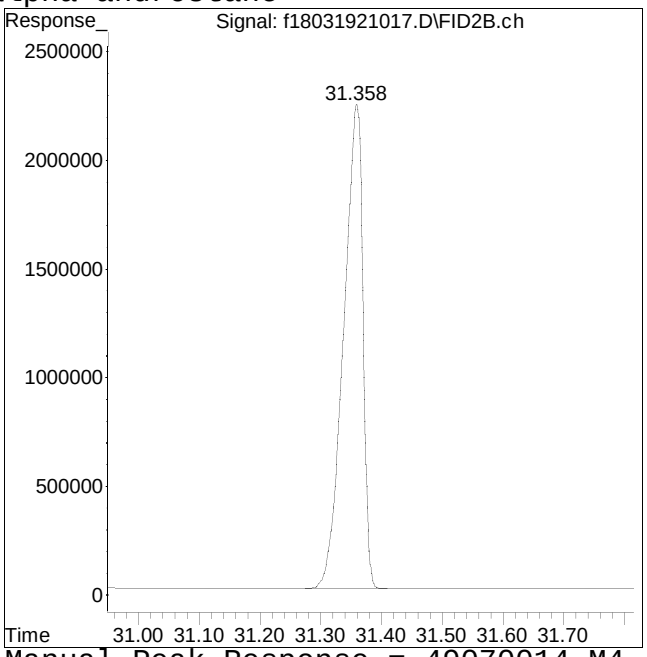
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #1: 5-alpha-androstane



Original Peak Response = 49114134



Manual Peak Response = 49070014 M4

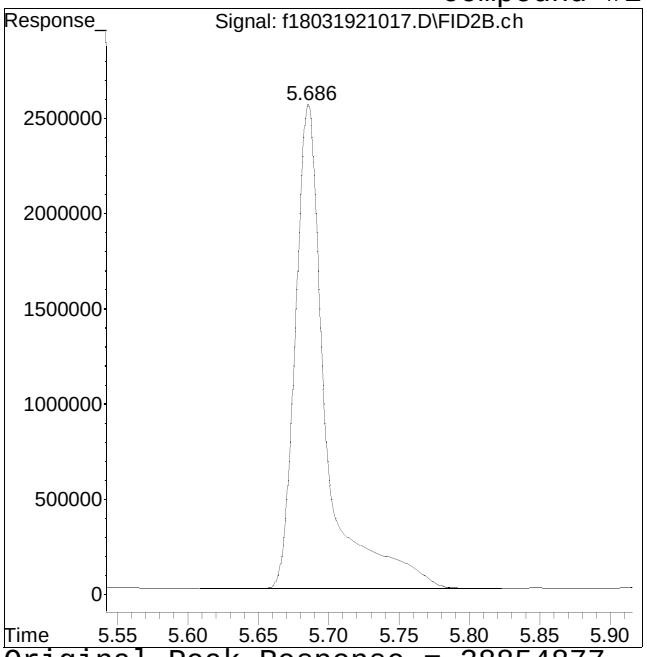
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

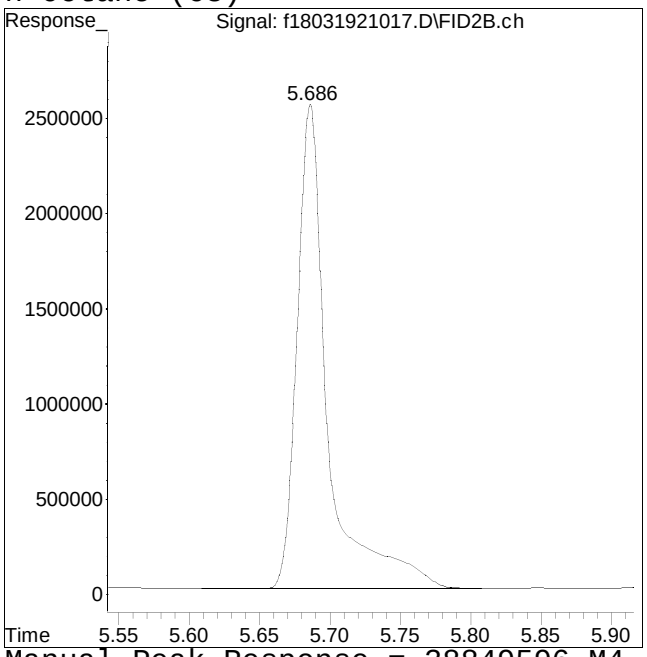
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #2: n-Octane (C8)



Original Peak Response = 38854877



Manual Peak Response = 38849596 M4

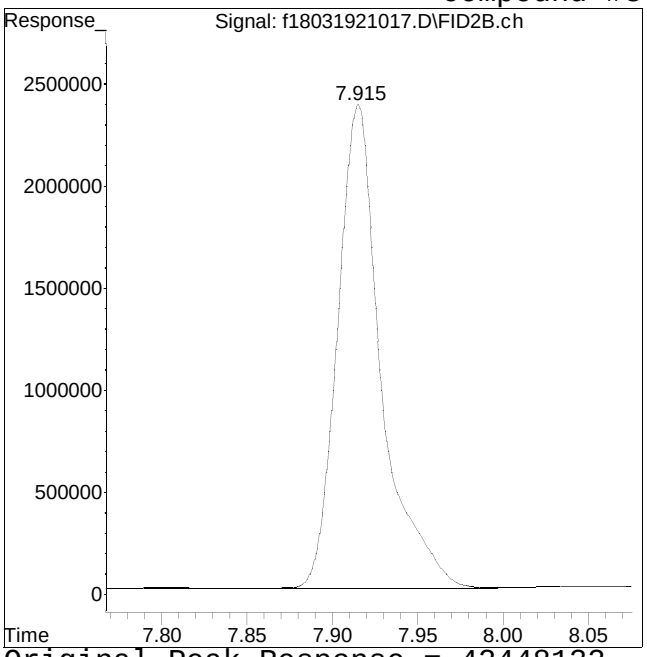
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

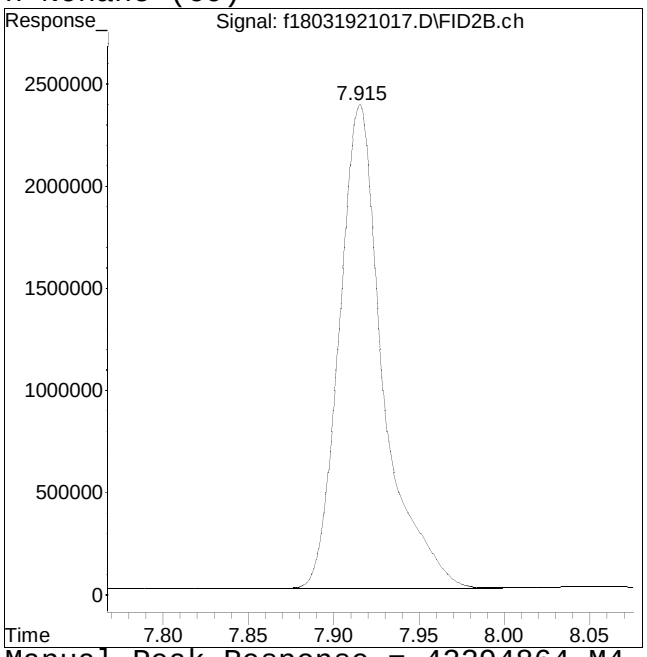
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #3: n-Nonane (C9)



Original Peak Response = 42448132



Manual Peak Response = 42294864 M4

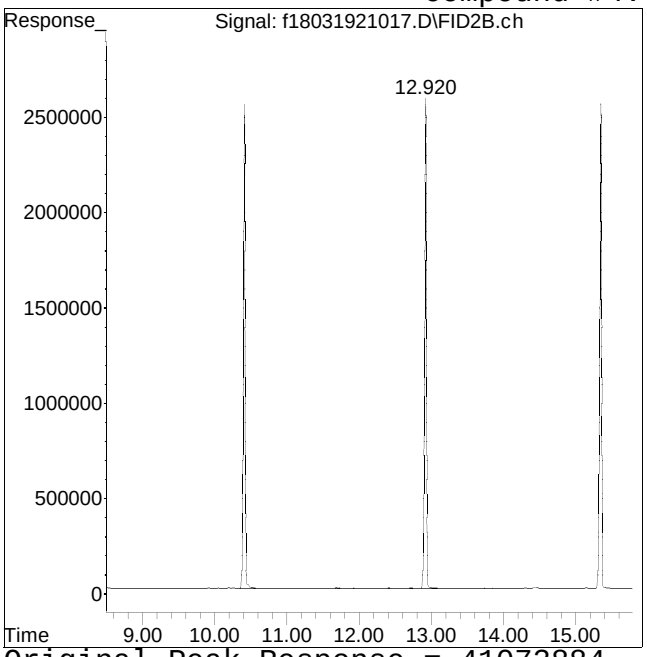
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

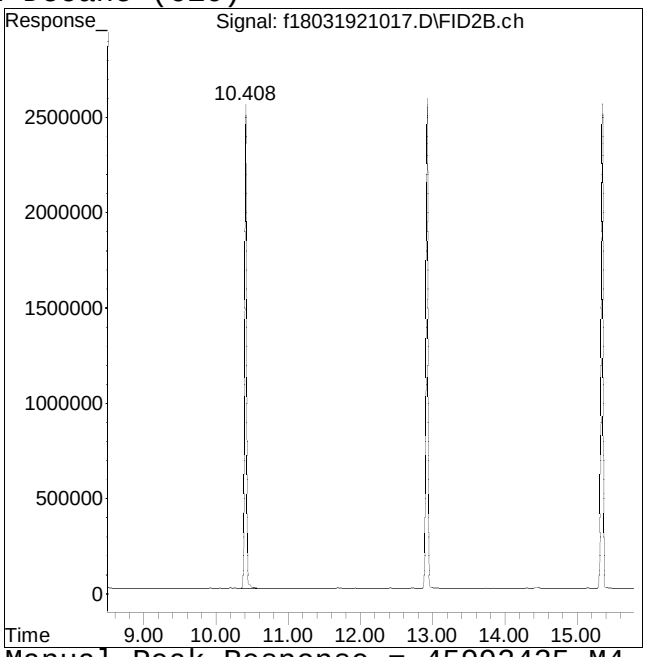
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #4: n-Decane (C10)



Original Peak Response = 41073884



Manual Peak Response = 45992435 M4

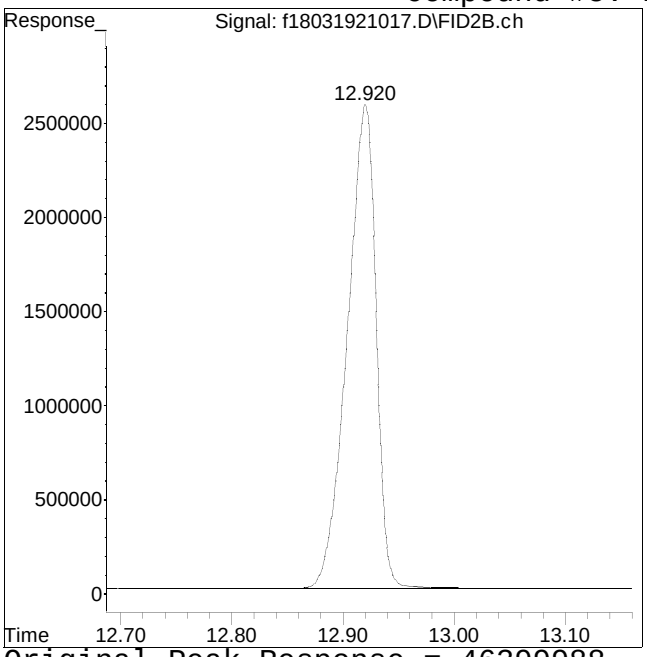
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

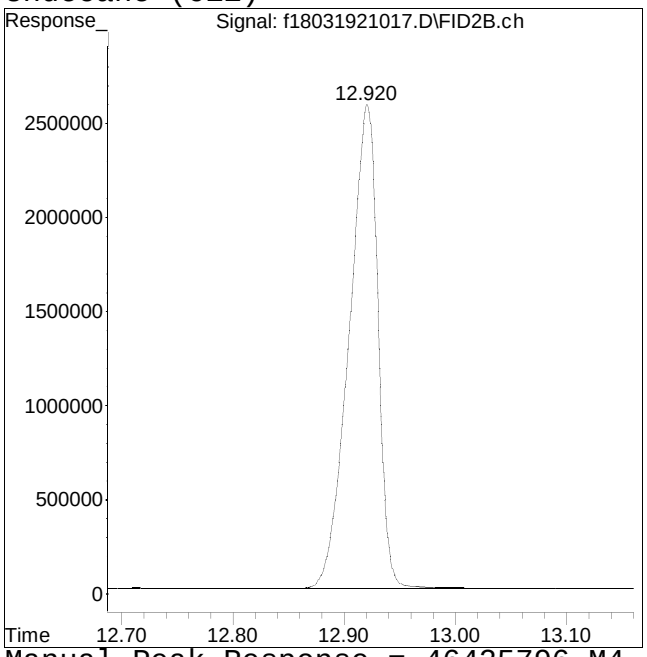
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #5: n-Undecane (C11)



Original Peak Response = 46399988



Manual Peak Response = 46425796 M4

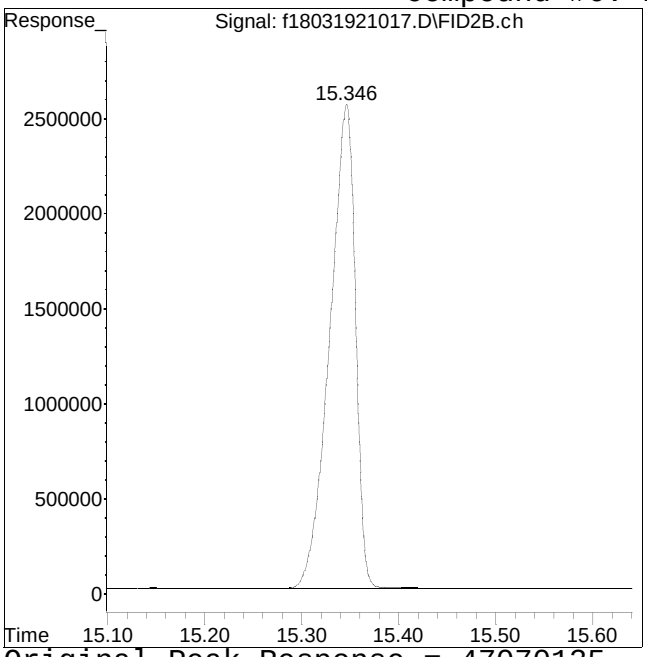
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

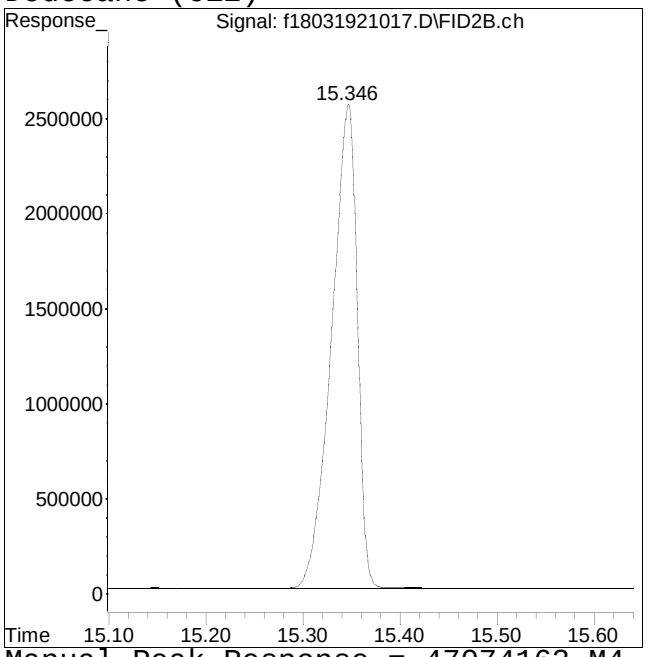
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 47070135



Manual Peak Response = 47074163 M4

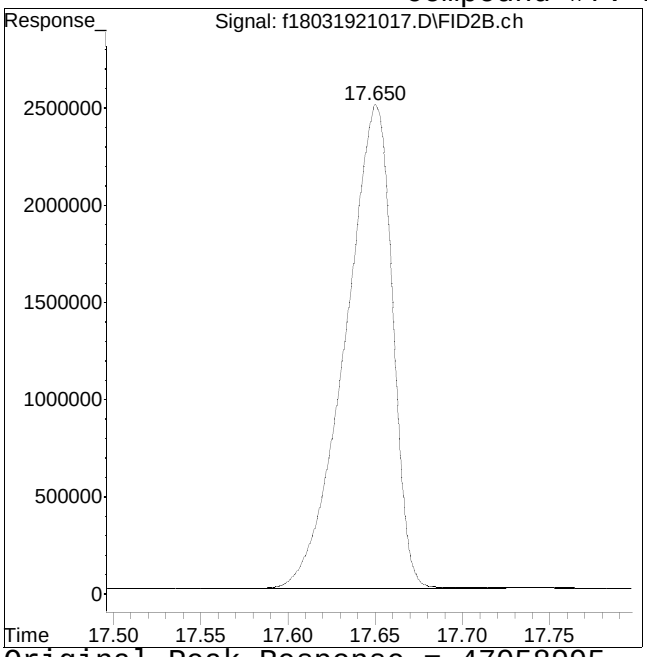
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

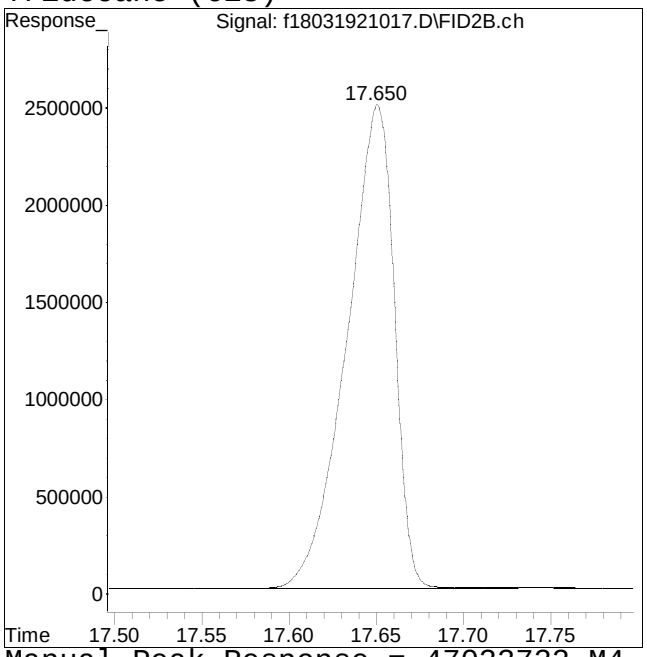
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 47058995



Manual Peak Response = 47033732 M4

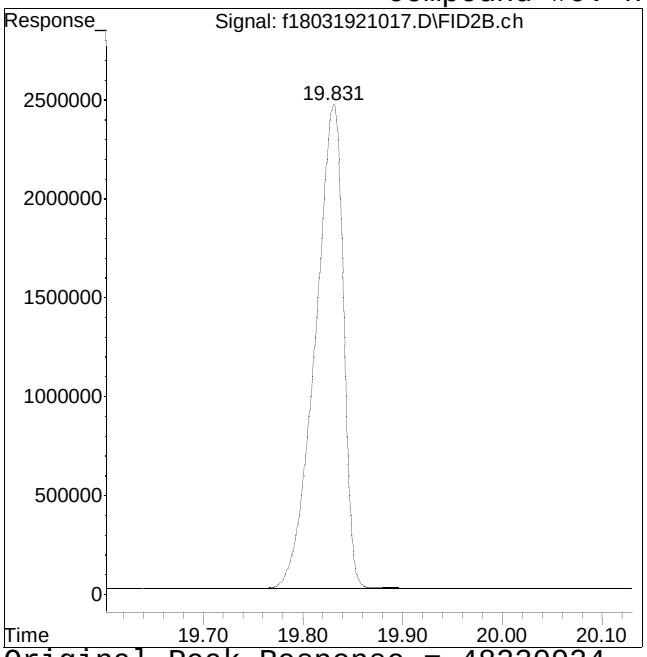
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

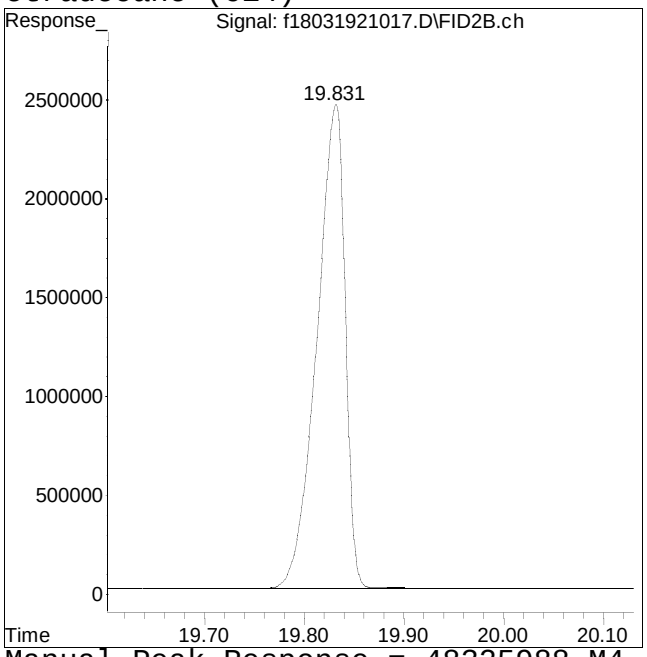
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 48230924



Manual Peak Response = 48325988 M4

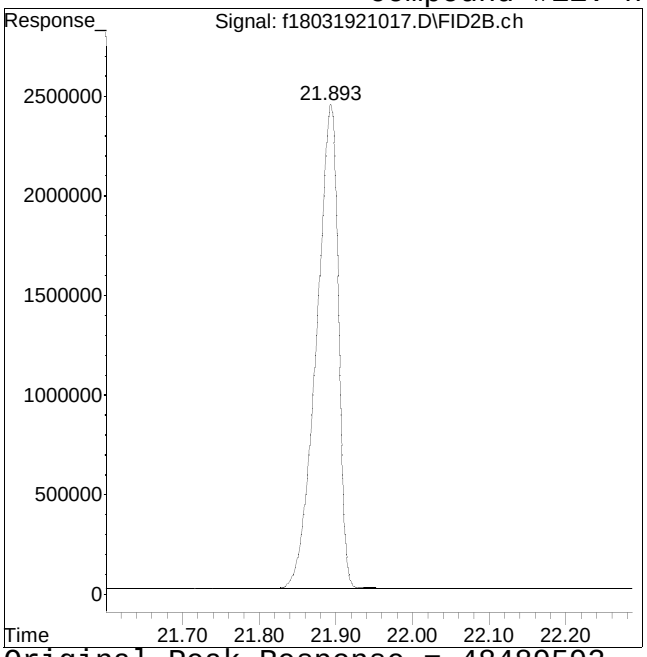
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

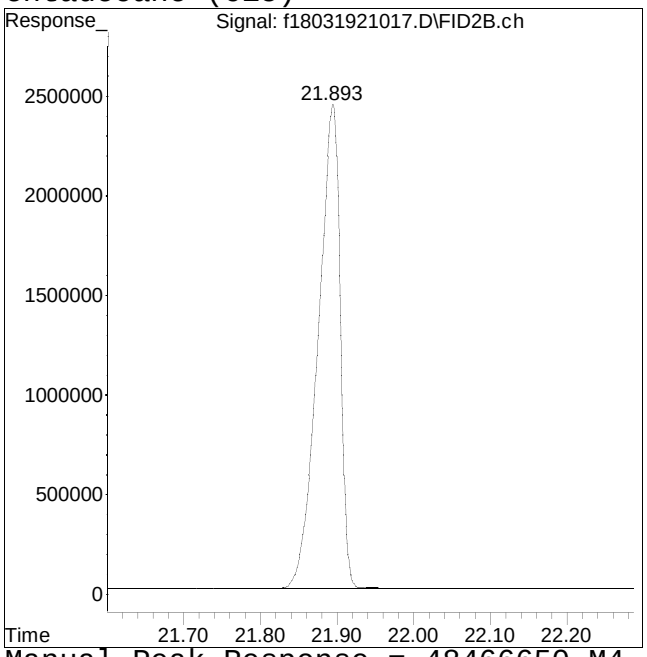
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 48489592



Manual Peak Response = 48466650 M4

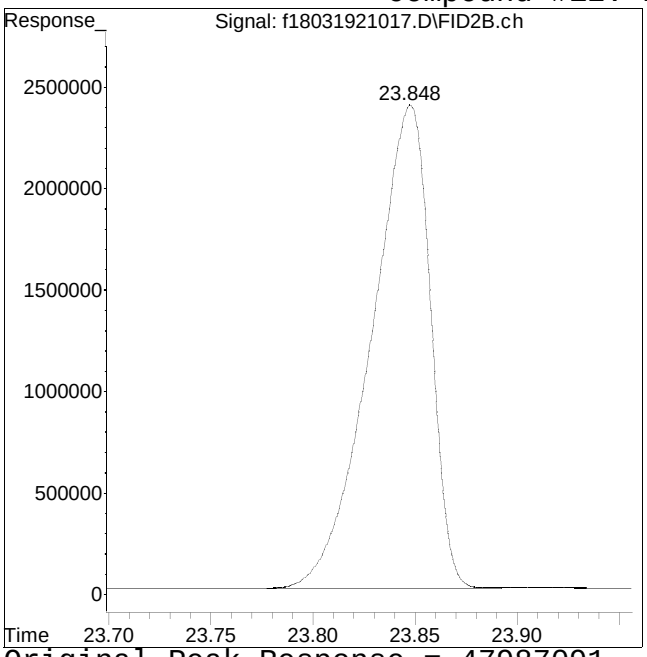
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

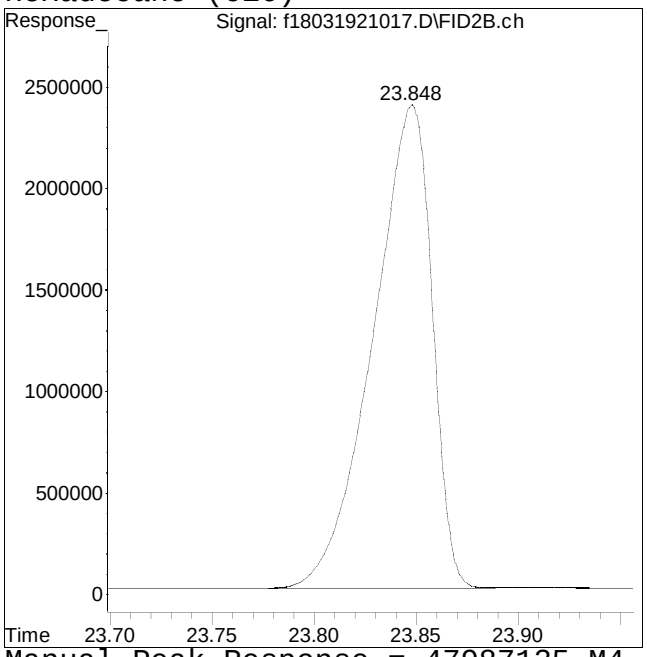
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 47987091



Manual Peak Response = 47987135 M4

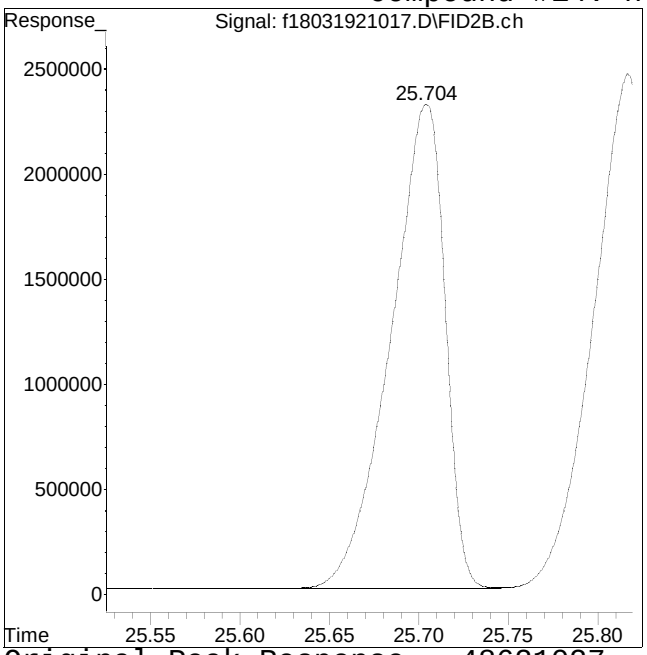
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

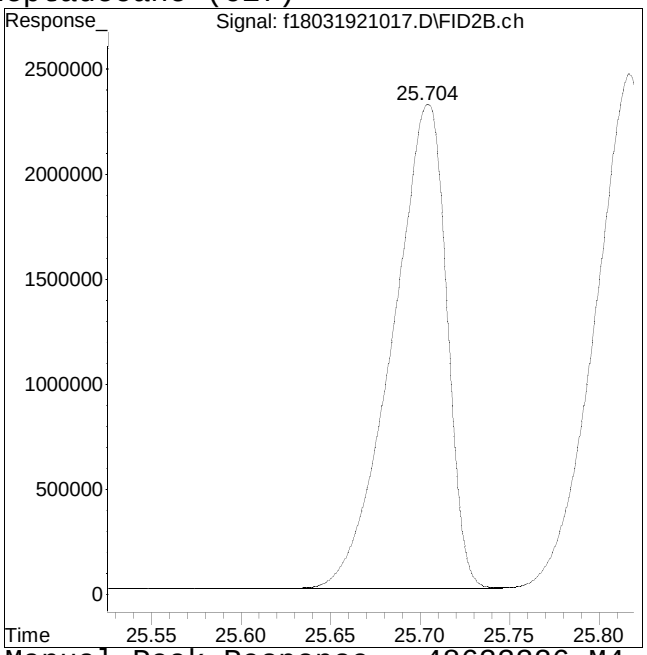
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 48621027



Manual Peak Response = 48633326 M4

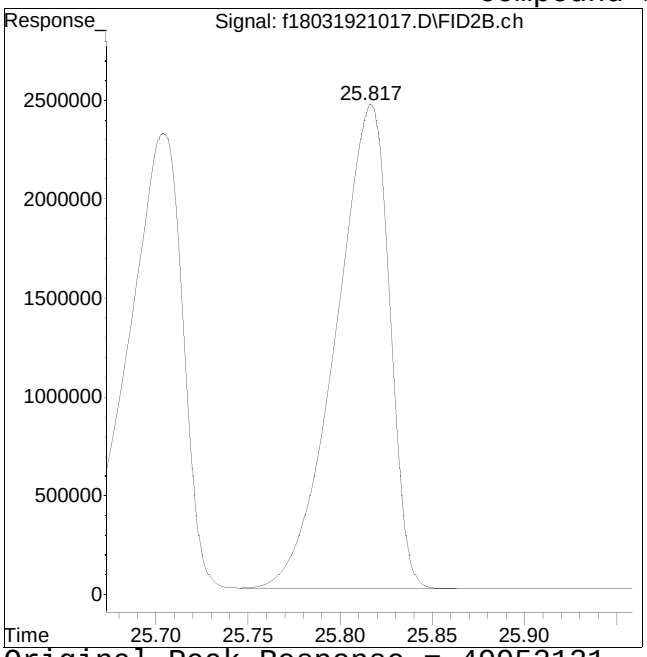
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

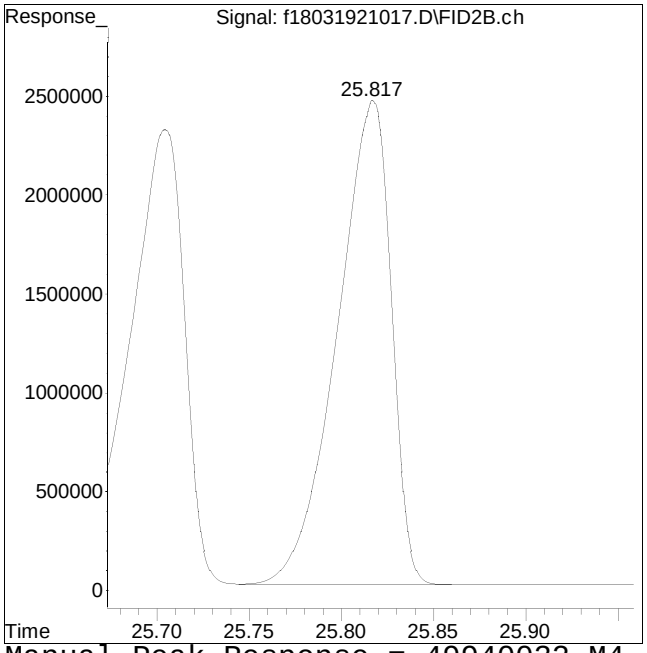
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #15: Pristane



Original Peak Response = 49952121



Manual Peak Response = 49940032 M4

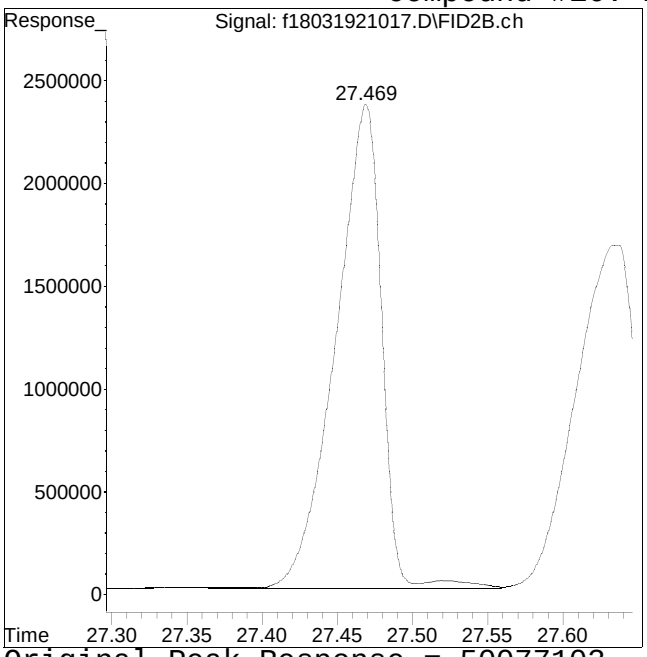
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

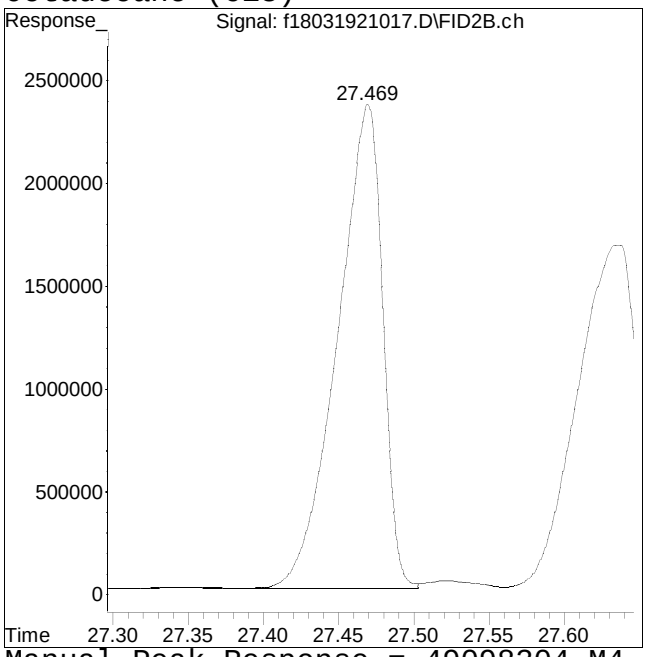
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 50077103



Manual Peak Response = 49098304 M4

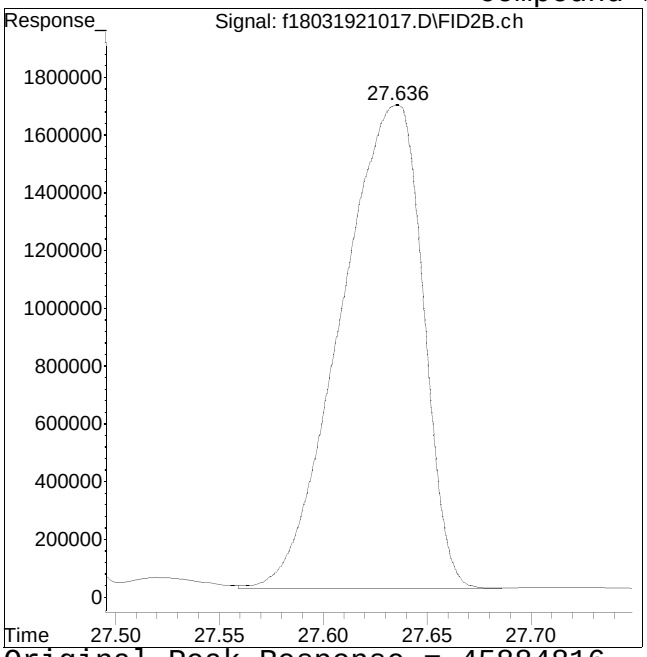
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

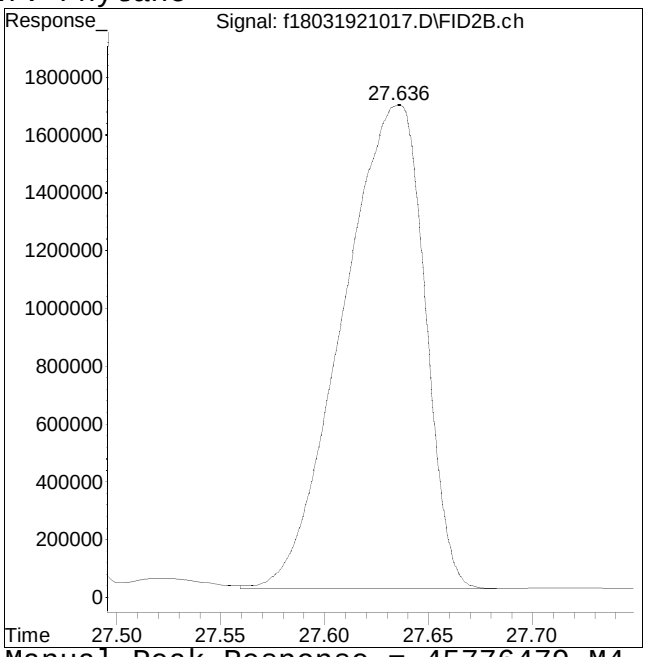
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #17: Phytane



Original Peak Response = 45884816



Manual Peak Response = 45776479 M4

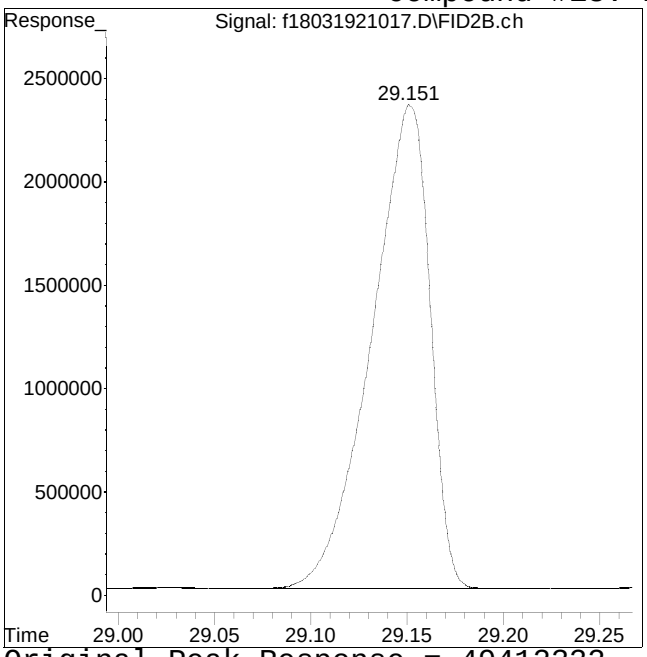
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

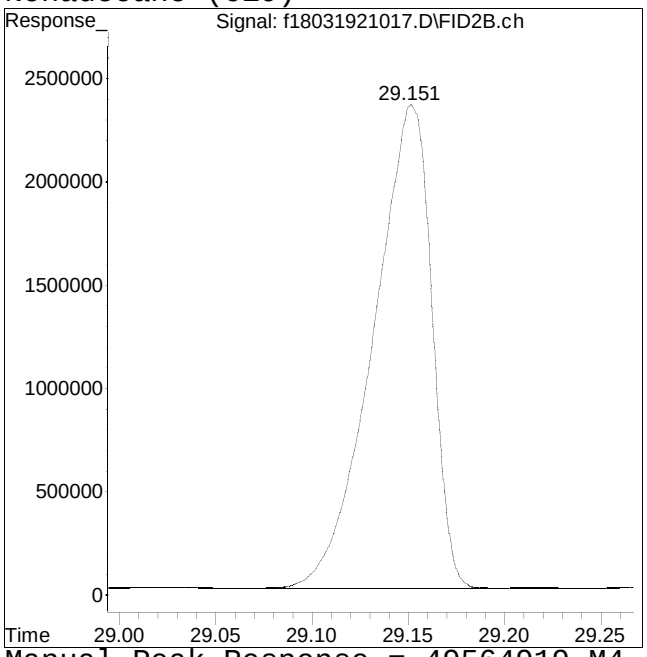
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 49412332



Manual Peak Response = 49564919 M4

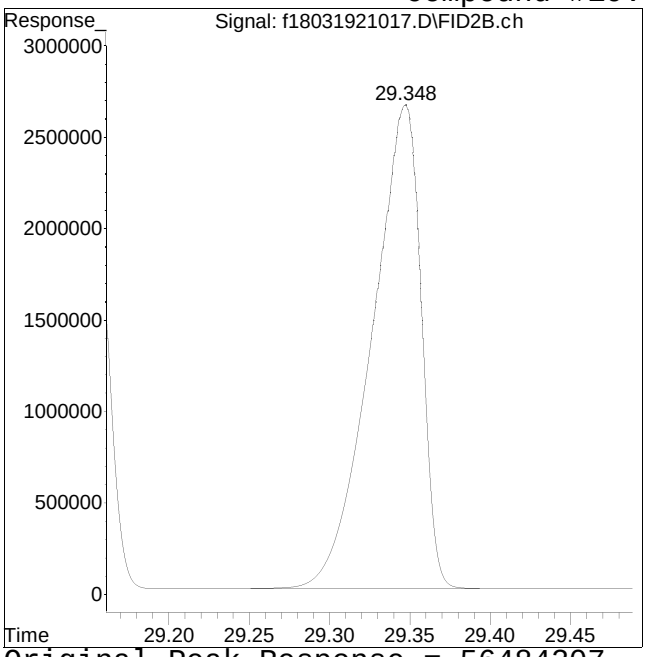
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

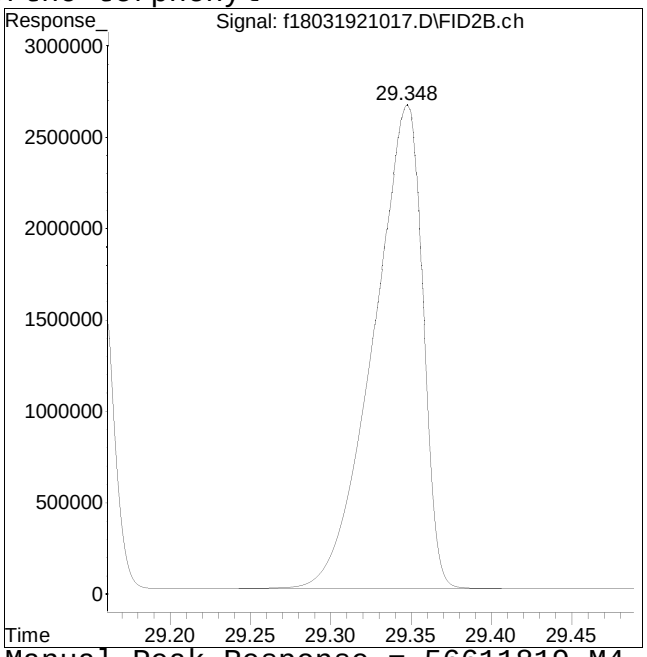
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #19: ortho-terphenyl



Original Peak Response = 56484207



Manual Peak Response = 56611819 M4

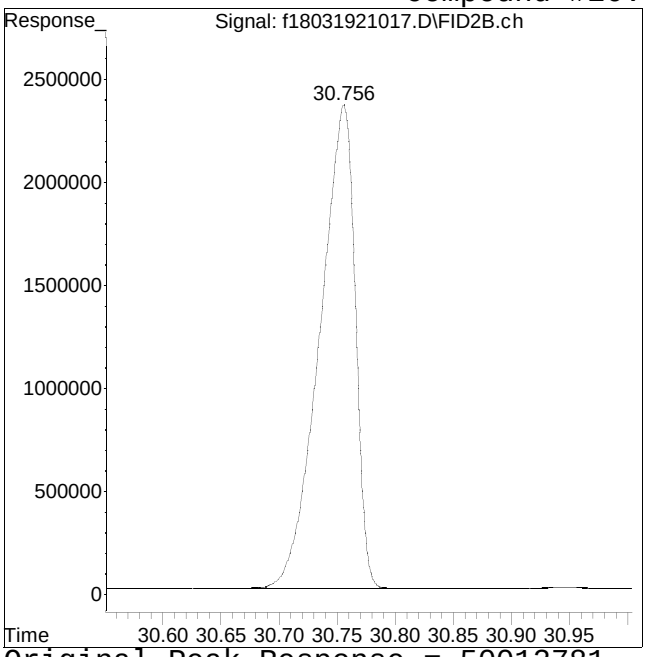
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

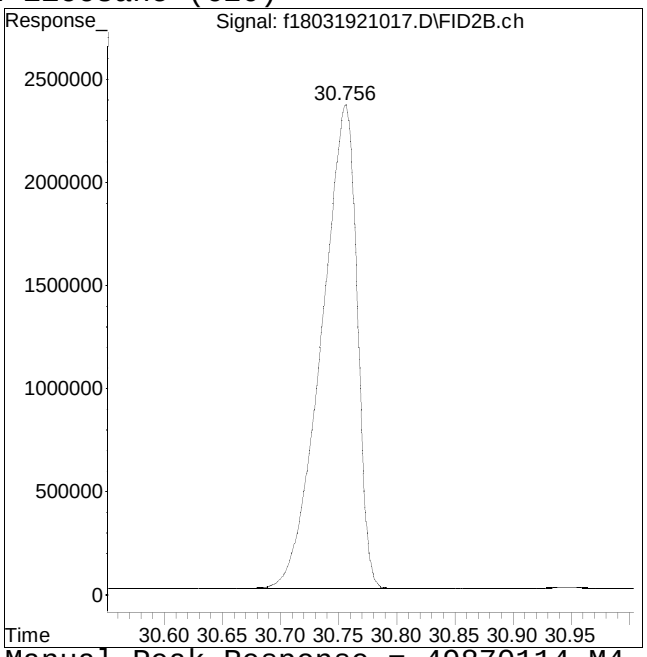
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 50012781



Manual Peak Response = 49870114 M4

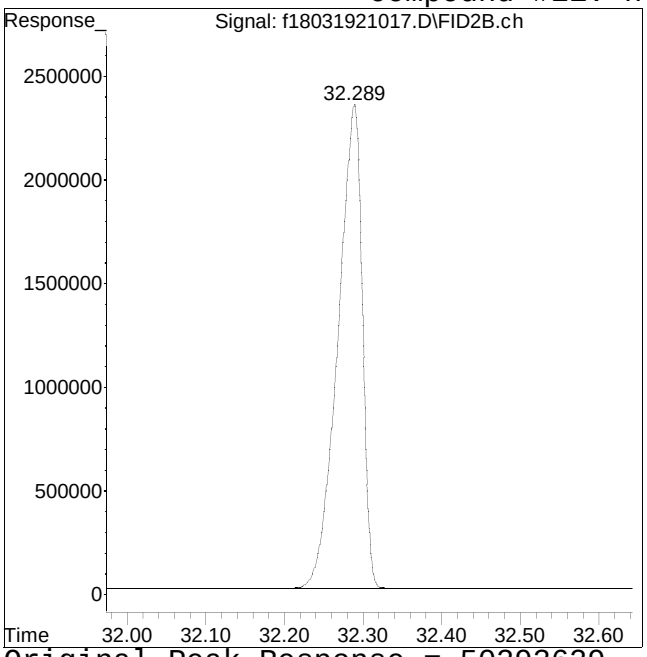
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

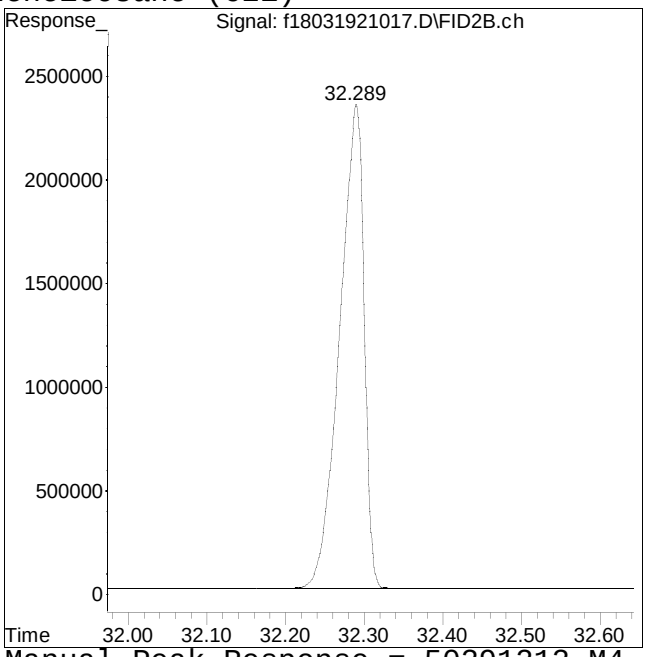
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 50293629



Manual Peak Response = 50291212 M4

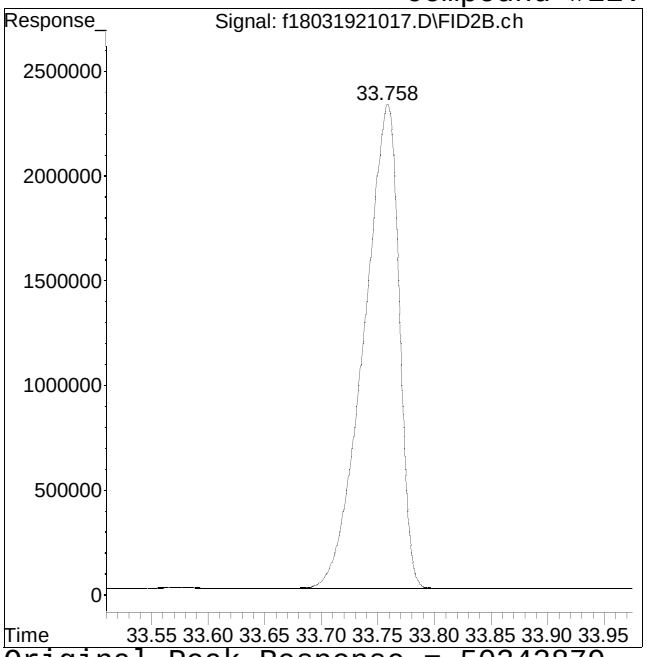
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

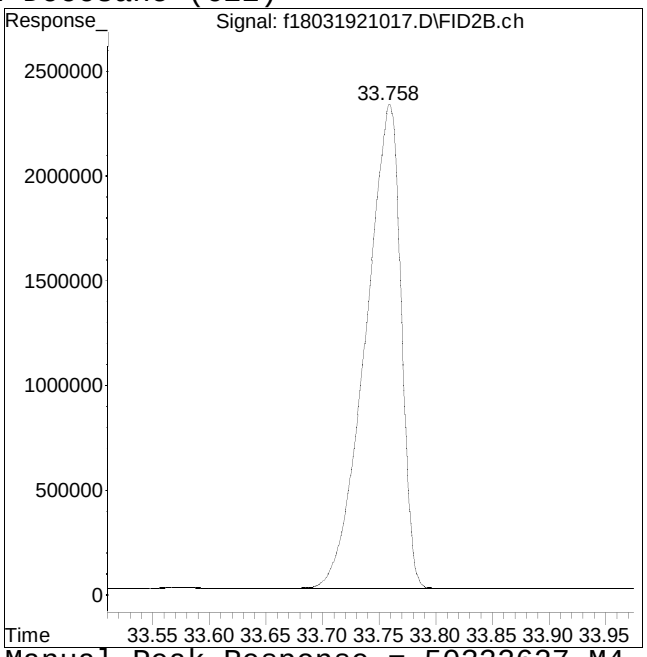
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #22: n-Docosane (C22)



Original Peak Response = 50343879



Manual Peak Response = 50332627 M4

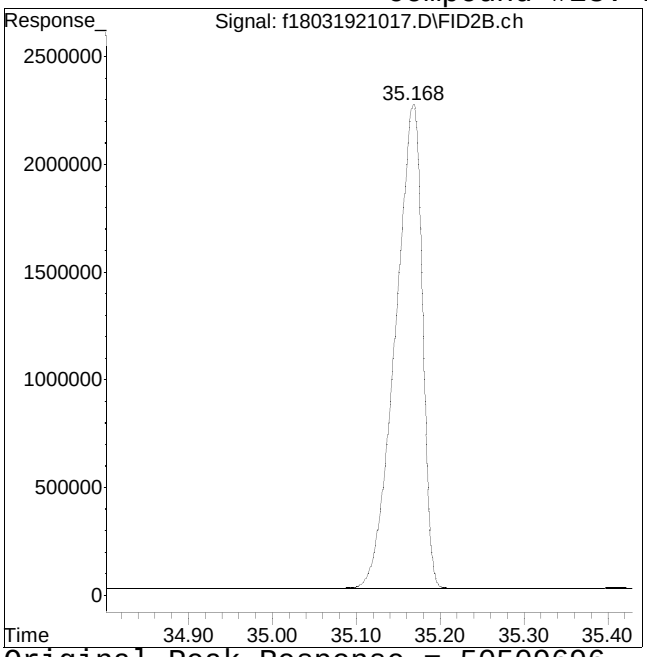
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

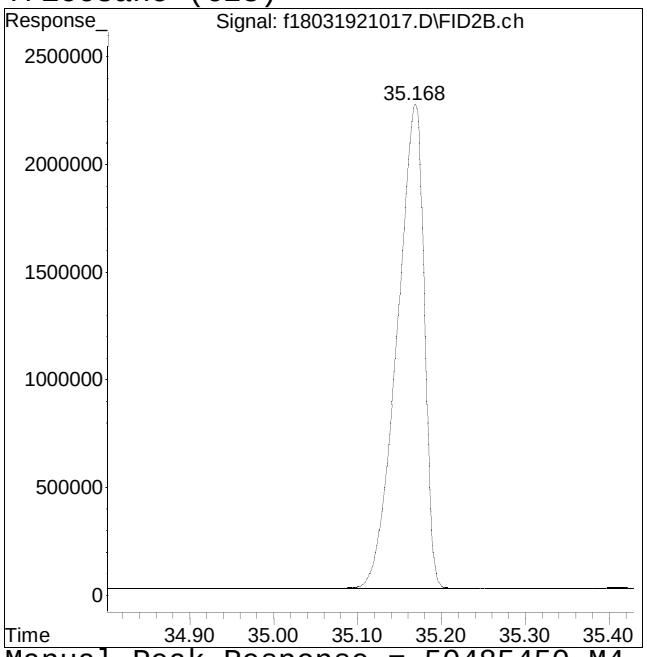
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 50509696



Manual Peak Response = 50485450 M4

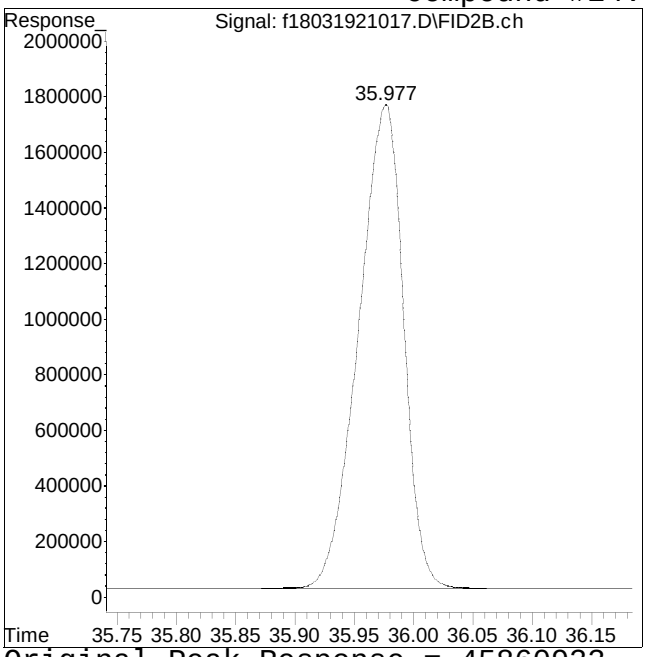
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

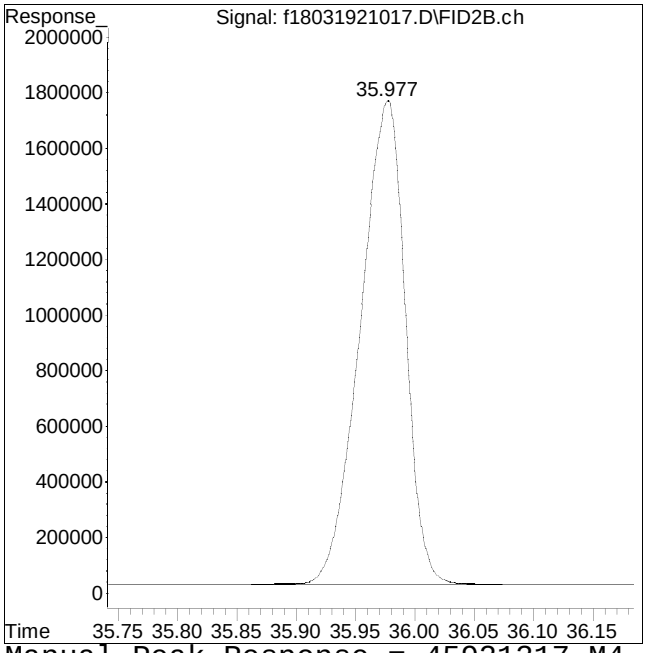
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #24: d50-Tetracosane



Original Peak Response = 45860933



Manual Peak Response = 45921317 M4

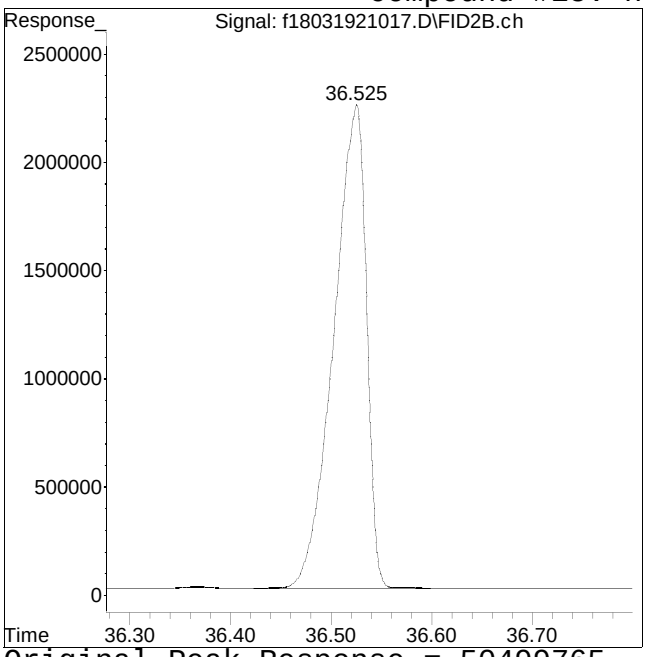
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

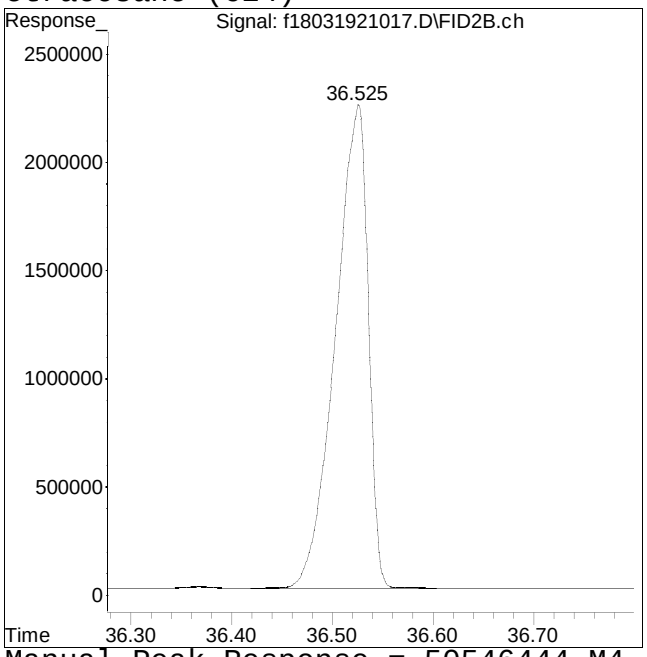
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 50499765



Manual Peak Response = 50546444 M4

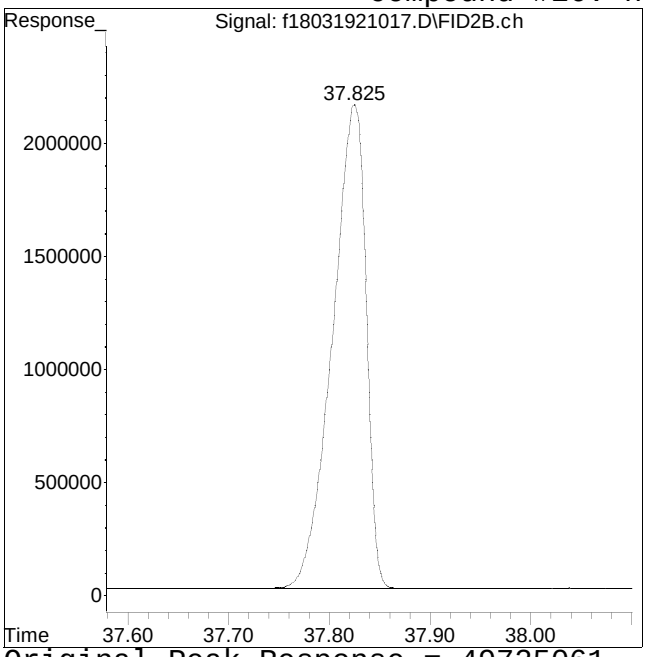
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

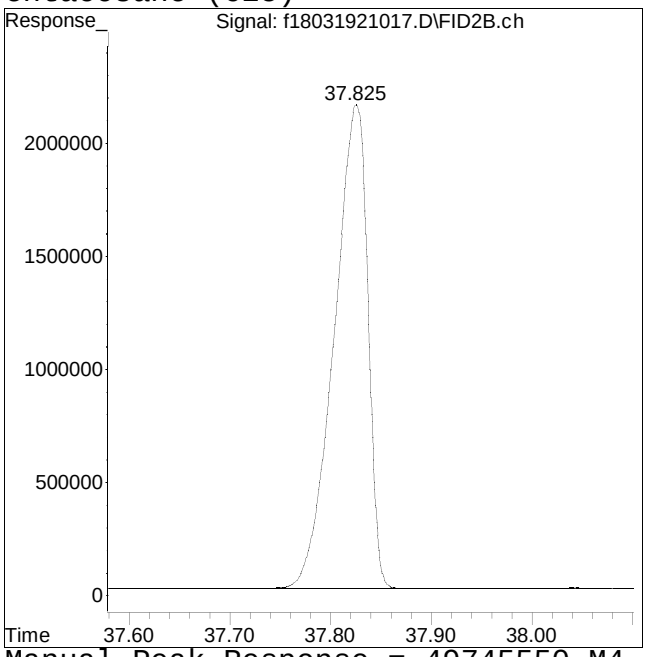
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 49725061



Manual Peak Response = 49745550 M4

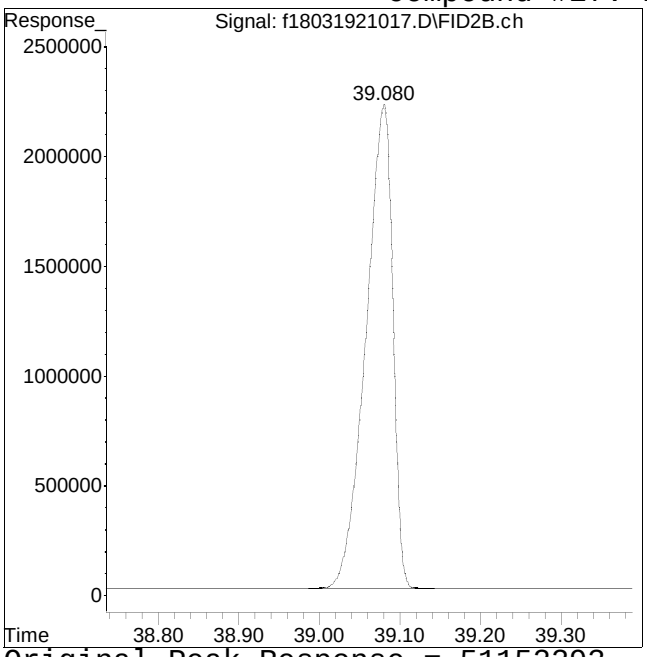
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

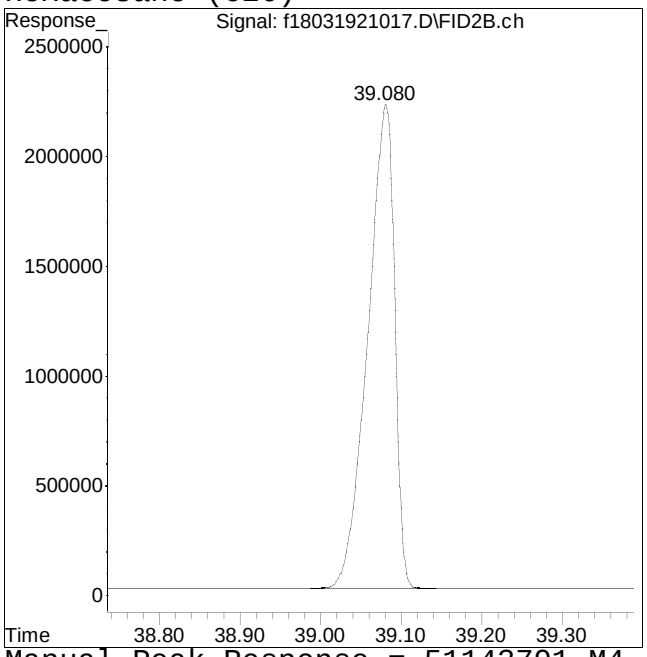
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 51152293



Manual Peak Response = 51143791 M4

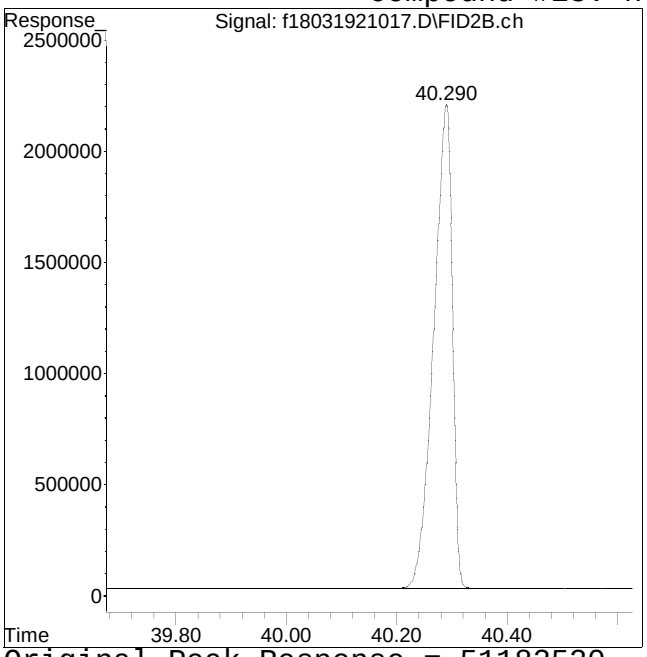
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

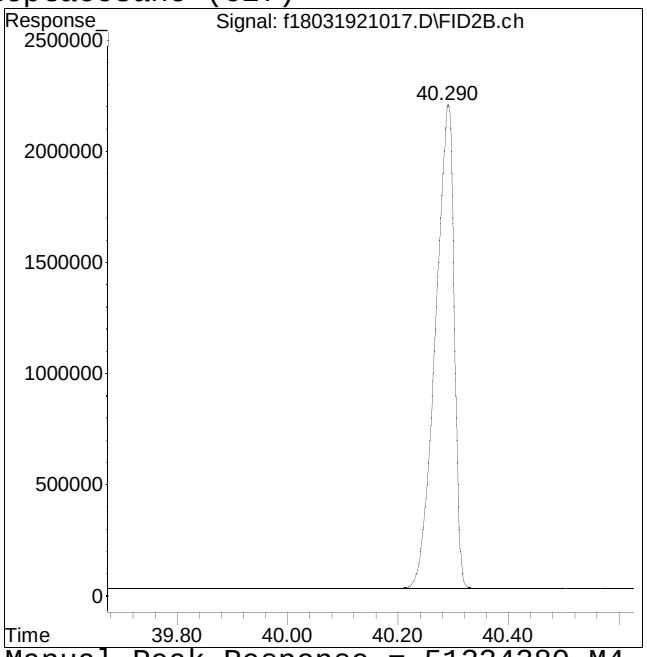
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 51182520



Manual Peak Response = 51234380 M4

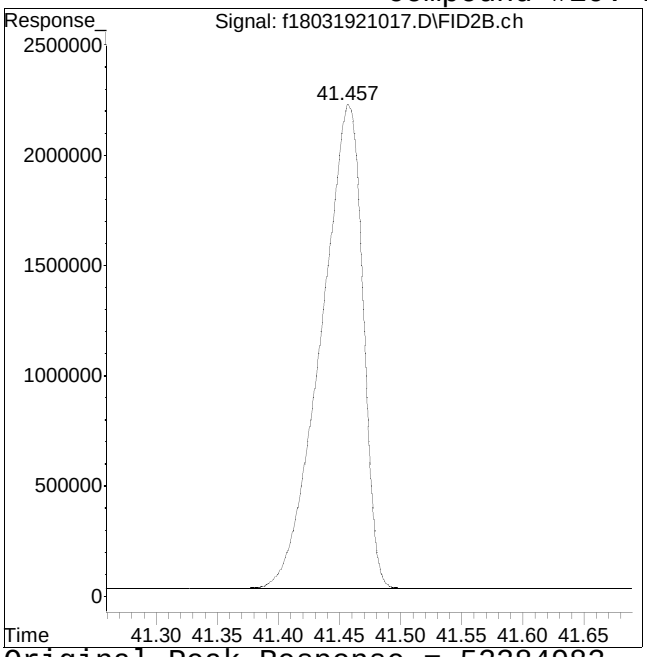
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

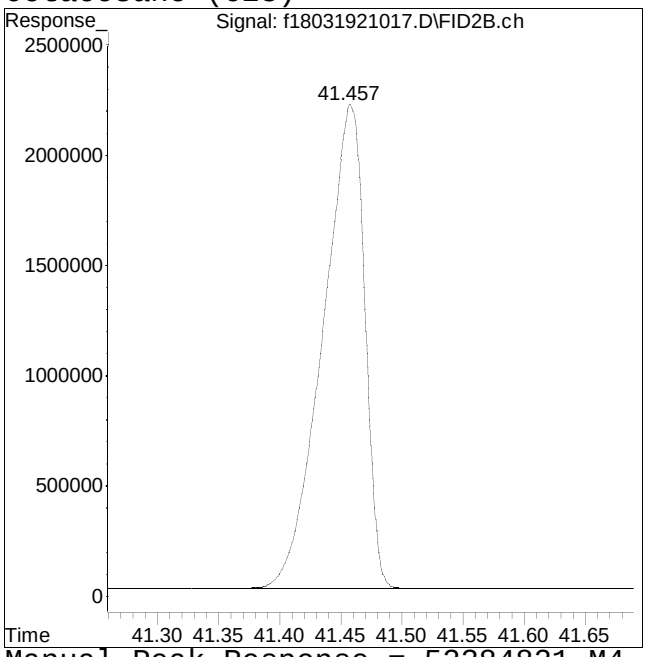
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 52384983



Manual Peak Response = 52384821 M4

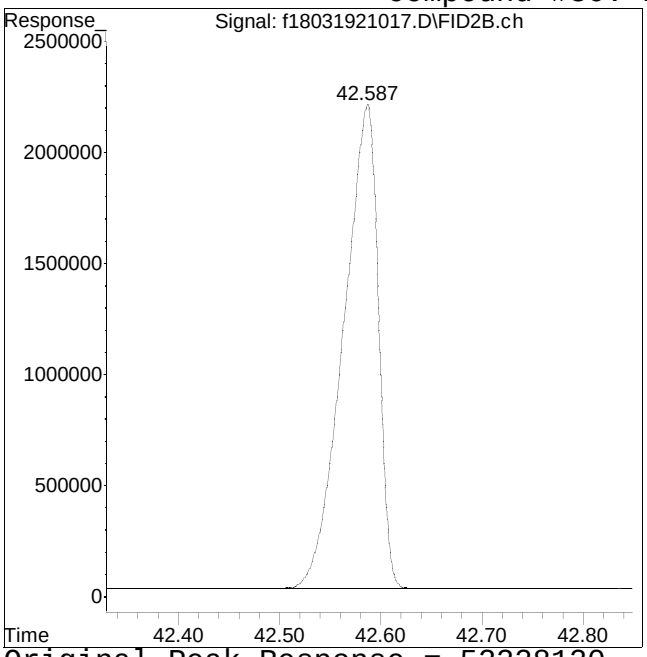
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

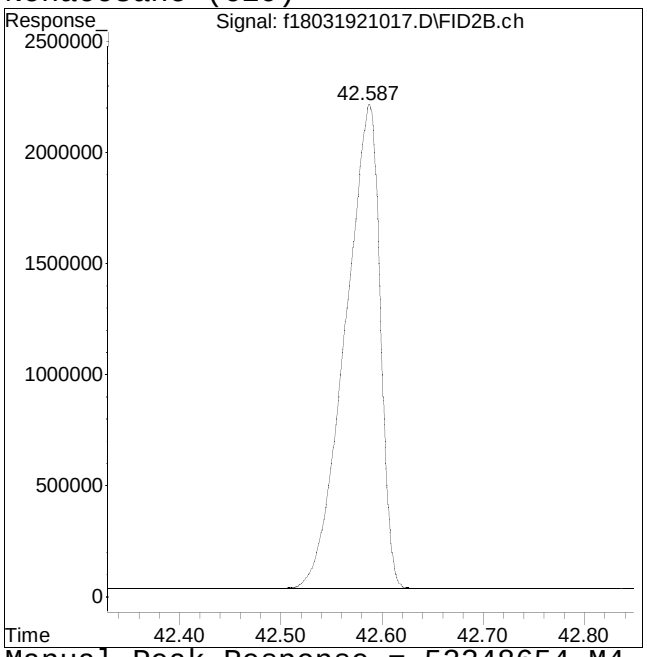
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 52228120



Manual Peak Response = 52248654 M4

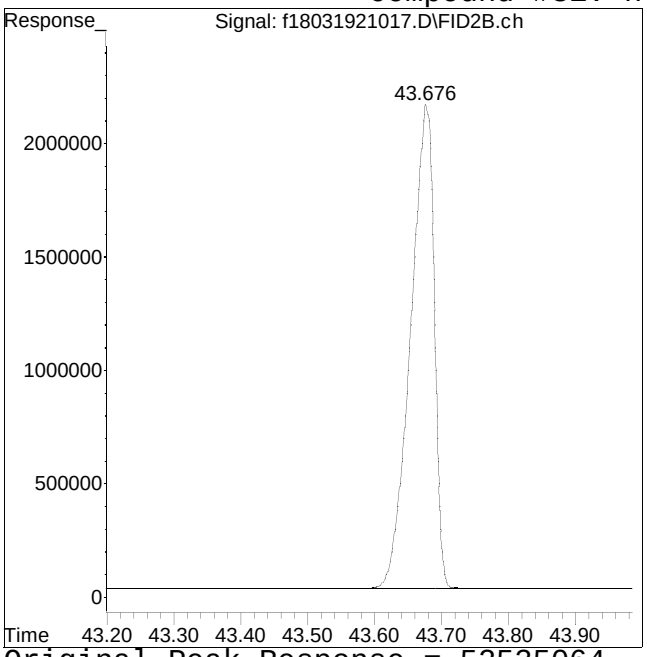
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

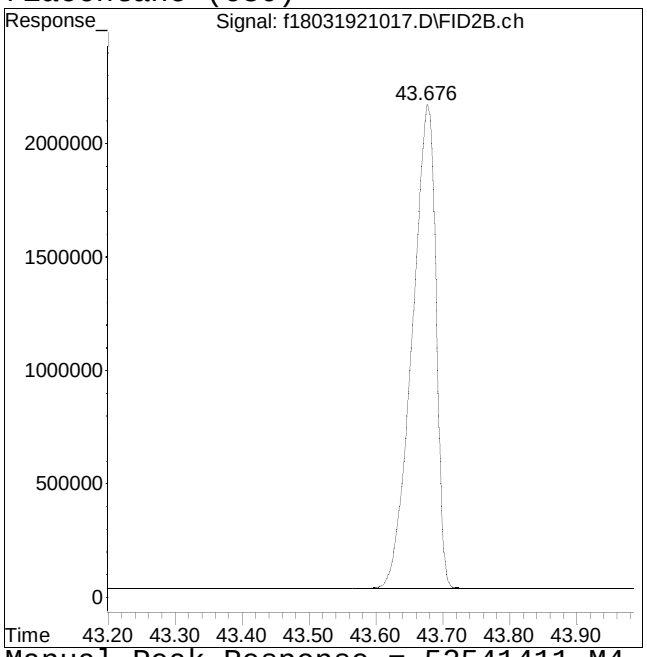
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 52535064



Manual Peak Response = 52541411 M4

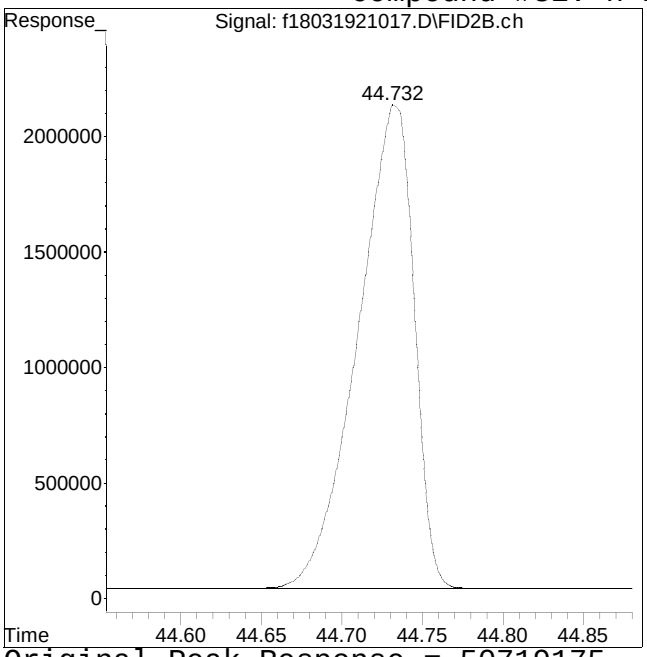
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

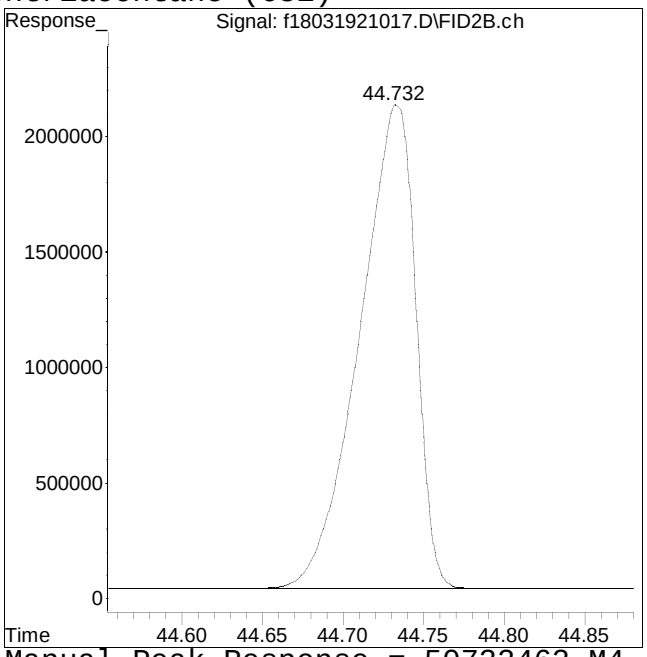
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 50719175



Manual Peak Response = 50732462 M4

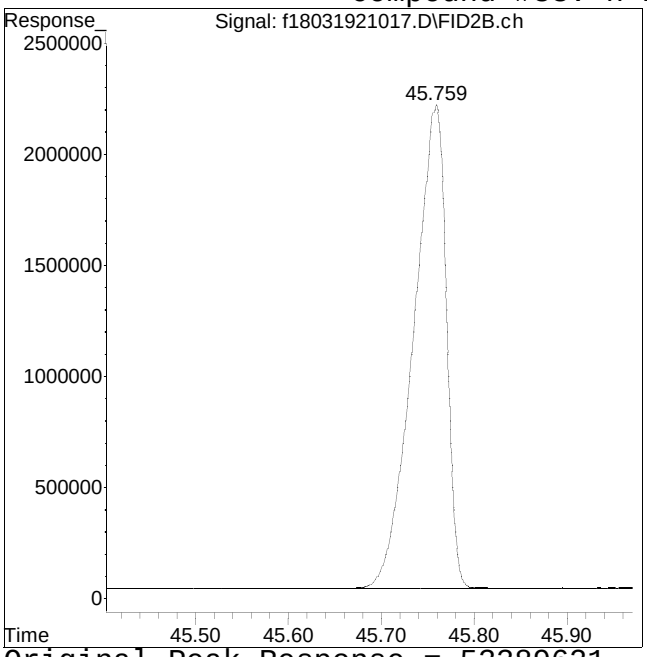
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

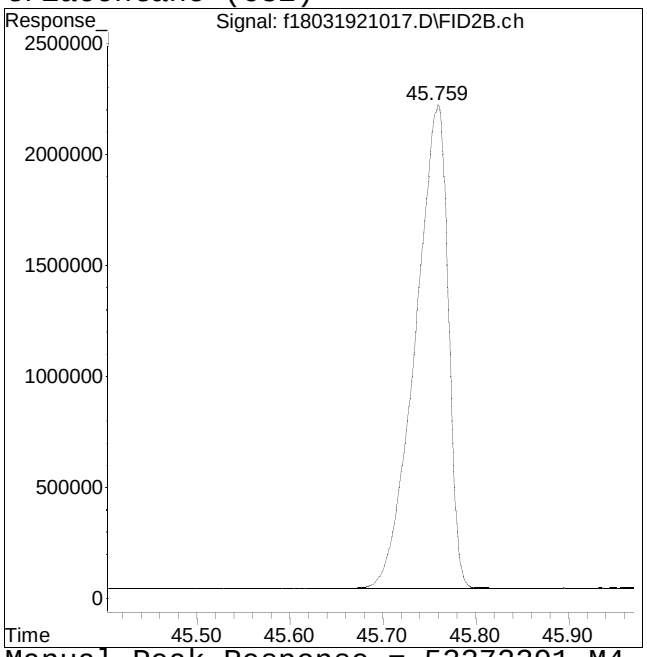
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 53389621



Manual Peak Response = 53372391 M4

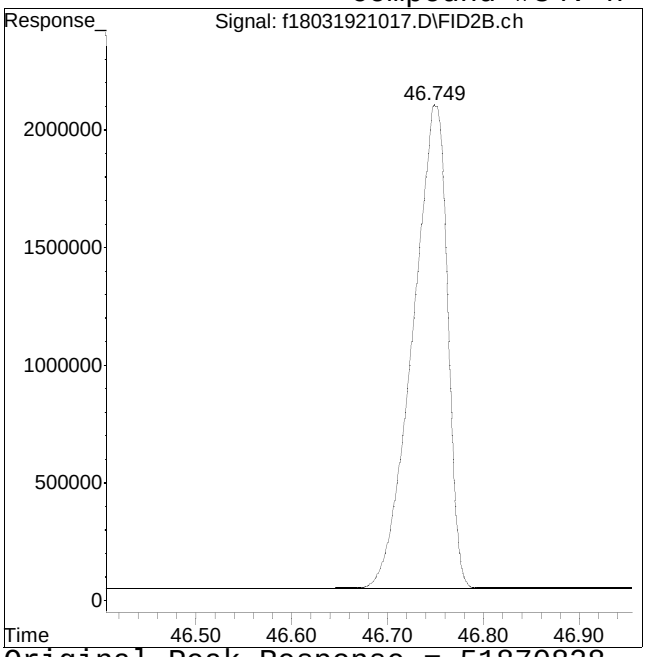
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

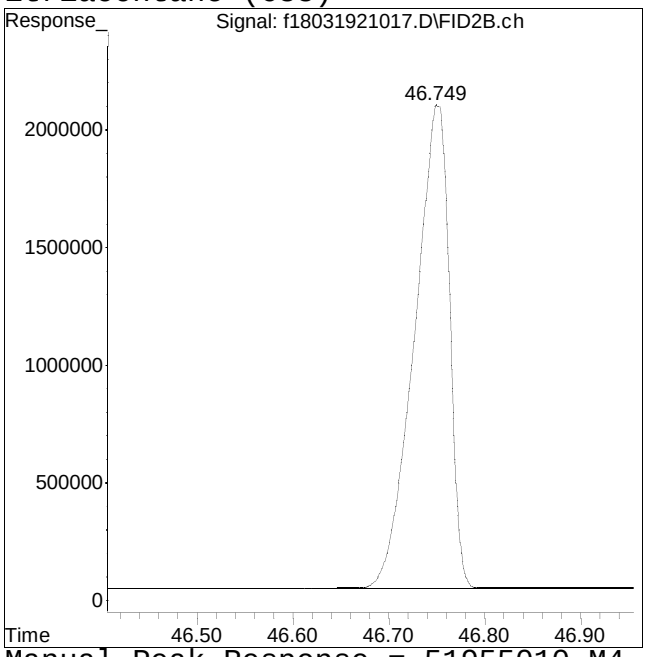
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 51870828



Manual Peak Response = 51955010 M4

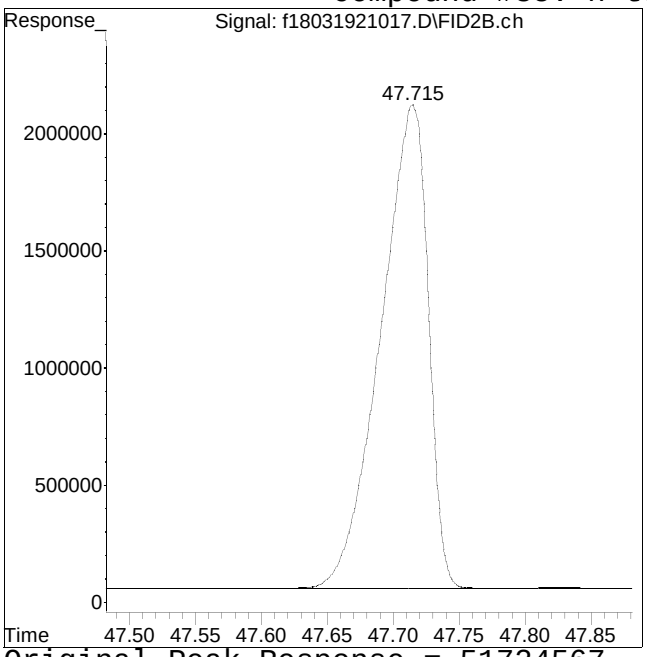
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

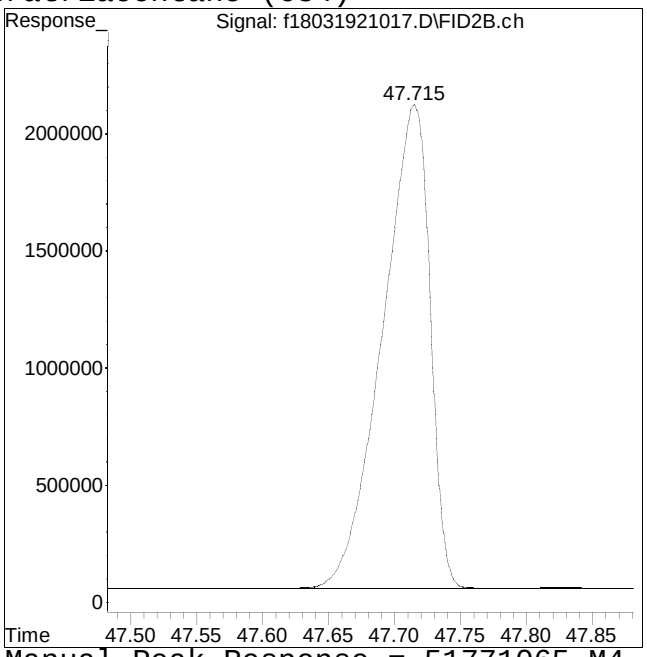
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 51724567



Manual Peak Response = 51771065 M4

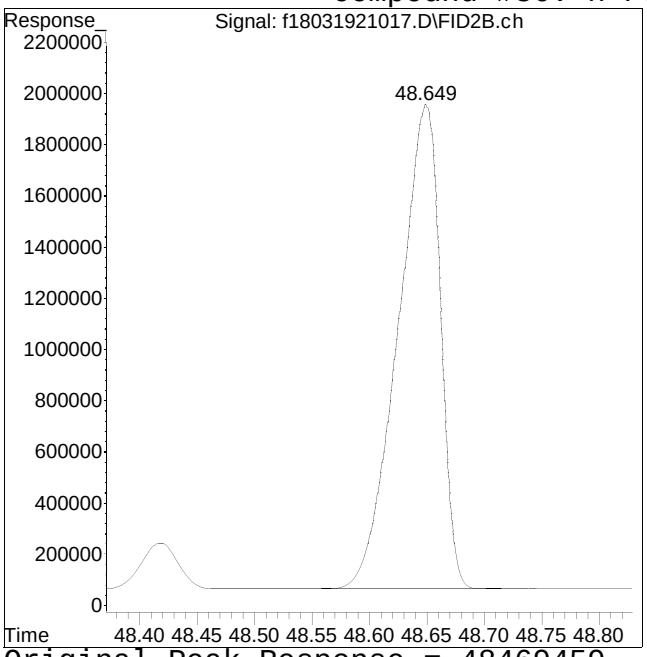
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

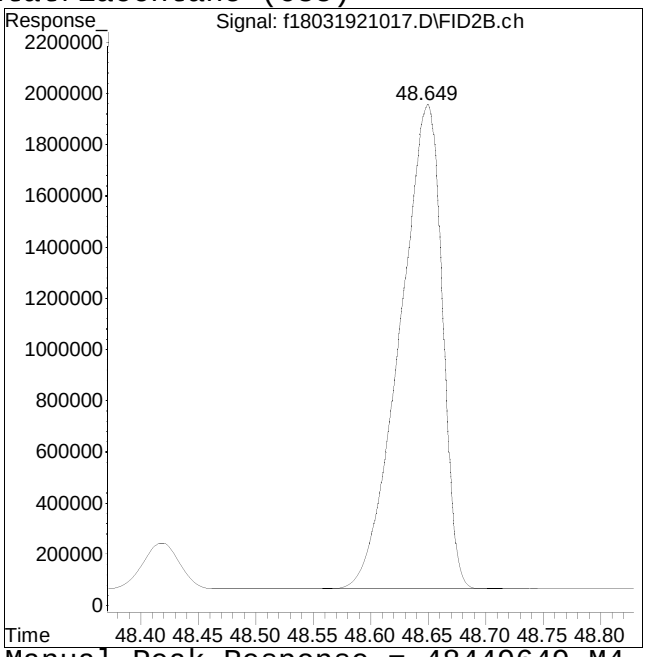
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 48469459



Manual Peak Response = 48449649 M4

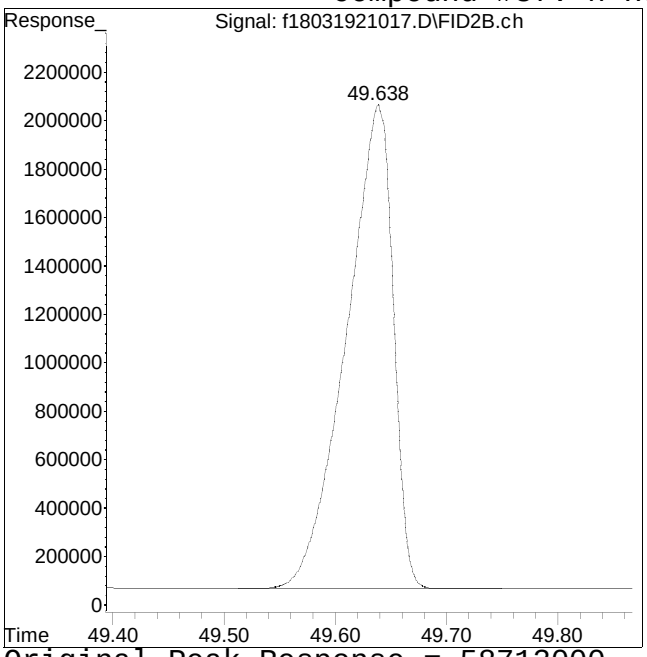
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

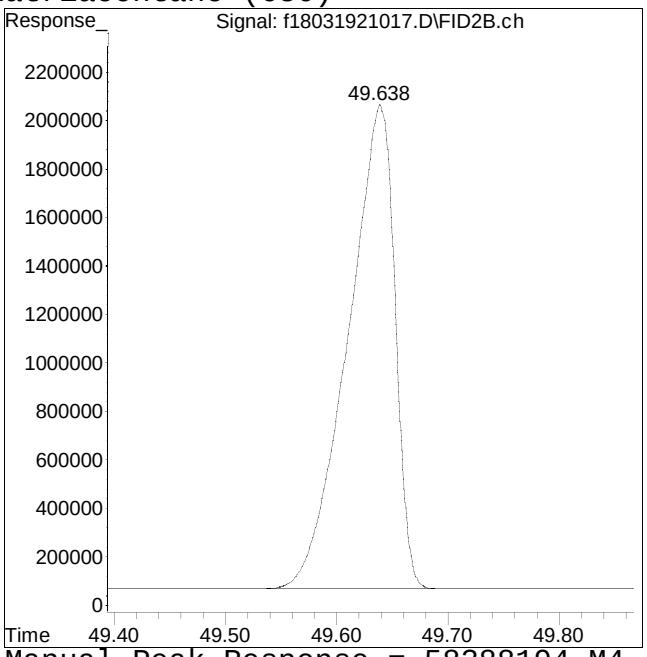
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 58713000



Manual Peak Response = 58388194 M4

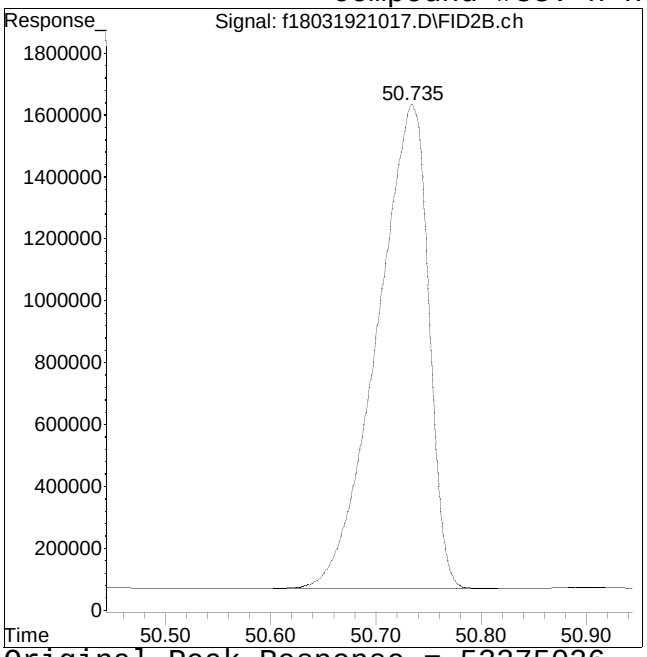
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

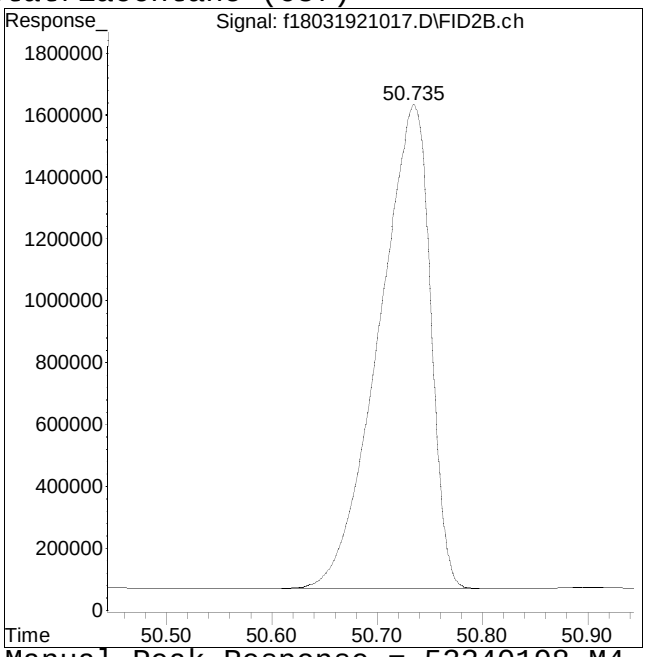
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 53275026



Manual Peak Response = 53240198 M4

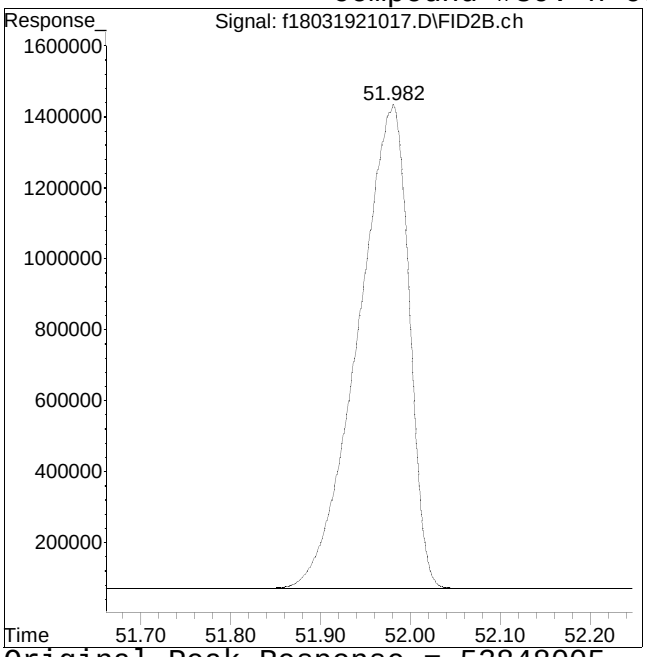
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

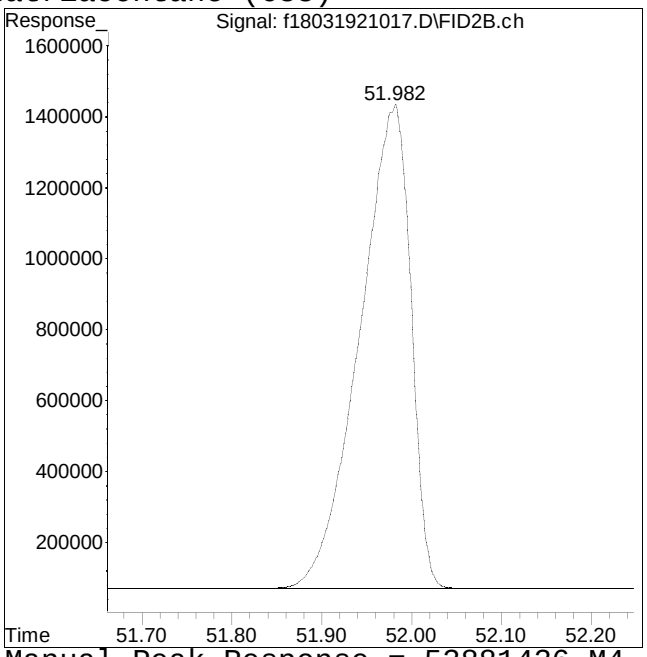
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 53848005



Manual Peak Response = 53881436 M4

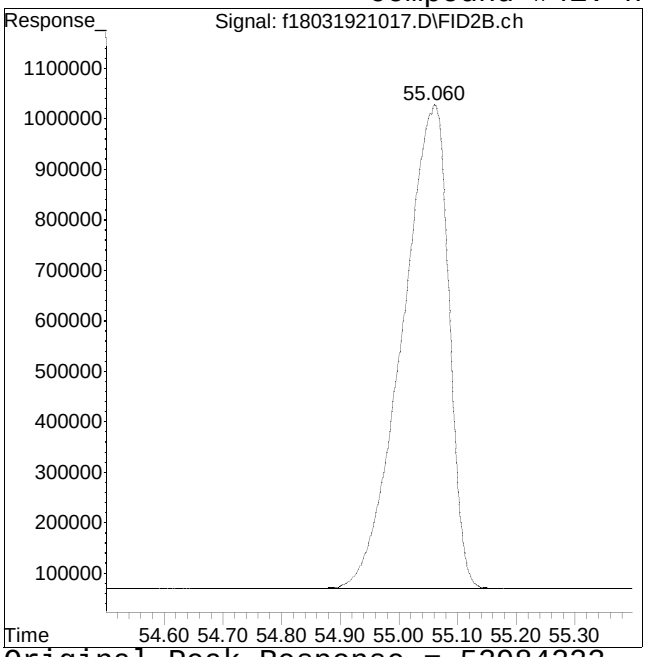
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

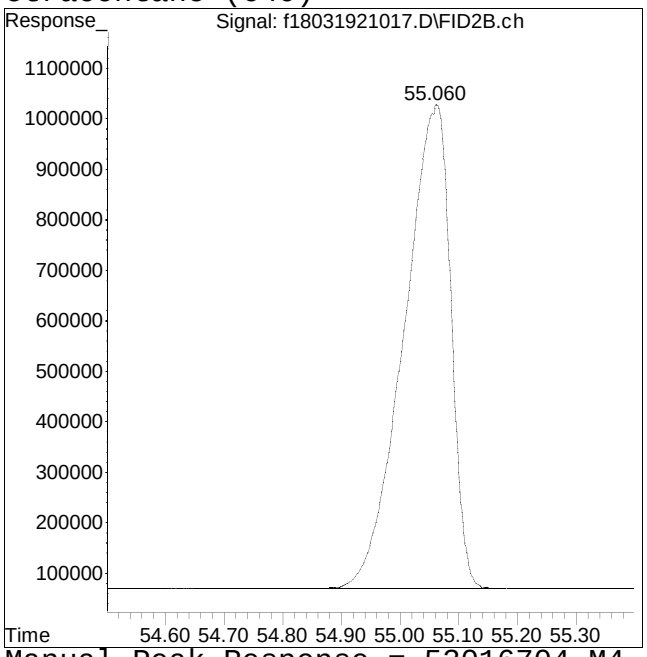
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921017.D
Date Inj'd : 3/20/2021 4:18 __
Sample : I1803192103R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 52984223



Manual Peak Response = 53016704 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921019.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 05:44
Operator : FID18:WR
Sample : I1803192104R
Misc : WG1479204,FRBC82
ALS Vial : 60 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:19:25 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:14:30 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.358	46153241	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.363	94669906	93.318 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 186.64%#	
24) s d50-Tetracosane	35.990	76756982	94.864 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 189.73%#	
Target Compounds			
2) t n-Octane (C8)	5.716	72285299	96.140 ug/mL M4
3) t n-Nonane (C9)	7.936	76234582	97.735 ug/mL M4
4) t n-Decane (C10)	10.422	81554234	99.670 ug/mL M4
5) t n-Undecane (C11)	12.933	82085819	100.483 ug/mL M4
6) t n-Dodecane (C12)	15.358	83287130	100.309 ug/mL M4
7) t n-Tridecane (C13)	17.663	83321760	99.681 ug/mL M4
9) t n-Tetradecane (C14)	19.844	85595539	99.626 ug/mL M4
11) t n-Pentadecane (C15)	21.907	85963835	98.945 ug/mL M4
12) t n-Hexadecane (C16)	23.861	85364774	98.740 ug/mL M4
14) t n-Heptadecane (C17)	25.718	86421244	98.656 ug/mL M4
15) t Pristane	25.832	88468347	98.008 ug/mL M4
16) t n-Octadecane (C18)	27.483	87329324	97.730 ug/mL M4
17) t Phytane	27.651	81131043	97.262 ug/mL M4
18) t n-Nonadecane (C19)	29.168	87651759	97.857 ug/mL M4
20) t n-Eicosane (C20)	30.769	88381519	97.838 ug/mL M4
21) t n-Heneicosane (C21)	32.304	88980710	97.948 ug/mL M4
22) t n-Docosane (C22)	33.774	89062312	97.909 ug/mL M4
23) t n-Tricosane (C23)	35.184	89267819	97.777 ug/mL M4
25) t n-Tetracosane (C24)	36.539	89124228	97.984 ug/mL M4
26) t n-Pentacosane (C25)	37.841	87813979	98.375 ug/mL M4
27) t n-Hexacosane (C26)	39.098	90361064	98.718 ug/mL M4
28) t n-Heptacosane (C27)	40.307	90566635	98.900 ug/mL M4
29) t n-Octacosane (C28)	41.477	92683260	99.155 ug/mL M4
30) t n-Nonacosane (C29)	42.604	92433782	99.574 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921019.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 05:44
Operator : FID18:WR
Sample : I1803192104R
Misc : WG1479204,FRBC82
ALS Vial : 60 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:19:25 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:14:30 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

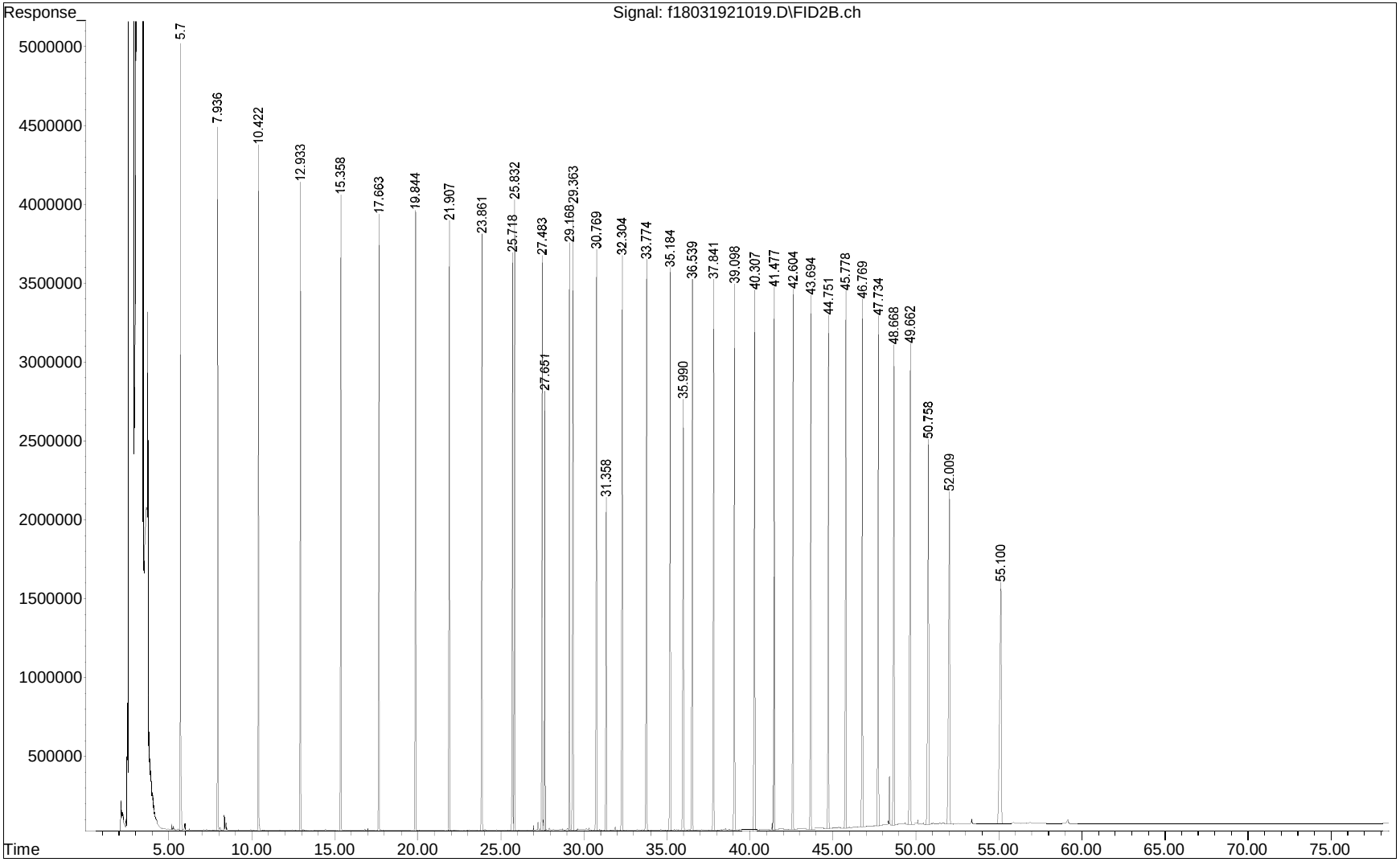
	Compound	R.T.	Response	Conc	Units	
31) t	n-Triacontane (C30)	43.694	92984899	99.952	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.751	89855876	100.204	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.778	94530276	100.544	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.769	91915379	100.742	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.734	91749014	101.129	ug/mL	M4
36) t	n-Pentatriacontane (C35)	48.668	85885954	101.180	ug/mL	M4
37) t	n-Hexatriacontane (C36)	49.662	103679165	100.984	ug/mL	M4
38) t	n-Heptatriacontane (C37)	50.758	94509377	101.033	ug/mL	M4
39) t	n-Octatriacontane (C38)	52.009	95729184	101.011	ug/mL	M4
41) t	n-Tetracontane (C40)	55.100	94263509	99.280	ug/mL	M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\f18031921019.D
Operator : FID18:WR
Acquired : 20 Mar 2021 05:44 using AcqMethod FID18.M
Sample Name: I1803192104R
Instrument: FID 18
Misc Info : WG1479204,FRBC82
Vial Number: 60
CurrentMeth: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M

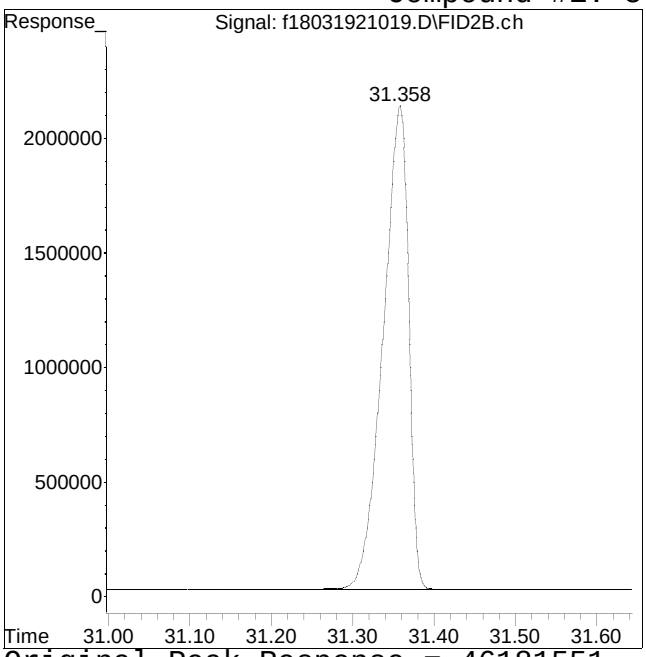


Manual Integration/Negative Proof Report

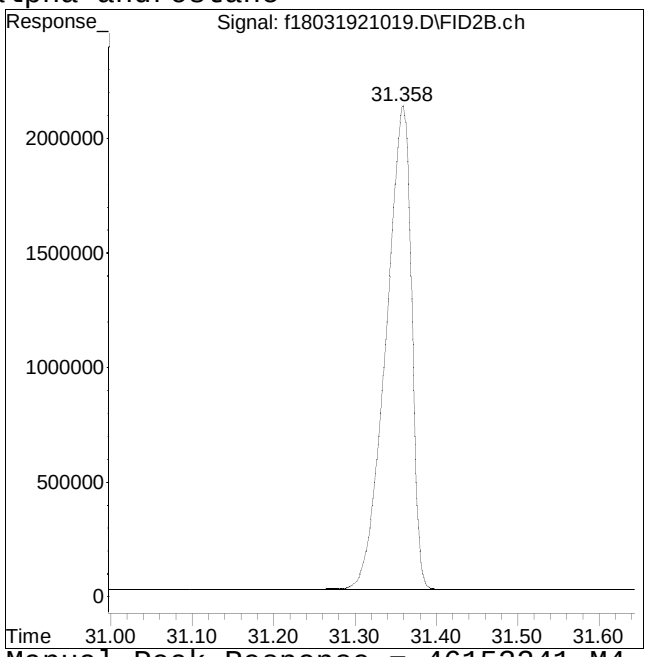
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #1: 5-alpha-androstane



Original Peak Response = 46181551



Manual Peak Response = 46153241 M4

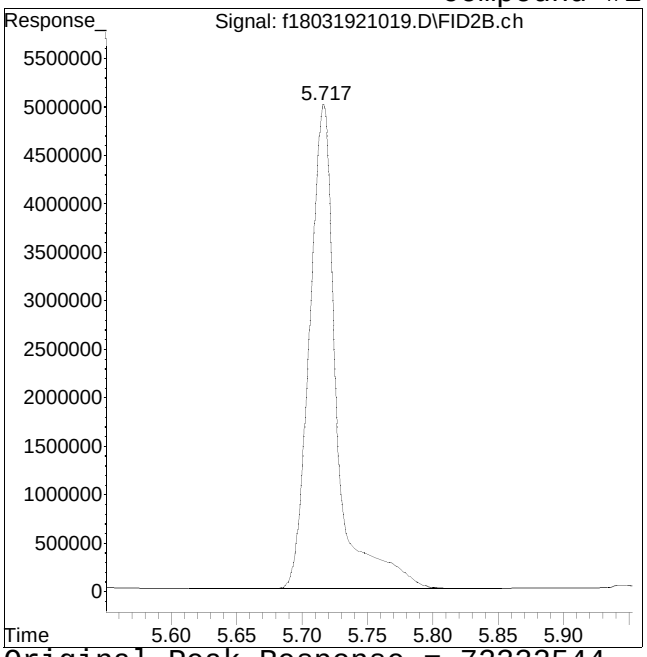
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

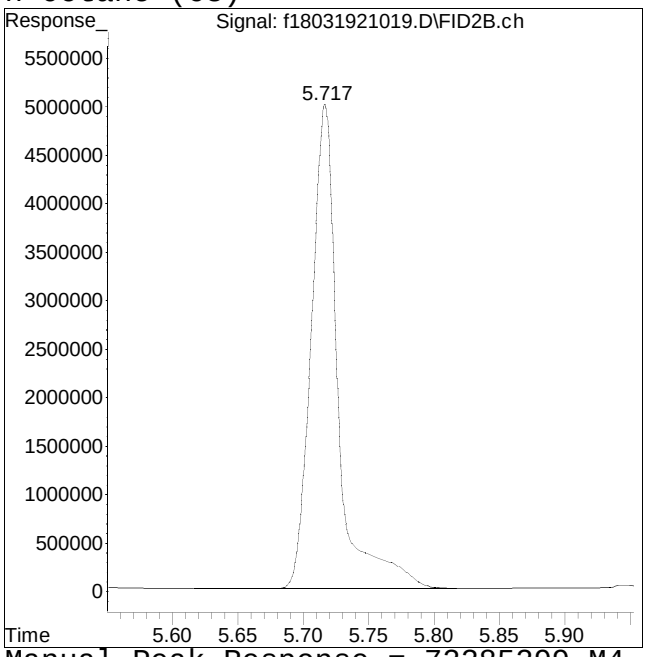
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #2: n-Octane (C8)



Original Peak Response = 72332544



Manual Peak Response = 72285299 M4

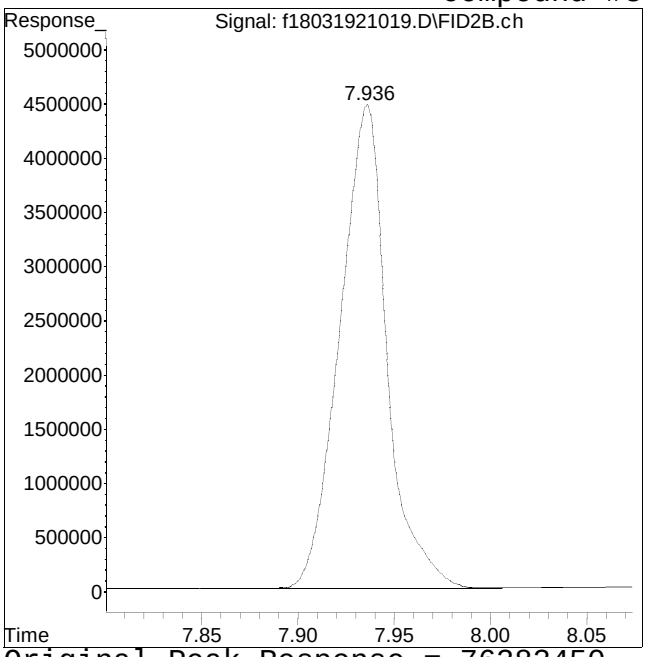
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

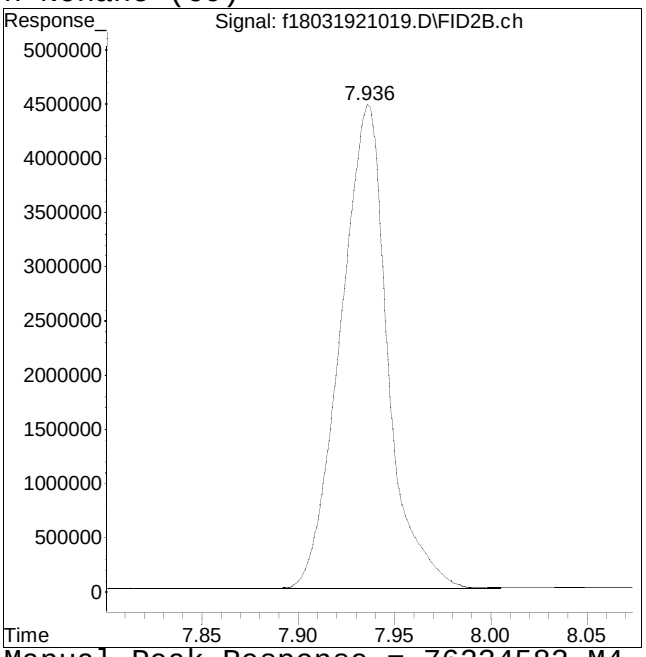
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #3: n-Nonane (C9)



Original Peak Response = 76383450



Manual Peak Response = 76234582 M4

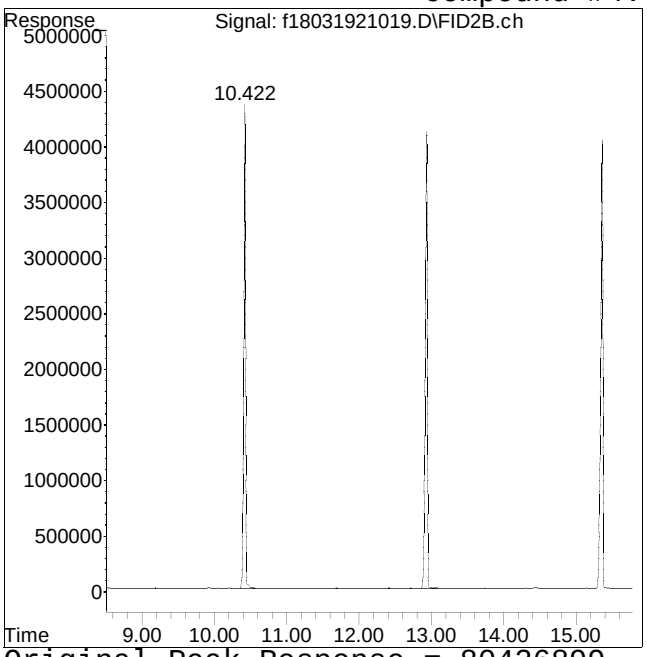
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

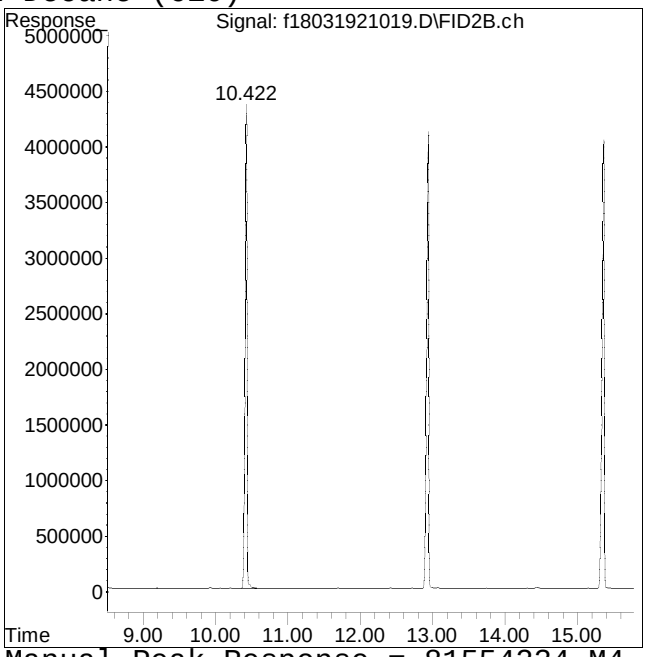
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #4: n-Decane (C10)



Original Peak Response = 80426899



Manual Peak Response = 81554234 M4

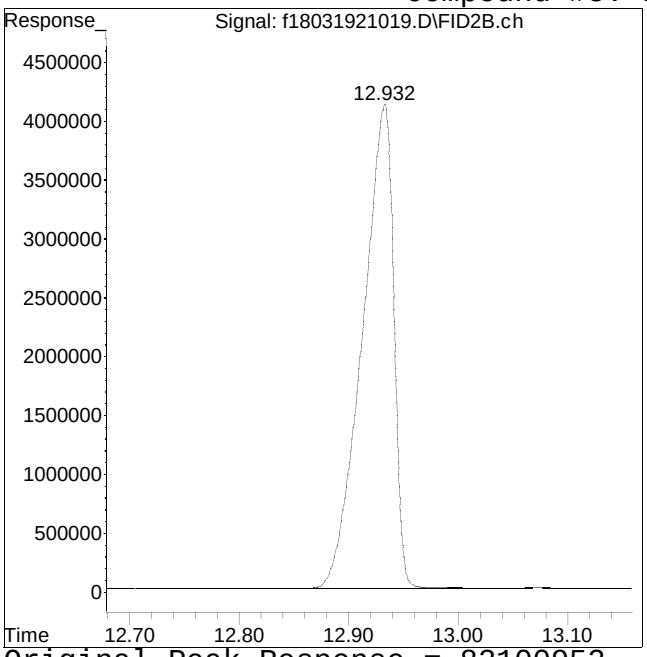
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

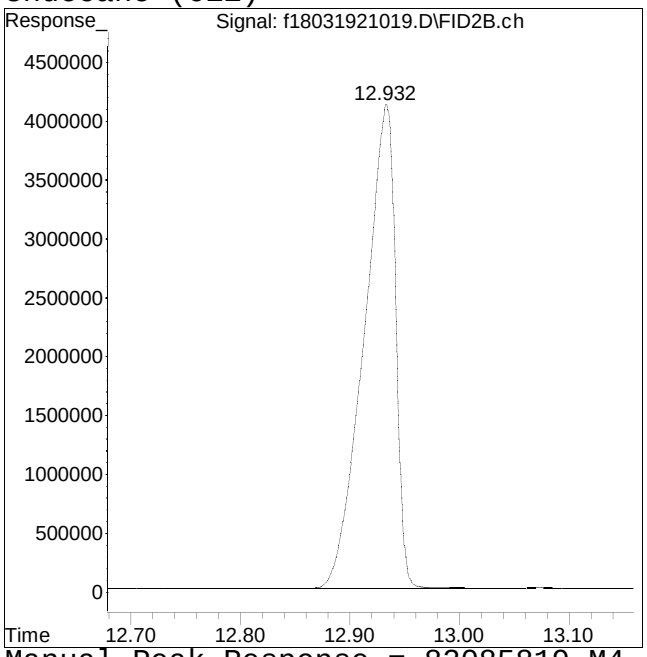
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #5: n-Undecane (C11)



Original Peak Response = 82100952



Manual Peak Response = 82085819 M4

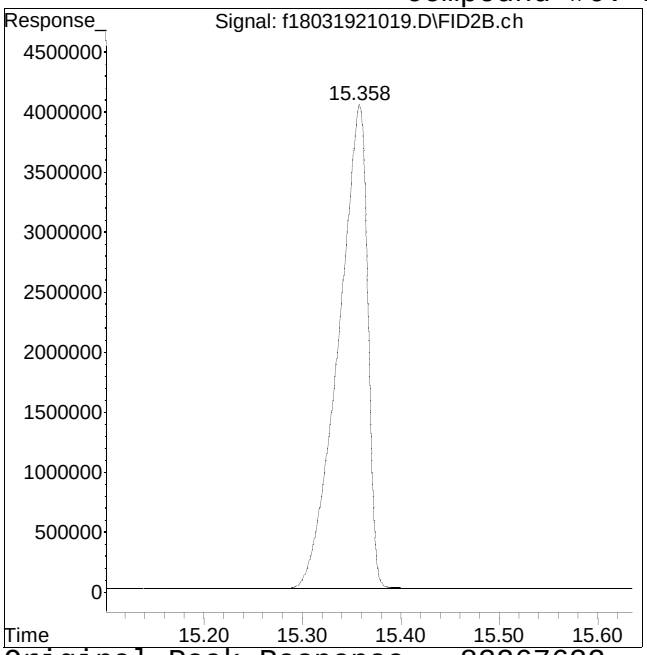
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

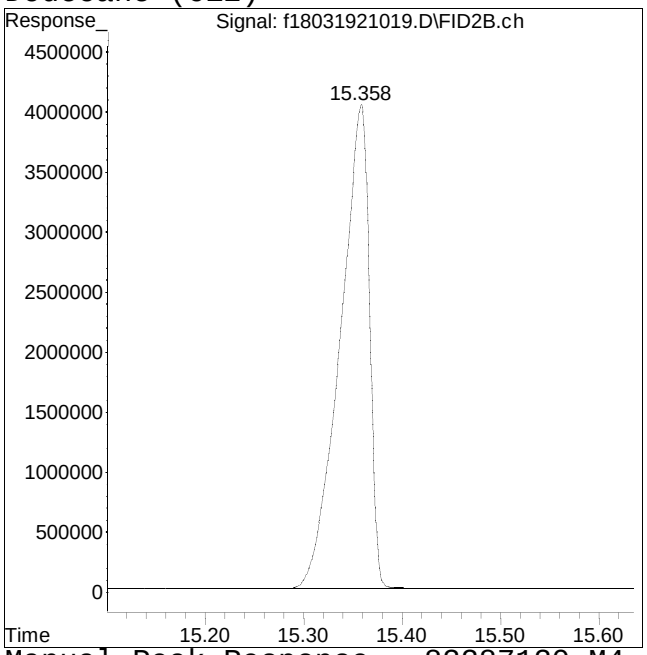
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 83267632



Manual Peak Response = 83287130 M4

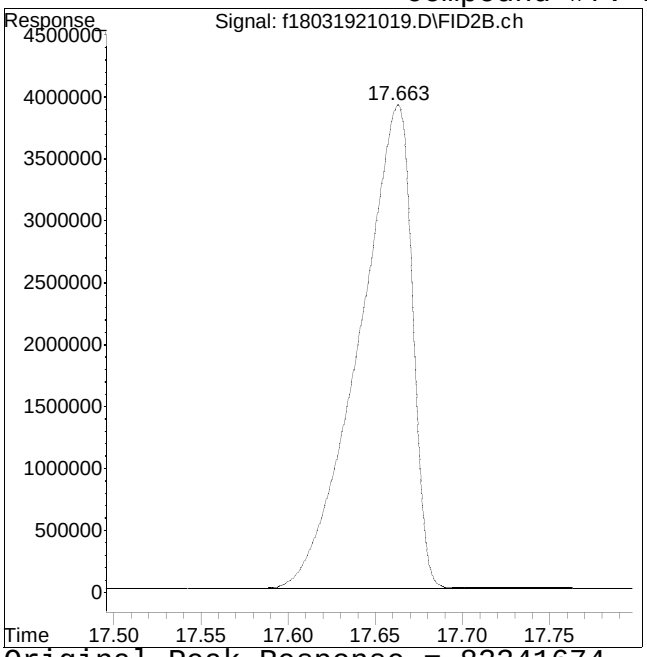
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

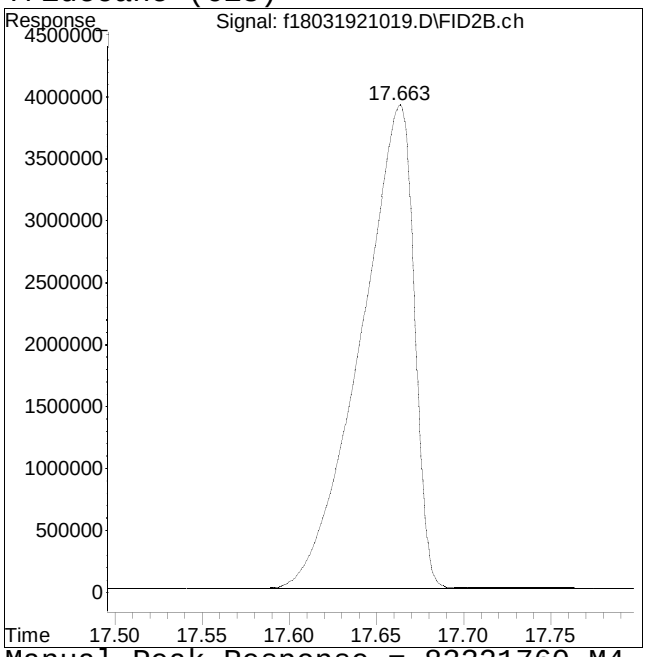
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 83341674



Manual Peak Response = 83321760 M4

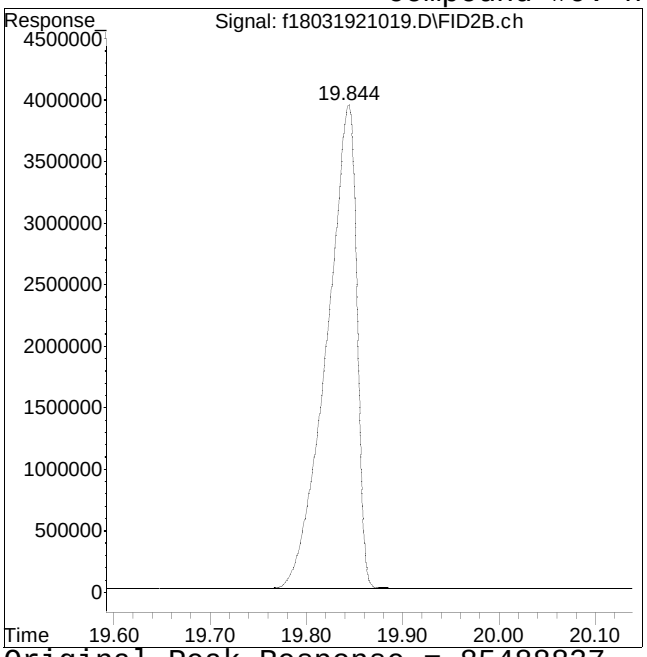
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

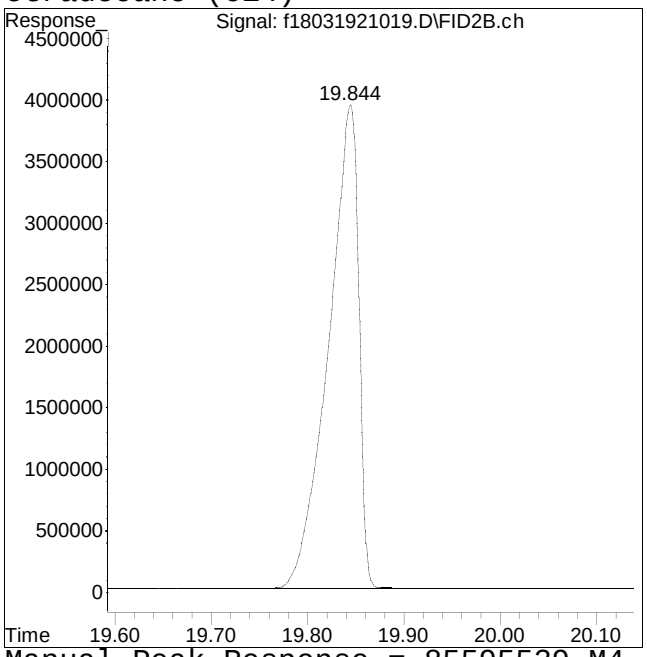
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 85488837



Manual Peak Response = 85595539 M4

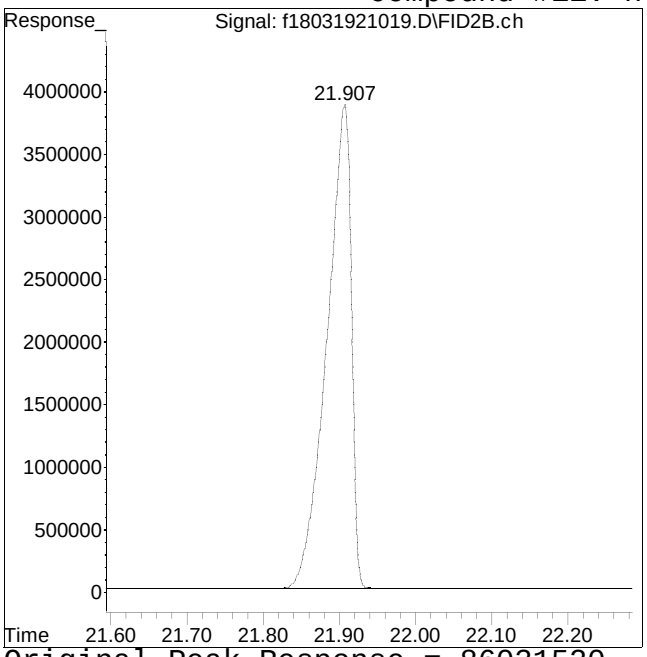
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

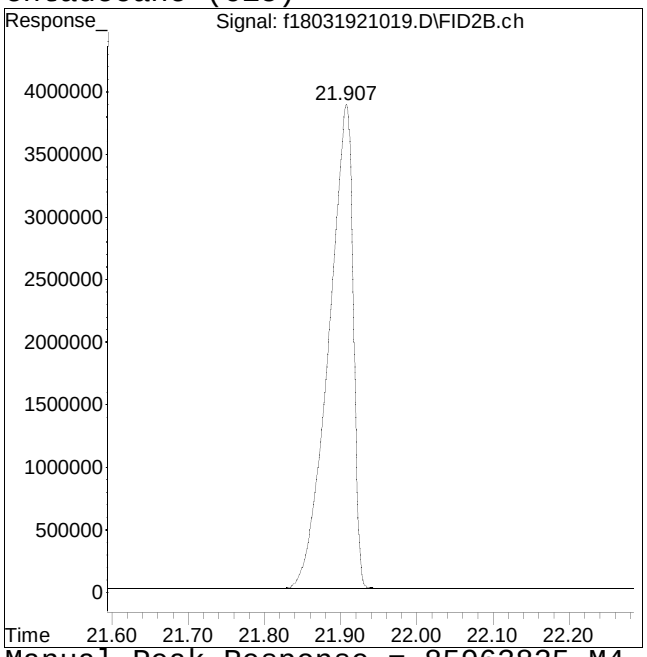
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 86031520



Manual Peak Response = 85963835 M4

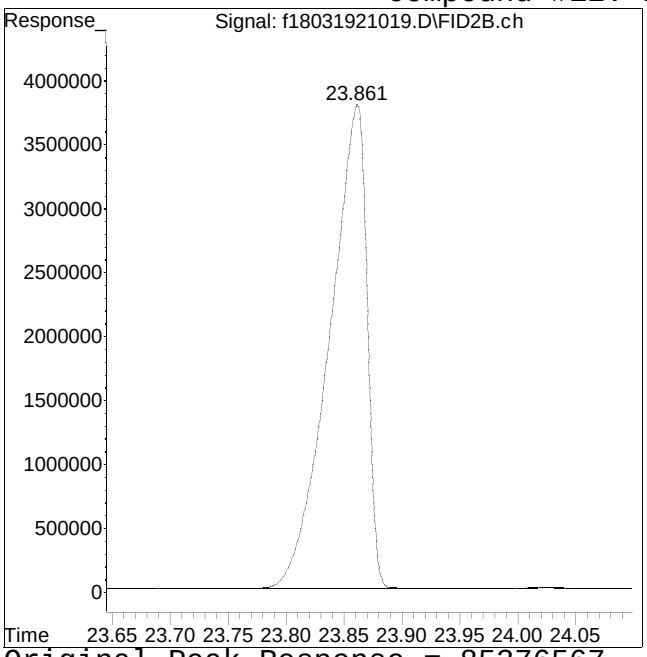
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

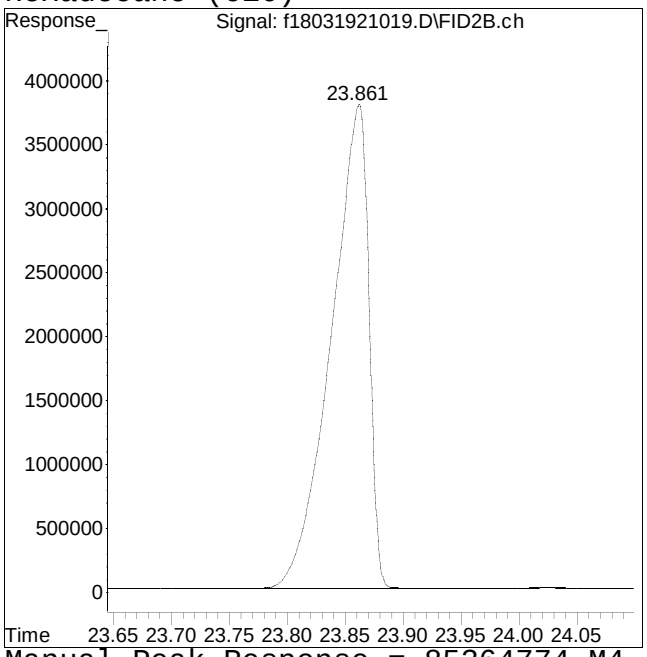
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 85376567



Manual Peak Response = 85364774 M4

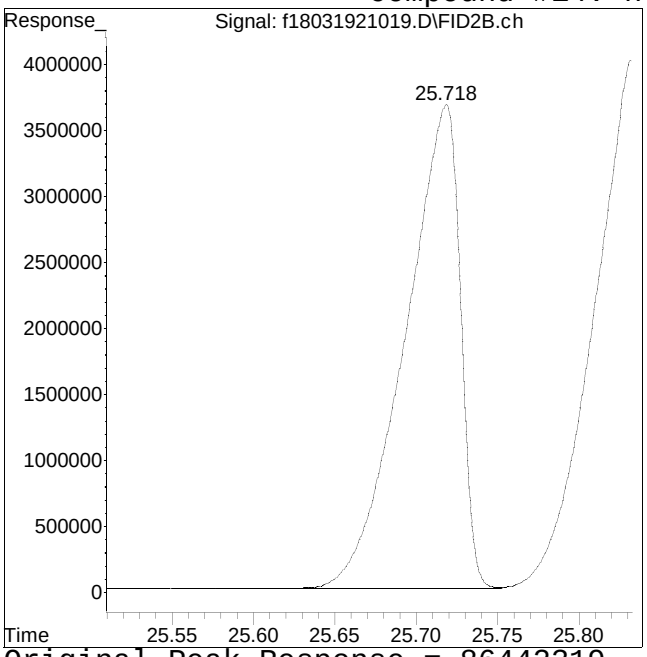
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

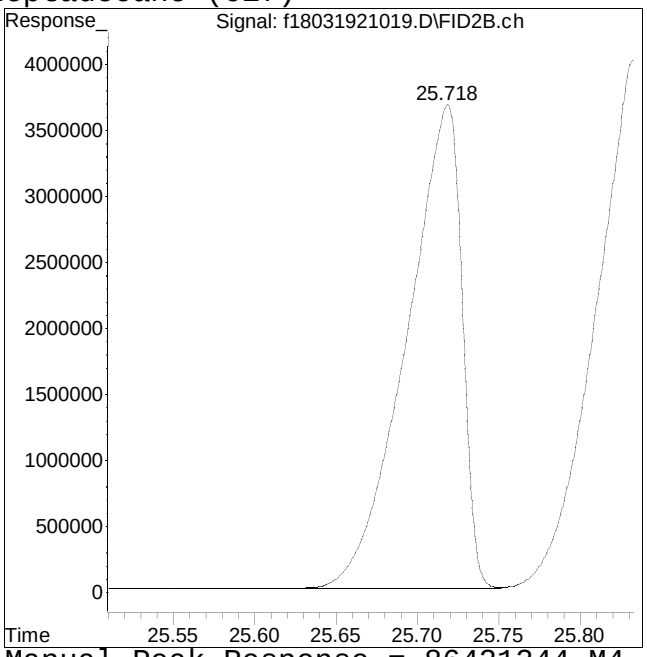
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 86442319



Manual Peak Response = 86421244 M4

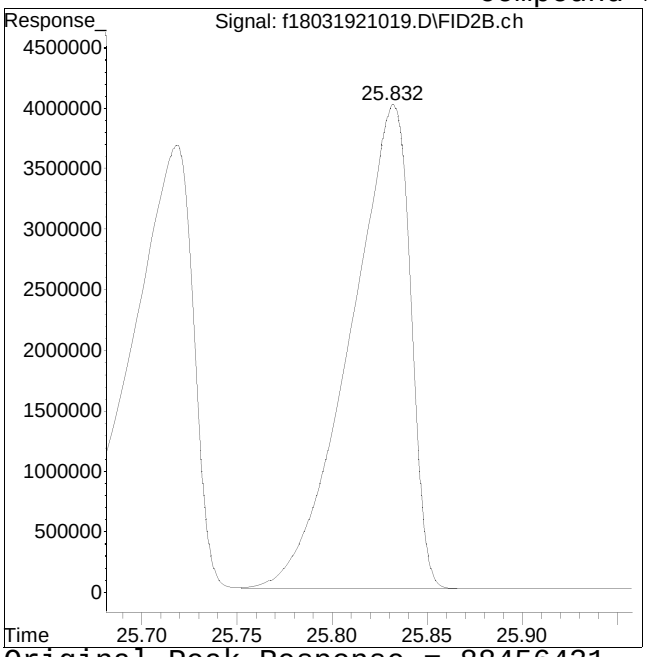
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

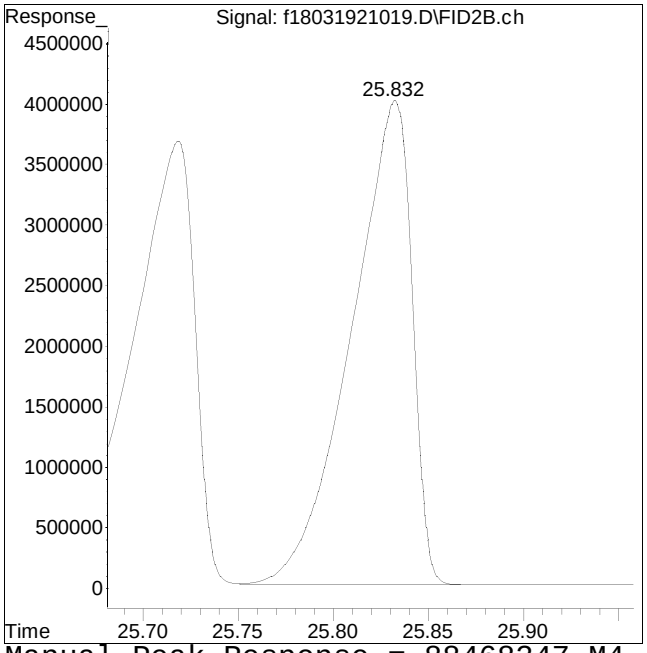
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #15: Pristane



Original Peak Response = 88456431



Manual Peak Response = 88468347 M4

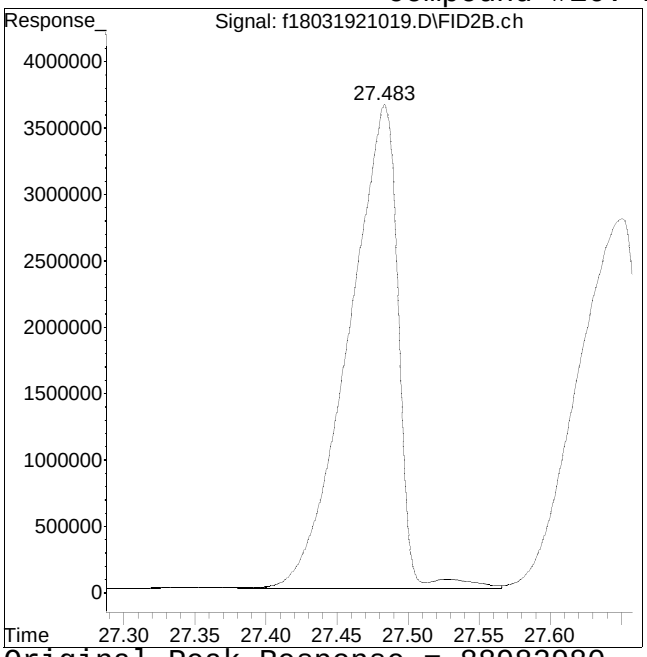
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

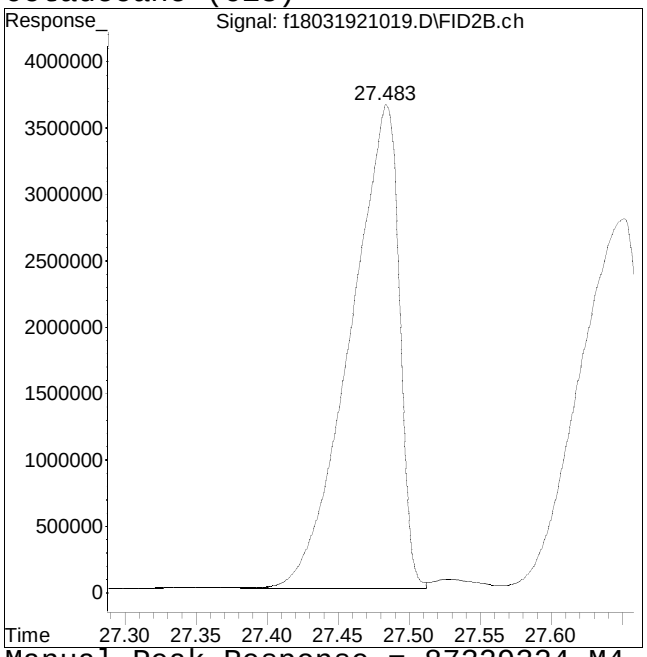
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 88982980



Manual Peak Response = 87329324 M4

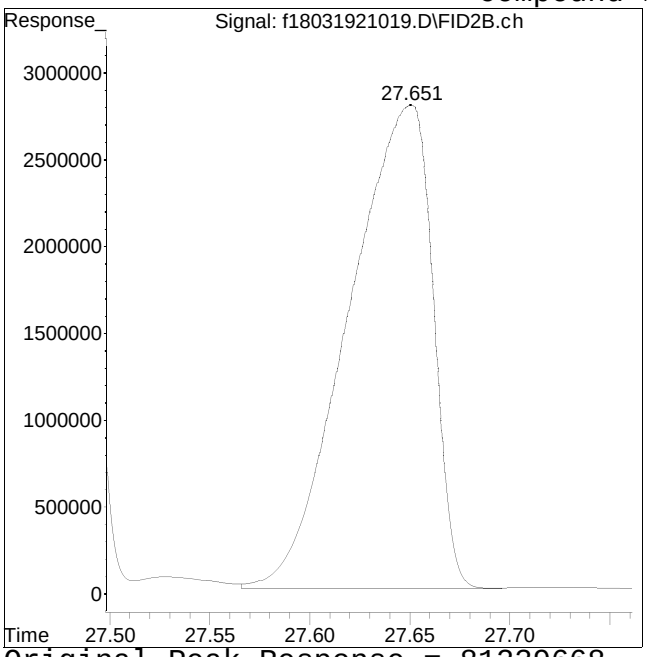
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

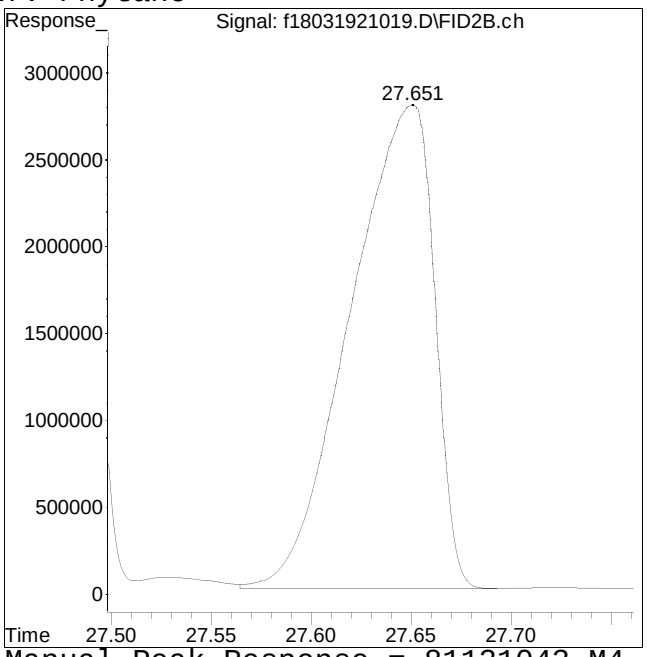
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #17: Phytane



Original Peak Response = 81239668



Manual Peak Response = 81131043 M4

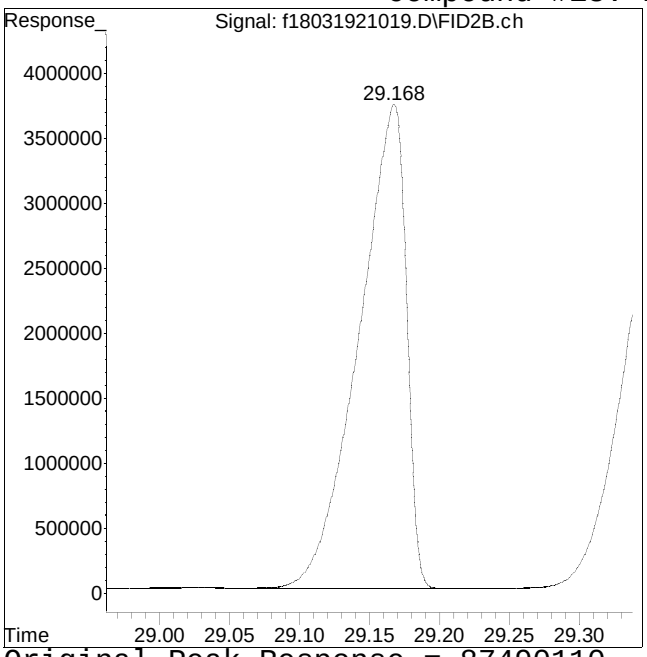
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

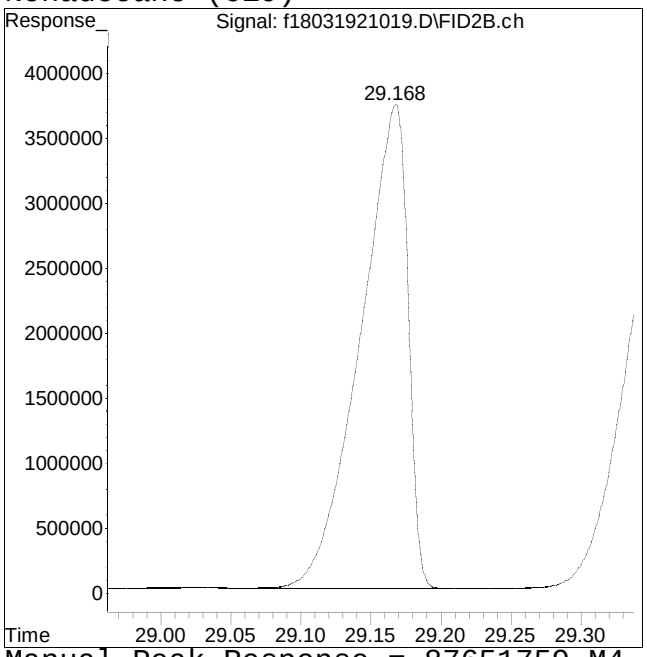
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 87490110



Manual Peak Response = 87651759 M4

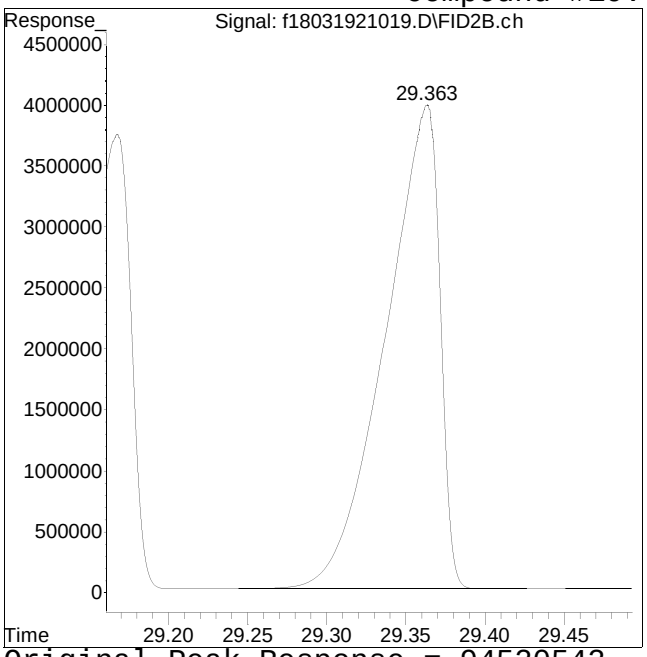
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

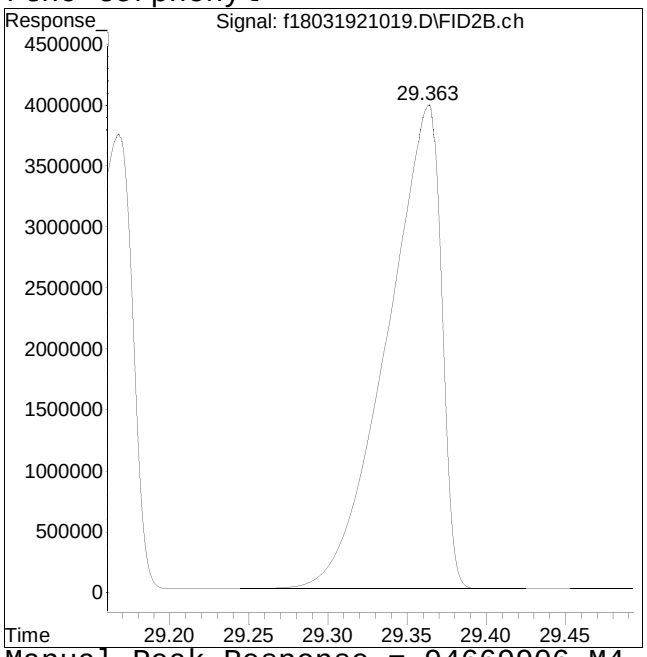
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #19: ortho-terphenyl



Original Peak Response = 94520542



Manual Peak Response = 94669906 M4

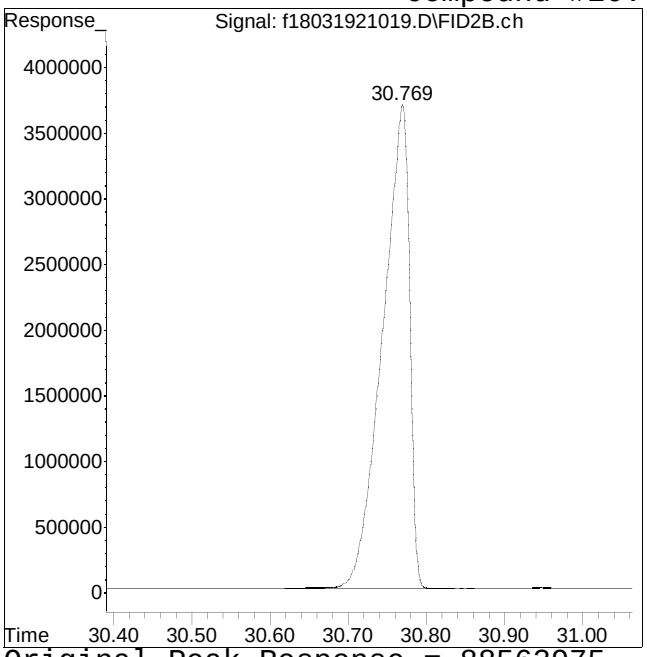
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

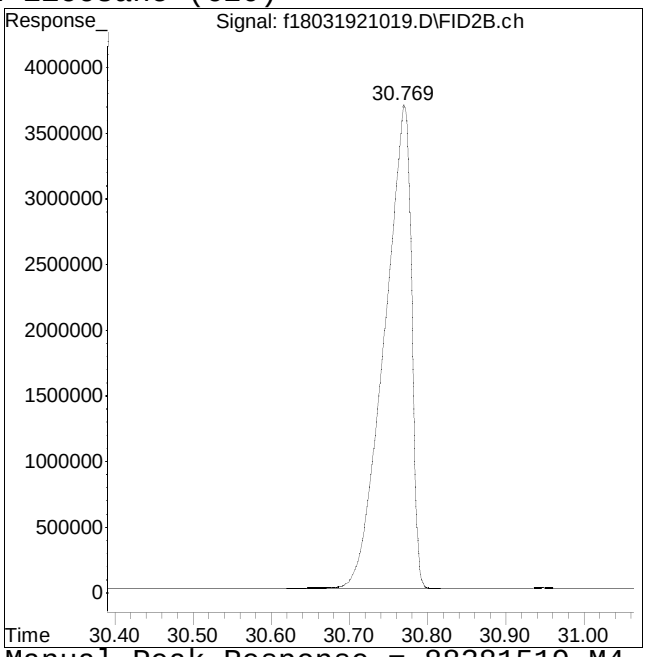
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 88563975



Manual Peak Response = 88381519 M4

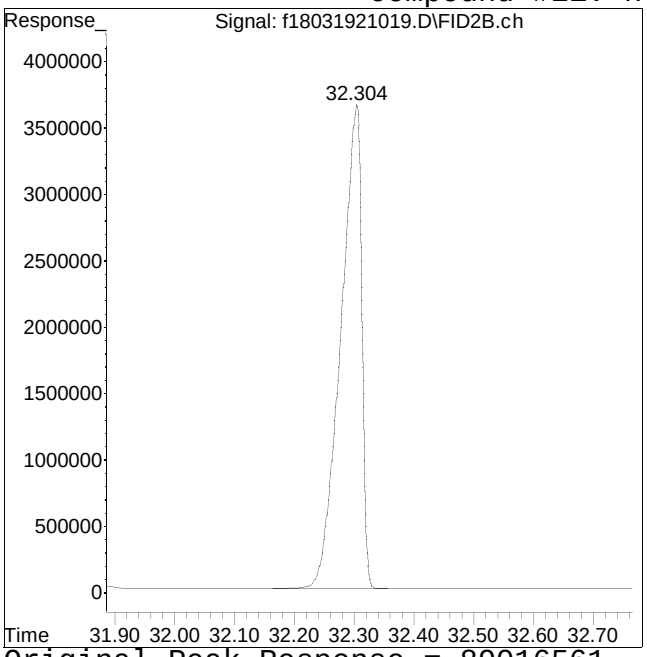
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

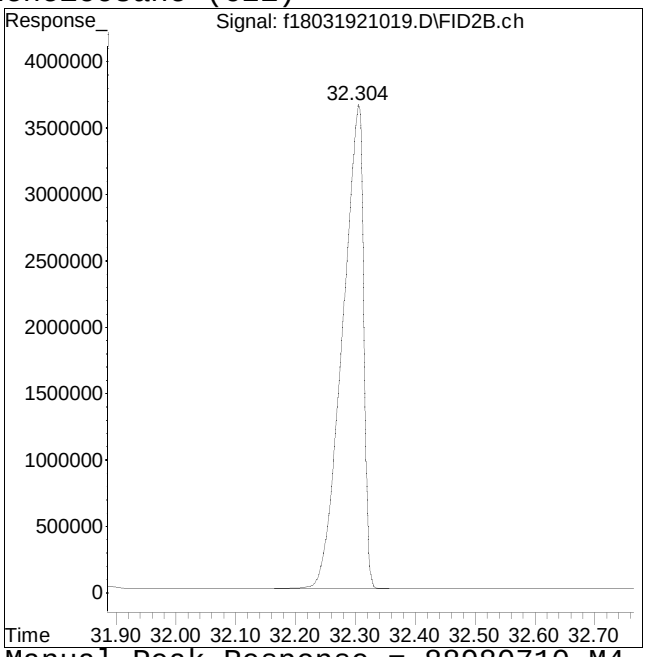
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 89016561



Manual Peak Response = 88980710 M4

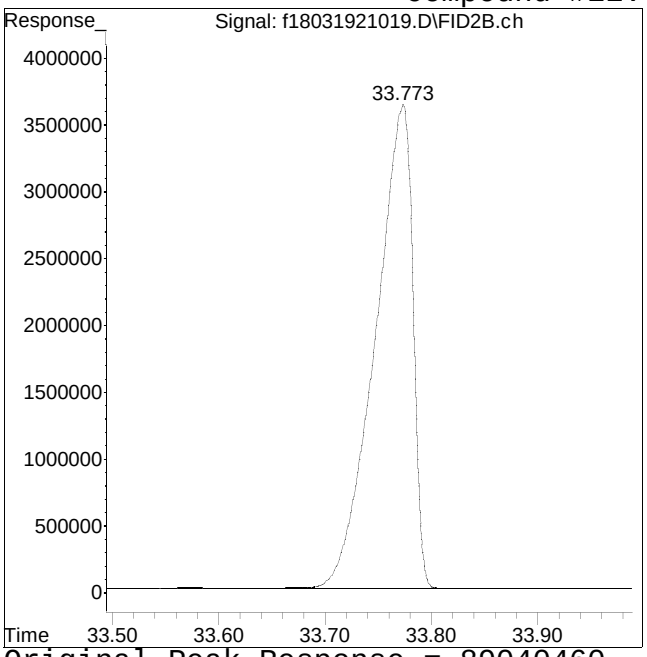
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

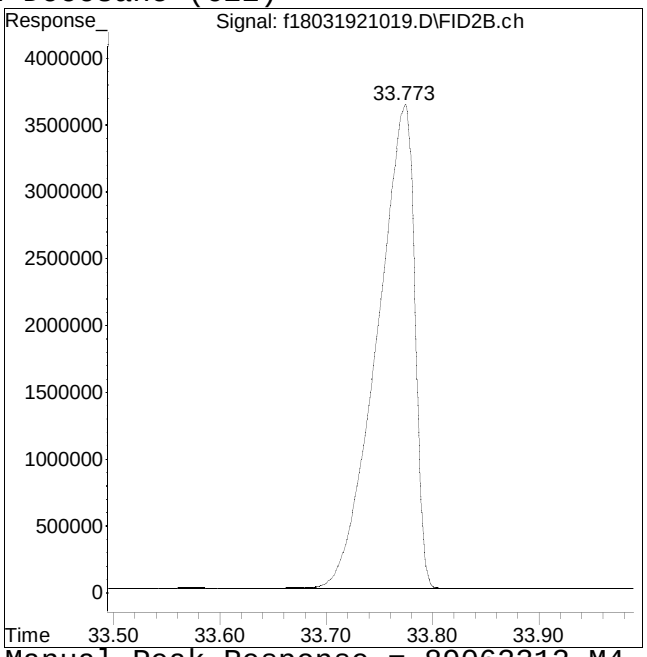
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #22: n-Docosane (C22)



Original Peak Response = 89040460



Manual Peak Response = 89062312 M4

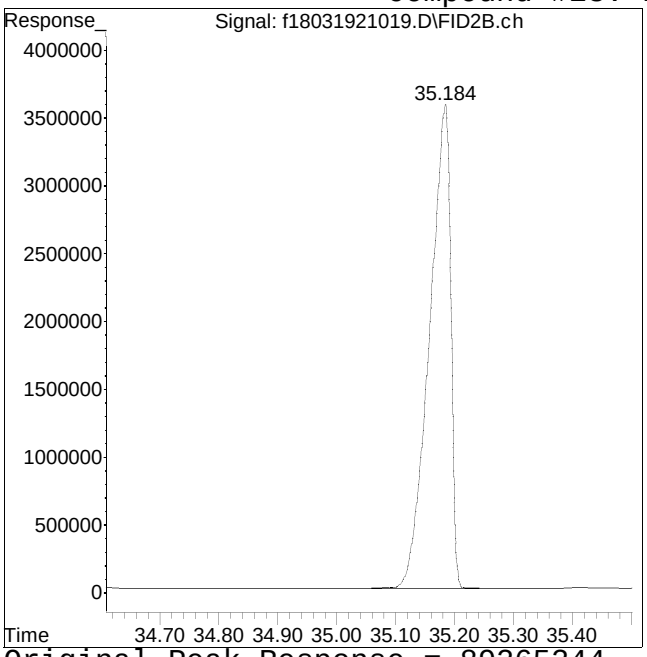
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

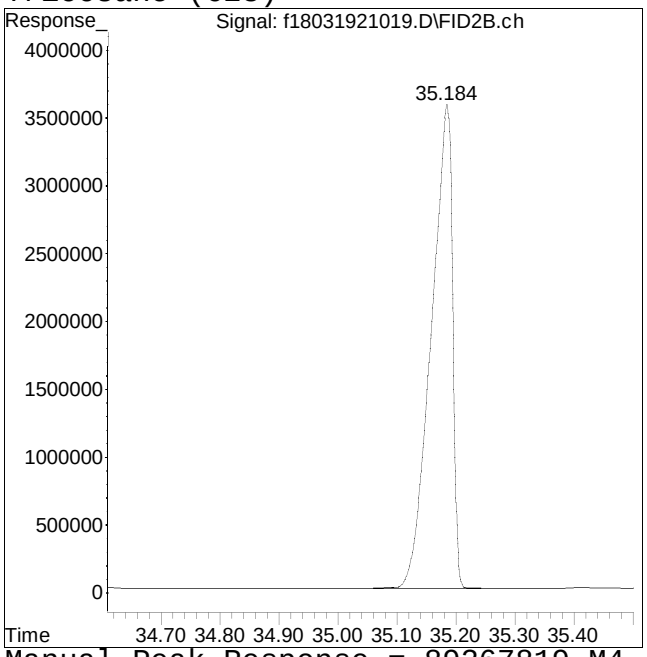
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 89265244



Manual Peak Response = 89267819 M4

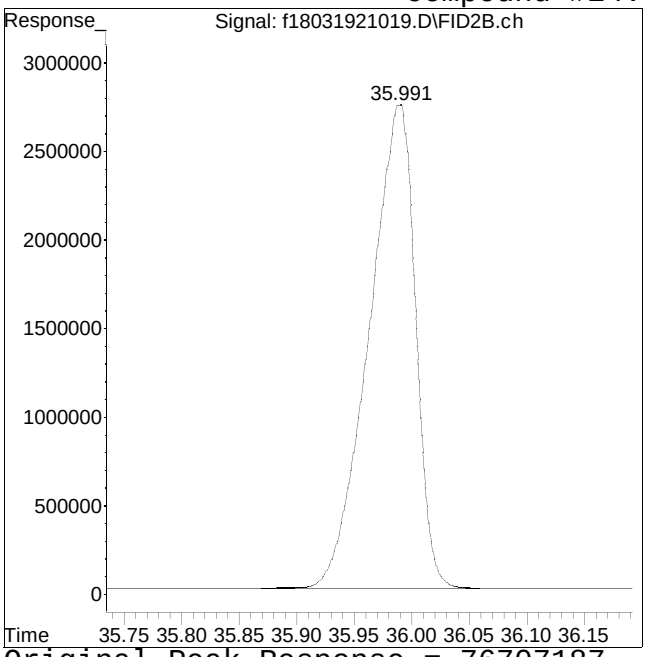
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

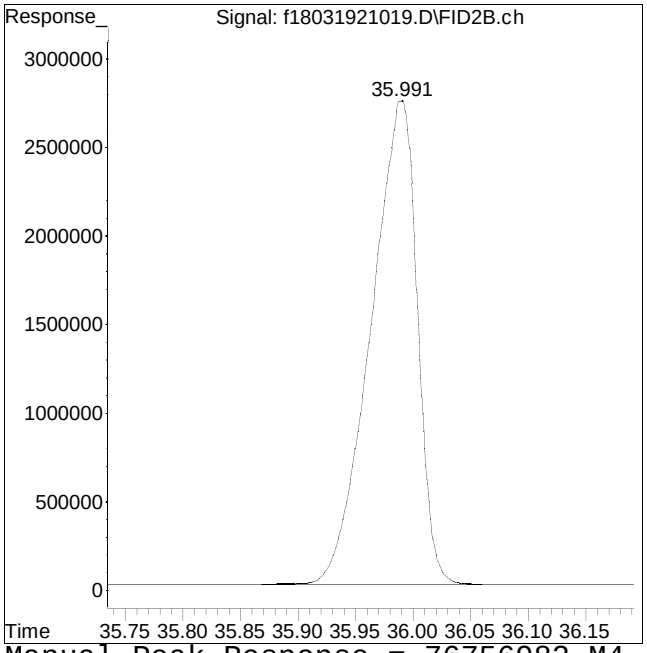
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #24: d50-Tetracosane



Original Peak Response = 76707187



Manual Peak Response = 76756982 M4

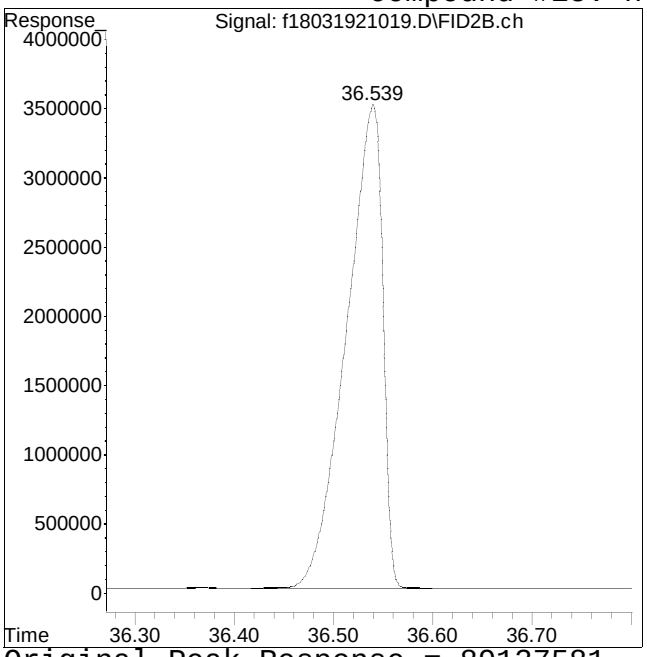
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

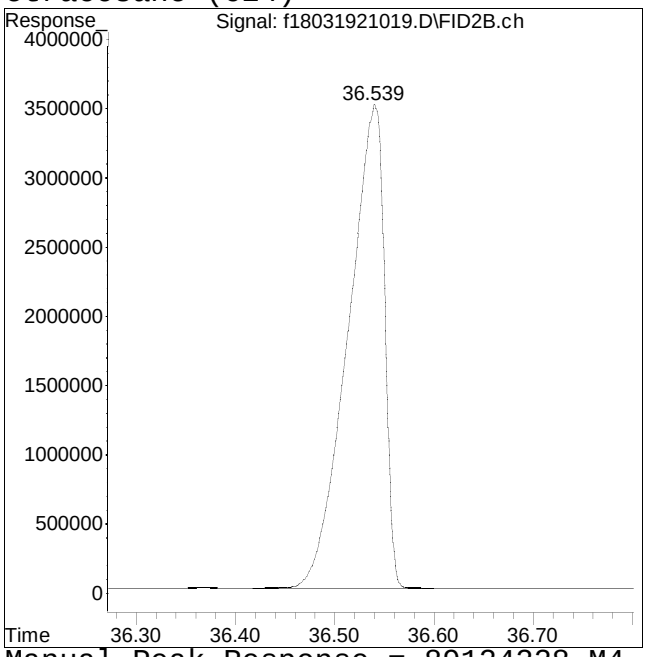
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 89137581



Manual Peak Response = 89124228 M4

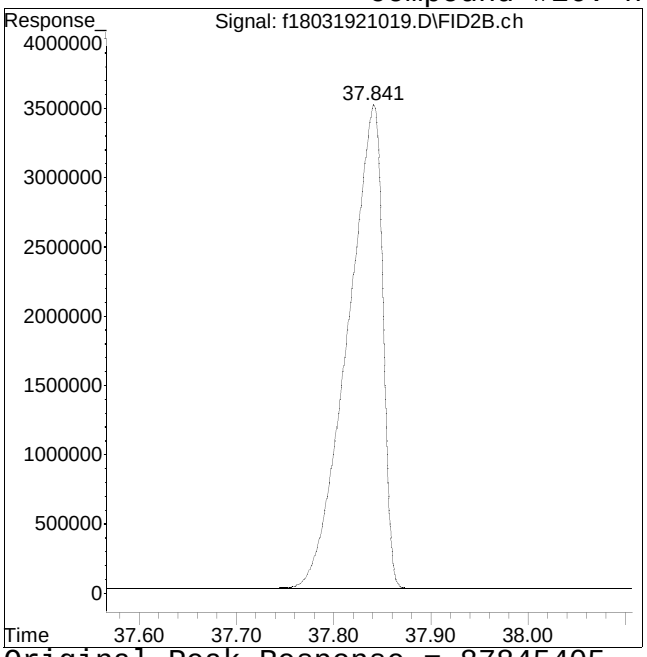
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

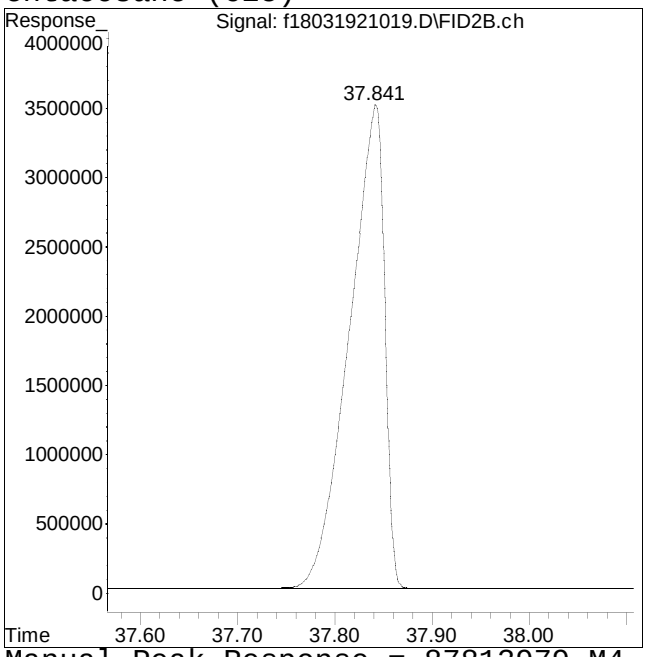
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 87845405



Manual Peak Response = 87813979 M4

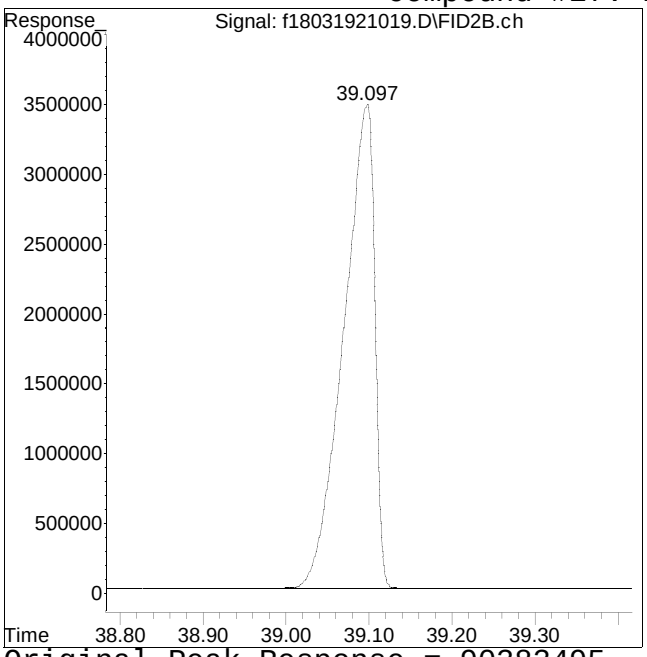
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

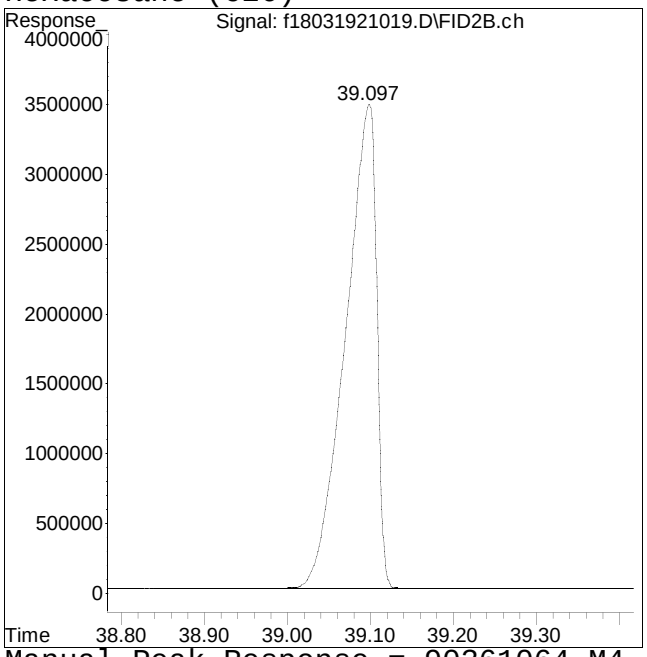
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 90383495



Manual Peak Response = 90361064 M4

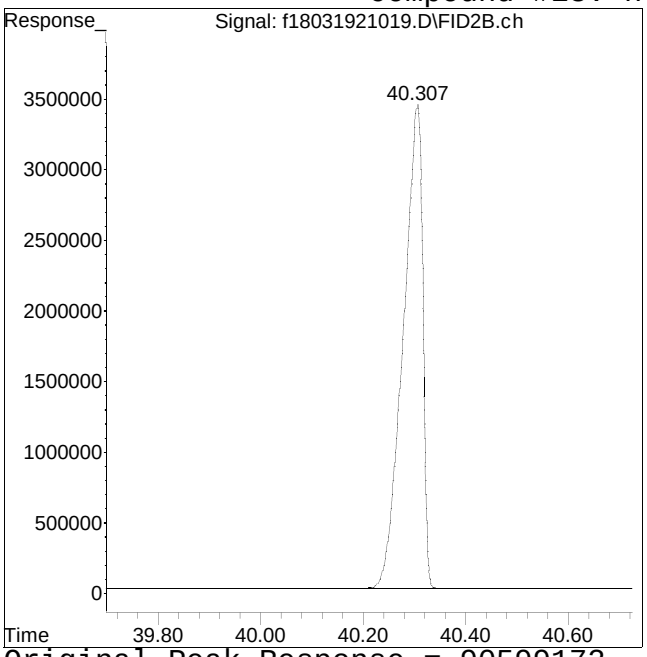
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

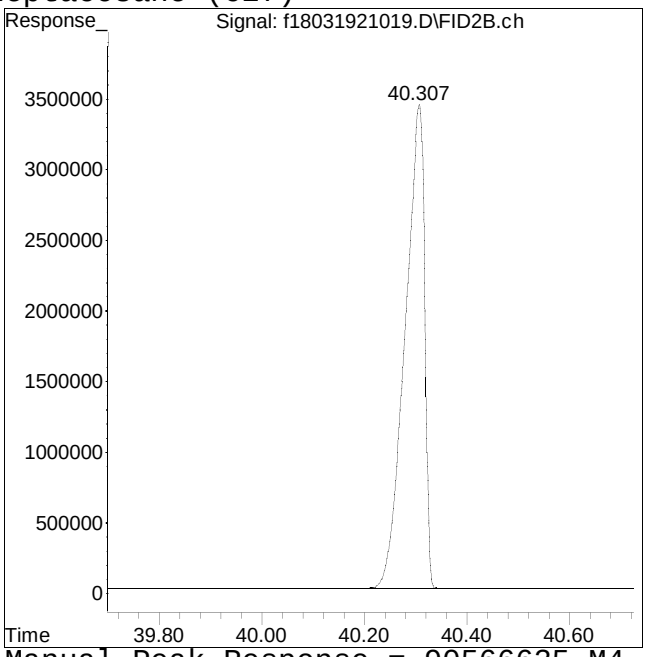
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 90599172



Manual Peak Response = 90566635 M4

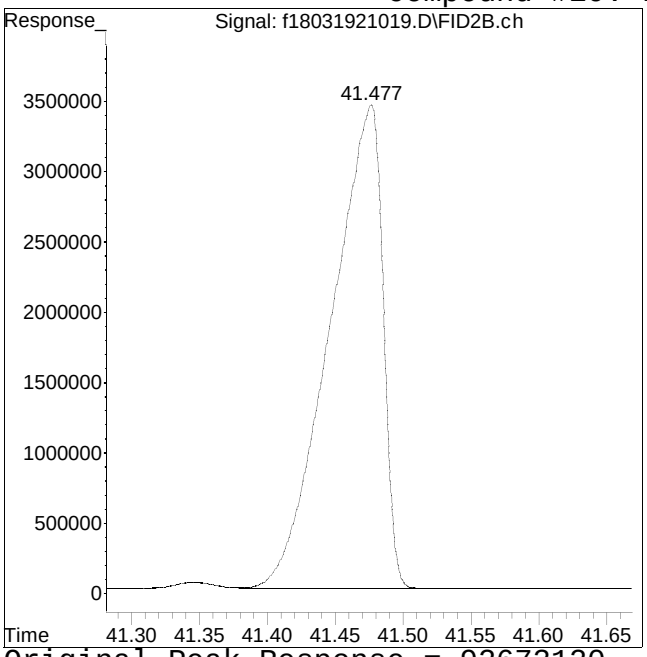
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

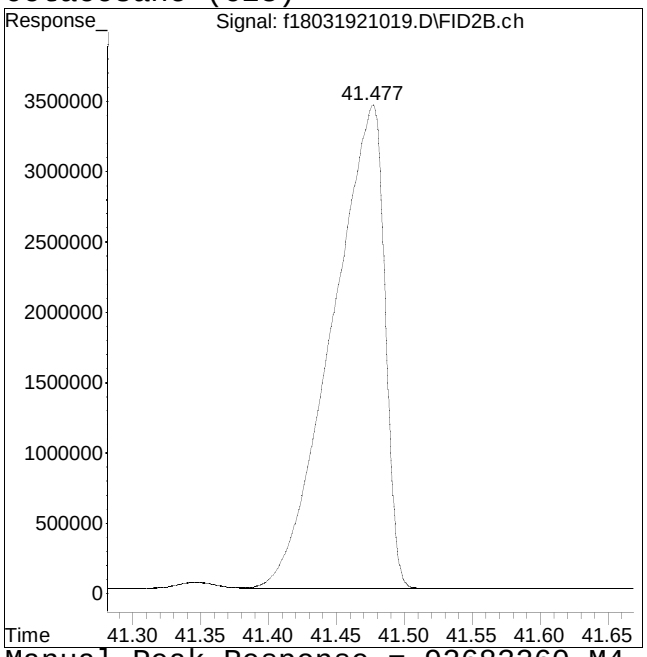
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 92673120



Manual Peak Response = 92683260 M4

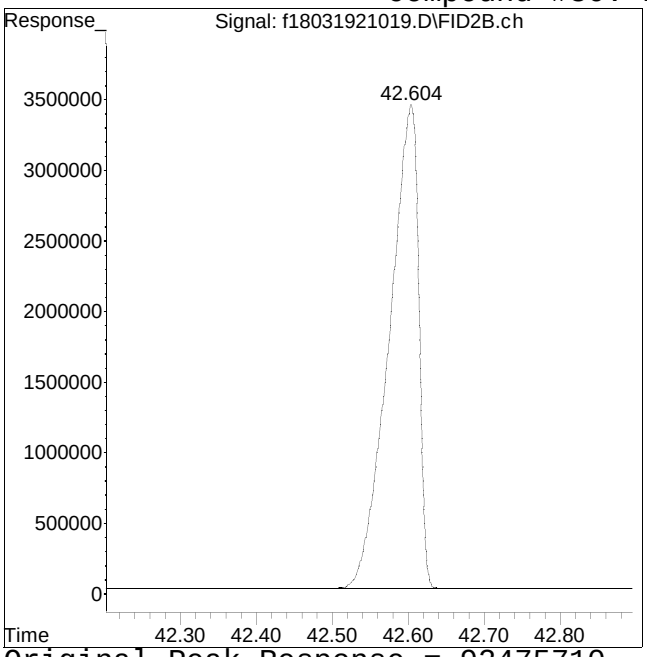
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

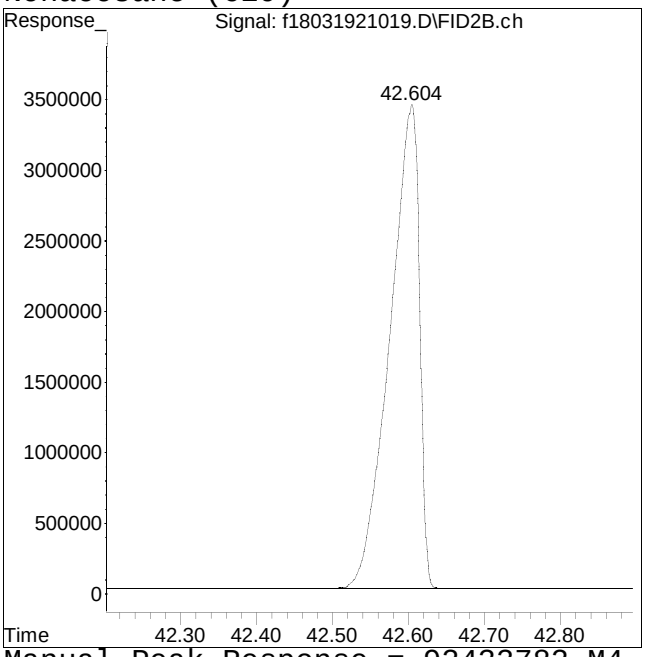
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 92475710



Manual Peak Response = 92433782 M4

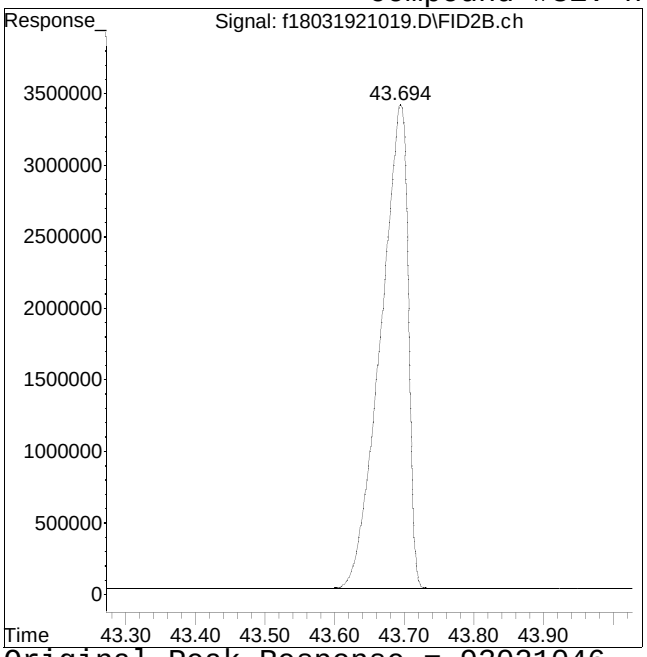
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

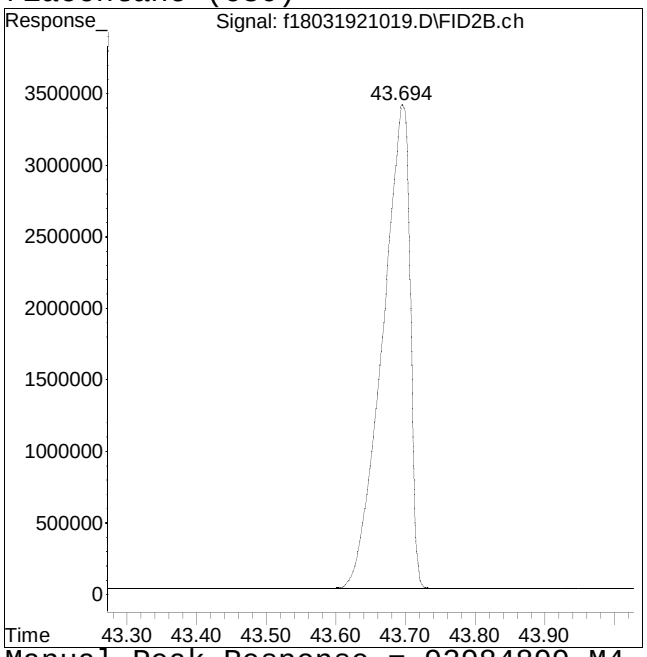
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 93021046



Manual Peak Response = 92984899 M4

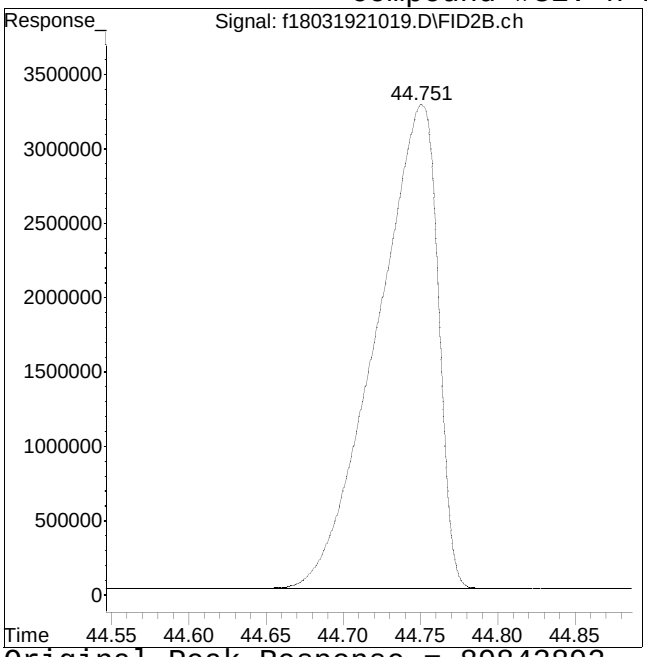
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

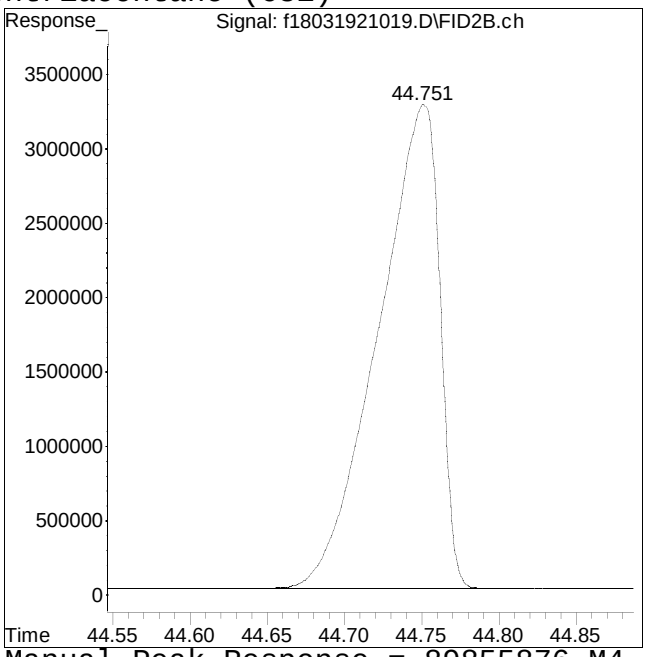
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 89843892



Manual Peak Response = 89855876 M4

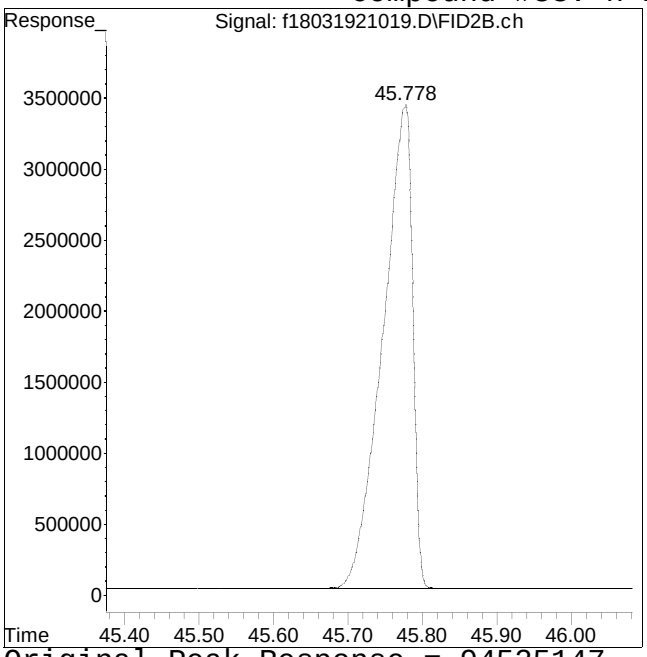
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

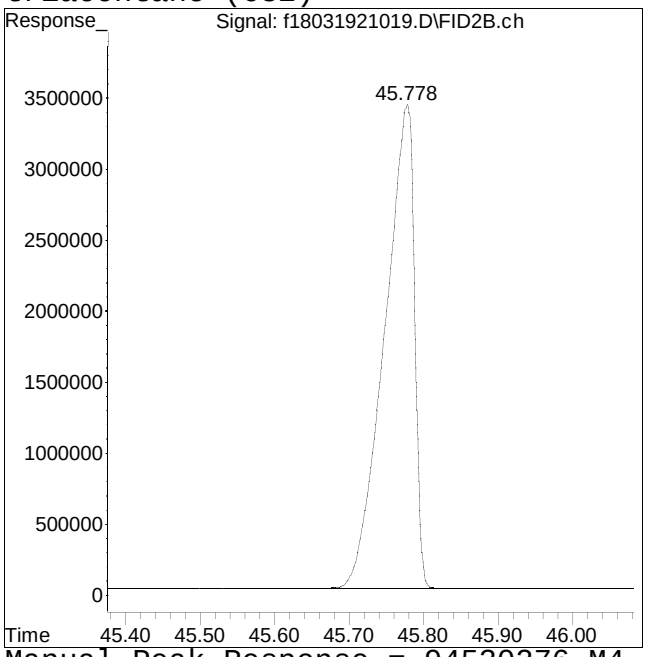
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 94525147



Manual Peak Response = 94530276 M4

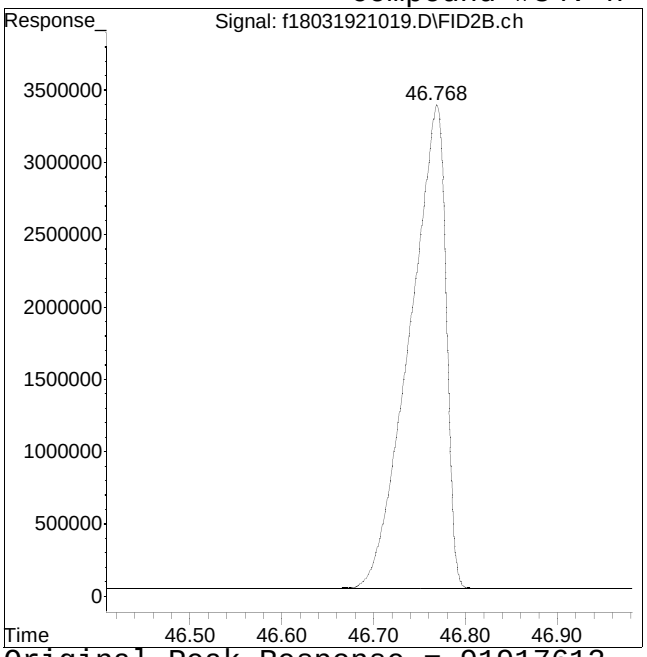
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

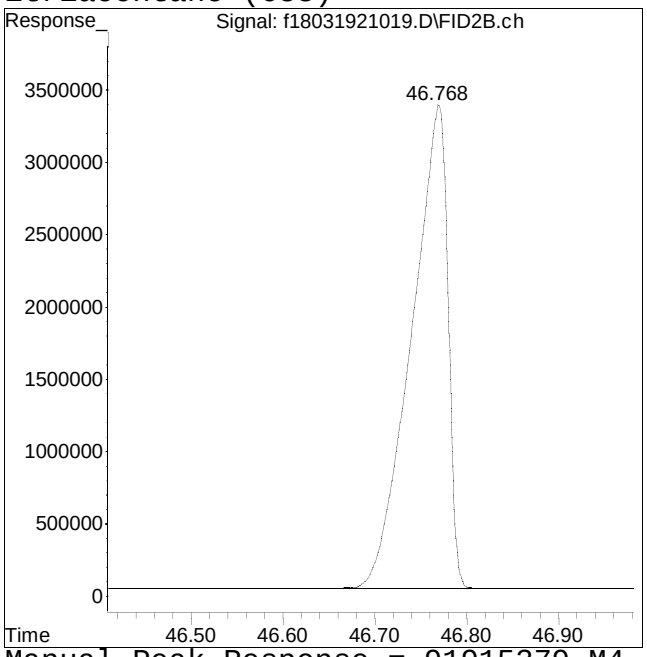
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 91917612



Manual Peak Response = 91915379 M4

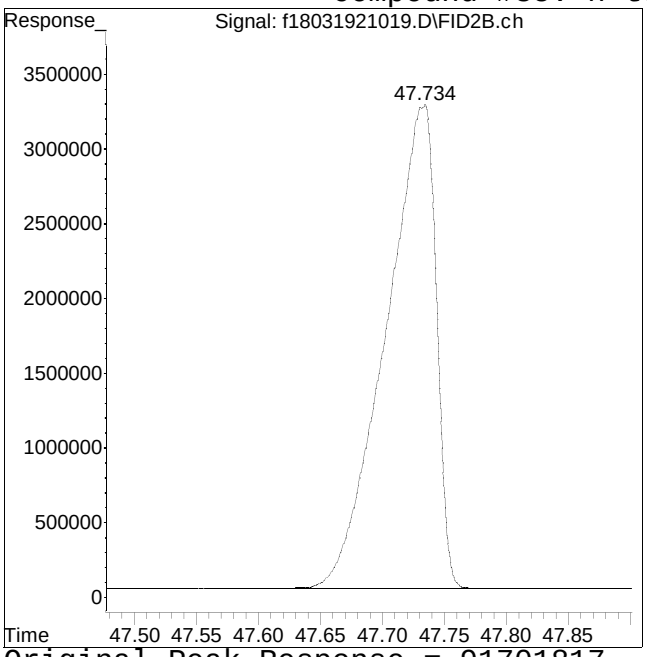
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

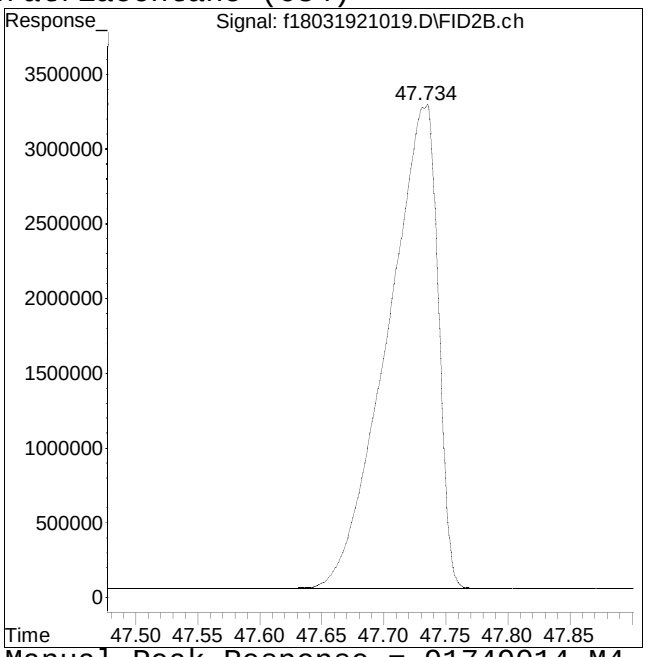
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 91701817



Manual Peak Response = 91749014 M4

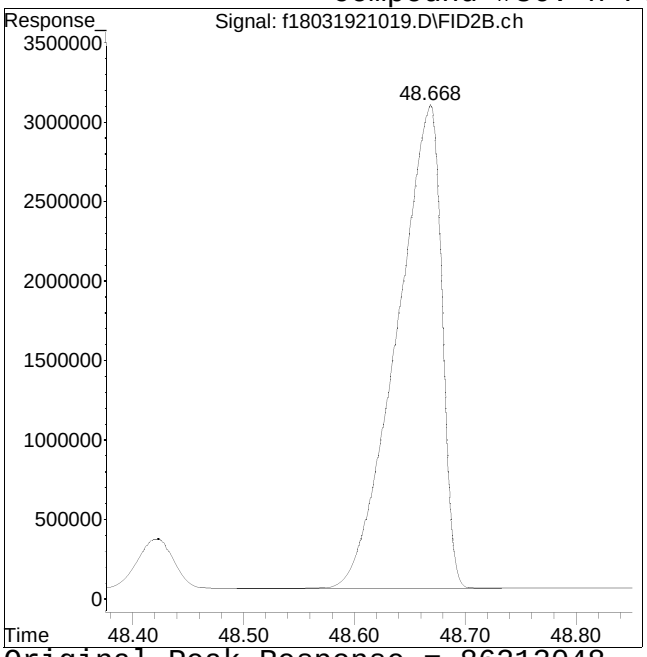
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

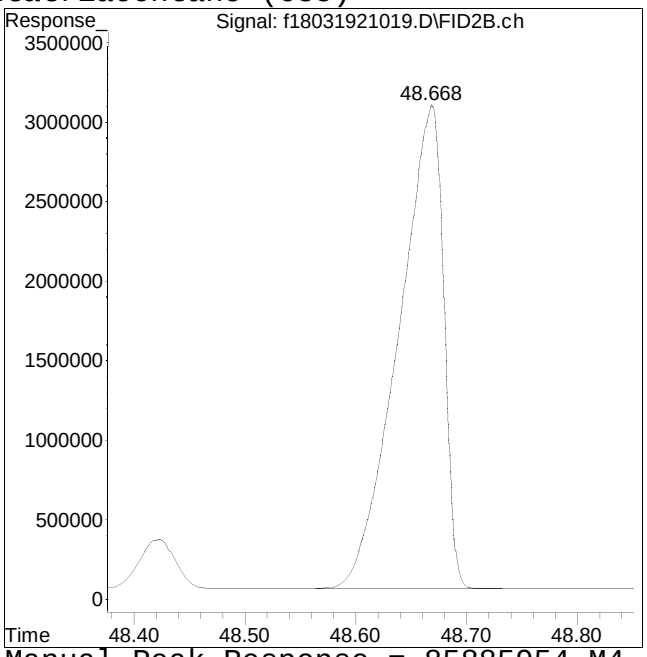
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 86213048



Manual Peak Response = 85885954 M4

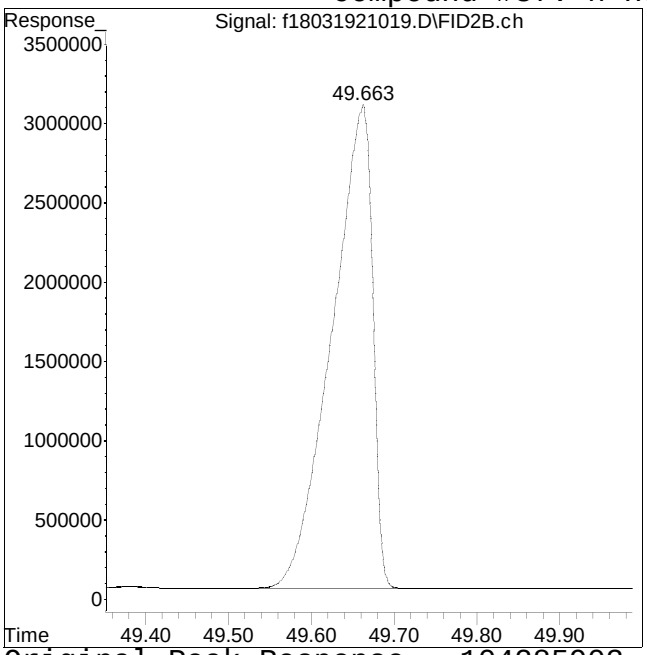
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

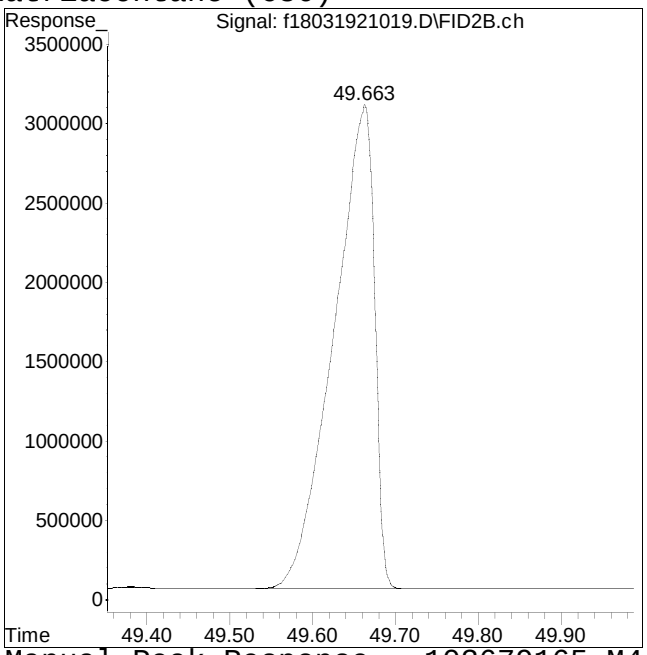
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 104285903



Manual Peak Response = 103679165 M4

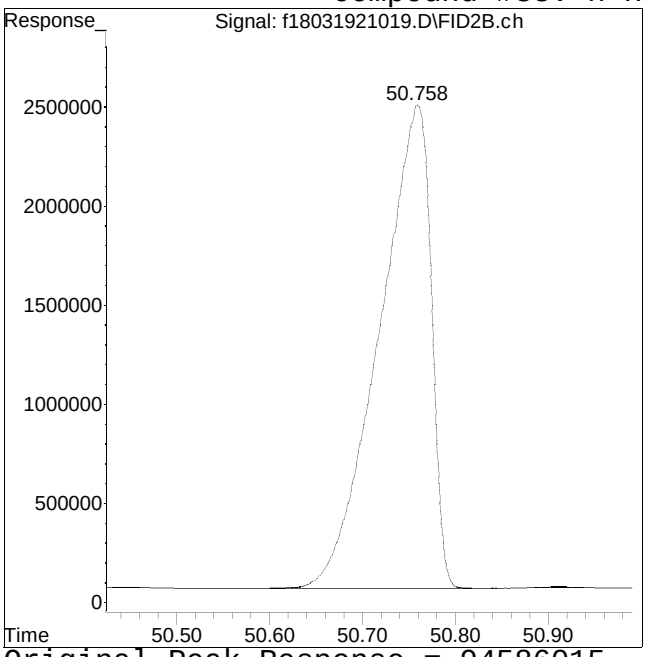
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

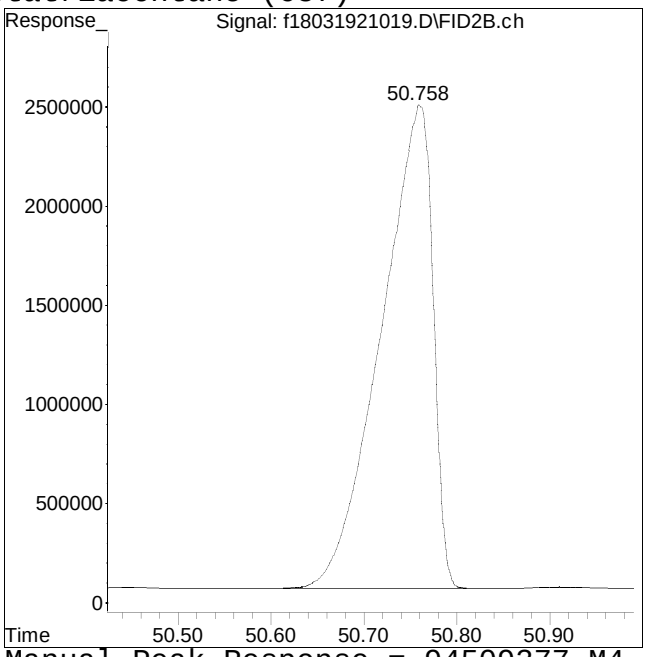
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 94586015



Manual Peak Response = 94509377 M4

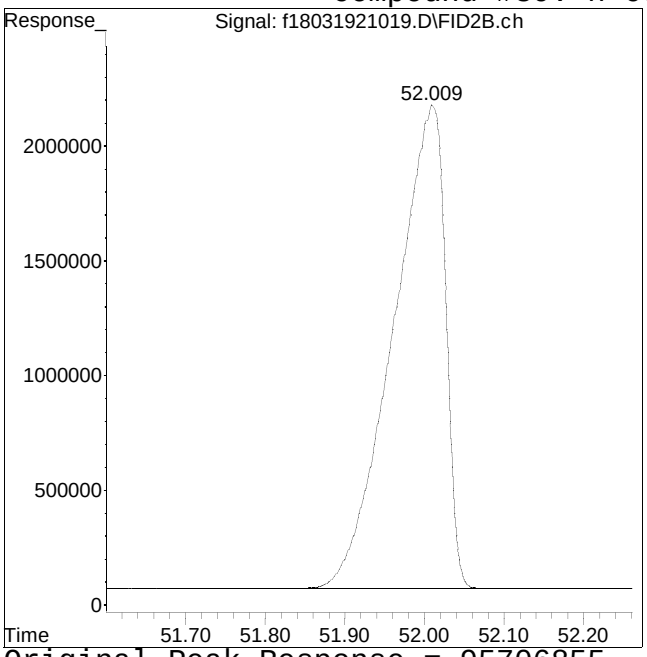
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

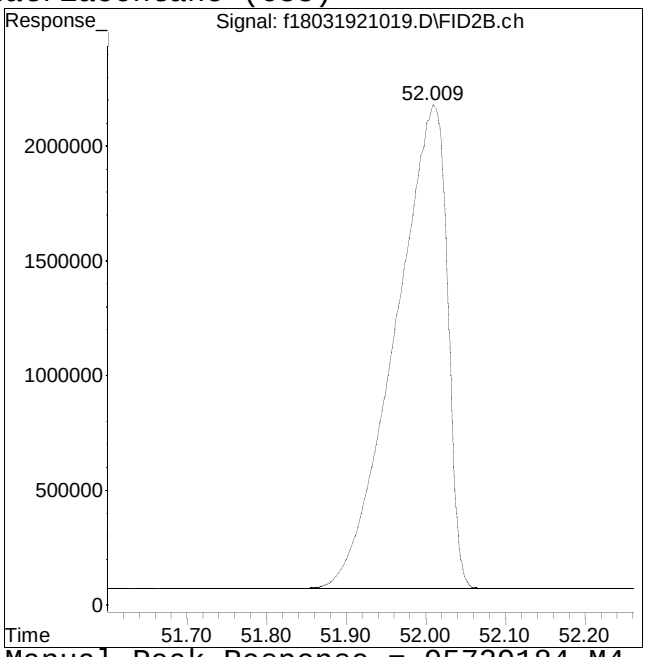
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 95706855



Manual Peak Response = 95729184 M4

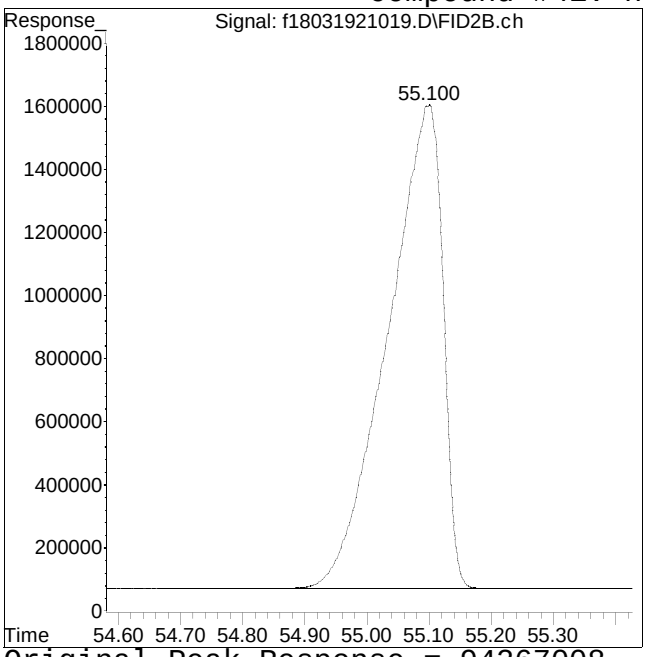
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

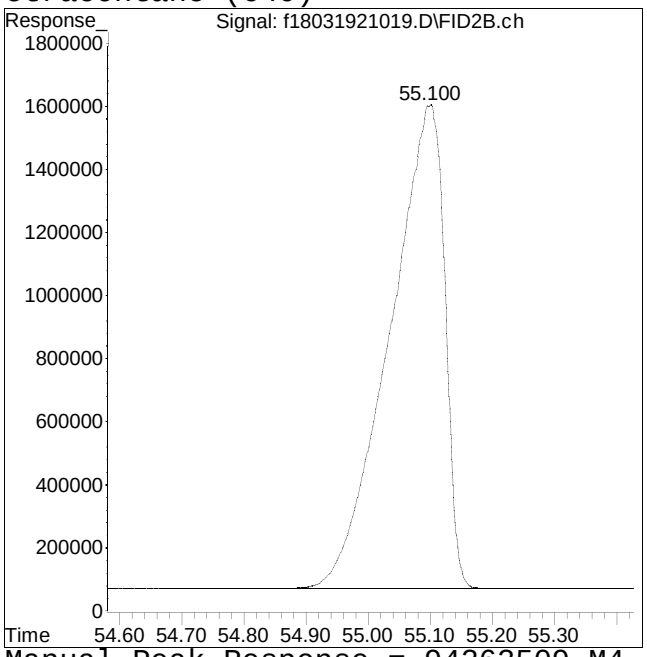
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921019.D
Date Inj'd : 3/20/2021 5:44 __
Sample : I1803192104R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:14 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 94267008



Manual Peak Response = 94263509 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921021.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 07:10
Operator : FID18:WR
Sample : I1803192105R
Misc : WG1479204,FRBC83
ALS Vial : 61 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:31:00 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:19:37 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.361	42433161	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.389	184882779	198.219 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 396.44%#	
24) s d50-Tetracosane	36.014	149145815	200.489 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 400.98%#	
Target Compounds			
2) t n-Octane (C8)	5.748	133439795	193.034 ug/mL M4
3) t n-Nonane (C9)	7.964	142611679	198.861 ug/mL M4
4) t n-Decane (C10)	10.444	153711735	204.325 ug/mL M4
5) t n-Undecane (C11)	12.951	155583840	207.151 ug/mL M4
6) t n-Dodecane (C12)	15.376	158208837	207.248 ug/mL M4
7) t n-Tridecane (C13)	17.681	158732095	206.546 ug/mL M4
9) t n-Tetradecane (C14)	19.862	163184688	206.584 ug/mL M4
11) t n-Pentadecane (C15)	21.927	164285633	205.672 ug/mL M4
12) t n-Hexadecane (C16)	23.882	163203985	205.324 ug/mL M4
14) t n-Heptadecane (C17)	25.741	166049332	206.175 ug/mL M4
15) t Pristane	25.858	168164570	202.631 ug/mL M4
16) t n-Octadecane (C18)	27.506	167402049	203.764 ug/mL M4
17) t Phytane	27.675	154486737	201.439 ug/mL M4
18) t n-Nonadecane (C19)	29.191	167010877	202.802 ug/mL M4
20) t n-Eicosane (C20)	30.794	168068413	202.361 ug/mL M4
21) t n-Heneicosane (C21)	32.328	169298801	202.698 ug/mL M4
22) t n-Docosane (C22)	33.798	169912302	203.167 ug/mL M4
23) t n-Tricosane (C23)	35.209	170482239	203.105 ug/mL M4
25) t n-Tetracosane (C24)	36.567	170550296	203.942 ug/mL M4
26) t n-Pentacosane (C25)	37.868	167996186	204.699 ug/mL M4
27) t n-Hexacosane (C26)	39.124	172738229	205.259 ug/mL M4
28) t n-Heptacosane (C27)	40.335	172865556	205.321 ug/mL M4
29) t n-Octacosane (C28)	41.503	176805497	205.734 ug/mL M4
30) t n-Nonacosane (C29)	42.632	176268306	206.532 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921021.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 07:10
Operator : FID18:WR
Sample : I1803192105R
Misc : WG1479204,FRBC83
ALS Vial : 61 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:31:00 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:19:37 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

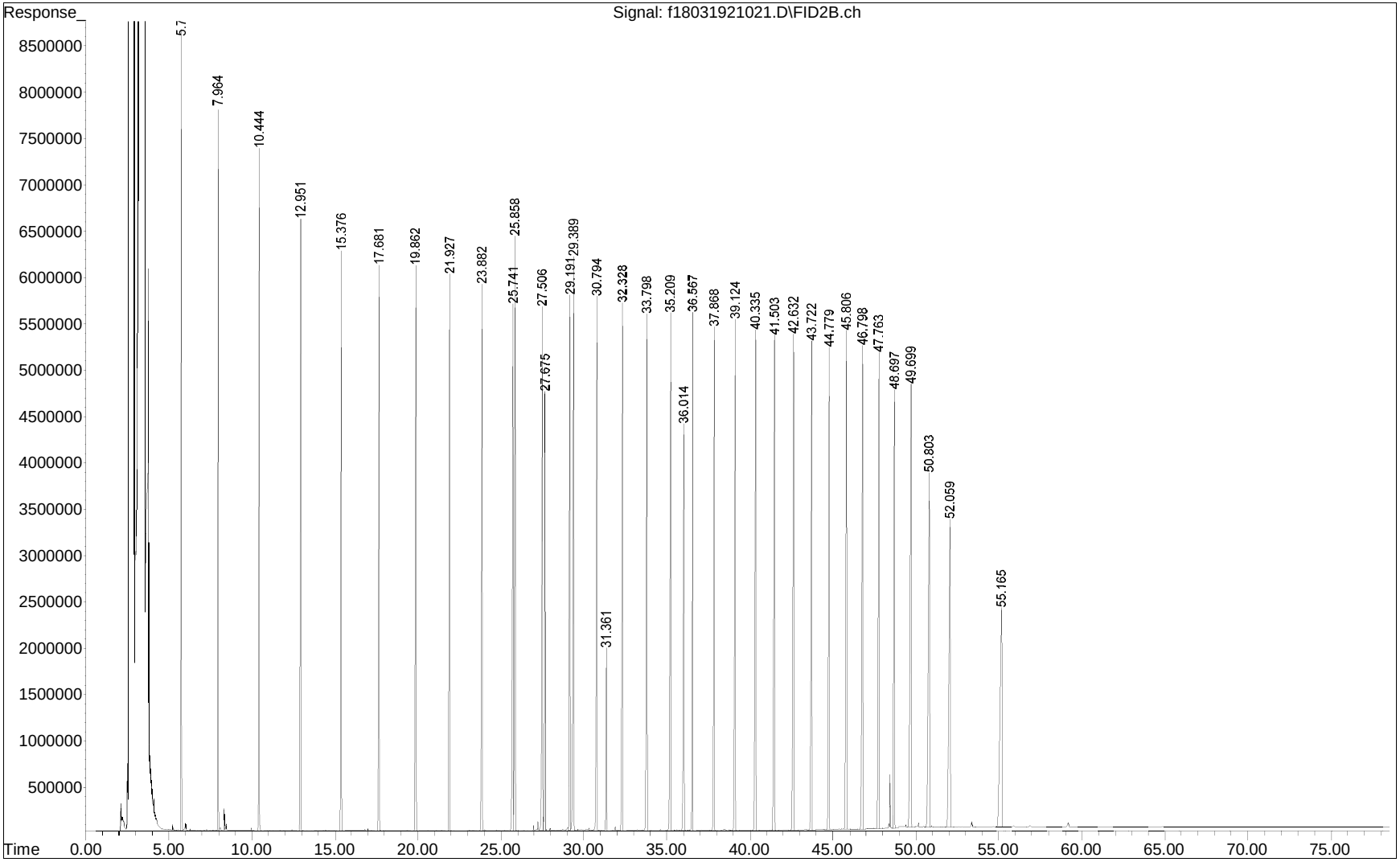
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.722	177343150	207.344 ug/mL M4
32) t	n-Hentriacontane (C31)	44.779	171336916	207.820 ug/mL M4
33) t	n-Dotriacontane (C32)	45.806	180068942	208.316 ug/mL M4
34) t	n-Tritriacontane (C33)	46.798	175463080	209.173 ug/mL M4
35) t	n-tetratriacontane (C34)	47.763	175175846	210.013 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.697	164224191	210.430 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.699	198476373	210.264 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.803	181053979	210.520 ug/mL M4
39) t	n-Octatriacontane (C38)	52.059	183230485	210.290 ug/mL M4
41) t	n-Tetracontane (C40)	55.165	180072983	206.283 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\f18031921021.D
Operator : FID18:WR
Acquired : 20 Mar 2021 07:10 using AcqMethod FID18.M
Sample Name: I1803192105R
Instrument: FID 18
Misc Info : WG1479204,FRBC83
Vial Number: 61
CurrentMeth: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M

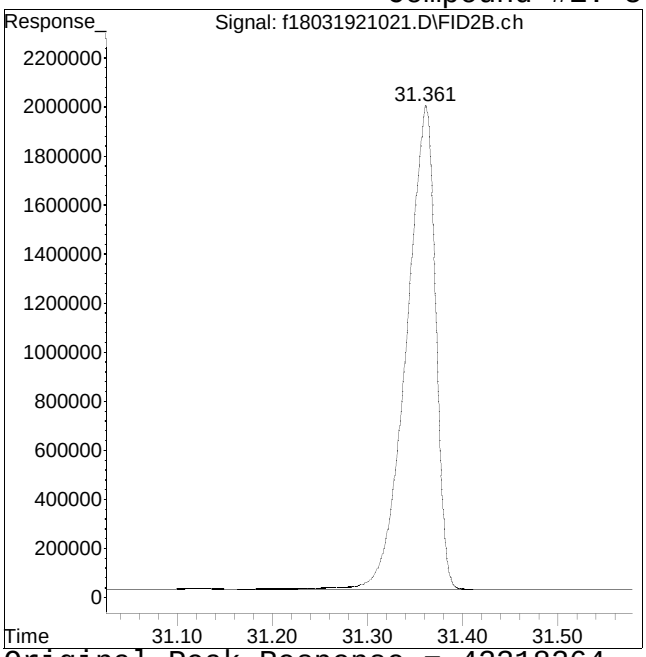


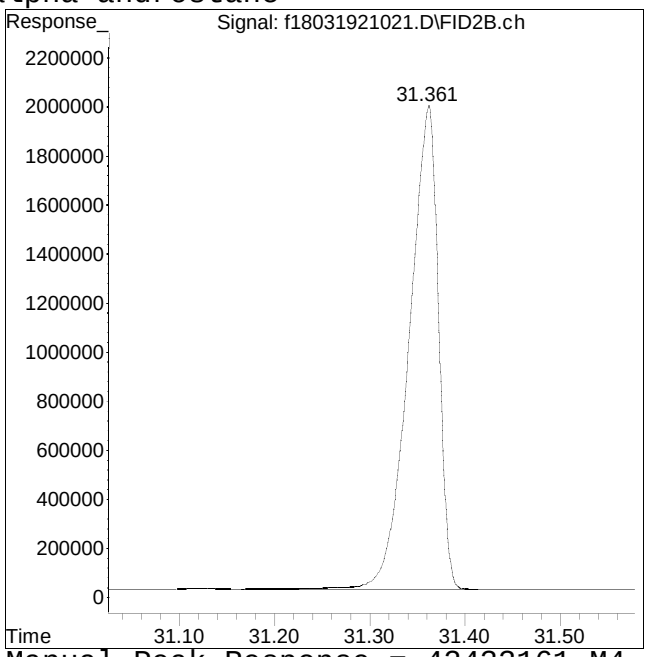
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #1: 5-alpha-androstane





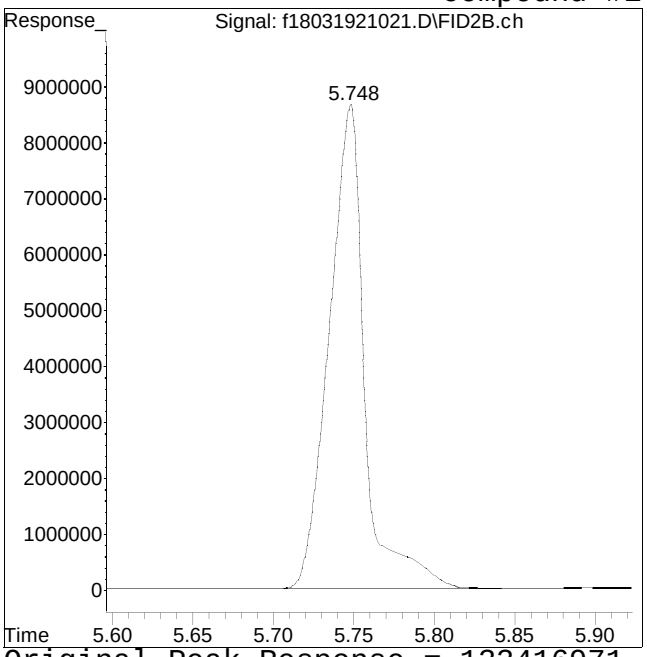
Original Peak Response = 42318264 Manual Peak Response = 42433161 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

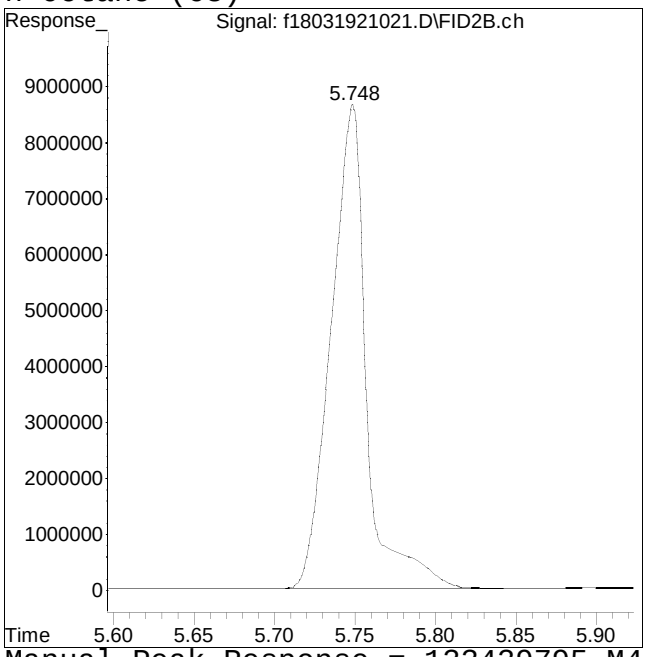
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #2: n-Octane (C8)



Original Peak Response = 133416971



Manual Peak Response = 133439795 M4

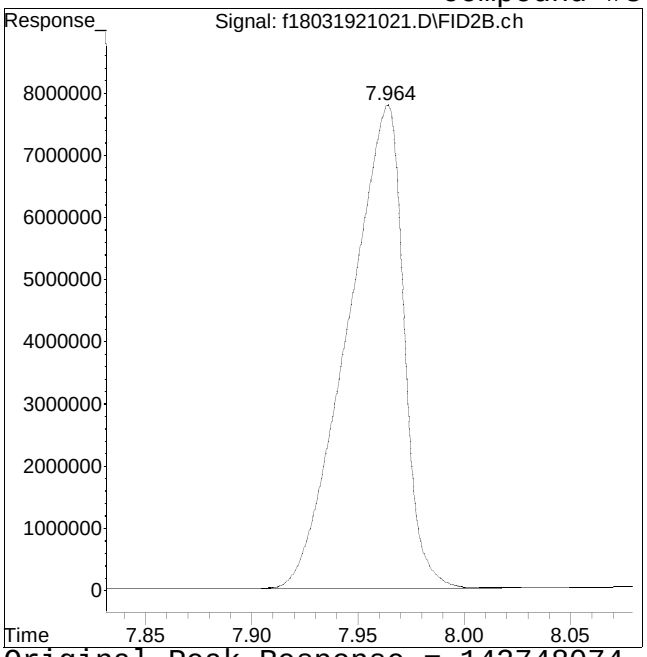
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

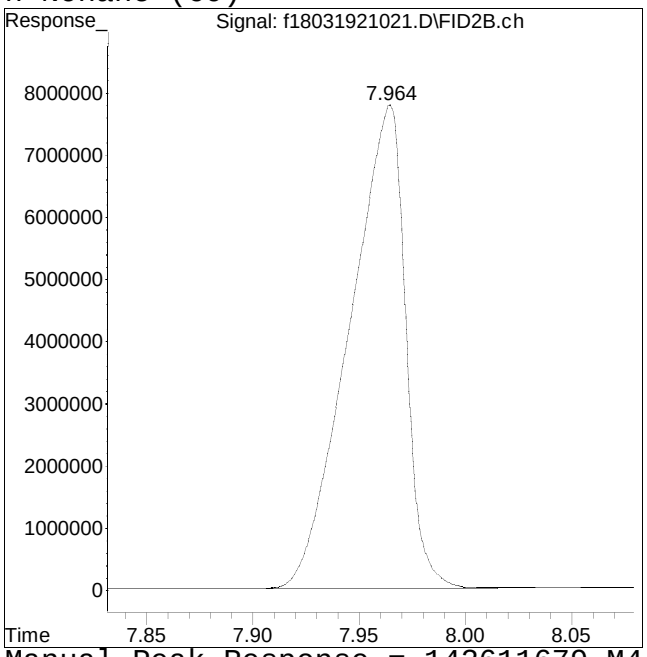
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #3: n-Nonane (C9)



Original Peak Response = 142748074



Manual Peak Response = 142611679 M4

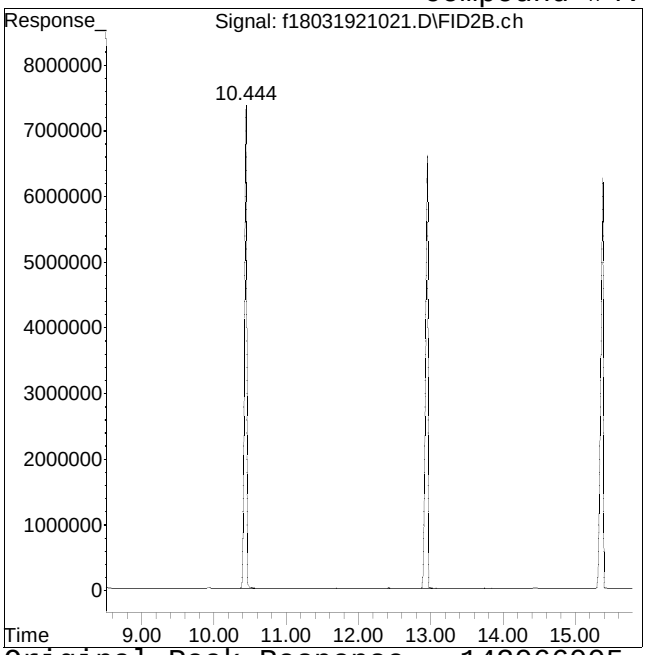
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

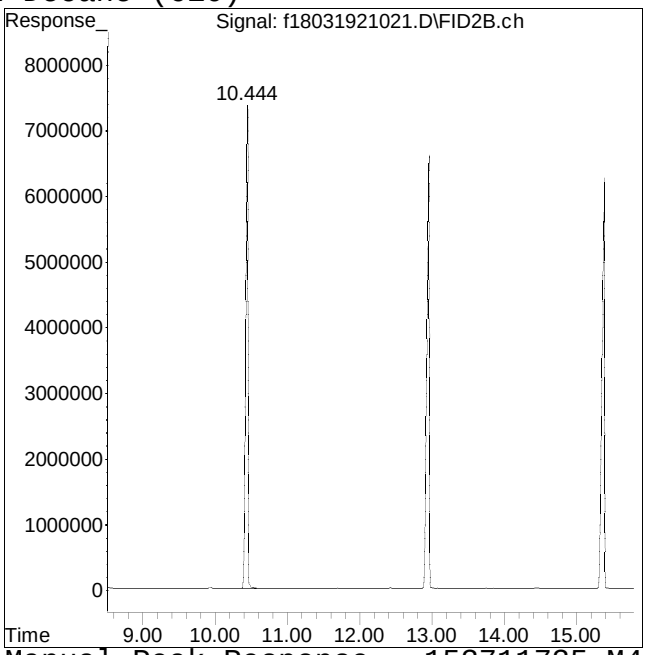
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #4: n-Decane (C10)



Original Peak Response = 142066005



Manual Peak Response = 153711735 M4

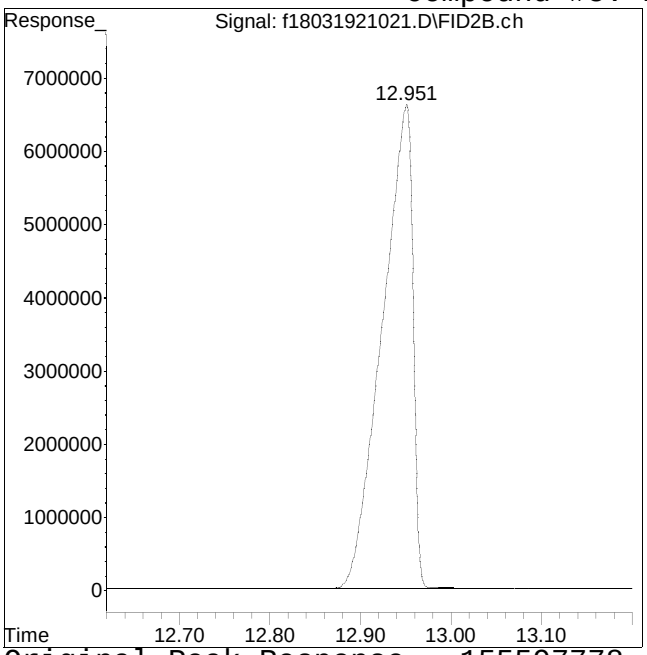
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

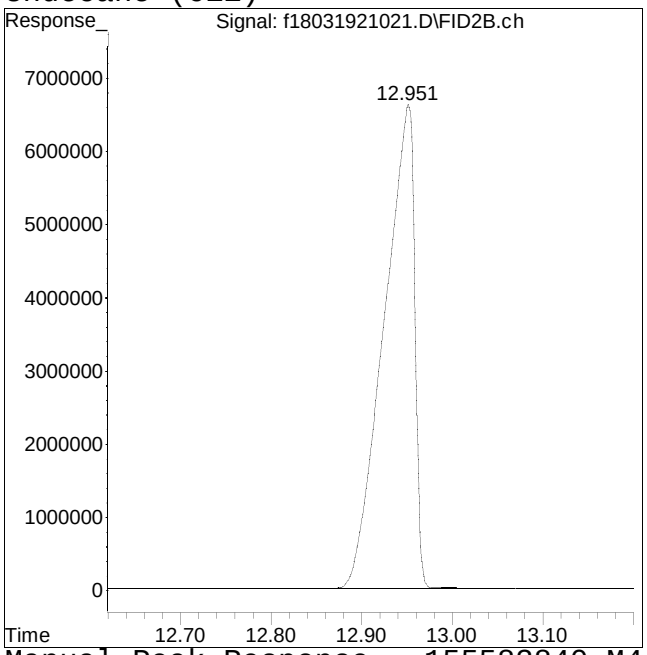
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #5: n-Undecane (C11)



Original Peak Response = 155597778



Manual Peak Response = 155583840 M4

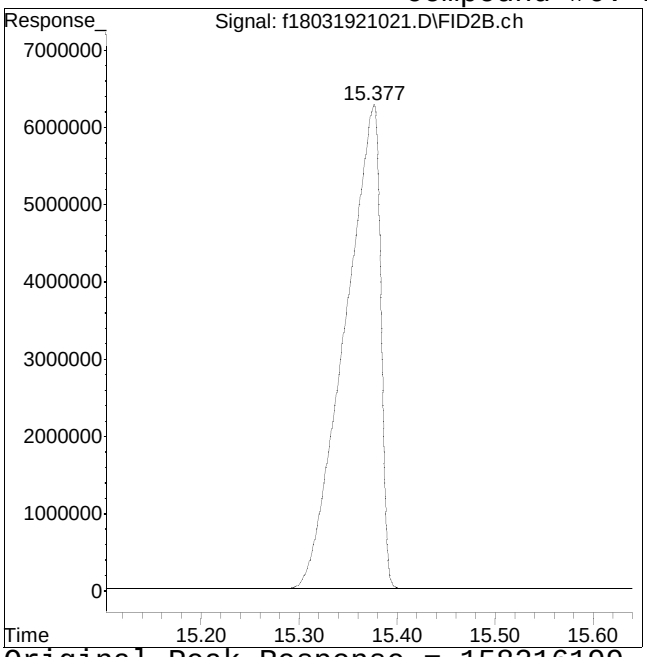
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

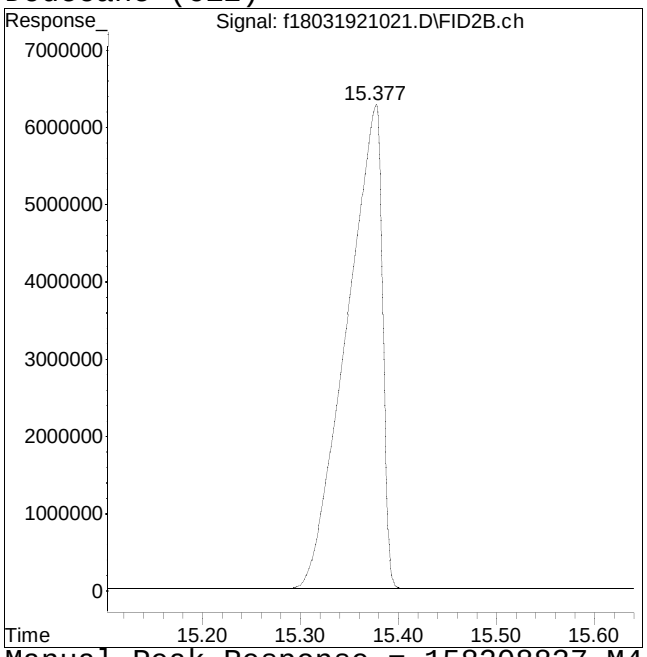
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 158216199



Manual Peak Response = 158208837 M4

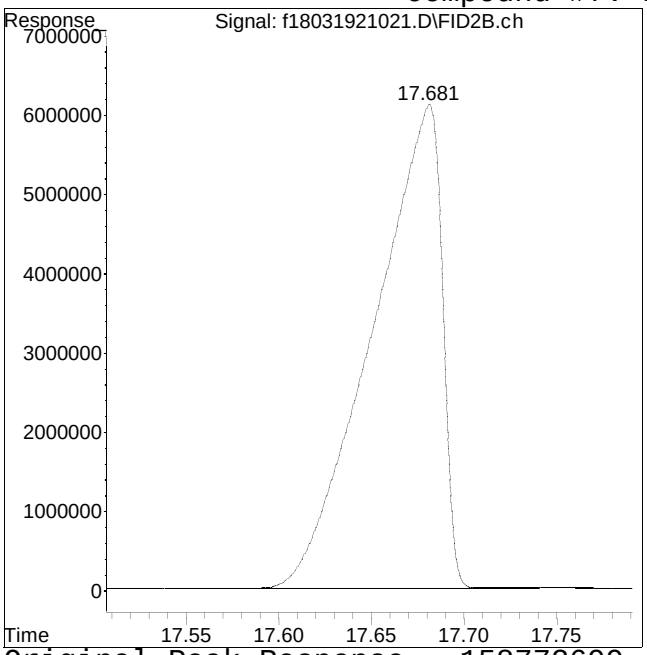
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

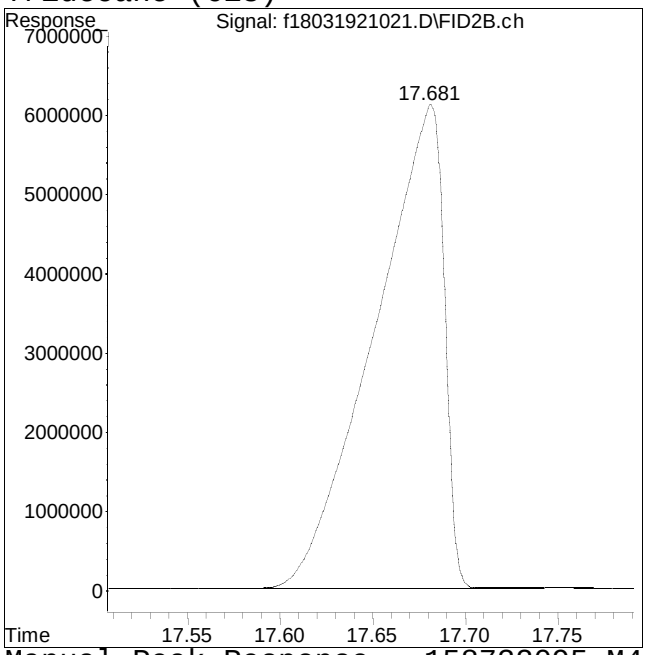
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 158772699



Manual Peak Response = 158732095 M4

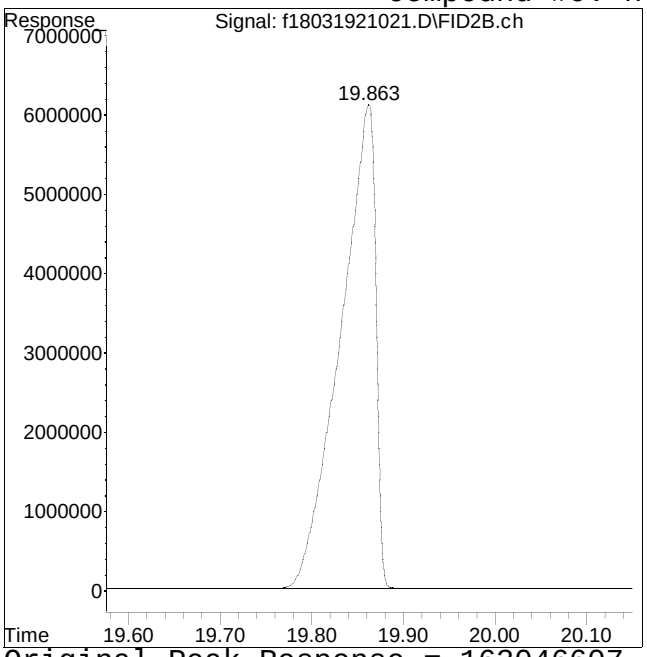
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

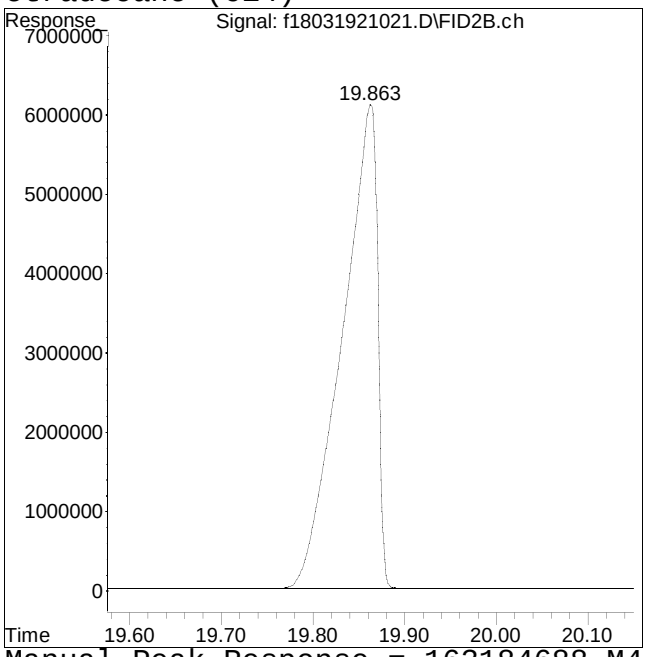
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 163046607



Manual Peak Response = 163184688 M4

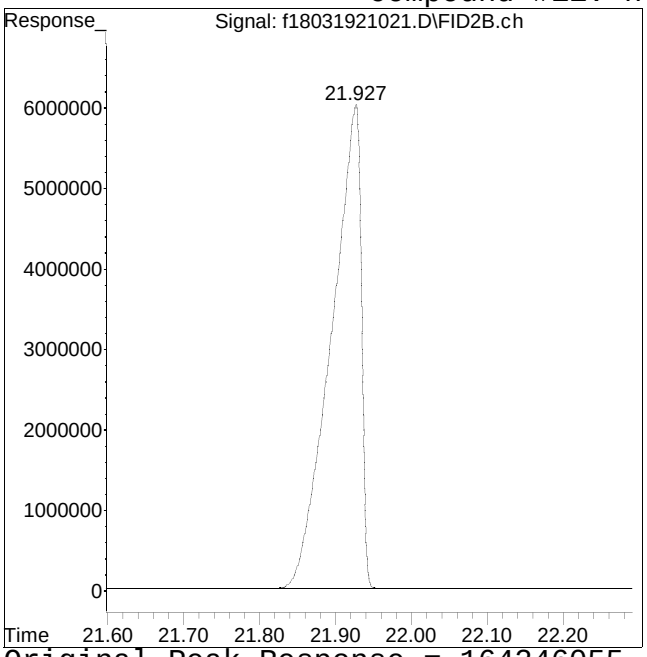
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

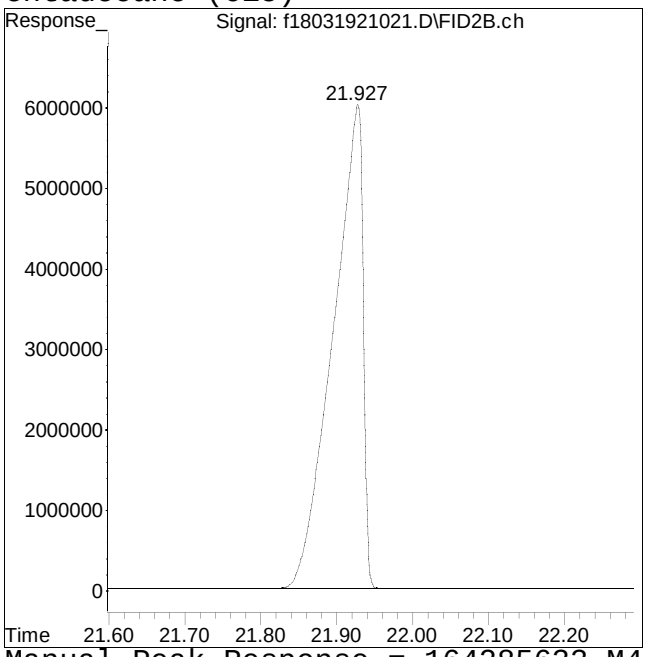
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 164246055



Manual Peak Response = 164285633 M4

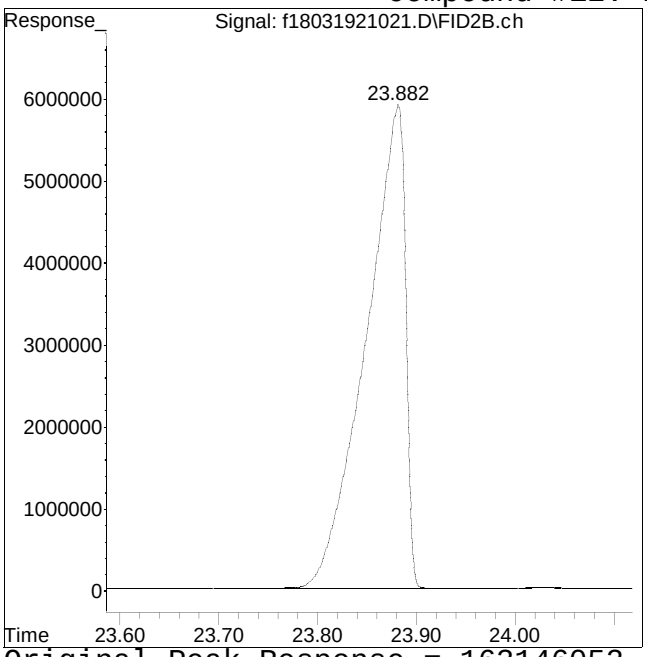
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

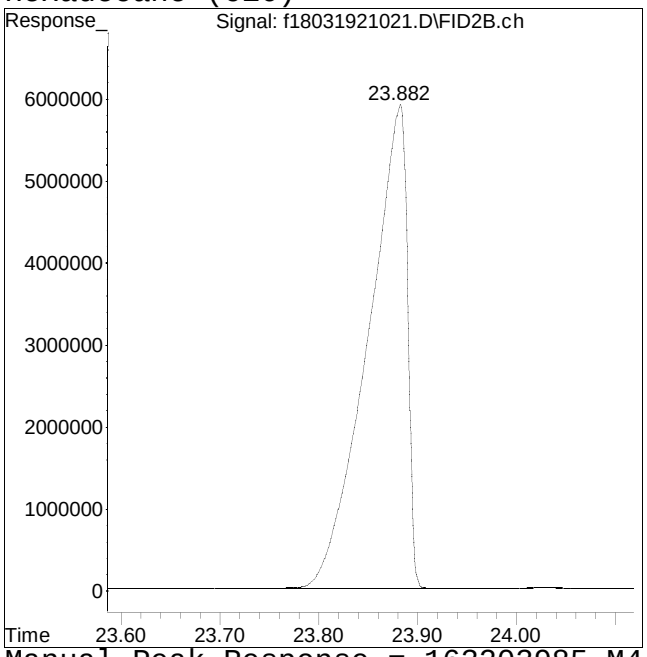
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 163146052



Manual Peak Response = 163203985 M4

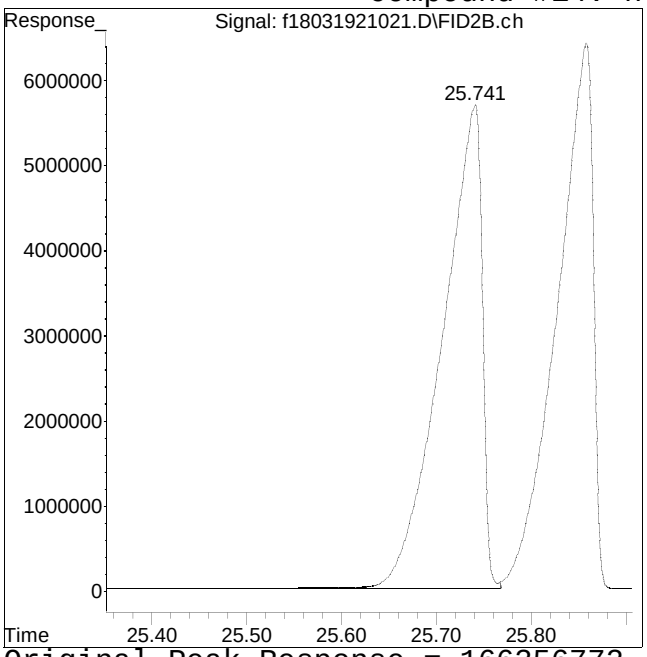
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

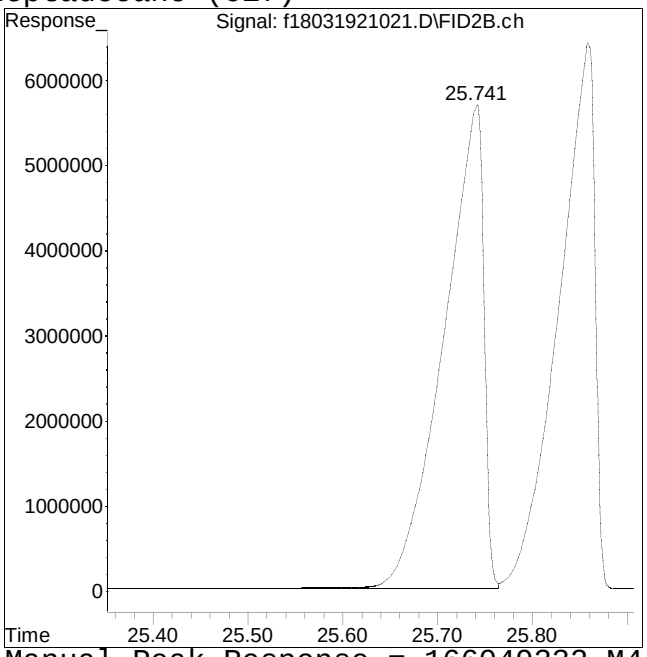
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 166356772



Manual Peak Response = 166049332 M4

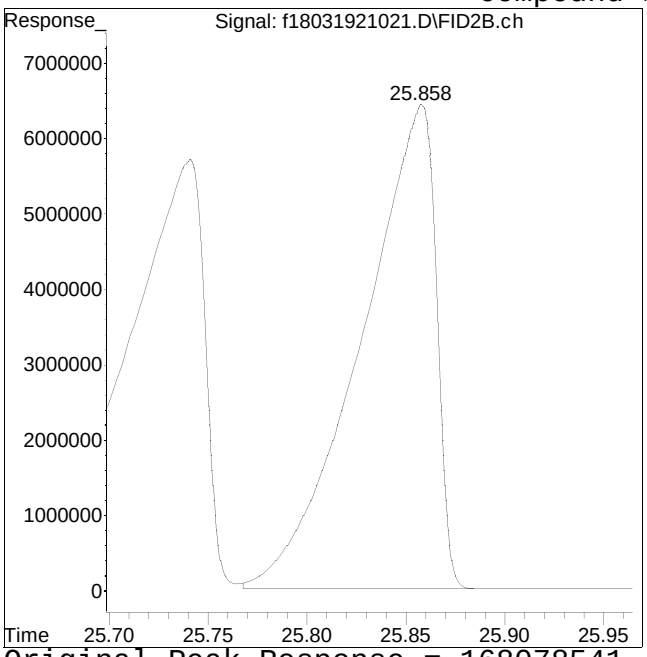
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

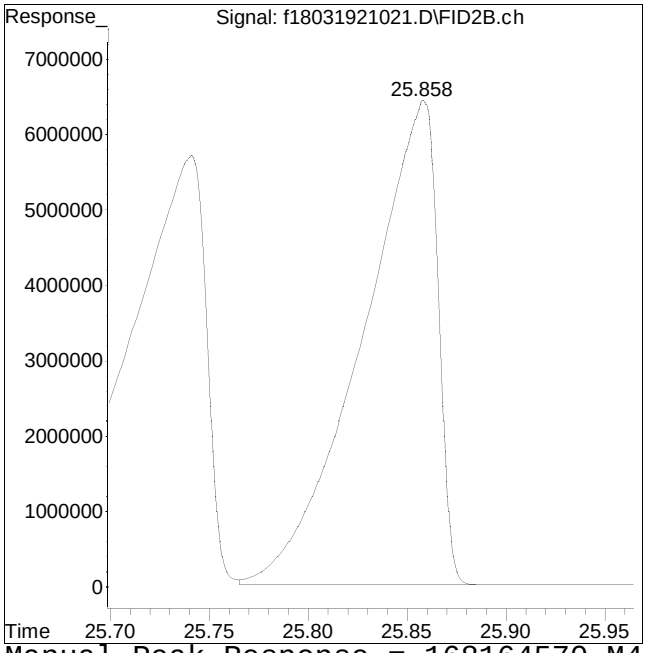
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #15: Pristane



Original Peak Response = 168078541



Manual Peak Response = 168164570 M4

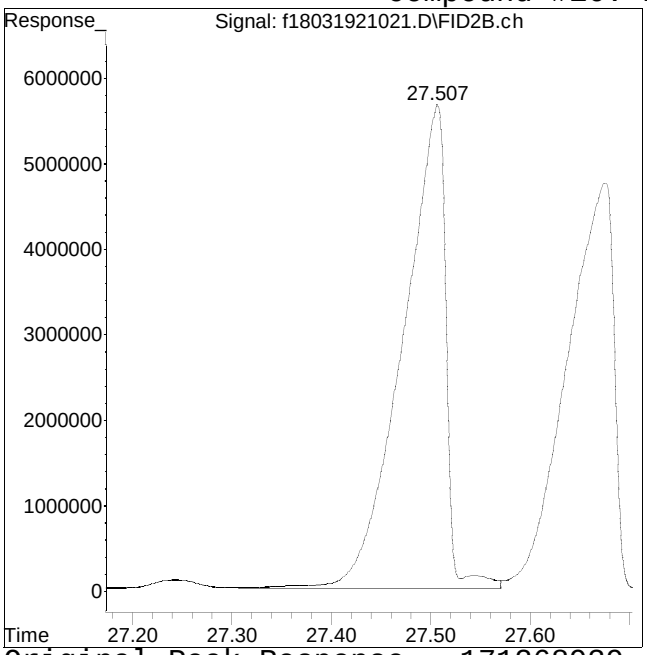
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

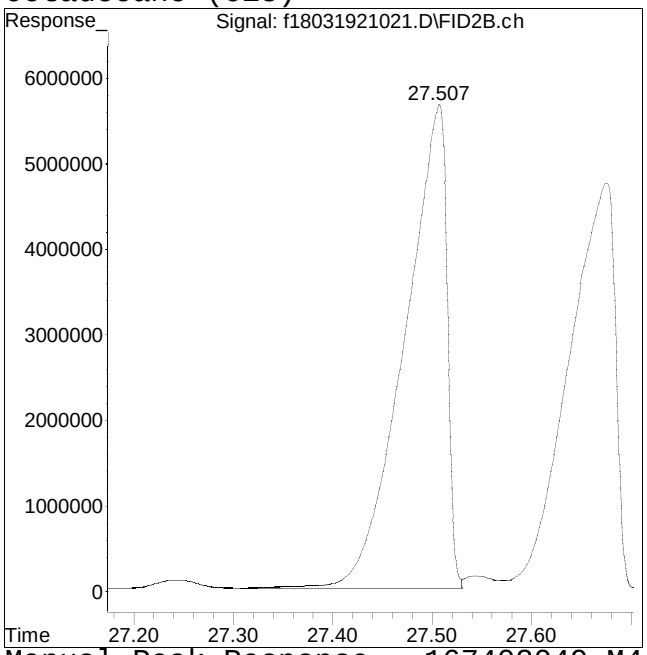
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 171268939



Manual Peak Response = 167402049 M4

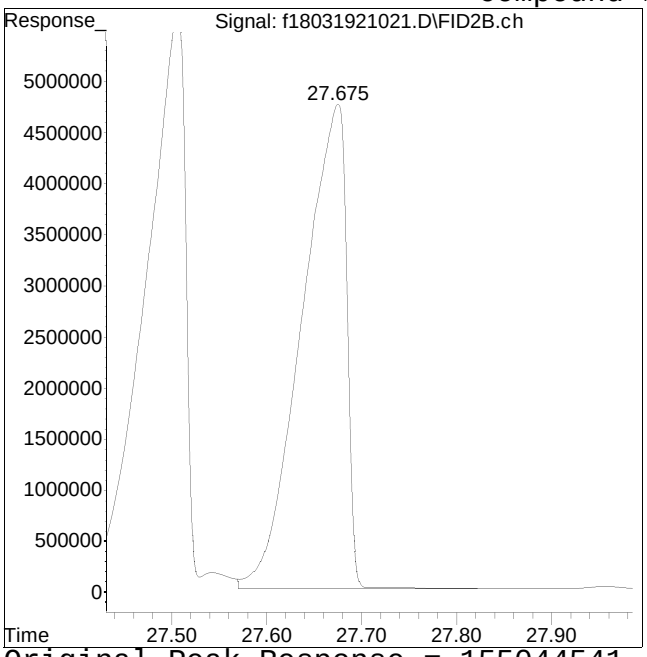
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

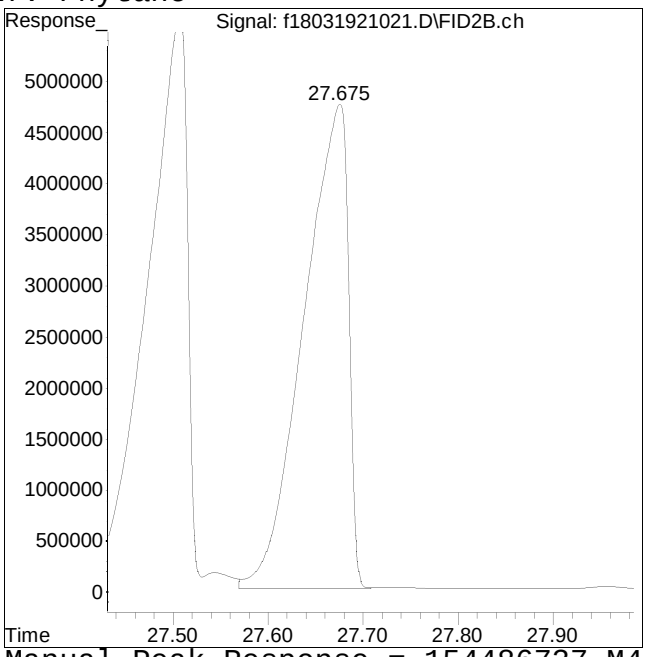
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #17: Phytane



Original Peak Response = 155044541



Manual Peak Response = 154486737 M4

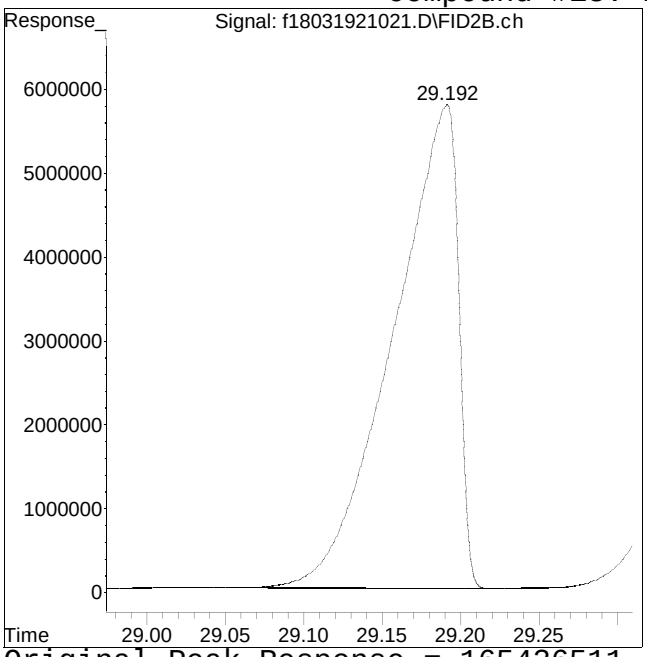
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

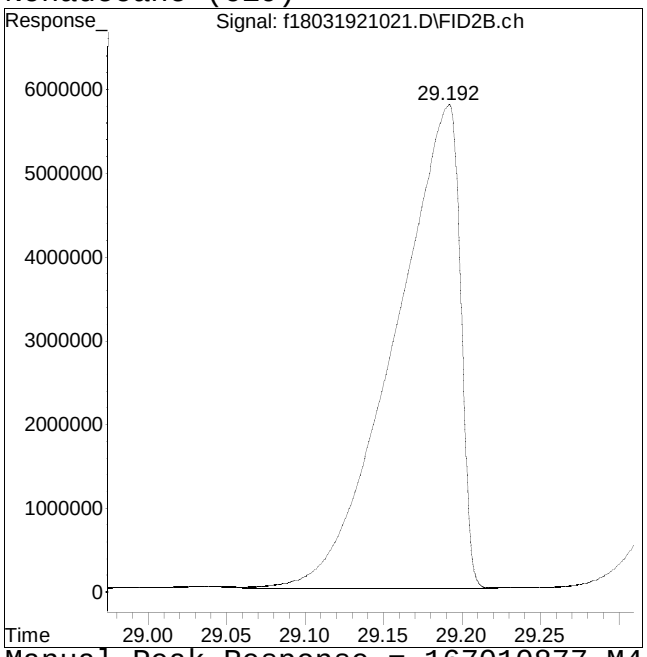
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 165436511



Manual Peak Response = 167010877 M4

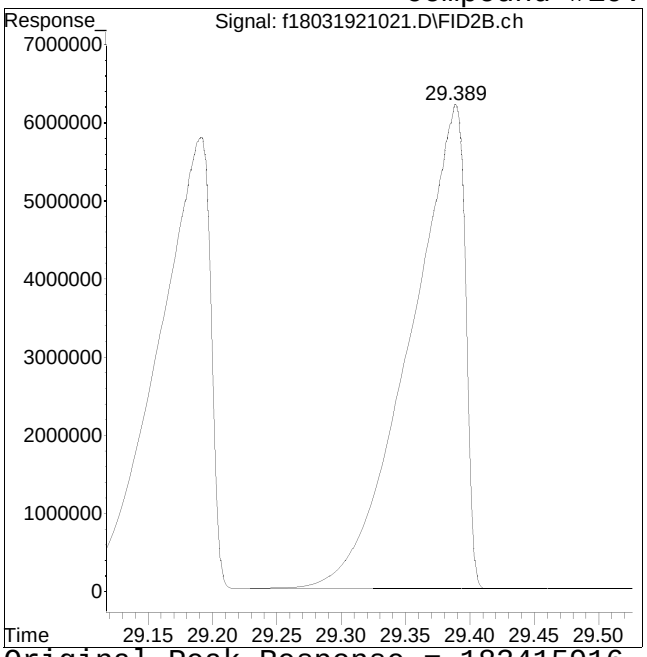
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

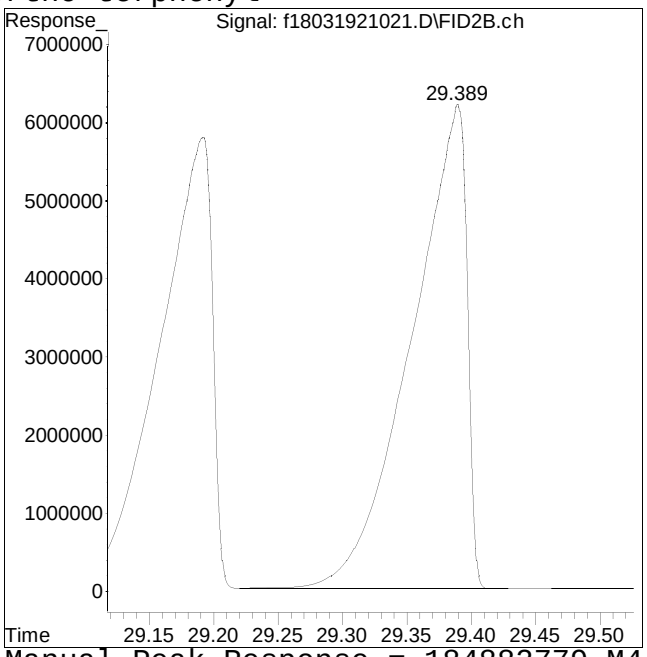
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #19: ortho-terphenyl



Original Peak Response = 183415916



Manual Peak Response = 184882779 M4

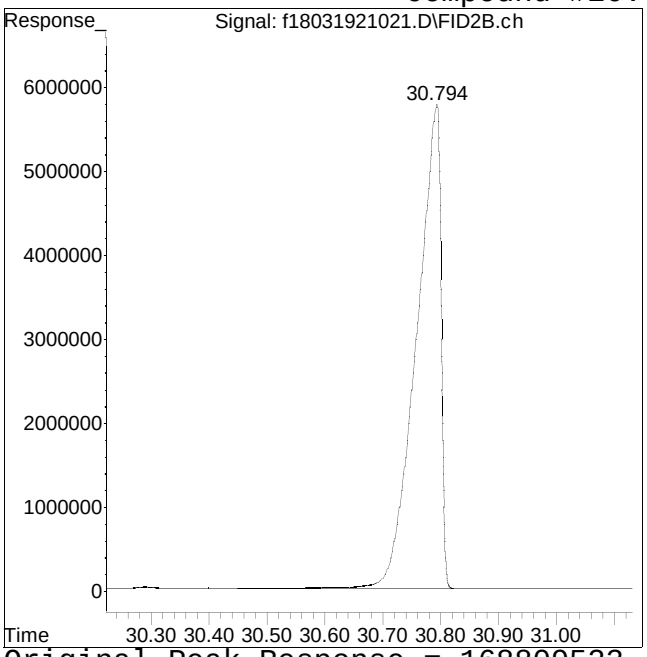
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

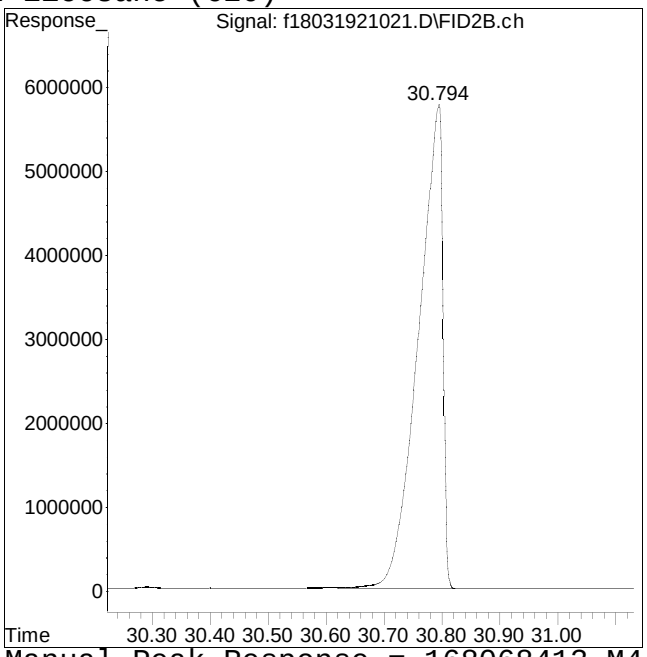
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 168809523



Manual Peak Response = 168068413 M4

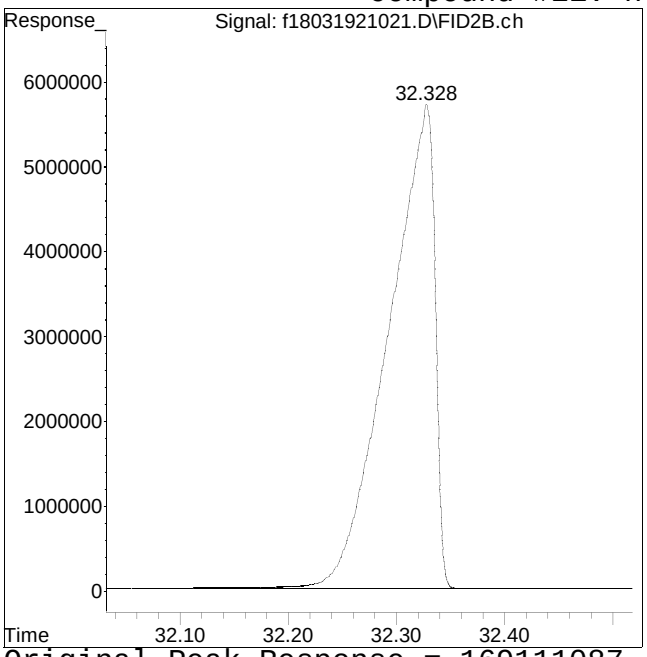
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

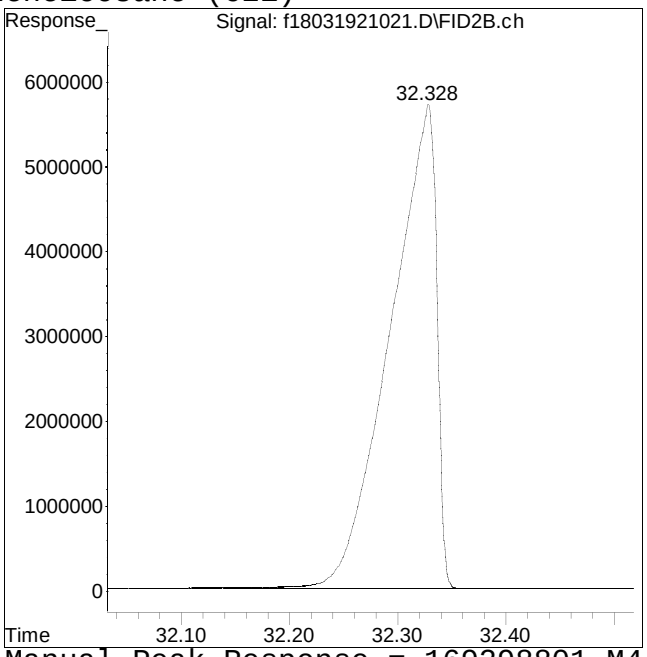
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 169111087



Manual Peak Response = 169298801 M4

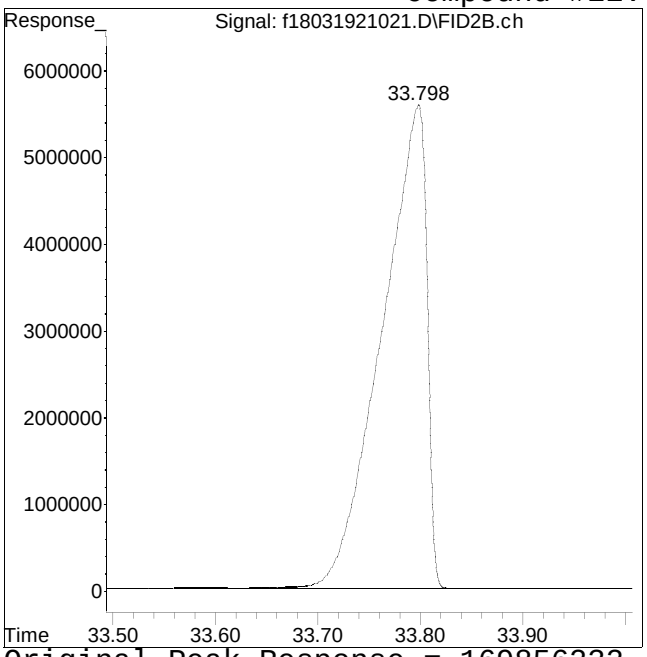
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

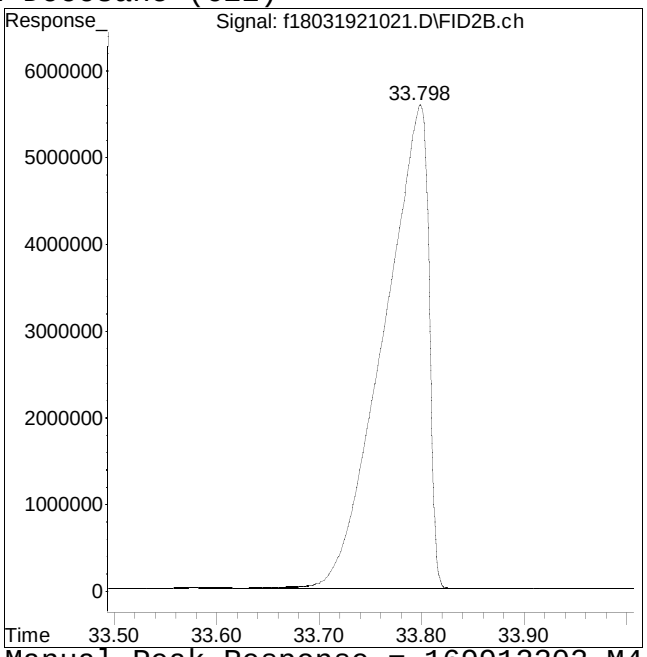
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #22: n-Docosane (C22)



Original Peak Response = 169856232



Manual Peak Response = 169912302 M4

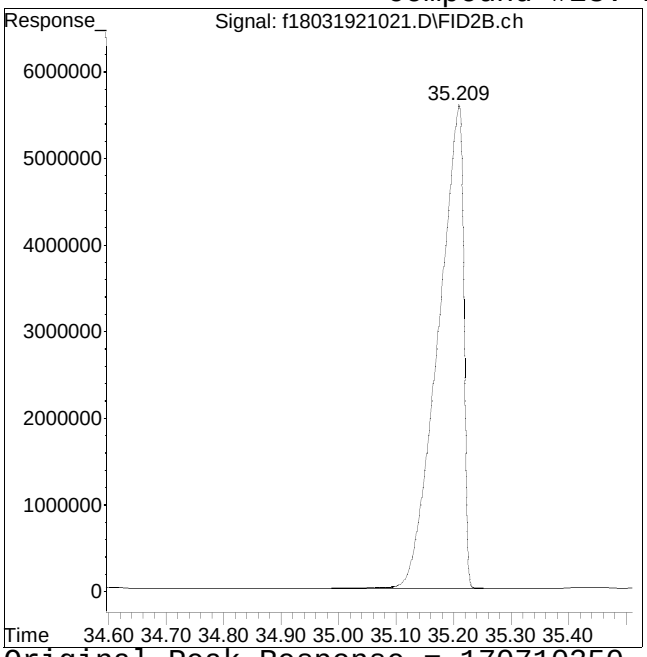
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

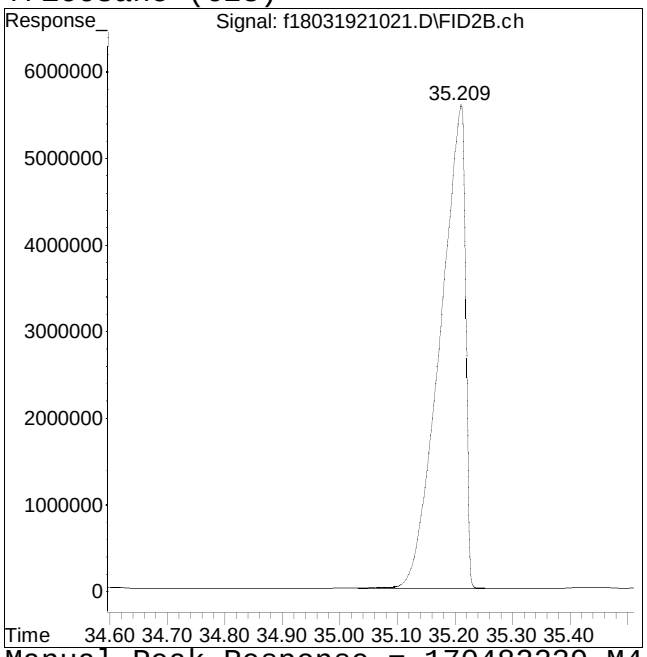
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 170710350



Manual Peak Response = 170482239 M4

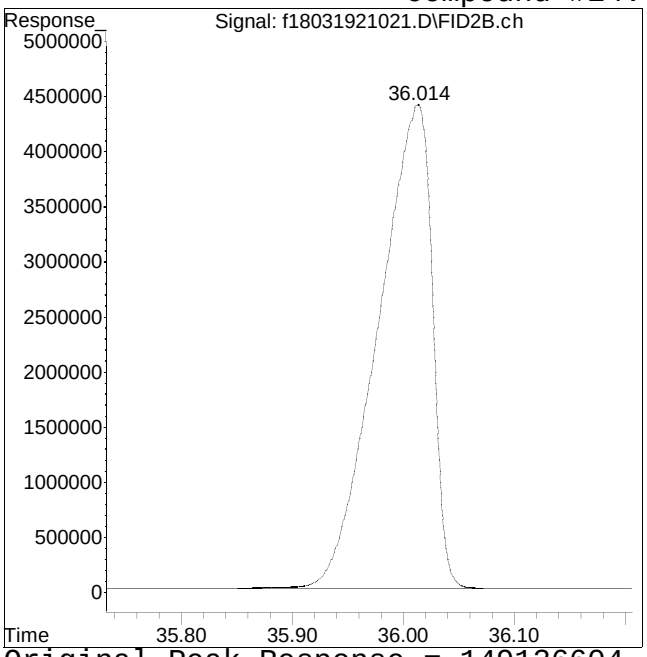
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

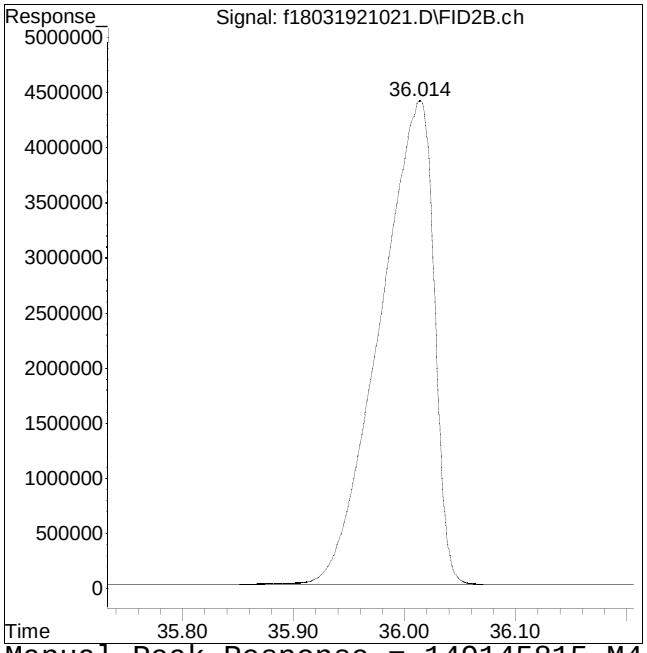
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #24: d50-Tetracosane



Original Peak Response = 149136604



Manual Peak Response = 149145815 M4

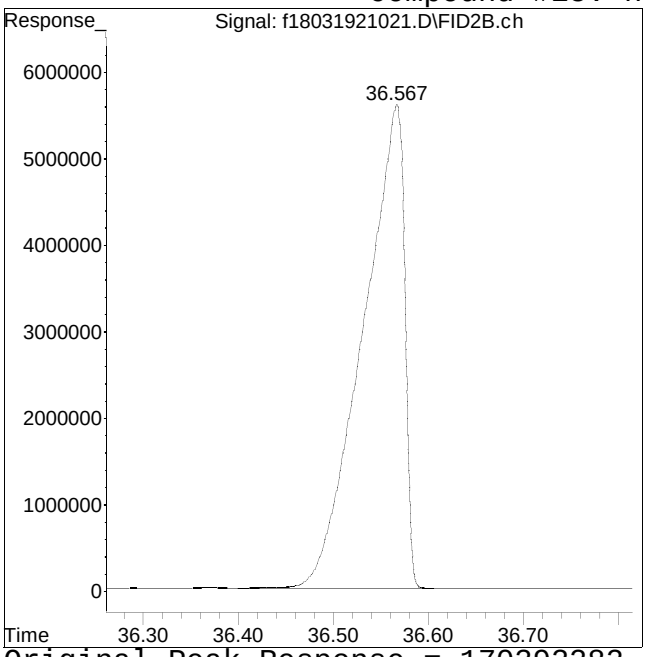
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

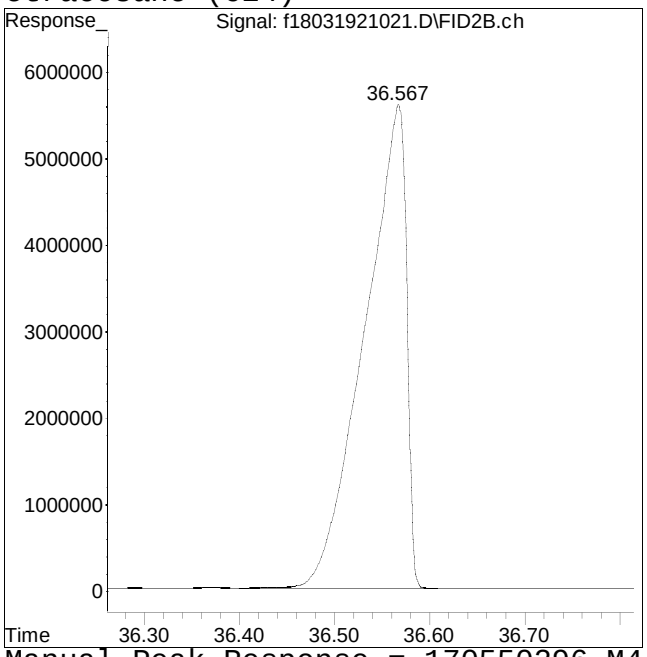
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 170392282



Manual Peak Response = 170550296 M4

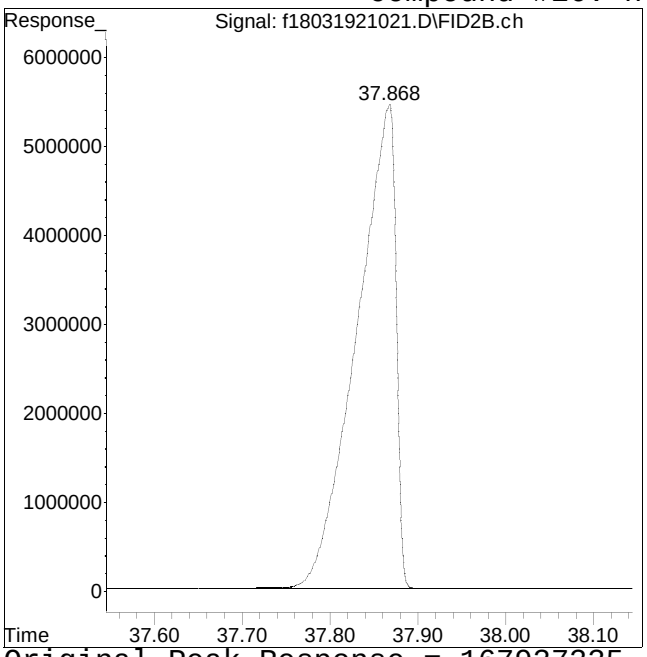
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

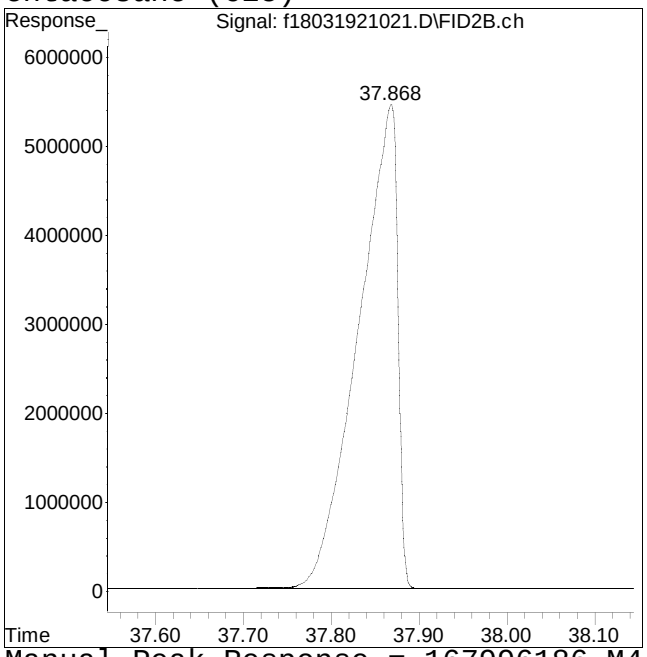
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 167937335



Manual Peak Response = 167996186 M4

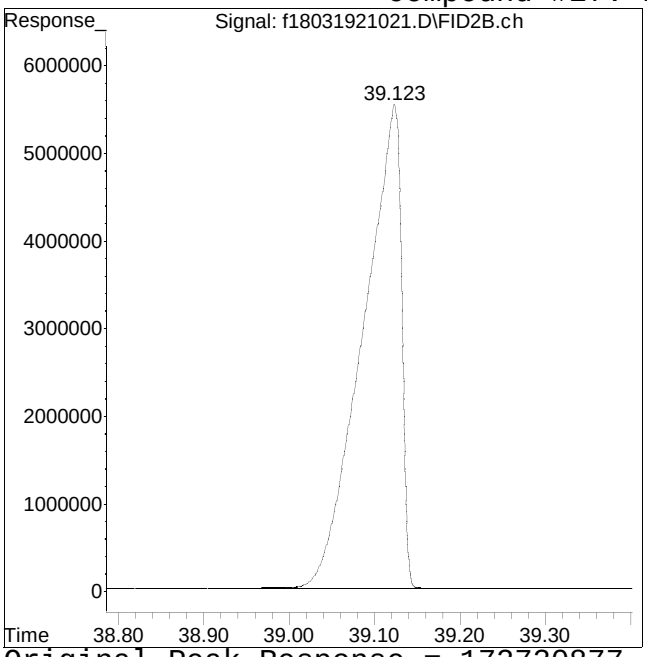
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

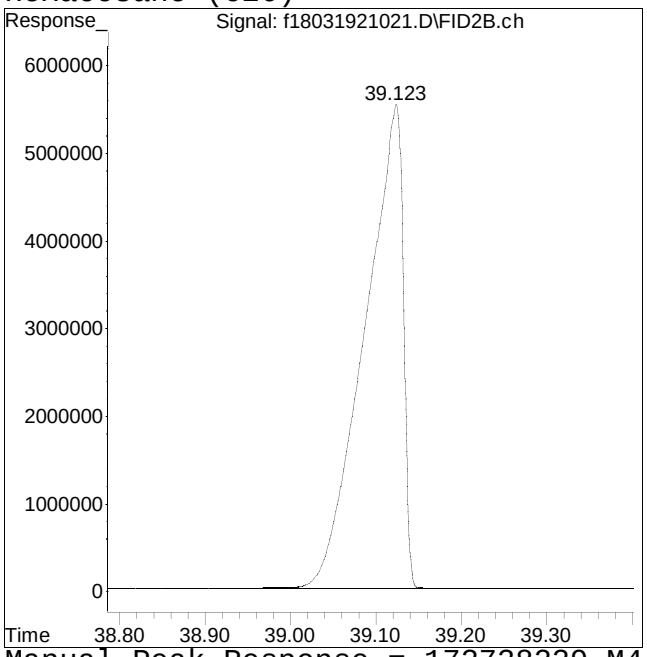
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 172730877



Manual Peak Response = 172738229 M4

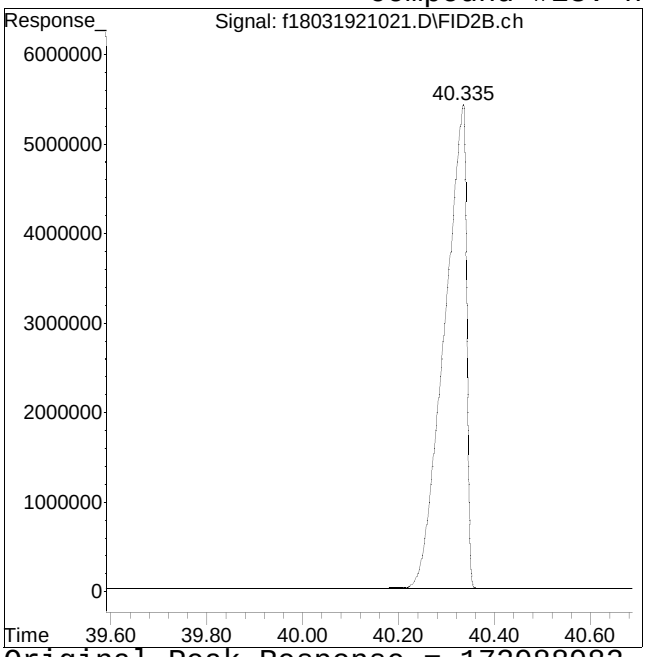
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

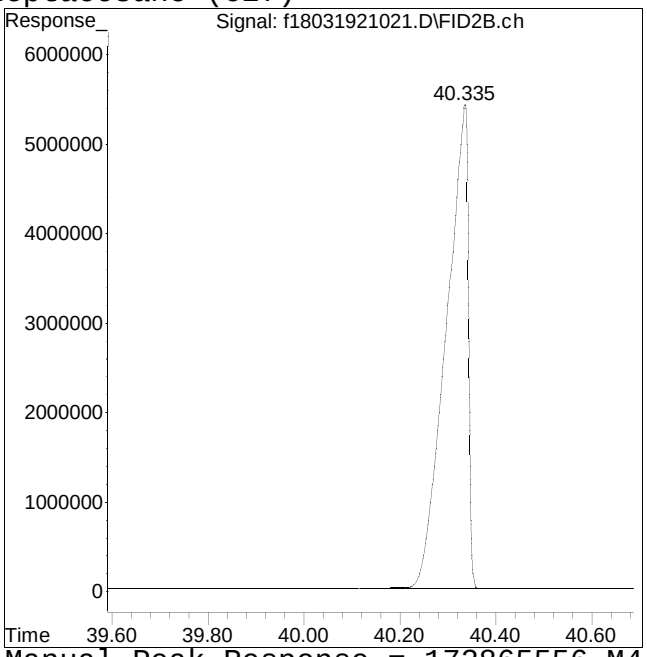
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 172988982



Manual Peak Response = 172865556 M4

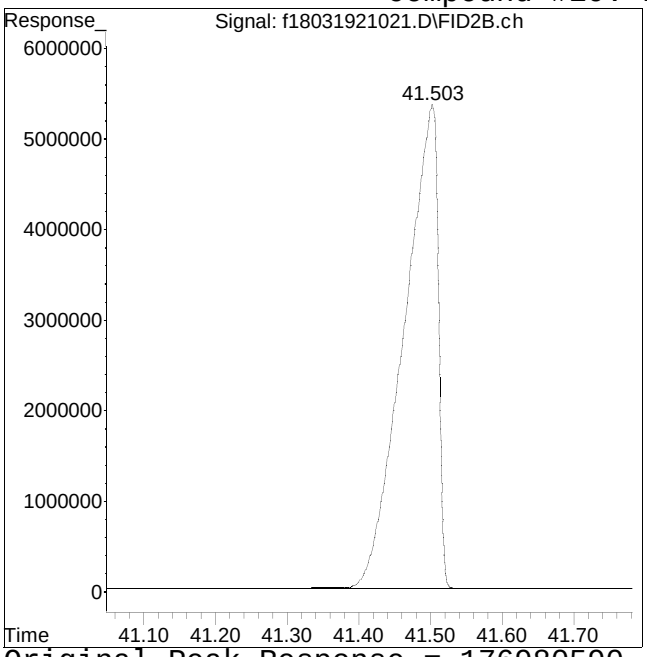
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

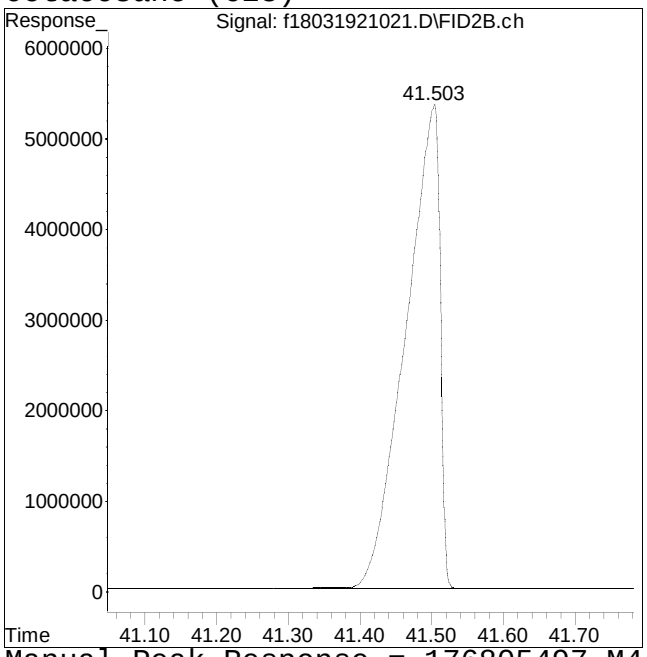
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 176980590



Manual Peak Response = 176805497 M4

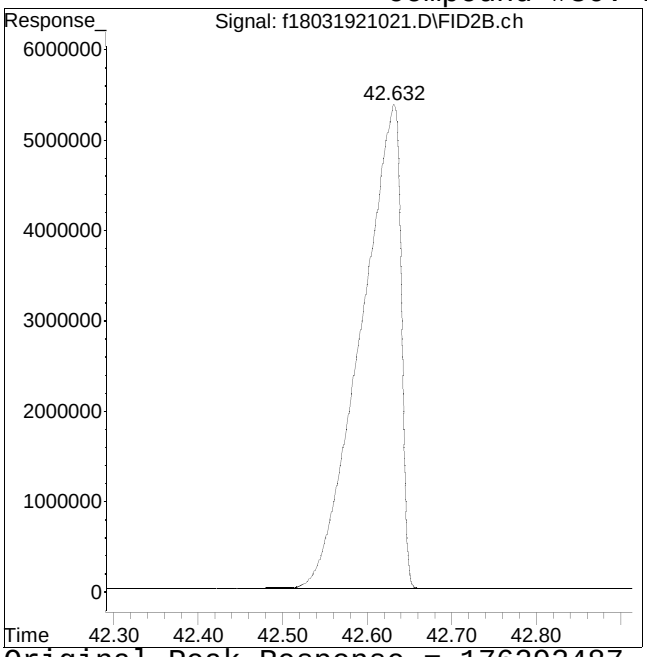
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

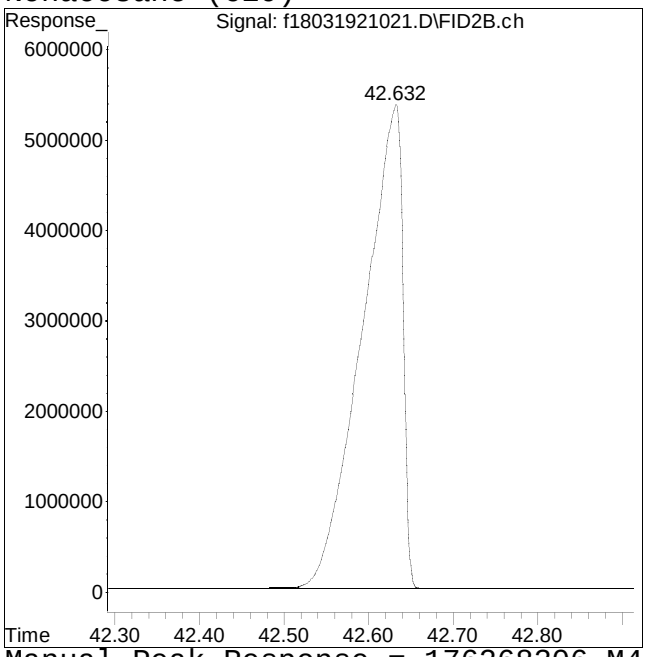
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 176292487



Manual Peak Response = 176268306 M4

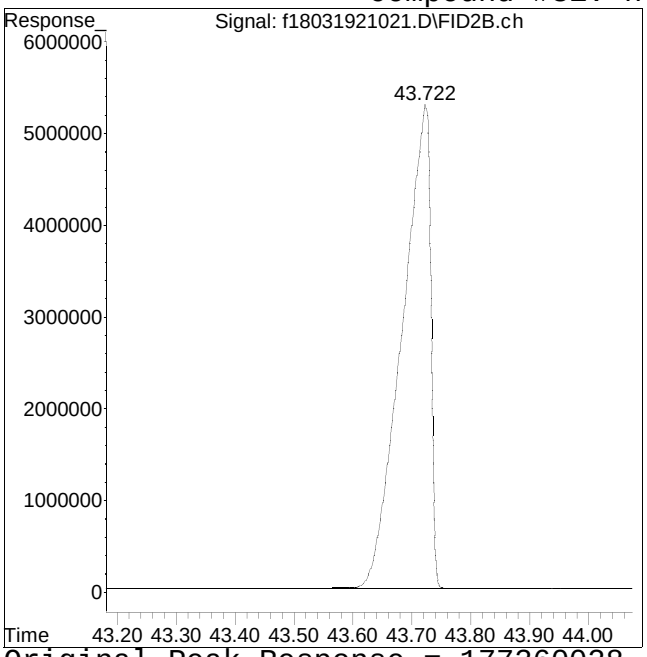
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

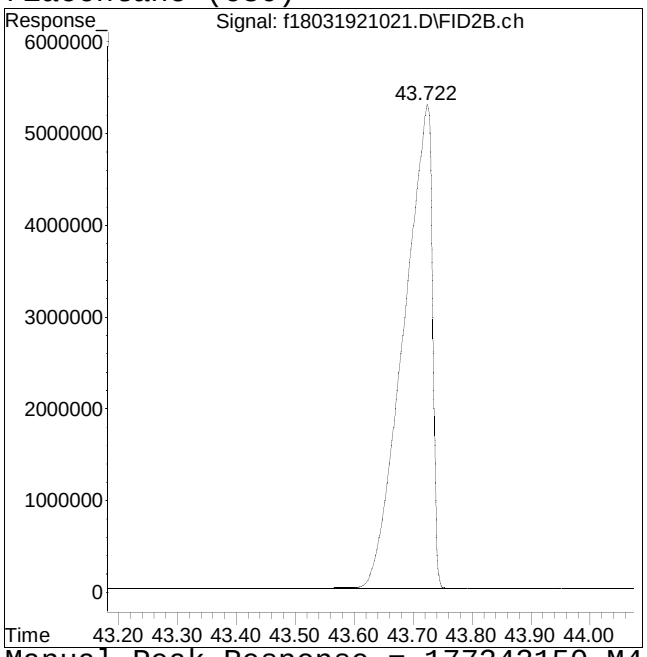
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 177360028



Manual Peak Response = 177343150 M4

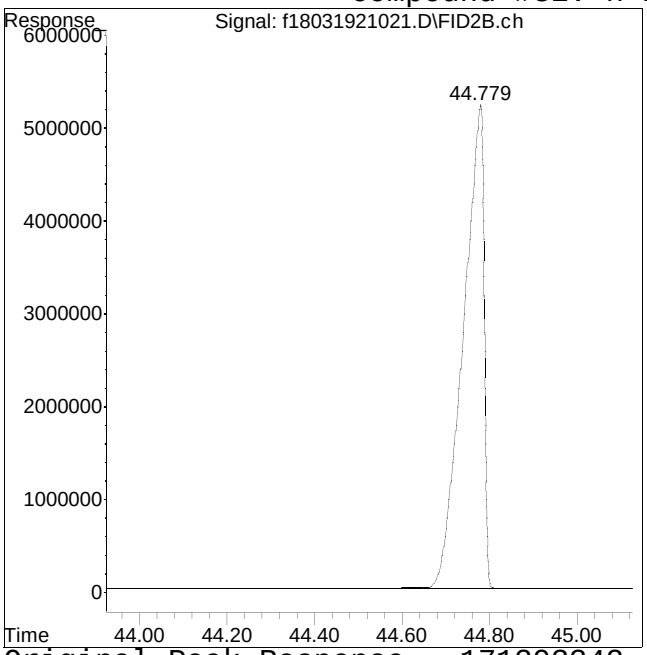
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

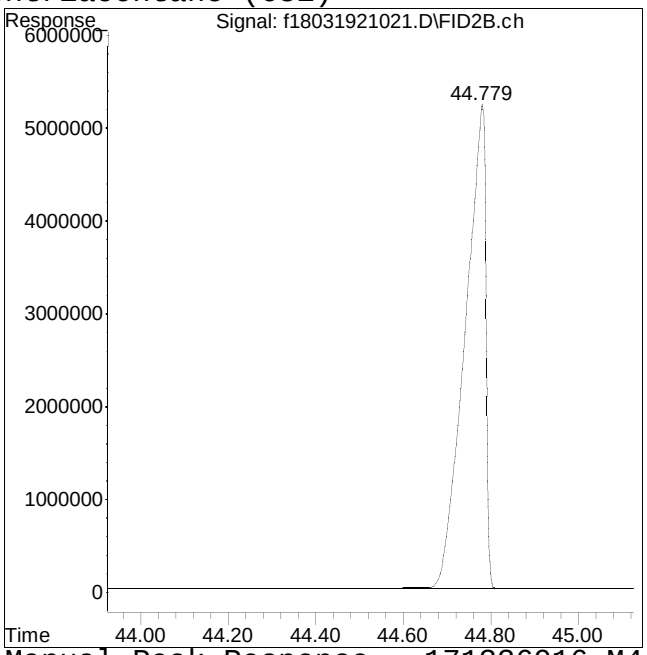
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 171393342



Manual Peak Response = 171336916 M4

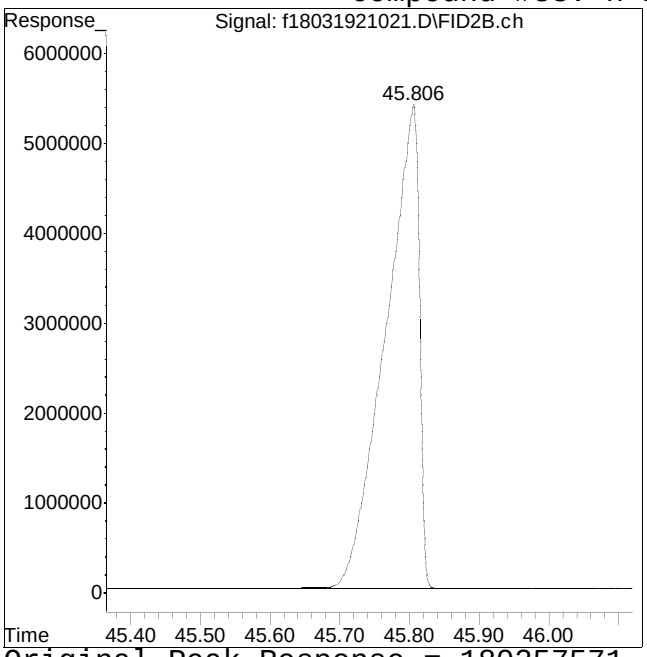
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

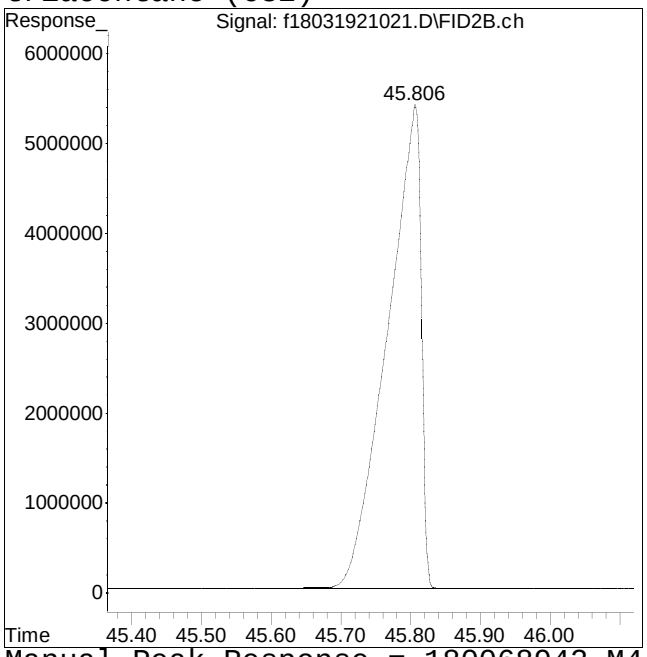
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 180257571



Manual Peak Response = 180068942 M4

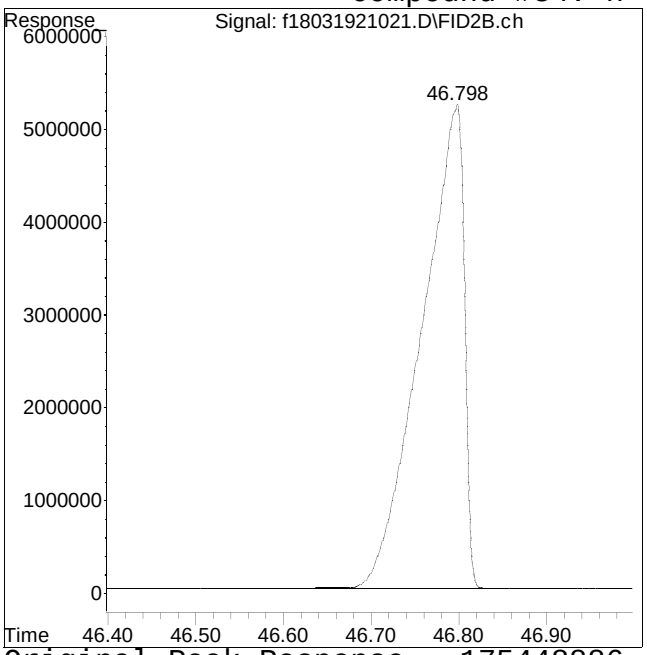
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

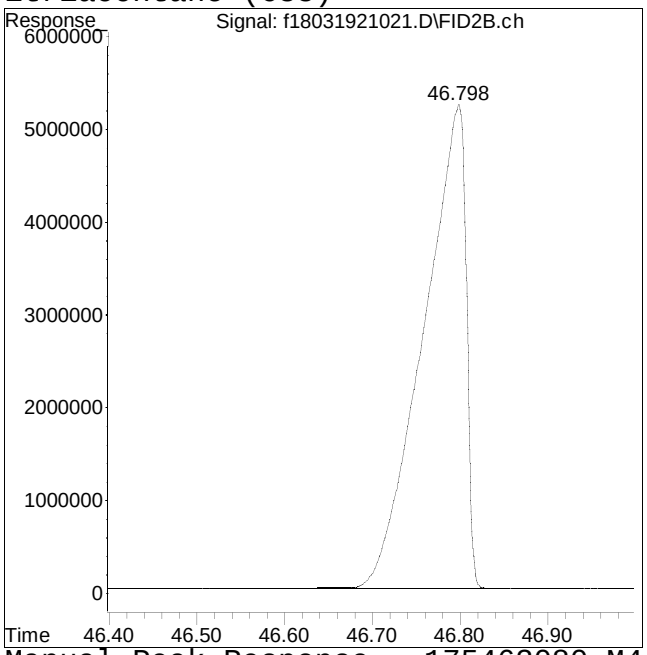
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 175448886



Manual Peak Response = 175463080 M4

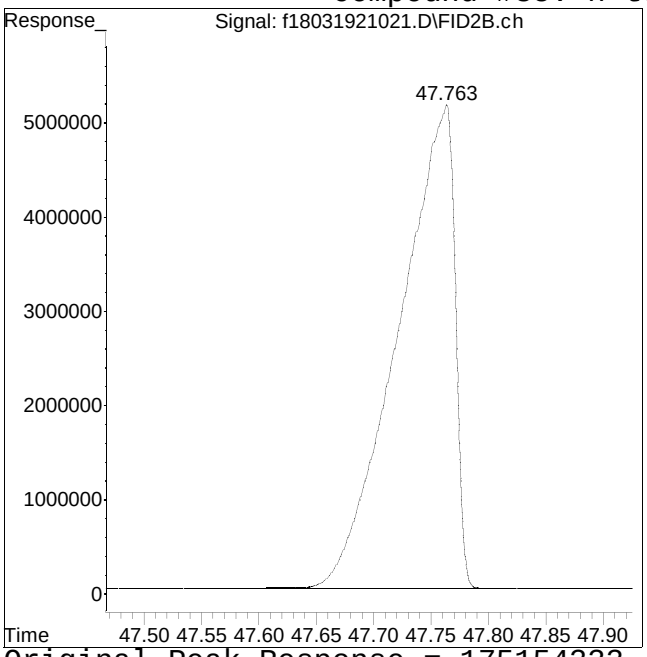
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

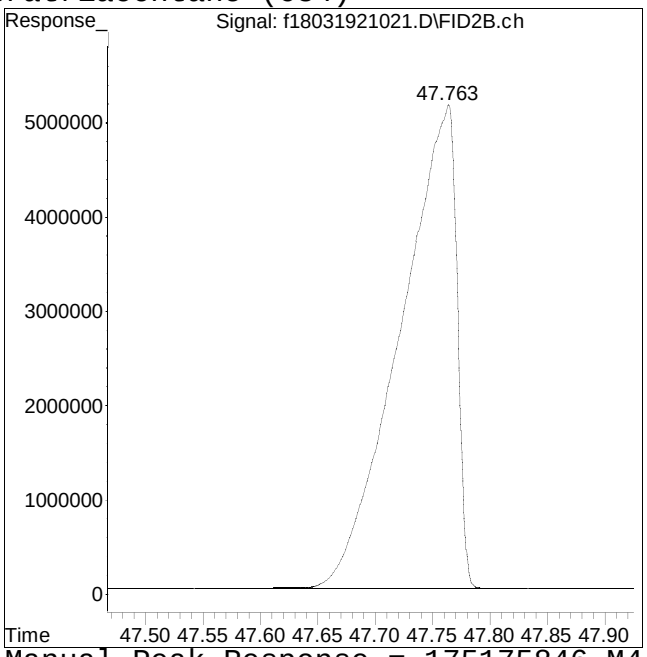
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 175154333



Manual Peak Response = 175175846 M4

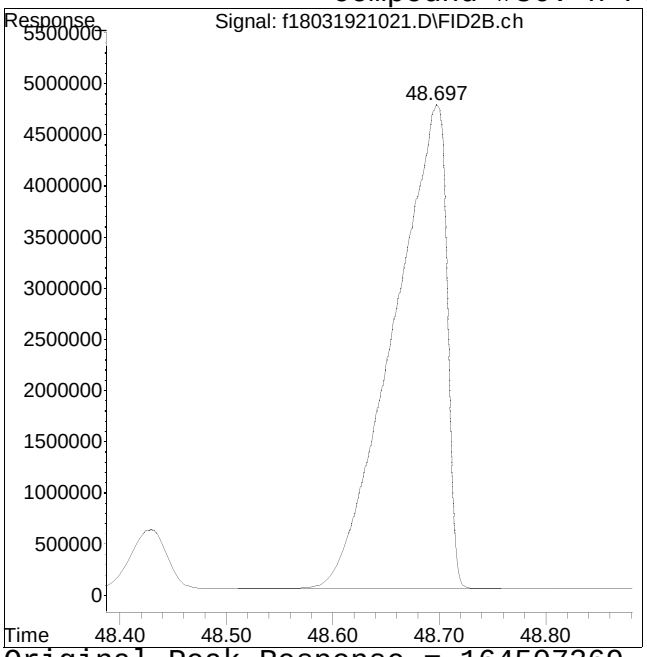
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

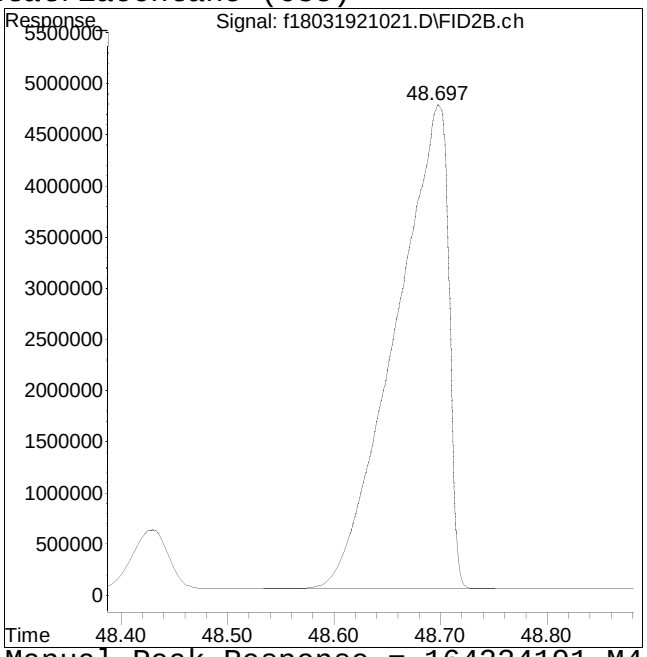
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 164507369



Manual Peak Response = 164224191 M4

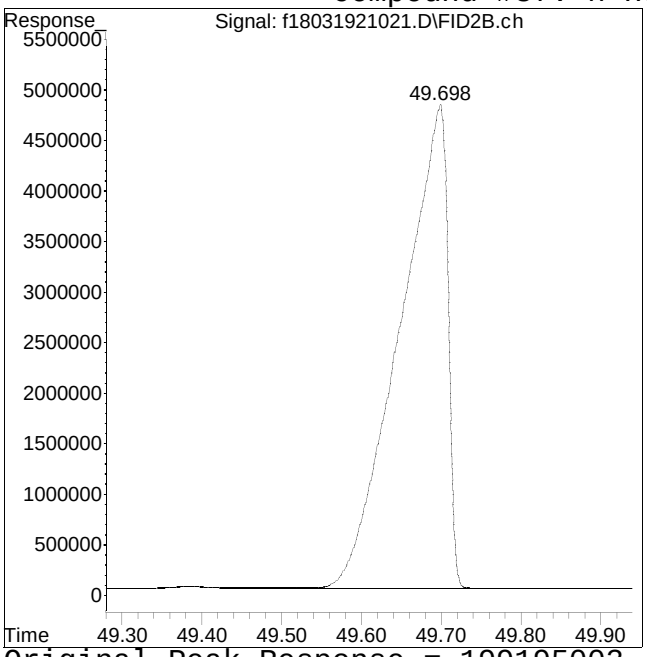
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

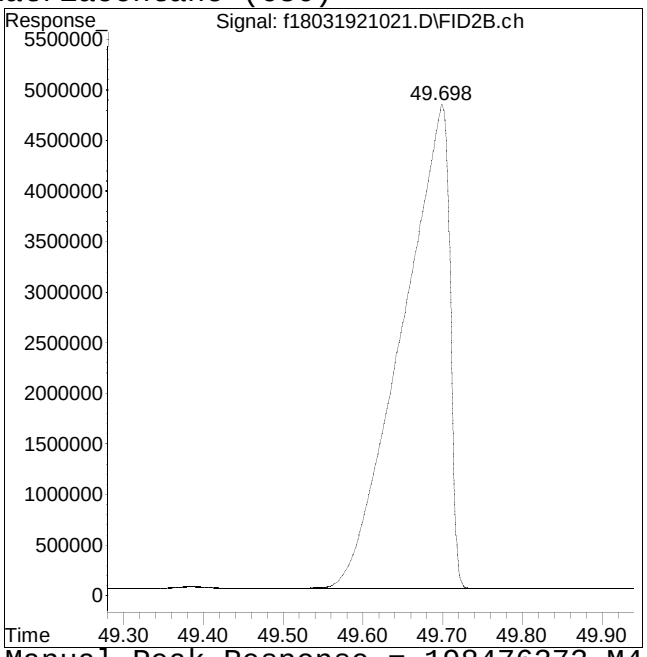
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 199195003



Manual Peak Response = 198476373 M4

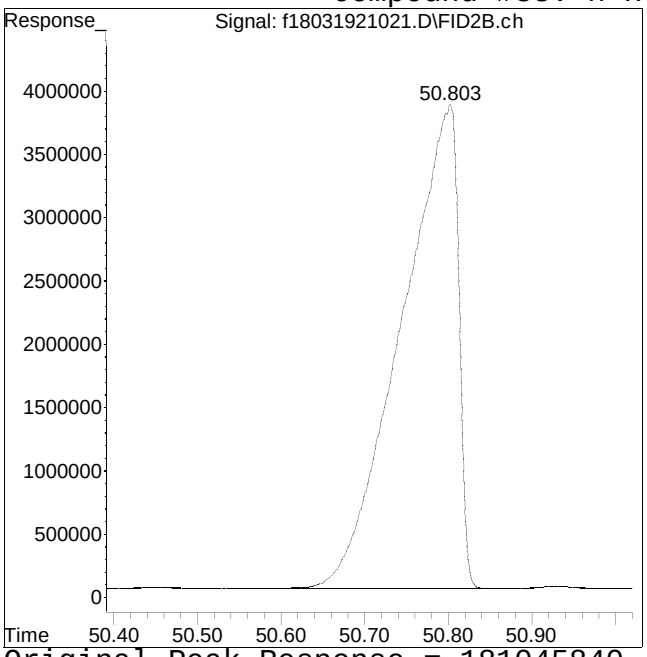
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

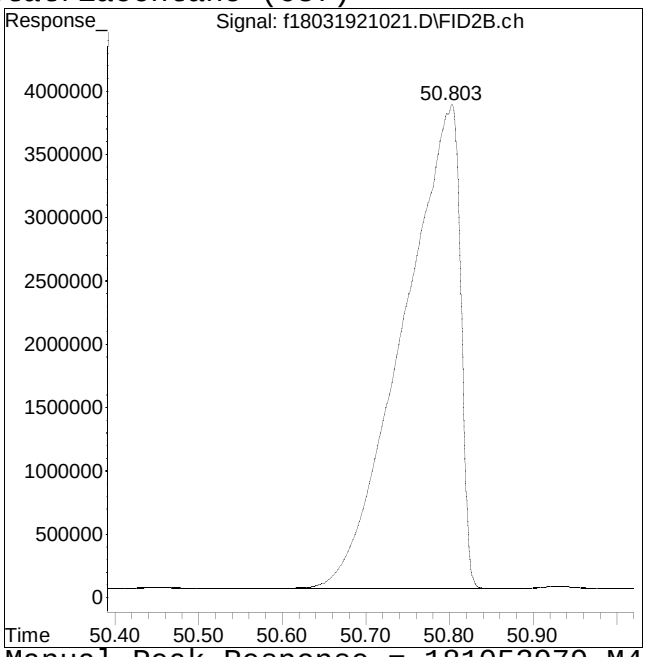
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 181045840



Manual Peak Response = 181053979 M4

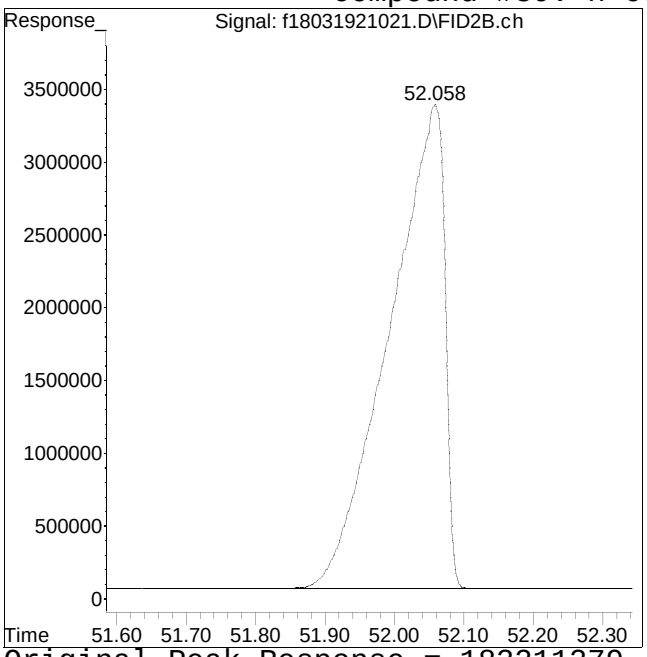
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

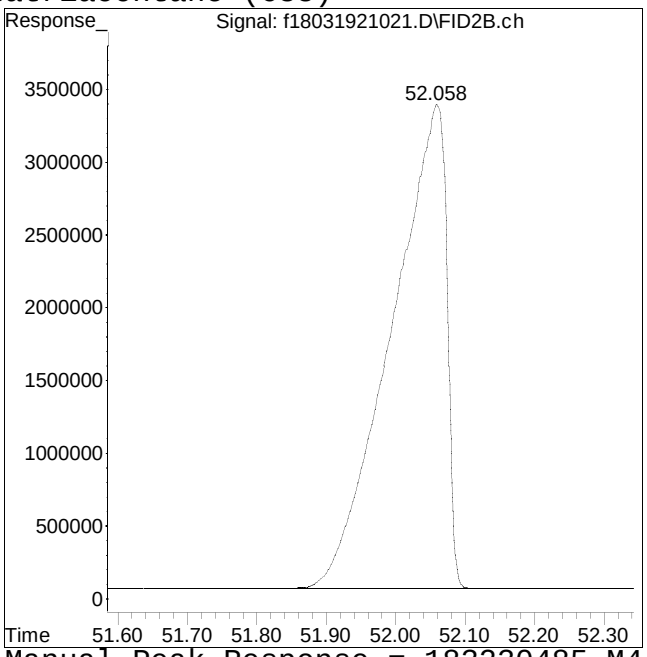
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 183211279



Manual Peak Response = 183230485 M4

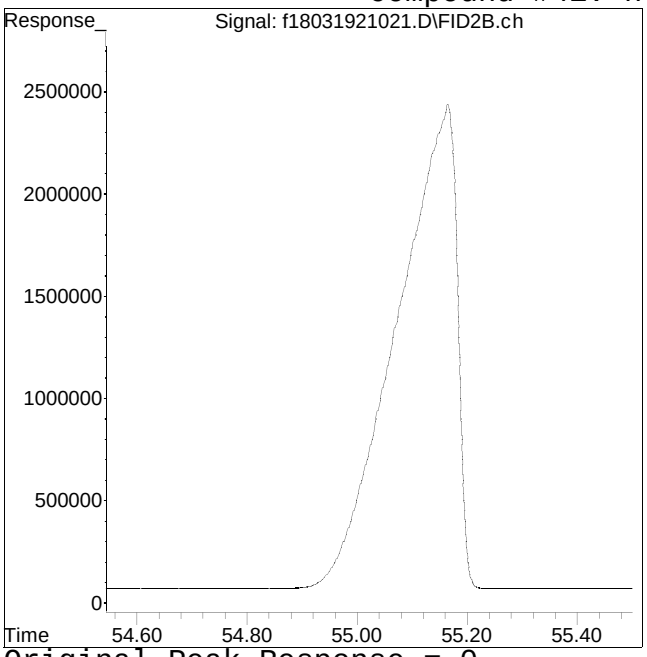
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

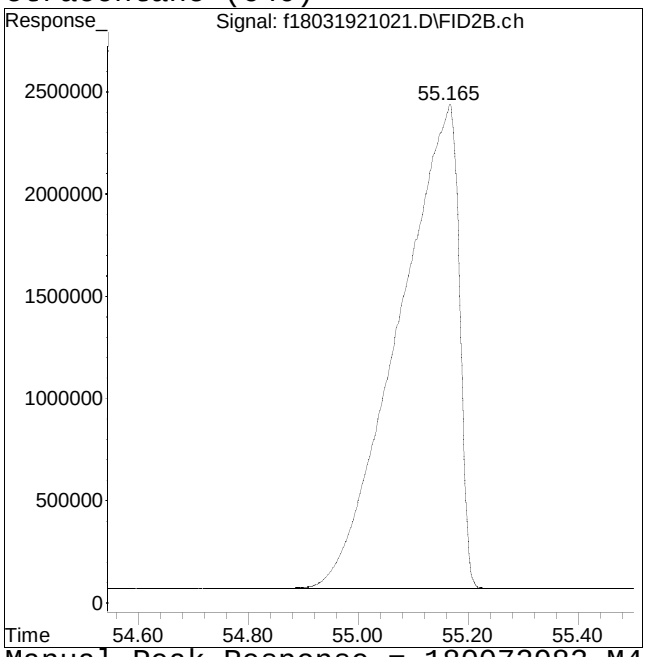
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921021.D
Date Inj'd : 3/20/2021 7:10 __
Sample : I1803192105R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:19 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 180072983 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921023.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 08:37
Operator : FID18:WR
Sample : I1803192106R
Misc : WG1479204,FRBC84
ALS Vial : 62 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:32:24 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:31:12 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.358	48142937	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.444	541357452	511.571	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 1023.14%#			
24) s	d50-Tetracosane	36.068	438780772	519.877	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 1039.75%#			
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	d
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	d
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	d
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	d
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	d
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	d
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	d
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	d
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	d
15) t	Pristane	0.000	0	N.D.	ug/mL	d
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	d
17) t	Phytane	0.000	0	N.D.	ug/mL	d
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	d
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	d
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	d
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	d
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	d
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	d
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	d
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	d
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	d

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921023.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 08:37
Operator : FID18:WR
Sample : I1803192106R
Misc : WG1479204,FRBC84
ALS Vial : 62 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:32:24 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:31:12 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

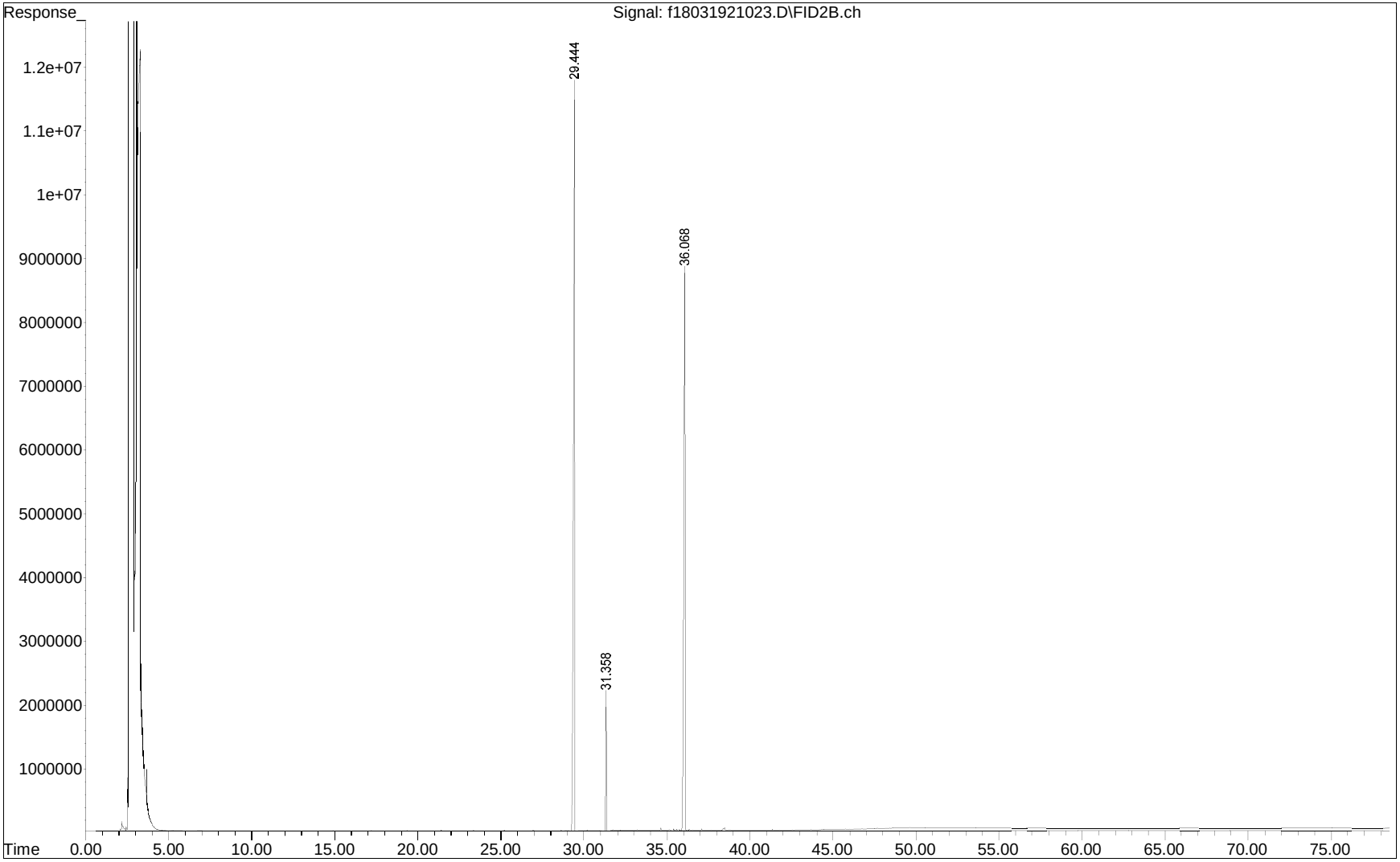
	Compound	R.T.	Response	Conc	Units	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	d
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	d
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	d
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	d
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	d
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	d
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	d
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	d
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	d

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\f18031921023.D
Operator : FID18:WR
Acquired : 20 Mar 2021 08:37 using AcqMethod FID18.M
Sample Name: I1803192106R
Instrument: FID 18
Misc Info : WG1479204,FRBC84
Vial Number: 62
CurrentMeth: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M

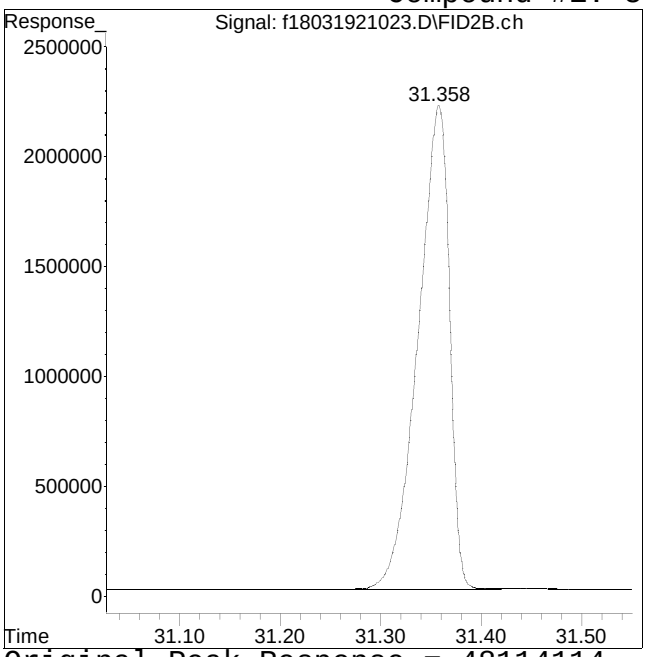


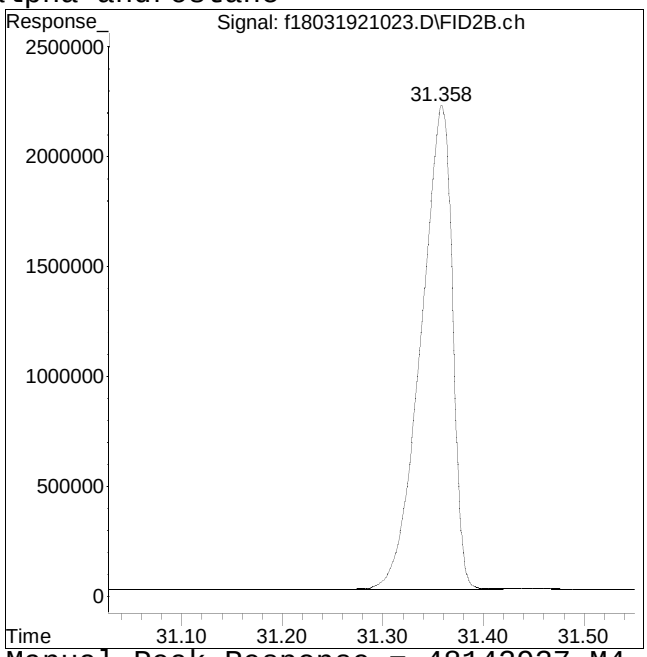
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921023.D
Date Inj'd : 3/20/2021 8:37 __
Sample : I1803192106R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:31 am

Compound #1: 5-alpha-androstane





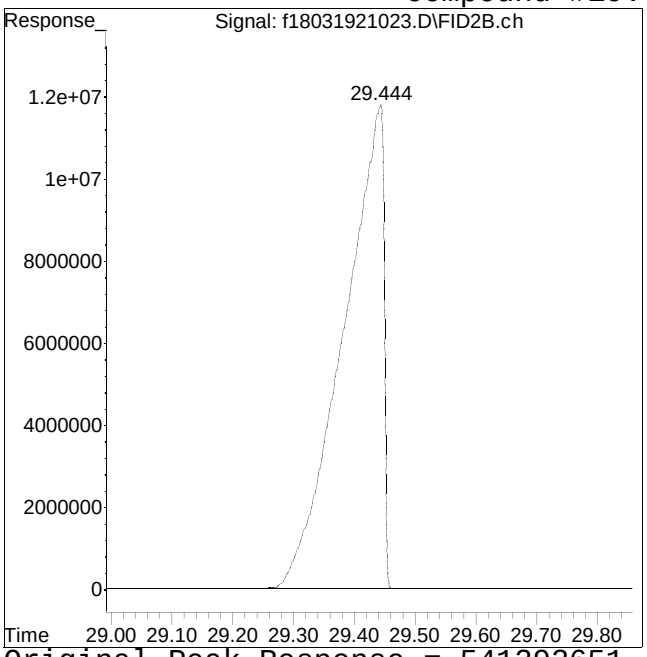
Original Peak Response = 48114114 Manual Peak Response = 48142937 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

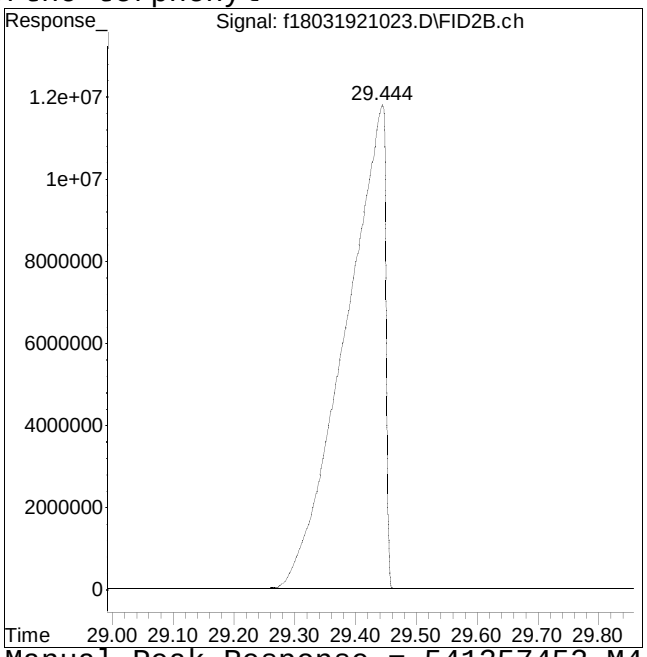
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921023.D
Date Inj'd : 3/20/2021 8:37 __
Sample : I1803192106R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:31 am

Compound #19: ortho-terphenyl



Original Peak Response = 541292651



Manual Peak Response = 541357452 M4

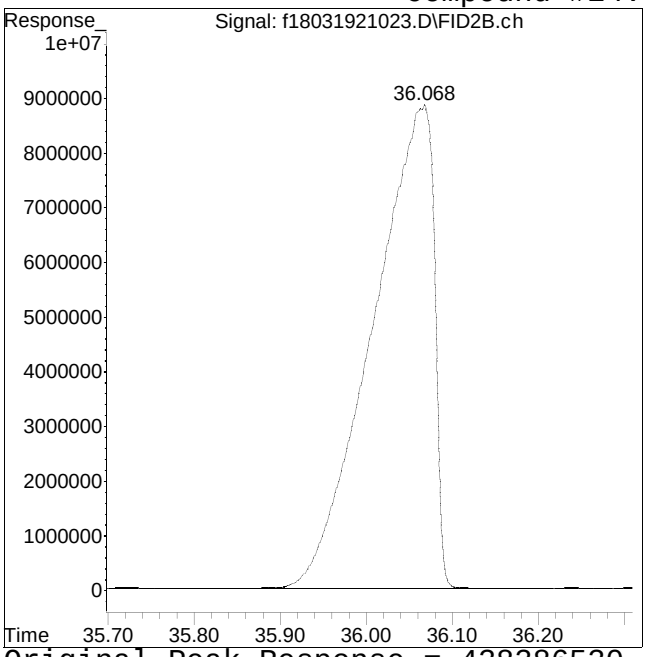
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

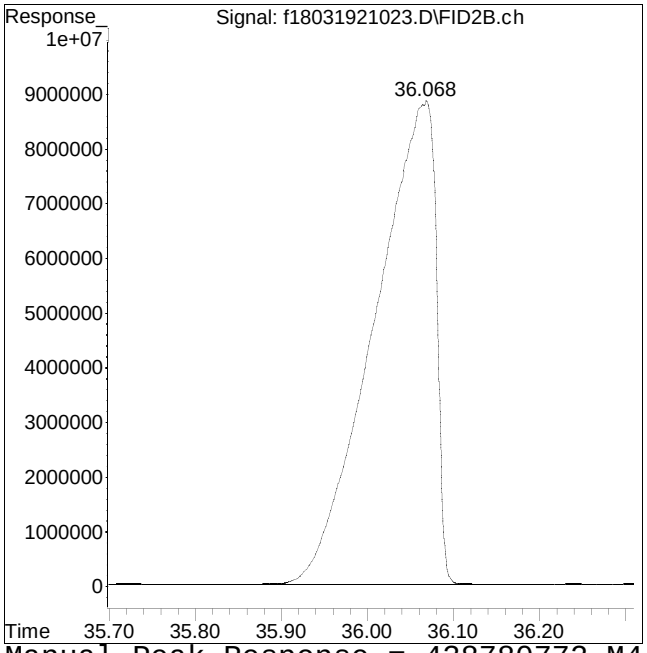
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921023.D
Date Inj'd : 3/20/2021 8:37 __
Sample : I1803192106R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:31 am

Compound #24: d50-Tetracosane



Original Peak Response = 438386530



Manual Peak Response = 438780772 M4

M4 = Poor automated baseline construction.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921027.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 11:29 am
Operator : FID18:WR
Sample : CQ1803192101R
Misc : WG1479204,FRBD15
ALS Vial : 64 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:42:10 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:35:30 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	89	0.00
2	t	n-Octane (C8)	0.796	0.790	0.8	89	0.00
3	t	n-Nonane (C9)	0.859	0.859	0.0	89	0.00
4	t	n-Decane (C10)	0.924	0.927	-0.3	88	0.00
5	t	n-Undecane (C11)	0.925	0.939	-1.5	88	0.00
6	t	n-Dodecane (C12)	0.937	0.961	-2.6	89	0.00
7	t	n-Tridecane (C13)	0.939	0.945	-0.6	88	0.00
9	t	n-Tetradecane (C14)	0.966	0.965	0.1	87	0.00
11	t	n-Pentadecane (C15)	0.969	0.970	-0.1	87	0.00
12	t	n-Hexadecane (C16)	0.957	0.986	-3.0	90	0.00
14	t	n-Heptadecane (C17)	0.968	0.956	1.2	86	0.00
15	t	Pristane	1.006	0.987	1.9	86	0.00
16	t	n-Octadecane (C18)	0.976	0.970	0.6	86	0.00
17	t	Phytane	0.919	0.886	3.6	84	0.00
18	t	n-Nonadecane (C19)	0.984	0.990	-0.6	87	0.00
19	s	ortho-terphenyl	1.114	1.105	0.8	85	0.00
20	t	n-Eicosane (C20)	0.991	1.002	-1.1	88	0.00
21	t	n-Heneicosane (C21)	1.002	1.006	-0.4	87	0.00
22	t	n-Docosane (C22)	1.013	1.040	-2.7	90	0.00
23	t	n-Tricosane (C23)	1.006	0.990	1.6	86	0.00
24	s	d50-Tetracosane	0.899	0.899	0.0	85	0.00
25	t	n-Tetracosane (C24)	1.004	1.018	-1.4	88	0.00
26	t	n-Pentacosane (C25)	0.995	1.010	-1.5	89	0.00
27	t	n-Hexacosane (C26)	1.024	1.039	-1.5	89	0.00
28	t	n-Heptacosane (C27)	1.032	1.003	2.8	85	0.00
29	t	n-Octacosane (C28)	1.050	1.038	1.1	86	0.00
30	t	n-Nonacosane (C29)	1.043	1.032	1.1	86	0.00
31	t	n-Triacontane (C30)	1.052	1.040	1.1	86	0.00
32	t	n-Hentriacontane (C31)	1.020	1.026	-0.6	88	0.00
33	t	n-Dotriacontane (C32)	1.068	1.030	3.6	84	0.00
34	t	n-Tritriacontane (C33)	1.040	1.034	0.6	87	0.00
35	t	n-tetratriacontane (C34)	1.041	1.055	-1.3	89	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921027.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 11:29 am
Operator : FID18:WR
Sample : CQ1803192101R
Misc : WG1479204,FRBD15
ALS Vial : 64 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:42:10 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:35:30 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.978	1.030	-5.3	93	0.00
37 t	n-Hexatriacontane (C36)	1.176	1.098	6.6	82	0.00
38 t	n-Heptatriacontane (C37)	1.071	1.048	2.1	86	0.00
39 t	n-Octatriacontane (C38)	1.084	1.089	-0.5	88	-0.01
41 t	n-Tetracontane (C40)	1.068	0.990	7.3	81	-0.01

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.10	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921027.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 11:29
Operator : FID18:WR
Sample : CQ1803192101R
Misc : WG1479204,FRBD15
ALS Vial : 64 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:42:10 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:35:30 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.353	43608662	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.343	48203371	49.595 ug/mL M4
Spiked Amount 50.000 Range 50 - 130		Recovery = 99.19%	
24) s d50-Tetracosane	35.972	39197806	49.969 ug/mL M4
Spiked Amount 50.000 Range 50 - 130		Recovery = 99.94%	
Target Compounds			
2) t n-Octane (C8)	5.684	34436396	49.603 ug/mL M4
3) t n-Nonane (C9)	7.913	37467066	50.010 ug/mL M4
4) t n-Decane (C10)	10.406	40424386	50.158 ug/mL M4
5) t n-Undecane (C11)	12.918	40940579	50.770 ug/mL M4
6) t n-Dodecane (C12)	15.343	41894179	51.240 ug/mL M4
7) t n-Tridecane (C13)	17.648	41217907	50.317 ug/mL M4
9) t n-Tetradecane (C14)	19.829	42102224	49.989 ug/mL M4
11) t n-Pentadecane (C15)	21.891	42282901	50.023 ug/mL M4
12) t n-Hexadecane (C16)	23.845	43014338	51.511 ug/mL M4
14) t n-Heptadecane (C17)	25.701	41680143	49.352 ug/mL M4
15) t Pristane	25.813	43043282	49.071 ug/mL M4
16) t n-Octadecane (C18)	27.467	42308070	49.695 ug/mL M4
17) t Phytane	27.631	38632398	48.217 ug/mL M4
18) t n-Nonadecane (C19)	29.148	43165332	50.282 ug/mL M4
20) t n-Eicosane (C20)	30.751	43701043	50.566 ug/mL M4
21) t n-Heneicosane (C21)	32.284	43872087	50.187 ug/mL M4
22) t n-Docosane (C22)	33.755	45333154	51.314 ug/mL M4
23) t n-Tricosane (C23)	35.164	43172987	49.182 ug/mL M4
25) t n-Tetracosane (C24)	36.519	44396382	50.691 ug/mL M4
26) t n-Pentacosane (C25)	37.821	44033558	50.717 ug/mL M4
27) t n-Hexacosane (C26)	39.076	45291875	50.717 ug/mL M4
28) t n-Heptacosane (C27)	40.285	43758558	48.619 ug/mL M4
29) t n-Octacosane (C28)	41.452	45287475	49.439 ug/mL M4
30) t n-Nonacosane (C29)	42.581	44993051	49.439 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\
Data File : f18031921027.D
Signal(s) : FID2B.ch
Acq On : 20 Mar 2021 11:29
Operator : FID18:WR
Sample : CQ1803192101R
Misc : WG1479204,FRBD15
ALS Vial : 64 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Mar 26 11:42:10 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Mar 26 11:35:30 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

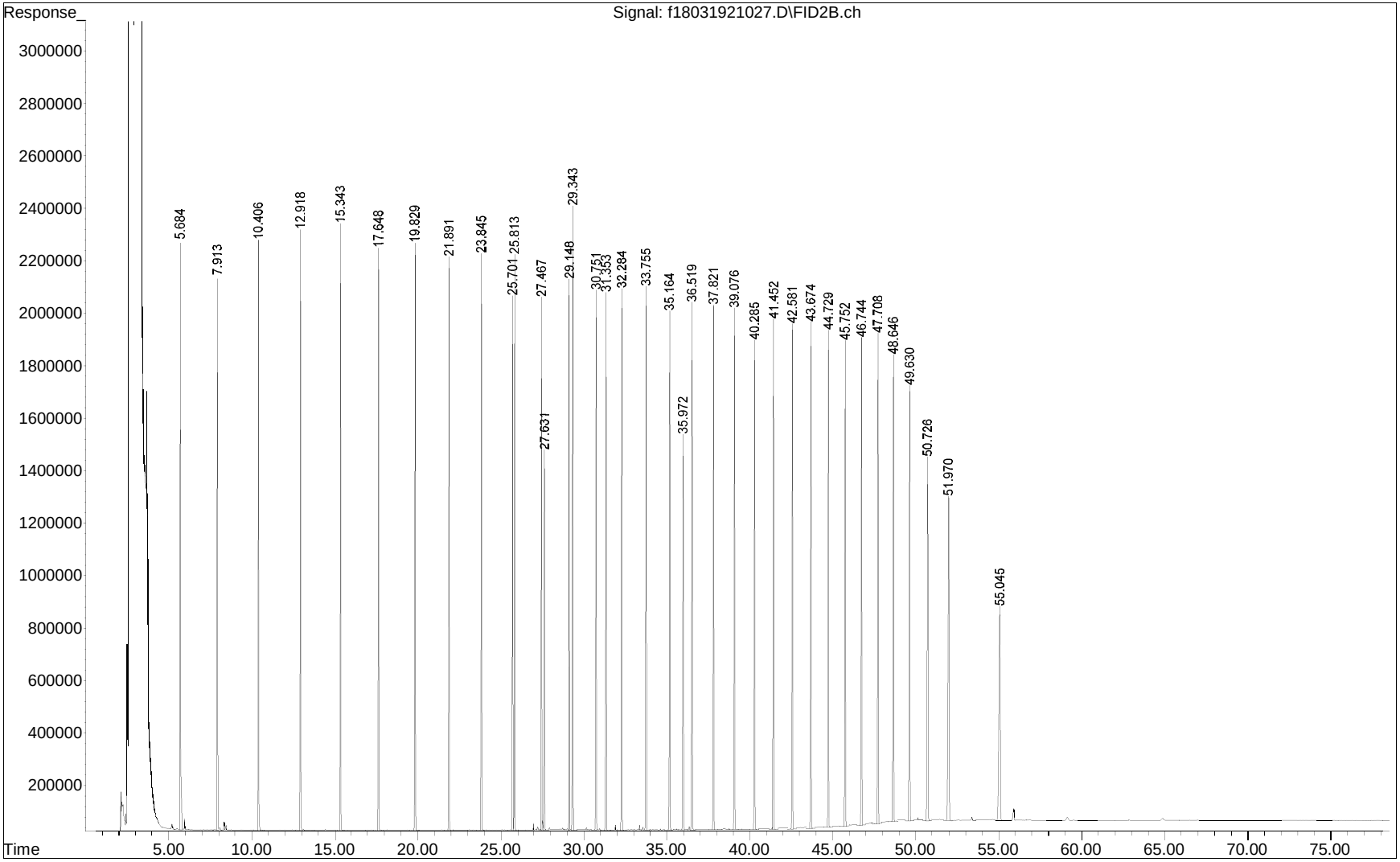
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.674	45341923	49.436 ug/mL M4
32) t	n-Hentriacontane (C31)	44.729	44725510	50.292 ug/mL M4
33) t	n-Dotriacontane (C32)	45.752	44917268	48.233 ug/mL M4
34) t	n-Tritriacontane (C33)	46.744	45073693	49.702 ug/mL M4
35) t	n-tetratriacontane (C34)	47.708	46007619	50.696 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.646	44899488	52.659 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.630	47898708	46.715 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.726	45700110	48.942 ug/mL M4
39) t	n-Octatriacontane (C38)	51.970	47482030	50.232 ug/mL M4
41) t	n-Tetracontane (C40)	55.045	43188719	46.358 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\f18031921027.D
Operator : FID18:WR
Acquired : 20 Mar 2021 11:29 using AcqMethod FID18.M
Sample Name: CQ1803192101R
Instrument: FID 18
Misc Info : WG1479204,FRBD15
Vial Number: 64
CurrentMeth: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M

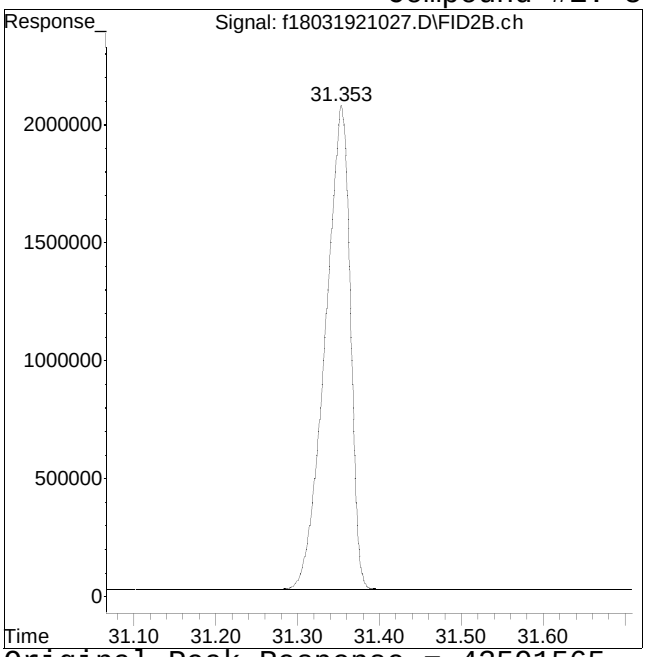


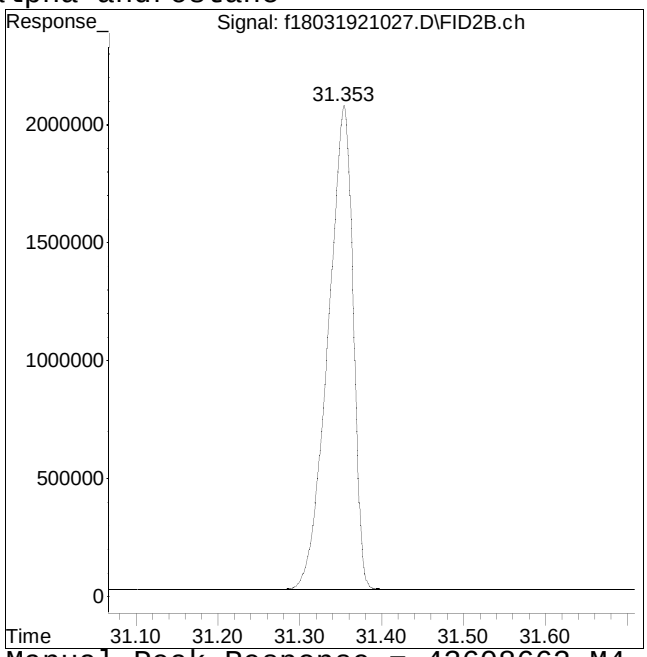
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #1: 5-alpha-androstane





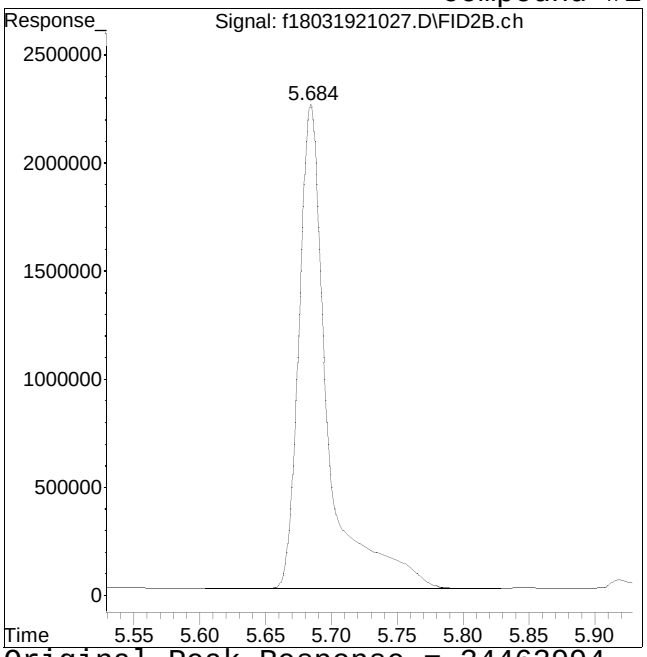
Original Peak Response = 43591565 Manual Peak Response = 43608662 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

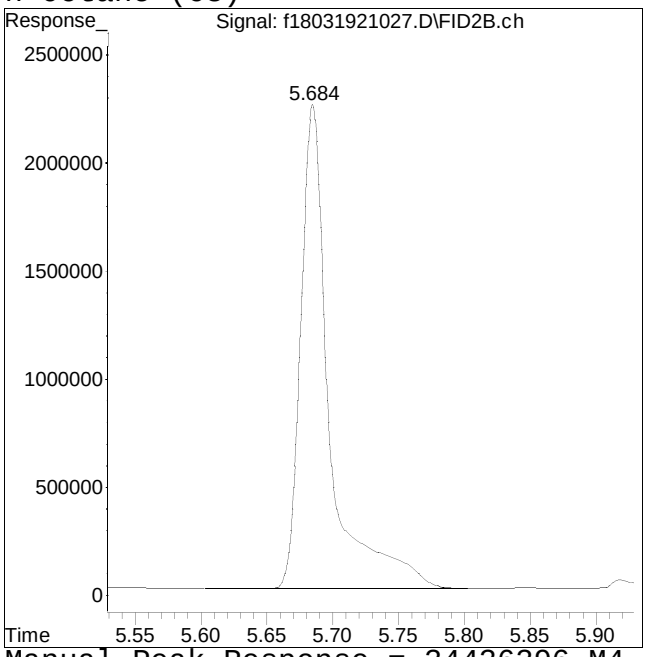
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #2: n-Octane (C8)



Original Peak Response = 34463994



Manual Peak Response = 34436396 M4

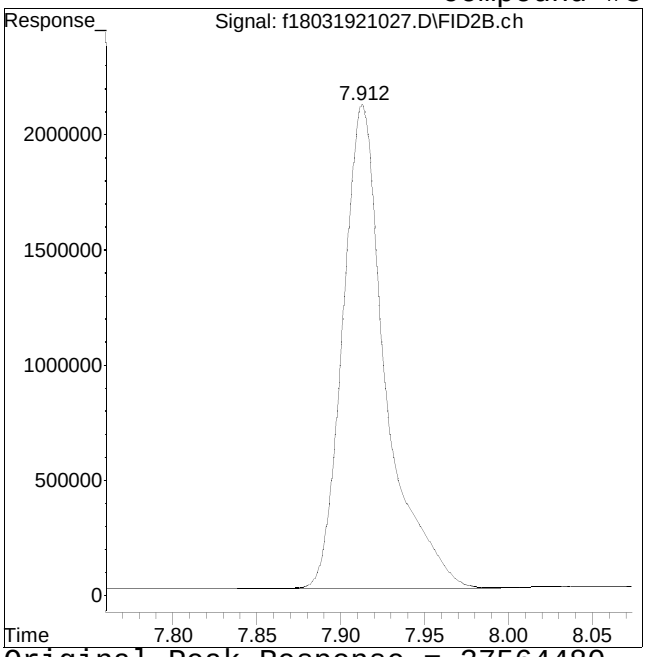
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

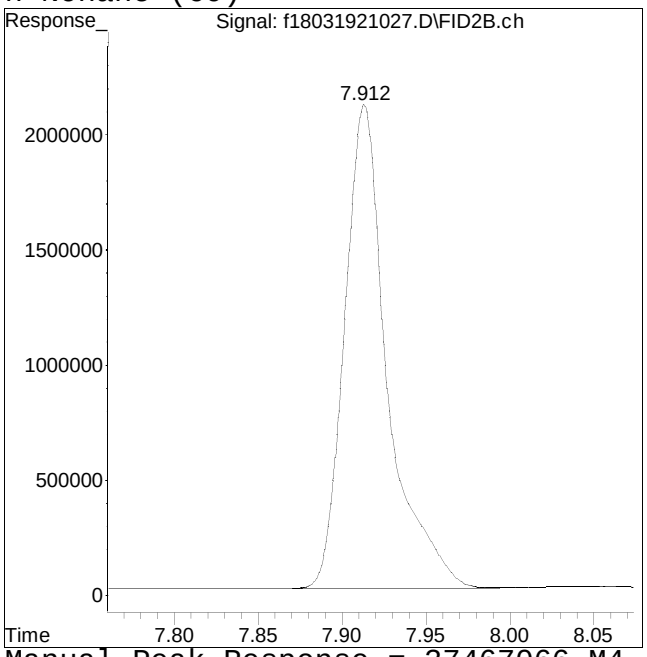
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #3: n-Nonane (C9)



Original Peak Response = 37564480



Manual Peak Response = 37467066 M4

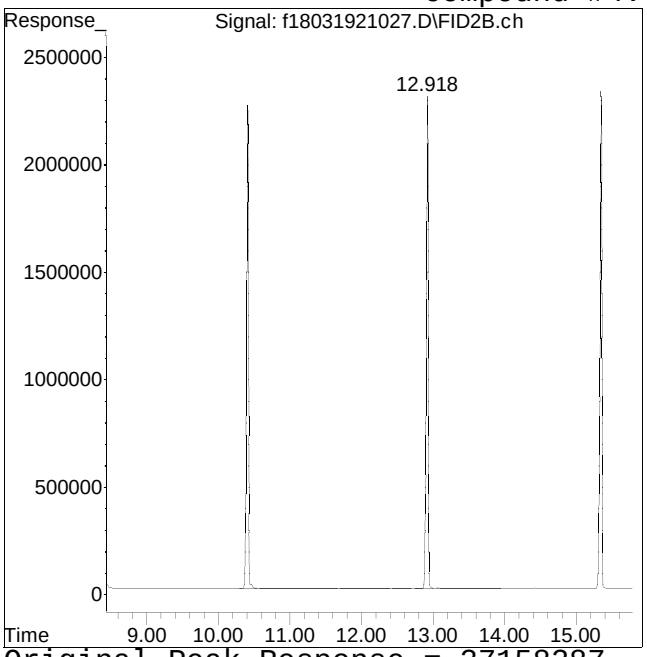
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

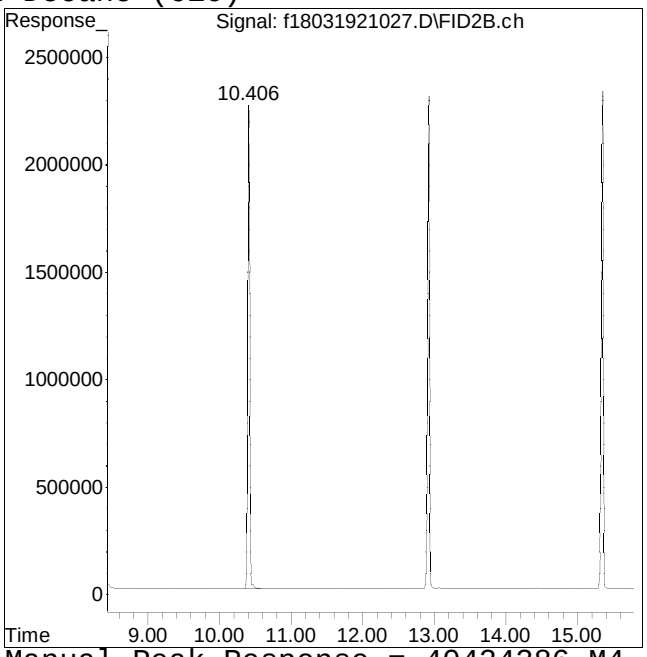
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #4: n-Decane (C10)



Original Peak Response = 37158287



Manual Peak Response = 40424386 M4

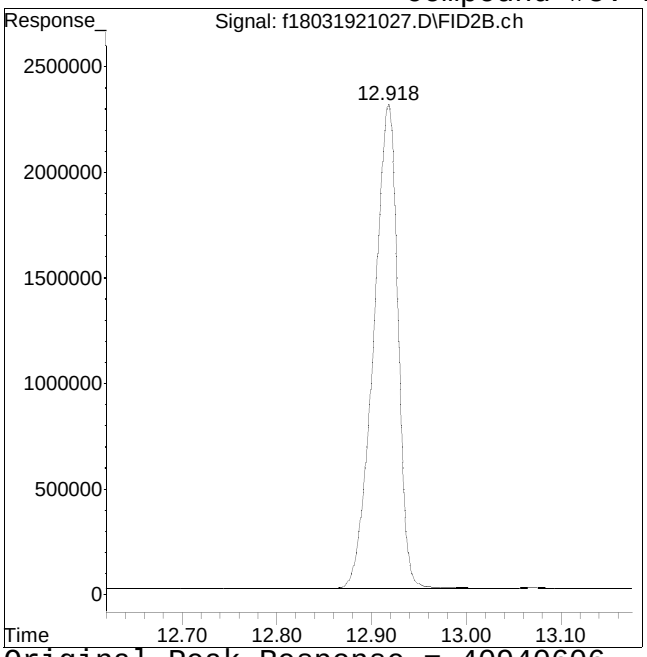
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

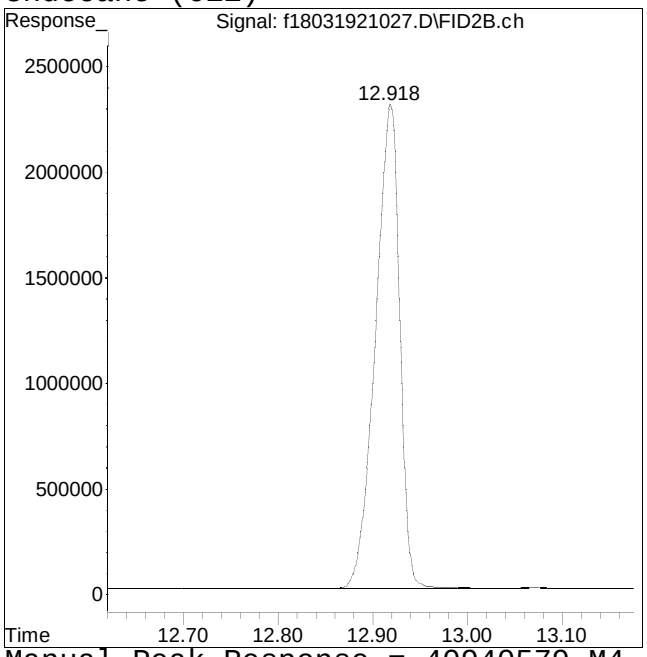
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #5: n-Undecane (C11)



Original Peak Response = 40940606



Manual Peak Response = 40940579 M4

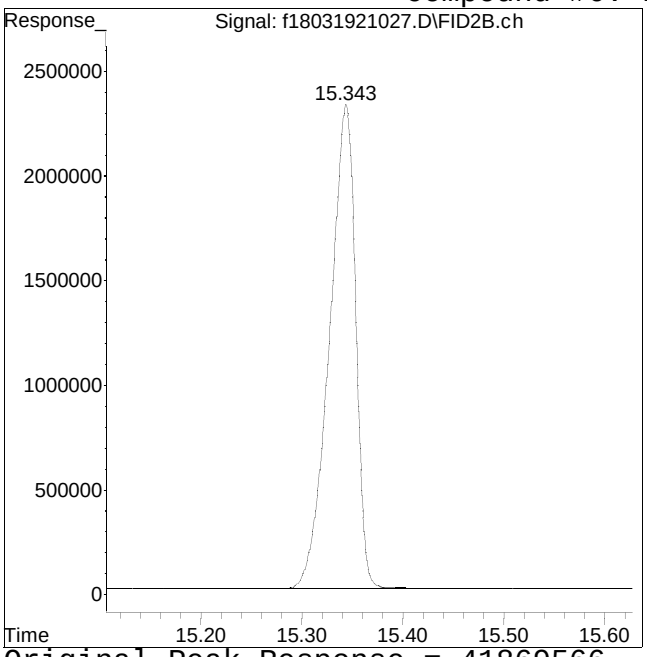
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

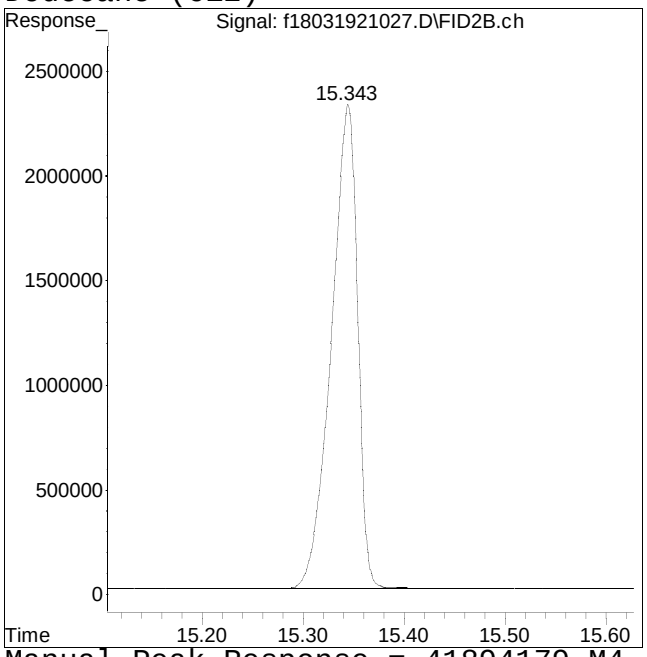
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 41869566



Manual Peak Response = 41894179 M4

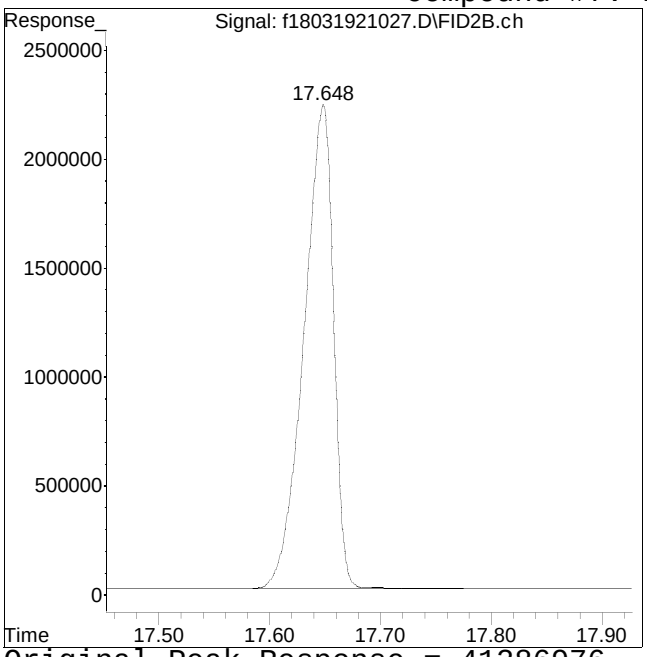
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

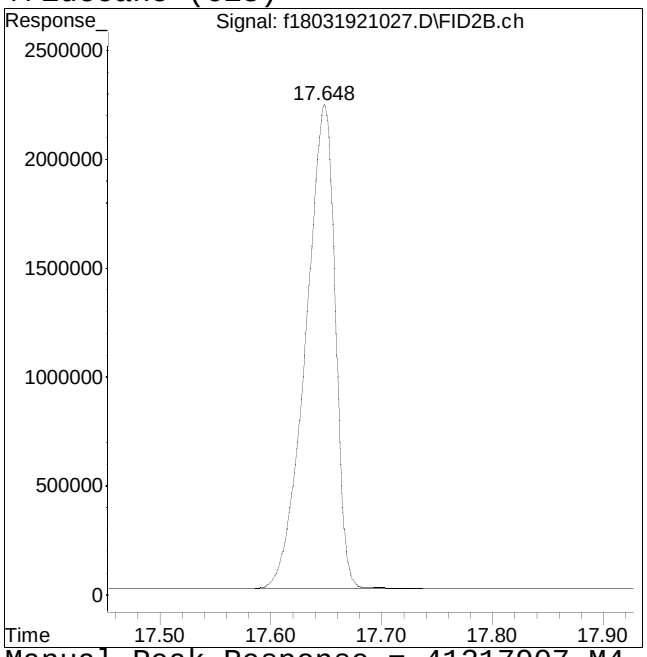
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 41286976



Manual Peak Response = 41217907 M4

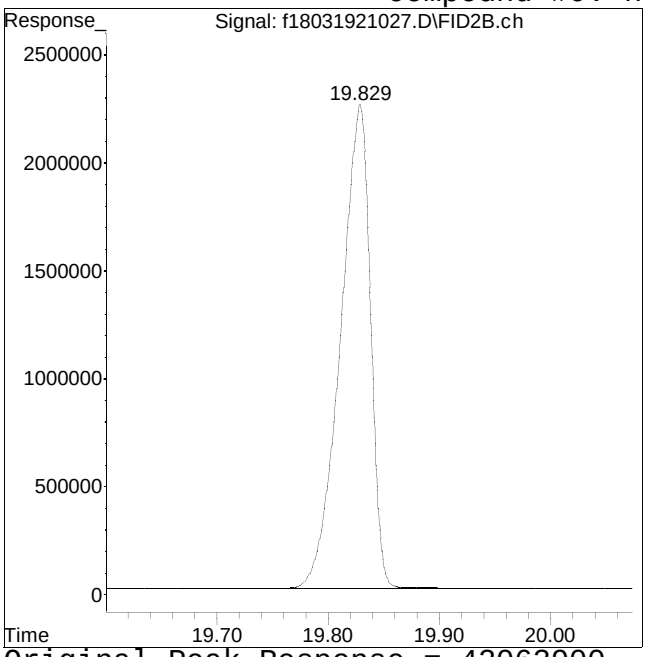
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

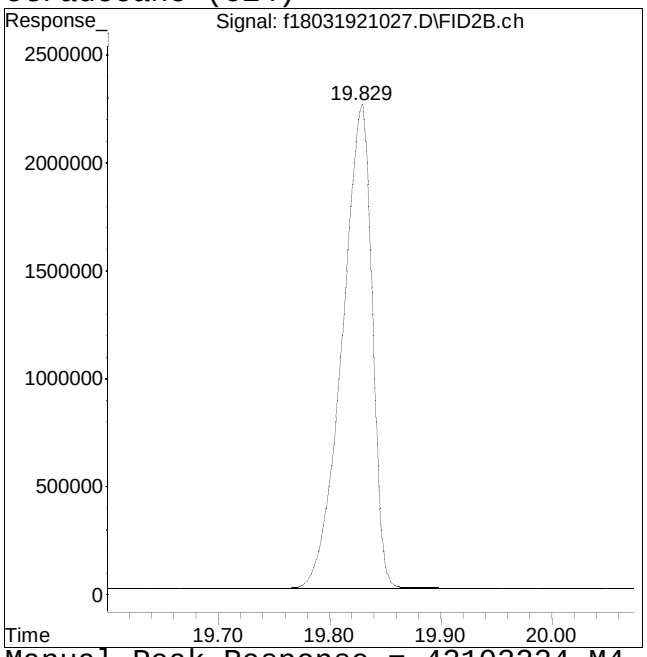
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 42063900



Manual Peak Response = 42102224 M4

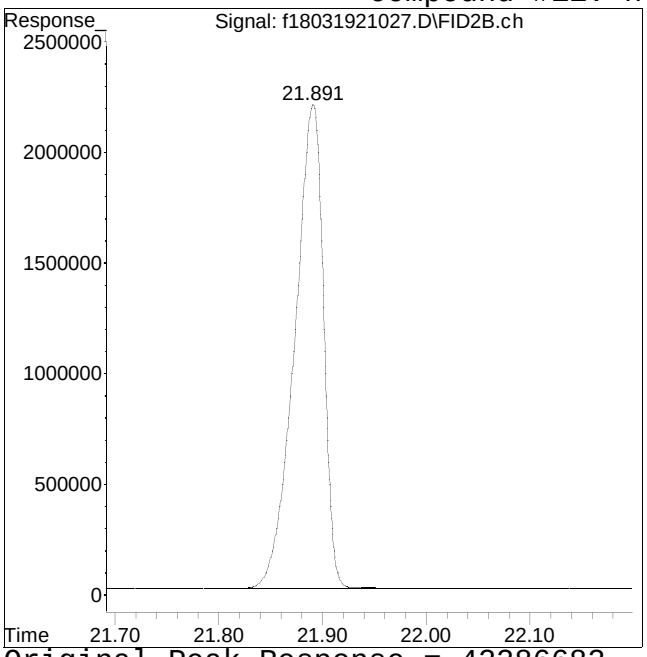
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

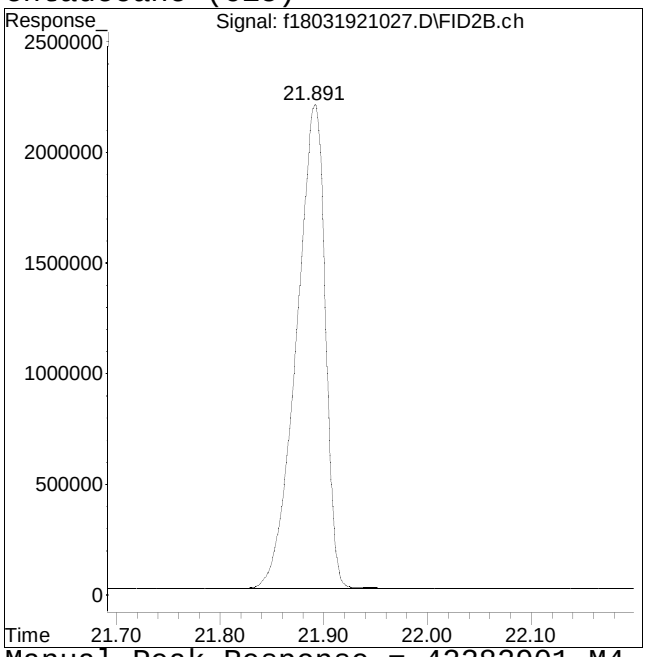
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 42286682



Manual Peak Response = 42282901 M4

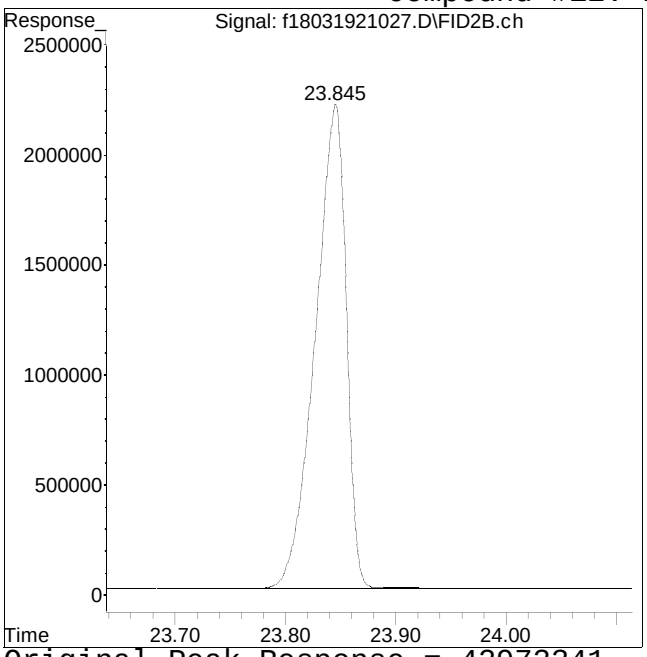
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

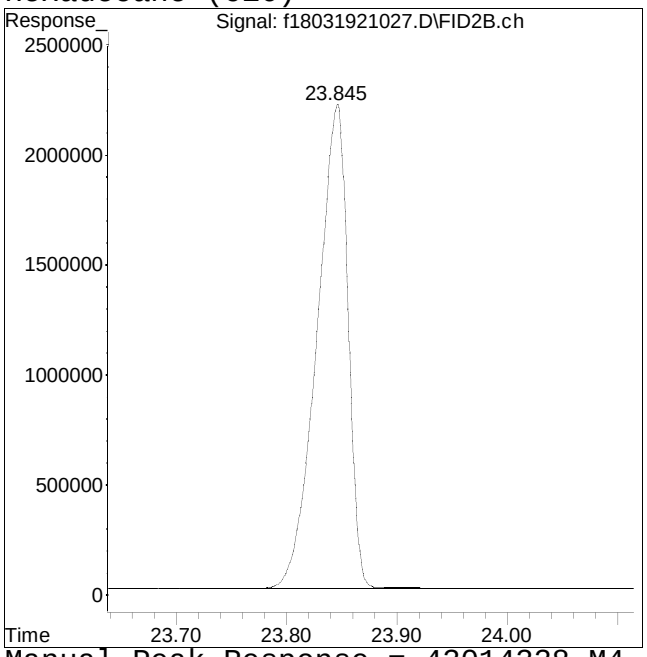
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 42973341



Manual Peak Response = 43014338 M4

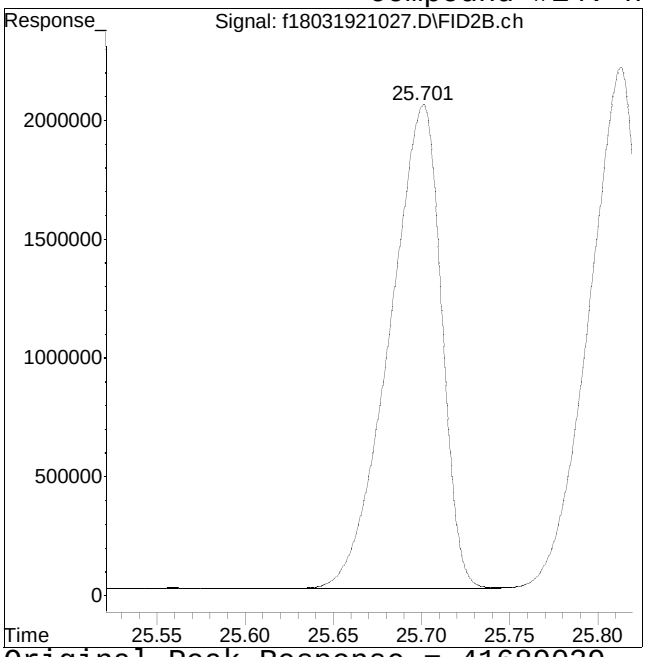
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

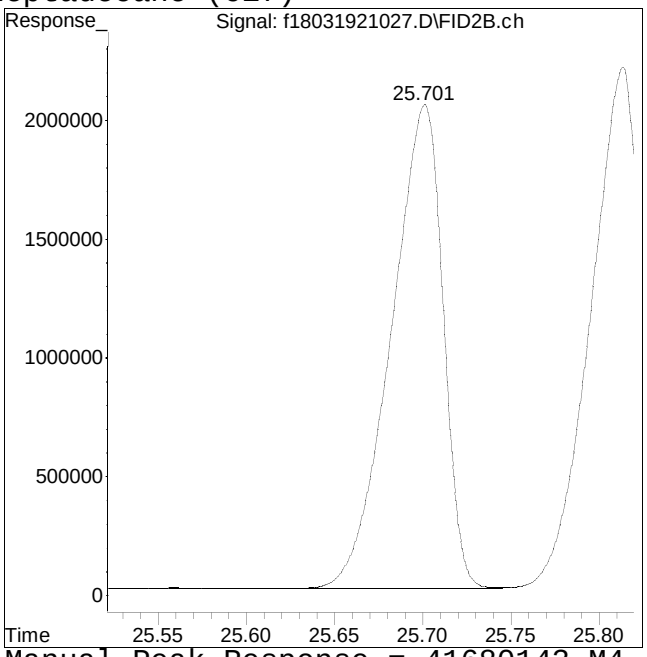
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 41689039



Manual Peak Response = 41680143 M4

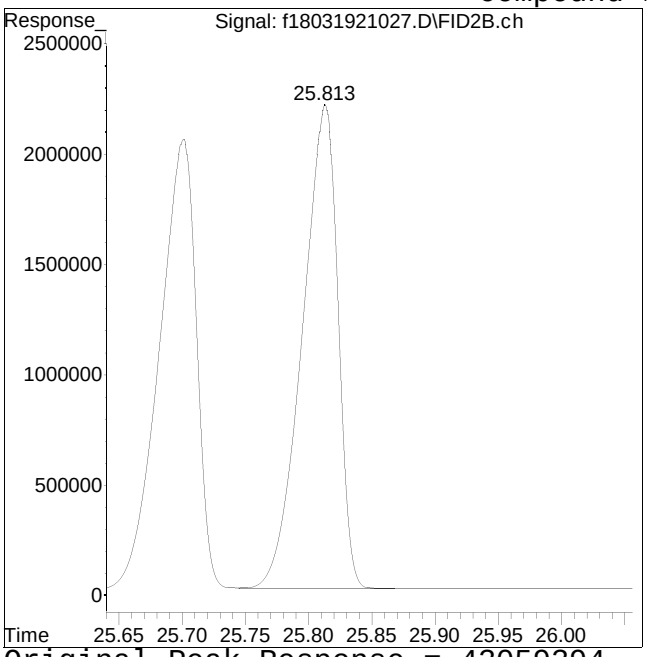
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

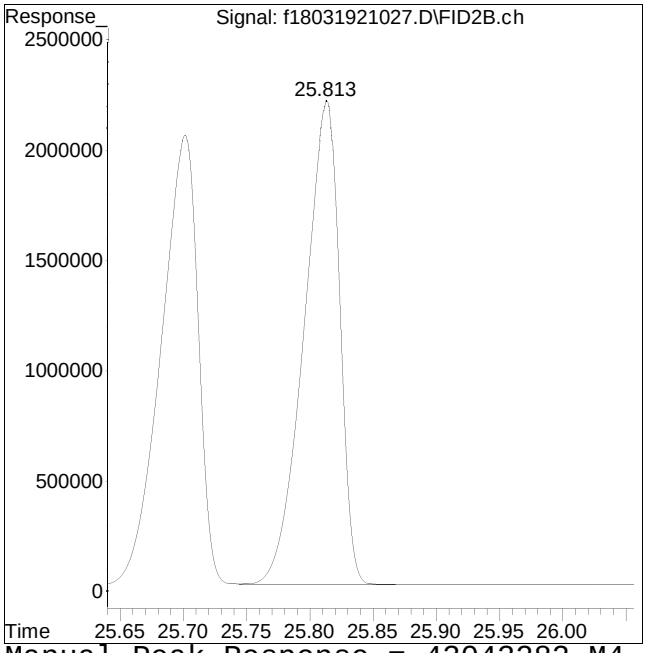
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #15: Pristane



Original Peak Response = 43059394



Manual Peak Response = 43043282 M4

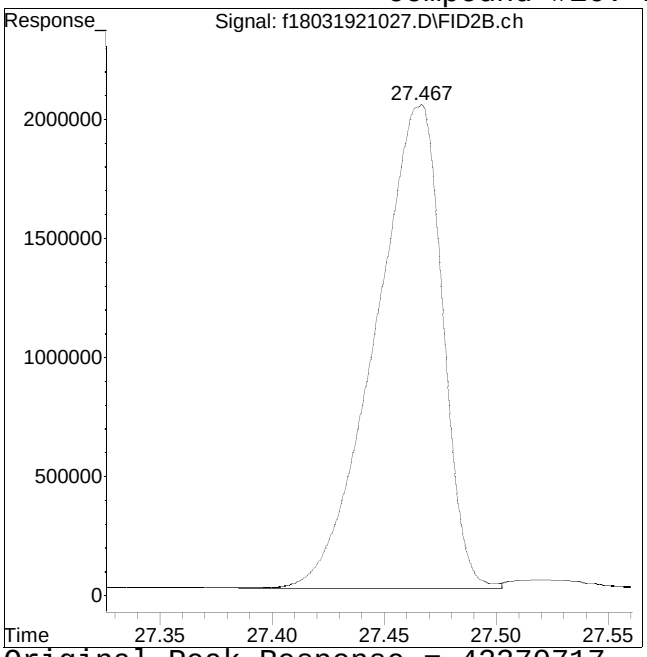
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

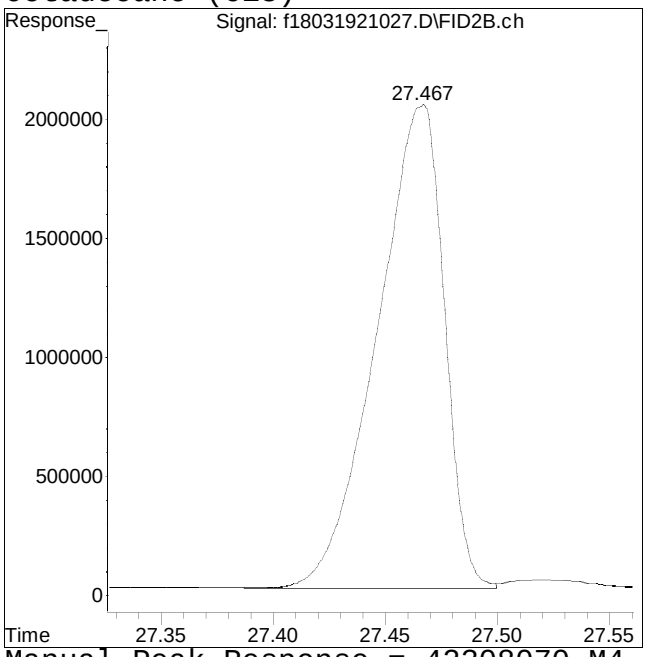
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 42370717



Manual Peak Response = 42308070 M4

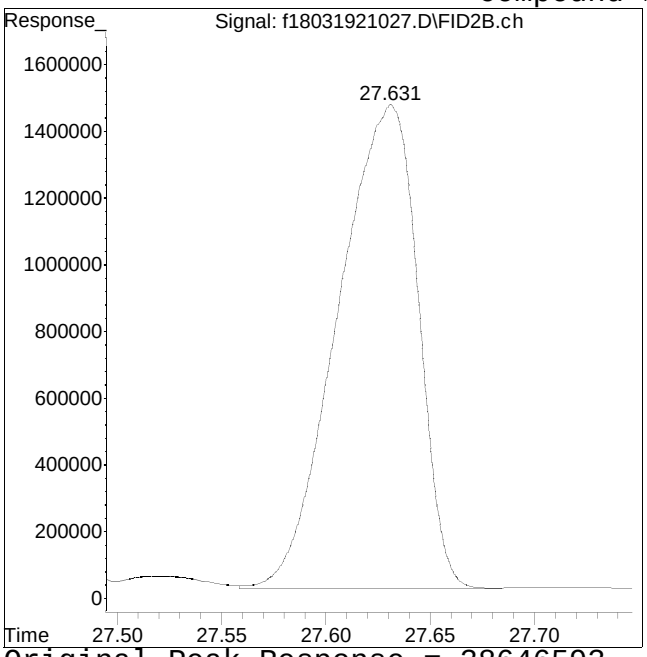
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

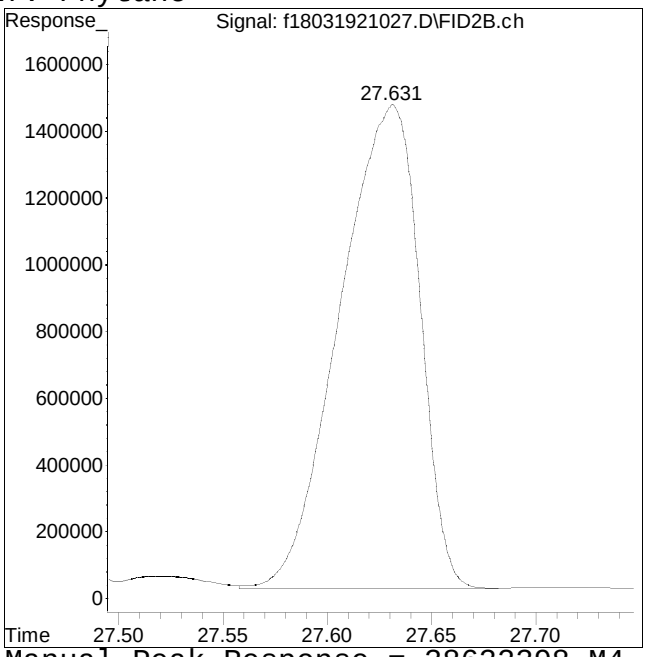
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #17: Phytane



Original Peak Response = 38646593



Manual Peak Response = 38632398 M4

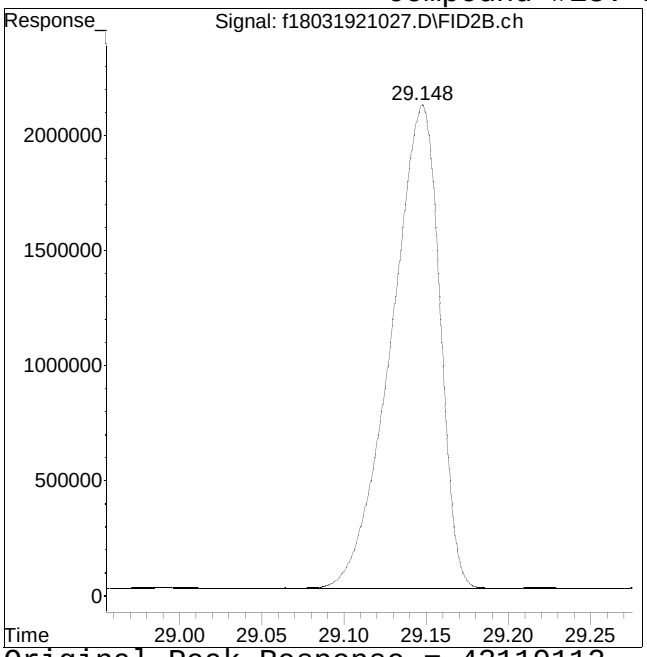
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

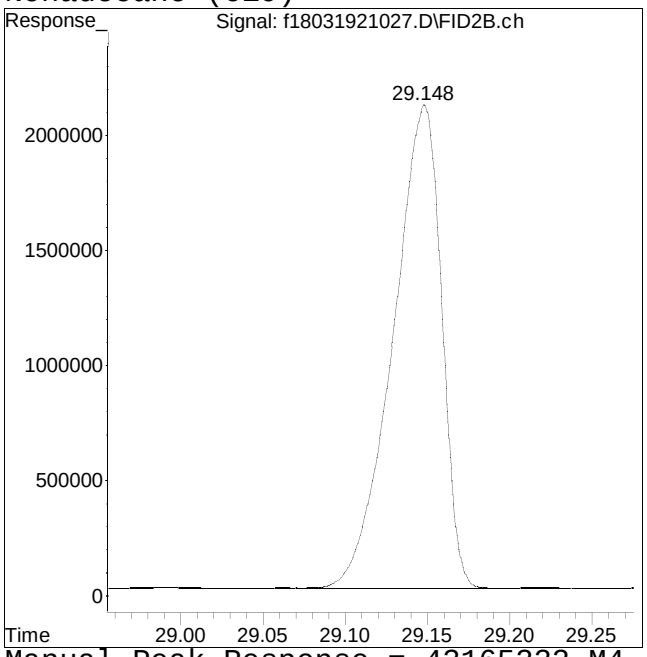
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 43119112



Manual Peak Response = 43165332 M4

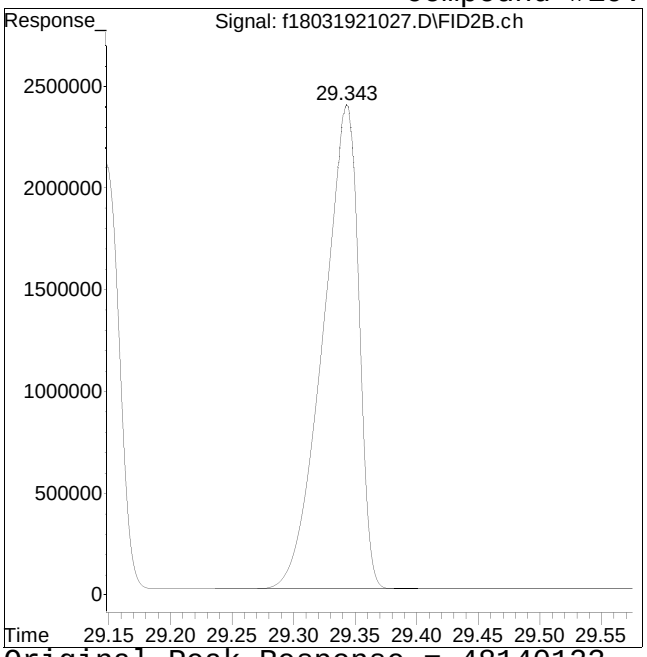
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

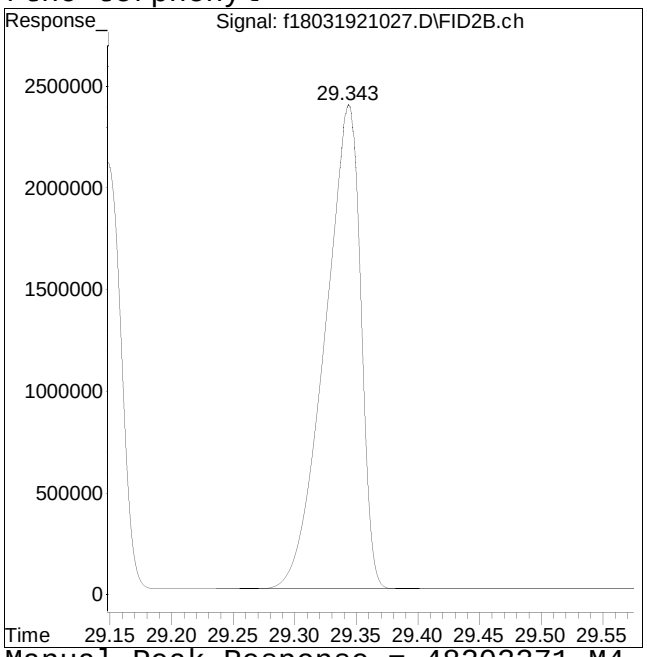
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #19: ortho-terphenyl



Original Peak Response = 48140123



Manual Peak Response = 48203371 M4

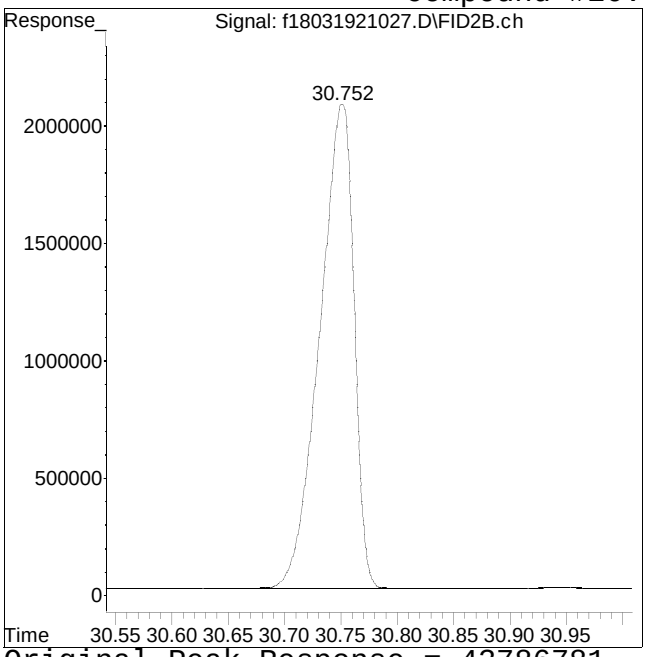
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

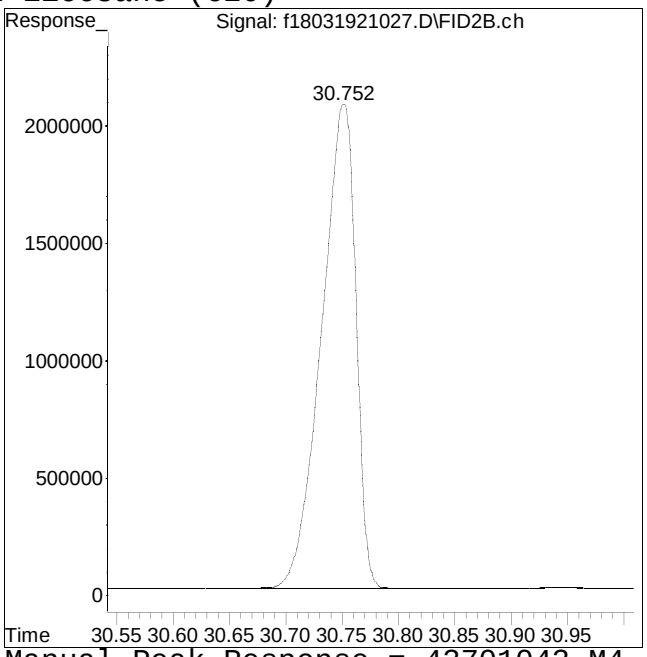
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 43786781



Manual Peak Response = 43701043 M4

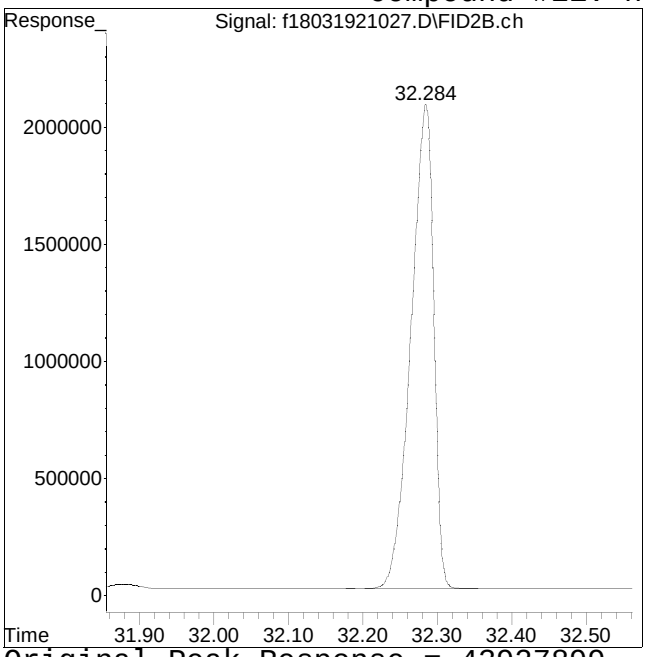
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

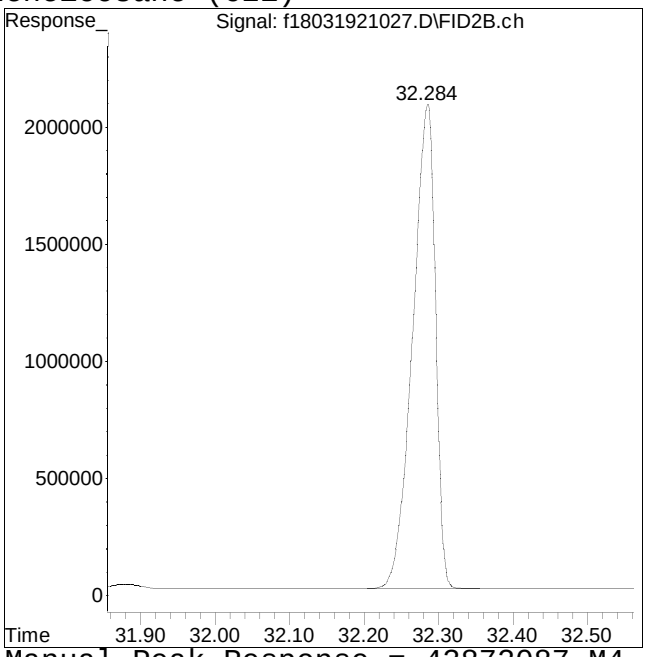
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 43927899



Manual Peak Response = 43872087 M4

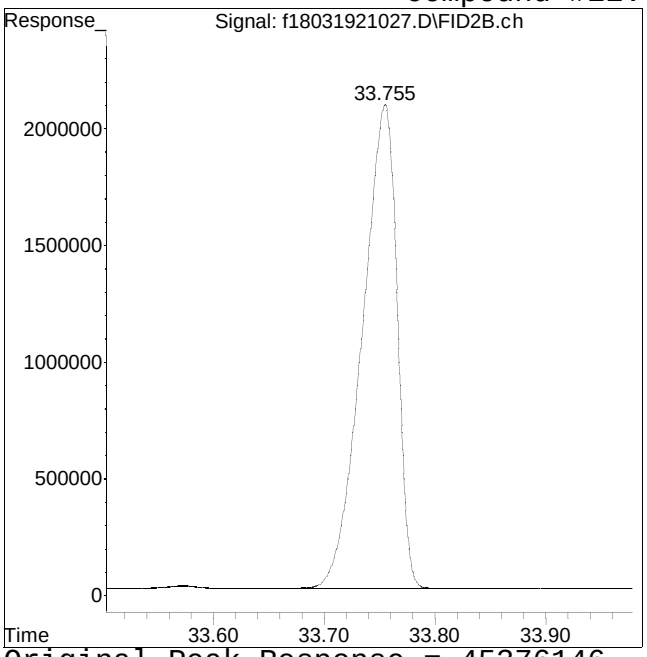
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

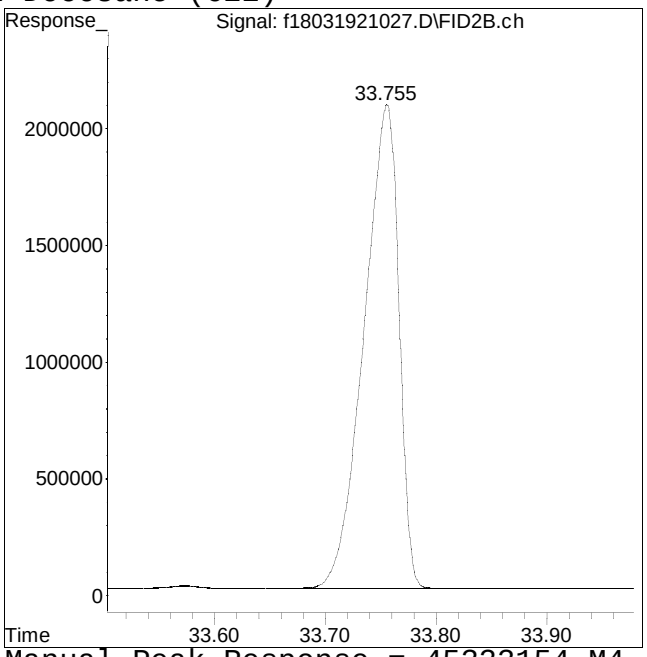
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #22: n-Docosane (C22)



Original Peak Response = 45376146



Manual Peak Response = 45333154 M4

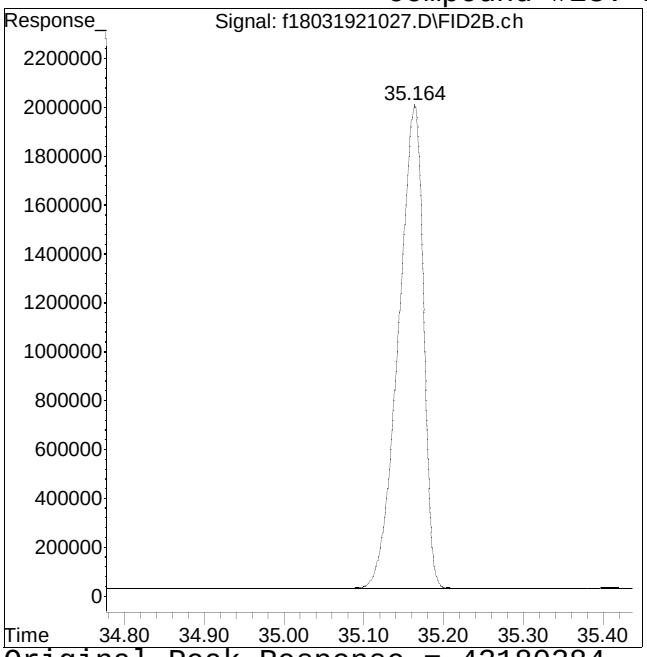
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

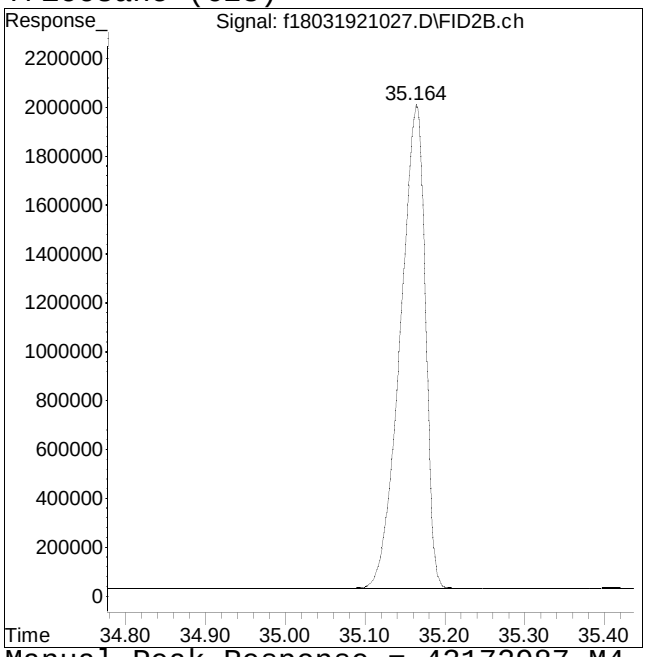
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 43180384



Manual Peak Response = 43172987 M4

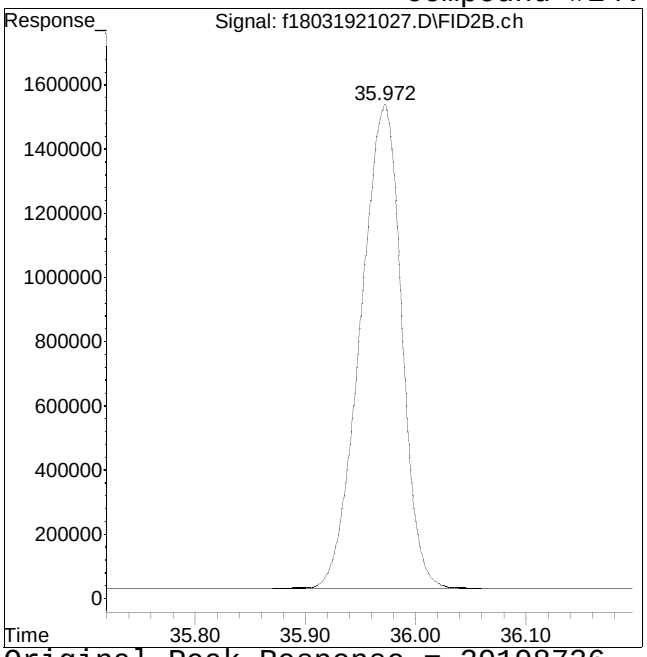
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

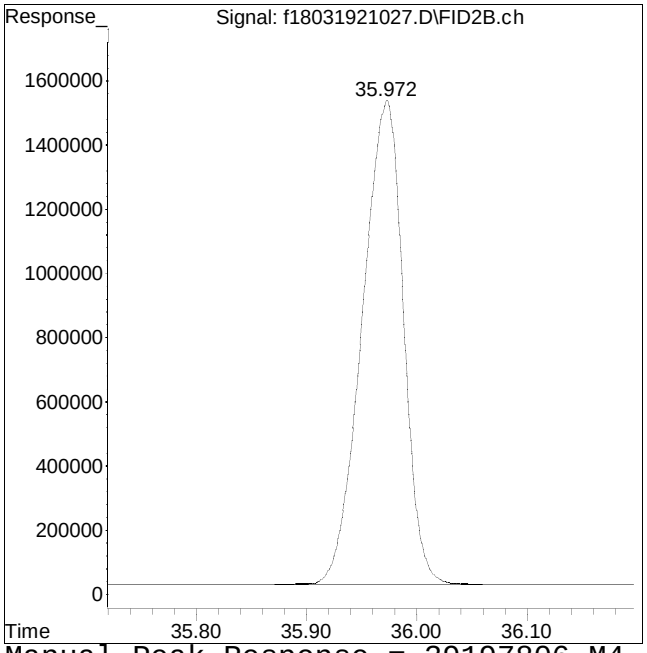
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #24: d50-Tetracosane



Original Peak Response = 39198736



Manual Peak Response = 39197806 M4

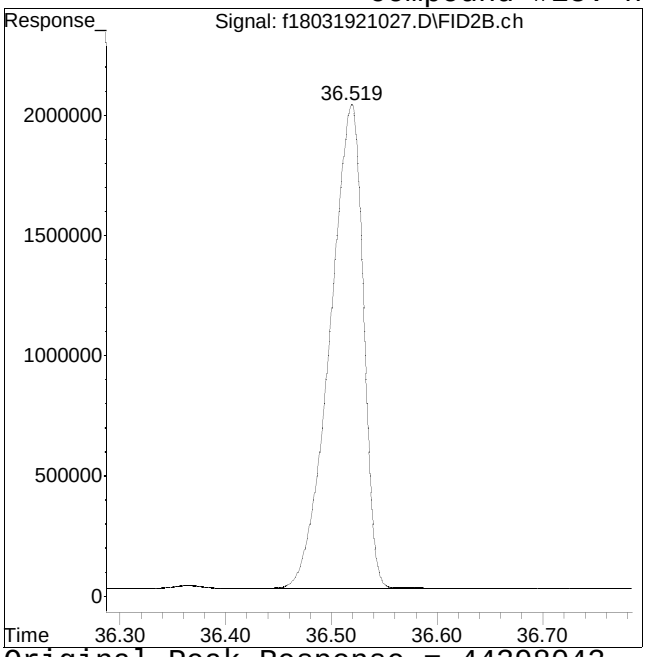
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

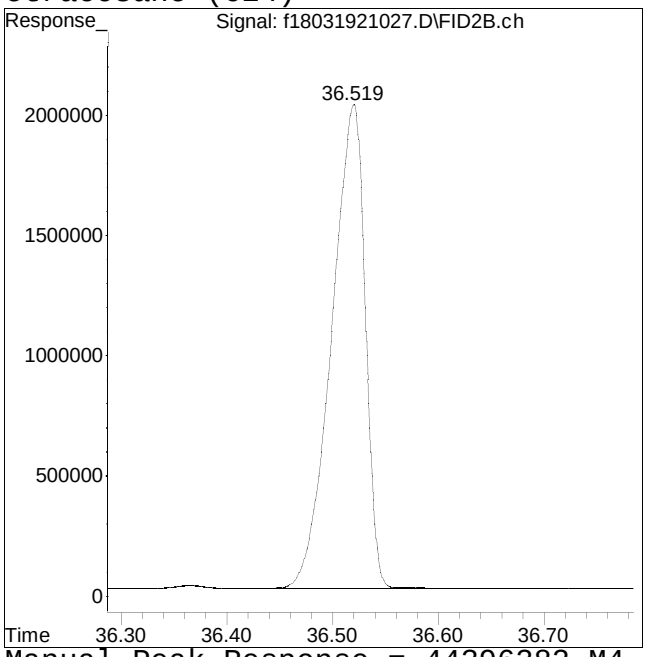
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 44398043



Manual Peak Response = 44396382 M4

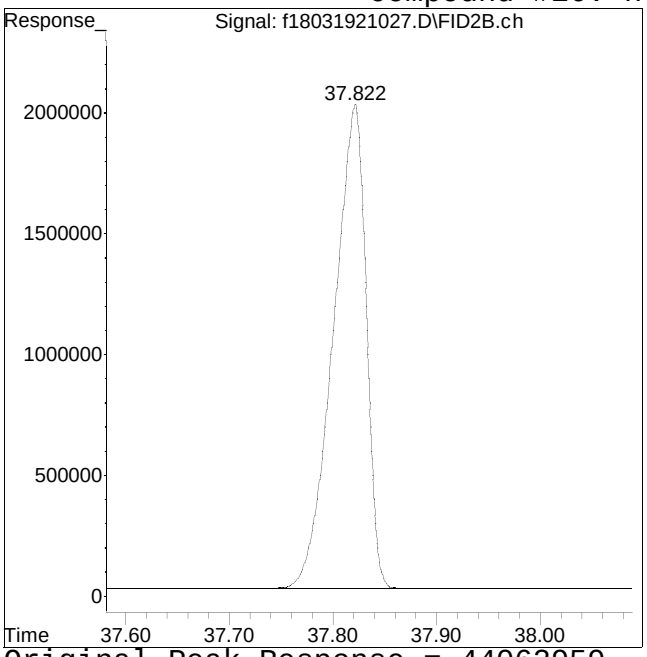
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

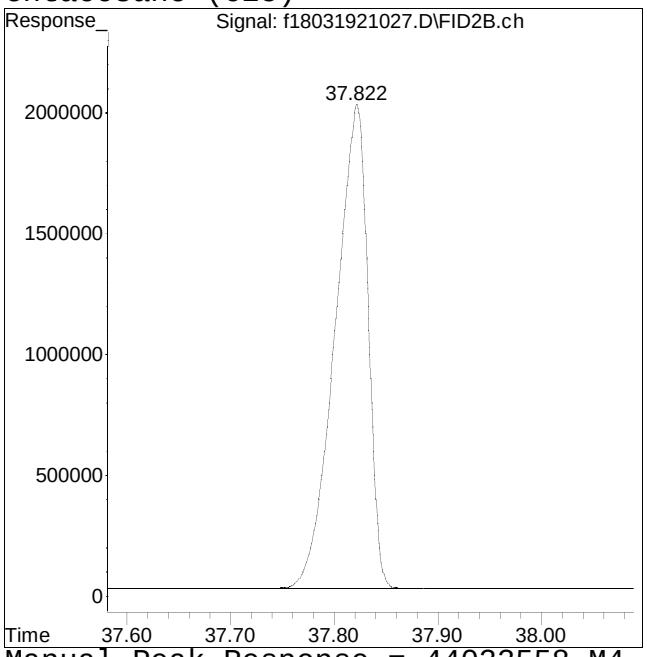
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 44062959



Manual Peak Response = 44033558 M4

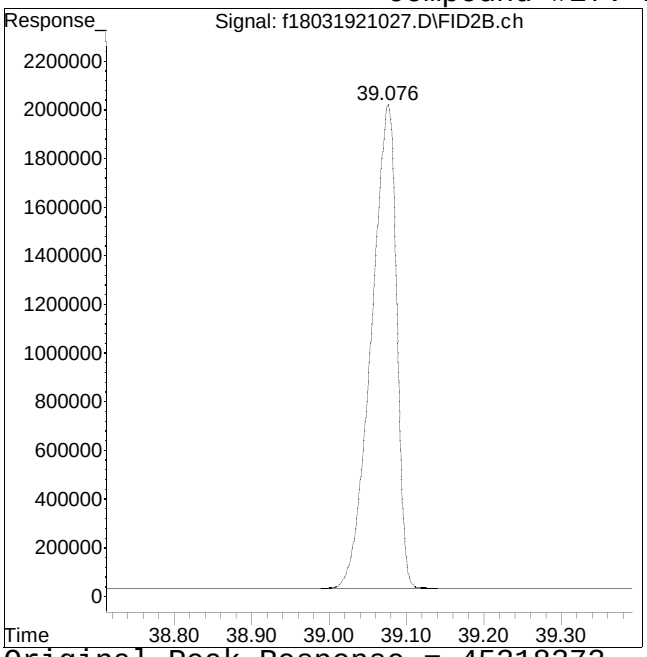
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

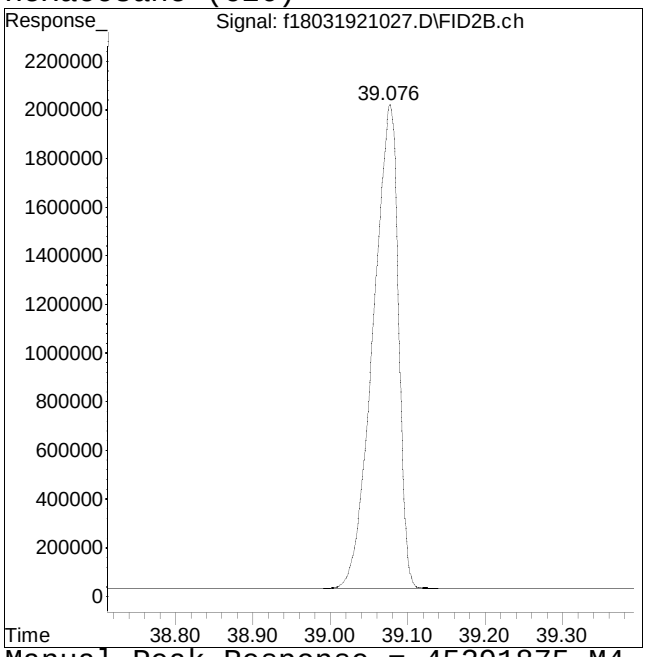
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 45318373



Manual Peak Response = 45291875 M4

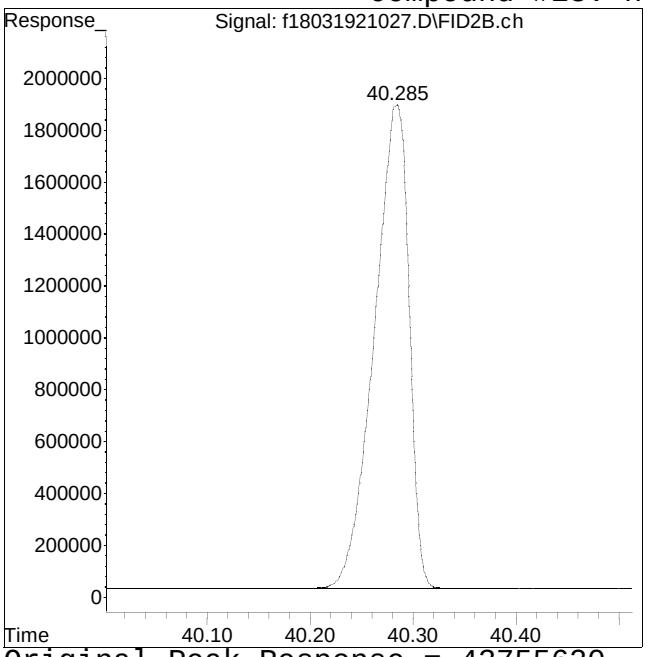
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

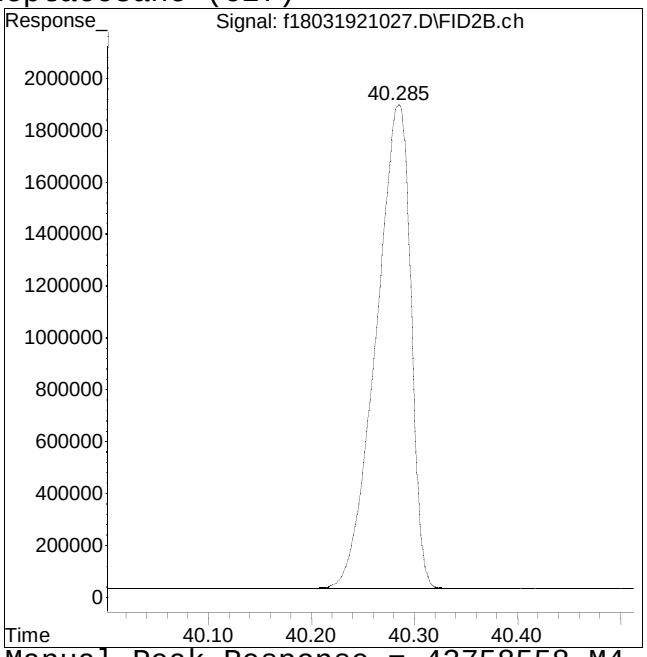
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 43755620



Manual Peak Response = 43758558 M4

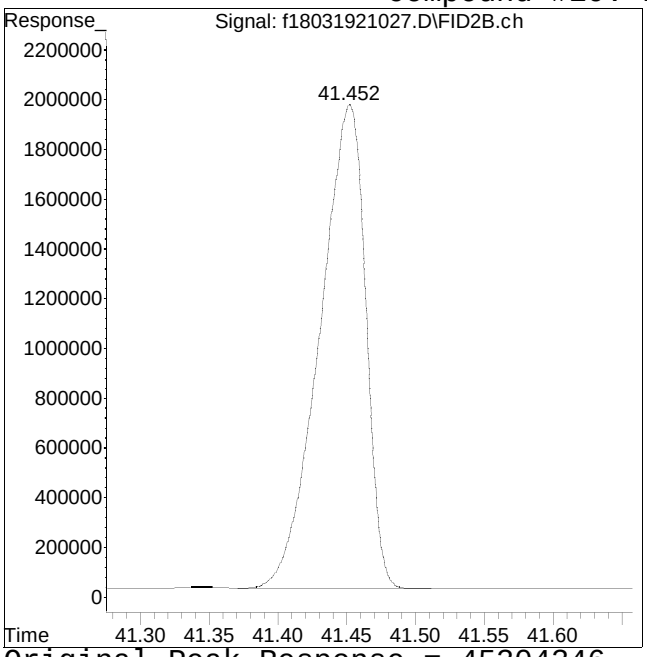
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

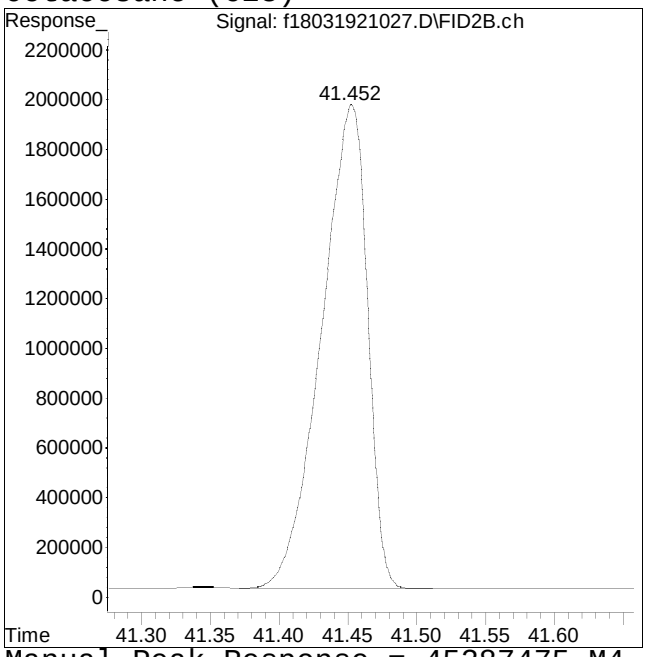
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 45304346



Manual Peak Response = 45287475 M4

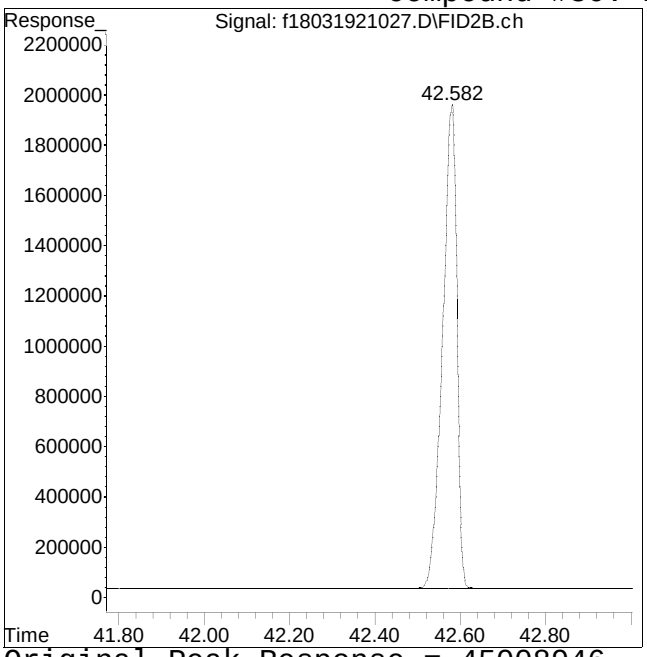
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

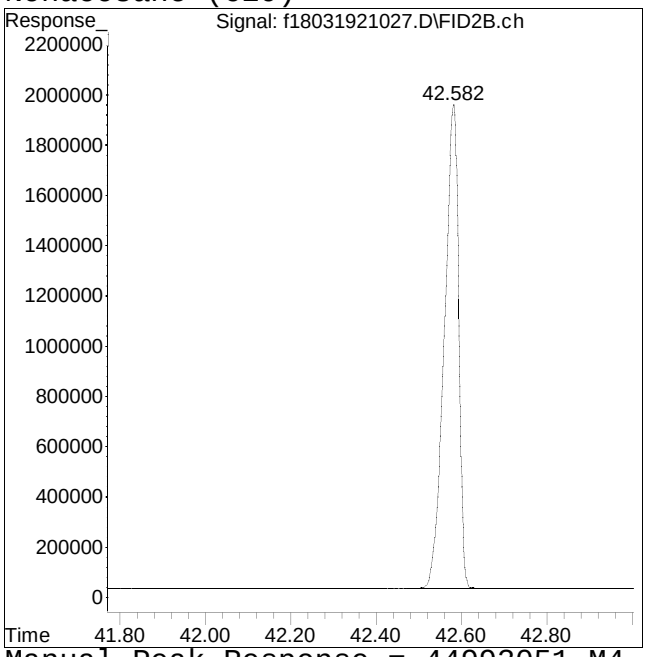
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 45008946



Manual Peak Response = 44993051 M4

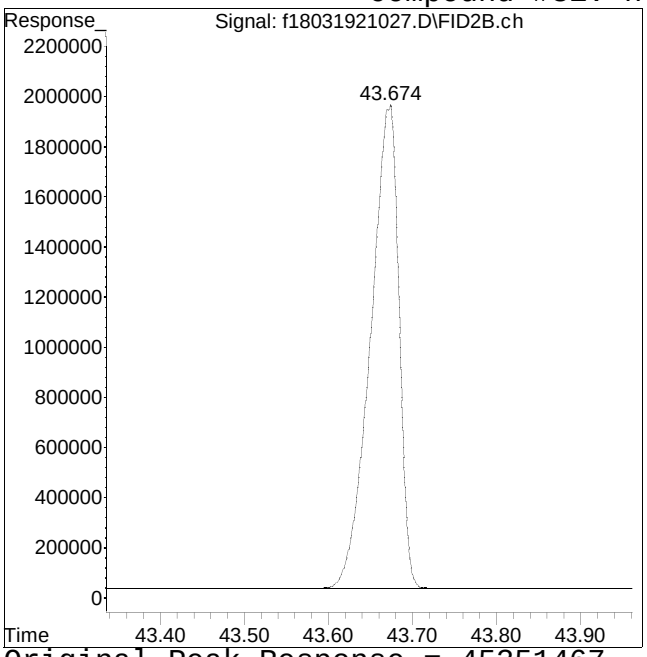
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

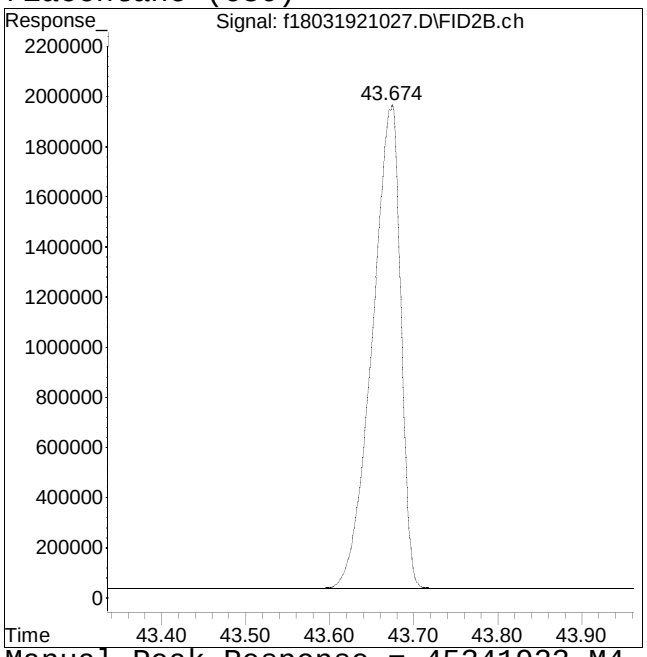
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 45351467



Manual Peak Response = 45341923 M4

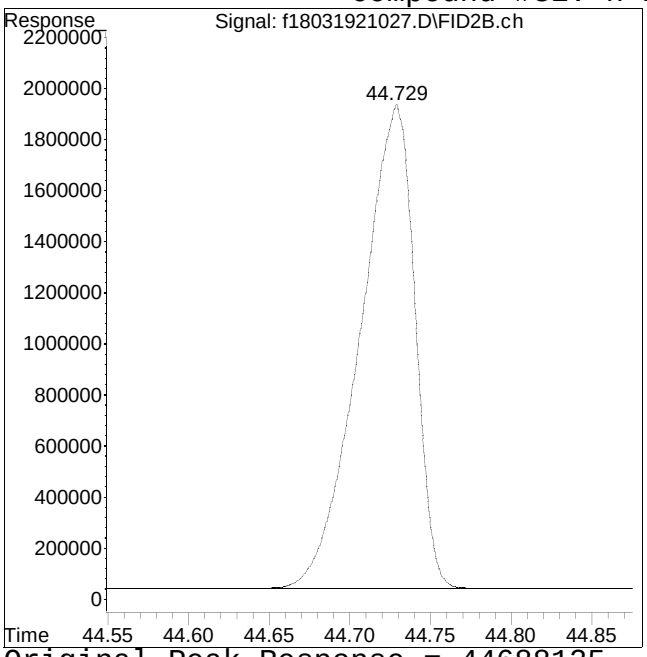
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

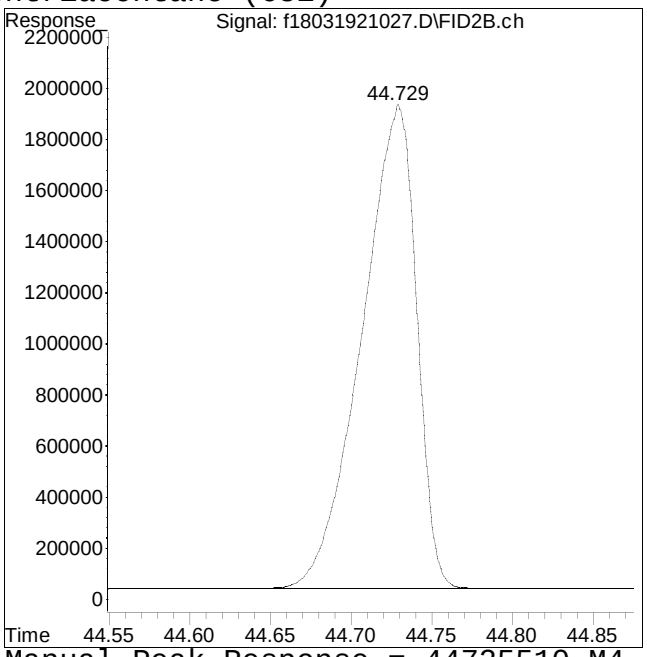
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 44688125



Manual Peak Response = 44725510 M4

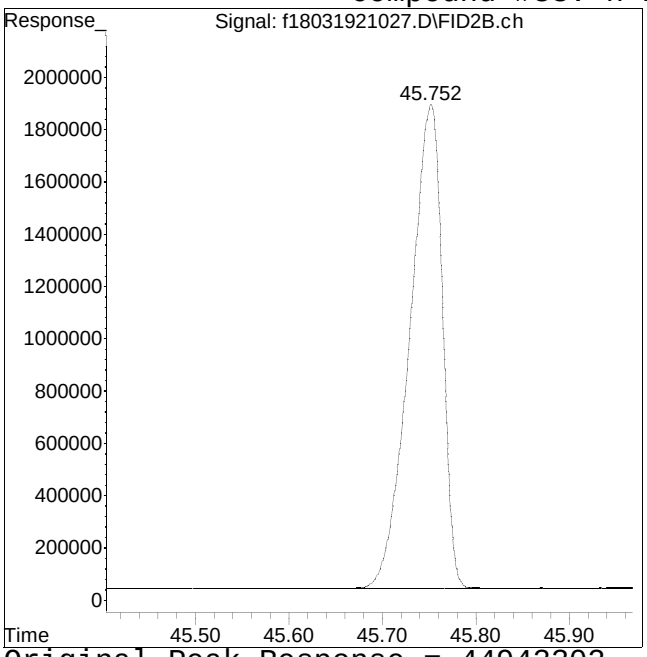
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

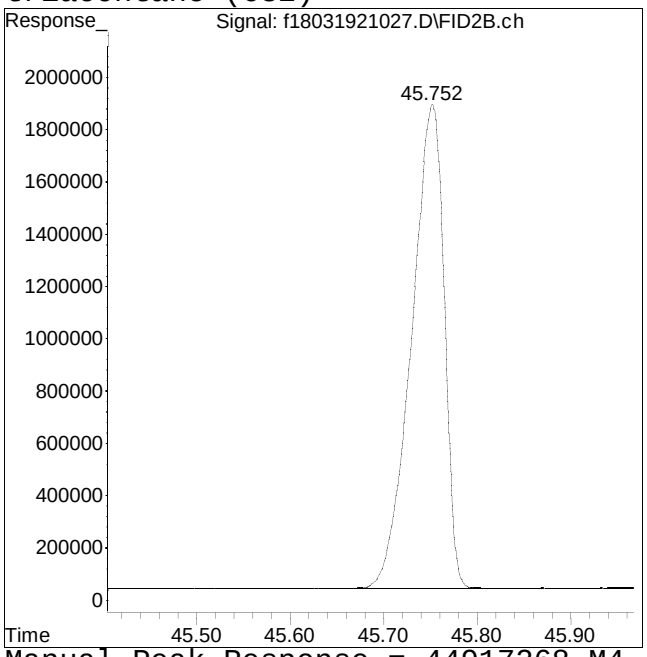
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 44943302



Manual Peak Response = 44917268 M4

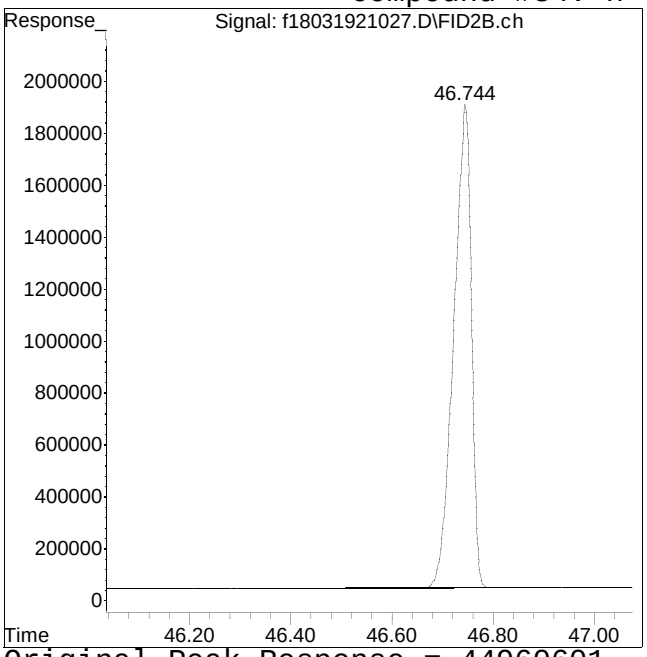
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

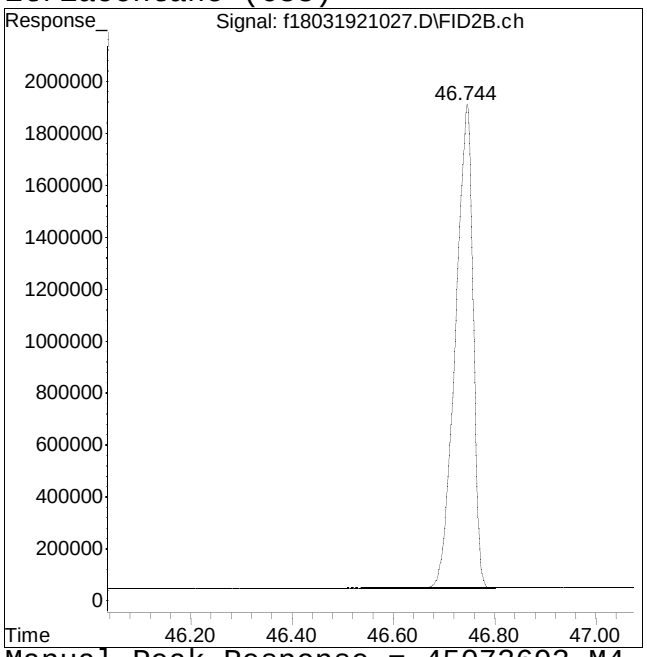
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 44960601



Manual Peak Response = 45073693 M4

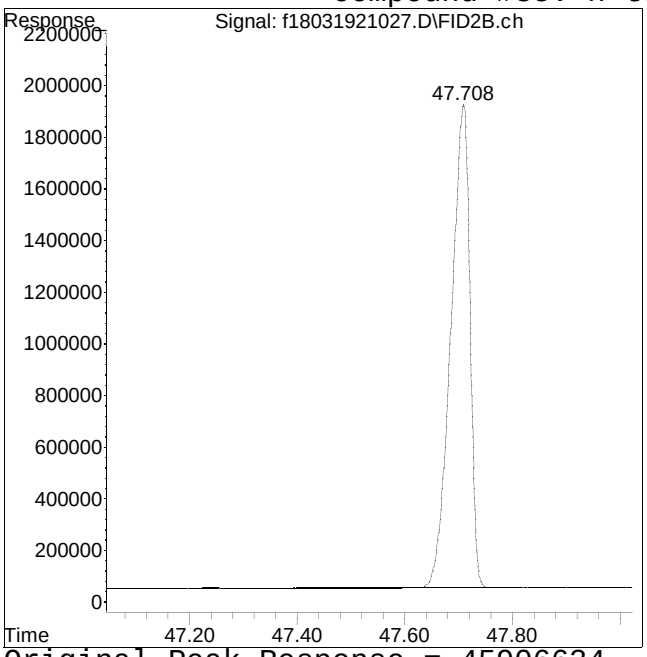
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

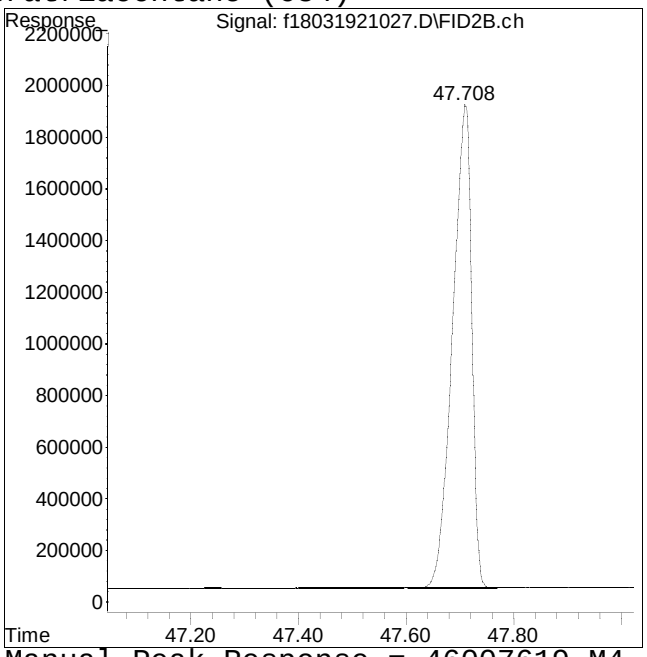
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 45906634



Manual Peak Response = 46007619 M4

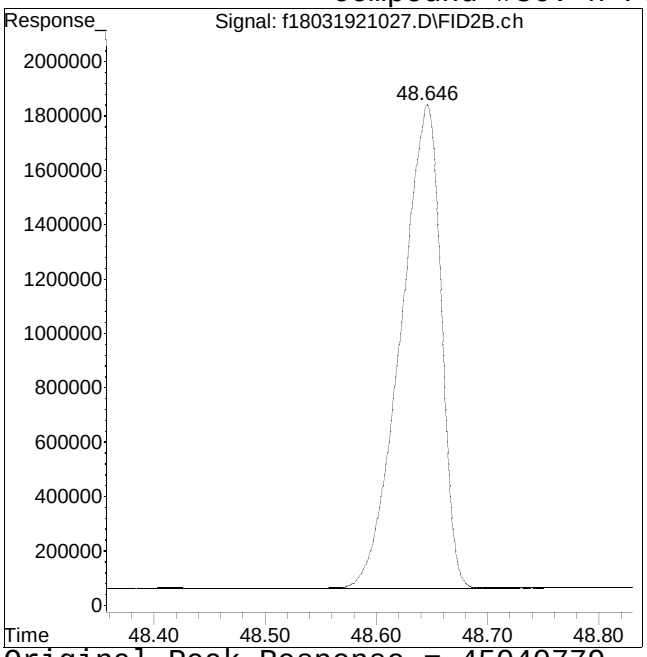
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

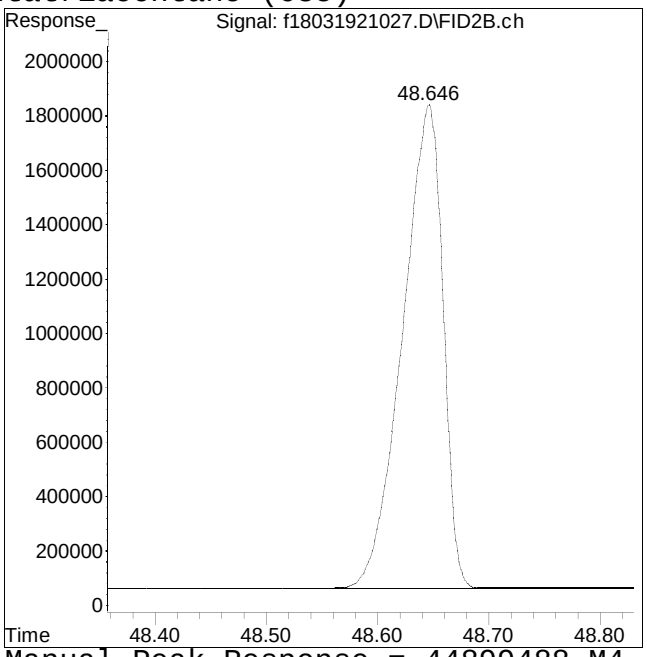
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 45040779



Manual Peak Response = 44899488 M4

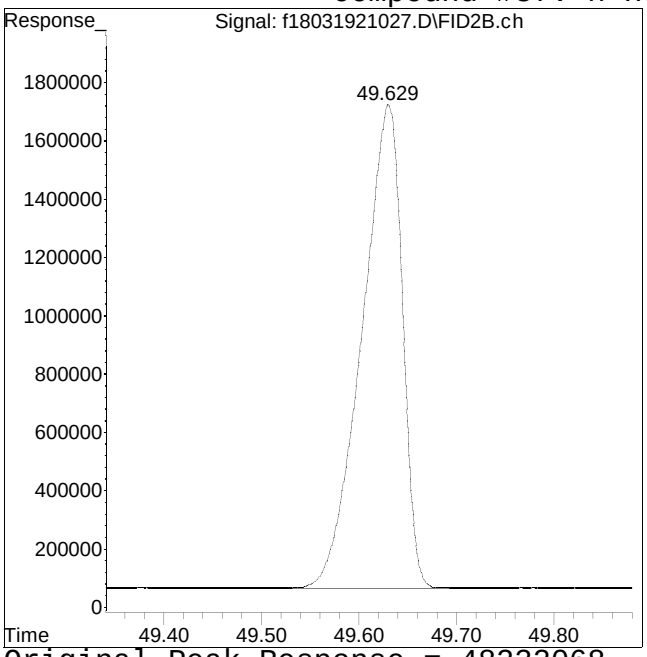
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

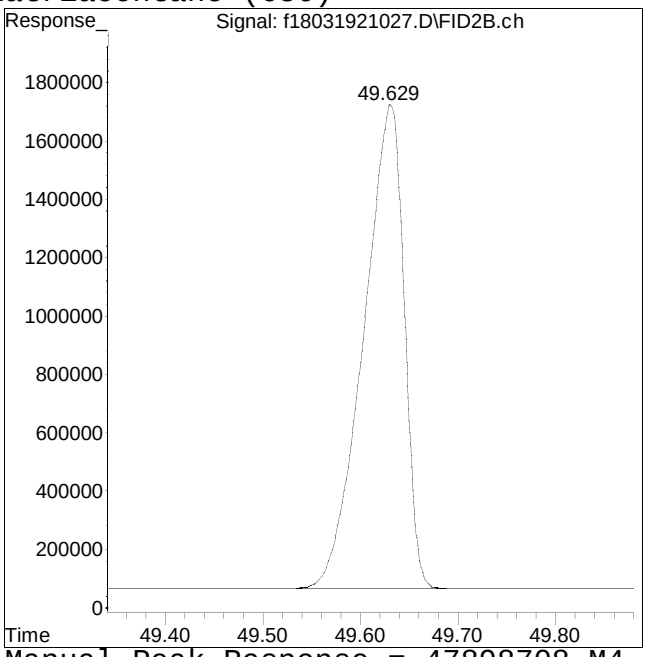
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 48232068



Manual Peak Response = 47898708 M4

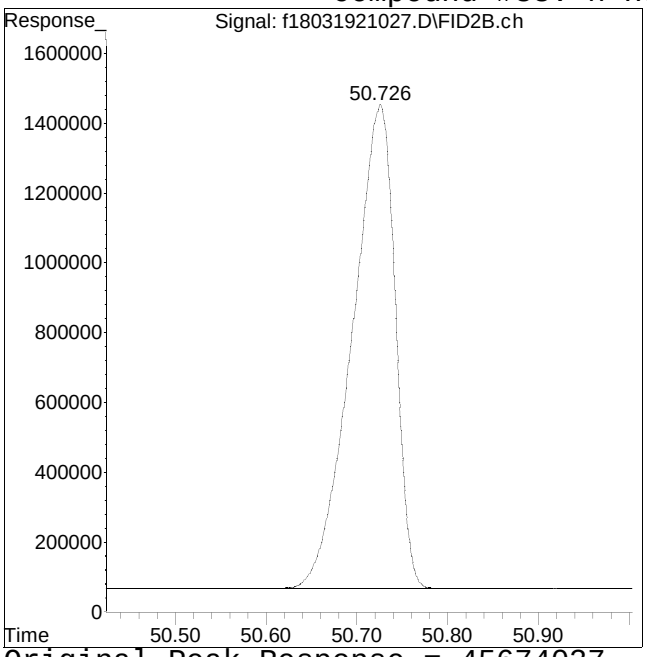
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

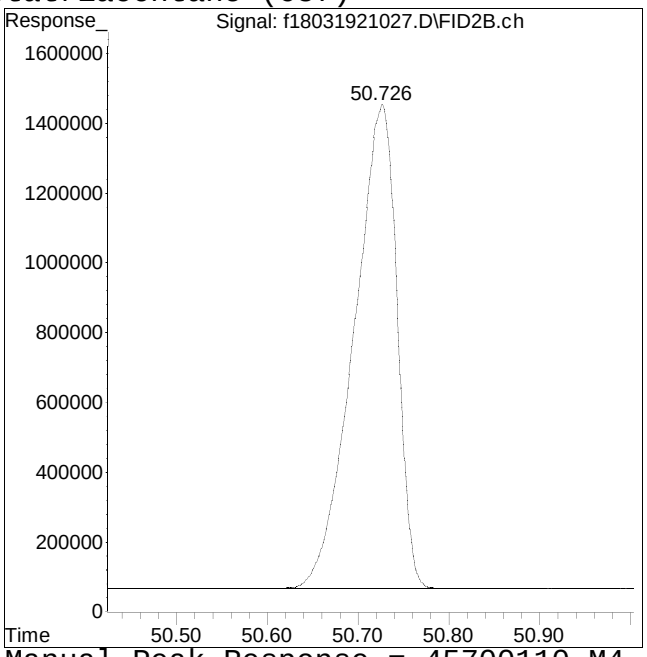
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 45674037



Manual Peak Response = 45700110 M4

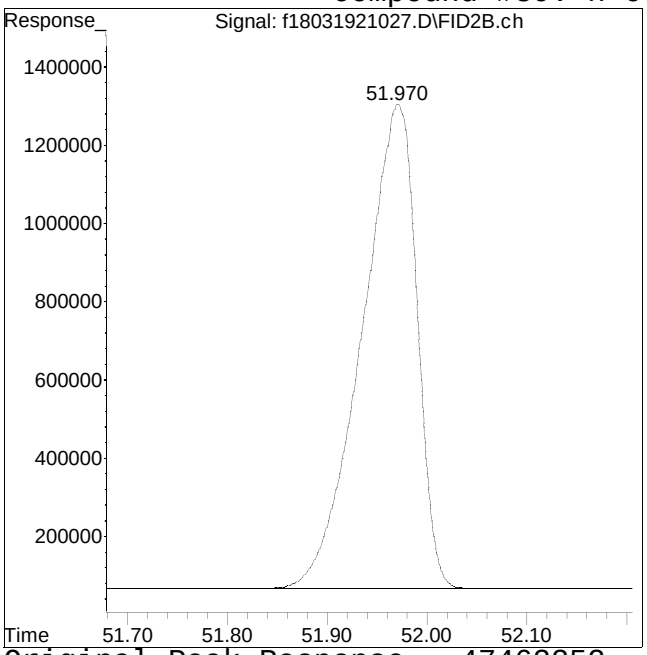
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

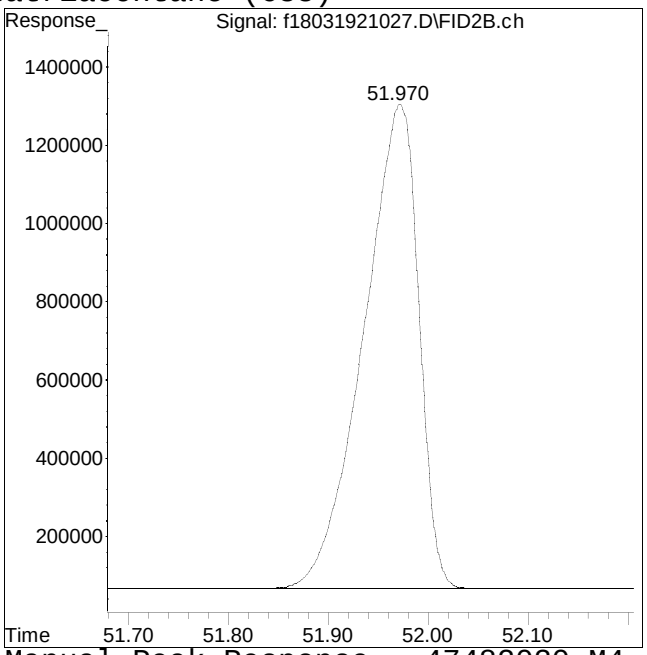
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 47462252



Manual Peak Response = 47482030 M4

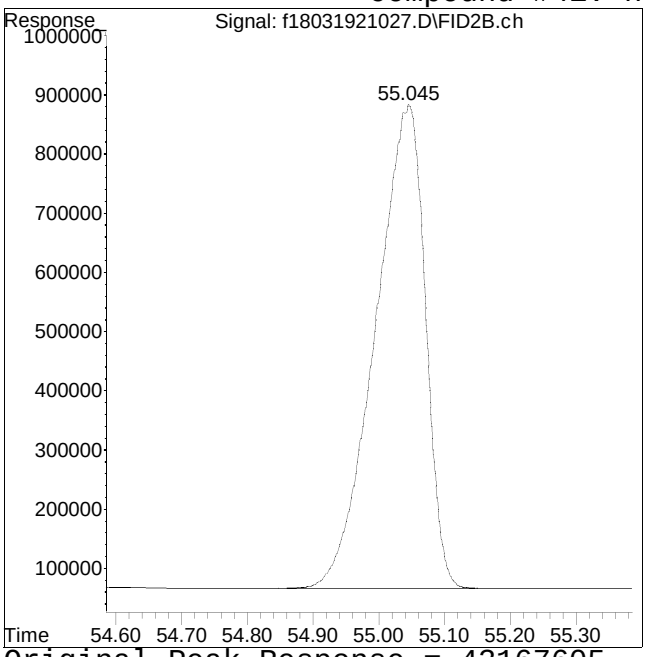
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

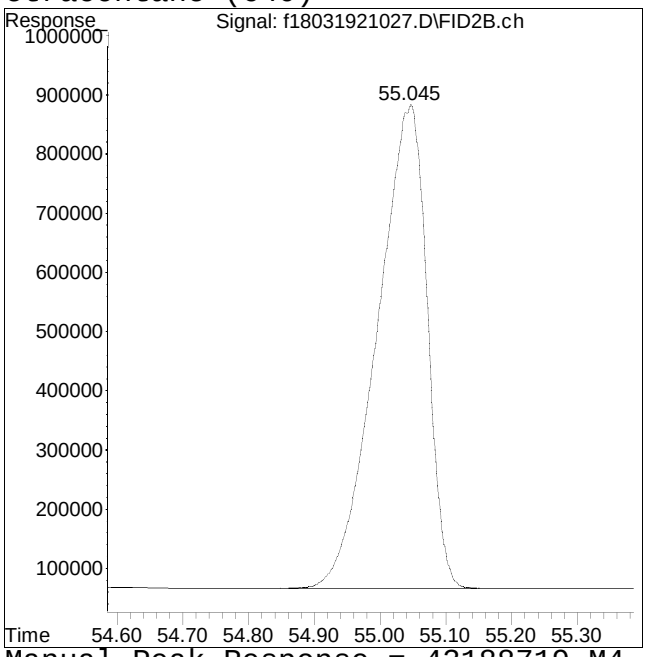
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18031921027.D
Date Inj'd : 3/20/2021 11:29 __
Sample : CQ1803192101R

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 3/26/2021 11:36 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 43167605



Manual Peak Response = 43188719 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR24.SEC\
Data File : f18032421001.D
Signal(s) : FID2B.ch
Acq On : 24 Mar 2021 15:51
Operator : FID18:WR
Sample : WG1479204-1,0.10054
Misc : WG1479204,FRBD62
ALS Vial : 51 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Apr 08 15:29:59 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Apr 08 15:22:59 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1803242101R
Blank File : f18032421005.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.331	43063701	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.317	40785838	42.494 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	84.99%
24) s	d50-Tetracosane	35.950	37765134	48.752 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	97.50%
	Target Compounds			
2) t	n-Octane (C8)	5.666	84691445	123.535 ug/mL M4
3) t	n-Nonane (C9)	7.898	57893194	78.252 ug/mL M4
4) t	n-Decane (C10)	10.390	48335940	60.734 ug/mL M4
5) t	n-Undecane (C11)	12.903	43900291	55.129 ug/mL M4
6) t	n-Dodecane (C12)	15.327	39076371	48.399 ug/mL M4
7) t	n-Tridecane (C13)	17.631	34775100	42.989 ug/mL M4
8) t	1380	19.303	8154936	9.805 ug/mL M4
9) t	n-Tetradecane (C14)	19.809	31400176	37.754 ug/mL M4
10) t	1470	21.091	11546538	13.833 ug/mL M4
11) t	n-Pentadecane (C15)	21.870	36014636	43.147 ug/mL M4
12) t	n-Hexadecane (C16)	23.822	28128235	34.111 ug/mL M4
13) t	1650	24.727	9084882	10.893 ug/mL M4
14) t	n-Heptadecane (C17)	25.676	25256393	30.284 ug/mL M4
15) t	Pristane	25.773	19691869	22.734 ug/mL M4
16) t	n-Octadecane (C18)	27.438	21946498	26.105 ug/mL M4
17) t	Phytane	27.598	10770952	13.613 ug/mL M4
18) t	n-Nonadecane (C19)	29.118	20597151	24.297 ug/mL M4
20) t	n-Eicosane (C20)	30.720	19812935	23.216 ug/mL M4
21) t	n-Heneicosane (C21)	32.254	18453963	21.377 ug/mL M4
22) t	n-Docosane (C22)	33.722	17403803	19.949 ug/mL M4
23) t	n-Tricosane (C23)	35.129	15340483	17.697 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR24.SEC\
Data File : f18032421001.D
Signal(s) : FID2B.ch
Acq On : 24 Mar 2021 15:51
Operator : FID18:WR
Sample : WG1479204-1,0.10054
Misc : WG1479204,FRBD62
ALS Vial : 51 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Apr 08 15:29:59 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Apr 08 15:22:59 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1803242101R
Blank File : f18032421005.D

Sub List : SHC - SHC

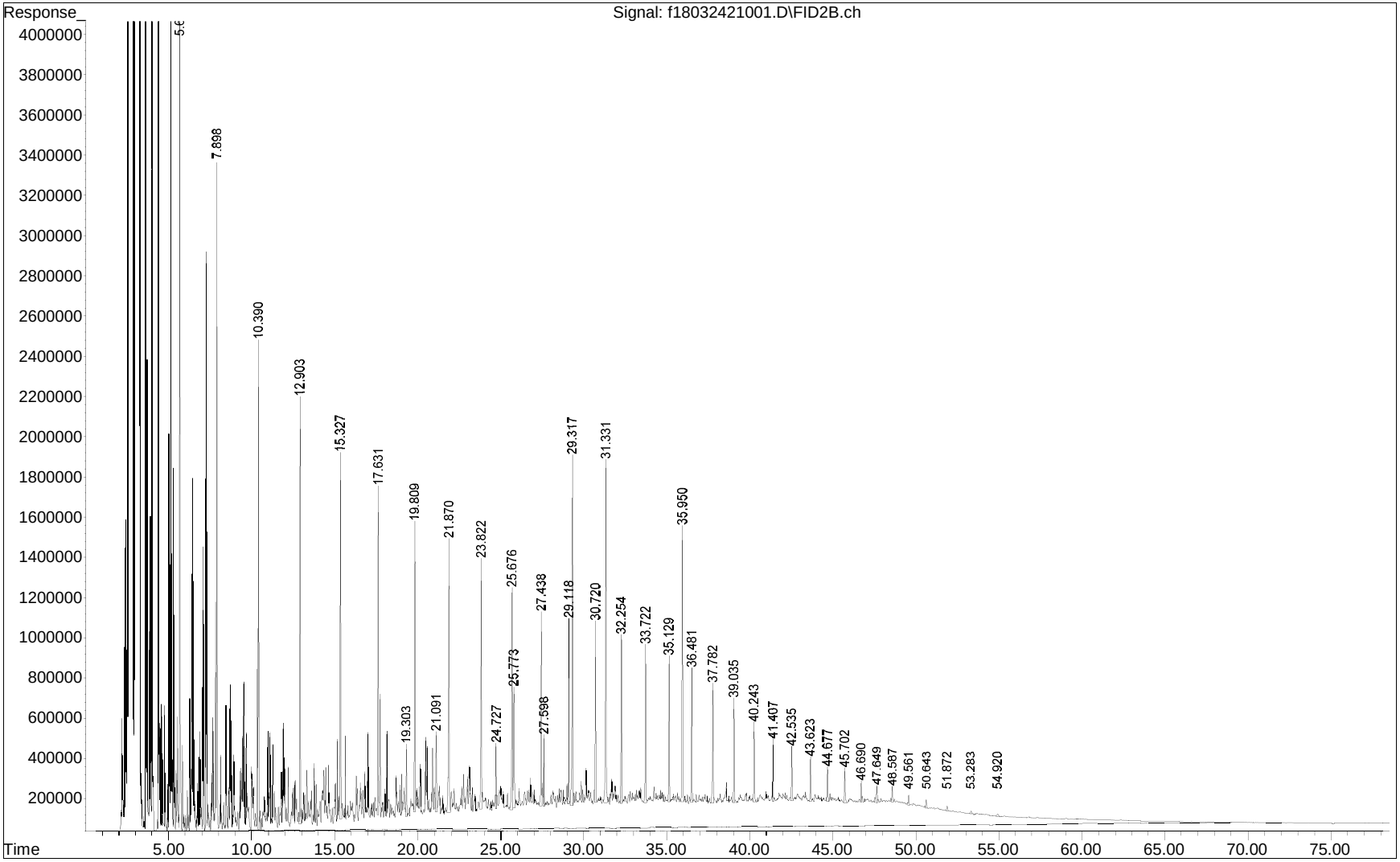
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	36.481	14237309	16.462	ug/mL	M4
26) t	n-Pentacosane (C25)	37.782	14676079	17.117	ug/mL	M4
27) t	n-Hexacosane (C26)	39.035	12015840	13.625	ug/mL	M4
28) t	n-Heptacosane (C27)	40.243	9383769	10.558	ug/mL	M4
29) t	n-Octacosane (C28)	41.407	6732547	7.443	ug/mL	M4
30) t	n-Nonacosane (C29)	42.535	6860983	7.634	ug/mL	M4
31) t	n-Triacontane (C30)	43.623	5221010	5.764	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.677	4239388	4.827	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.702	4842308	5.266	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.690	2400290	2.680	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.649	2534051	2.828	ug/mL	M4
36) t	n-Pentatriacontane (C35)	48.587	2296085	2.727	ug/mL	M4
37) t	n-Hexatriacontane (C36)	49.561f	1478002	1.460	ug/mL	M4
38) t	n-Heptatriacontane (C37)	50.643	1468403	1.592	ug/mL	M4
39) t	n-Octatriacontane (C38)	51.872	923335	0.989	ug/mL	M4
40) t	n-Nonatriacontane (C39)	53.283	633316	0.688	ug/mL	M4
41) t	n-Tetracontane (C40)	54.920	634181	0.689	ug/mL	M4
42) h	C9-C44 Total Petroleu...	36.374	5630452527	6520.248	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.374	4922363446	5700.258	ug/mL	m
46) h	Total Resolved Hydroc...	37.870	1779609239	2060.846	ug/mL	m

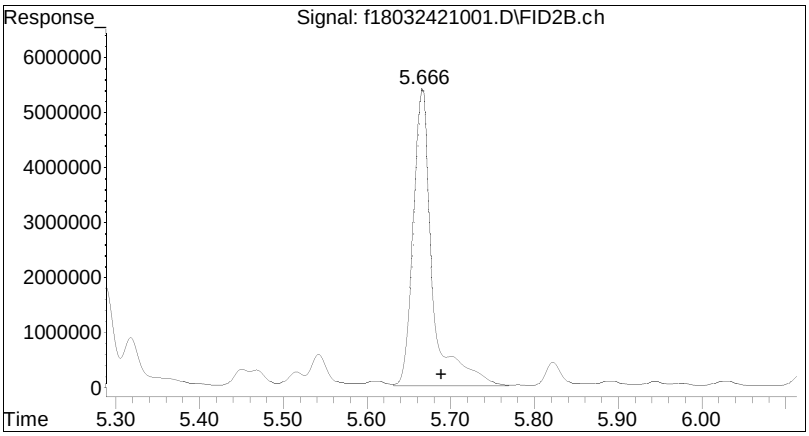
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

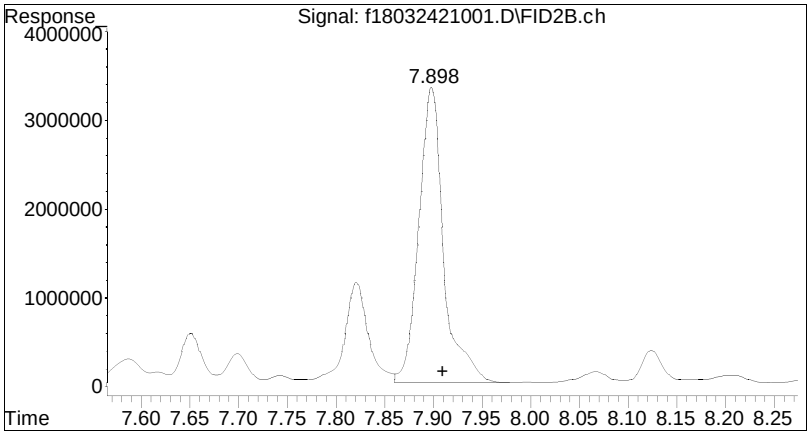
File :O:\Forensics\Data\FID18\2021\MAR\MAR24.SEC\f18032421001.D
Operator : FID18:WR
Acquired : 24 Mar 2021 15:51 using AcqMethod FID18.M
Sample Name: WG1479204-1,0.10054
Instrument: FID 18
Misc Info : WG1479204,FRBD62
Vial Number: 51
CurrentMeth: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M





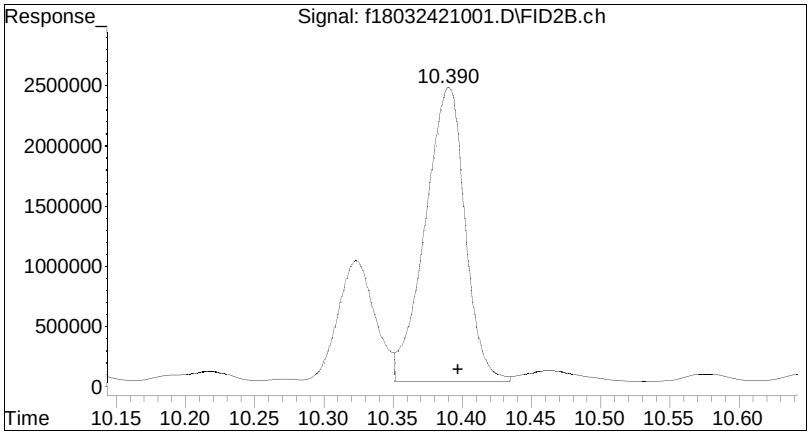
#2 n-Octane (C8)

R.T.: 5.666 min
Delta R.T.: -0.023 min
Response: 84691445
Conc: 123.54 ug/mL M4



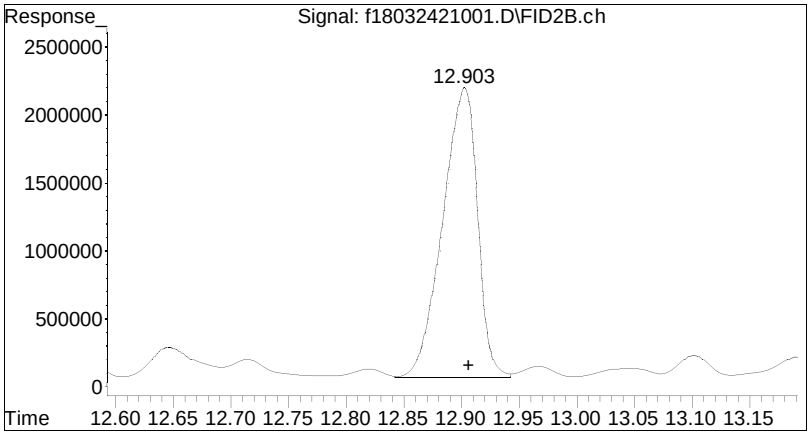
#3 n-Nonane (C9)

R.T.:	7.898 min
Delta R.T.:	-0.011 min
Response:	57893194
Conc:	78.25 ug/mL M4



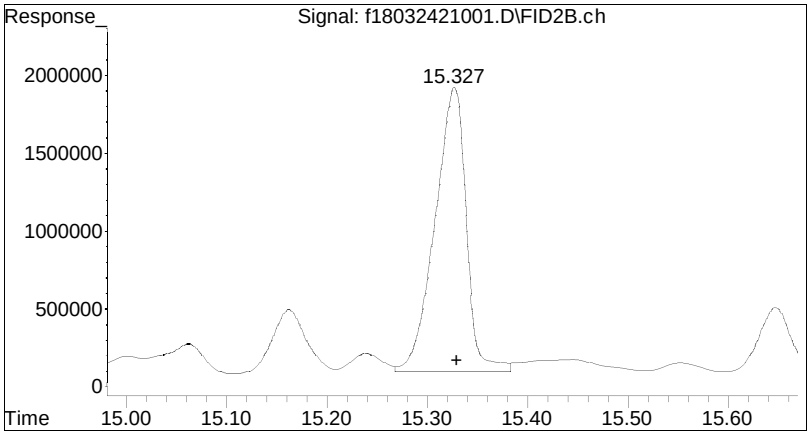
#4 n-Decane (C10)

R.T.: 10.390 min
Delta R.T.: -0.007 min
Response: 48335940
Conc: 60.73 ug/mL M4



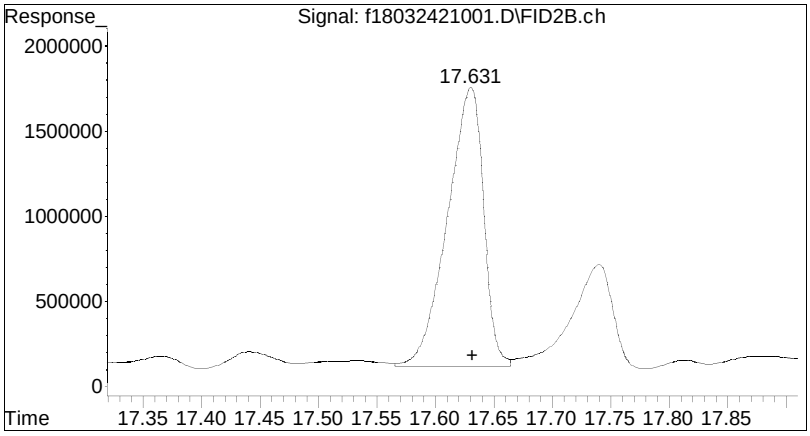
#5 n-Undecane (C11)

R.T.: 12.903 min
Delta R.T.: -0.004 min
Response: 43900291
Conc: 55.13 ug/mL M4



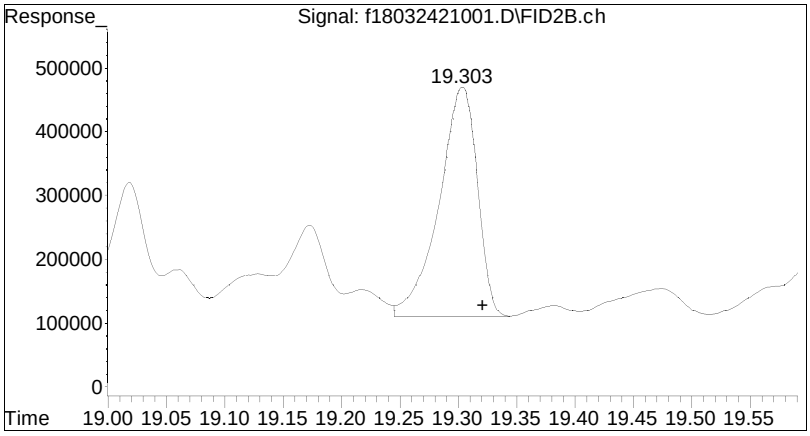
#6 n-Dodecane (C12)

R.T.: 15.327 min
Delta R.T.: -0.003 min
Response: 39076371
Conc: 48.40 ug/mL M4



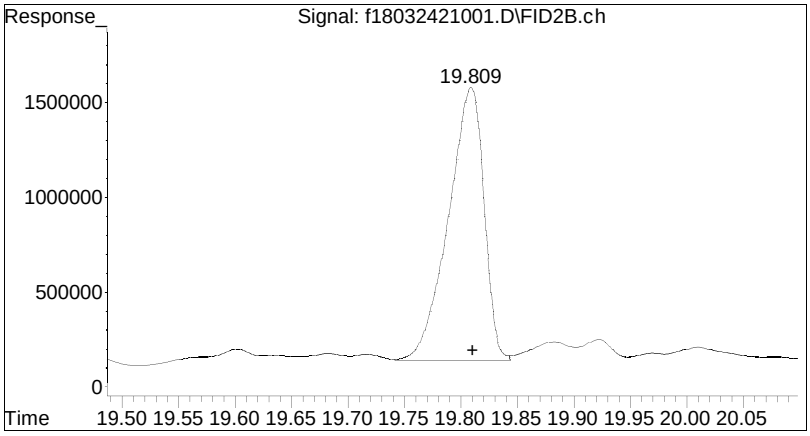
#7 n-Tridecane (C13)

R.T.:	17.631 min
Delta R.T.:	-0.001 min
Response:	34775100
Conc:	42.99 ug/mL M4



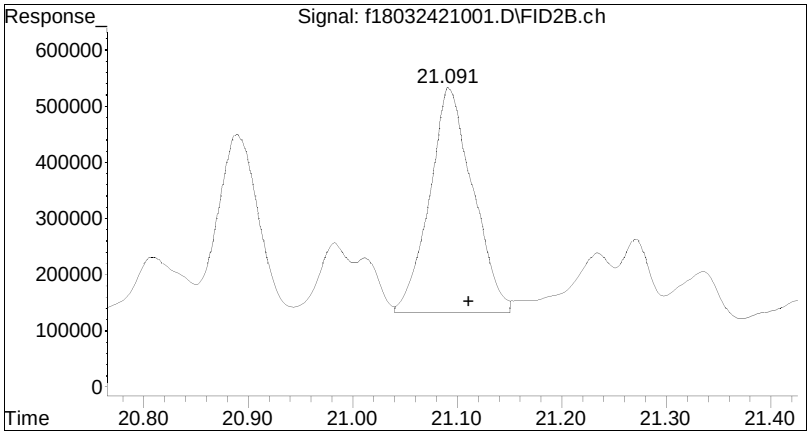
#8 1380

R.T.:	19.303 min
Delta R.T.:	-0.018 min
Response:	8154936
Conc:	9.81 ug/mL M4



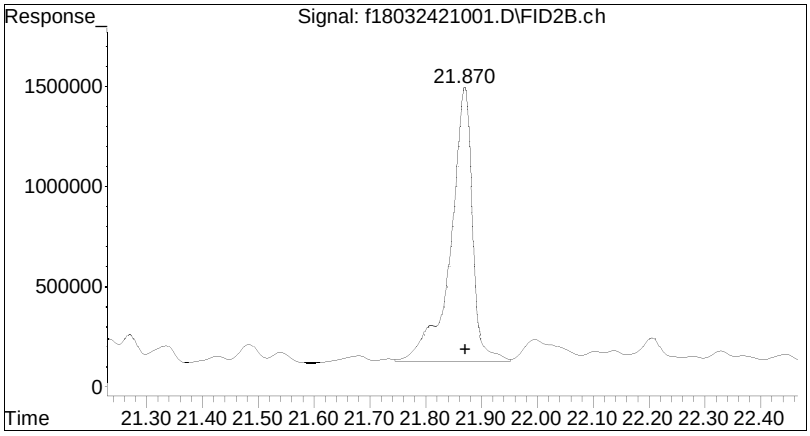
#9 n-Tetradecane (C14)

R.T.: 19.809 min
Delta R.T.: -0.001 min
Response: 31400176
Conc: 37.75 ug/mL M4



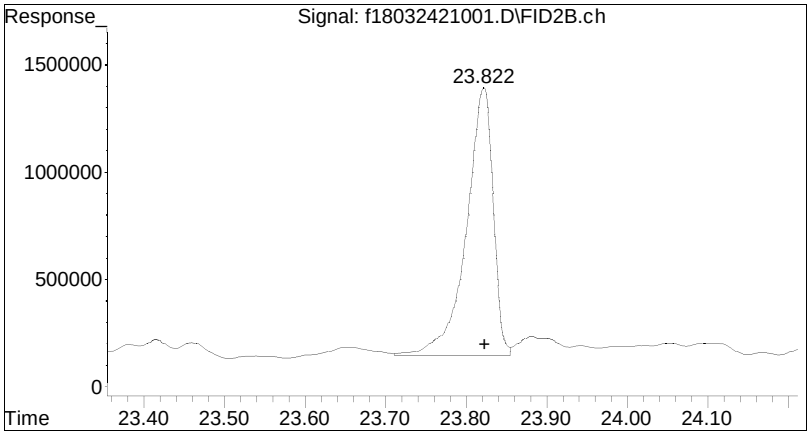
#10 1470

R.T.: 21.091 min
Delta R.T.: -0.020 min
Response: 11546538
Conc: 13.83 ug/mL M4



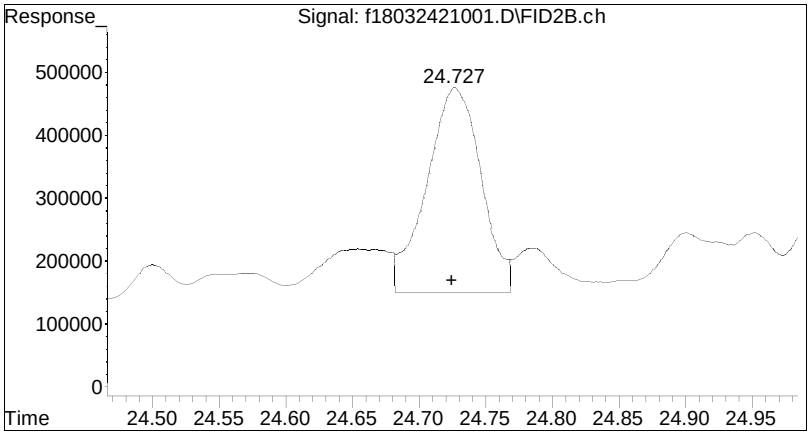
#11 n-Pentadecane (C15)

R.T.:	21.870 min
Delta R.T.:	0.000 min
Response:	36014636
Conc:	43.15 ug/mL M4



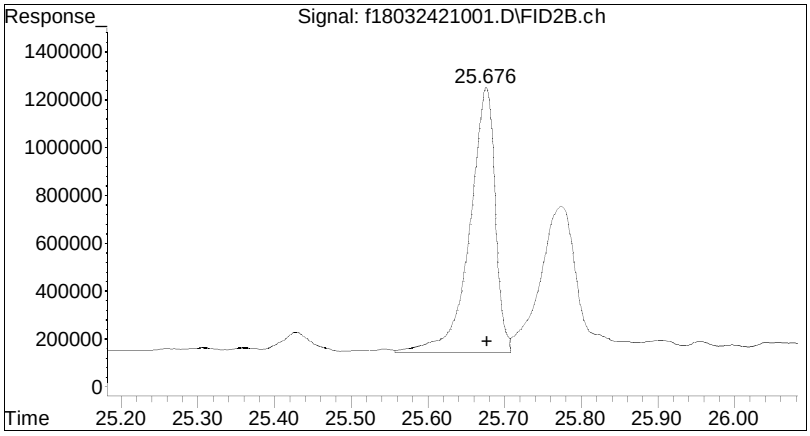
#12 n-Hexadecane (C16)

R.T.: 23.822 min
Delta R.T.: -0.001 min
Response: 28128235
Conc: 34.11 ug/mL M4



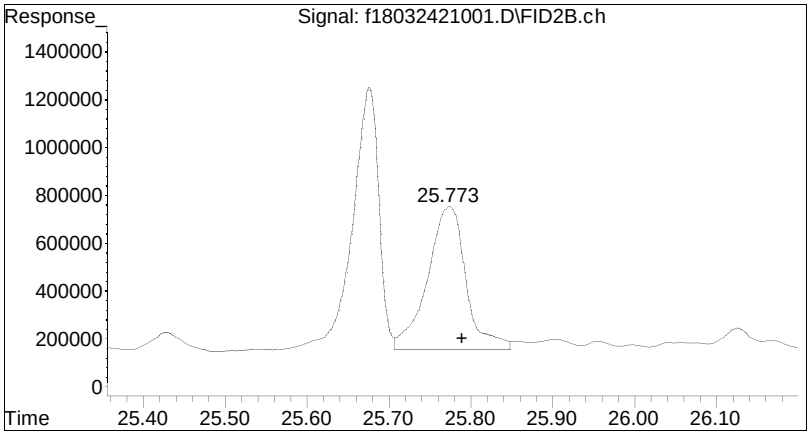
#13 1650

R.T.: 24.727 min
Delta R.T.: 0.002 min
Response: 9084882
Conc: 10.89 ug/mL M4



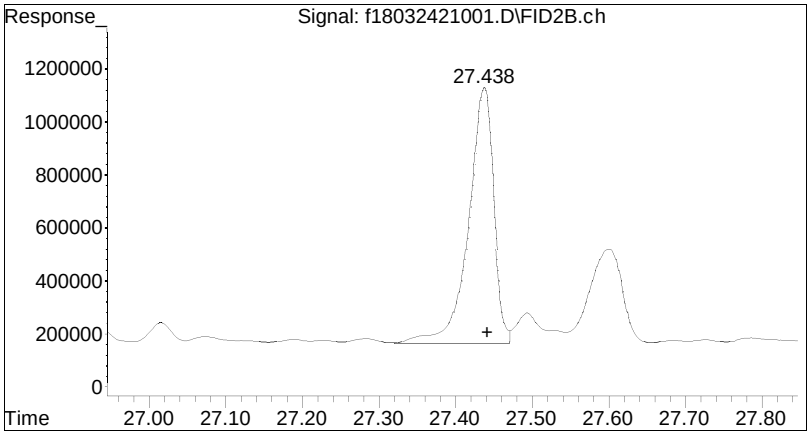
#14 n-Heptadecane (C17)

R.T.:	25.676 min
Delta R.T.:	-0.002 min
Response:	25256393
Conc:	30.28 ug/mL M4



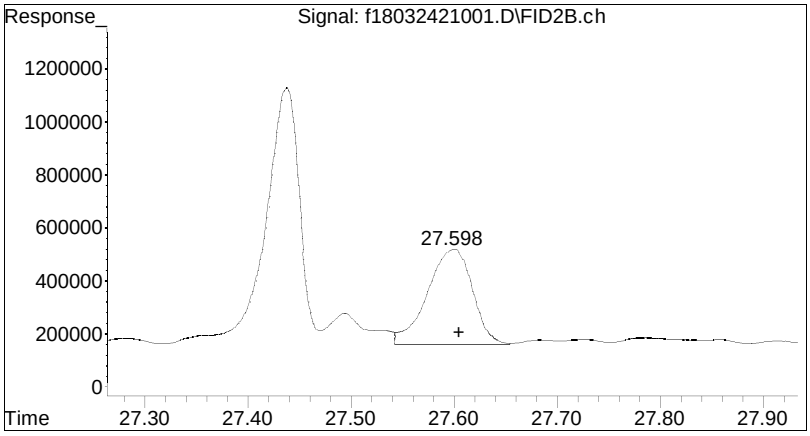
#15 Pristane

R.T.: 25.773 min
Delta R.T.: -0.017 min
Response: 19691869
Conc: 22.73 ug/mL M4



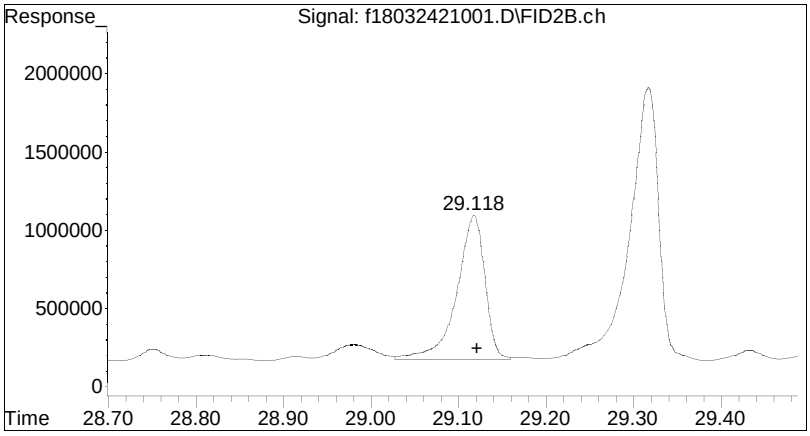
#16 n-Octadecane (C18)

R.T.: 27.438 min
Delta R.T.: -0.004 min
Response: 21946498
Conc: 26.10 ug/mL M4



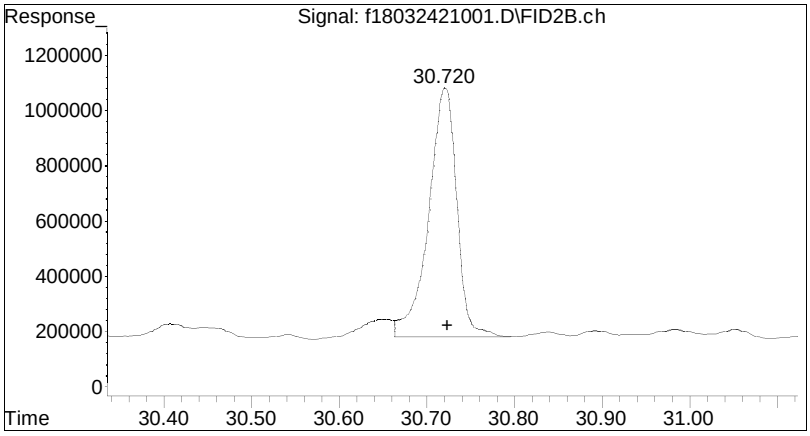
#17 Phytane

R.T.: 27.598 min
Delta R.T.: -0.007 min
Response: 10770952
Conc: 13.61 ug/mL M4



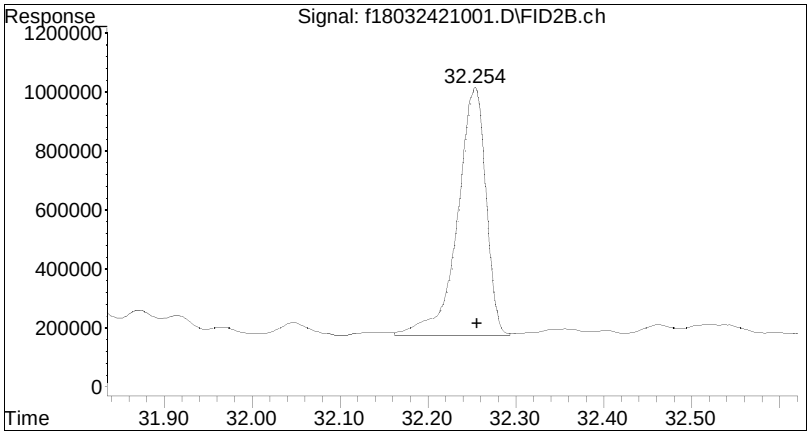
#18 n-Nonadecane (C19)

R.T.: 29.118 min
Delta R.T.: -0.004 min
Response: 20597151
Conc: 24.30 ug/mL M4



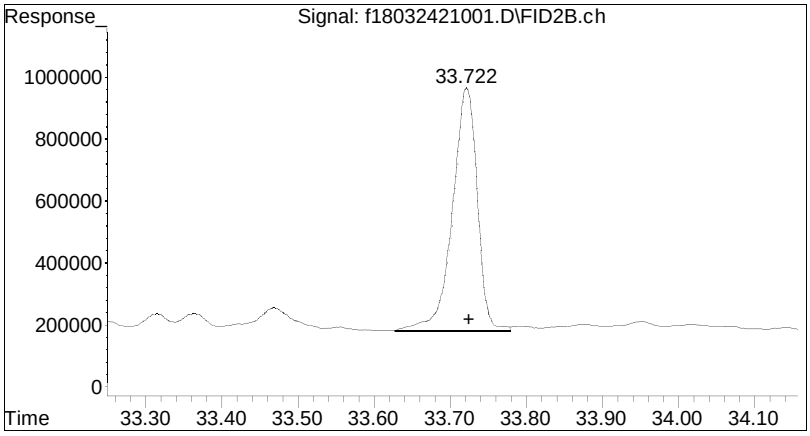
#20 n-Eicosane (C20)

R.T.: 30.720 min
Delta R.T.: -0.003 min
Response: 19812935
Conc: 23.22 ug/mL M4



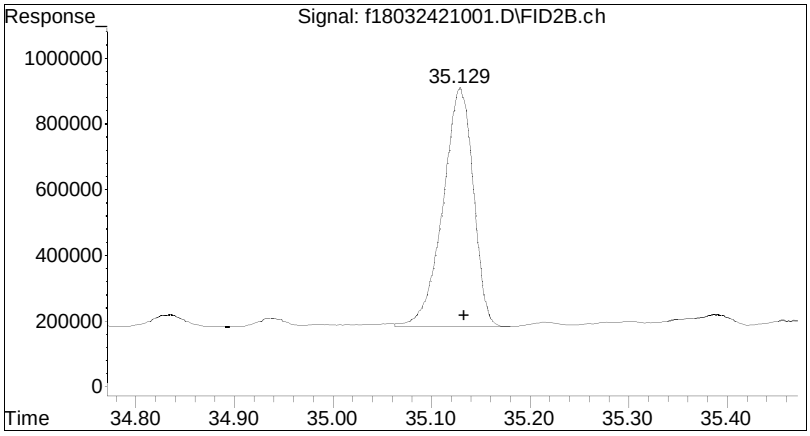
#21 n-Heneicosane (C21)

R.T.: 32.254 min
Delta R.T.: -0.002 min
Response: 18453963
Conc: 21.38 ug/mL M4



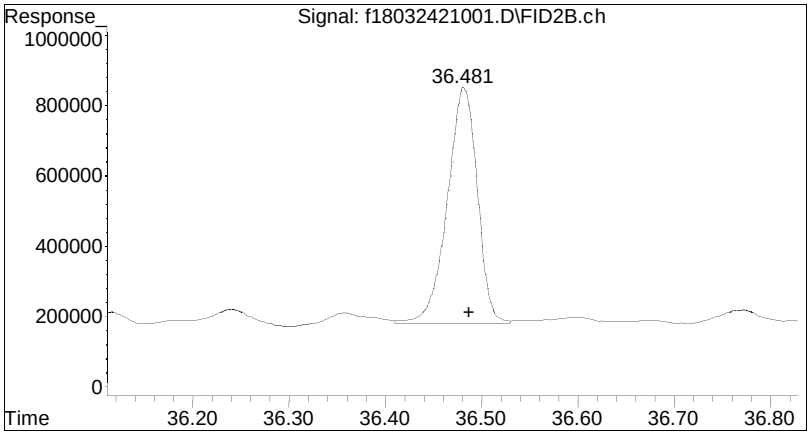
#22 n-Docosane (C22)

R.T.:	33.722 min
Delta R.T.:	-0.003 min
Response:	17403803
Conc:	19.95 ug/mL M4



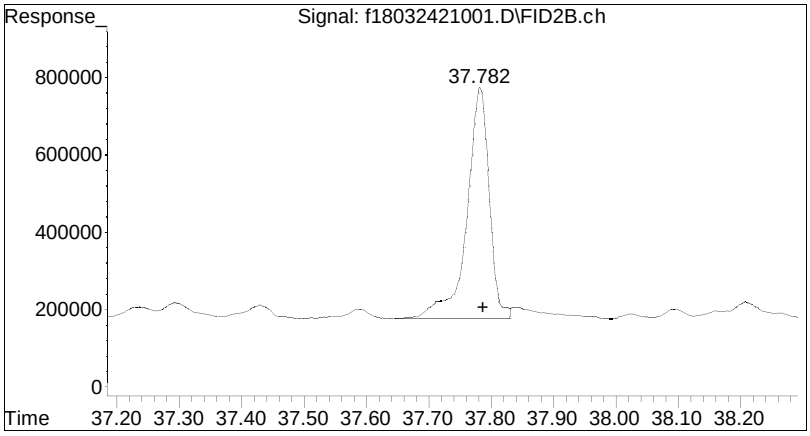
#23 n-Tricosane (C23)

R.T.:	35.129 min
Delta R.T.:	-0.004 min
Response:	15340483
Conc:	17.70 ug/mL M4



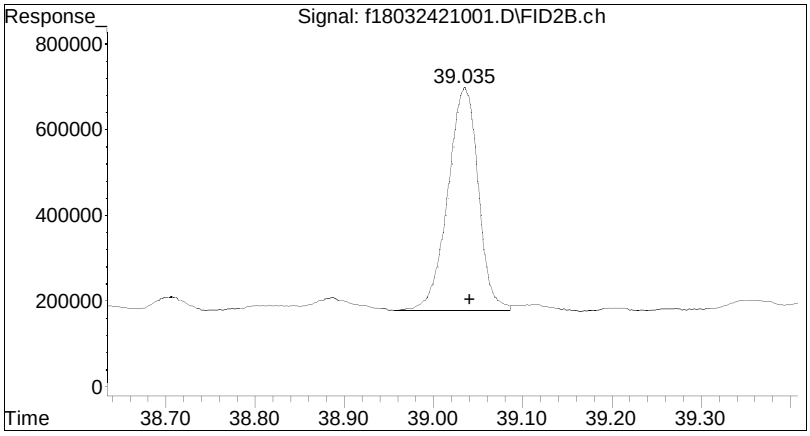
#25 n-Tetracosane (C24)

R.T.:	36.481 min
Delta R.T.:	-0.006 min
Response:	14237309
Conc:	16.46 ug/mL M4



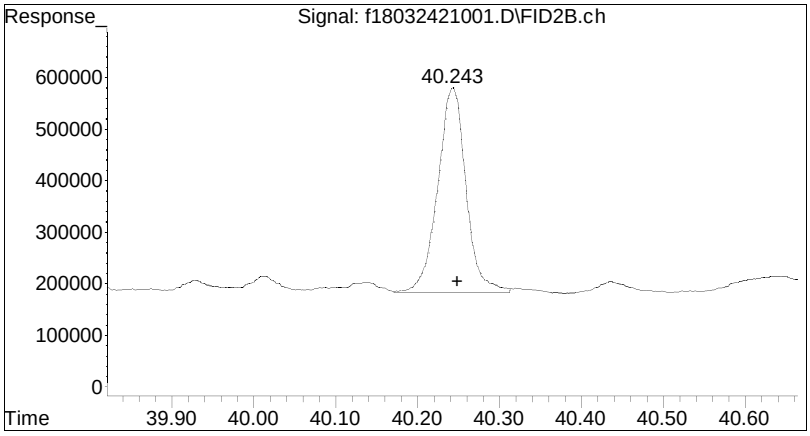
#26 n-Pentacosane (C25)

R.T.: 37.782 min
Delta R.T.: -0.005 min
Response: 14676079
Conc: 17.12 ug/mL M4



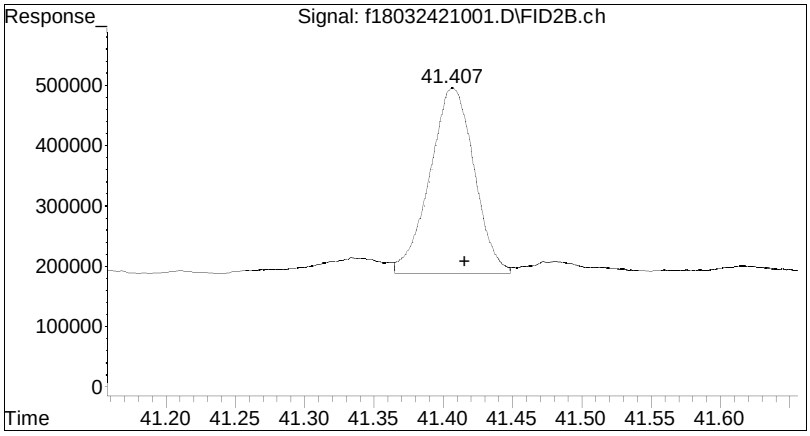
#27 n-Hexacosane (C26)

R.T.:	39.035 min
Delta R.T.:	-0.005 min
Response:	12015840
Conc:	13.63 ug/mL M4



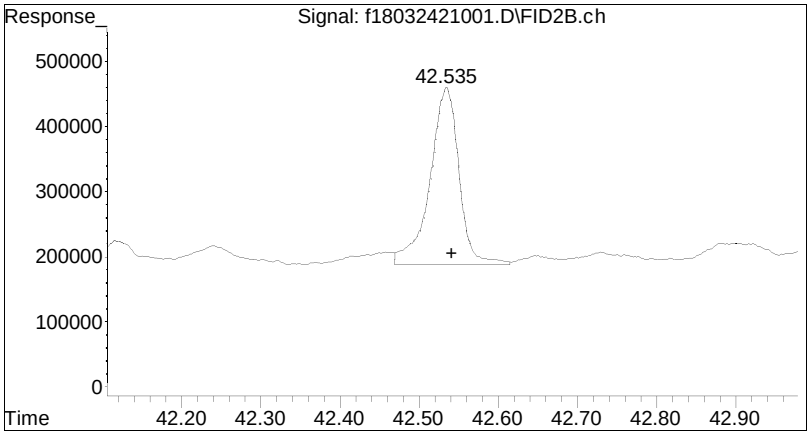
#28 n-Heptacosane (C27)

R.T.:	40.243 min
Delta R.T.:	-0.006 min
Response:	9383769
Conc:	10.56 ug/mL M4



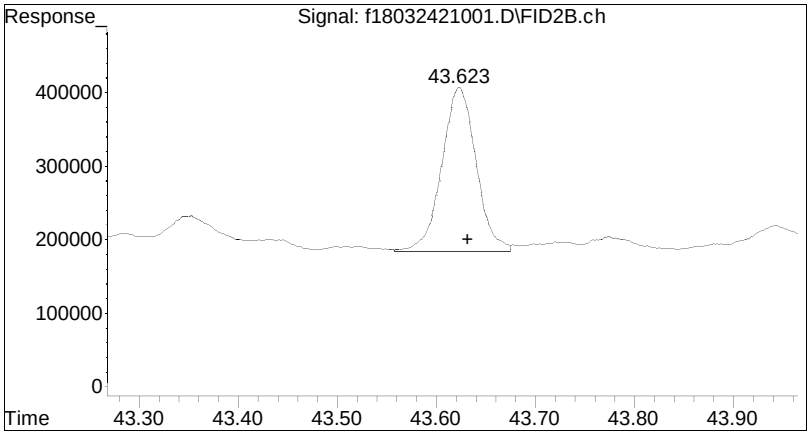
#29 n-Octacosane (C28)

R.T.:	41.407 min
Delta R.T.:	-0.009 min
Response:	6732547
Conc:	7.44 ug/mL M4



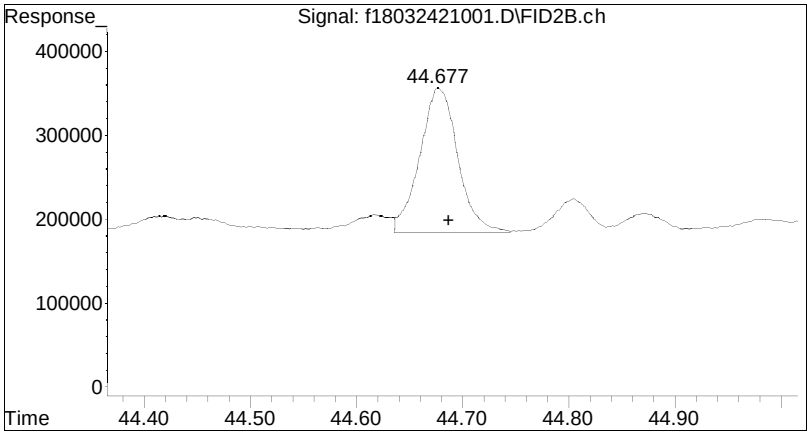
#30 n-Nonacosane (C29)

R.T.:	42.535 min
Delta R.T.:	-0.007 min
Response:	6860983
Conc:	7.63 ug/mL M4



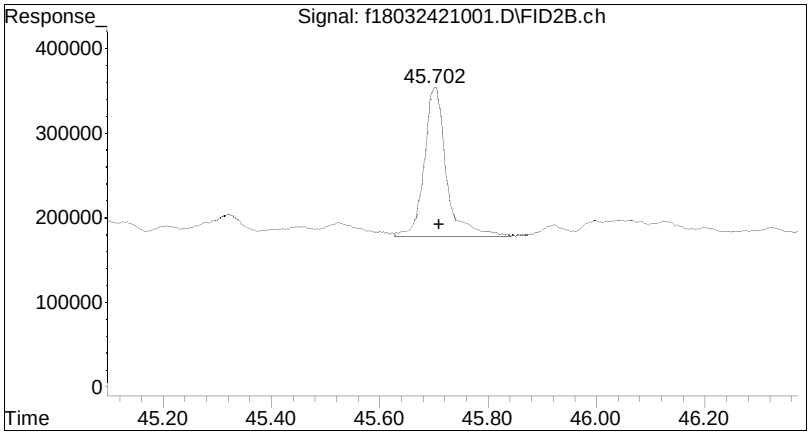
#31 n-Triacontane (C30)

R.T.:	43.623 min
Delta R.T.:	-0.008 min
Response:	5221010
Conc:	5.76 ug/mL M4



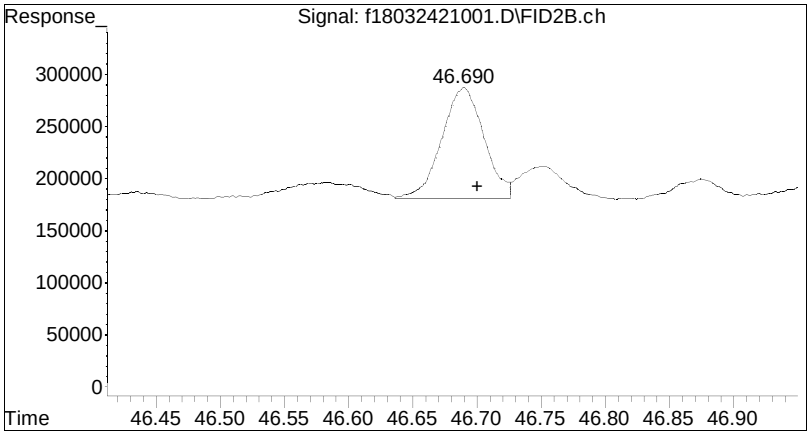
#32 n-Hentriacontane (C31)

R.T.:	44.677 min
Delta R.T.:	-0.010 min
Response:	4239388
Conc:	4.83 ug/mL M4



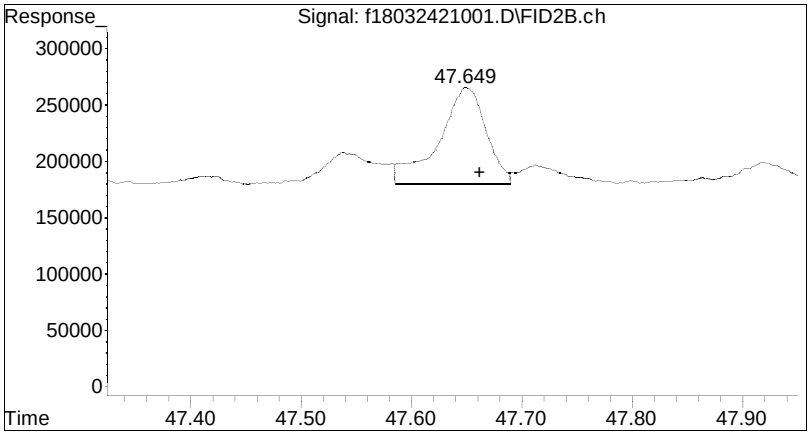
#33 n-Dotriacontane (C32)

R.T.:	45.702 min
Delta R.T.:	-0.007 min
Response:	4842308
Conc:	5.27 ug/mL M4



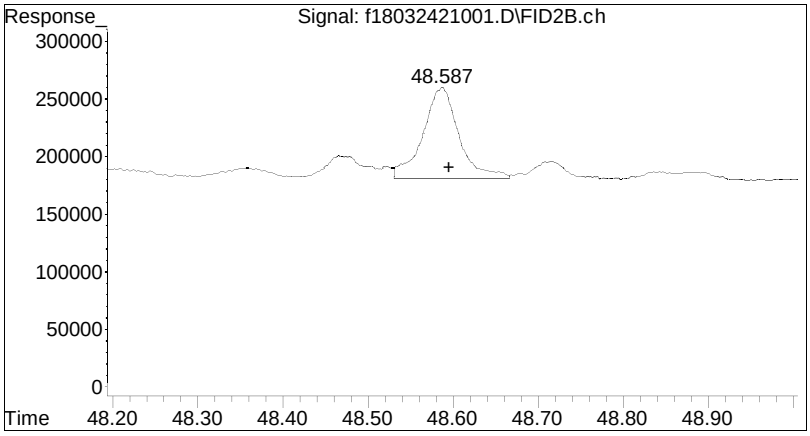
#34 n-Tritriacontane (C33)

R.T.:	46.690 min
Delta R.T.:	-0.011 min
Response:	2400290
Conc:	2.68 ug/mL M4



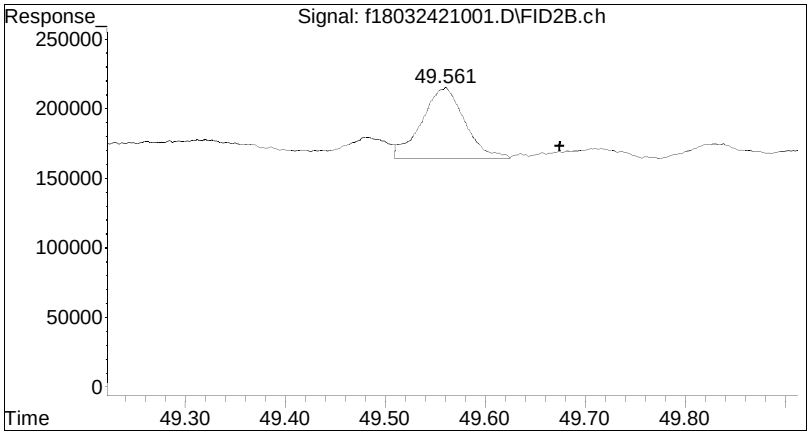
#35 n-tetratriacontane (C34)

R.T.:	47.649 min
Delta R.T.:	-0.013 min
Response:	2534051
Conc:	2.83 ug/mL M4



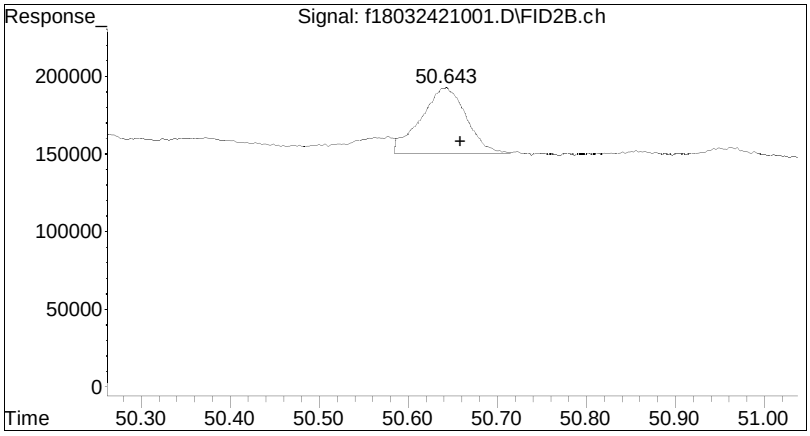
#36 n-Pentatriacontane (C35)

R.T.:	48.587 min
Delta R.T.:	-0.008 min
Response:	2296085
Conc:	2.73 ug/mL M4



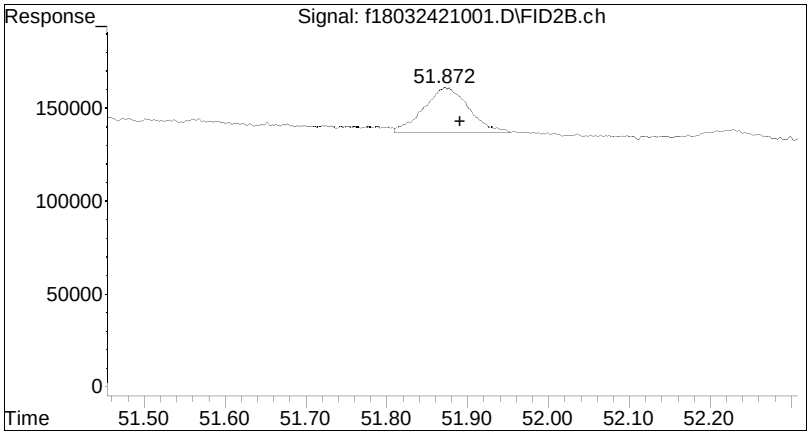
#37 n-Hexatriacontane (C36)

R.T.:	49.561 min
Delta R.T.:	-0.114 min
Response:	1478002
Conc:	1.46 ug/mL M4



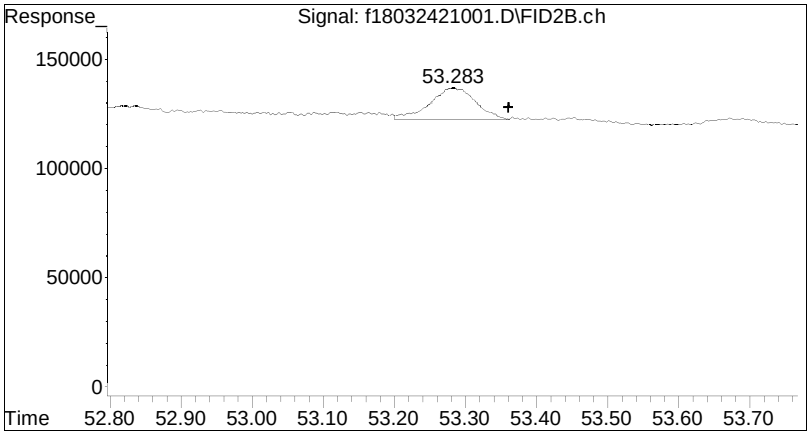
#38 n-Heptatriacontane (C37)

R.T.:	50.643 min
Delta R.T.:	-0.016 min
Response:	1468403
Conc:	1.59 ug/mL M4



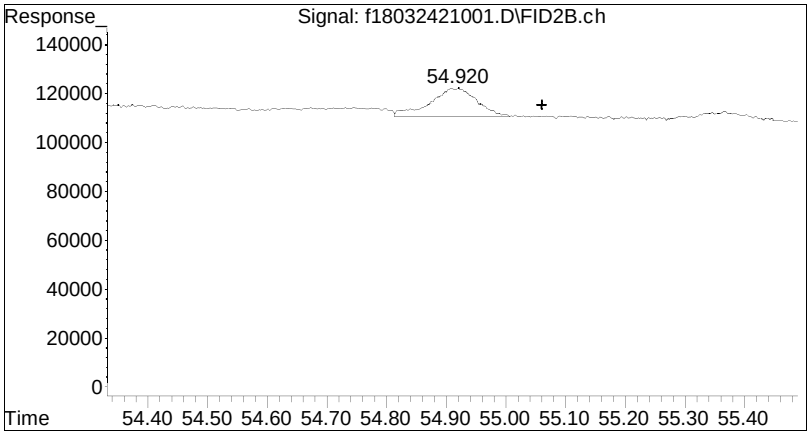
#39 n-Octatriacontane (C38)

R.T.:	51.872 min
Delta R.T.:	-0.019 min
Response:	923335
Conc:	0.99 ug/mL M4



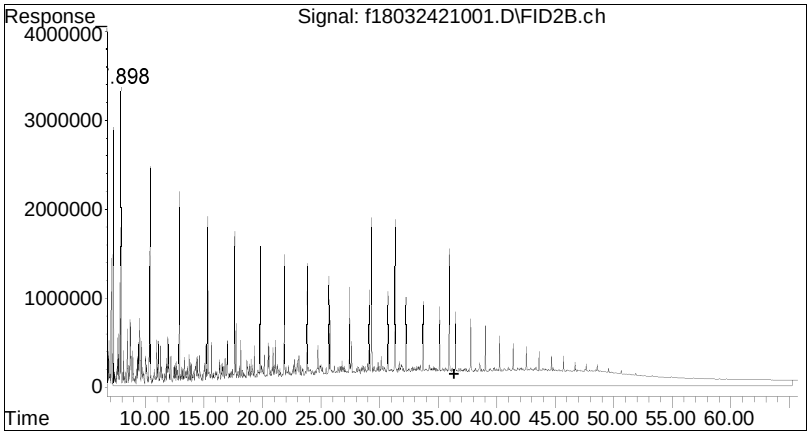
#40 n-Nonatriacontane (C39)

R.T.:	53.283 min
Delta R.T.:	-0.077 min
Response:	633316
Conc:	0.69 ug/mL M4



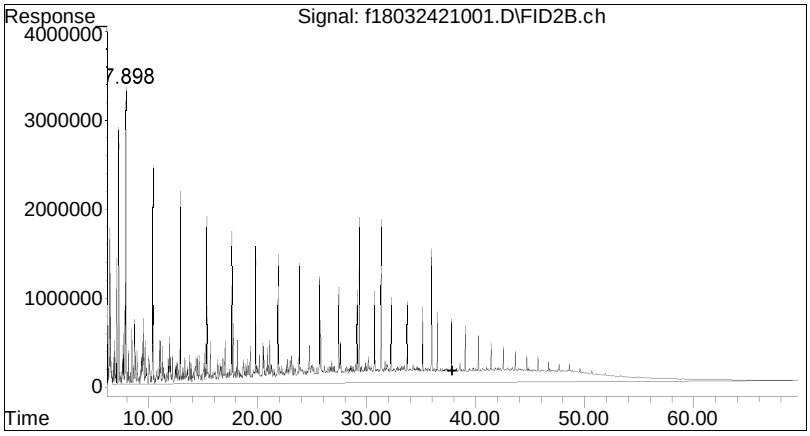
#41 n-Tetracontane (C40)

R.T.:	54.920 min
Delta R.T.:	-0.140 min
Response:	634181
Conc:	0.69 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.374 min
Delta R.T.: 0.000 min
Response: 5630452527
Conc: 6520.25 ug/mL m



#46 Total Resolved Hydrocarbo

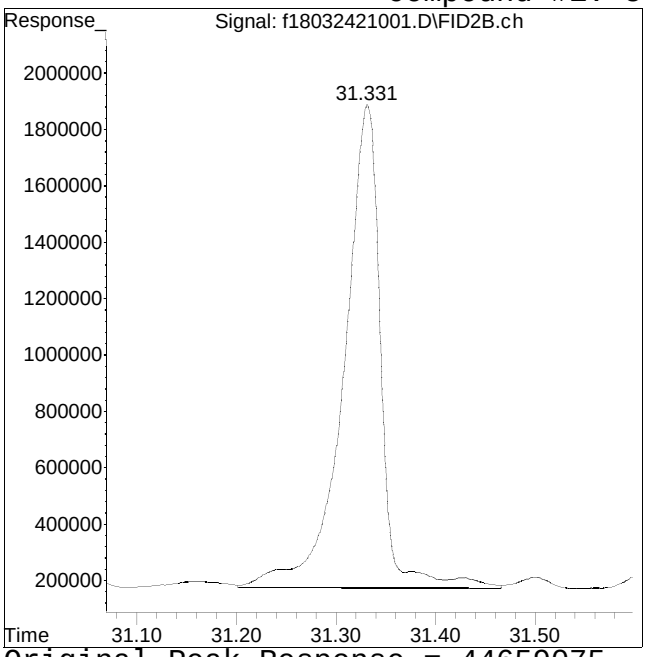
R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 1779609239
Conc: 2060.85 ug/mL m

Manual Integration/Negative Proof Report

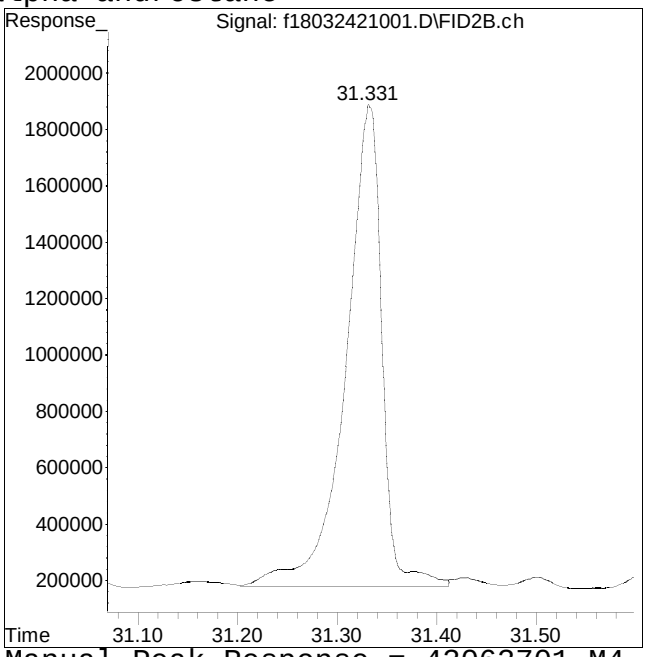
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 44659075



Manual Peak Response = 43063701 M4

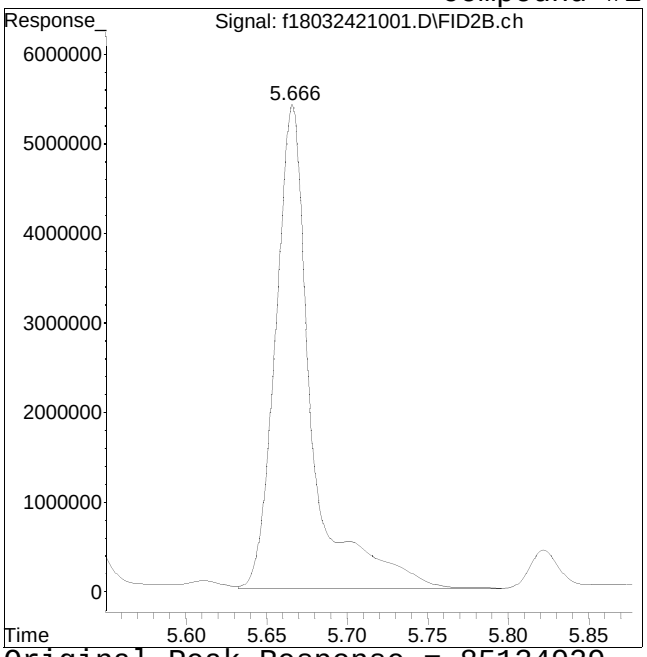
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

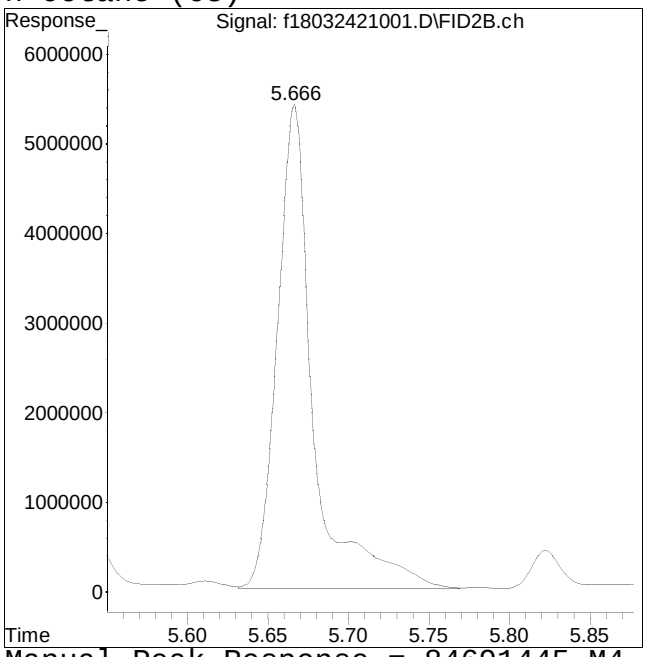
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #2: n-Octane (C8)



Original Peak Response = 85134929



Manual Peak Response = 84691445 M4

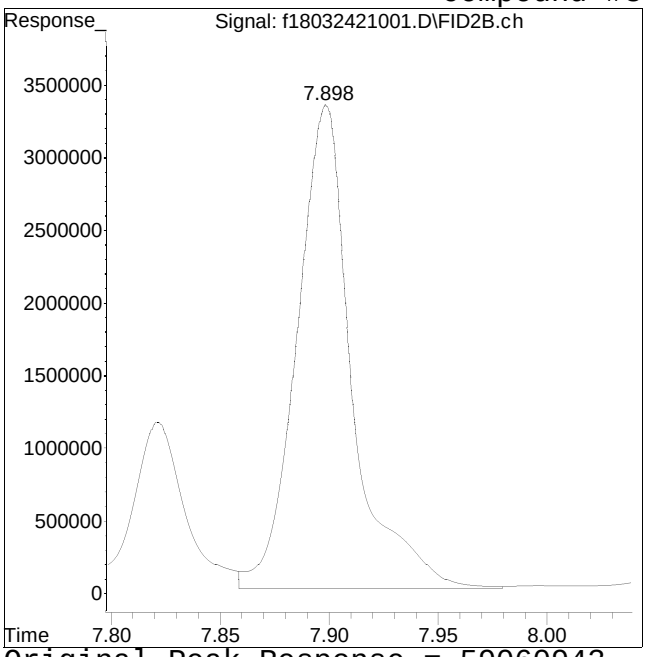
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

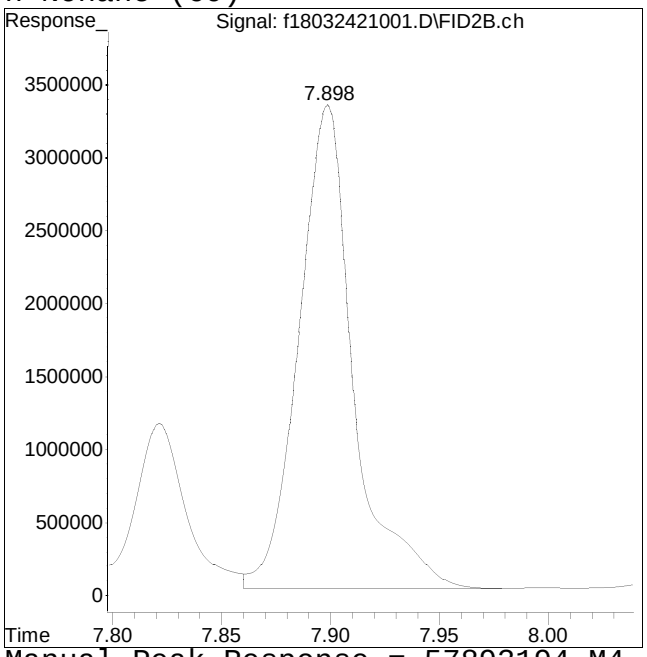
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 59060943



Manual Peak Response = 57893194 M4

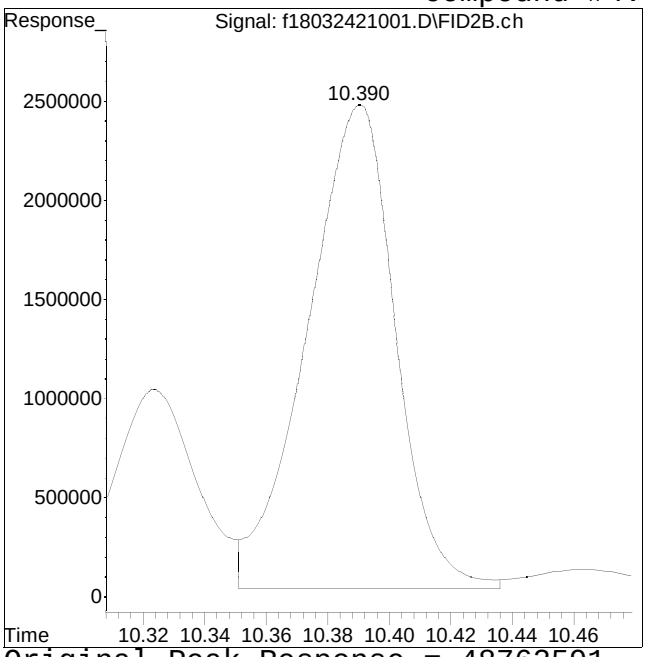
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

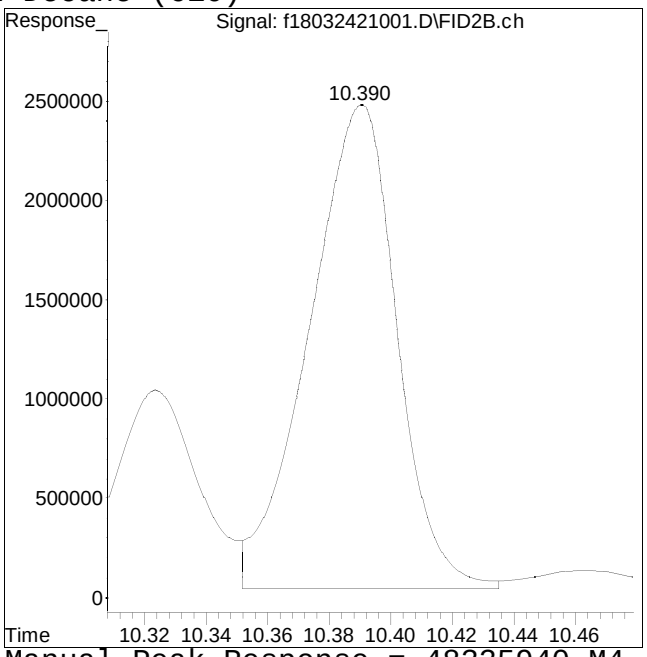
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #4: n-Decane (C10)



Original Peak Response = 48762591



Manual Peak Response = 48335940 M4

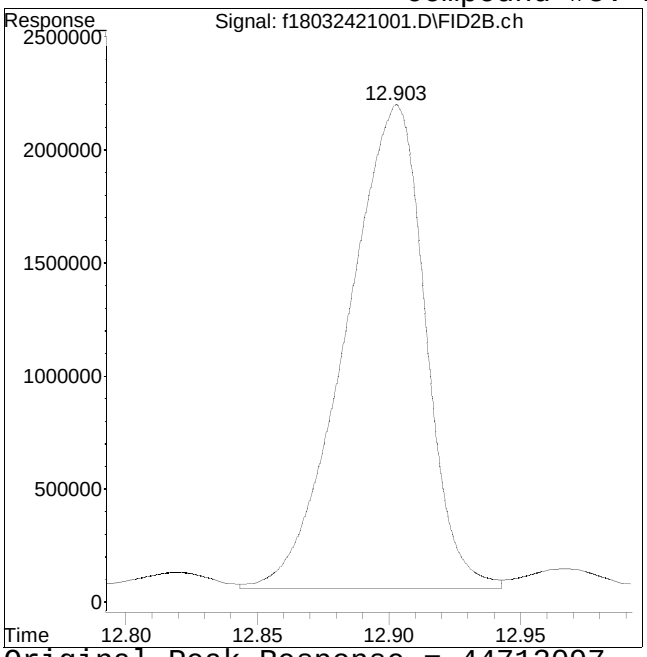
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

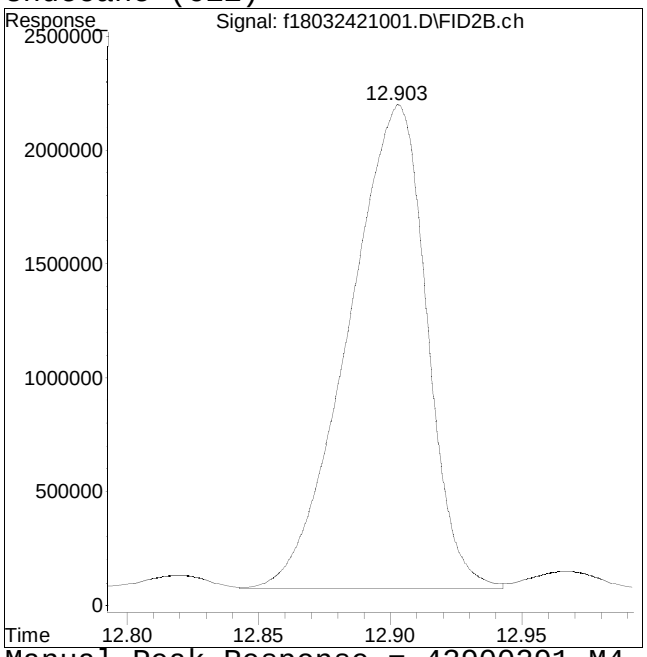
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 44713097



Manual Peak Response = 43900291 M4

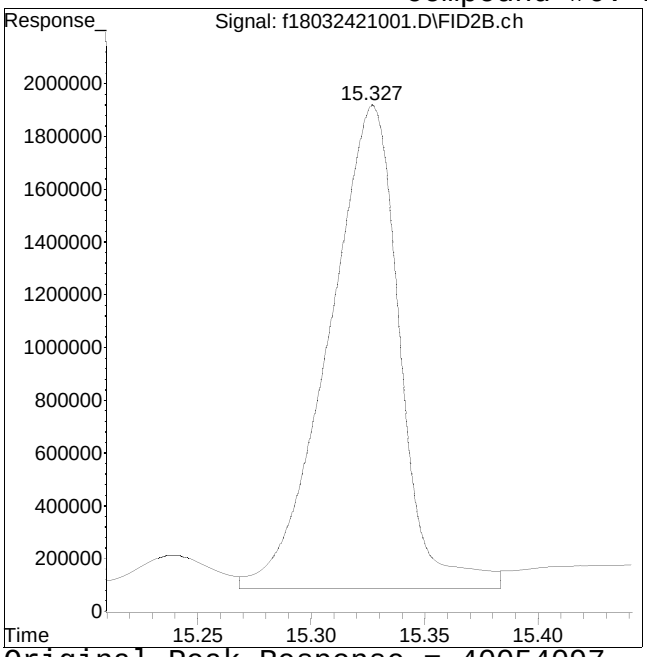
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

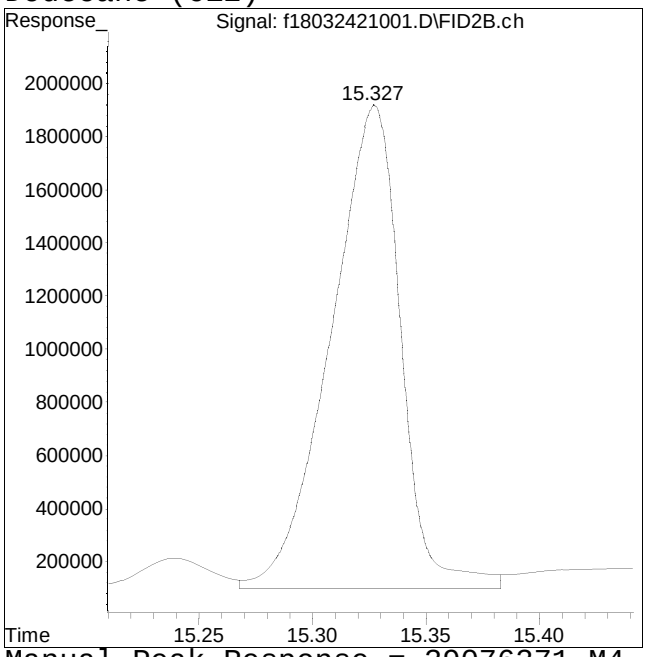
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 40054097



Manual Peak Response = 39076371 M4

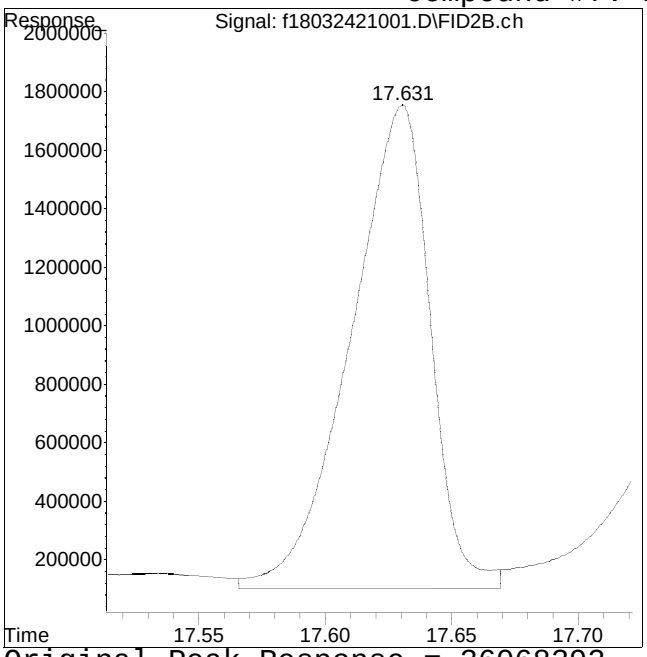
M4 = Poor automated baseline construction.

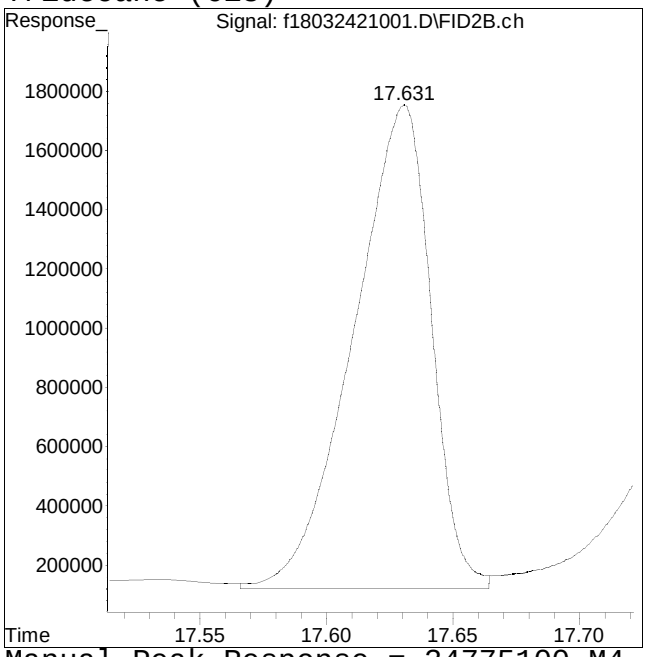
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #7: n-Tridecane (C13)





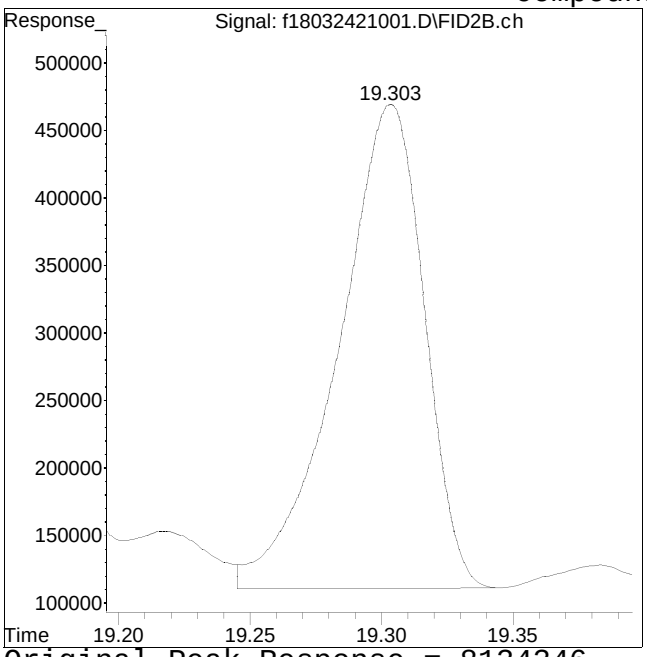
Original Peak Response = 36068392 Manual Peak Response = 34775100 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

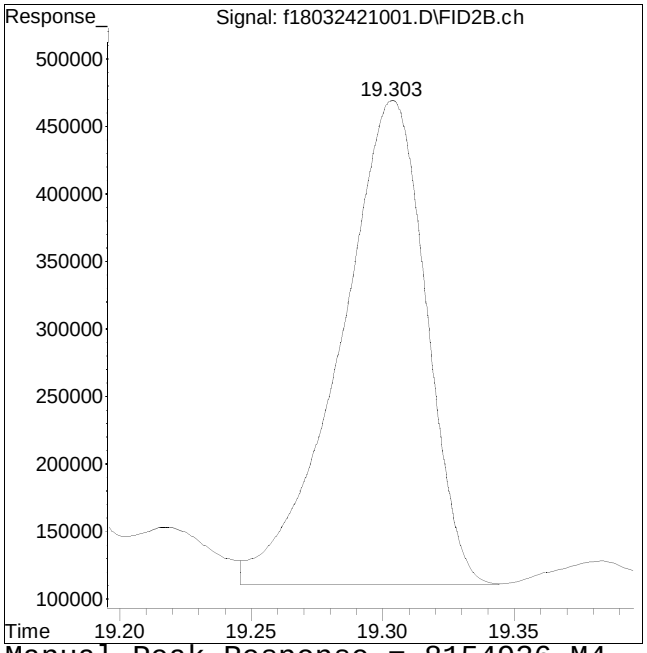
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #8: 1380



Original Peak Response = 8134346



Manual Peak Response = 8154936 M4

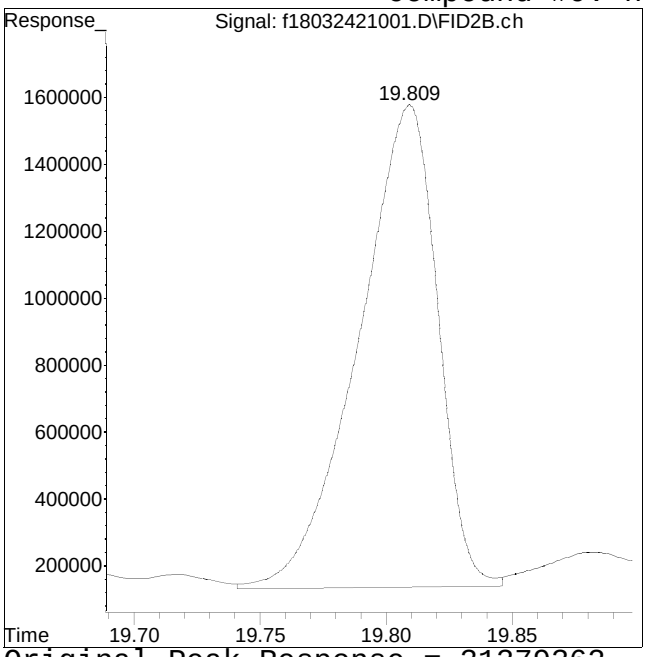
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

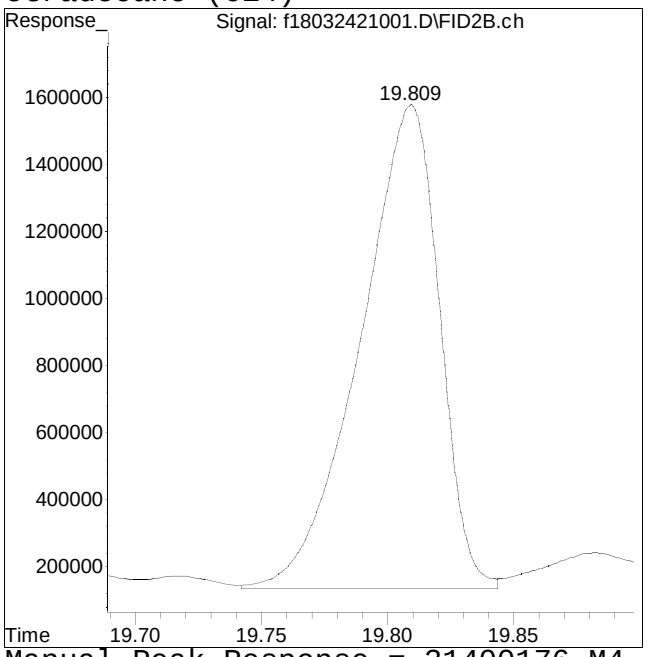
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 31379362



Manual Peak Response = 31400176 M4

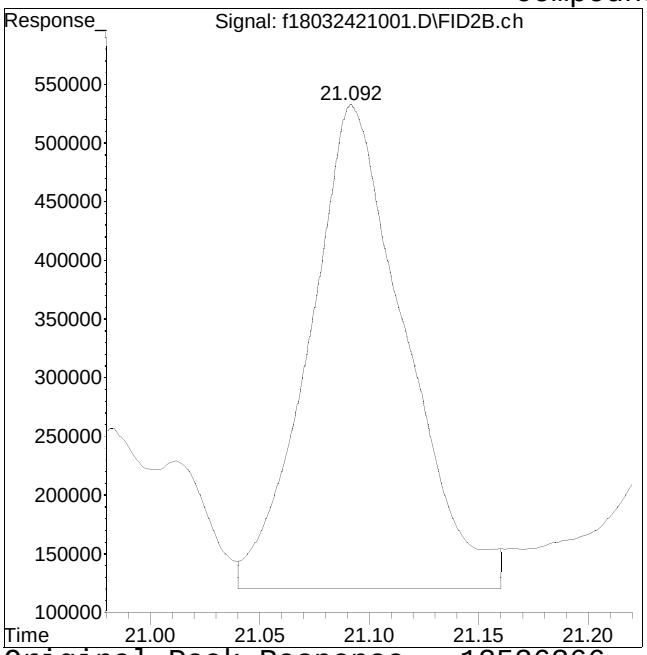
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

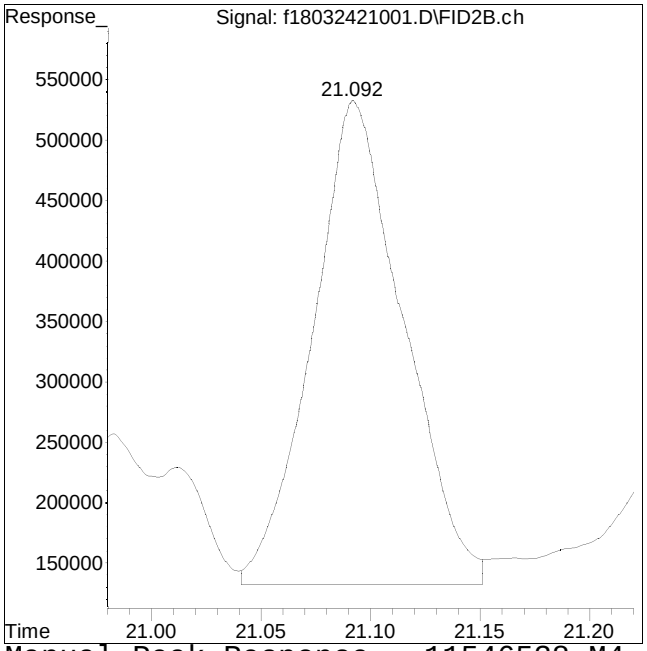
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #10: 1470



Original Peak Response = 12536366



Manual Peak Response = 11546538 M4

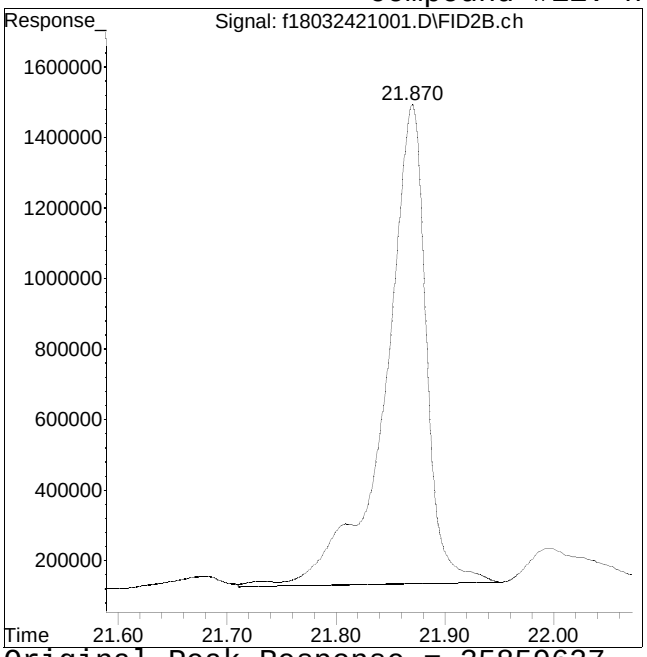
M4 = Poor automated baseline construction.

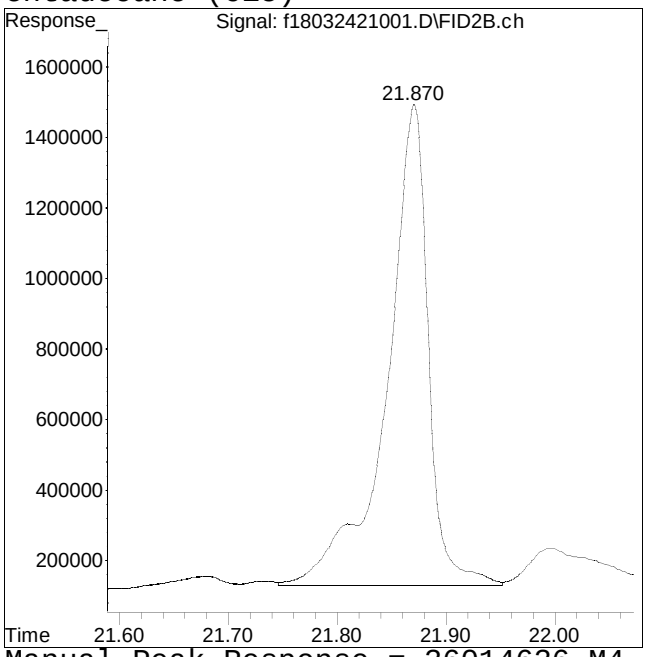
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #11: n-Pentadecane (C15)





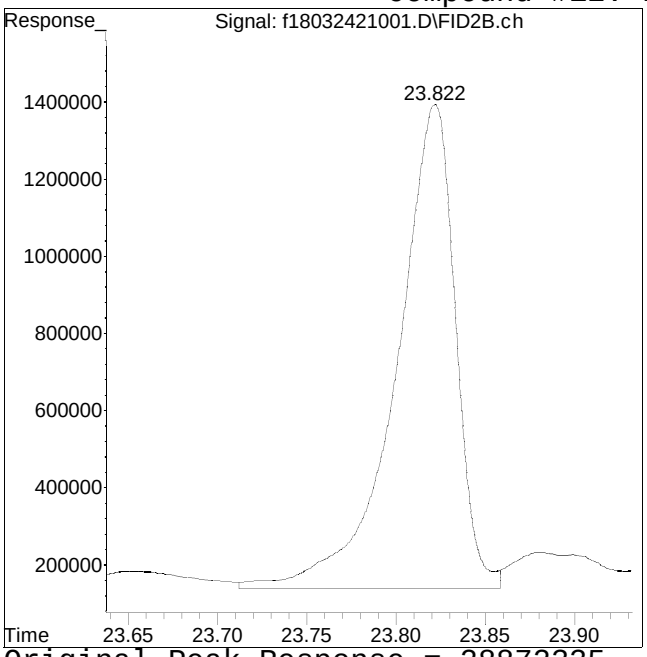
Original Peak Response = 35859627 Manual Peak Response = 36014636 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

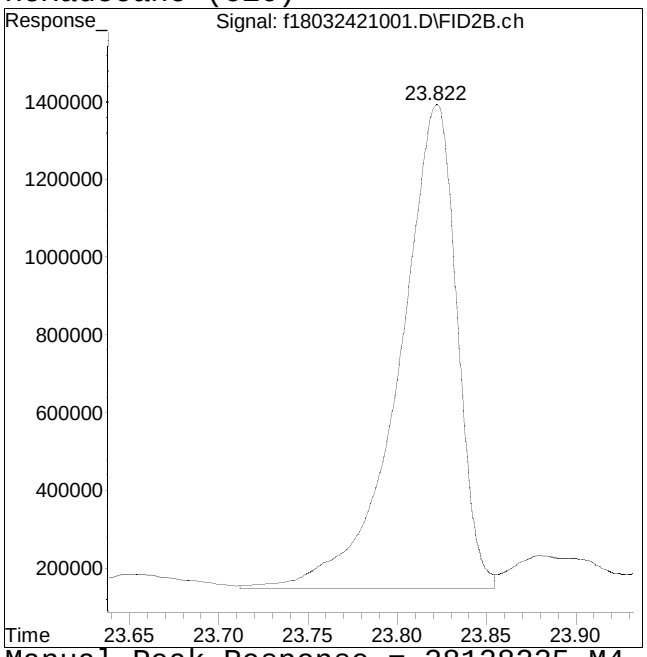
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 28872335



Manual Peak Response = 28128235 M4

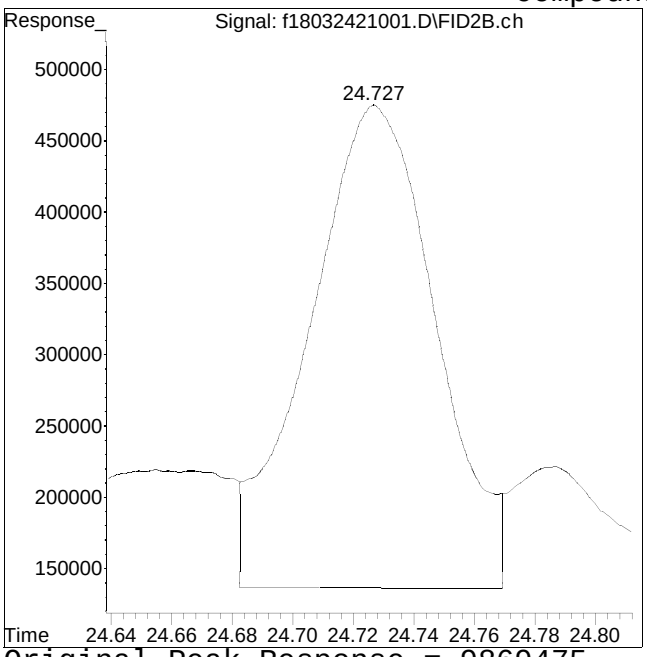
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

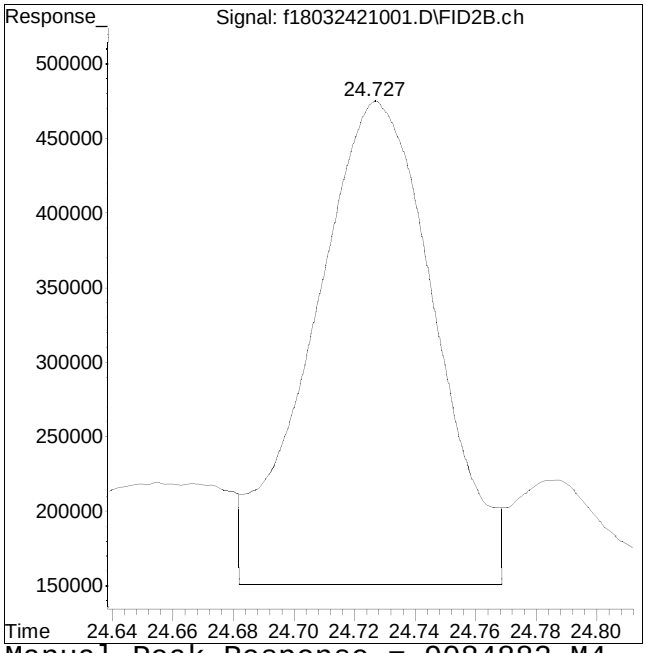
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #13: 1650



Original Peak Response = 9869475



Manual Peak Response = 9084882 M4

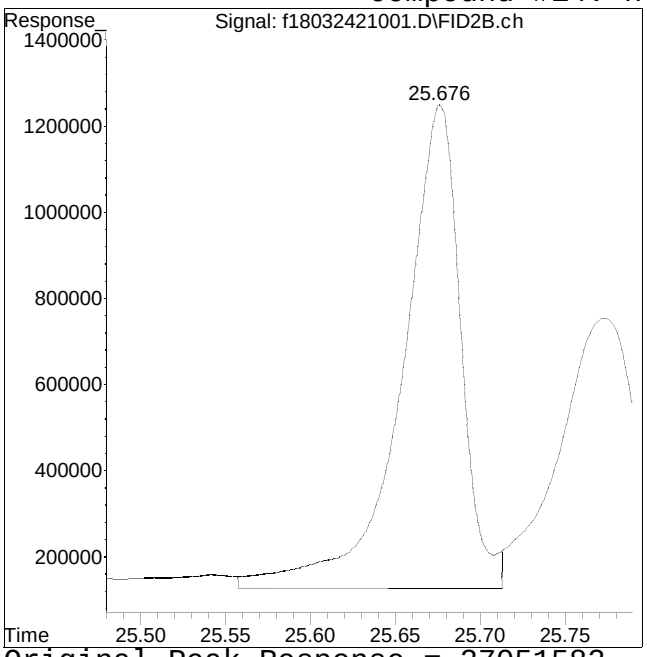
M4 = Poor automated baseline construction.

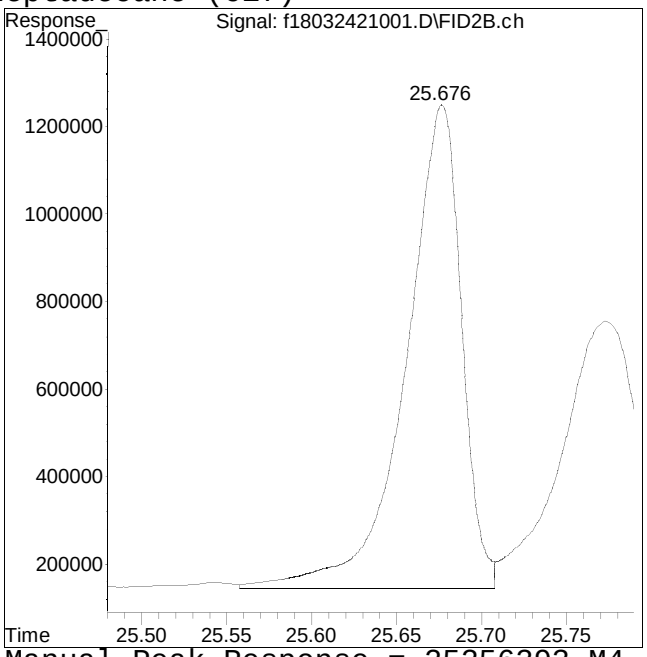
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #14: n-Heptadecane (C17)





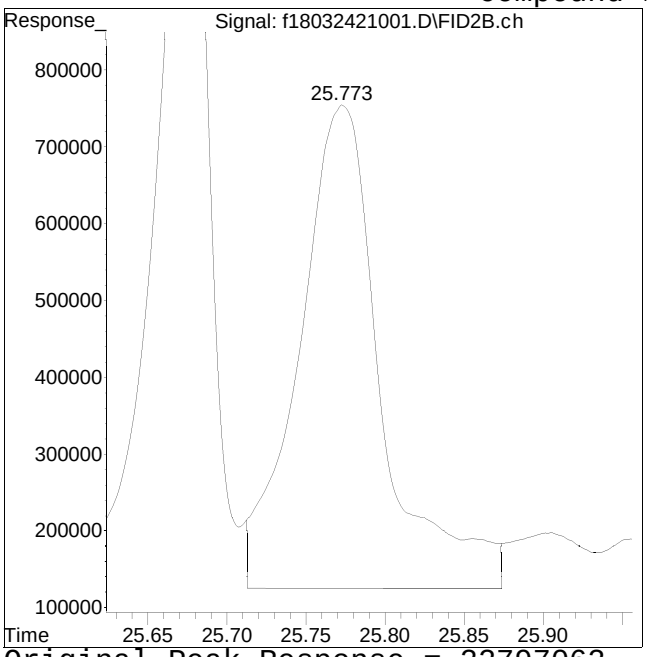
Original Peak Response = 27051582 Manual Peak Response = 25256393 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

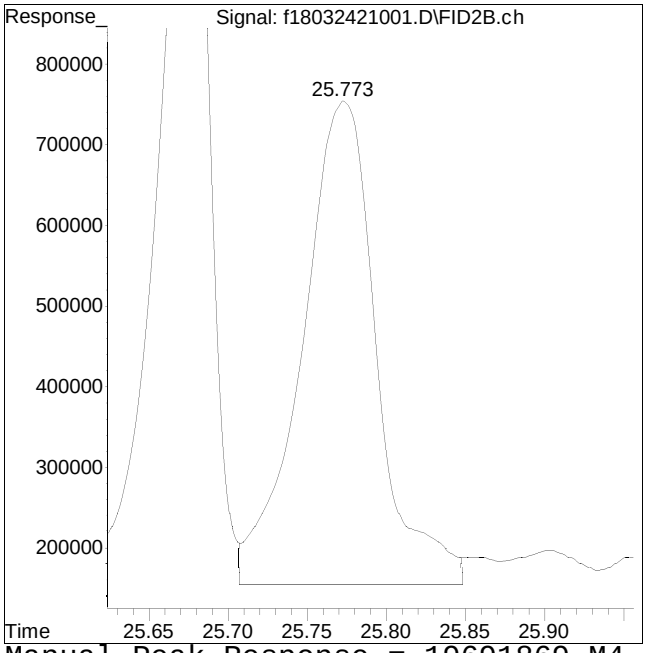
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #15: Pristane



Original Peak Response = 22797062



Manual Peak Response = 19691869 M4

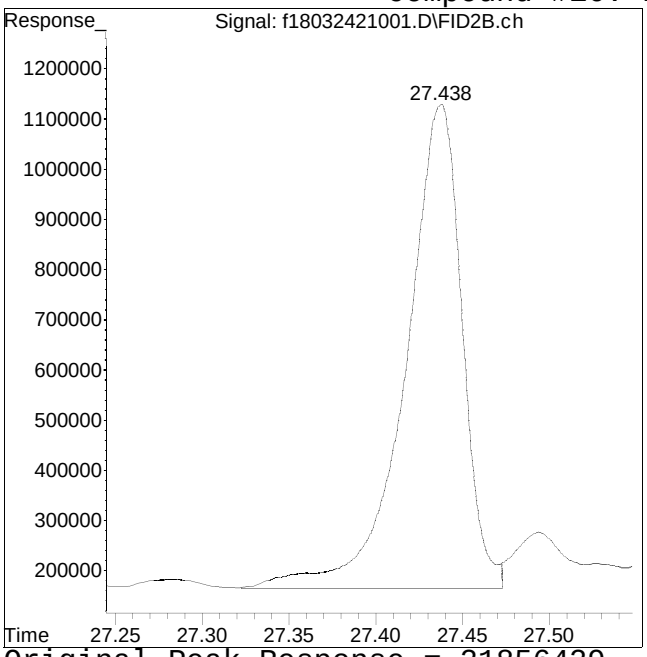
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

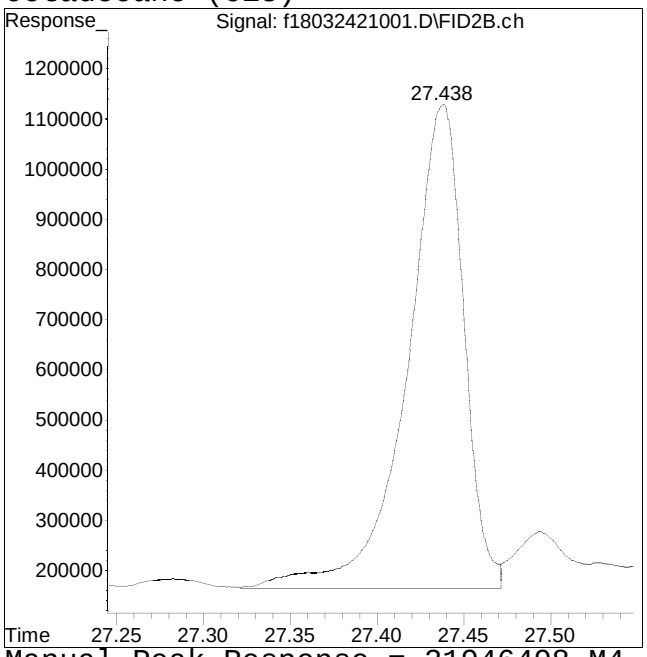
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 21856429



Manual Peak Response = 21946498 M4

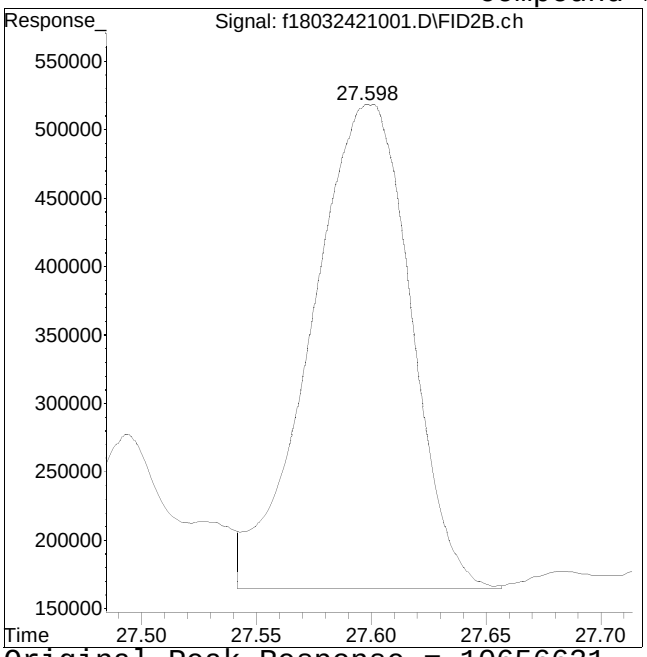
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

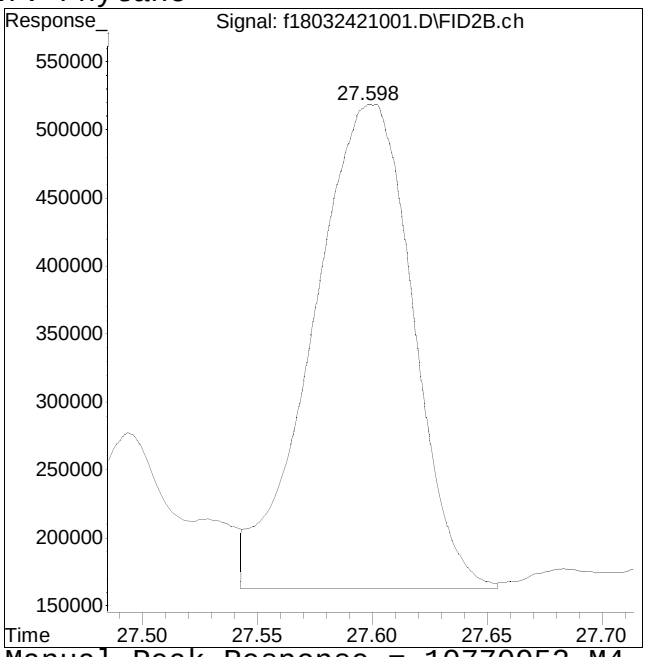
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #17: Phytane



Original Peak Response = 10656631



Manual Peak Response = 10770952 M4

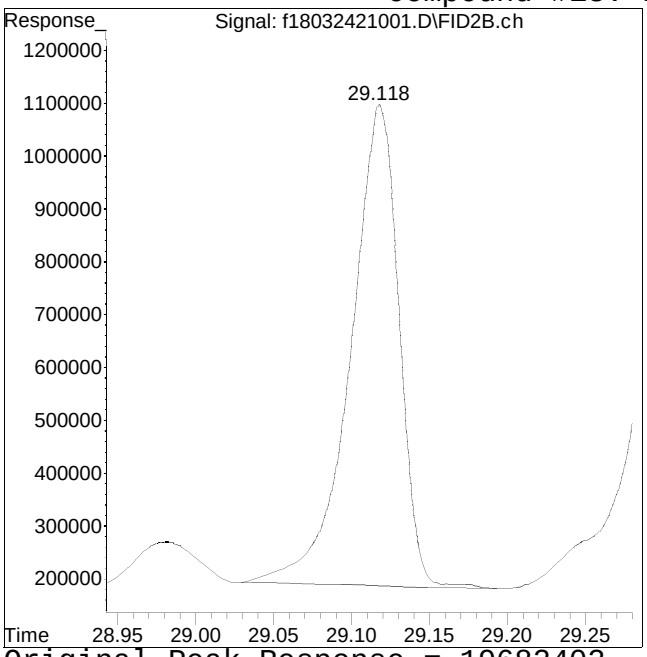
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

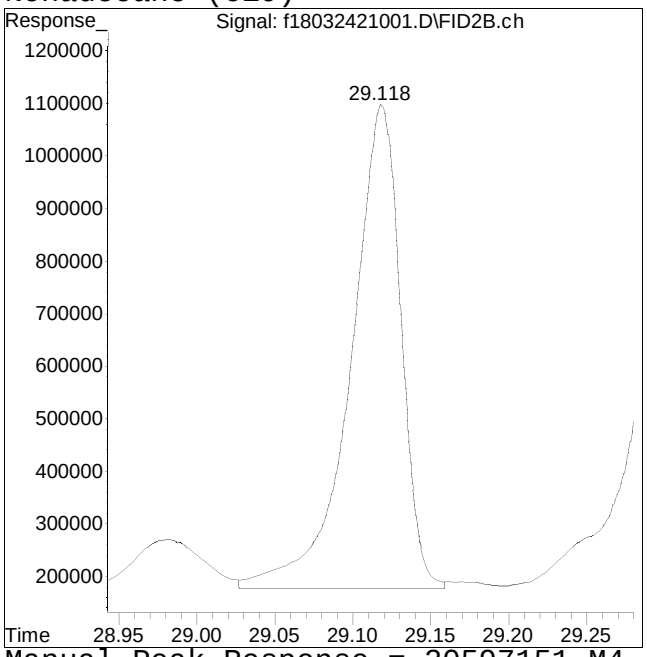
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 19682402



Manual Peak Response = 20597151 M4

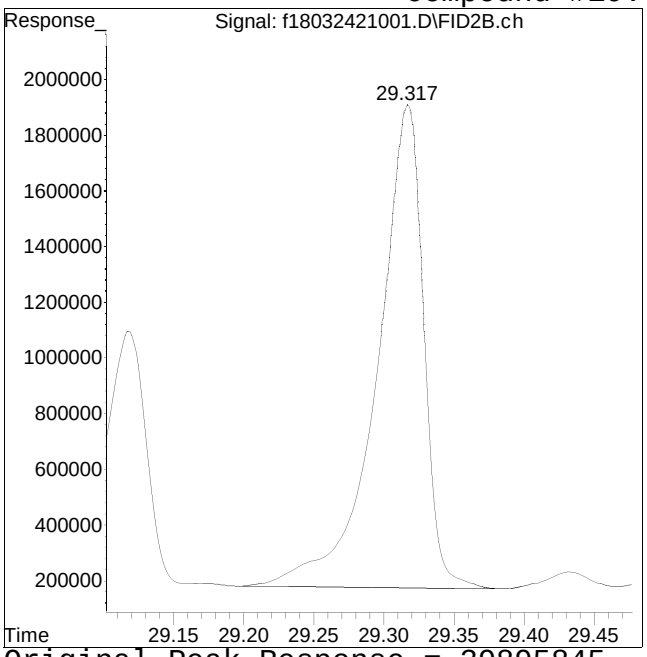
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

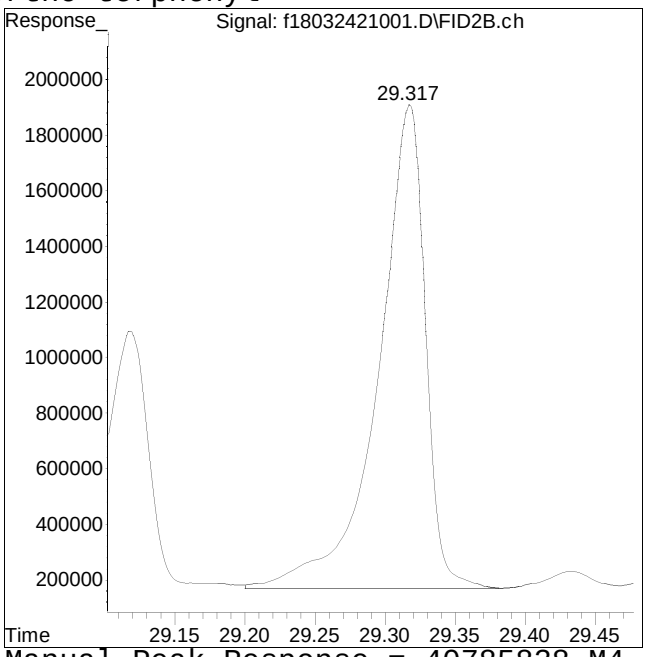
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #19: ortho-terphenyl



Original Peak Response = 39895845



Manual Peak Response = 40785838 M4

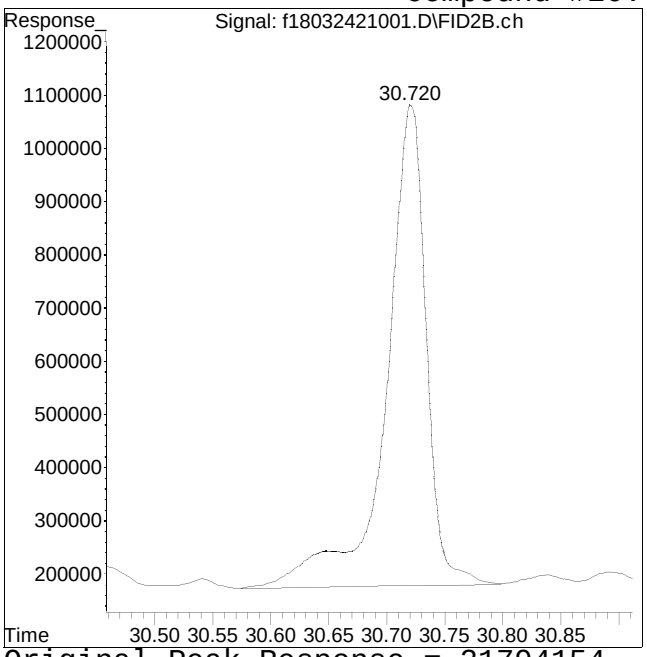
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

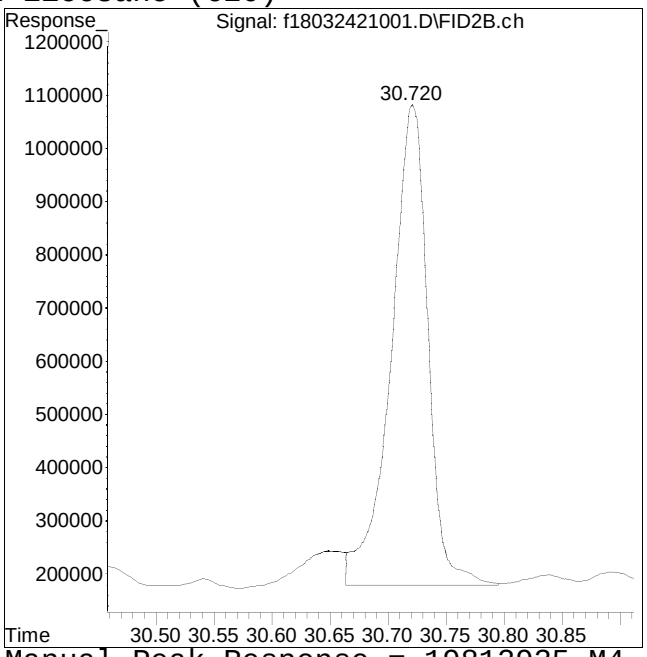
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 21794154



Manual Peak Response = 19812935 M4

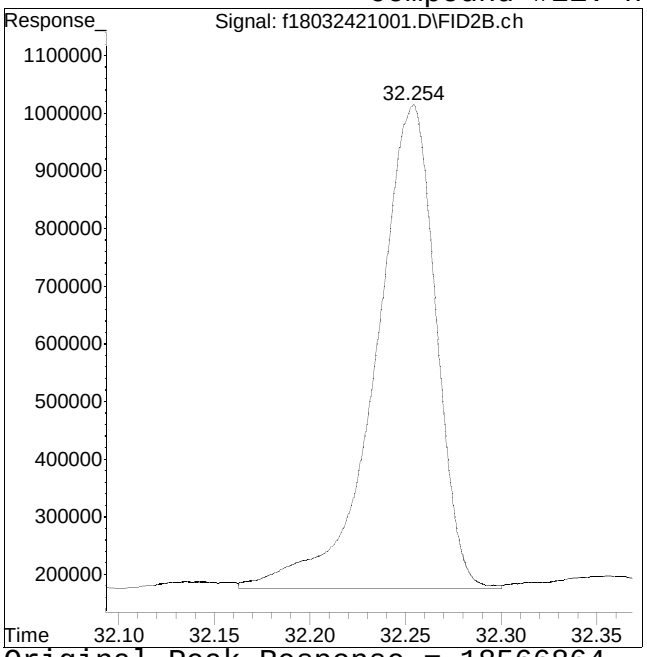
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

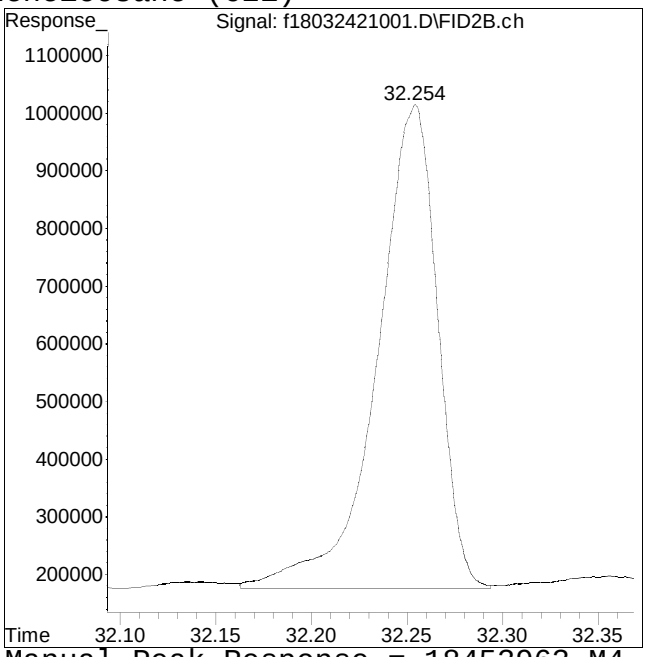
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 18566864



Manual Peak Response = 18453963 M4

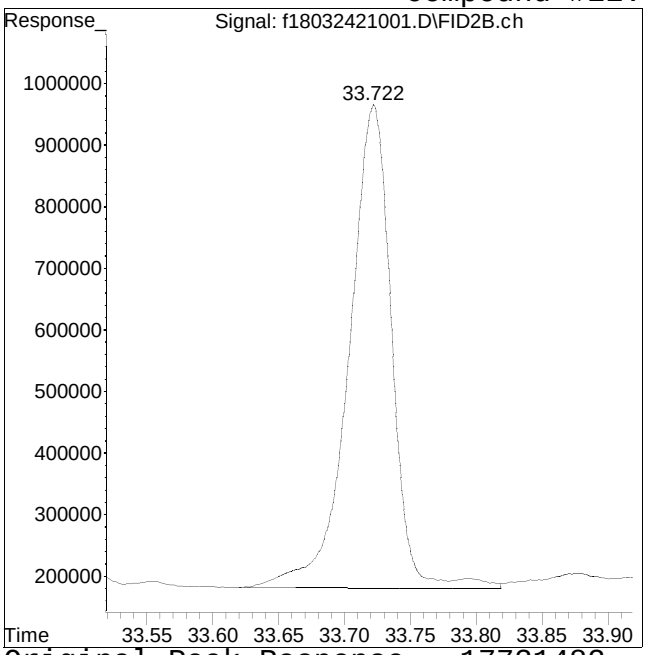
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

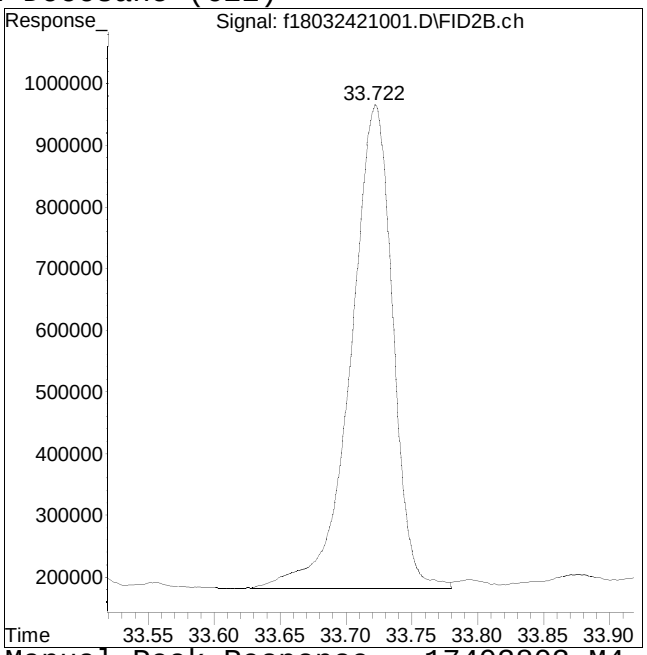
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 17731482



Manual Peak Response = 17403803 M4

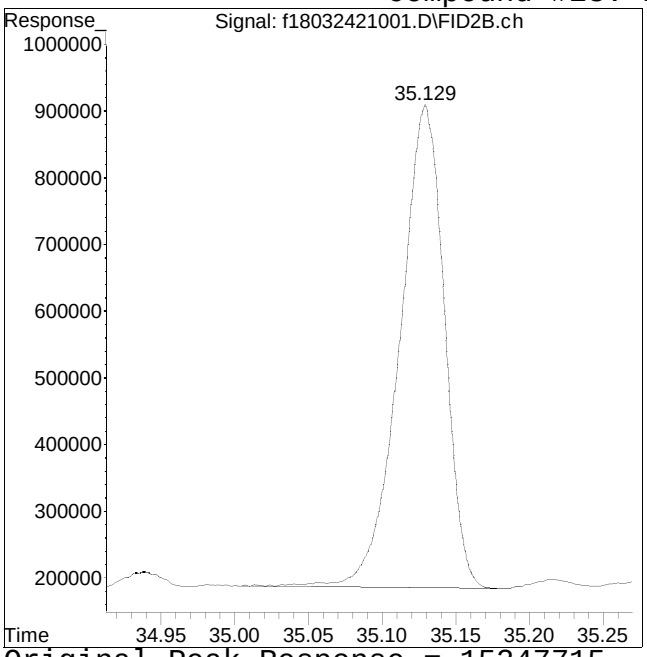
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

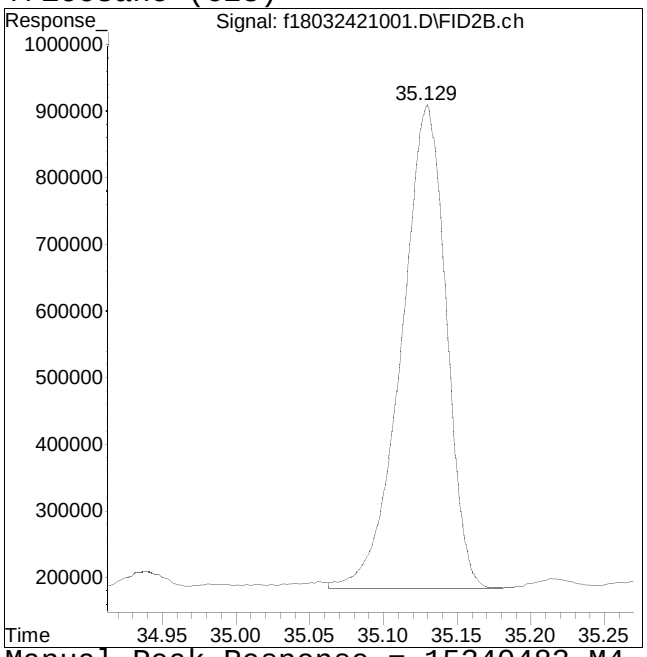
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 15247715



Manual Peak Response = 15340483 M4

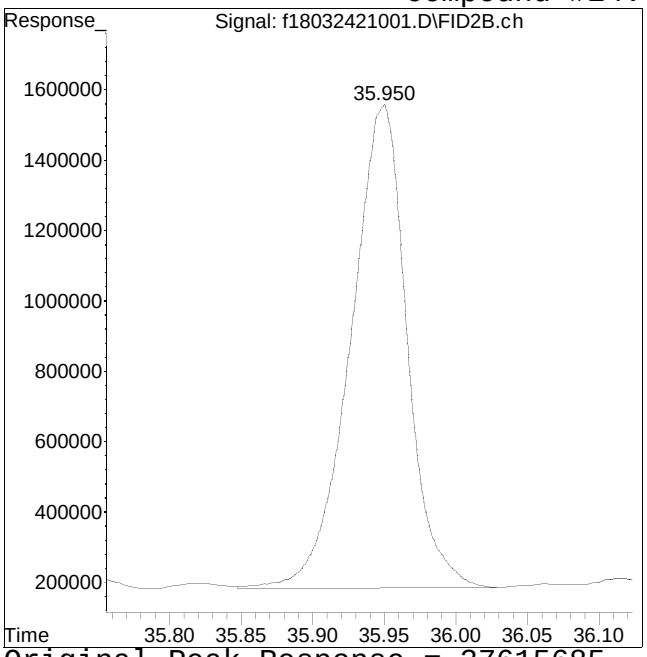
M4 = Poor automated baseline construction.

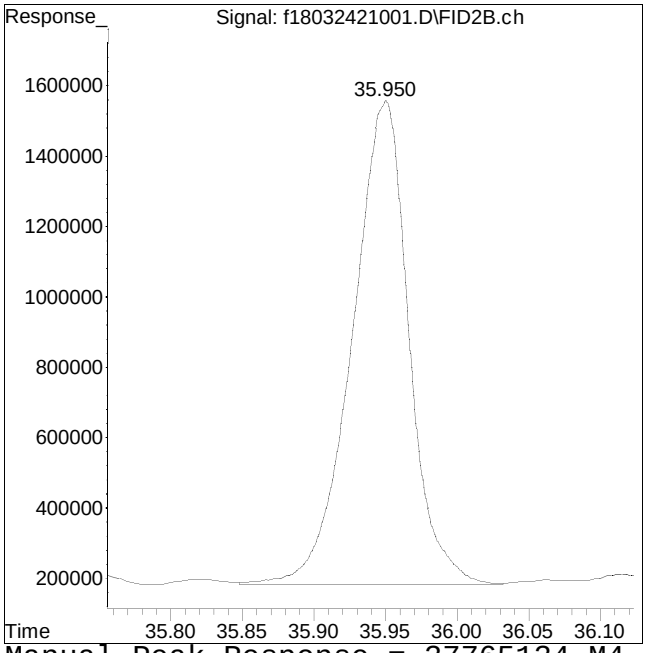
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #24: d50-Tetracosane





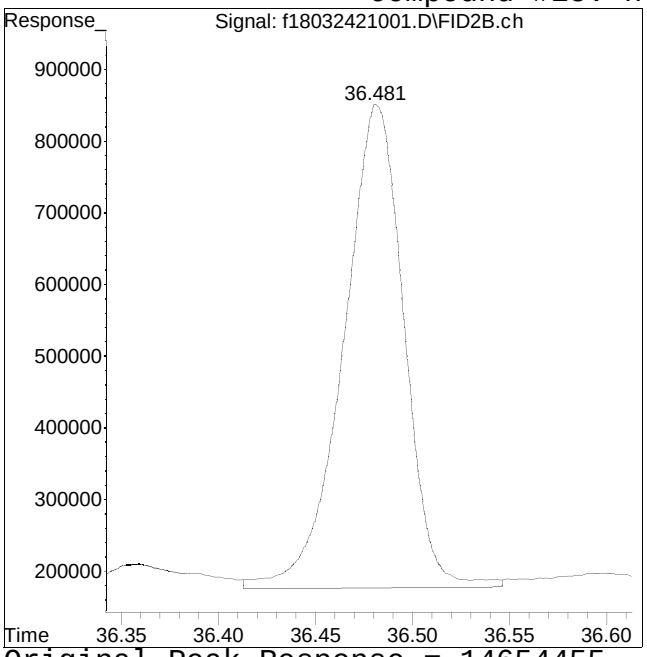
Original Peak Response = 37615685 Manual Peak Response = 37765134 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

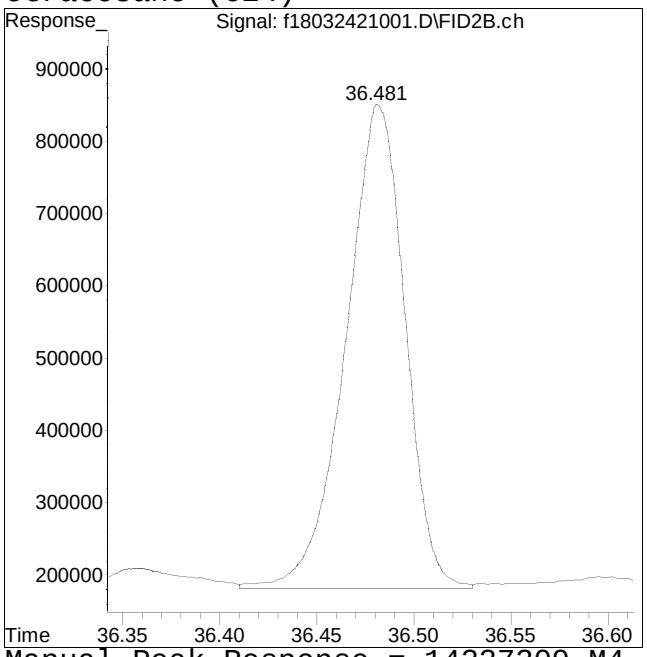
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 14654455



Manual Peak Response = 14237309 M4

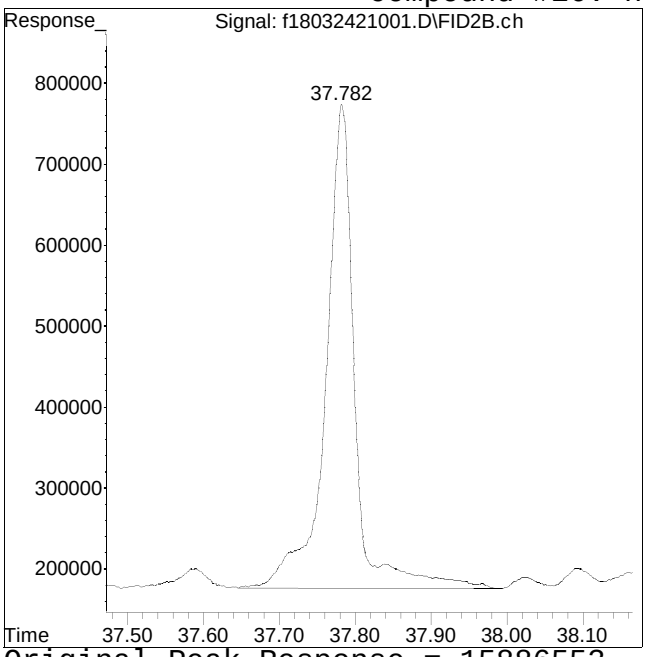
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

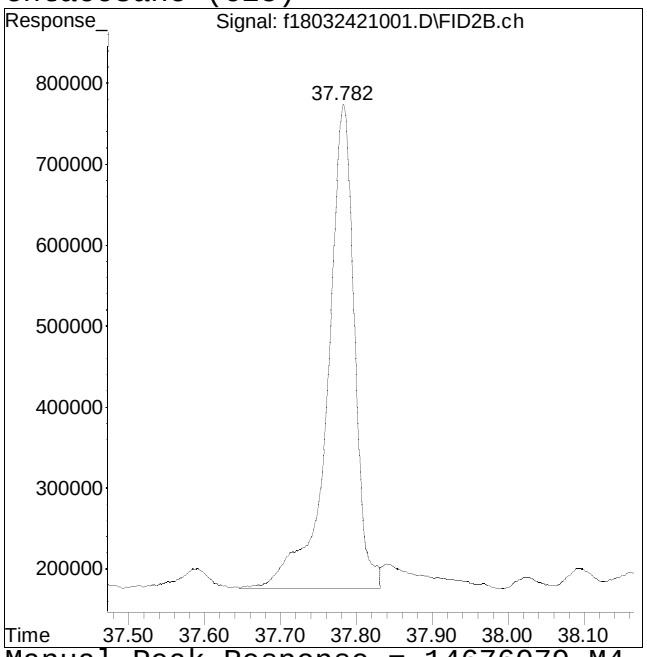
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 15886553



Manual Peak Response = 14676079 M4

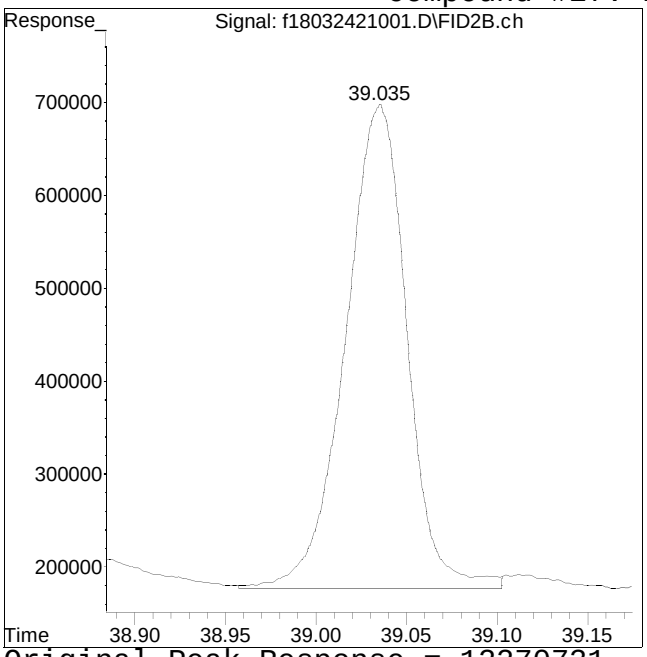
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

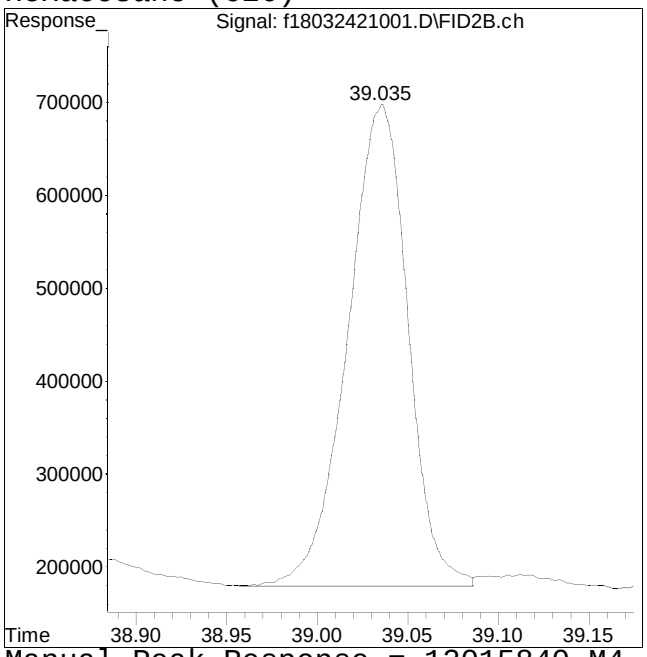
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 12270731



Manual Peak Response = 12015840 M4

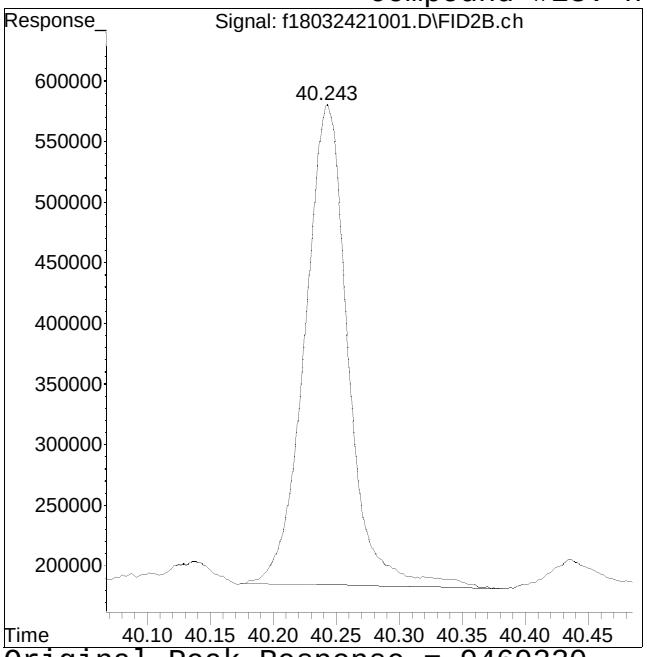
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

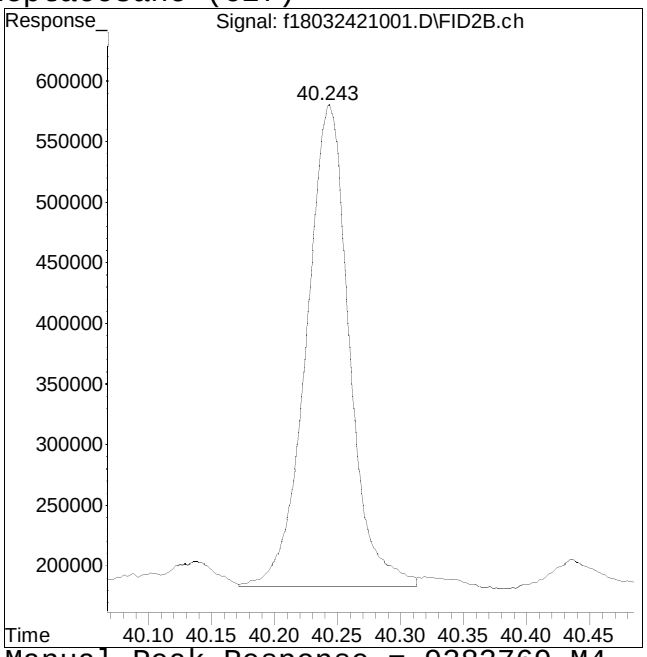
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 9469330



Manual Peak Response = 9383769 M4

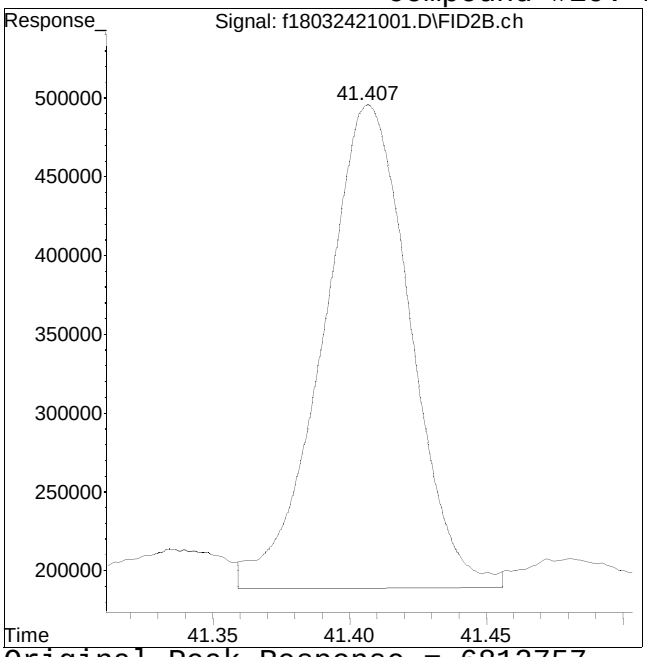
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

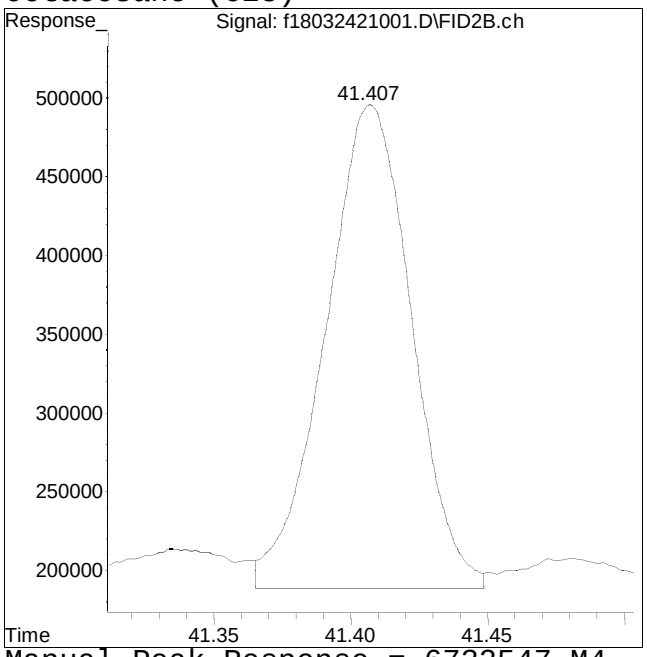
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 6812757



Manual Peak Response = 6732547 M4

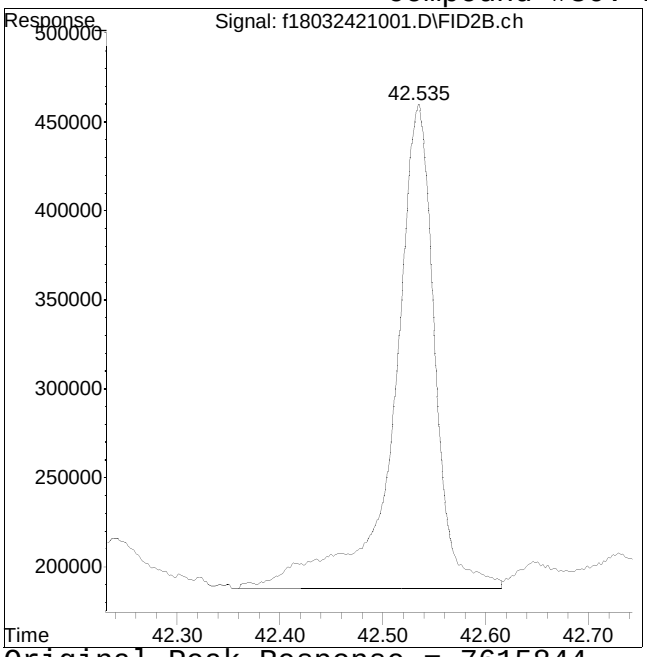
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

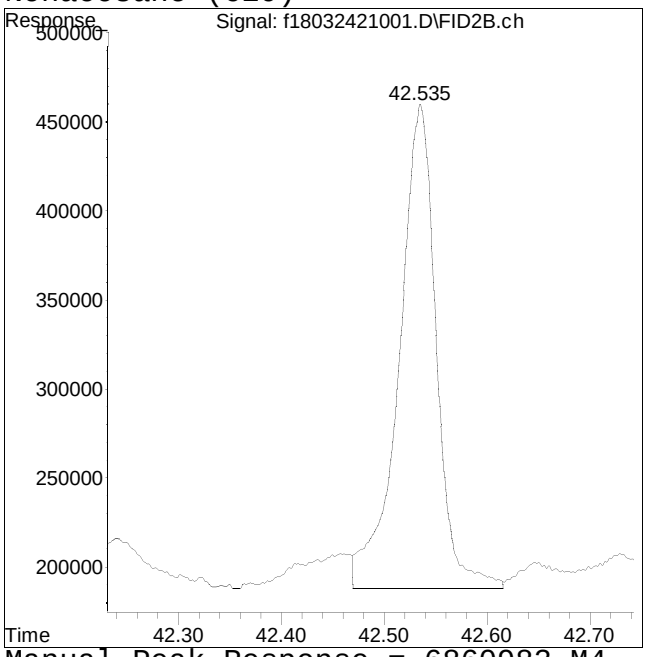
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 7615844



Manual Peak Response = 6860983 M4

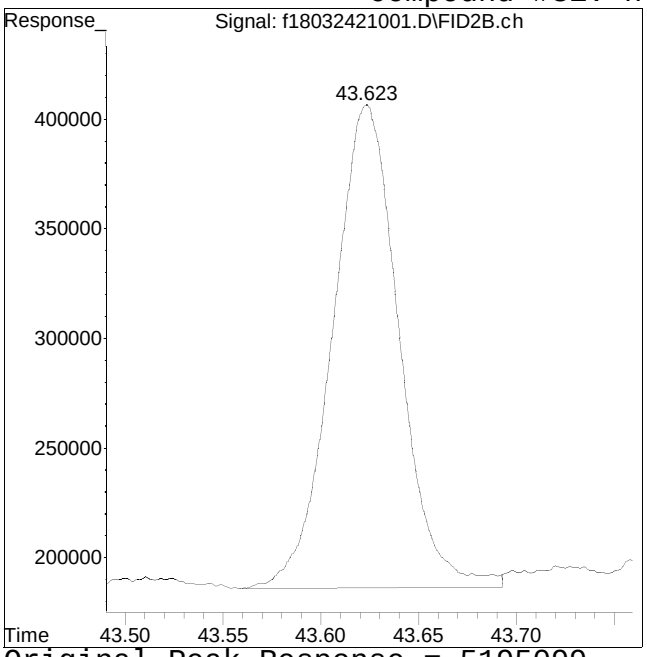
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

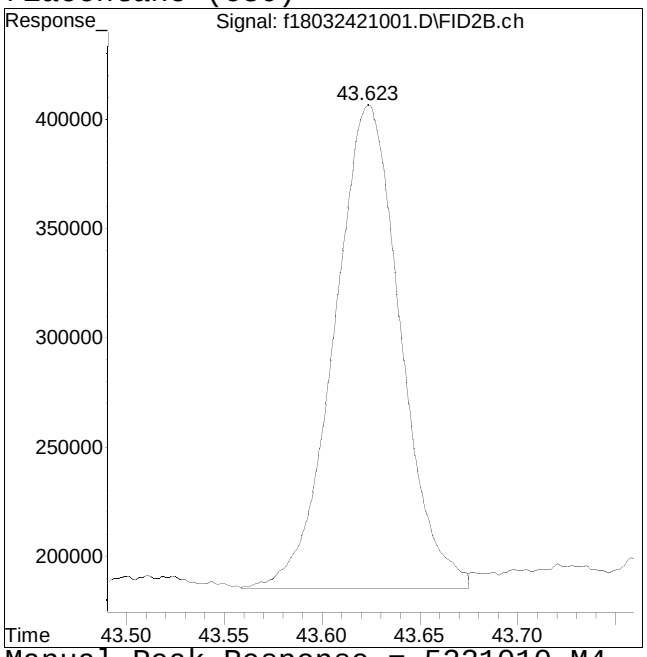
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 5195099



Manual Peak Response = 5221010 M4

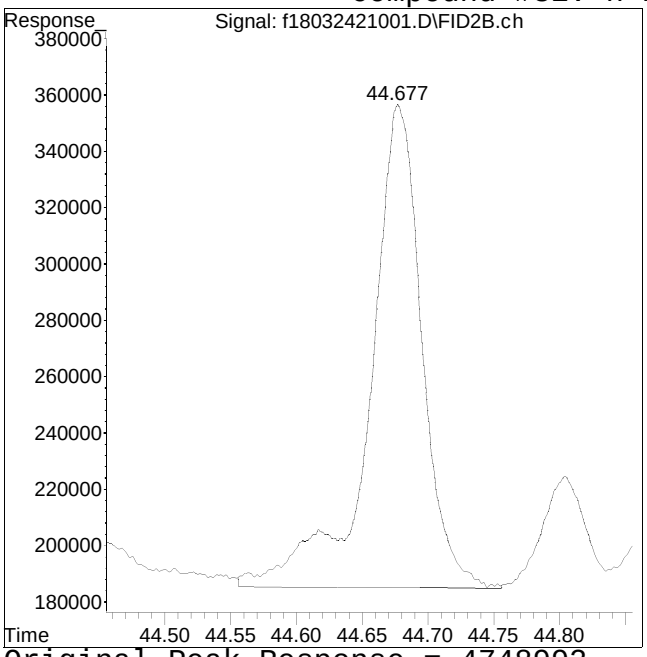
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

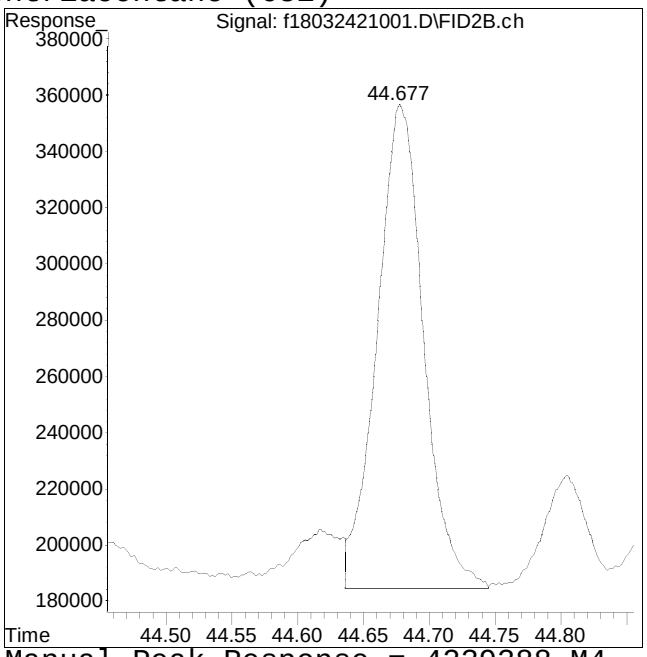
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 4748992



Manual Peak Response = 4239388 M4

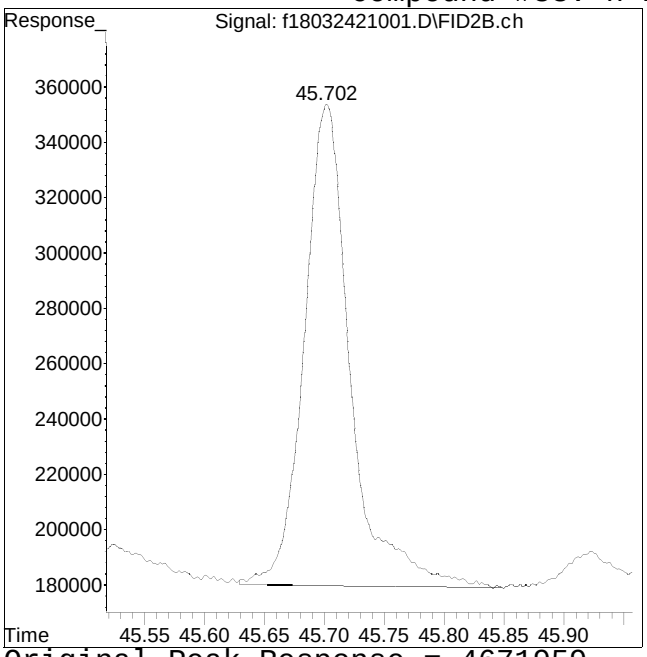
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

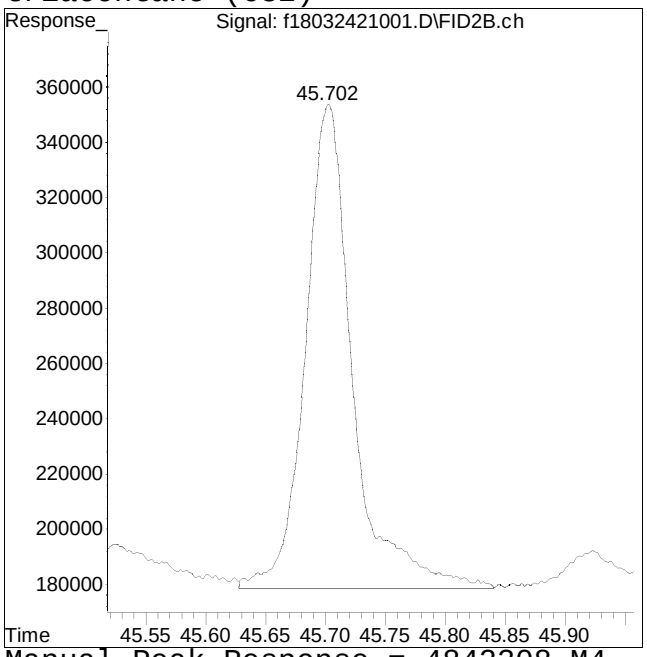
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 4671959



Manual Peak Response = 4842308 M4

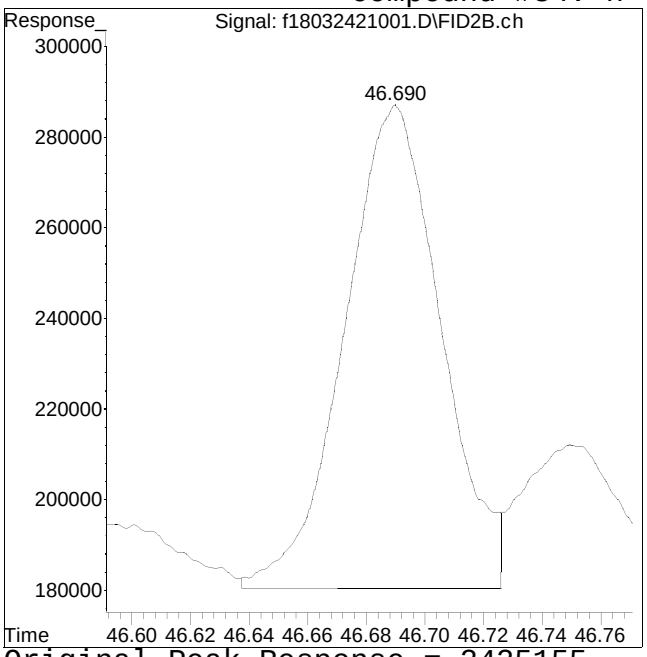
M4 = Poor automated baseline construction.

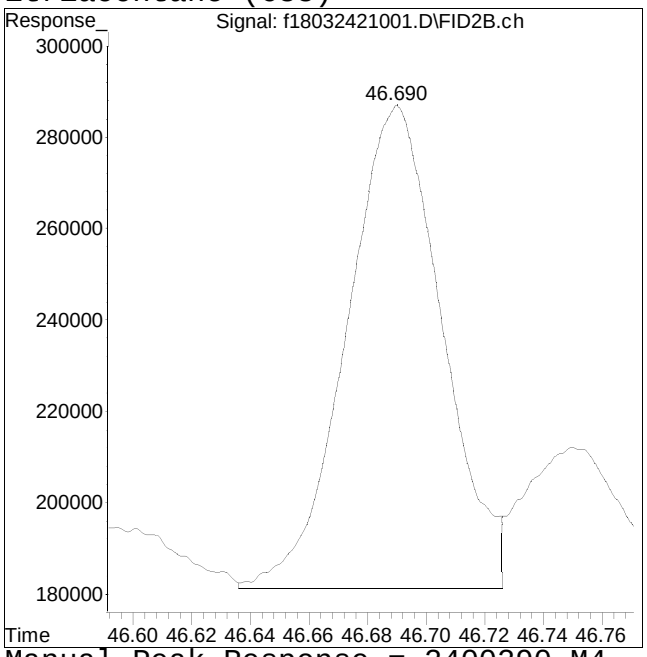
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #34: n-Tritriacontane (C33)





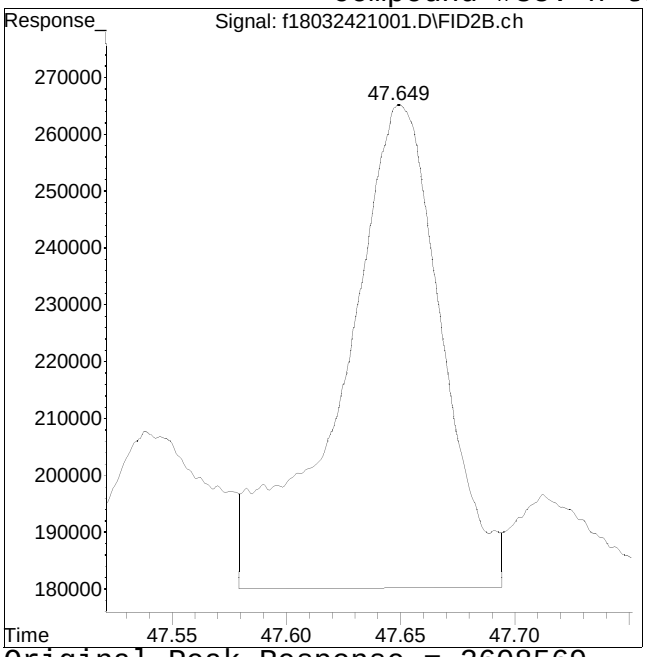
Original Peak Response = 2425155 Manual Peak Response = 2400290 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

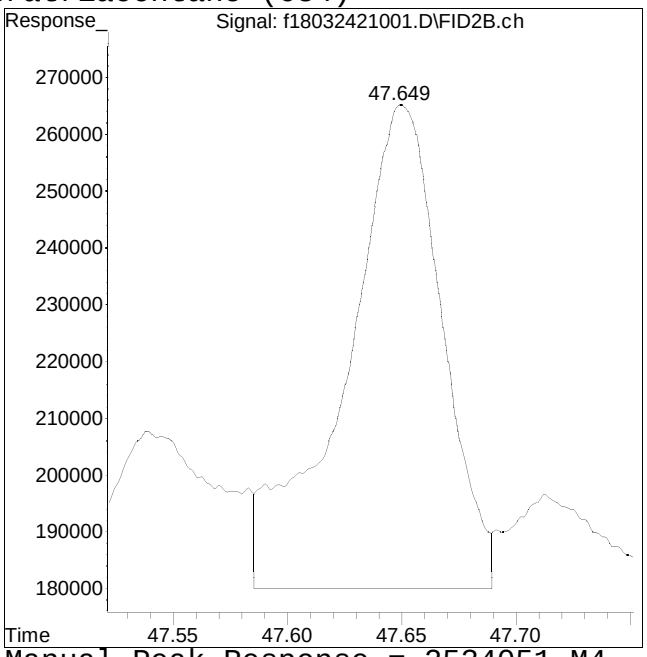
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 2608569



Manual Peak Response = 2534051 M4

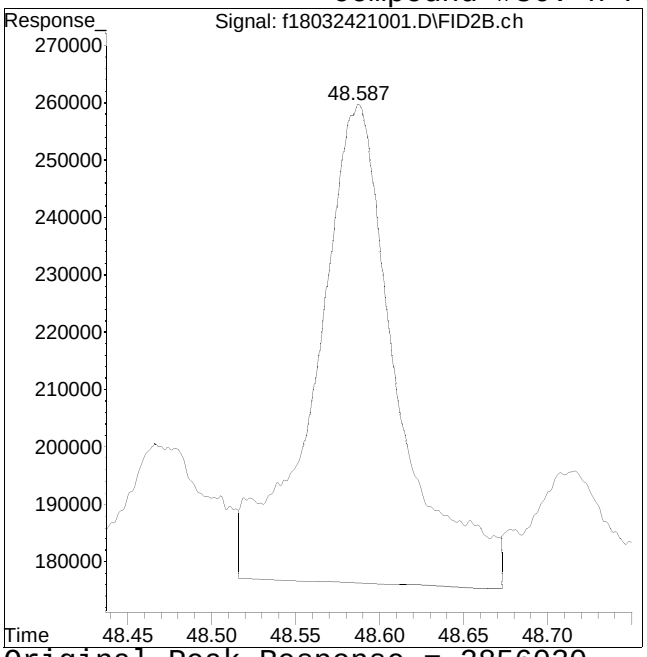
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

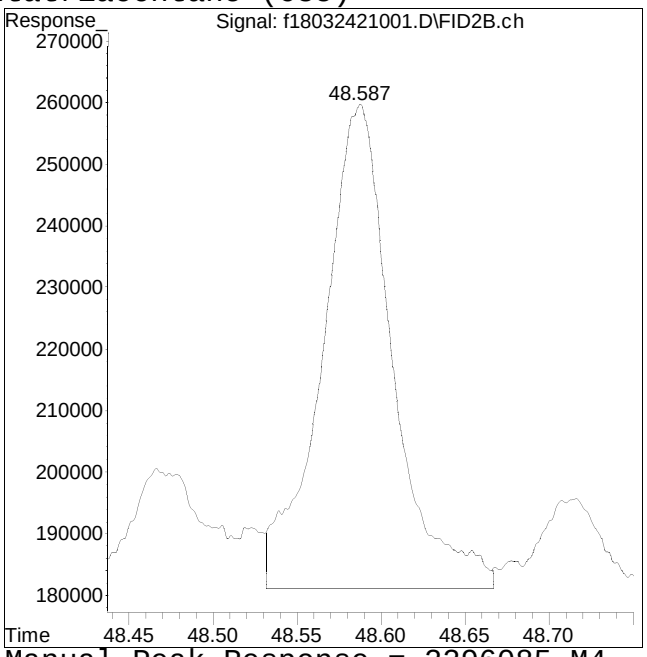
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 2856030



Manual Peak Response = 2296085 M4

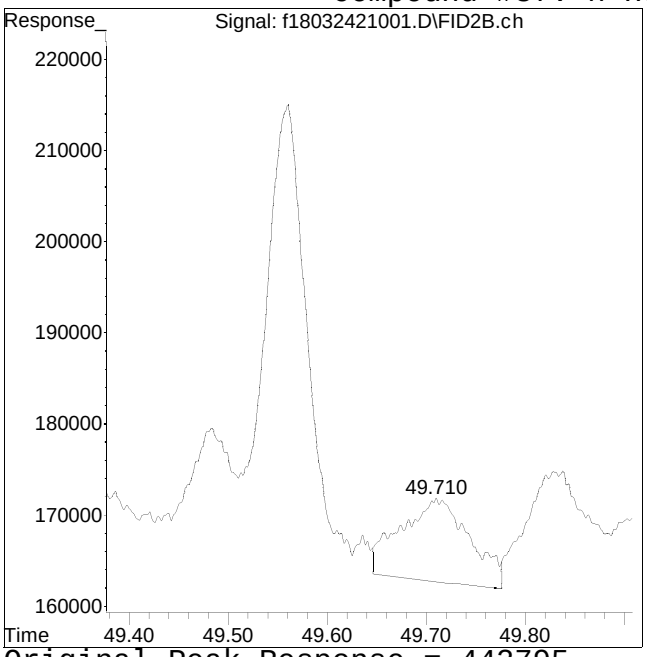
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

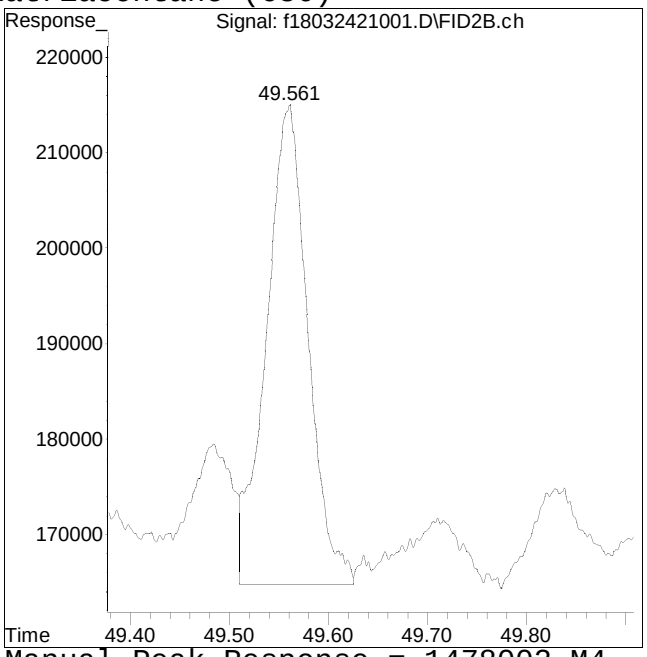
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 442795



Manual Peak Response = 1478002 M4

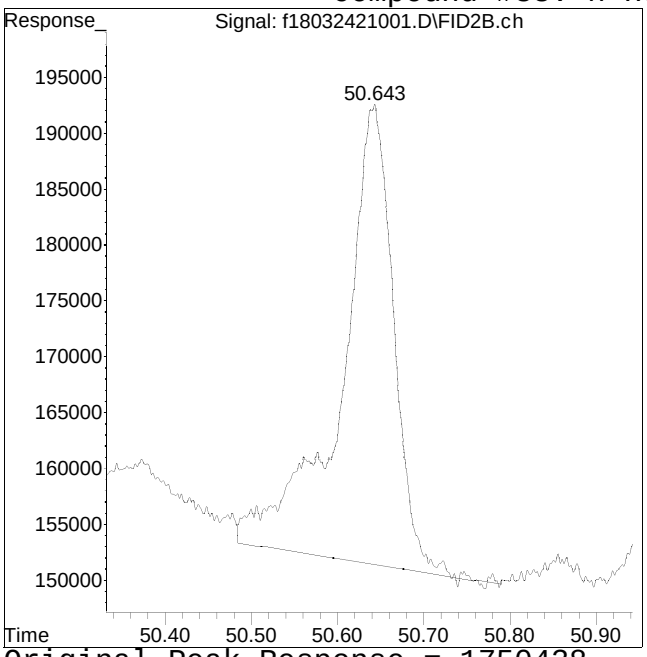
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

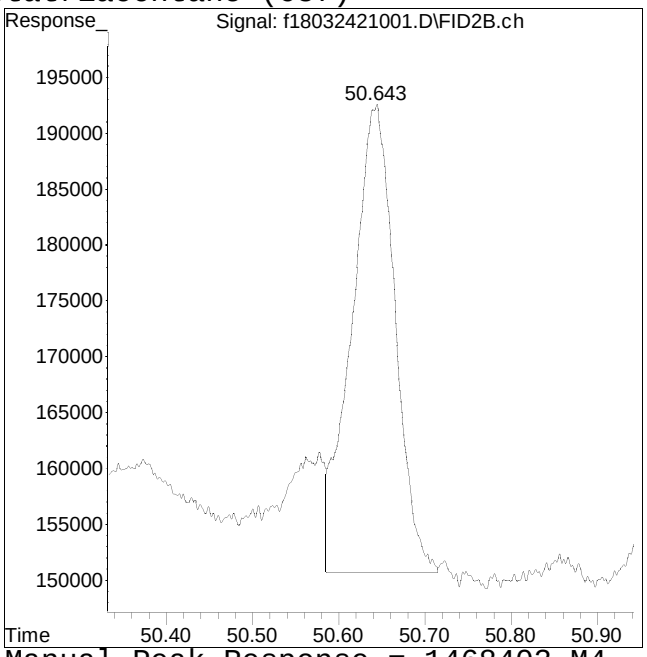
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 1750438



Manual Peak Response = 1468403 M4

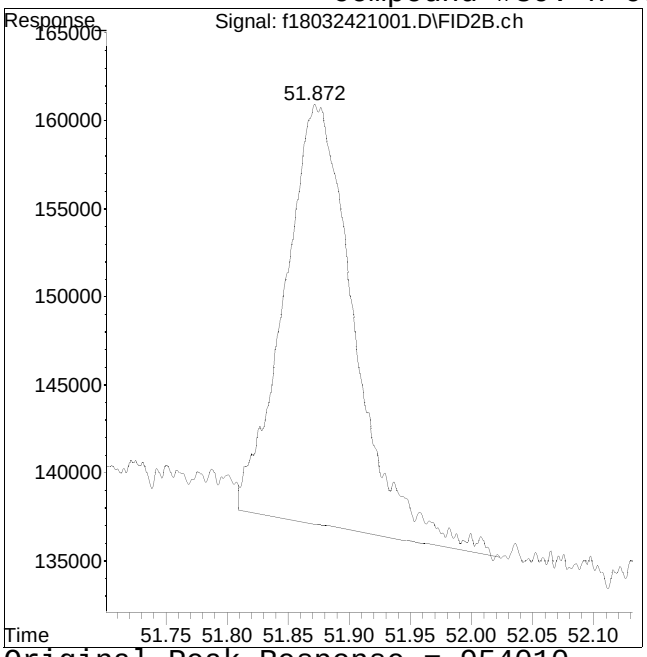
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

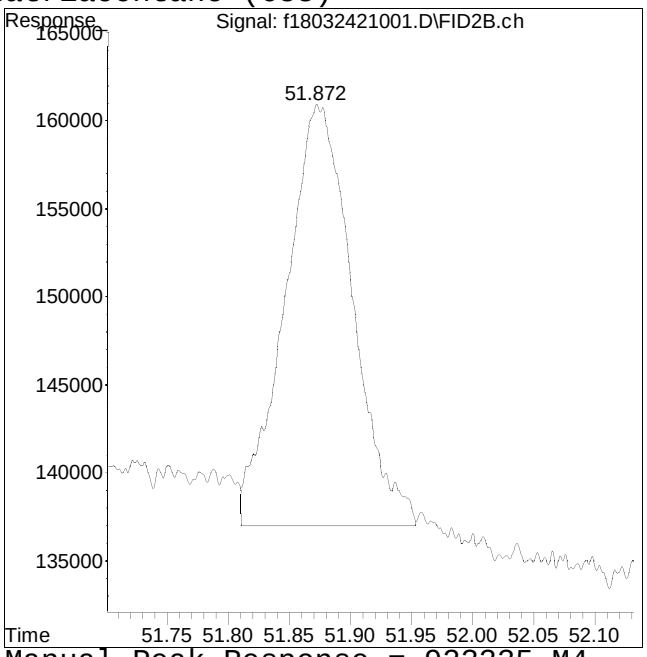
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 954010



Manual Peak Response = 923335 M4

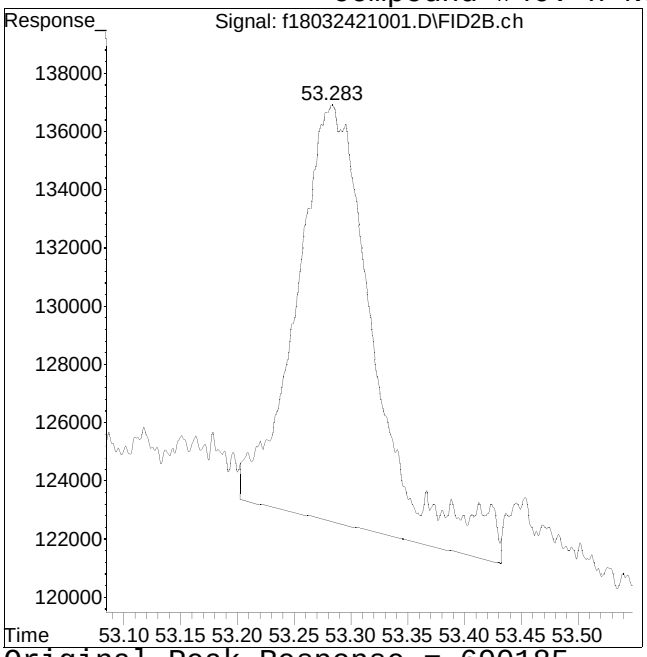
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

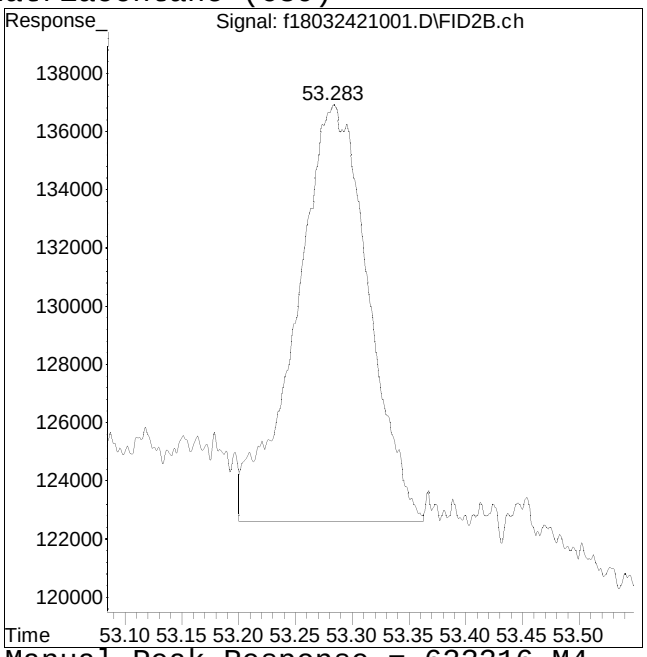
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #40: n-Nonatriacontane (C39)



Original Peak Response = 690185



Manual Peak Response = 633316 M4

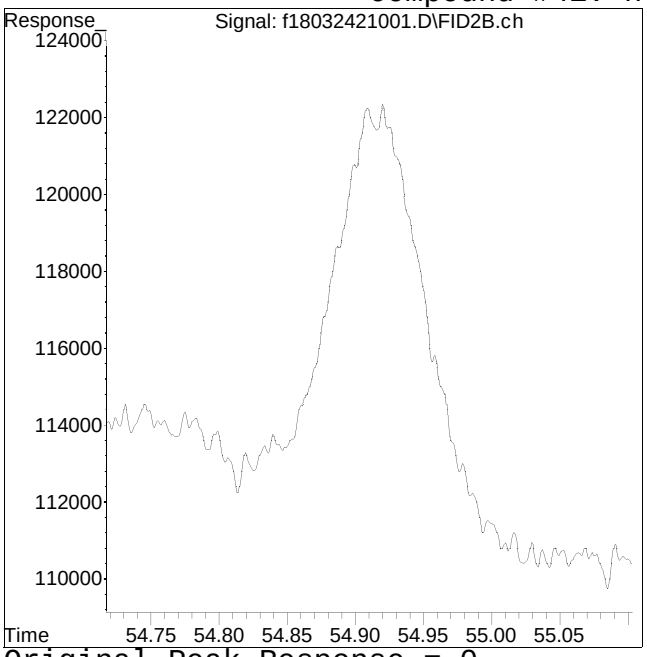
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

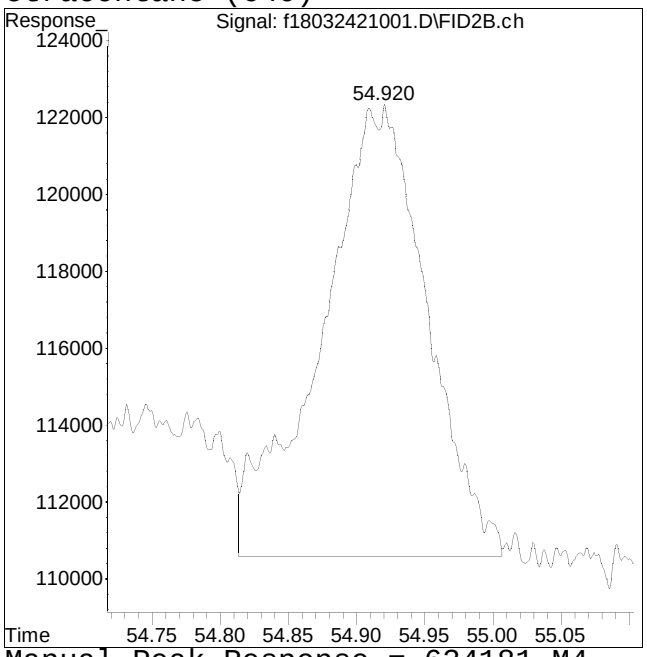
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 634181 M4

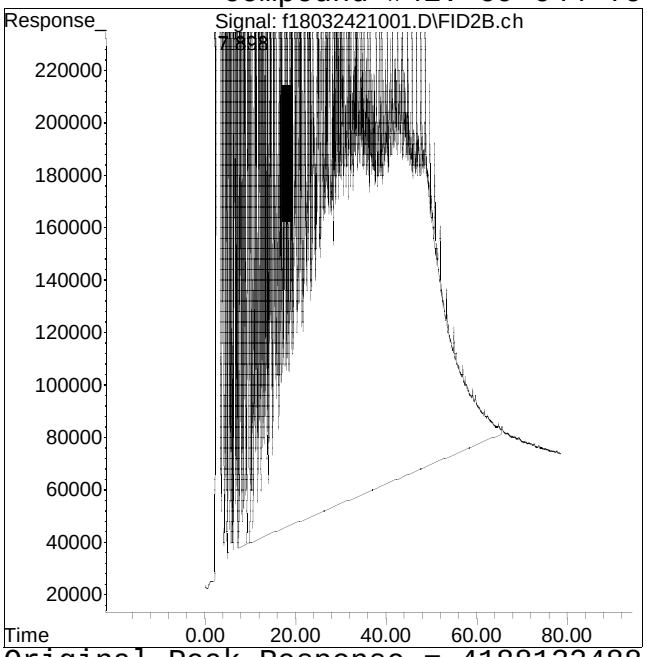
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

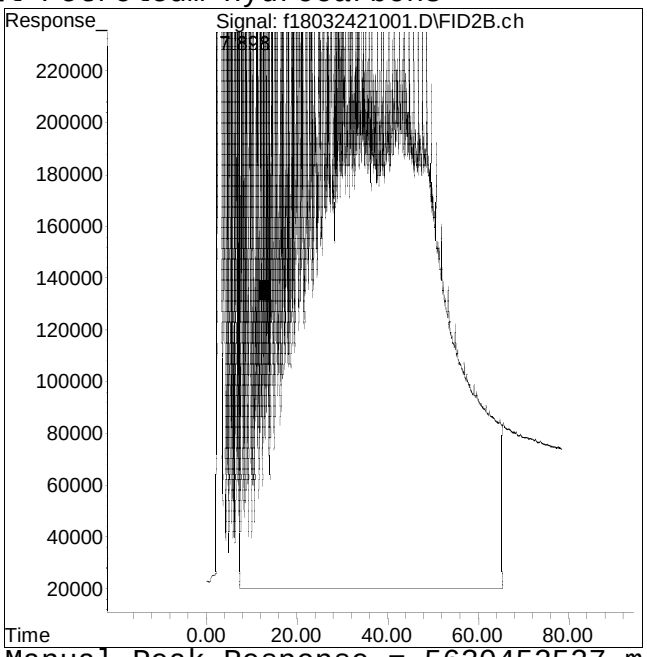
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #42: C9-C44 Total Petroleum Hydrocarbons



Original Peak Response = 4188132488



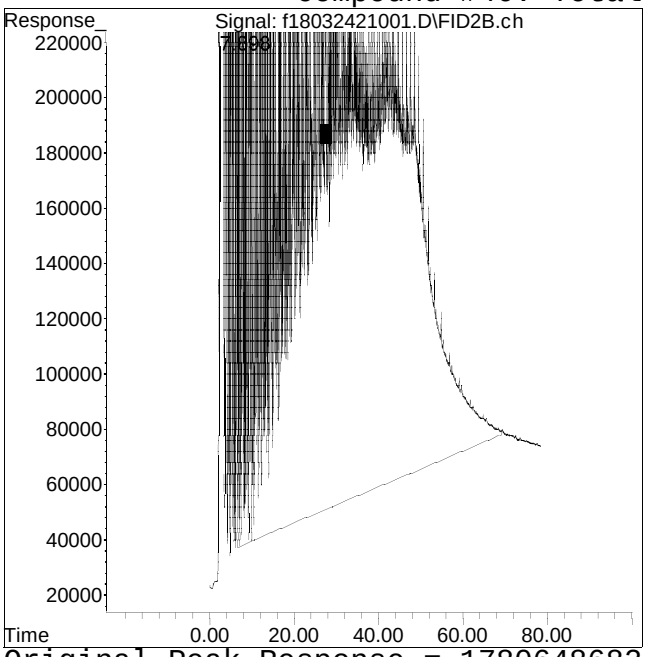
Manual Peak Response = 5630452527 m

Manual Integration/Negative Proof Report

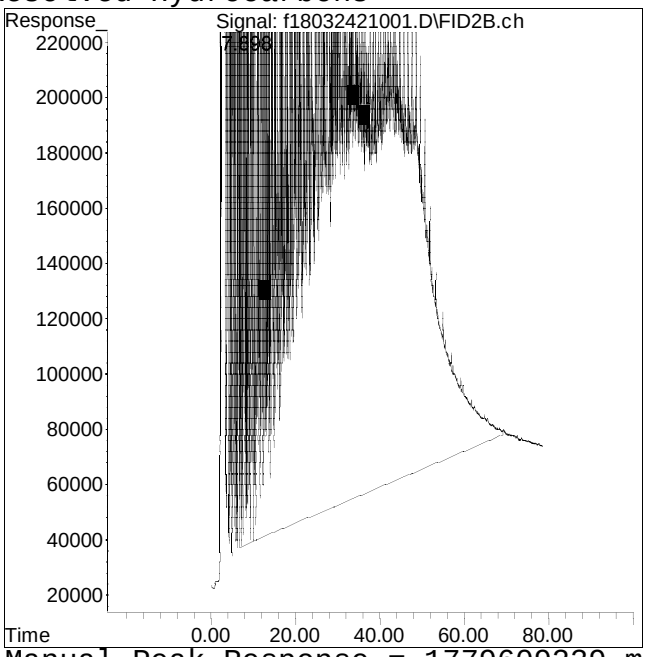
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18032421001.D
Date Inj'd : 3/24/2021 15:51 __
Sample : WG1479204-1,0.10054

Method : HC18031921R_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 4/8/2021 3:23 pm

Compound #46: Total Resolved Hydrocarbons



Original Peak Response = 1780648682



Manual Peak Response = 1779609239 m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\MAR\MAR24.SEC\
Data File : f18032421005.D
Signal(s) : FID2B.ch
Acq On : 24 Mar 2021 18:44
Operator : FID18:WR
Sample : IB1803242101R
Misc : DCM
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Apr 08 15:29:25 2021
Quant Method : O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Apr 08 15:22:59 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

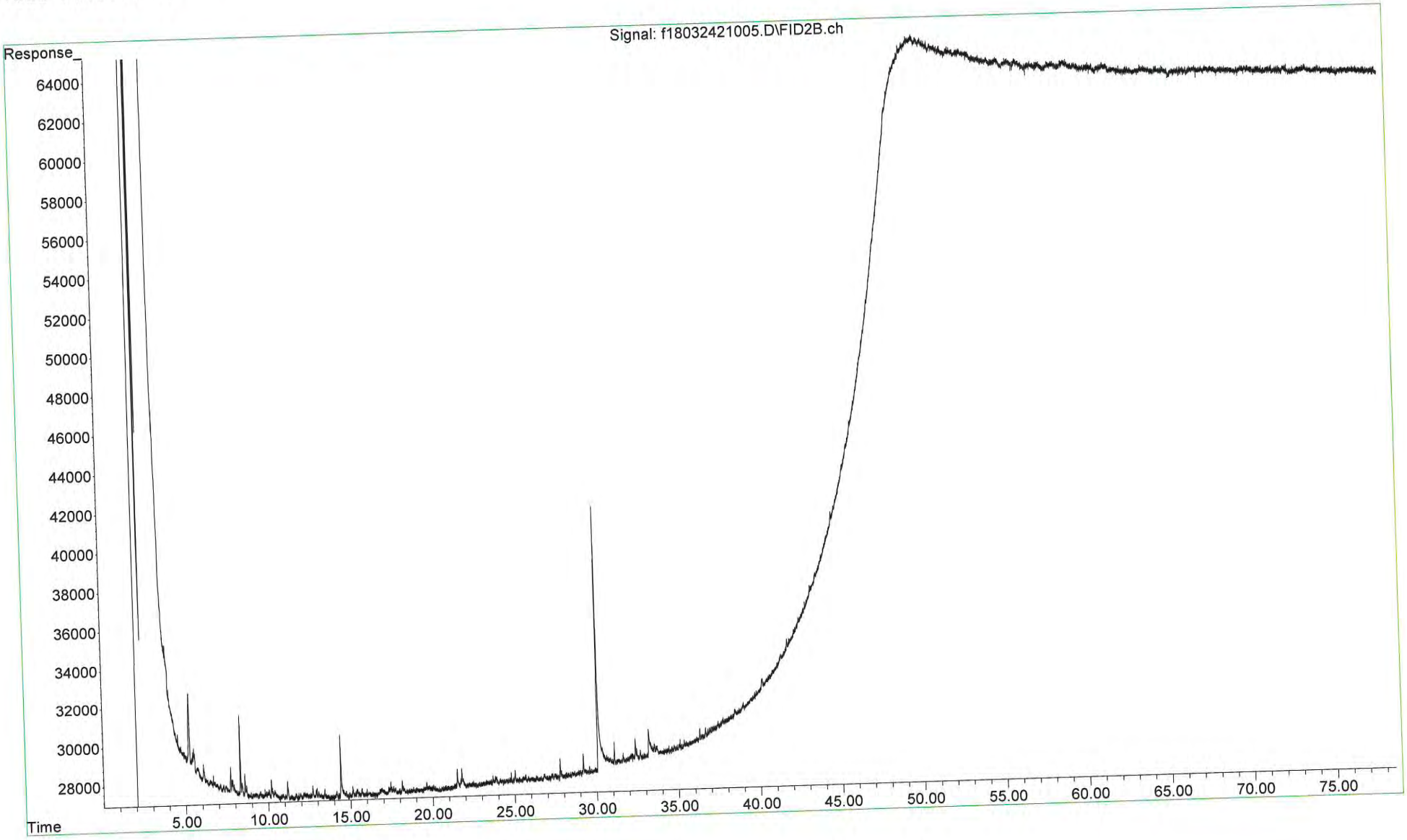
Sub List : TPH - TPH

Compound		R.T.	Response	Conc Units
Internal Standards				
1) I	5-alpha-androstane	31.377	36215	50.000 ug/mL M4
System Monitoring Compounds				
19) s	ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
24) s	d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
Target Compounds				
42) h	C9-C44 Total Petroleu...	36.374	708089081	975047.806 ug/mL M5
46) h	Total Resolved Hydroc...	37.870	6261579	8622.275 ug/mL m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

File :O:\Forensics\Data\FID18\2021\MAR\MAR24.SEC\f18032421005.D
Operator : FID18:WR
Acquired : 24 Mar 2021 18:44 using AcqMethod FID18.M
Instrument : FID 18
Sample Name: IB1803242101R
Misc Info : DCM
Vial Number: 53



Response Factor Report FID17

Method Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Method File : HC17052021F_DRO.M
Title : FID Forensics
Last Update : Thu May 27 16:04:30 2021
Response Via : Initial Calibration

Calibration Files
1 =F1705202112.D 10 =F1705202114.D 50 =F1705202116.D 100 =F1705202118.D 200 =F1705202120.D
500 =F1705202122.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.919	0.879	0.879	0.852	0.792		0.864	5.42
3)	t	n-Nonane (C9)	1.068	0.920	0.915	0.880	0.829		0.922	9.67
4)	t	n-Decane (C10)	1.011	0.959	0.958	0.923	0.870		0.944	5.53
5)	t	n-Undecane (C11)	0.934	0.945	0.951	0.917	0.867		0.923	3.64
6)	t	n-Dodecane (C12)	0.921	0.950	0.956	0.924	0.875		0.925	3.47
7)	t	n-Tridecane (...	0.936	0.949	0.954	0.924	0.875		0.928	3.39
8)	t	1380	0.984	0.973	0.977	0.947	0.898		0.956	3.70
9)	t	n-Tetradecane...	0.984	0.973	0.977	0.947	0.898		0.956	3.70
10)	t	1470	0.975	0.976	0.980	0.951	0.902		0.957	3.40
11)	t	n-Pentadecane...	0.975	0.976	0.980	0.951	0.902		0.957	3.40
12)	t	n-Hexadecane ...	1.001	0.968	0.971	0.943	0.893		0.955	4.21
13)	t	1650	0.951	0.975	0.981	0.953	0.911		0.954	2.87
14)	t	n-Heptadecane...	0.951	0.975	0.981	0.953	0.911		0.954	2.87
15)	t	Pristane	1.054	1.003	1.003	0.973	0.915		0.990	5.13
16)	t	n-Octadecane ...	0.999	0.985	0.989	0.962	0.915		0.970	3.45
17)	t	Phytane	0.941	0.925	0.923	0.894	0.854		0.908	3.79
18)	t	n-Nonadecane ...	1.000	0.988	0.994	0.966	0.918		0.973	3.44
19)	s	ortho-terphenyl	1.120	1.096	1.100	1.069	1.025	1.093	1.084	3.03
20)	t	n-Eicosane (C20)	1.009	0.993	0.999	0.971	0.922		0.979	3.53
21)	t	n-Heneicosane...	1.009	0.996	1.002	0.976	0.926		0.982	3.43
22)	t	n-Docosane (C22)	1.019	0.997	1.001	0.975	0.925		0.983	3.68
23)	t	n-Tricosane (...	1.025	0.998	1.001	0.977	0.926		0.985	3.79
24)	s	d50-Tetracosane	0.879	0.860	0.888	0.854	0.819	0.860	0.860	2.80
25)	t	n-Tetracosane...	1.025	0.990	0.998	0.976	0.923		0.982	3.84
26)	t	n-Pentacosane...	0.990	0.970	0.977	0.960	0.908		0.961	3.32
27)	t	n-Hexacosane ...	1.013	0.996	1.002	0.989	0.933		0.987	3.17
28)	t	n-Heptacosane...	1.023	0.995	1.001	0.992	0.934		0.989	3.34
29)	t	n-Octacosane ...	1.105	1.026	1.022	1.018	0.957		1.026	5.13
30)	t	n-Nonacosane ...	1.030	1.010	1.016	1.019	0.955		1.006	2.95
31)	t	n-Triacontane...	1.033	1.012	1.018	1.027	0.960		1.010	2.90

Response Factor Report FID17

Method Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Method File : HC17052021F_DRO.M
Title : FID Forensics
Last Update : Thu May 27 16:04:30 2021
Response Via : Initial Calibration

Calibration Files
1 =F1705202112.D 10 =F1705202114.D 50 =F1705202116.D 100 =F1705202118.D 200 =F1705202120.D
500 =F1705202122.D

	Compound	1	10	50	100	200	500	Avg	%RSD
32) t	n-Hentriacont...	1.005	0.975	0.981	0.996	0.927		0.977	3.10
33) t	n-Dotriaconta...	1.052	1.022	1.028	1.050	0.974		1.025	3.09
34) t	n-Tritriacont...	1.030	0.993	0.998	1.024	0.945		0.998	3.39
35) t	n-tetratriaco...	1.013	0.986	0.993	1.023	0.940		0.991	3.26
36) t	n-Pentatriaco...	0.951	0.919	0.927	0.958	0.875		0.926	3.55
37) t	n-Hexatriacon...	1.140	1.107	1.117	1.158	1.051		1.115	3.63
38) t	n-Heptatriaco...	1.023	1.004	1.018	1.056	0.953		1.011	3.71
39) t	n-Octatriacon...	1.032	1.019	1.030	1.069	0.960		1.022	3.88
40) t	n-Nonatriacon...	1.026	1.003	1.018	1.058	0.939		1.009	4.35
41) t	n-Tetracontan...	1.026	1.003	1.018	1.058	0.939		1.009	4.35
42) h	C9-C44 Total ...	1.010	0.986	0.991	0.983	0.920		0.978	3.49
43) h	C9-C40 Total ...	1.010	0.986	0.991	0.983	0.920		0.978	3.49
44) h	C10-C28 DRO	0.996	0.981	0.985	0.960	0.909		0.966	3.56
45) h	C28-C40 ORO	1.037	1.006	1.014	1.038	0.953		1.010	3.43
46) h	Total Resolve...	1.010	0.986	0.991	0.983	0.920		0.978	3.49

(#) = Out of Range

rfupdate

RSF Update Summary Report

Method Path.....: O:\Forensics\Data\FID17\2021\MAY\MAY20\
Method File.....: HC17052021F_DRO.M
Method Title.....: FID Forensics
Last Update.....: Thu May 27 15:39:11 2021

Generating Average Response Factor For: C9-C44 Total Petroleum Hydrocarbons

No	Compound	Level	Conc	Response
1	n-Nonane (C9)	1	1.00000	1171751.435
2	n-Decane (C10)	1	1.00000	1109845.697
3	n-Undecane (C11)	1	1.00000	1024381.455
4	n-Dodecane (C12)	1	1.00000	1010343.272
5	n-Tridecane (C13)	1	1.00000	1026803.234
6	n-Tetradecane (C14)	1	1.00000	1079621.954
7	n-Pentadecane (C15)	1	1.00000	1070039.053
8	n-Hexadecane (C16)	1	1.00000	1098101.248
9	n-Heptadecane (C17)	1	1.00000	1042971.331
10	Pristane	1	1.00000	1156625.936
11	n-Octadecane (C18)	1	1.00000	1096477.082
12	Phytane	1	1.00000	1032737.962
13	n-Nonadecane (C19)	1	1.00000	1096831.277
14	n-Eicosane (C20)	1	1.00000	1107447.315
15	n-Heneicosane (C21)	1	1.00000	1107526.004
16	n-Docosane (C22)	1	1.00000	1117658.493
17	n-Tricosane (C23)	1	1.00000	1124390.751
18	n-Tetracosane (C24)	1	1.00000	1124339.765
19	n-Pentacosane (C25)	1	1.00000	1086806.757
20	n-Hexacosane (C26)	1	1.00000	1111966.289
21	n-Heptacosane (C27)	1	1.00000	1122848.256
22	n-Octacosane (C28)	1	1.00000	1212558.746
23	n-Nonacosane (C29)	1	1.00000	1130473.888
24	n-Triacontane (C30)	1	1.00000	1133109.263
25	n-Hentriacontane (C31)	1	1.00000	1103004.874
26	n-Dotriacontane (C32)	1	1.00000	1154057.569
27	n-Tritriacontane (C33)	1	1.00000	1130391.444
28	n-tetratriacontane (C34)	1	1.00000	1110986.529
29	n-Pentatriacontane (C35)	1	1.00000	1043736.753
30	n-Hexatriacontane (C36)	1	1.00000	1250484.820
31	n-Heptatriacontane (C37)	1	1.00000	1122679.143
32	n-Octatriacontane (C38)	1	1.00000	1131929.425
33	n-Tetracontane (C40)	1	1.00000	1125356.431
Avg RSF For: C9-C44 Total Petroleum			1.00000	1108129.802
1	n-Nonane (C9)	2	10.00000	10684051.990
2	n-Decane (C10)	2	10.00000	11134164.186
3	n-Undecane (C11)	2	10.00000	10967330.535
4	n-Dodecane (C12)	2	10.00000	11028597.130
5	n-Tridecane (C13)	2	10.00000	11018399.725
6	n-Tetradecane (C14)	2	10.00000	11292200.447
7	n-Pentadecane (C15)	2	10.00000	11328599.670
8	n-Hexadecane (C16)	2	10.00000	11234298.968
9	n-Heptadecane (C17)	2	10.00000	11323333.321

		rfupdate	
10 Pristane	2	10.00000	11642848.950
11 n-Octadecane (C18)	2	10.00000	11434772.804
12 Phytane	2	10.00000	10743380.638
13 n-Nonadecane (C19)	2	10.00000	11473771.864
14 n-Eicosane (C20)	2	10.00000	11523057.761
15 n-Heneicosane (C21)	2	10.00000	11566081.768
16 n-Docosane (C22)	2	10.00000	11574332.153
17 n-Tricosane (C23)	2	10.00000	11587701.760
18 n-Tetracosane (C24)	2	10.00000	11494662.796
19 n-Pentacosane (C25)	2	10.00000	11265787.330
20 n-Hexacosane (C26)	2	10.00000	11556999.980
21 n-Heptacosane (C27)	2	10.00000	11548396.870
22 n-Octacosane (C28)	2	10.00000	11909847.149
23 n-Nonacosane (C29)	2	10.00000	11729452.101
24 n-Triacontane (C30)	2	10.00000	11742904.972
25 n-Hentriacontane (C31)	2	10.00000	11314814.828
26 n-Dotriacontane (C32)	2	10.00000	11865476.996
27 n-Tritriacontane (C33)	2	10.00000	11523465.994
28 n-tetratriacontane (C34)	2	10.00000	11451119.910
29 n-Pentatriacontane (C35)	2	10.00000	10662256.031
30 n-Hexatriacontane (C36)	2	10.00000	12851113.166
31 n-Heptatriacontane (C37)	2	10.00000	11656708.336
32 n-Octatriacontane (C38)	2	10.00000	11826731.842
33 n-Tetracontane (C40)	2	10.00000	11647803.772
Avg RSF For: C9-C44 Total Petroleum		10.00000	11442559.568

1 n-Nonane (C9)	3	50.00000	48771924.188
2 n-Decane (C10)	3	50.00000	51075440.058
3 n-Undecane (C11)	3	50.00000	50678911.624
4 n-Dodecane (C12)	3	50.00000	50957984.484
5 n-Tridecane (C13)	3	50.00000	50845025.599
6 n-Tetradecane (C14)	3	50.00000	52094598.732
7 n-Pentadecane (C15)	3	50.00000	52229145.720
8 n-Hexadecane (C16)	3	50.00000	51751351.206
9 n-Heptadecane (C17)	3	50.00000	52277861.662
10 Pristane	3	50.00000	53447131.621
11 n-Octadecane (C18)	3	50.00000	52735679.739
12 Phytane	3	50.00000	49215356.348
13 n-Nonadecane (C19)	3	50.00000	52976616.081
14 n-Eicosane (C20)	3	50.00000	53233893.536
15 n-Heneicosane (C21)	3	50.00000	53418500.860
16 n-Docosane (C22)	3	50.00000	53373024.950
17 n-Tricosane (C23)	3	50.00000	53358924.111
18 n-Tetracosane (C24)	3	50.00000	53197968.180
19 n-Pentacosane (C25)	3	50.00000	52079855.565
20 n-Hexacosane (C26)	3	50.00000	53440081.718
21 n-Heptacosane (C27)	3	50.00000	53387647.002
22 n-Octacosane (C28)	3	50.00000	54460527.094
23 n-Nonacosane (C29)	3	50.00000	54143436.222
24 n-Triacontane (C30)	3	50.00000	54272054.438
25 n-Hentriacontane (C31)	3	50.00000	52296053.650
26 n-Dotriacontane (C32)	3	50.00000	54818805.711
27 n-Tritriacontane (C33)	3	50.00000	53208653.286
28 n-tetratriacontane (C34)	3	50.00000	52932855.272
29 n-Pentatriacontane (C35)	3	50.00000	49392768.576
30 n-Hexatriacontane (C36)	3	50.00000	59548003.527
31 n-Heptatriacontane (C37)	3	50.00000	54257422.814
32 n-Octatriacontane (C38)	3	50.00000	54921095.872
33 n-Tetracontane (C40)	3	50.00000	54254862.067
Avg RSF For: C9-C44 Total Petroleum		50.00000	52819801.864

1	n-Nonane (C9)	4	100.00000	96616068.282
2	n-Decane (C10)	4	100.00000	101268677.390
3	n-Undecane (C11)	4	100.00000	100584077.070
4	n-Dodecane (C12)	4	100.00000	101404379.156
5	n-Tridecane (C13)	4	100.00000	101382803.662
6	n-Tetradecane (C14)	4	100.00000	103951622.041
7	n-Pentadecane (C15)	4	100.00000	104381724.683
8	n-Hexadecane (C16)	4	100.00000	103498290.798
9	n-Heptadecane (C17)	4	100.00000	104608997.866
10	Pristane	4	100.00000	106780008.973
11	n-Octadecane (C18)	4	100.00000	105576841.549
12	Phytane	4	100.00000	98121493.646
13	n-Nonadecane (C19)	4	100.00000	106027847.812
14	n-Eicosane (C20)	4	100.00000	106535091.341
15	n-Heneicosane (C21)	4	100.00000	107060131.819
16	n-Docosane (C22)	4	100.00000	107024075.650
17	n-Tricosane (C23)	4	100.00000	107222101.125
18	n-Tetracosane (C24)	4	100.00000	107072362.874
19	n-Pentacosane (C25)	4	100.00000	105388821.800
20	n-Hexacosane (C26)	4	100.00000	108489729.585
21	n-Heptacosane (C27)	4	100.00000	108907457.100
22	n-Octacosane (C28)	4	100.00000	111710930.880
23	n-Nonacosane (C29)	4	100.00000	111802404.469
24	n-Triacontane (C30)	4	100.00000	112736860.098
25	n-Hentriacontane (C31)	4	100.00000	109283275.930
26	n-Dotriacontane (C32)	4	100.00000	115267518.176
27	n-Tritriacontane (C33)	4	100.00000	112385731.740
28	n-tetratriacontane (C34)	4	100.00000	112321183.654
29	n-Pentatriacontane (C35)	4	100.00000	105135244.122
30	n-Hexatriacontane (C36)	4	100.00000	127058278.819
31	n-Heptatriacontane (C37)	4	100.00000	115889229.832
32	n-Octatriacontane (C38)	4	100.00000	117351710.870
33	n-Tetracontane (C40)	4	100.00000	116054901.150
Avg RSF For: C9-C44 Total Petroleum			100.00000	107845450.726

1	n-Nonane (C9)	5	200.00000	201433030.462
2	n-Decane (C10)	5	200.00000	211499703.473
3	n-Undecane (C11)	5	200.00000	210848119.612
4	n-Dodecane (C12)	5	200.00000	212672282.269
5	n-Tridecane (C13)	5	200.00000	212839738.378
6	n-Tetradecane (C14)	5	200.00000	218208937.692
7	n-Pentadecane (C15)	5	200.00000	219341701.982
8	n-Hexadecane (C16)	5	200.00000	217167665.547
9	n-Heptadecane (C17)	5	200.00000	221556768.031
10	Pristane	5	200.00000	222551620.557
11	n-Octadecane (C18)	5	200.00000	222568928.594
12	Phytane	5	200.00000	207645519.598
13	n-Nonadecane (C19)	5	200.00000	223138563.365
14	n-Eicosane (C20)	5	200.00000	224220195.049
15	n-Heneicosane (C21)	5	200.00000	225118581.418
16	n-Docosane (C22)	5	200.00000	224840261.386
17	n-Tricosane (C23)	5	200.00000	225071564.356
18	n-Tetracosane (C24)	5	200.00000	224349500.588
19	n-Pentacosane (C25)	5	200.00000	220635797.497
20	n-Hexacosane (C26)	5	200.00000	226867831.536
21	n-Heptacosane (C27)	5	200.00000	227180738.989
22	n-Octacosane (C28)	5	200.00000	232741442.061
23	n-Nonacosane (C29)	5	200.00000	232059129.360
24	n-Triacontane (C30)	5	200.00000	233302652.370

25	n-Hentriacontane (C31)	5	200.00000	225361978.013
26	n-Dotriacontane (C32)	5	200.00000	236707431.832
27	n-Tritriacontane (C33)	5	200.00000	229699743.795
28	n-tetratriacontane (C34)	5	200.00000	228455680.432
29	n-Pentatriacontane (C35)	5	200.00000	212723470.359
30	n-Hexatriacontane (C36)	5	200.00000	255619090.777
31	n-Heptatriacontane (C37)	5	200.00000	231704397.063
32	n-Octatriacontane (C38)	5	200.00000	233342360.344
33	n-Tetracontane (C40)	5	200.00000	228203729.372
Avg RSF For: C9-C44 Total Petroleum			200.00000	223626610.793

Generating Average Response Factor For: C10-C28 DRO

No	Compound	Level	Conc	Response
1	n-Decane (C10)	1	1.00000	1109845.697
2	n-Undecane (C11)	1	1.00000	1024381.455
3	n-Dodecane (C12)	1	1.00000	1010343.272
4	n-Tridecane (C13)	1	1.00000	1026803.234
5	n-Tetradecane (C14)	1	1.00000	1079621.954
6	n-Pentadecane (C15)	1	1.00000	1070039.053
7	n-Hexadecane (C16)	1	1.00000	1098101.248
8	n-Heptadecane (C17)	1	1.00000	1042971.331
9	n-Octadecane (C18)	1	1.00000	1096477.082
10	n-Nonadecane (C19)	1	1.00000	1096831.277
11	n-Eicosane (C20)	1	1.00000	1107447.315
12	n-Heneicosane (C21)	1	1.00000	1107526.004
13	n-Docosane (C22)	1	1.00000	1117658.493
14	n-Tricosane (C23)	1	1.00000	1124390.751
15	n-Tetracosane (C24)	1	1.00000	1124339.765
16	n-Pentacosane (C25)	1	1.00000	1086806.757
17	n-Hexacosane (C26)	1	1.00000	1111966.289
18	n-Heptacosane (C27)	1	1.00000	1122848.256
19	n-Octacosane (C28)	1	1.00000	1212558.746
Avg RSF For: C10-C28 DRO			1.00000	1093208.315
1	n-Decane (C10)	2	10.00000	11134164.186
2	n-Undecane (C11)	2	10.00000	10967330.535
3	n-Dodecane (C12)	2	10.00000	11028597.130
4	n-Tridecane (C13)	2	10.00000	11018399.725
5	n-Tetradecane (C14)	2	10.00000	11292200.447
6	n-Pentadecane (C15)	2	10.00000	11328599.670
7	n-Hexadecane (C16)	2	10.00000	11234298.968
8	n-Heptadecane (C17)	2	10.00000	11323333.321
9	n-Octadecane (C18)	2	10.00000	11434772.804
10	n-Nonadecane (C19)	2	10.00000	11473771.864
11	n-Eicosane (C20)	2	10.00000	11523057.761
12	n-Heneicosane (C21)	2	10.00000	11566081.768
13	n-Docosane (C22)	2	10.00000	11574332.153
14	n-Tricosane (C23)	2	10.00000	11587701.760
15	n-Tetracosane (C24)	2	10.00000	11494662.796
16	n-Pentacosane (C25)	2	10.00000	11265787.330
17	n-Hexacosane (C26)	2	10.00000	11556999.980
18	n-Heptacosane (C27)	2	10.00000	11548396.870
19	n-Octacosane (C28)	2	10.00000	11909847.149
Avg RSF For: C10-C28 DRO			10.00000	11382228.222

1	n-Decane (C10)	3	50.00000	51075440.058
2	n-Undecane (C11)	3	50.00000	50678911.624
3	n-Dodecane (C12)	3	50.00000	50957984.484
4	n-Tridecane (C13)	3	50.00000	50845025.599
5	n-Tetradecane (C14)	3	50.00000	52094598.732
6	n-Pentadecane (C15)	3	50.00000	52229145.720
7	n-Hexadecane (C16)	3	50.00000	51751351.206
8	n-Heptadecane (C17)	3	50.00000	52277861.662
9	n-Octadecane (C18)	3	50.00000	52735679.739
10	n-Nonadecane (C19)	3	50.00000	52976616.081
11	n-Eicosane (C20)	3	50.00000	53233893.536
12	n-Heneicosane (C21)	3	50.00000	53418500.860
13	n-Docosane (C22)	3	50.00000	53373024.950
14	n-Tricosane (C23)	3	50.00000	53358924.111
15	n-Tetracosane (C24)	3	50.00000	53197968.180
16	n-Pentacosane (C25)	3	50.00000	52079855.565
17	n-Hexacosane (C26)	3	50.00000	53440081.718
18	n-Heptacosane (C27)	3	50.00000	53387647.002
19	n-Octacosane (C28)	3	50.00000	54460527.094
Avg RSF For: C10-C28 DRO			50.00000	52503844.101

1	n-Decane (C10)	4	100.00000	101268677.390
2	n-Undecane (C11)	4	100.00000	100584077.070
3	n-Dodecane (C12)	4	100.00000	101404379.156
4	n-Tridecane (C13)	4	100.00000	101382803.662
5	n-Tetradecane (C14)	4	100.00000	103951622.041
6	n-Pentadecane (C15)	4	100.00000	104381724.683
7	n-Hexadecane (C16)	4	100.00000	103498290.798
8	n-Heptadecane (C17)	4	100.00000	104608997.866
9	n-Octadecane (C18)	4	100.00000	105576841.549
10	n-Nonadecane (C19)	4	100.00000	106027847.812
11	n-Eicosane (C20)	4	100.00000	106535091.341
12	n-Heneicosane (C21)	4	100.00000	107060131.819
13	n-Docosane (C22)	4	100.00000	107024075.650
14	n-Tricosane (C23)	4	100.00000	107222101.125
15	n-Tetracosane (C24)	4	100.00000	107072362.874
16	n-Pentacosane (C25)	4	100.00000	105388821.800
17	n-Hexacosane (C26)	4	100.00000	108489729.585
18	n-Heptacosane (C27)	4	100.00000	108907457.100
19	n-Octacosane (C28)	4	100.00000	111710930.880
Avg RSF For: C10-C28 DRO			100.00000	105373471.800

1	n-Decane (C10)	5	200.00000	211499703.473
2	n-Undecane (C11)	5	200.00000	210848119.612
3	n-Dodecane (C12)	5	200.00000	212672282.269
4	n-Tridecane (C13)	5	200.00000	212839738.378
5	n-Tetradecane (C14)	5	200.00000	218208937.692
6	n-Pentadecane (C15)	5	200.00000	219341701.982
7	n-Hexadecane (C16)	5	200.00000	217167665.547
8	n-Heptadecane (C17)	5	200.00000	221556768.031
9	n-Octadecane (C18)	5	200.00000	222568928.594
10	n-Nonadecane (C19)	5	200.00000	223138563.365
11	n-Eicosane (C20)	5	200.00000	224220195.049
12	n-Heneicosane (C21)	5	200.00000	225118581.418
13	n-Docosane (C22)	5	200.00000	224840261.386
14	n-Tricosane (C23)	5	200.00000	225071564.356
15	n-Tetracosane (C24)	5	200.00000	224349500.588

16	n-Pentacosane (C25)	5	200.00000	220635797.497
17	n-Hexacosane (C26)	5	200.00000	226867831.536
18	n-Heptacosane (C27)	5	200.00000	227180738.989
19	n-Octacosane (C28)	5	200.00000	232741442.061
Avg RSF For: C10-C28 DRO			200.00000	221098332.727

Generating Average Response Factor For: C28-C40 ORO

No	Compound	Level	Conc	Response
1	n-Octacosane (C28)	1	1.00000	1212558.746
2	n-Nonacosane (C29)	1	1.00000	1130473.888
3	n-Triacontane (C30)	1	1.00000	1133109.263
4	n-Hentriacontane (C31)	1	1.00000	1103004.874
5	n-Dotriacontane (C32)	1	1.00000	1154057.569
6	n-Tritriacontane (C33)	1	1.00000	1130391.444
7	n-tetratriacontane (C34)	1	1.00000	1110986.529
8	n-Pentatriacontane (C35)	1	1.00000	1043736.753
9	n-Hexatriacontane (C36)	1	1.00000	1250484.820
10	n-Heptatriacontane (C37)	1	1.00000	1122679.143
11	n-Octatriacontane (C38)	1	1.00000	1131929.425
12	n-Tetracontane (C40)	1	1.00000	1125356.431
Avg RSF For: C28-C40 ORO			1.00000	1137397.407
1	n-Octacosane (C28)	2	10.00000	11909847.149
2	n-Nonacosane (C29)	2	10.00000	11729452.101
3	n-Triacontane (C30)	2	10.00000	11742904.972
4	n-Hentriacontane (C31)	2	10.00000	11314814.828
5	n-Dotriacontane (C32)	2	10.00000	11865476.996
6	n-Tritriacontane (C33)	2	10.00000	11523465.994
7	n-tetratriacontane (C34)	2	10.00000	11451119.910
8	n-Pentatriacontane (C35)	2	10.00000	10662256.031
9	n-Hexatriacontane (C36)	2	10.00000	12851113.166
10	n-Heptatriacontane (C37)	2	10.00000	11656708.336
11	n-Octatriacontane (C38)	2	10.00000	11826731.842
12	n-Tetracontane (C40)	2	10.00000	11647803.772
Avg RSF For: C28-C40 ORO			10.00000	11681807.925
1	n-Octacosane (C28)	3	50.00000	54460527.094
2	n-Nonacosane (C29)	3	50.00000	54143436.222
3	n-Triacontane (C30)	3	50.00000	54272054.438
4	n-Hentriacontane (C31)	3	50.00000	52296053.650
5	n-Dotriacontane (C32)	3	50.00000	54818805.711
6	n-Tritriacontane (C33)	3	50.00000	53208653.286
7	n-tetratriacontane (C34)	3	50.00000	52932855.272
8	n-Pentatriacontane (C35)	3	50.00000	49392768.576
9	n-Hexatriacontane (C36)	3	50.00000	59548003.527
10	n-Heptatriacontane (C37)	3	50.00000	54257422.814
11	n-Octatriacontane (C38)	3	50.00000	54921095.872
12	n-Tetracontane (C40)	3	50.00000	54254862.067
Avg RSF For: C28-C40 ORO			50.00000	54042211.544
1	n-Octacosane (C28)	4	100.00000	111710930.880

		rfupdate		
2	n-Nonacosane (C29)	4	100.00000	111802404.469
3	n-Triacontane (C30)	4	100.00000	112736860.098
4	n-Hentriacontane (C31)	4	100.00000	109283275.930
5	n-Dotriacontane (C32)	4	100.00000	115267518.176
6	n-Tritriacontane (C33)	4	100.00000	112385731.740
7	n-tetratriacontane (C34)	4	100.00000	112321183.654
8	n-Pentatriacontane (C35)	4	100.00000	105135244.122
9	n-Hexatriacontane (C36)	4	100.00000	127058278.819
10	n-Heptatriacontane (C37)	4	100.00000	115889229.832
11	n-Octatriacontane (C38)	4	100.00000	117351710.870
12	n-Tetracontane (C40)	4	100.00000	116054901.150
Avg RSF For: C28-C40 ORO			100.00000	113916439.145

1	n-Octacosane (C28)	5	200.00000	232741442.061
2	n-Nonacosane (C29)	5	200.00000	232059129.360
3	n-Triacontane (C30)	5	200.00000	233302652.370
4	n-Hentriacontane (C31)	5	200.00000	225361978.013
5	n-Dotriacontane (C32)	5	200.00000	236707431.832
6	n-Tritriacontane (C33)	5	200.00000	229699743.795
7	n-tetratriacontane (C34)	5	200.00000	228455680.432
8	n-Pentatriacontane (C35)	5	200.00000	212723470.359
9	n-Hexatriacontane (C36)	5	200.00000	255619090.777
10	n-Heptatriacontane (C37)	5	200.00000	231704397.063
11	n-Octatriacontane (C38)	5	200.00000	233342360.344
12	n-Tetracontane (C40)	5	200.00000	228203729.372
Avg RSF For: C28-C40 ORO			200.00000	231660092.148

Generating Reference Response Factors

No	Compound	No	Refrence Compound
8	1380	9	n-Tetradecane (C14)
10	1470	11	n-Pentadecane (C15)
13	1650	14	n-Heptadecane (C17)
40	n-Nonatriacontane (C39)	41	n-Tetracontane (C40)
43	C9-C40 Total Petroleum Hydrocarbons	42	C9-C44 Total Petroleum Hydrocarbons
46	Total Resolved Hydrocarbons	42	C9-C44 Total Petroleum Hydrocarbons

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Abacus Response Factor Update Macro Ver. 1.0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202112.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 8:50 pm
Operator : FID17:WR
Sample : I1705202101F
Misc : WG1505003,FRBD77,1ug/ml
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:16:34 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:11:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.313	54861668	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.267	1228518	1.018	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	2.04%#		
24) s	d50-Tetracosane	35.933	964897	0.990	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	1.98%#		
	Target Compounds					
2) t	n-Octane (C8)	5.598	1008599	1.046	ug/mL	M4
3) t	n-Nonane (C9)	7.806	1171751	1.167	ug/mL	M4
4) t	n-Decane (C10)	10.300	1109846	1.056	ug/mL	M4
5) t	n-Undecane (C11)	12.818	1024381	0.982	ug/mL	M4
6) t	n-Dodecane (C12)	15.248	1010343	0.963	ug/mL	M4
7) t	n-Tridecane (C13)	17.558	1026803	0.981	ug/mL	M4
9) t	n-Tetradecane (C14)	19.743	1079622	1.007	ug/mL	M4
11) t	n-Pentadecane (C15)	21.812	1070039	0.995	ug/mL	M4
12) t	n-Hexadecane (C16)	23.770	1098101	1.031	ug/mL	M4
14) t	n-Heptadecane (C17)	25.630	1042971	0.969	ug/mL	M4
15) t	Pristane	25.738	1156626	1.051	ug/mL	M4
16) t	n-Octadecane (C18)	27.398	1096477	1.010	ug/mL	M4
17) t	Phytane	27.561	1032738	1.019	ug/mL	M4
18) t	n-Nonadecane (C19)	29.085	1096831	1.006	ug/mL	M4
20) t	n-Eicosane (C20)	30.694	1107447	1.011	ug/mL	M4
21) t	n-Heneicosane (C21)	32.230	1107526	1.007	ug/mL	M4
22) t	n-Docosane (C22)	33.706	1117658	1.017	ug/mL	M4
23) t	n-Tricosane (C23)	35.121	1124391	1.024	ug/mL	M4
25) t	n-Tetracosane (C24)	36.480	1124340	1.027	ug/mL	M4
26) t	n-Pentacosane (C25)	37.786	1086807	1.014	ug/mL	M4
27) t	n-Hexacosane (C26)	39.044	1111966	1.011	ug/mL	M4
28) t	n-Heptacosane (C27)	40.258	1122848	1.022	ug/mL	M4
29) t	n-Octacosane (C28)	41.431	1212559	1.082	ug/mL	M4
30) t	n-Nonacosane (C29)	42.562	1130474	1.014	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202112.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 8:50 pm
Operator : FID17:WR
Sample : I1705202101F
Misc : WG1505003,FRBD77,1ug/ml
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:16:34 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:11:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

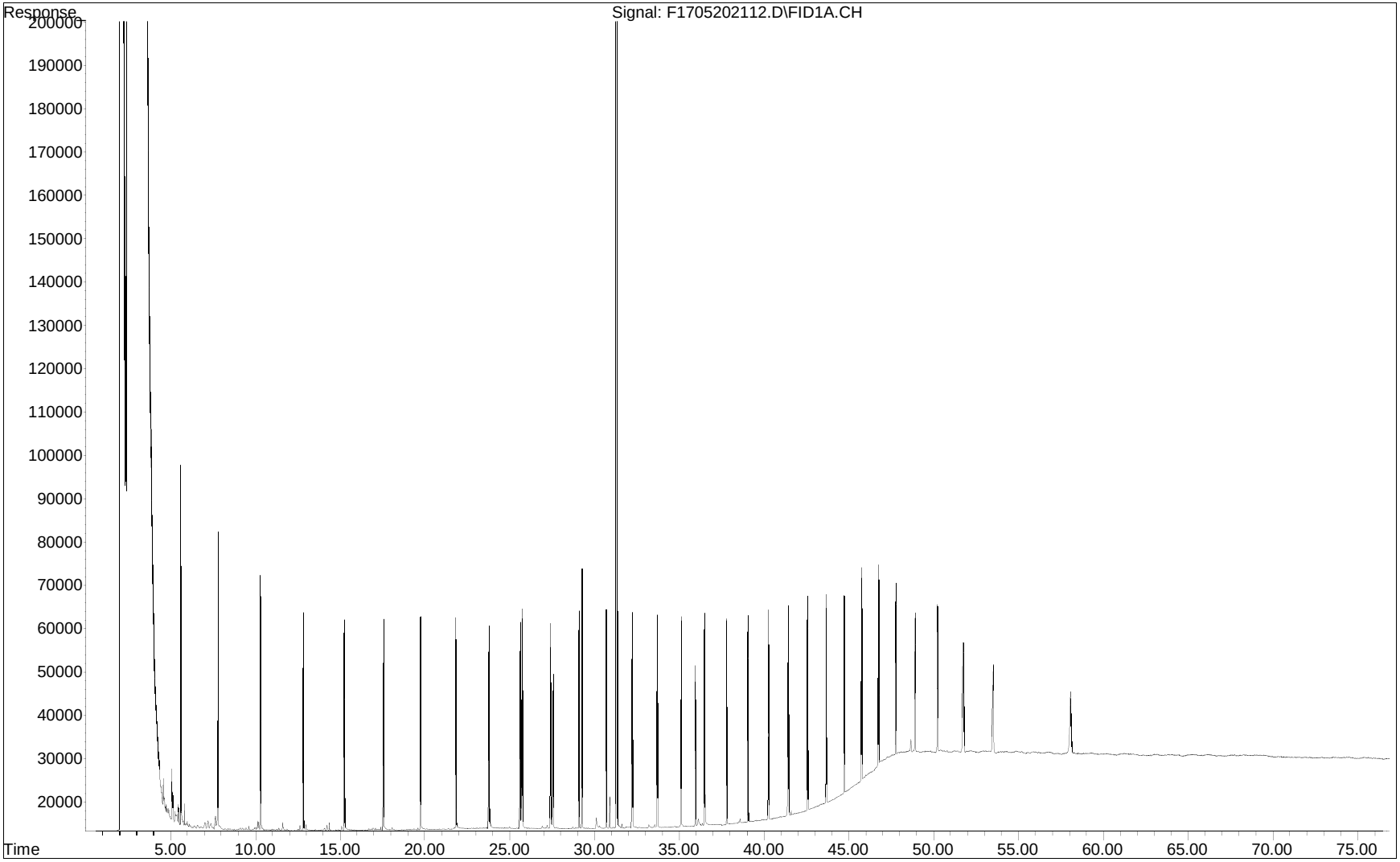
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.658	1133109	1.014 ug/mL M4
32) t	n-Hentriacontane (C31)	44.717	1103005	1.025 ug/mL M4
33) t	n-Dotriacontane (C32)	45.747	1154058	1.023 ug/mL M4
34) t	n-Tritriacontane (C33)	46.745	1130391	1.032 ug/mL M4
35) t	n-tetratriacontane (C34)	47.764	1110987	1.020 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.916	1043737	1.027 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.222	1250485	1.020 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.738	1122679	1.005 ug/mL M4
39) t	n-Octatriacontane (C38)	53.502	1131929	1.001 ug/mL M4
41) t	n-Tetracontane (C40)	58.050	1125356	1.008 ug/mL M4

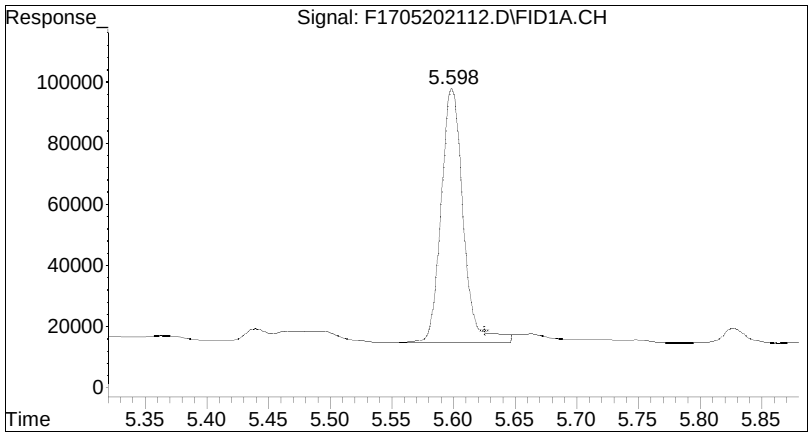
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

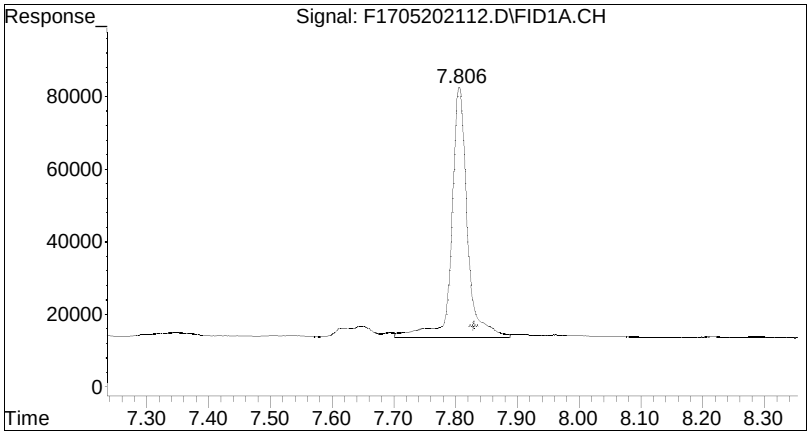
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202112.D
Operator : FID17:WR
Acquired : 20 May 2021 8:50 pm using AcqMethod FID17A.M
Sample Name: I1705202101F
Instrument: FID17
Misc Info : WG1505003,FRBD77,1ug/ml
Vial Number: 6
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M





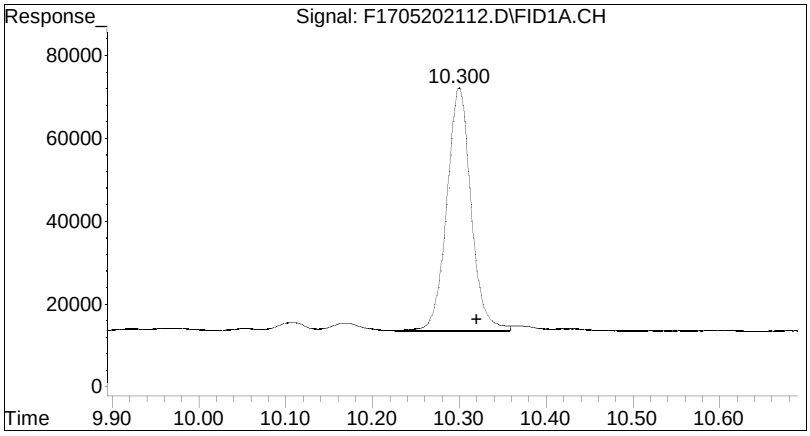
#2 n-Octane (C8)

R.T.:	5.598 min
Delta R.T.:	-0.027 min
Response:	1008599
Conc:	1.05 ug/mL M4



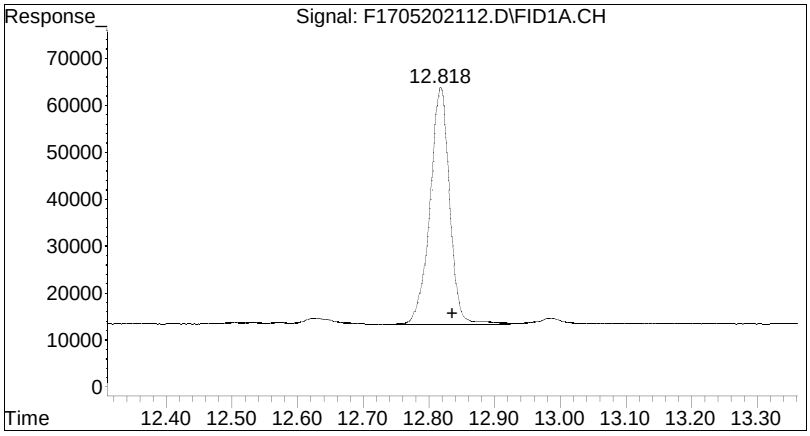
#3 n-Nonane (C9)

R.T.:	7.806 min
Delta R.T.:	-0.024 min
Response:	1171751
Conc:	1.17 ug/mL M4



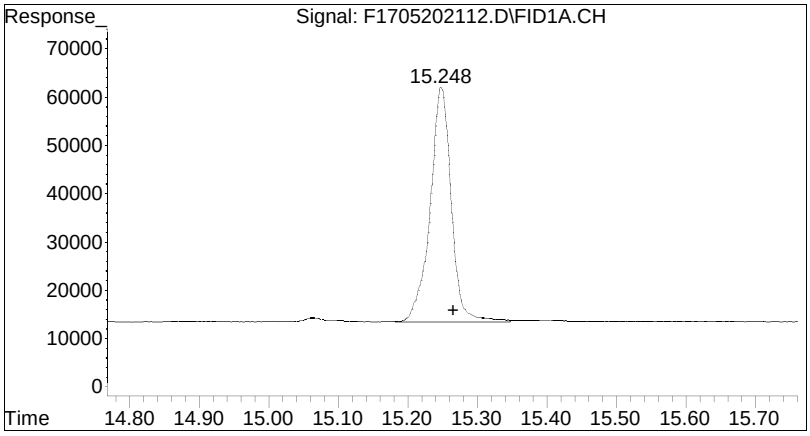
#4 n-Decane (C10)

R.T.:	10.300 min
Delta R.T.:	-0.020 min
Response:	1109846
Conc:	1.06 ug/mL M4



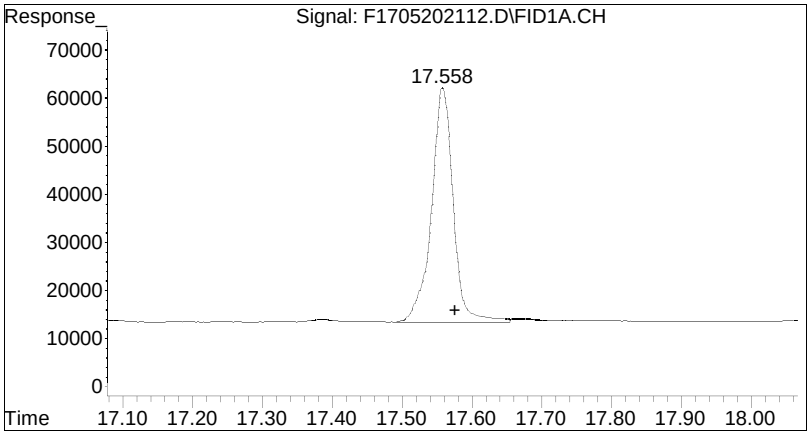
#5 n-Undecane (C11)

R.T.:	12.818 min
Delta R.T.:	-0.018 min
Response:	1024381
Conc:	0.98 ug/mL M4



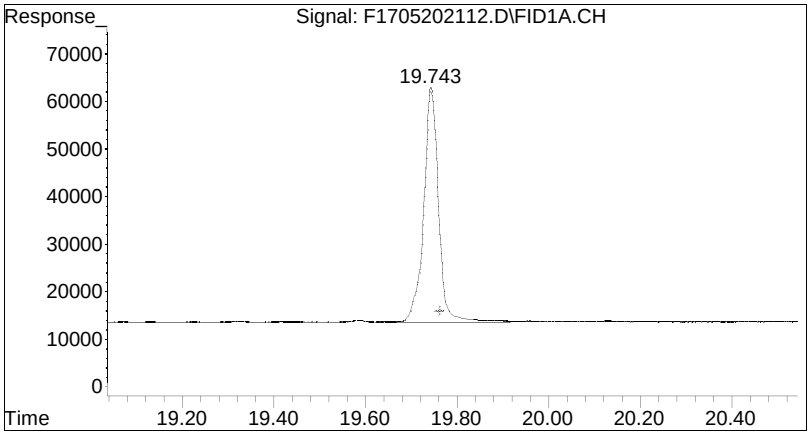
#6 n-Dodecane (C12)

R.T.:	15.248 min
Delta R.T.:	-0.018 min
Response:	1010343
Conc:	0.96 ug/mL M4



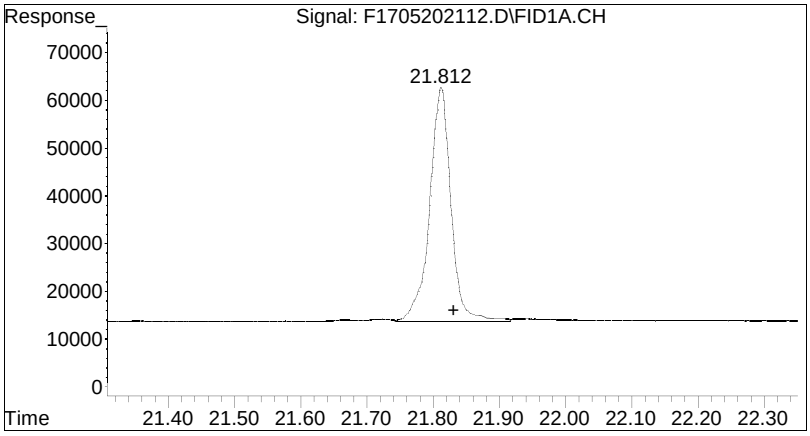
#7 n-Tridecane (C13)

R.T.:	17.558 min
Delta R.T.:	-0.018 min
Response:	1026803
Conc:	0.98 ug/mL M4



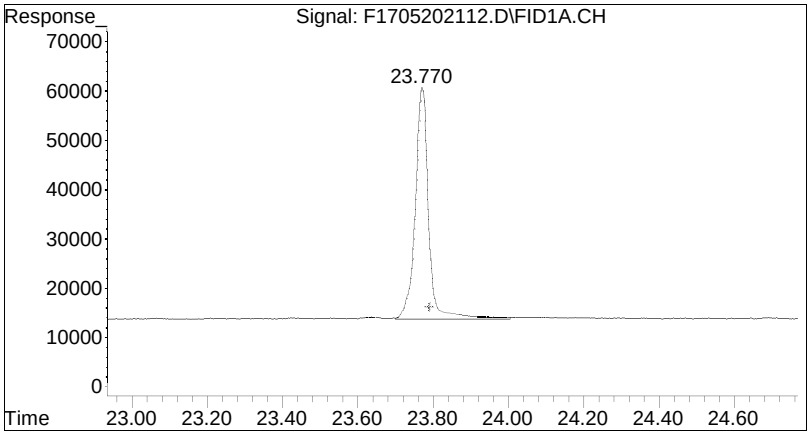
#9 n-Tetradecane (C14)

R.T.:	19.743 min
Delta R.T.:	-0.019 min
Response:	1079622
Conc:	1.01 ug/mL M4



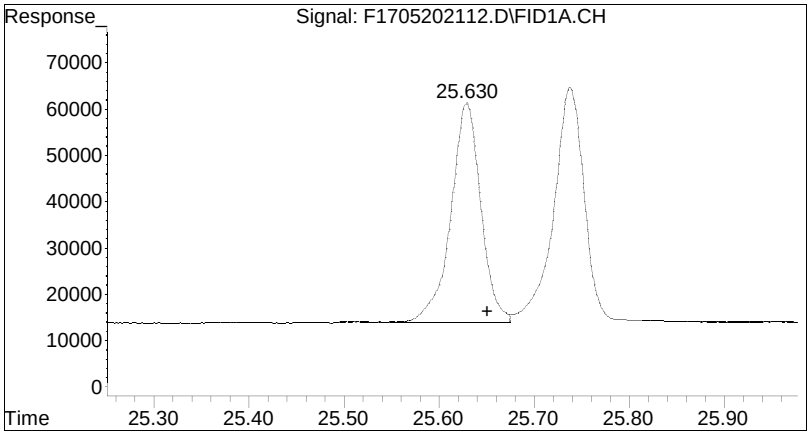
#11 n-Pentadecane (C15)

R.T.:	21.812 min
Delta R.T.:	-0.019 min
Response:	1070039
Conc:	1.00 ug/mL M4



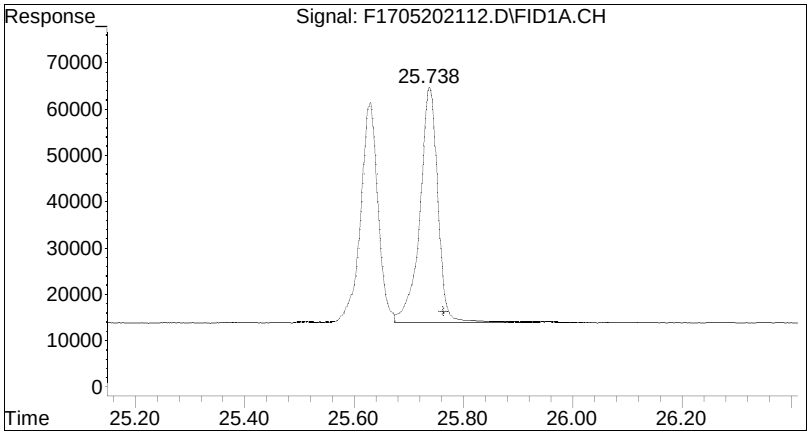
#12 n-Hexadecane (C16)

R.T.:	23.770 min
Delta R.T.:	-0.021 min
Response:	1098101
Conc:	1.03 ug/mL M4



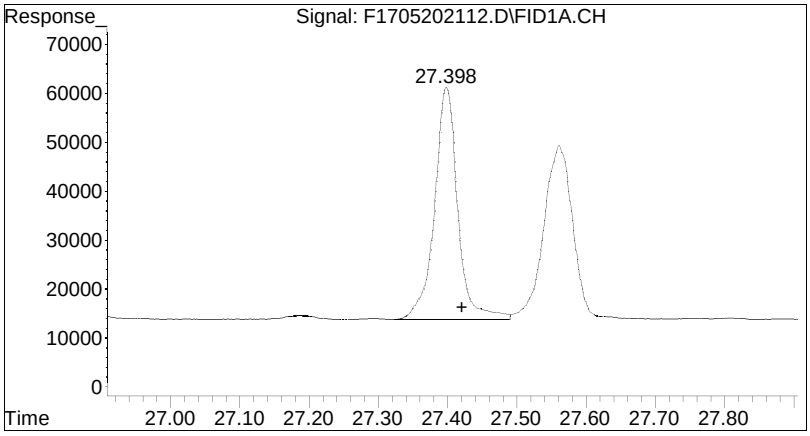
#14 n-Heptadecane (C17)

R.T.:	25.630 min
Delta R.T.:	-0.021 min
Response:	1042971
Conc:	0.97 ug/mL M4



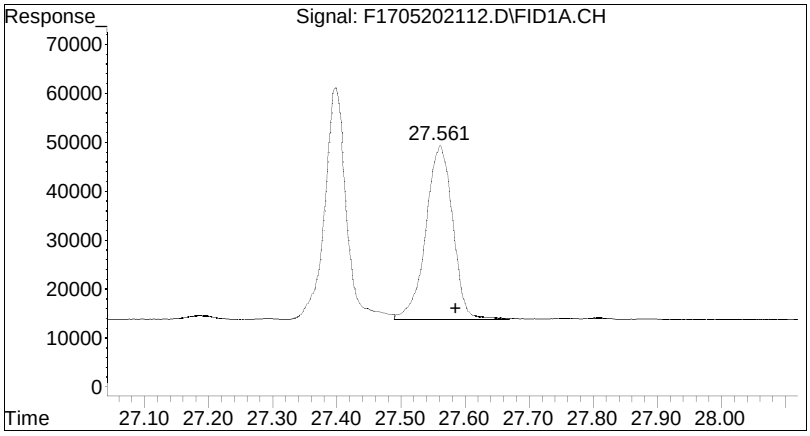
#15 Pristane

R.T.:	25.738 min
Delta R.T.:	-0.026 min
Response:	1156626
Conc:	1.05 ug/mL M4



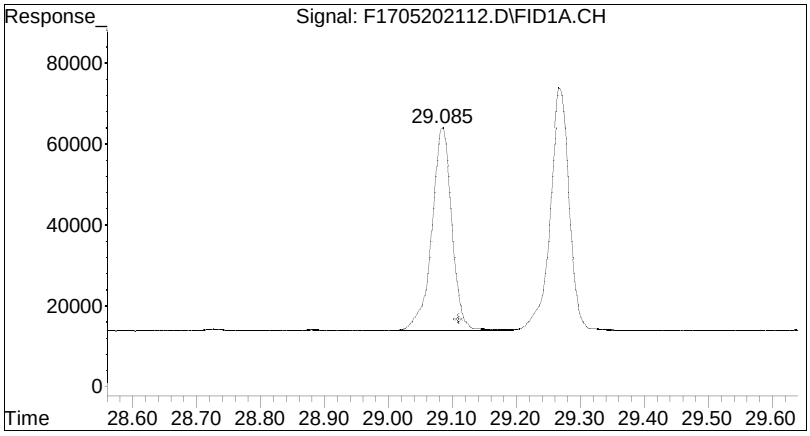
#16 n-Octadecane (C18)

R.T.:	27.398 min
Delta R.T.:	-0.023 min
Response:	1096477
Conc:	1.01 ug/mL M4



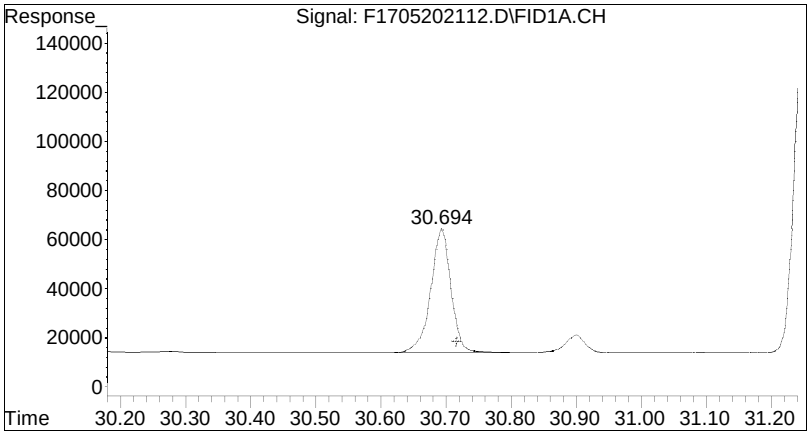
#17 Phytane

R.T.:	27.561 min
Delta R.T.:	-0.025 min
Response:	1032738
Conc:	1.02 ug/mL M4



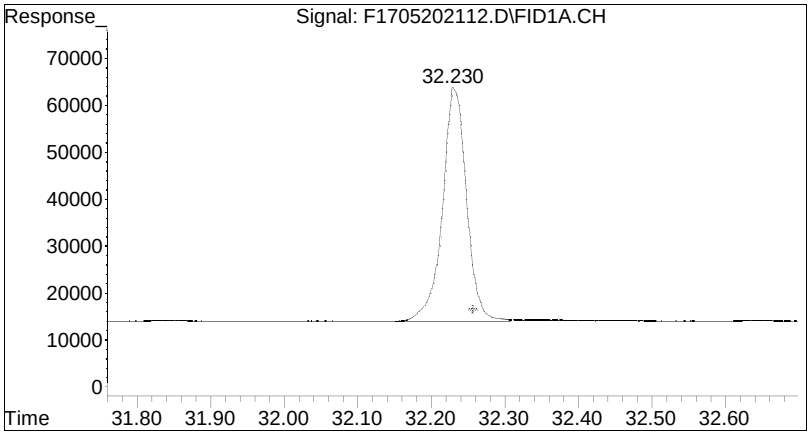
#18 n-Nonadecane (C19)

R.T.:	29.085 min
Delta R.T.:	-0.026 min
Response:	1096831
Conc:	1.01 ug/mL M4



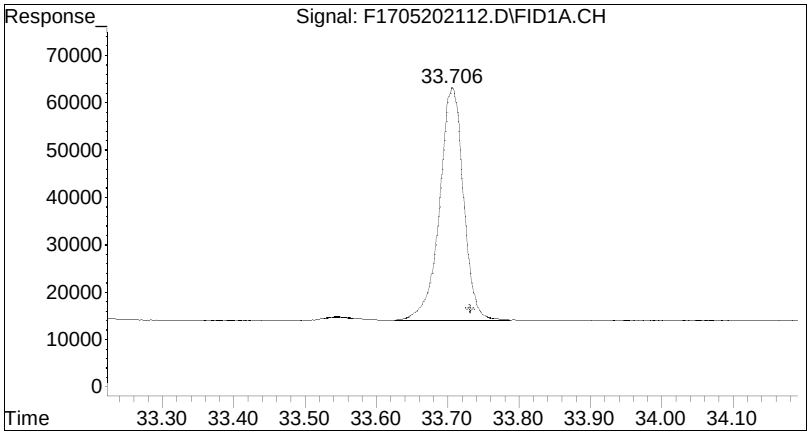
#20 n-Eicosane (C20)

R.T.:	30.694 min
Delta R.T.:	-0.023 min
Response:	1107447
Conc:	1.01 ug/mL M4



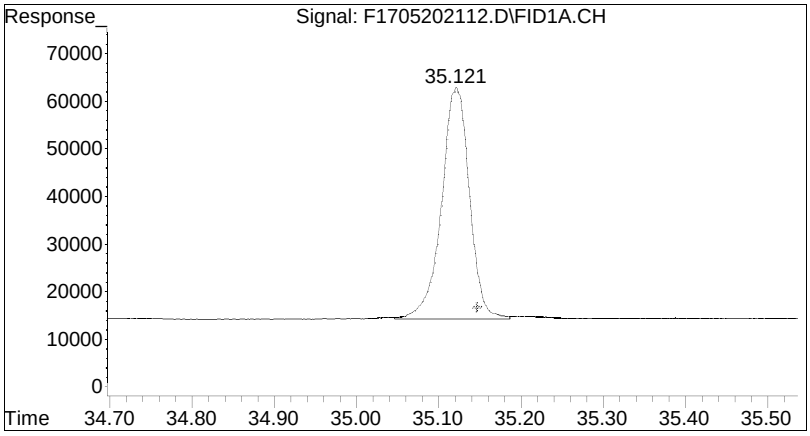
#21 n-Heneicosane (C21)

R.T.:	32.230 min
Delta R.T.:	-0.027 min
Response:	1107526
Conc:	1.01 ug/mL M4



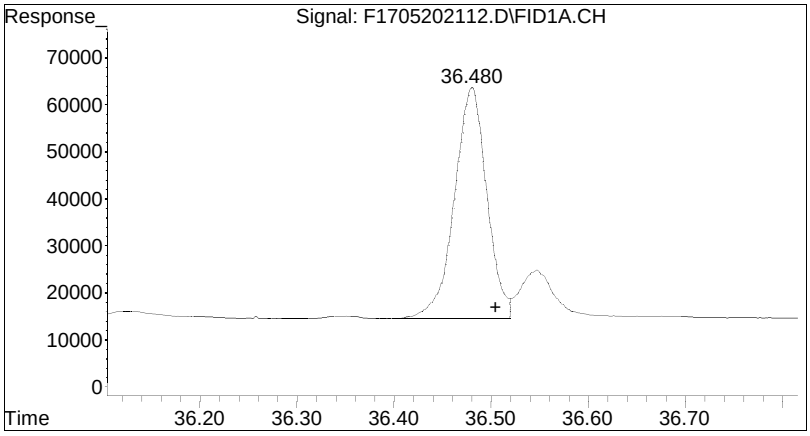
#22 n-Docosane (C22)

R.T.:	33.706 min
Delta R.T.:	-0.025 min
Response:	1117658
Conc:	1.02 ug/mL M4



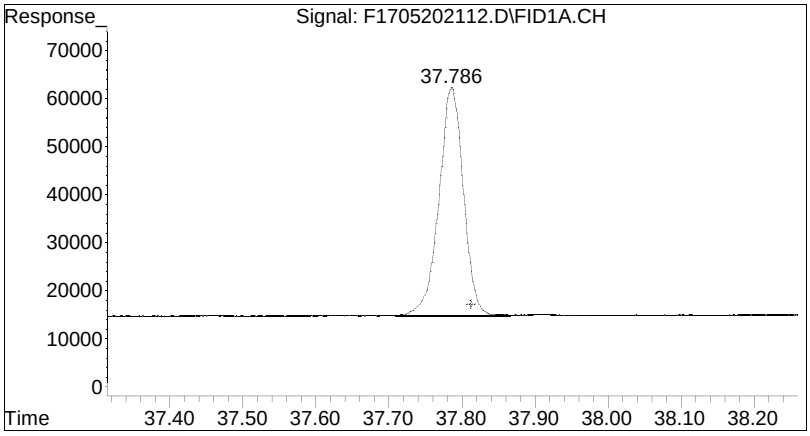
#23 n-Tricosane (C23)

R.T.:	35.121 min
Delta R.T.:	-0.026 min
Response:	1124391
Conc:	1.02 ug/mL M4



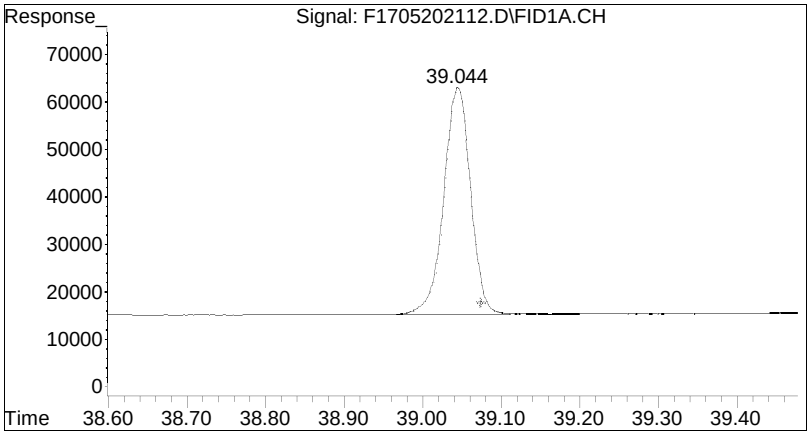
#25 n-Tetracosane (C24)

R.T.:	36.480 min
Delta R.T.:	-0.024 min
Response:	1124340
Conc:	1.03 ug/mL M4



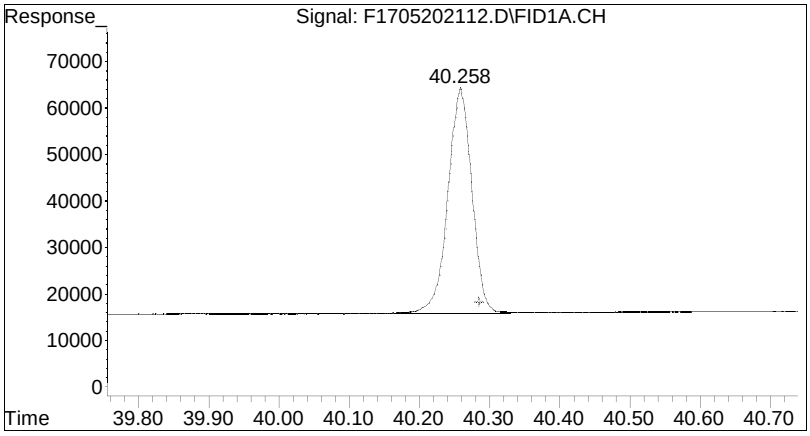
#26 n-Pentacosane (C25)

R.T.:	37.786 min
Delta R.T.:	-0.026 min
Response:	1086807
Conc:	1.01 ug/mL M4



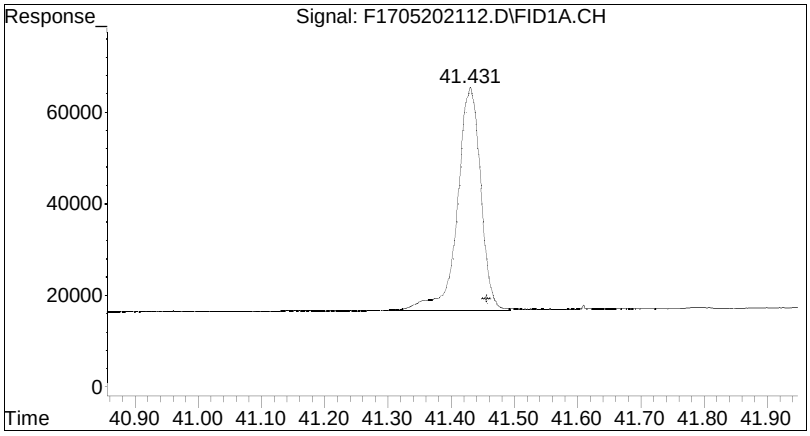
#27 n-Hexacosane (C26)

R.T.:	39.044 min
Delta R.T.:	-0.030 min
Response:	1111966
Conc:	1.01 ug/mL M4



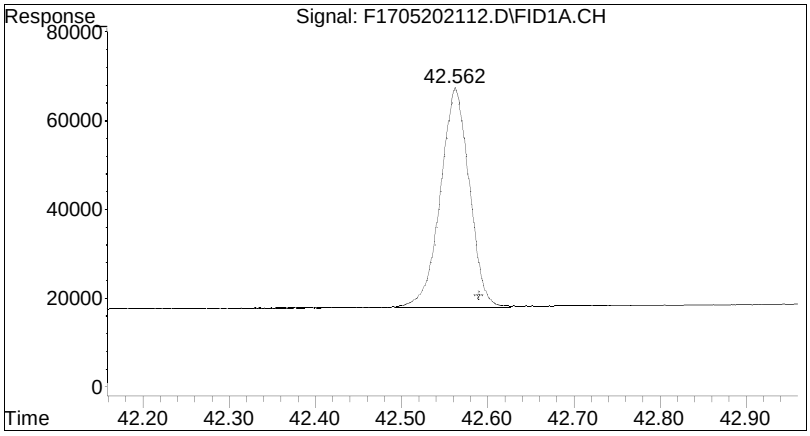
#28 n-Heptacosane (C27)

R.T.:	40.258 min
Delta R.T.:	-0.027 min
Response:	1122848
Conc:	1.02 ug/mL M4



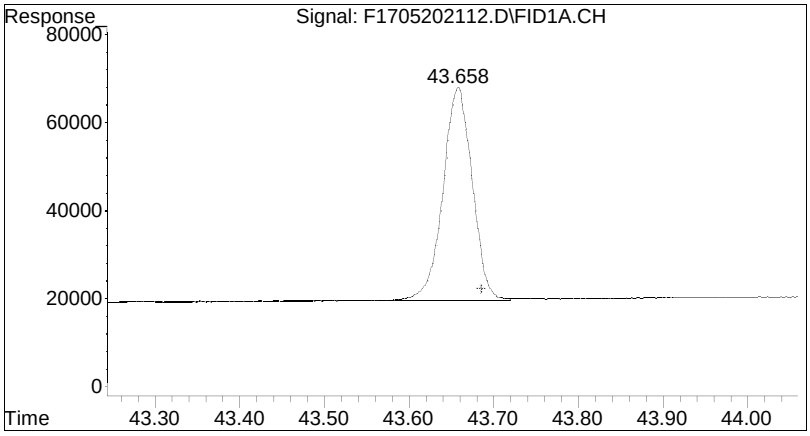
#29 n-Octacosane (C28)

R.T.:	41.431 min
Delta R.T.:	-0.025 min
Response:	1212559
Conc:	1.08 ug/mL M4



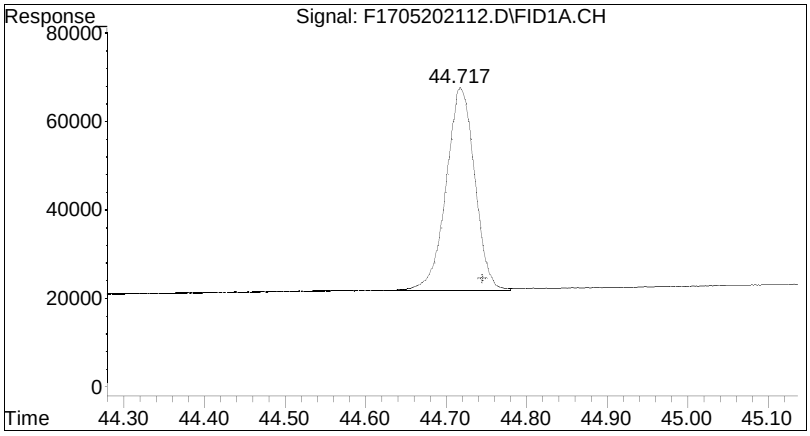
#30 n-Nonacosane (C29)

R.T.:	42.562 min
Delta R.T.:	-0.028 min
Response:	1130474
Conc:	1.01 ug/mL M4



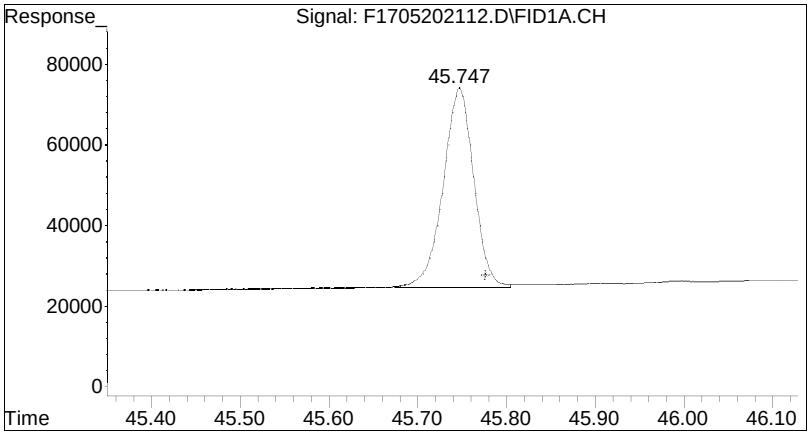
#31 n-Triacontane (C30)

R.T.:	43.658 min
Delta R.T.:	-0.027 min
Response:	1133109
Conc:	1.01 ug/mL M4



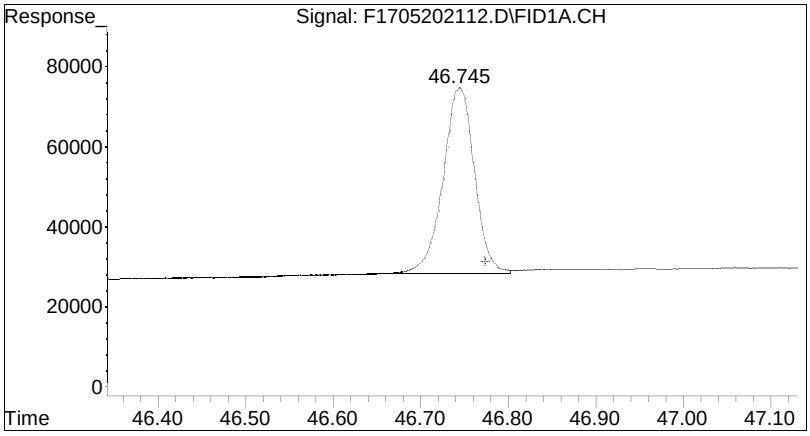
#32 n-Hentriacontane (C31)

R.T.:	44.717 min
Delta R.T.:	-0.028 min
Response:	1103005
Conc:	1.02 ug/mL M4



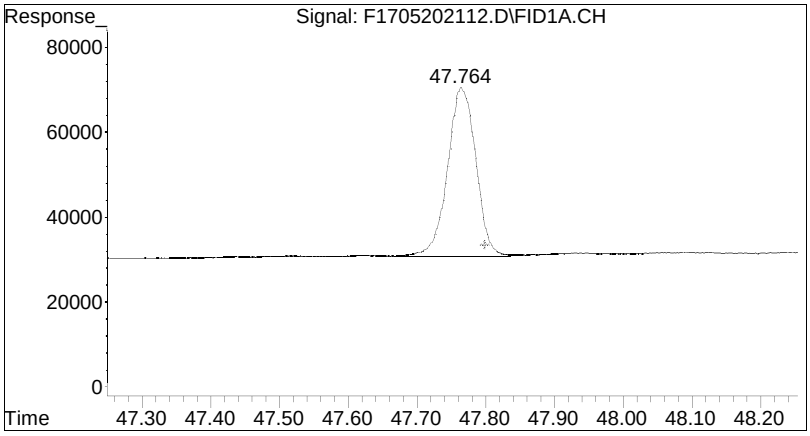
#33 n-Dotriacontane (C32)

R.T.:	45.747 min
Delta R.T.:	-0.029 min
Response:	1154058
Conc:	1.02 ug/mL M4



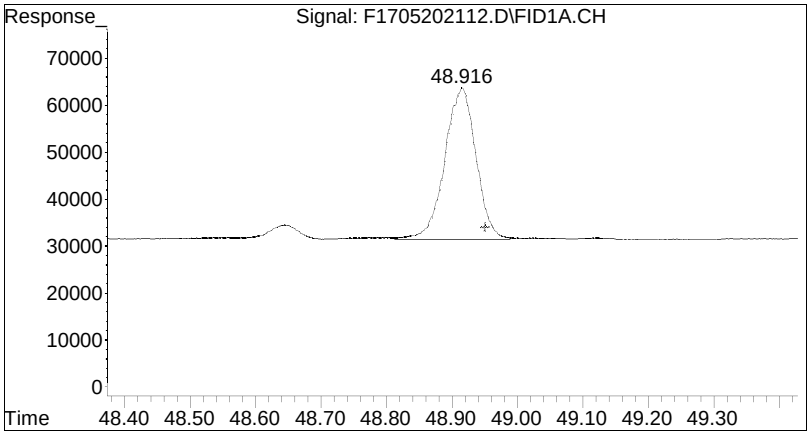
#34 n-Tritriacontane (C33)

R.T.:	46.745 min
Delta R.T.:	-0.029 min
Response:	1130391
Conc:	1.03 ug/mL M4



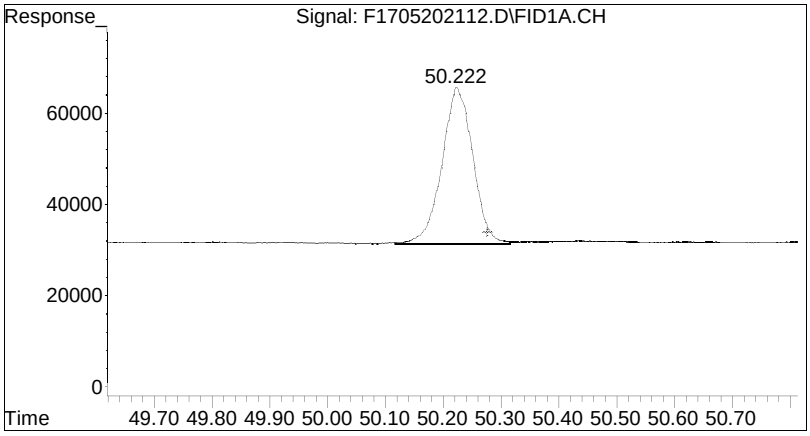
#35 n-tetratriacontane (C34)

R.T.:	47.764 min
Delta R.T.:	-0.035 min
Response:	1110987
Conc:	1.02 ug/mL M4



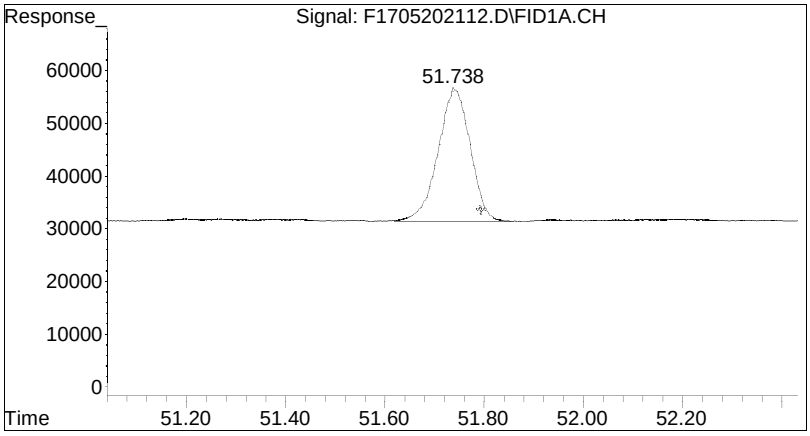
#36 n-Pentatriacontane (C35)

R.T.:	48.916 min
Delta R.T.:	-0.035 min
Response:	1043737
Conc:	1.03 ug/mL M4



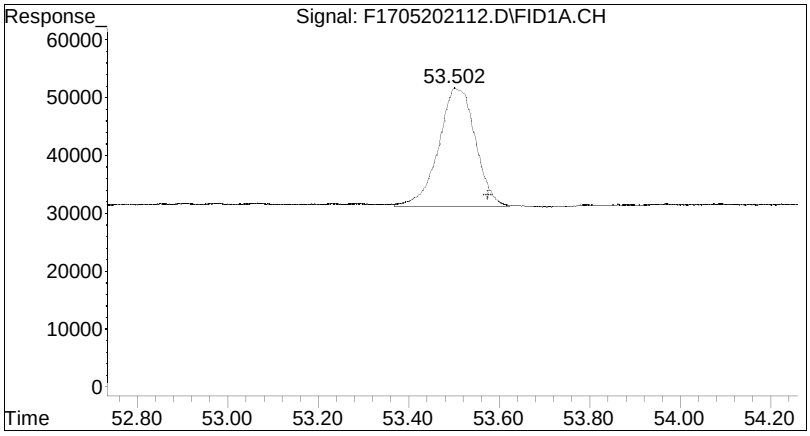
#37 n-Hexatriacontane (C36)

R.T.:	50.222 min
Delta R.T.:	-0.054 min
Response:	1250485
Conc:	1.02 ug/mL M4



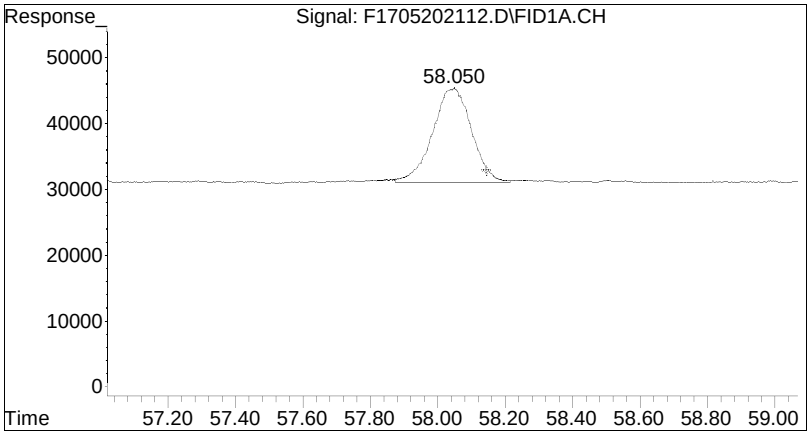
#38 n-Heptatriacontane (C37)

R.T.:	51.738 min
Delta R.T.:	-0.056 min
Response:	1122679
Conc:	1.01 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.:	53.502 min
Delta R.T.:	-0.073 min
Response:	1131929
Conc:	1.00 ug/mL M4



#41 n-Tetracontane (C40)

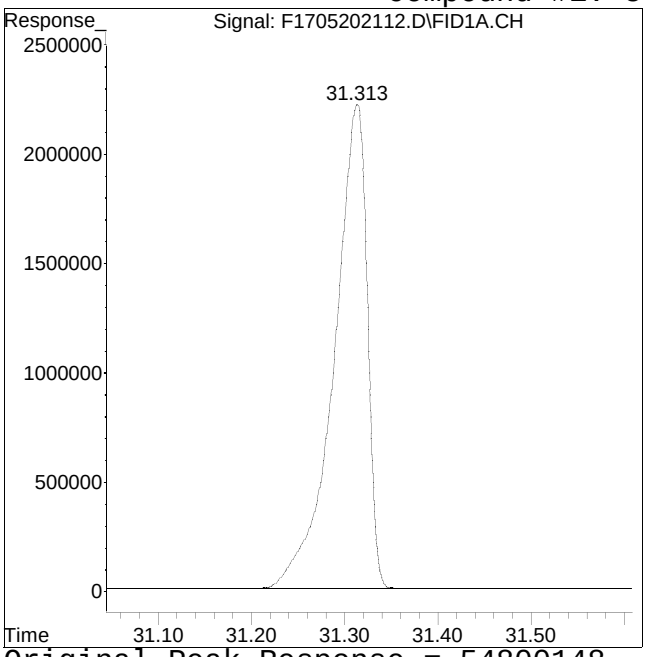
R.T.:	58.050 min
Delta R.T.:	-0.095 min
Response:	1125356
Conc:	1.01 ug/mL M4

Manual Integration/Negative Proof Report

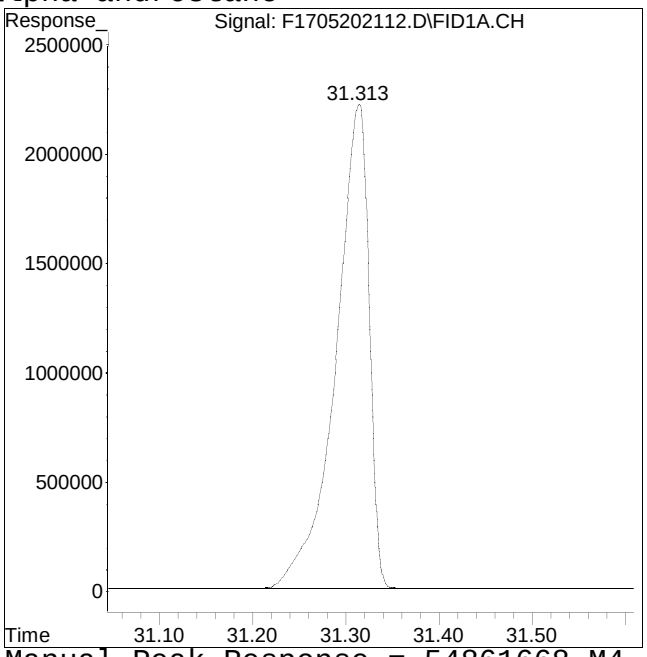
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 54800148



Manual Peak Response = 54861668 M4

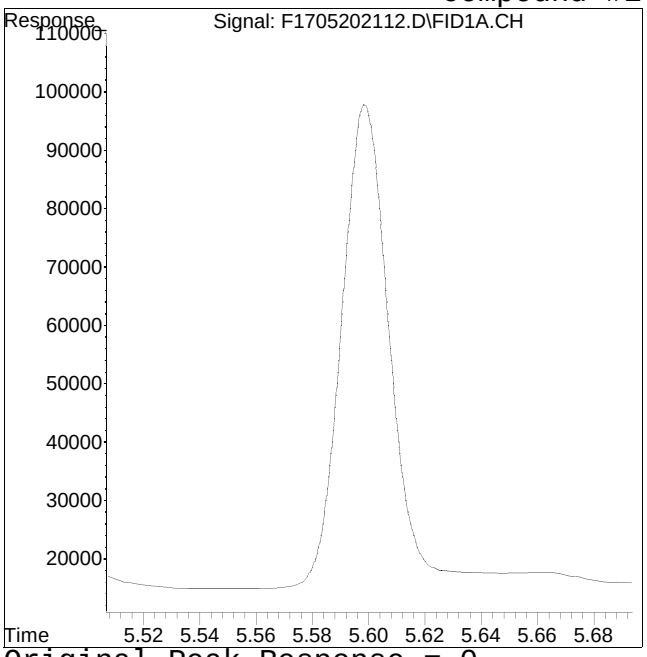
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

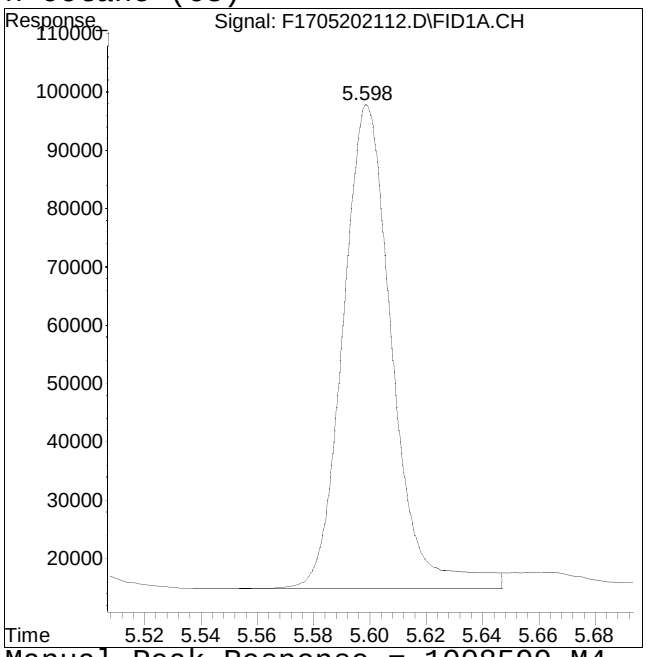
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #2: n-Octane (C8)



Original Peak Response = 0



Manual Peak Response = 1008599 M4

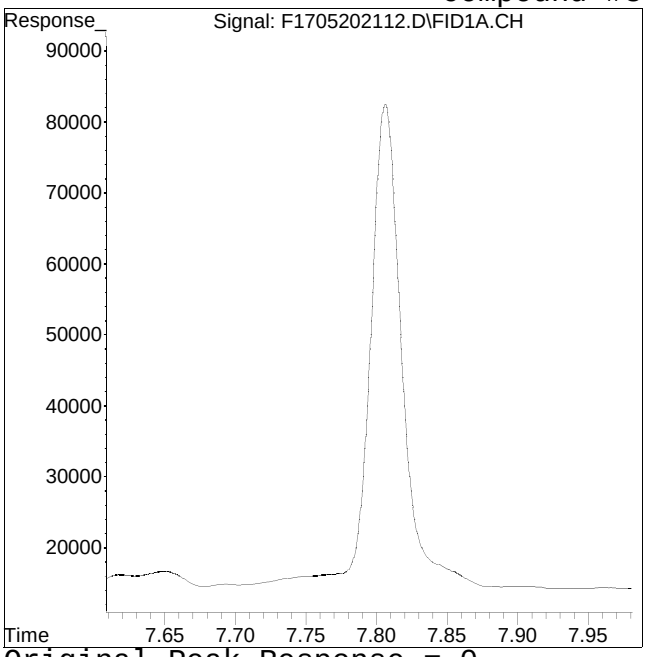
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

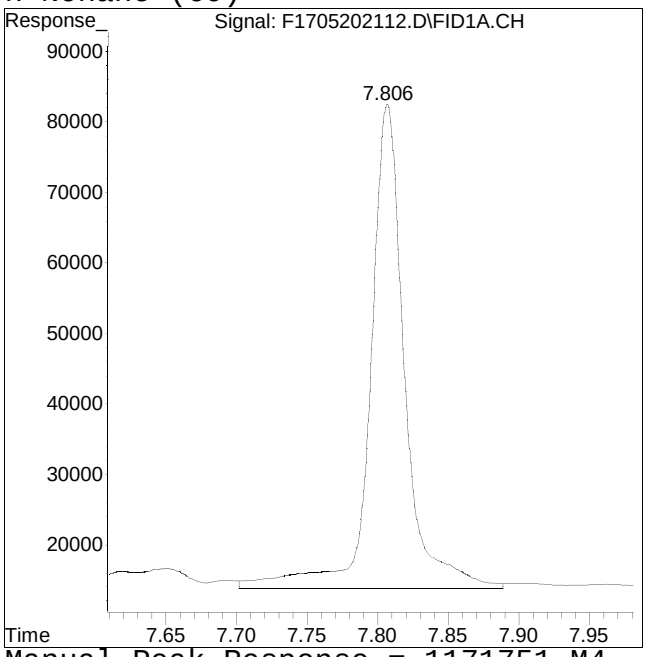
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 0



Manual Peak Response = 1171751 M4

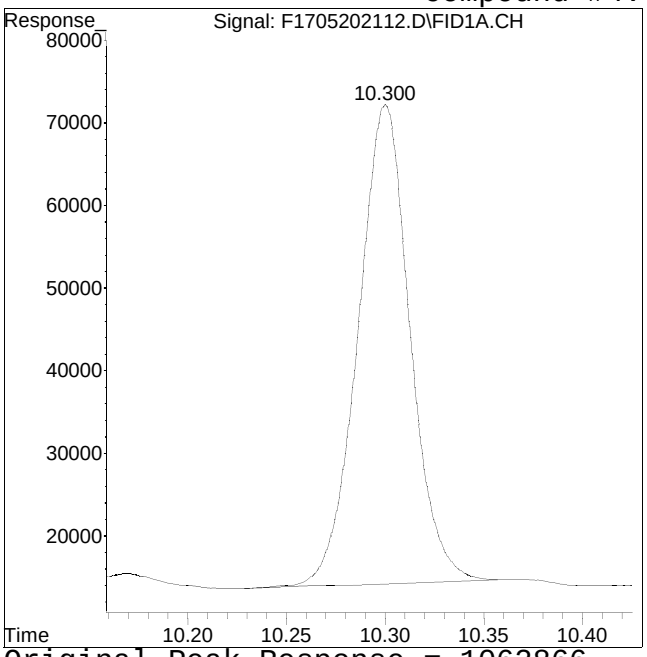
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

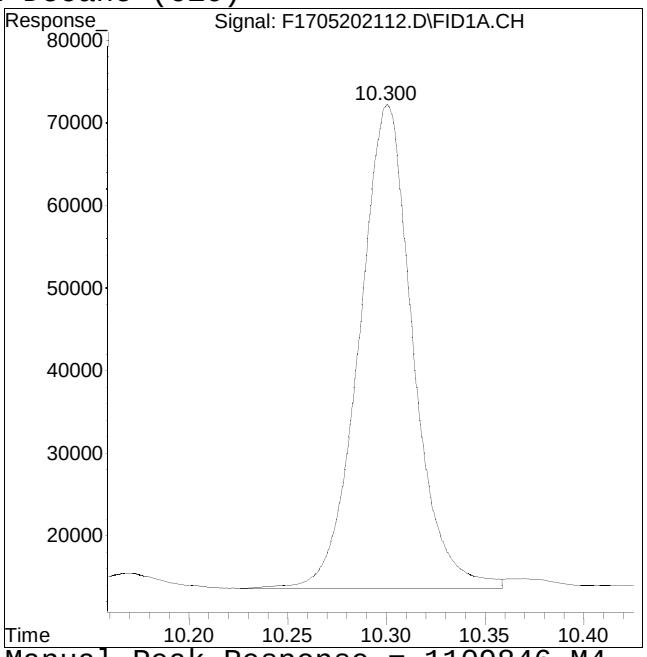
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #4: n-Decane (C10)



Original Peak Response = 1062866



Manual Peak Response = 1109846 M4

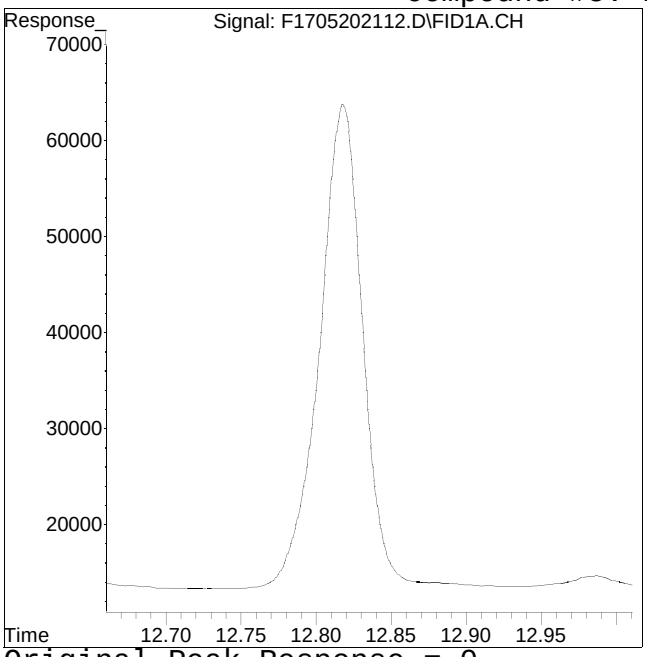
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

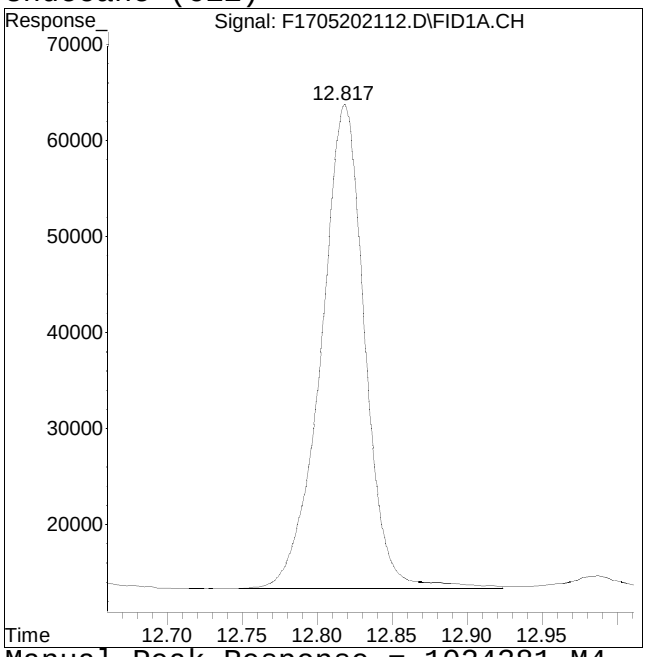
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 0



Manual Peak Response = 1024381 M4

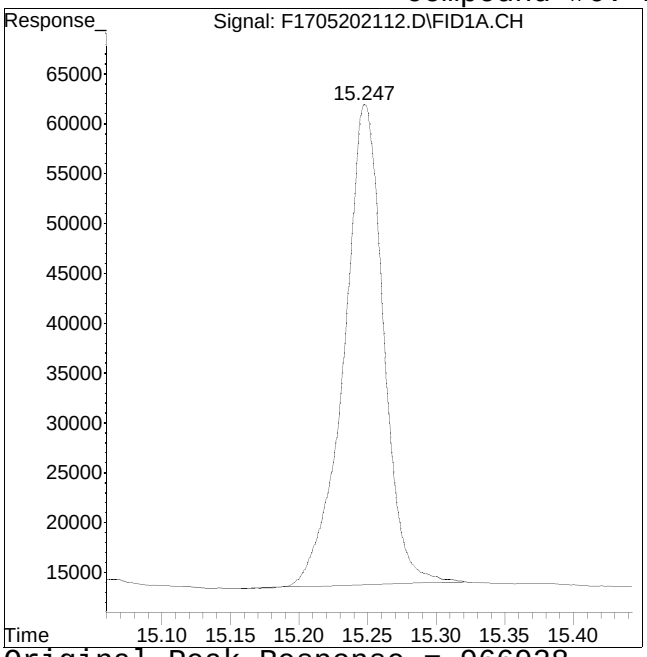
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

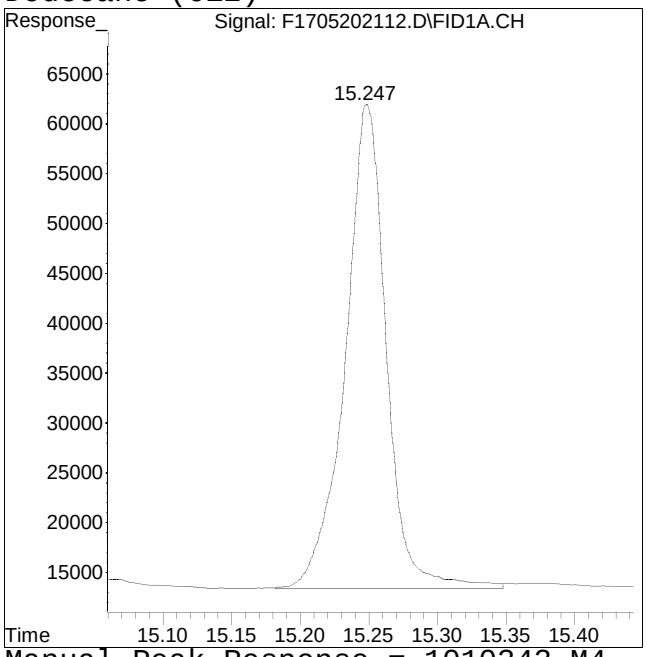
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 966928



Manual Peak Response = 1010343 M4

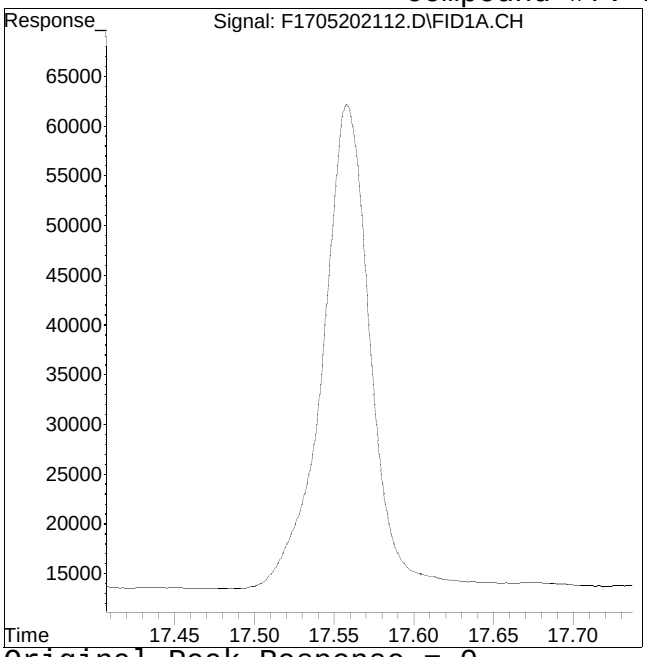
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

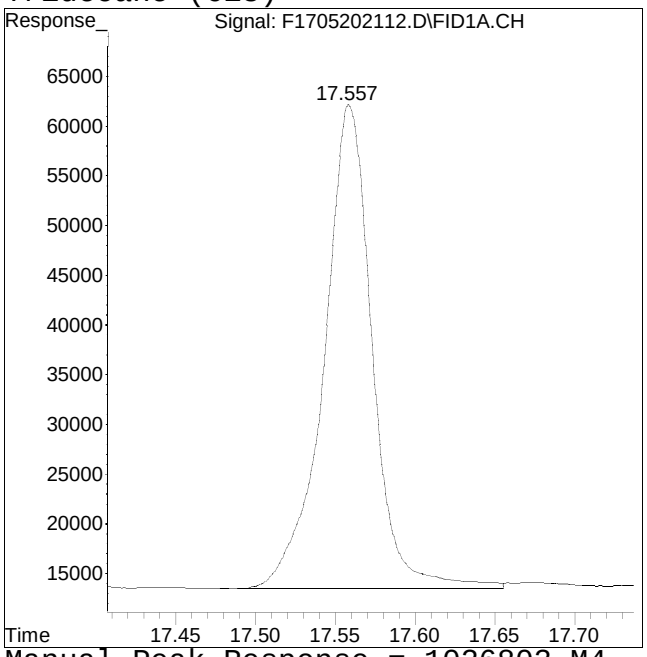
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 0



Manual Peak Response = 1026803 M4

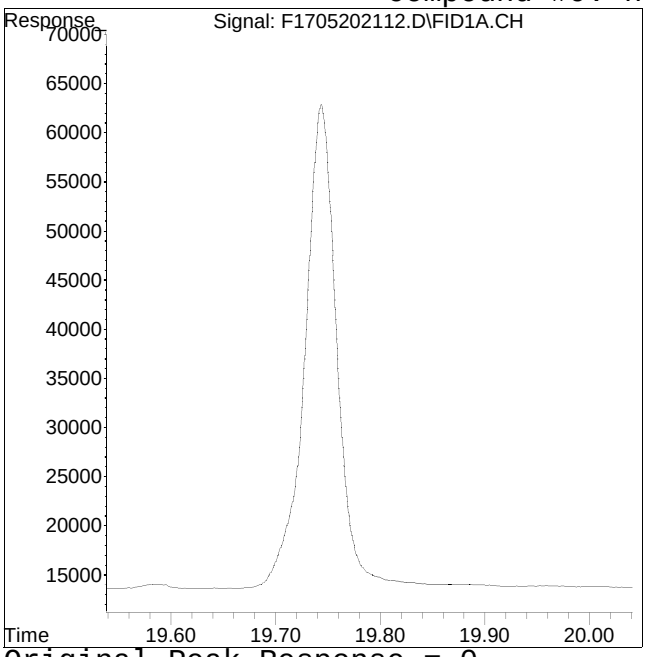
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

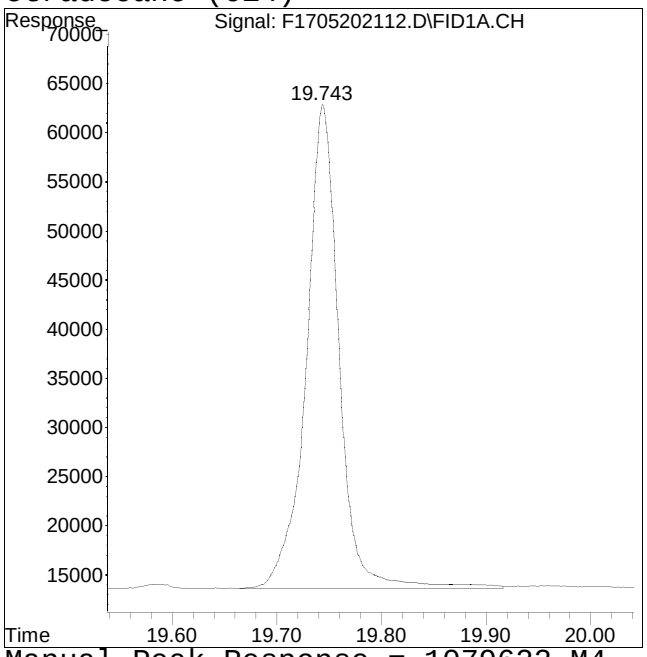
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 0



Manual Peak Response = 1079622 M4

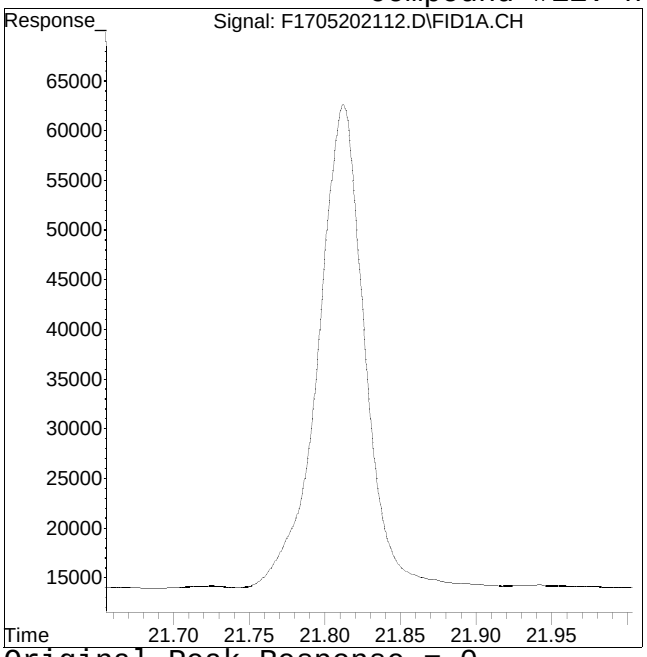
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

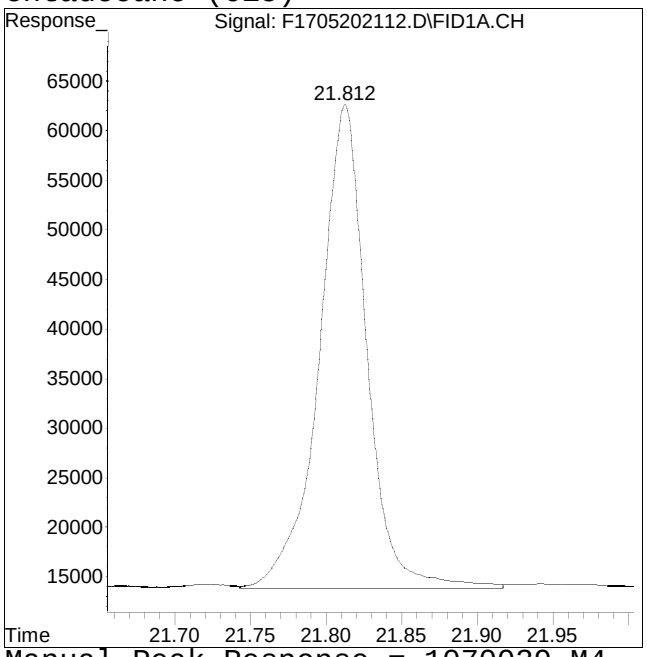
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 0



Manual Peak Response = 1070039 M4

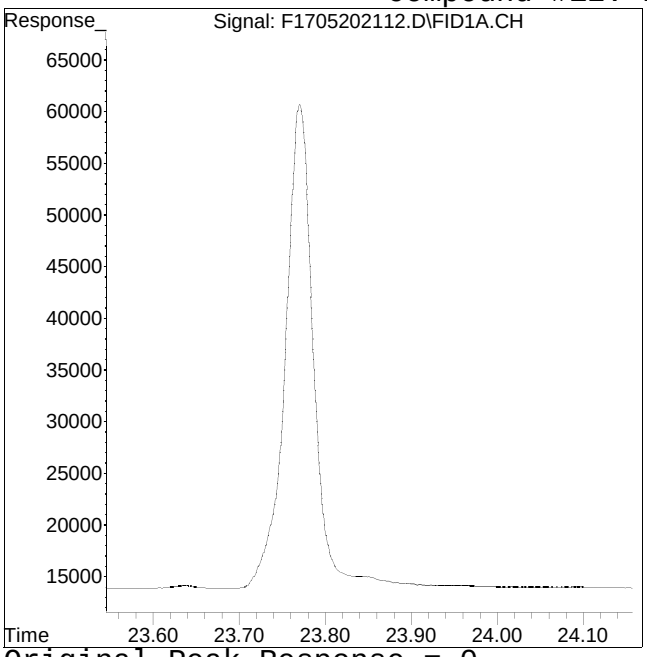
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

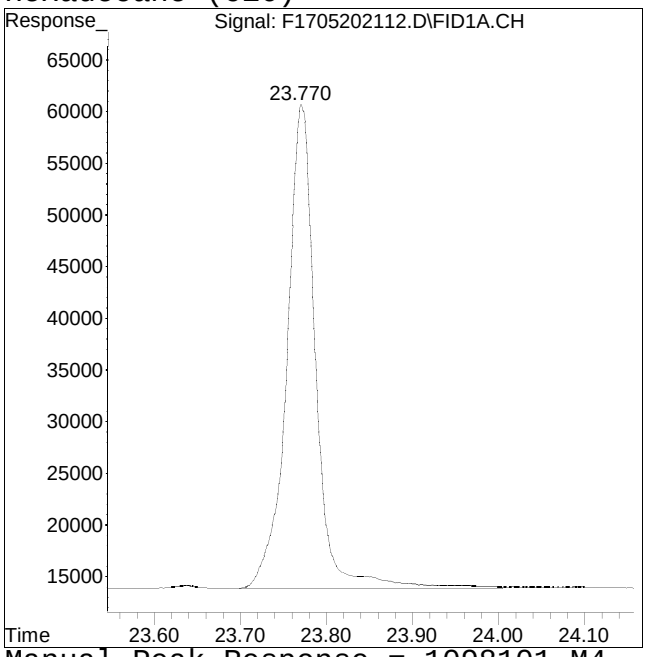
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 0



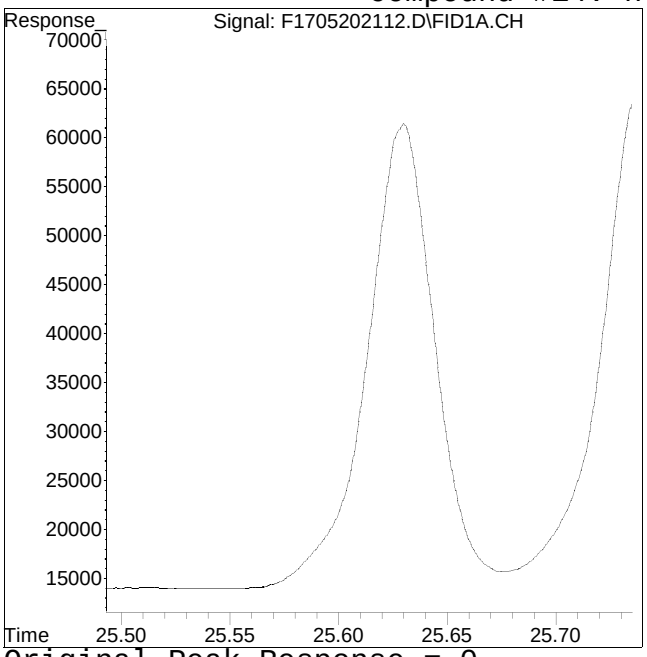
Manual Peak Response = 1098101 M4

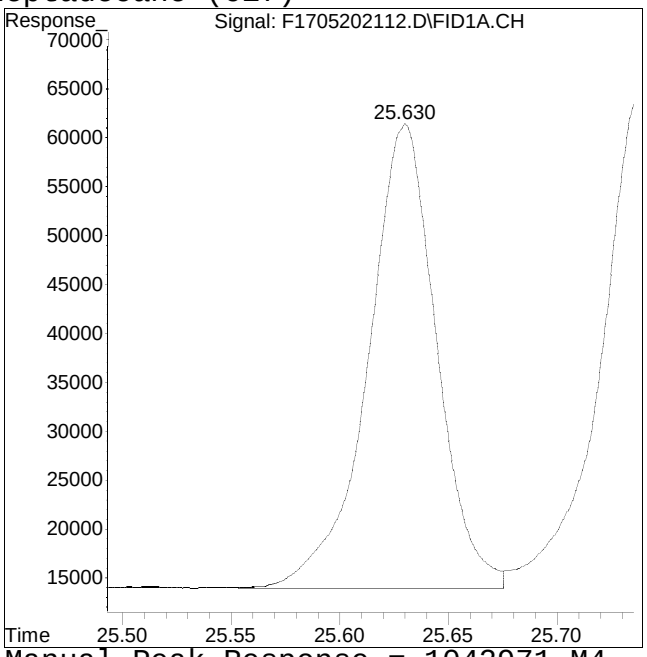
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path	: O:\Forensics\Data\FID17\202Q	Method	: HC17052021F_DRO.M
Data File	: F1705202112.D	Operator	: FID17:WR
Date Inj'd	: 5/20/2021 8:50 pm	Instrument	: FID17
Sample	: I1705202101F	Quant Date	: 5/27/2021 3:11 pm

Compound #14: n-Heptadecane (C17)





Original Peak Response = 0 Manual Peak Response = 1042971 M4

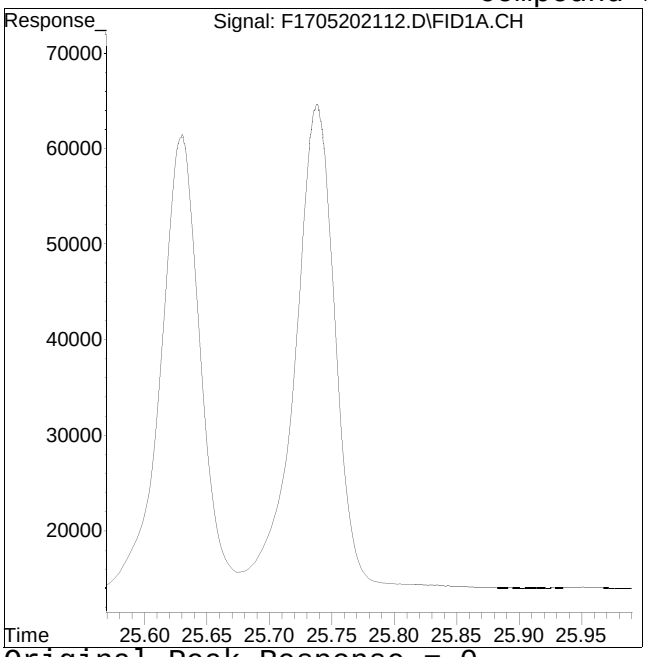
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

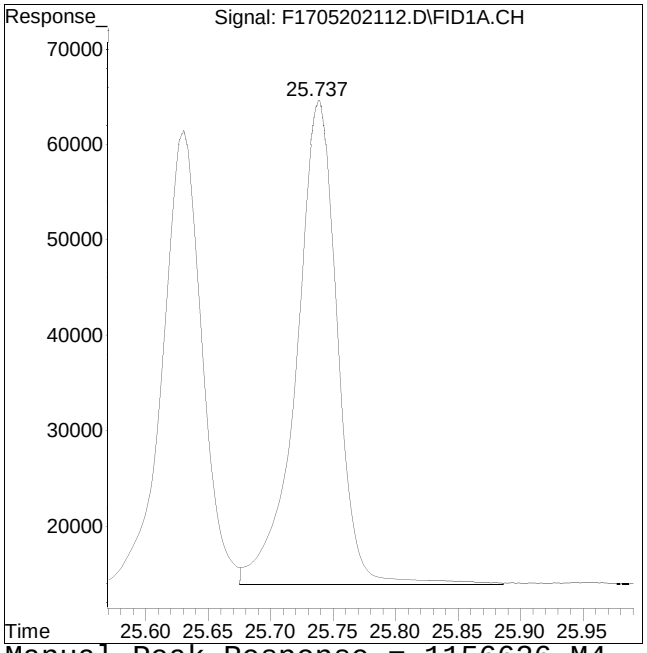
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #15: Pristane



Original Peak Response = 0



Manual Peak Response = 1156626 M4

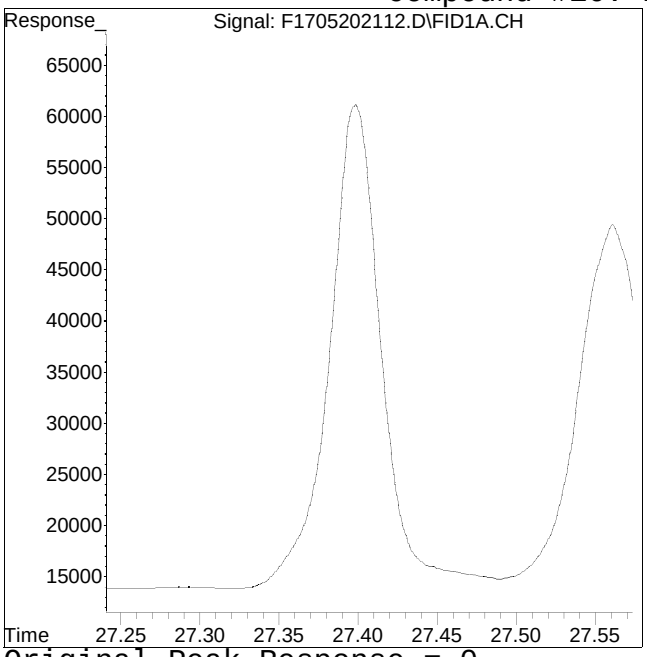
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

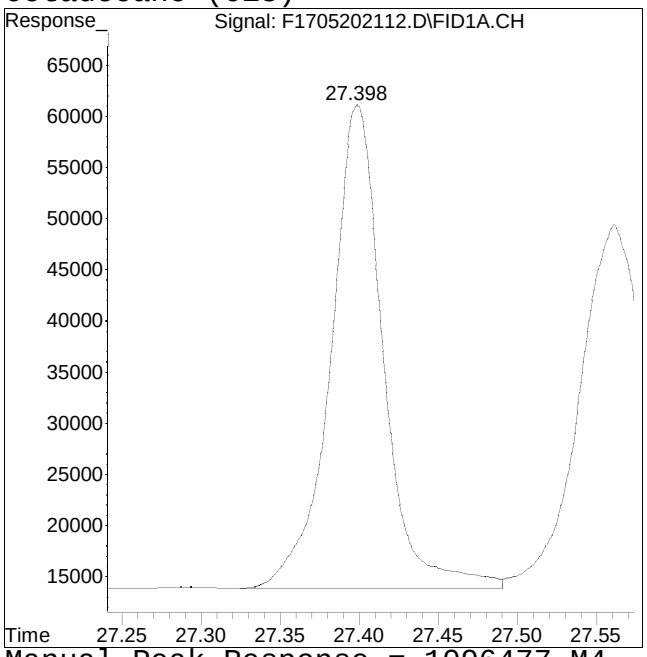
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 0



Manual Peak Response = 1096477 M4

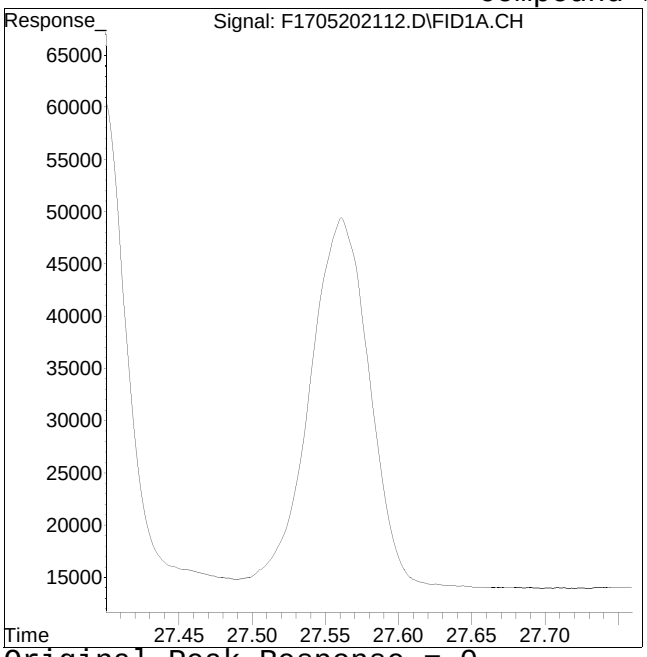
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

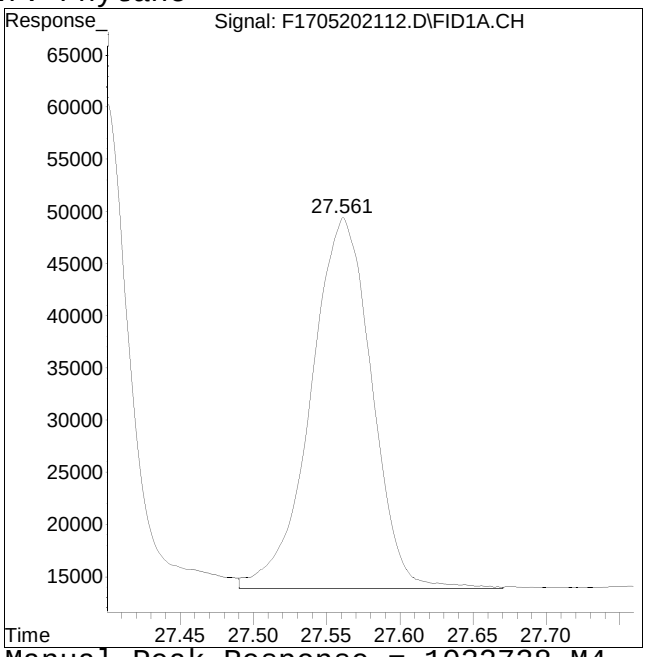
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #17: Phytane



Original Peak Response = 0



Manual Peak Response = 1032738 M4

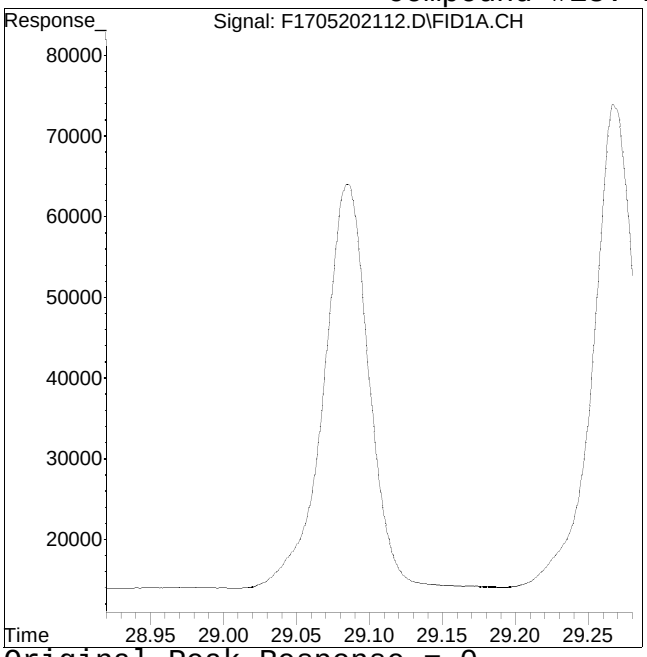
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

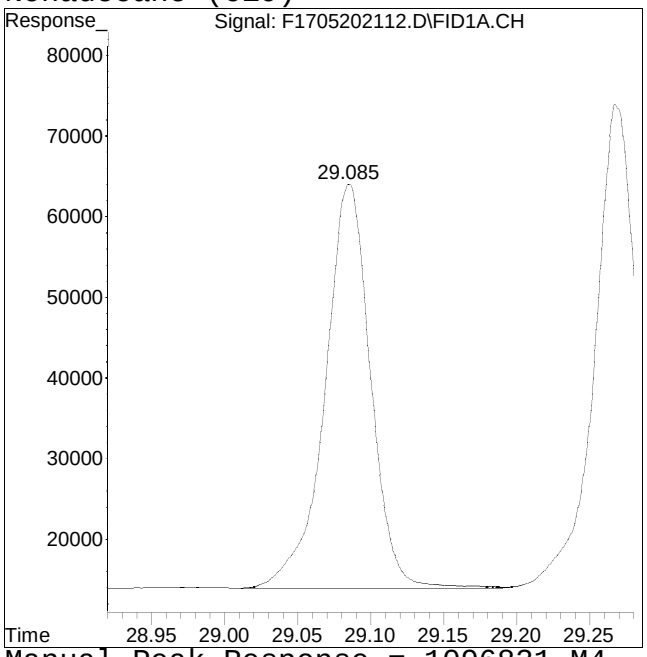
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 0



Manual Peak Response = 1096831 M4

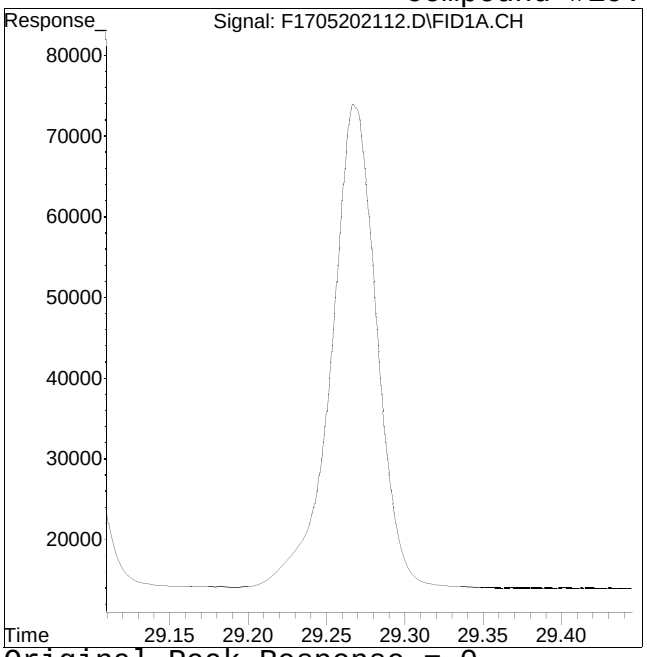
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

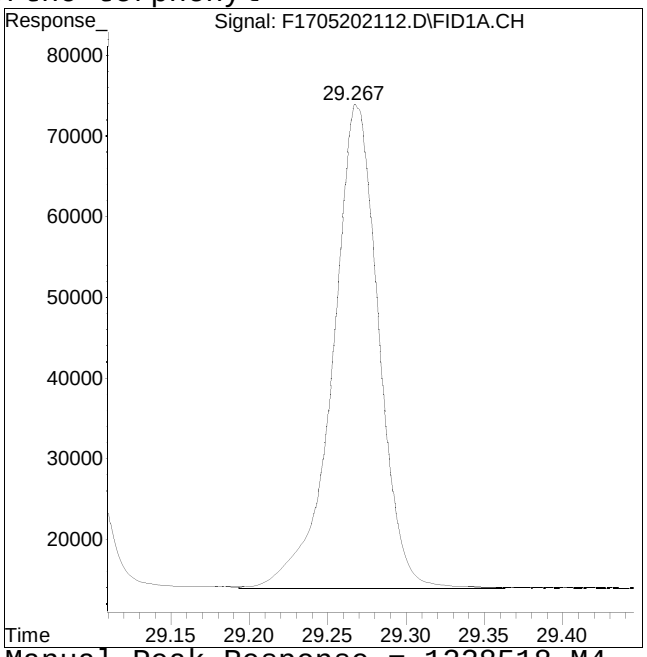
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #19: ortho-terphenyl



Original Peak Response = 0



Manual Peak Response = 1228518 M4

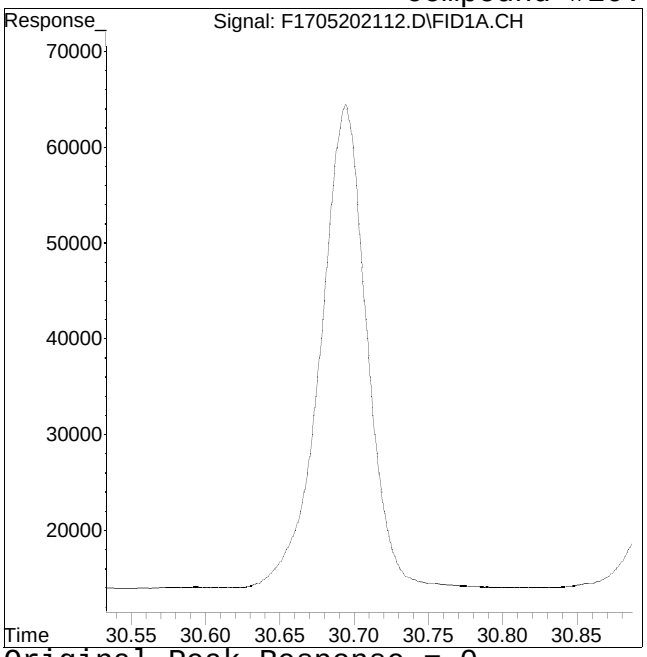
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

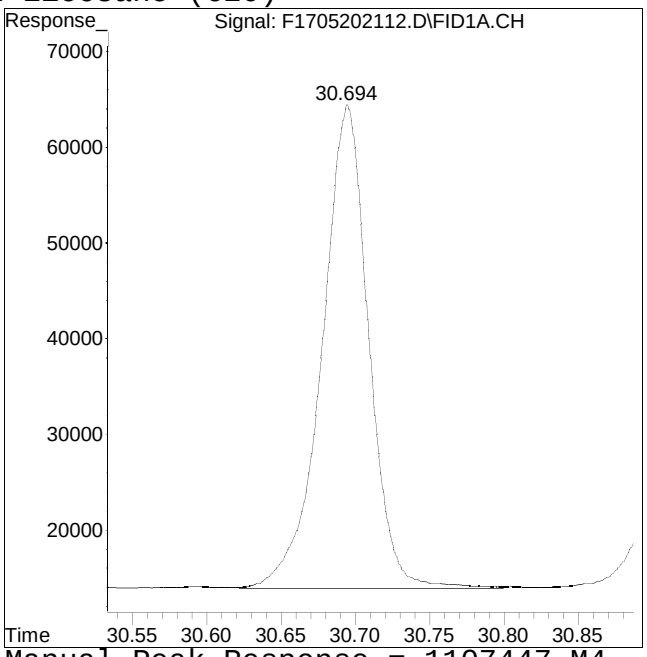
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 0



Manual Peak Response = 1107447 M4

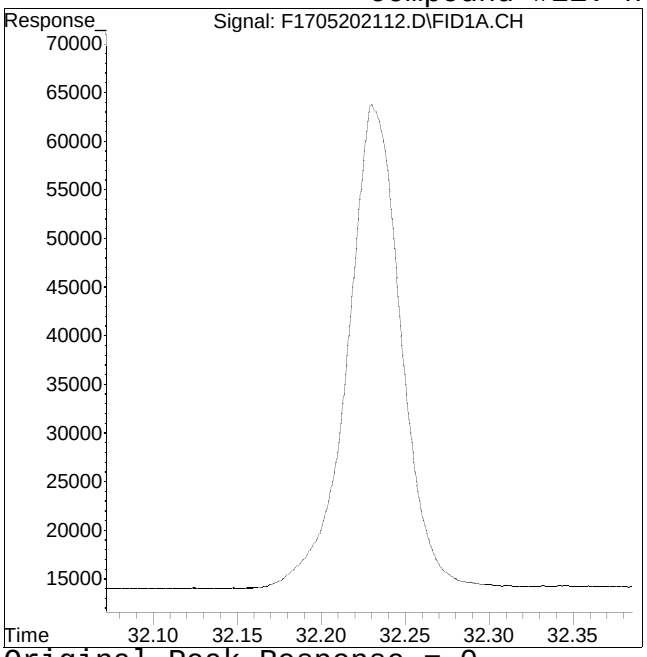
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

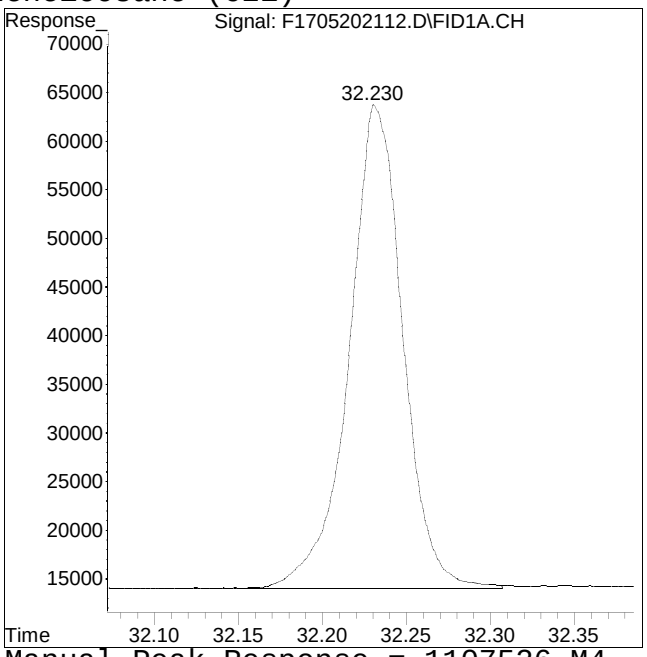
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 0



Manual Peak Response = 1107526 M4

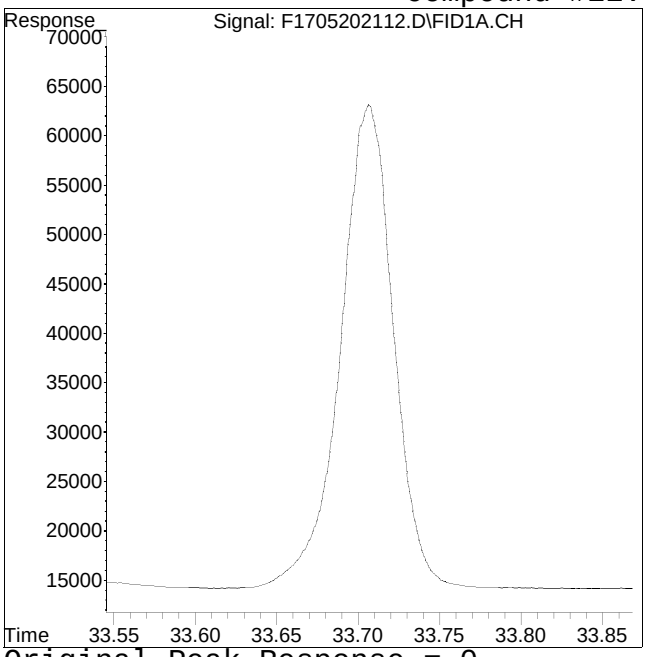
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

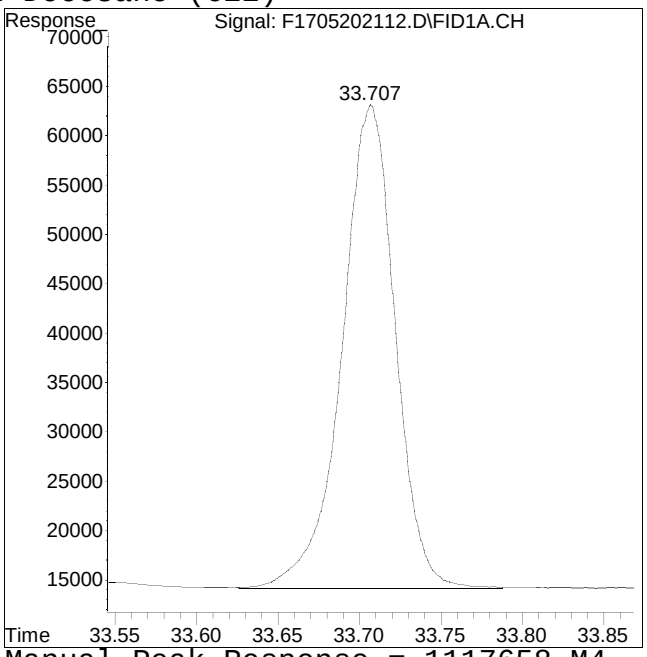
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 0



Manual Peak Response = 1117658 M4

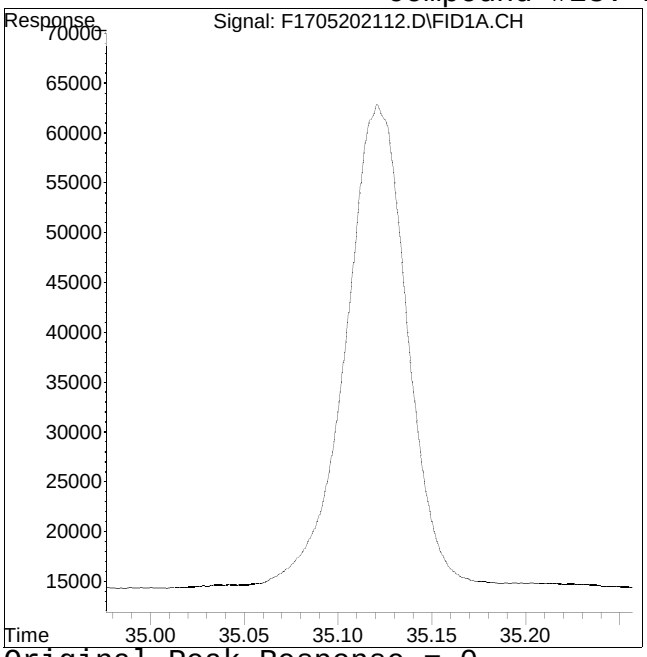
M4 = Poor automated baseline construction.

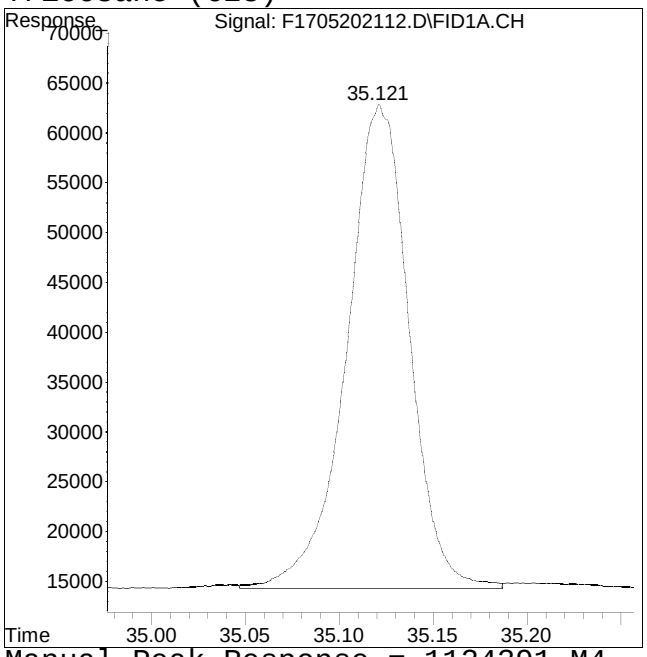
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #23: n-Tricosane (C23)





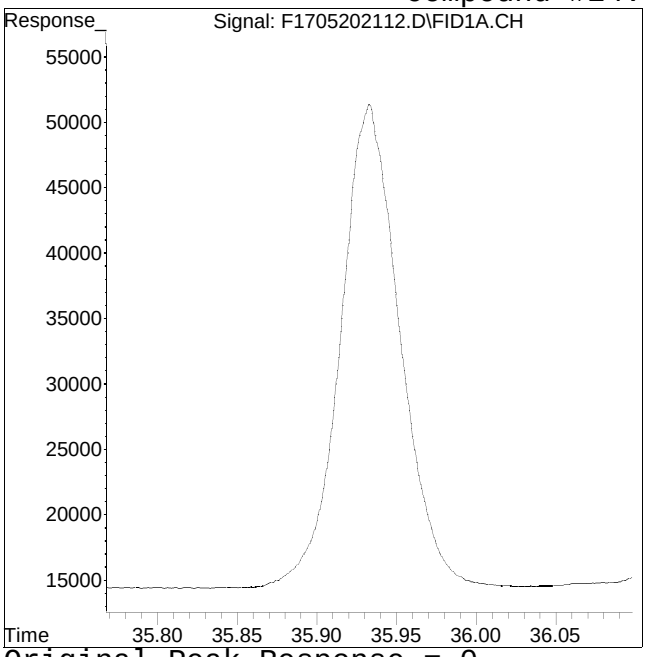
Original Peak Response = 0
Manual Peak Response = 1124391 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

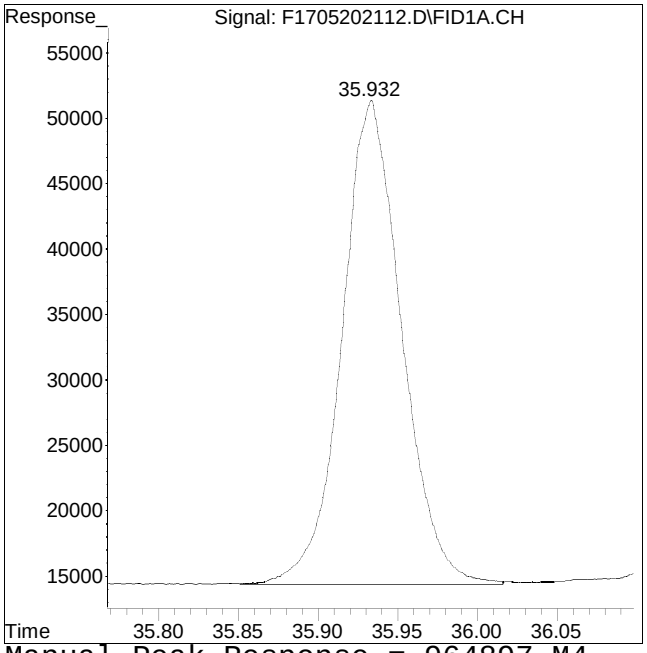
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #24: d50-Tetracosane



Original Peak Response = 0



Manual Peak Response = 964897 M4

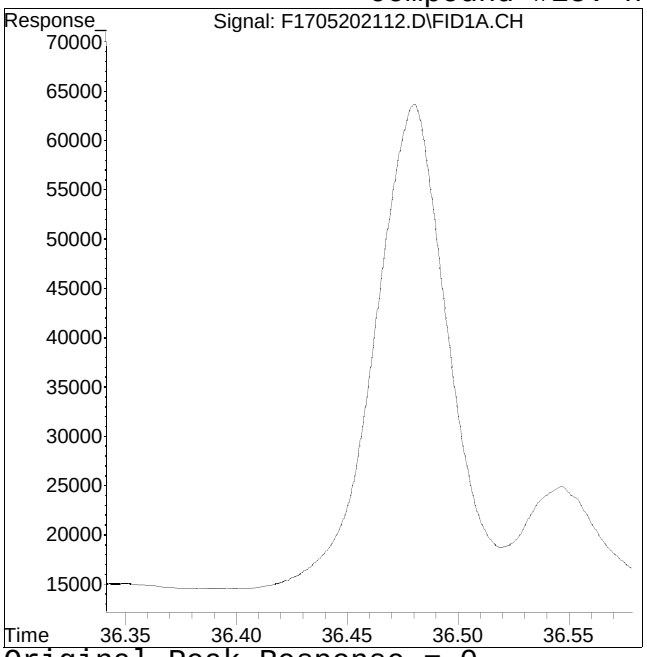
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

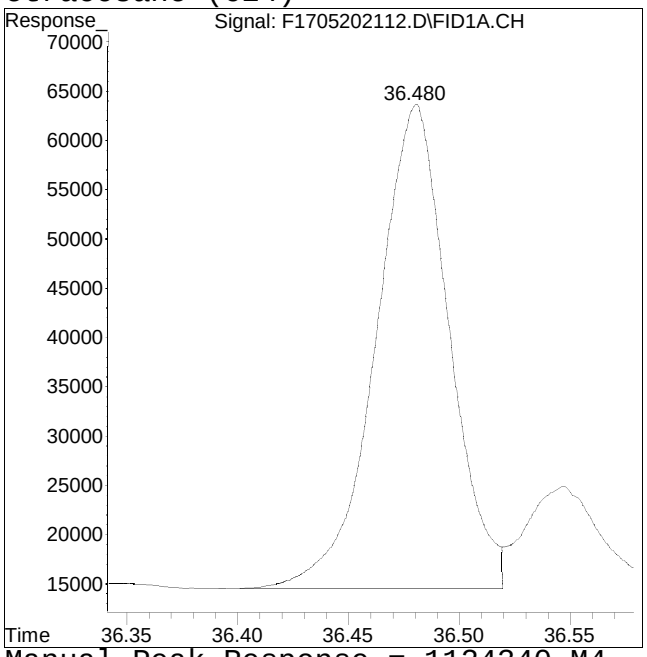
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 0



Manual Peak Response = 1124340 M4

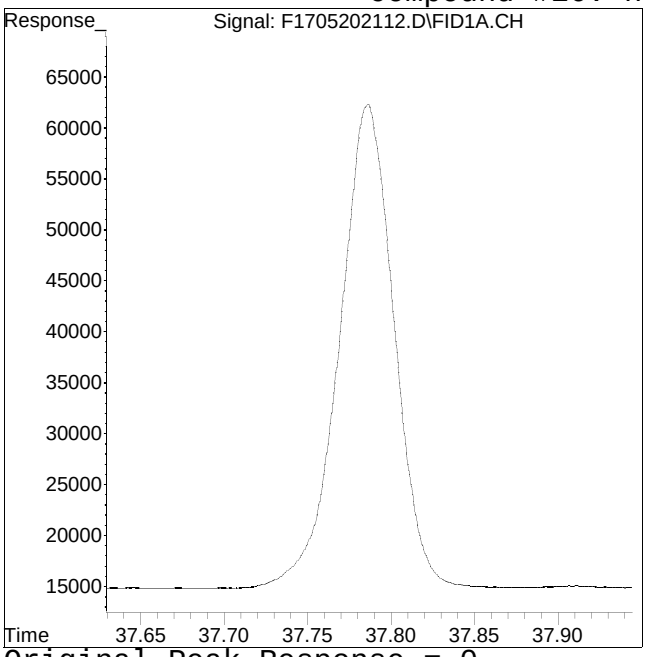
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

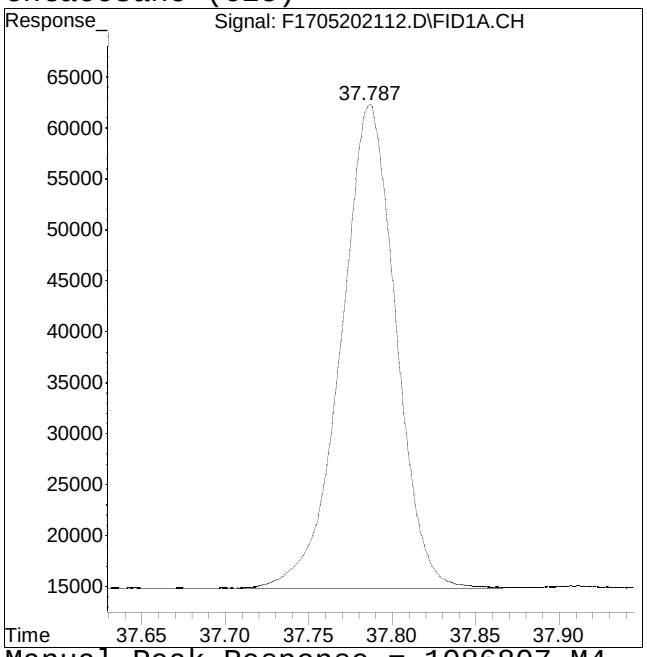
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 0



Manual Peak Response = 1086807 M4

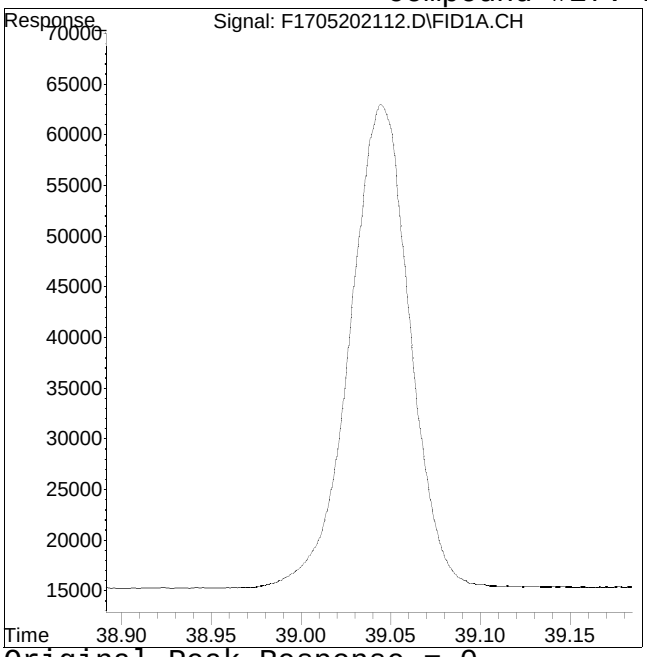
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

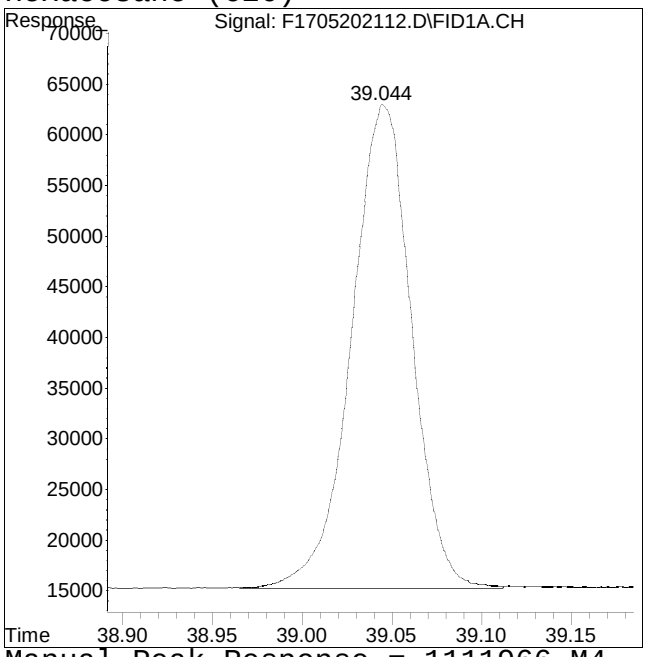
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 0



Manual Peak Response = 1111966 M4

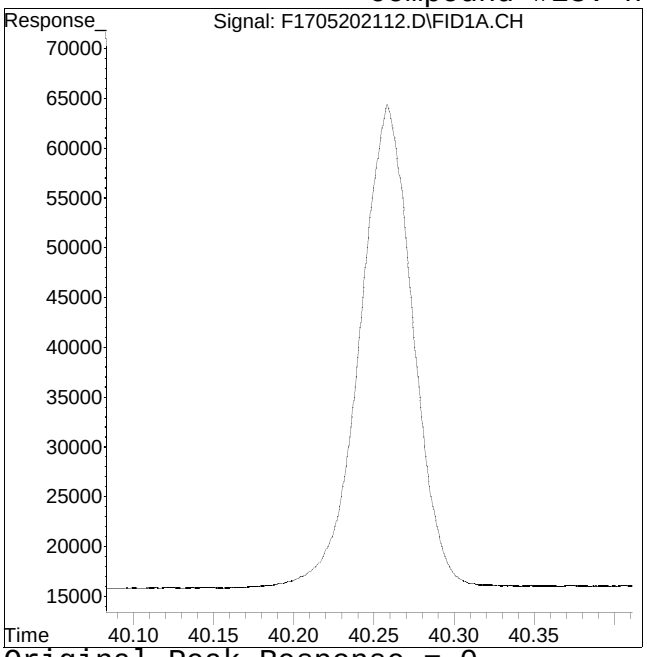
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

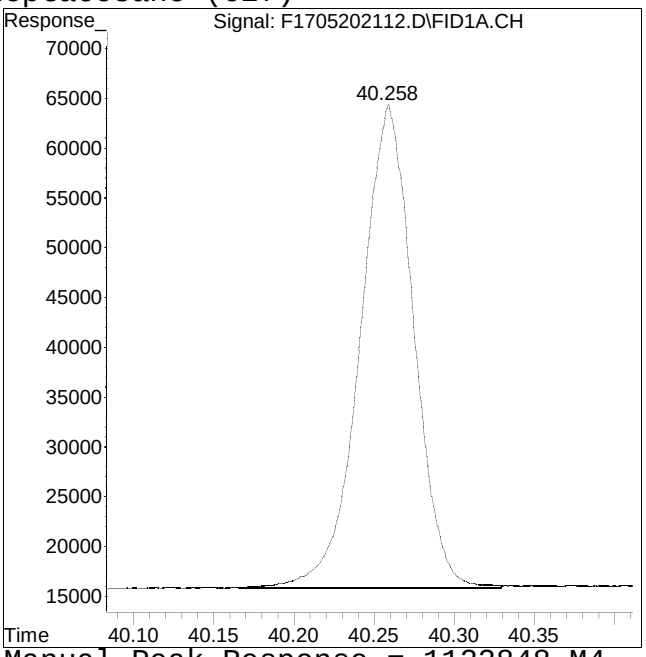
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 0



Manual Peak Response = 1122848 M4

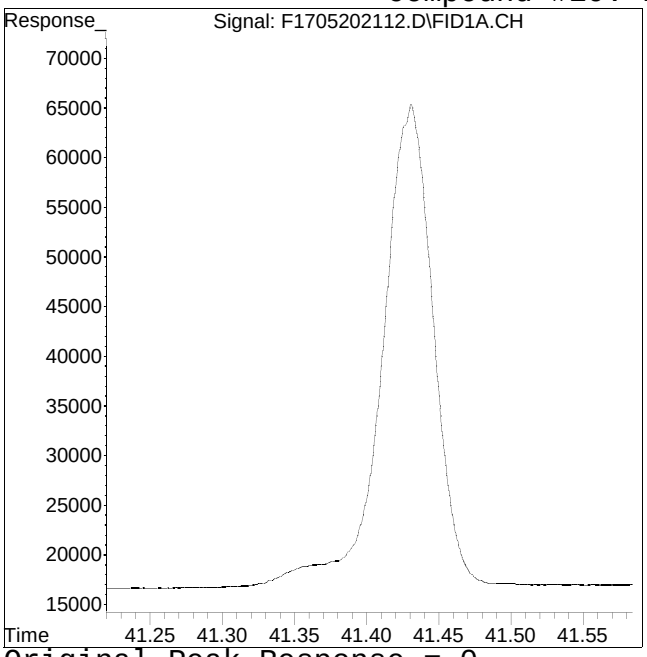
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

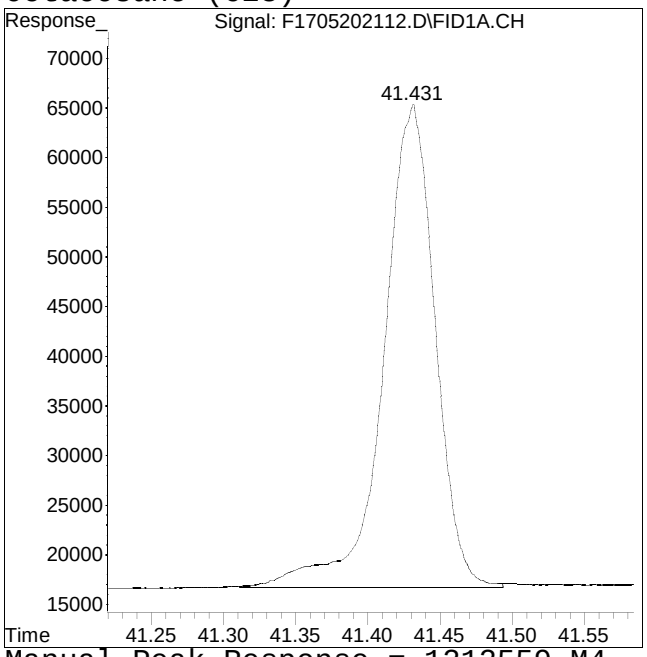
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 0



Manual Peak Response = 1212559 M4

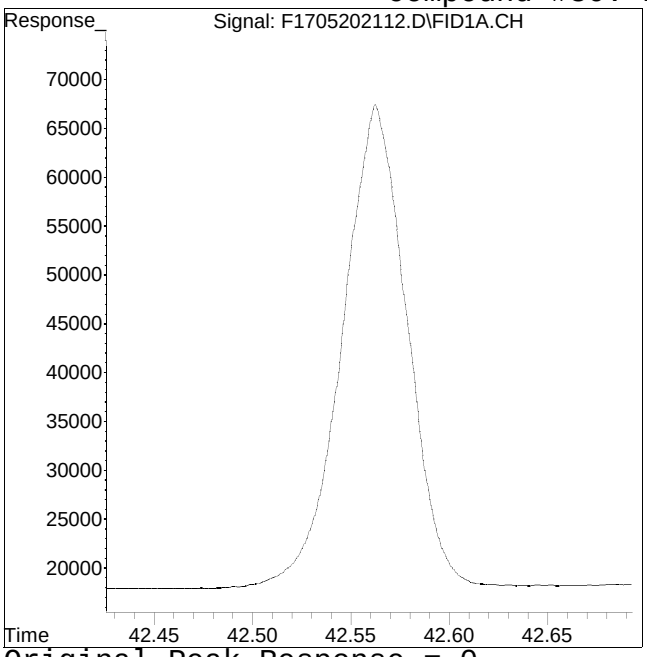
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

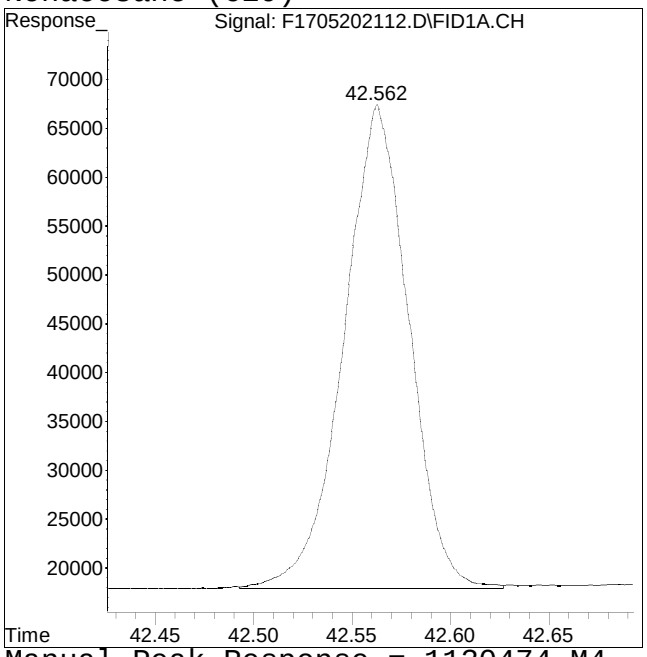
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 0



Manual Peak Response = 1130474 M4

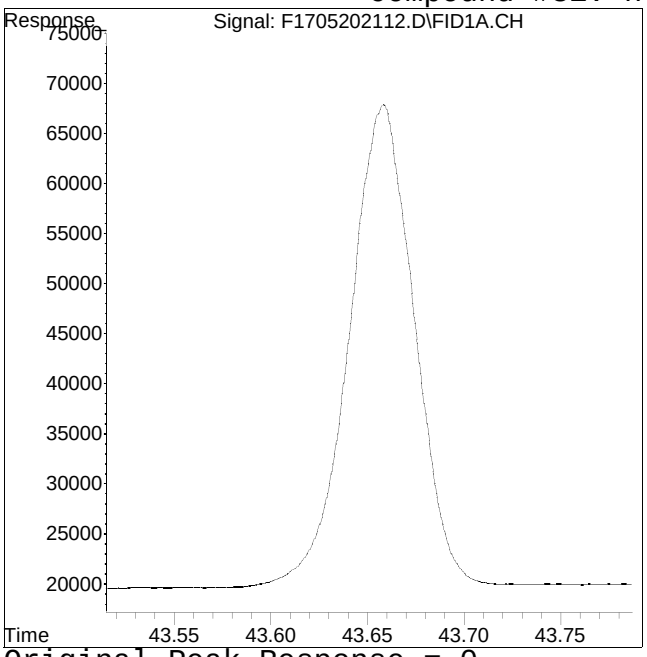
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

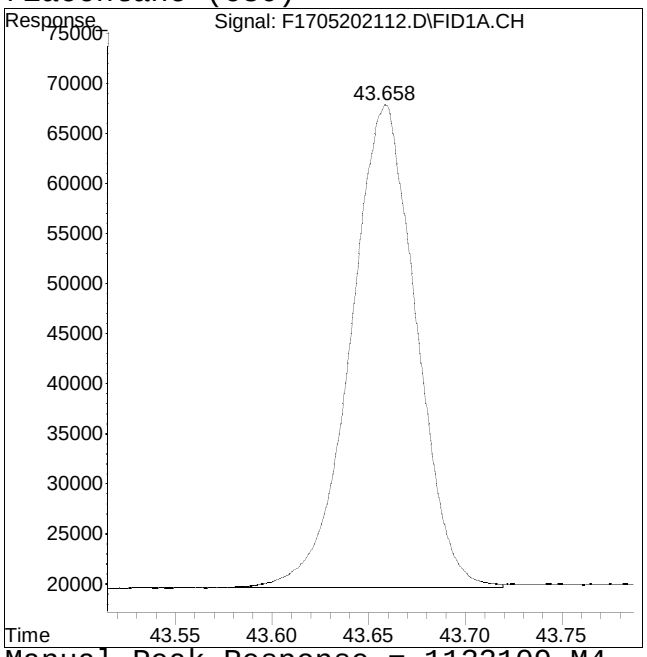
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 0



Manual Peak Response = 1133109 M4

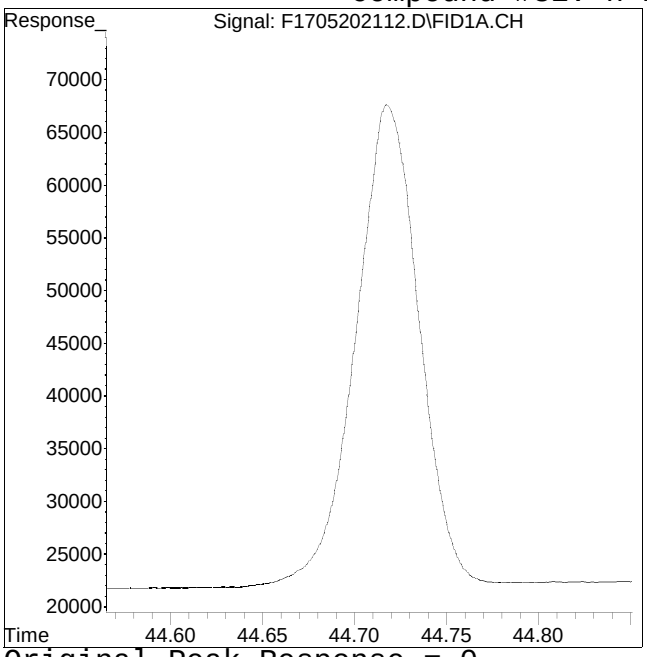
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

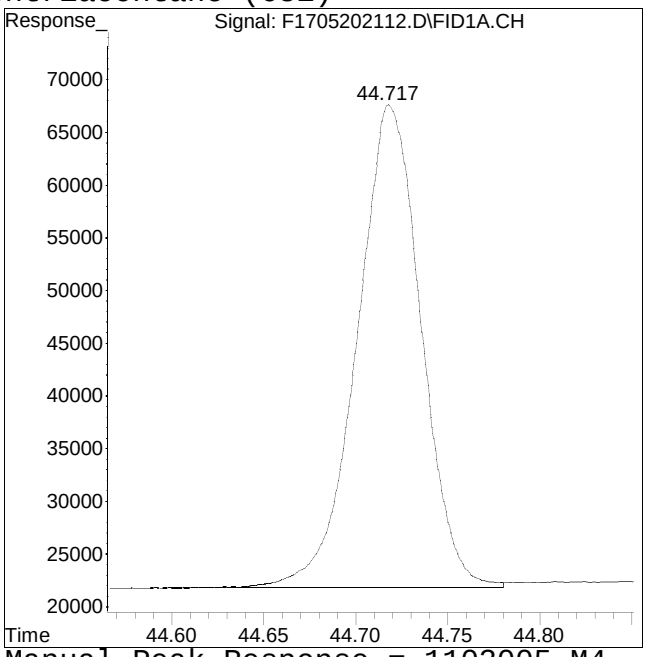
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 0



Manual Peak Response = 1103005 M4

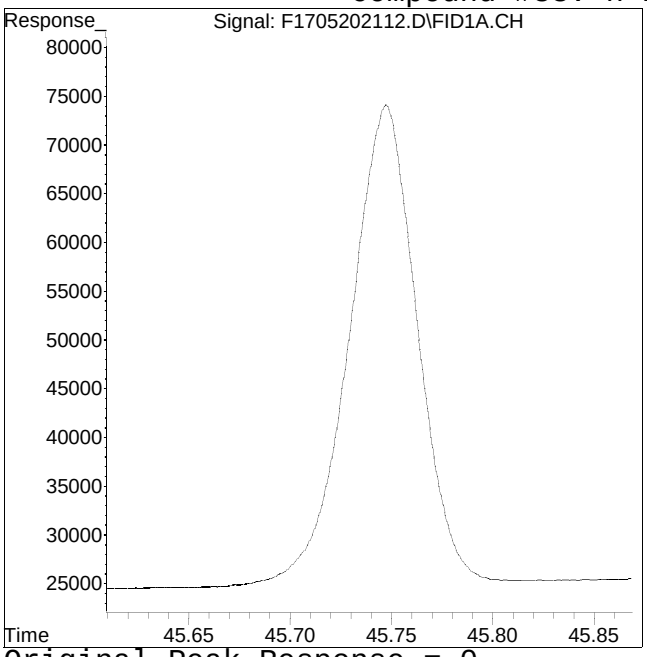
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

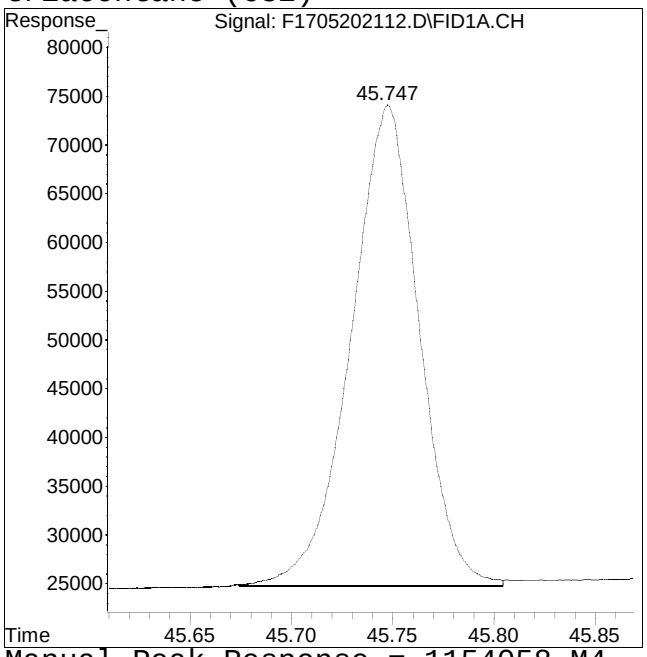
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 0



Manual Peak Response = 1154058 M4

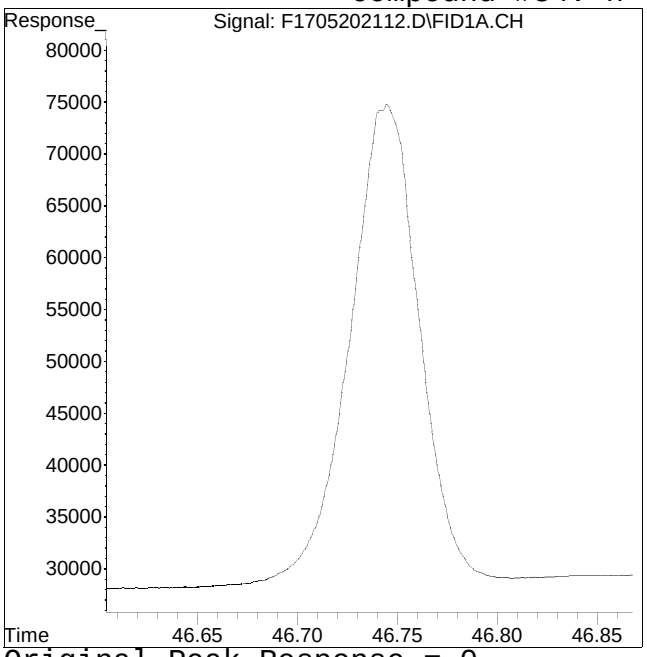
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

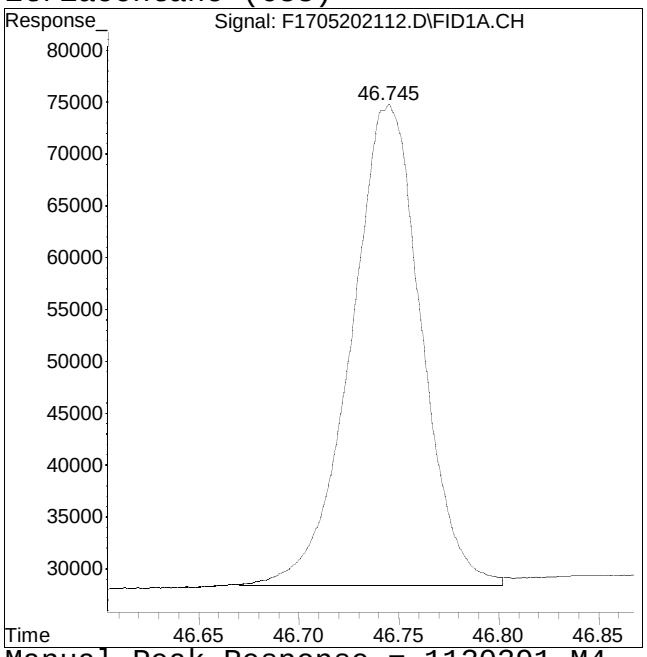
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 0



Manual Peak Response = 1130391 M4

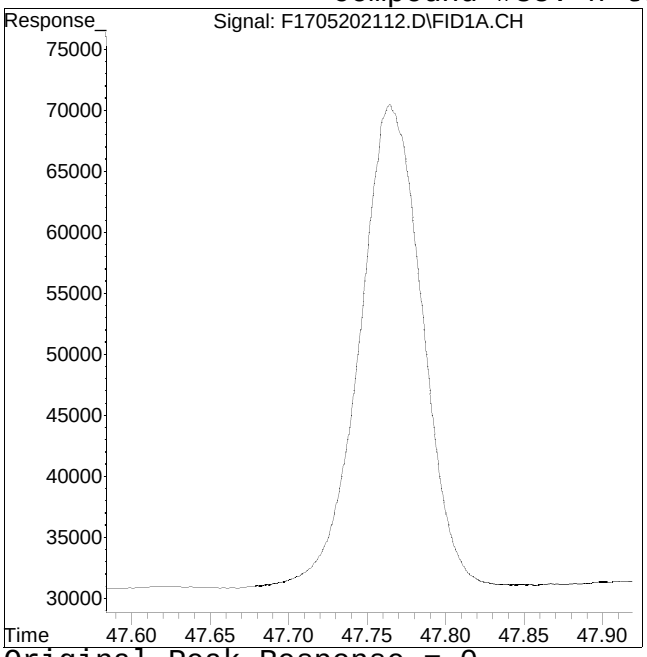
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

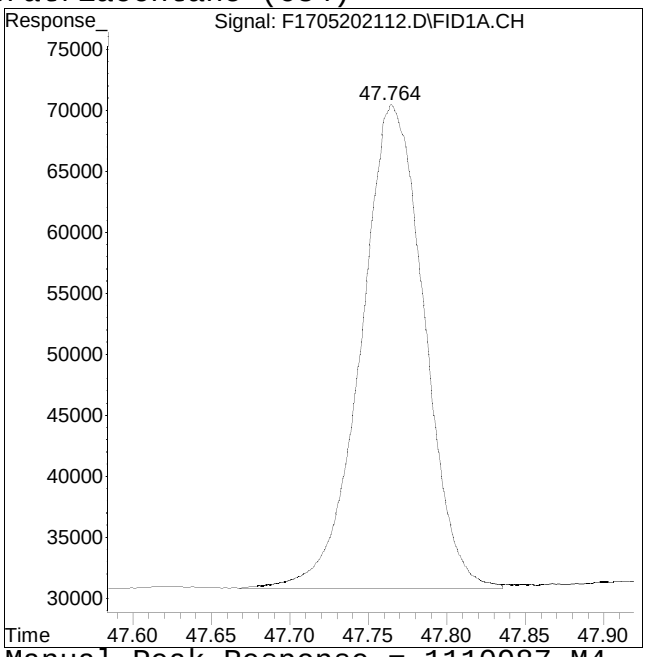
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 0



Manual Peak Response = 1110987 M4

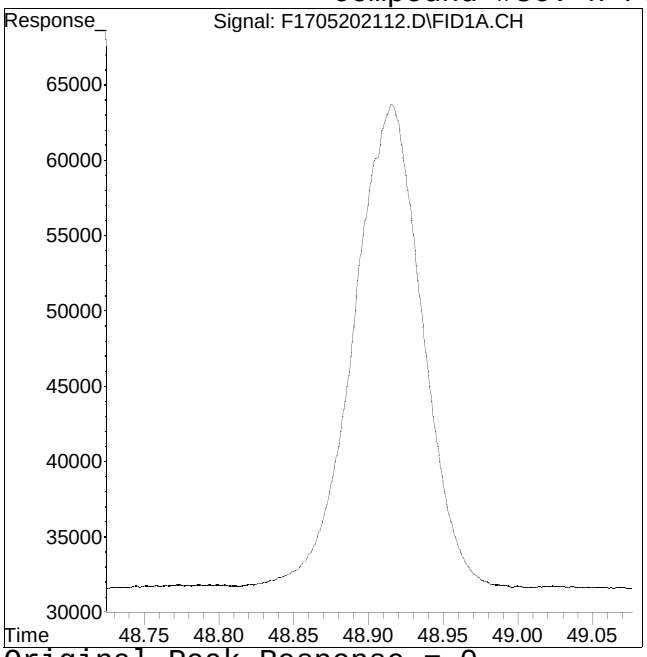
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

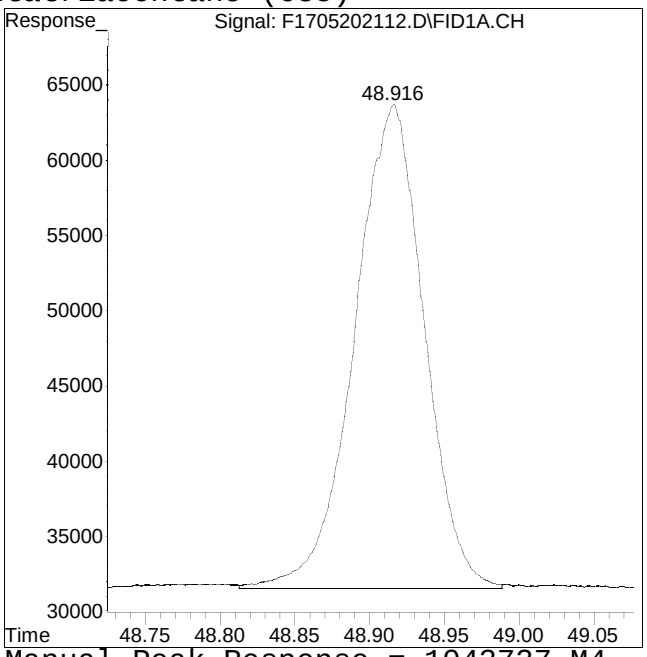
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 0



Manual Peak Response = 1043737 M4

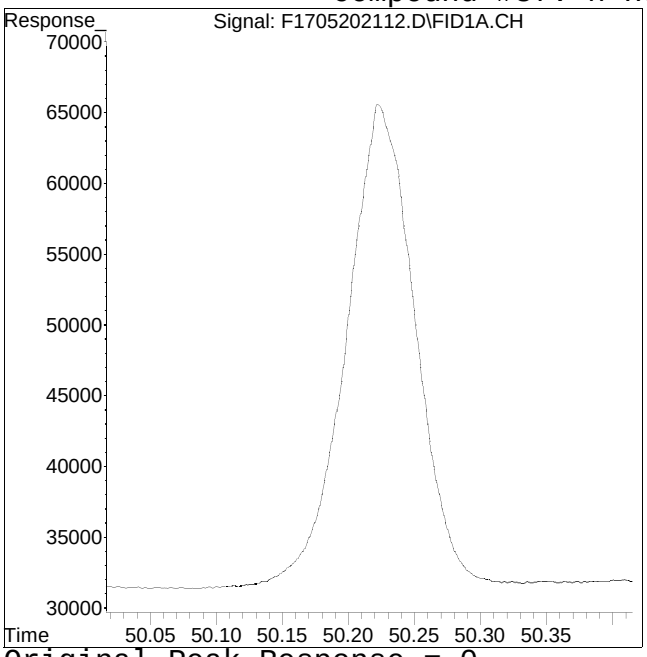
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

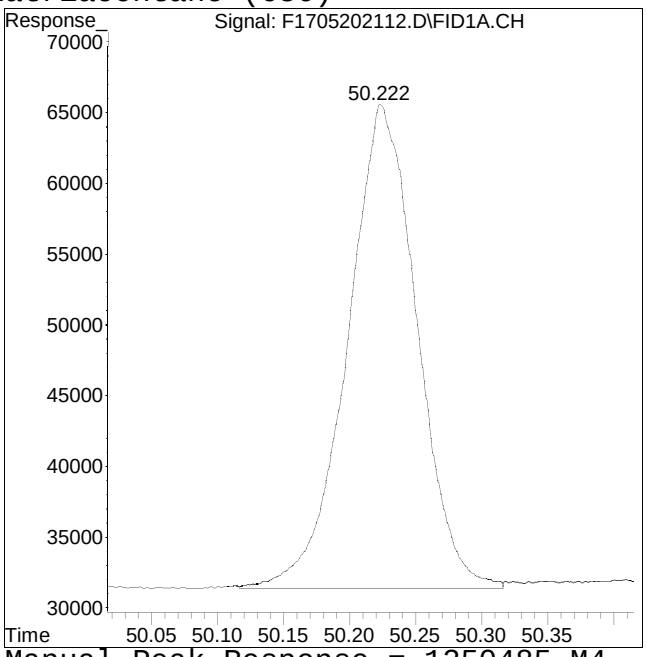
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 0



Manual Peak Response = 1250485 M4

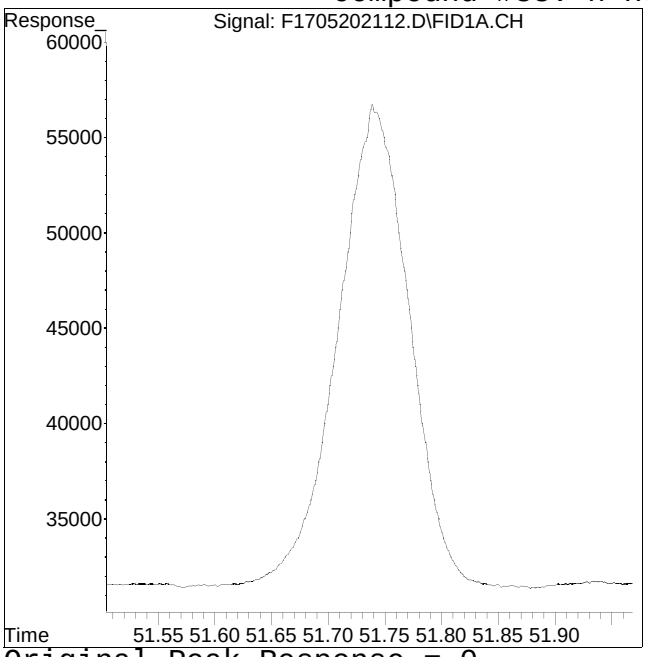
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

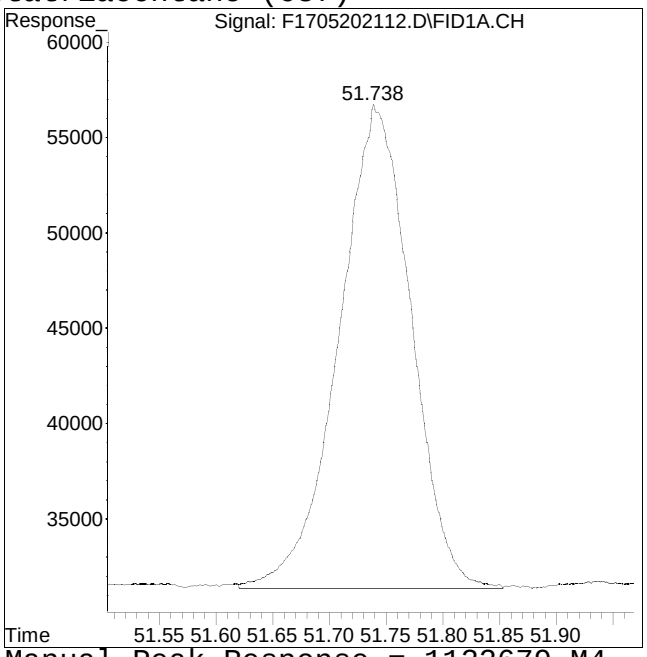
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 0



Manual Peak Response = 1122679 M4

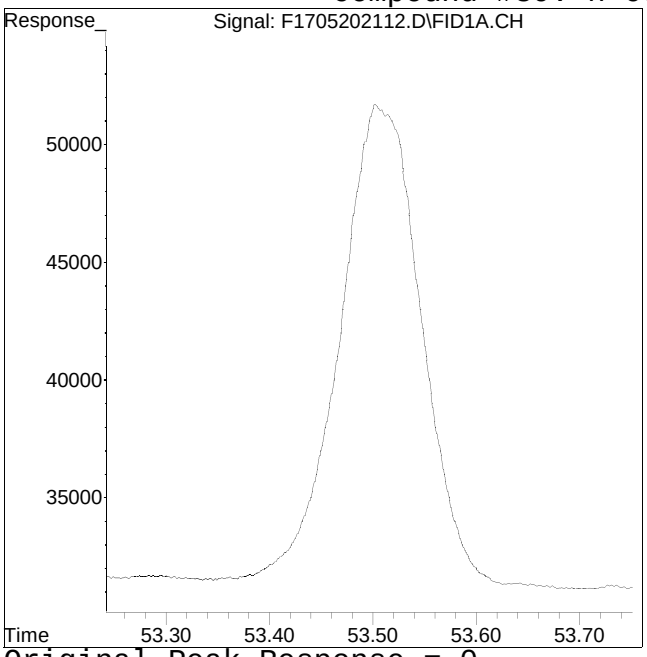
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

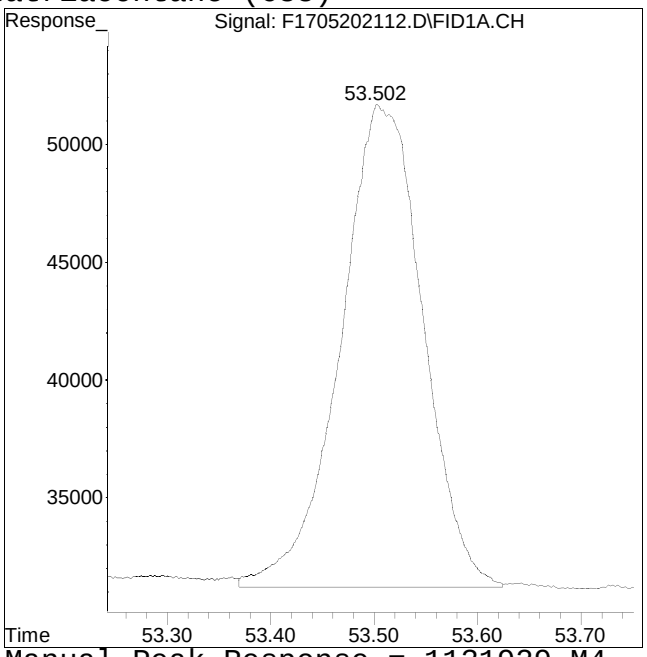
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 1131929 M4

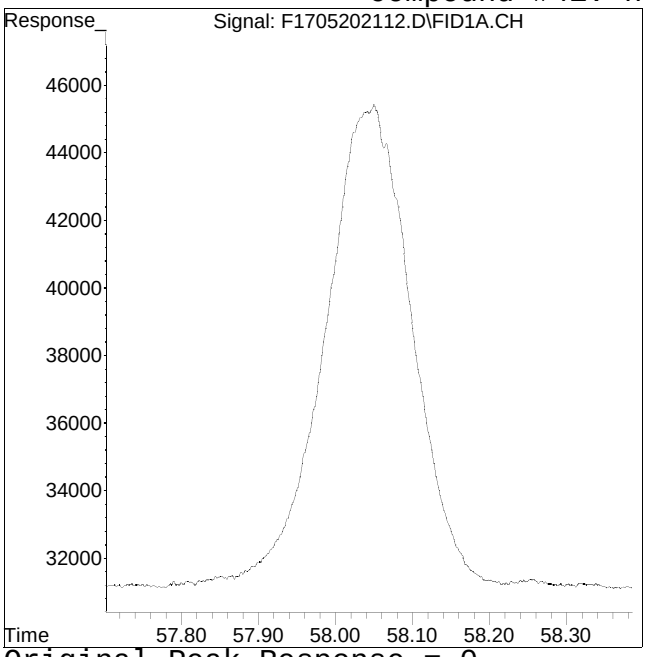
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

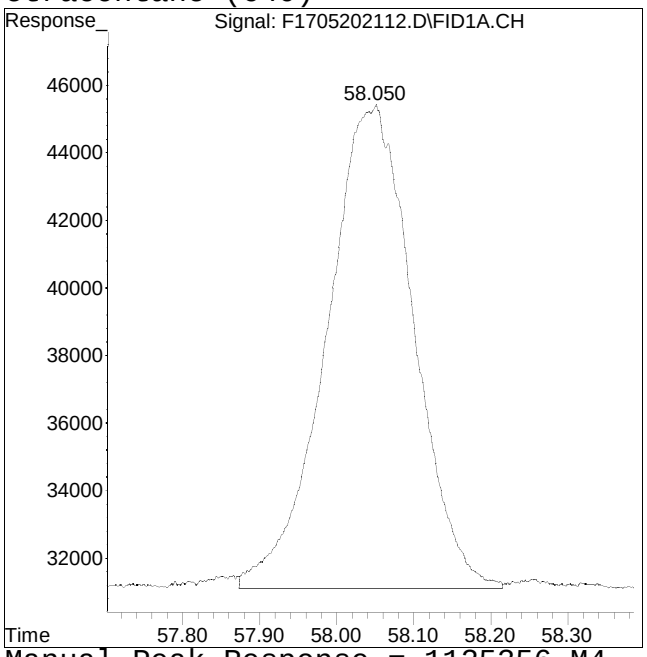
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202112.D
Date Inj'd : 5/20/2021 8:50 pm
Sample : I1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:11 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 1125356 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202114.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 10:19 pm
Operator : FID17:WR
Sample : I1705202102F
Misc : WG1505003,FRBD78,10ug/ml
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:23:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:16:58 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.314	58041610	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.272	12718876	9.873 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 19.75%#	
24) s d50-Tetracosane	35.936	9979171	9.728 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 19.46%#	
Target Compounds			
2) t n-Octane (C8)	5.605	10204965	9.777 ug/mL M4
3) t n-Nonane (C9)	7.811	10684052	9.284 ug/mL M4
4) t n-Decane (C10)	10.304	11134164	9.740 ug/mL M4
5) t n-Undecane (C11)	12.820	10967331	10.028 ug/mL M4
6) t n-Dodecane (C12)	15.250	11028597	10.125 ug/mL M4
7) t n-Tridecane (C13)	17.560	11018400	10.046 ug/mL M4
9) t n-Tetradecane (C14)	19.746	11292200	9.920 ug/mL M4
11) t n-Pentadecane (C15)	21.814	11328600	9.984 ug/mL M4
12) t n-Hexadecane (C16)	23.772	11234299	9.817 ug/mL M4
14) t n-Heptadecane (C17)	25.631	11323333	10.102 ug/mL M4
15) t Pristane	25.740	11642849	9.753 ug/mL M4
16) t n-Octadecane (C18)	27.402	11434773	9.907 ug/mL M4
17) t Phytane	27.561	10743381	9.928 ug/mL M4
18) t n-Nonadecane (C19)	29.088	11473772	9.917 ug/mL M4
20) t n-Eicosane (C20)	30.695	11523058	9.887 ug/mL M4
21) t n-Heneicosane (C21)	32.232	11566082	9.907 ug/mL M4
22) t n-Docosane (C22)	33.707	11574332	9.873 ug/mL M4
23) t n-Tricosane (C23)	35.123	11587702	9.856 ug/mL M4
25) t n-Tetracosane (C24)	36.481	11494663	9.791 ug/mL M4
26) t n-Pentacosane (C25)	37.789	11265787	9.865 ug/mL M4
27) t n-Hexacosane (C26)	39.045	11557000	9.877 ug/mL M4
28) t n-Heptacosane (C27)	40.257	11548397	9.826 ug/mL M4
29) t n-Octacosane (C28)	41.435	11909847	9.648 ug/mL M4
30) t n-Nonacosane (C29)	42.564	11729452	9.877 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202114.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 10:19 pm
Operator : FID17:WR
Sample : I1705202102F
Misc : WG1505003,FRBD78,10ug/ml
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:23:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:16:58 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

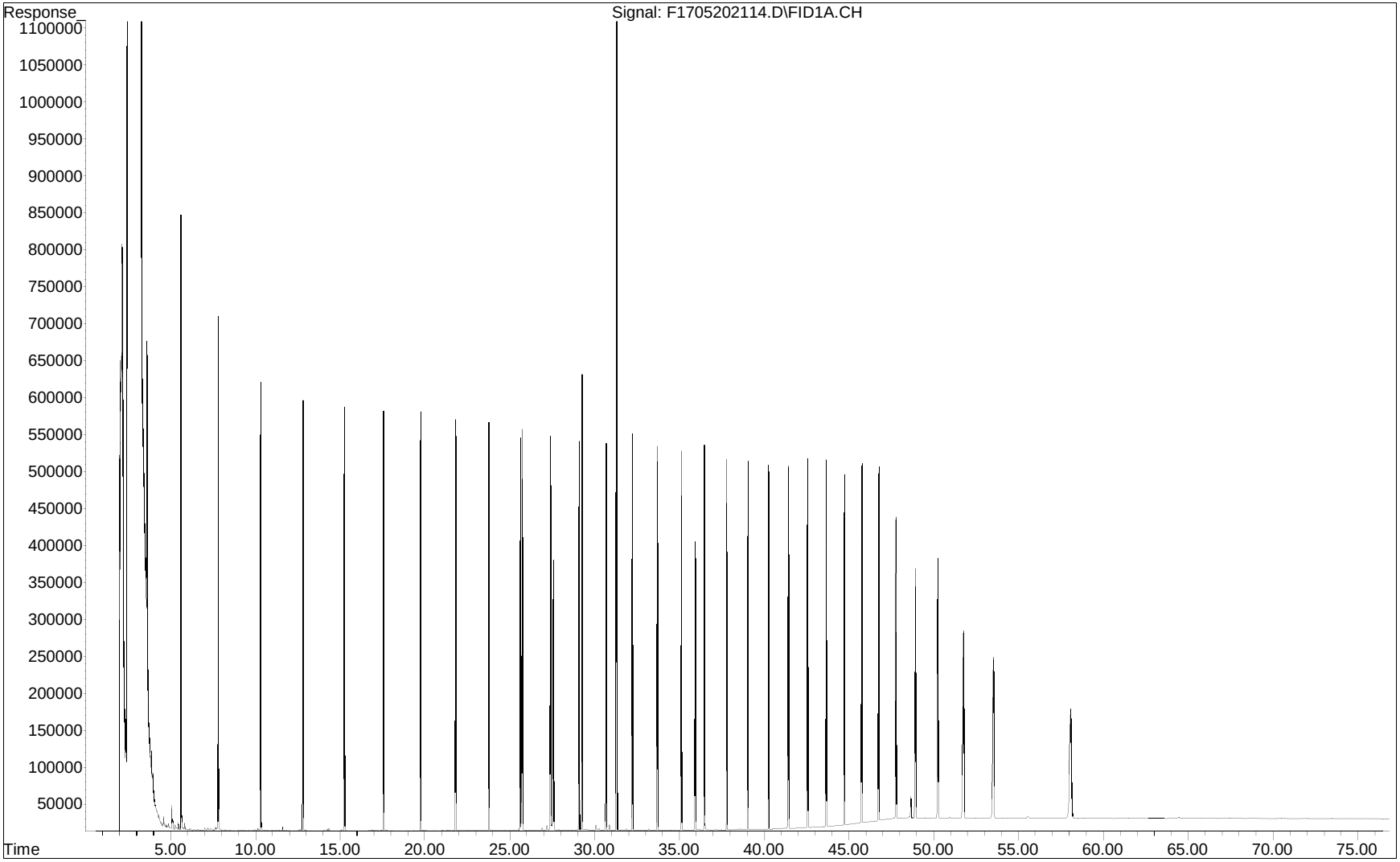
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.663	11742905	9.865 ug/mL M4
32) t	n-Hentriacontane (C31)	44.725	11314815	9.815 ug/mL M4
33) t	n-Dotriacontane (C32)	45.754	11865477	9.828 ug/mL M4
34) t	n-Tritriacontane (C33)	46.748	11523466	9.788 ug/mL M4
35) t	n-tetratriacontane (C34)	47.770	11451120	9.838 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.920	10662256	9.783 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.236	12851113	9.811 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.753	11656708	9.840 ug/mL M4
39) t	n-Octatriacontane (C38)	53.516	11826732	9.882 ug/mL M4
41) t	n-Tetracontane (C40)	58.060	11647804	9.821 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202114.D
Operator : FID17:WR
Acquired : 20 May 2021 10:19 pm using AcqMethod FID17A.M
Sample Name: I1705202102F
Instrument: FID17
Misc Info : WG1505003,FRBD78,10ug/ml
Vial Number: 7
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

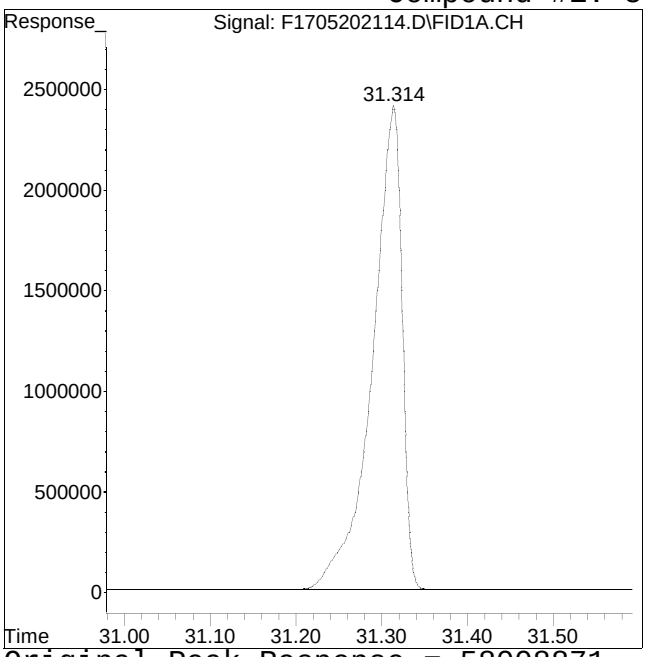


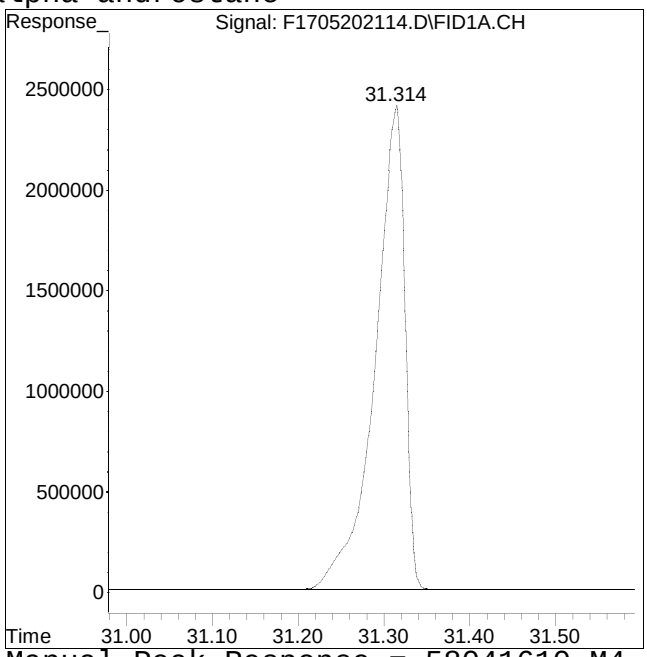
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #1: 5-alpha-androstane





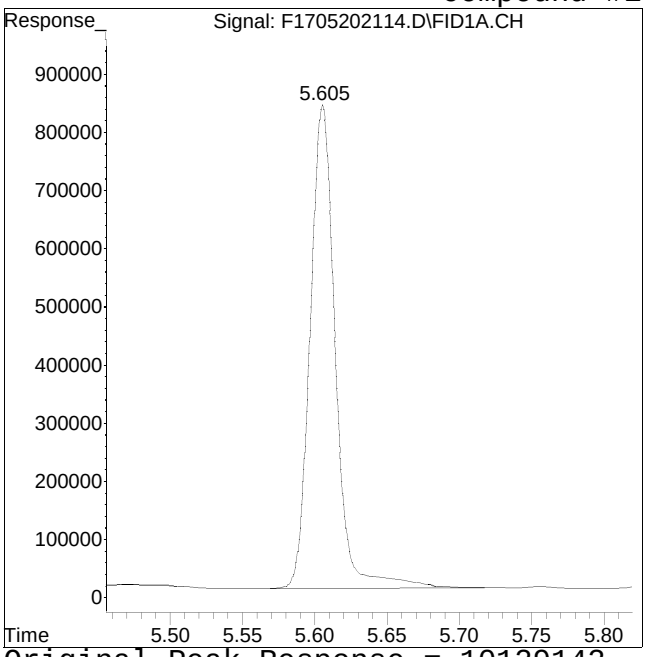
Original Peak Response = 58008871 Manual Peak Response = 58041610 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

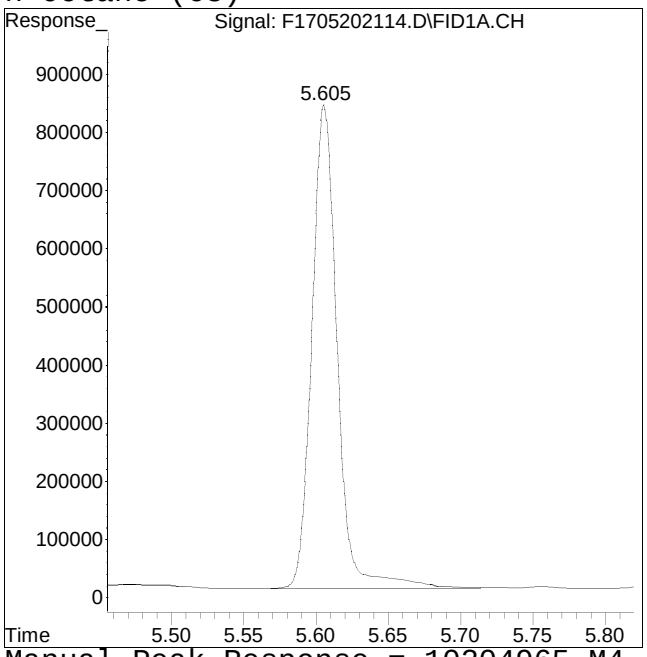
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #2: n-Octane (C8)



Original Peak Response = 10129142



Manual Peak Response = 10204965 M4

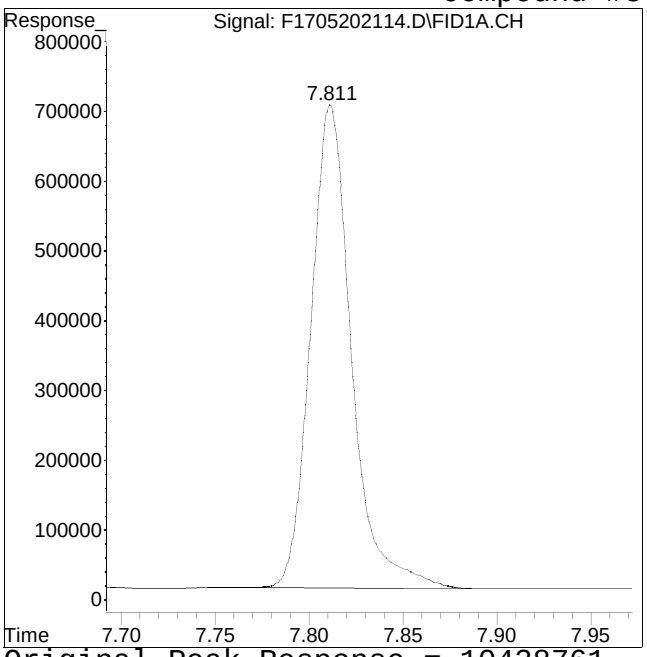
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

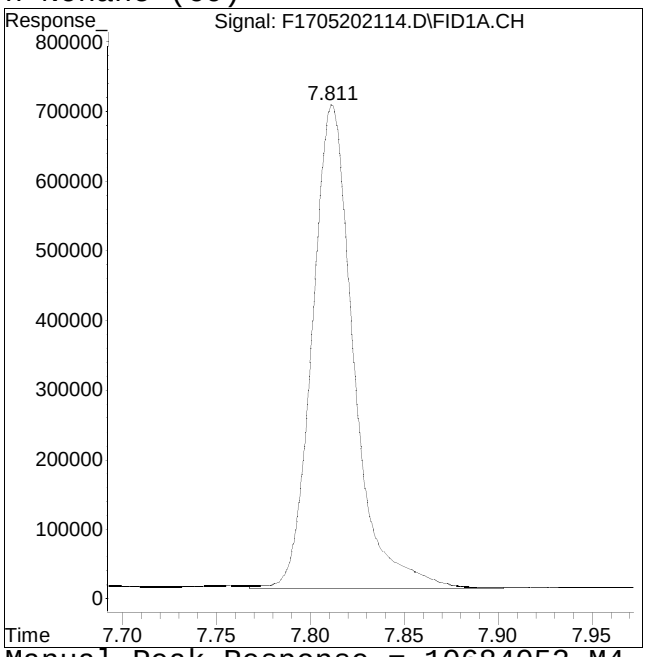
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 10438761



Manual Peak Response = 10684052 M4

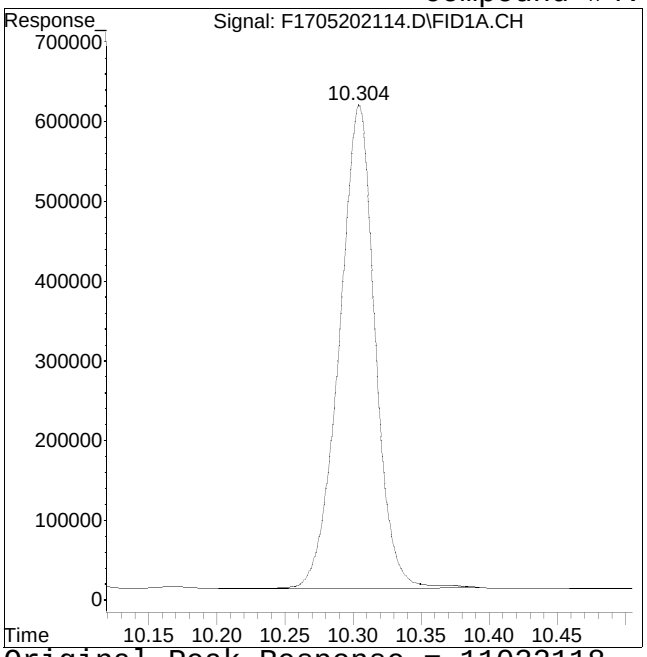
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

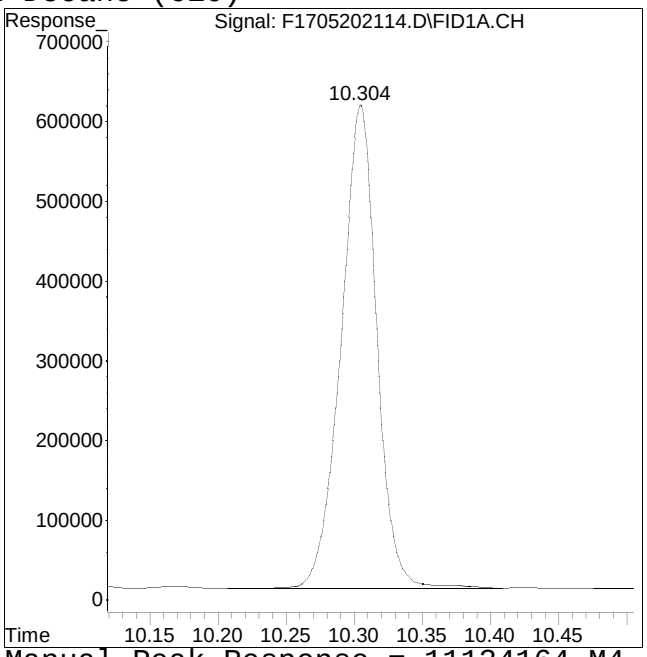
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #4: n-Decane (C10)



Original Peak Response = 11032118



Manual Peak Response = 11134164 M4

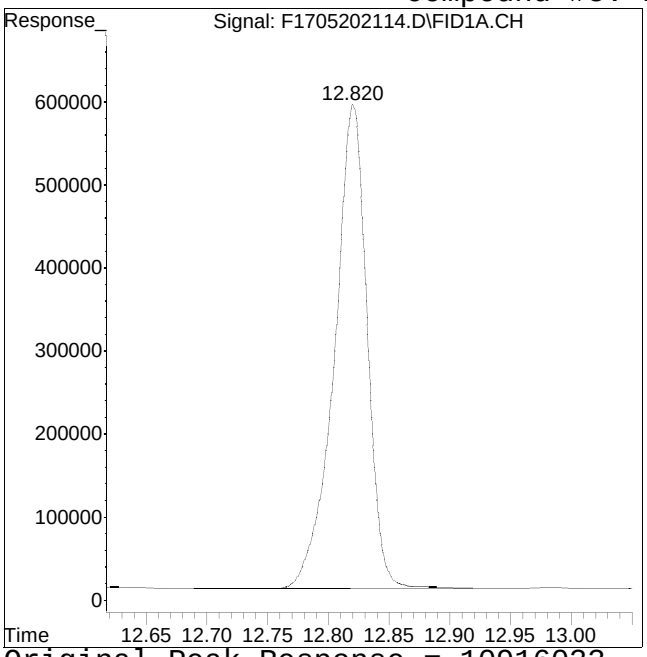
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

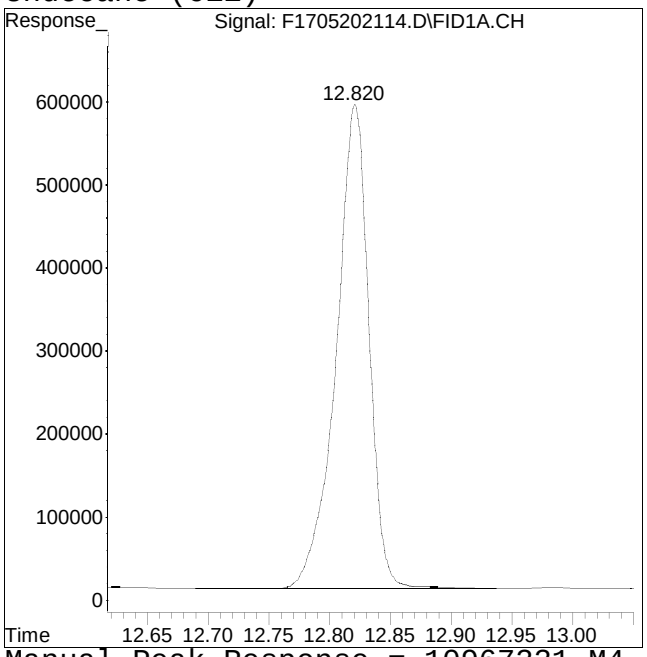
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 10916033



Manual Peak Response = 10967331 M4

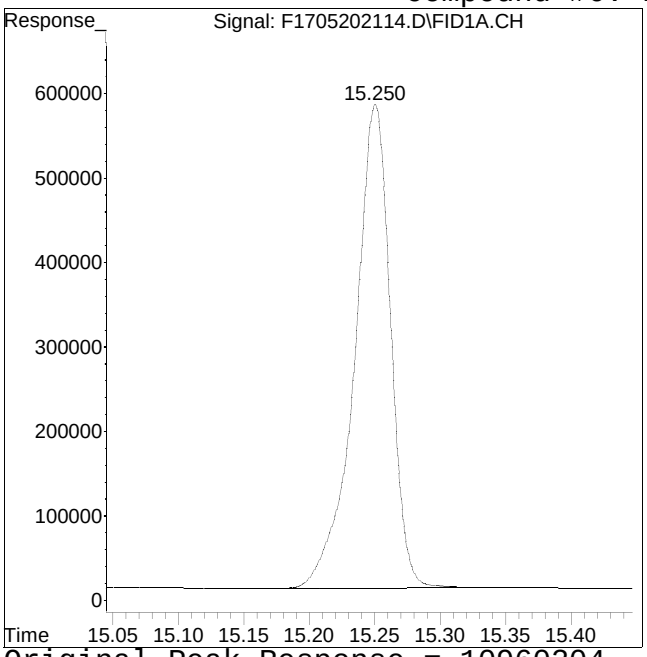
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

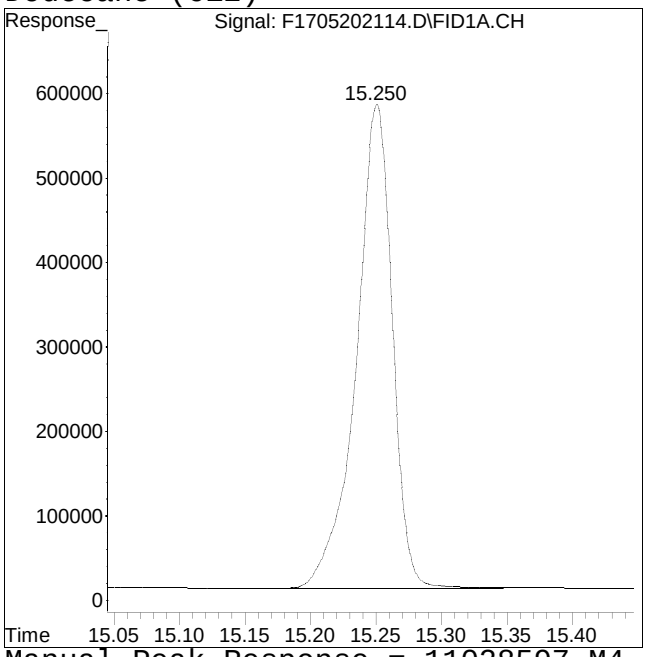
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 10960204



Manual Peak Response = 11028597 M4

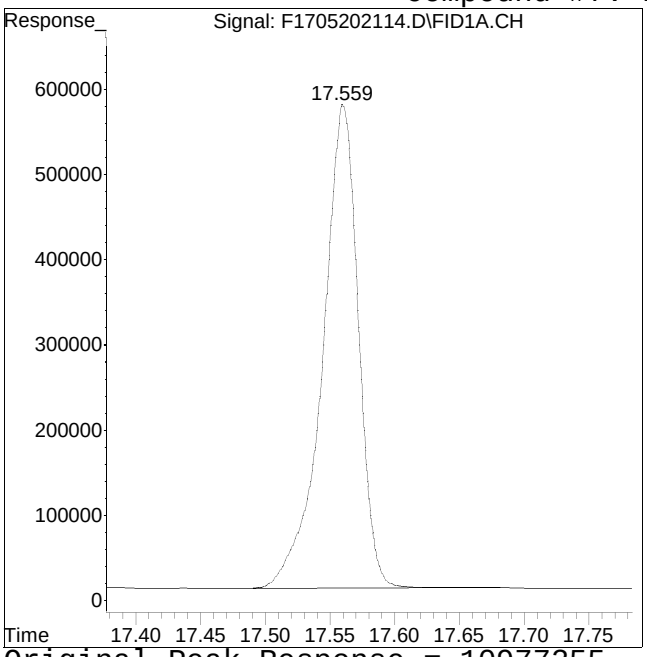
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

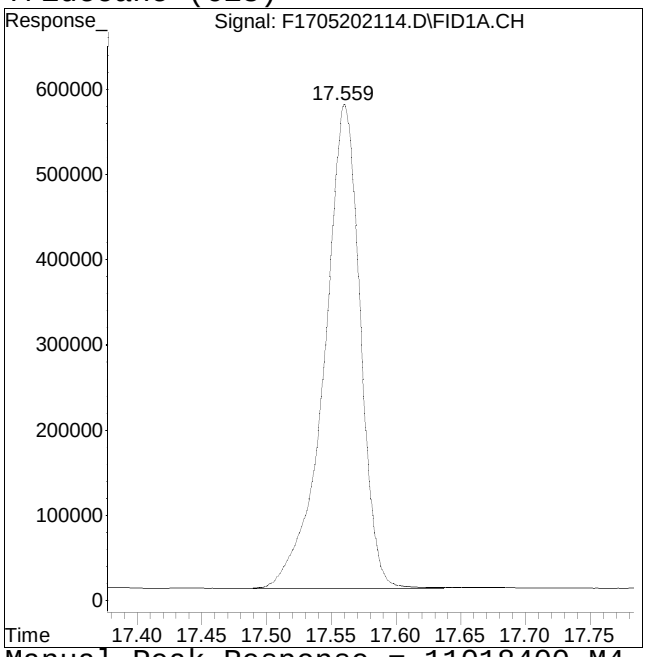
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 10977255



Manual Peak Response = 11018400 M4

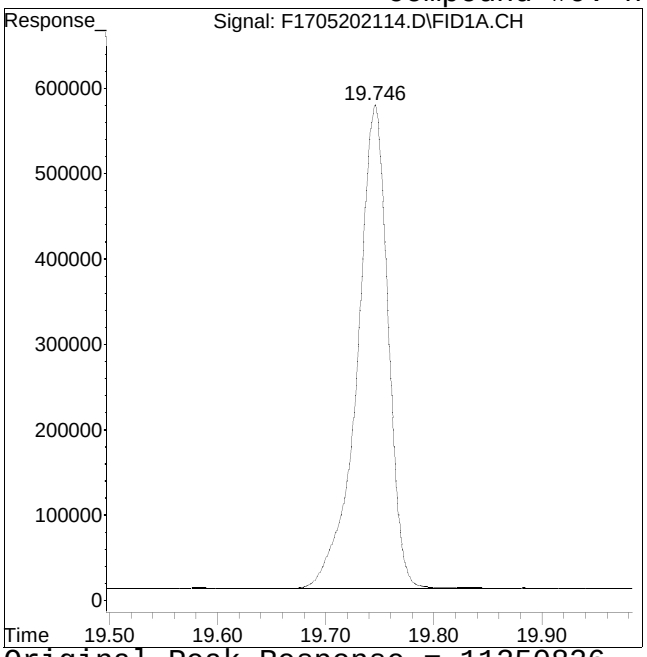
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

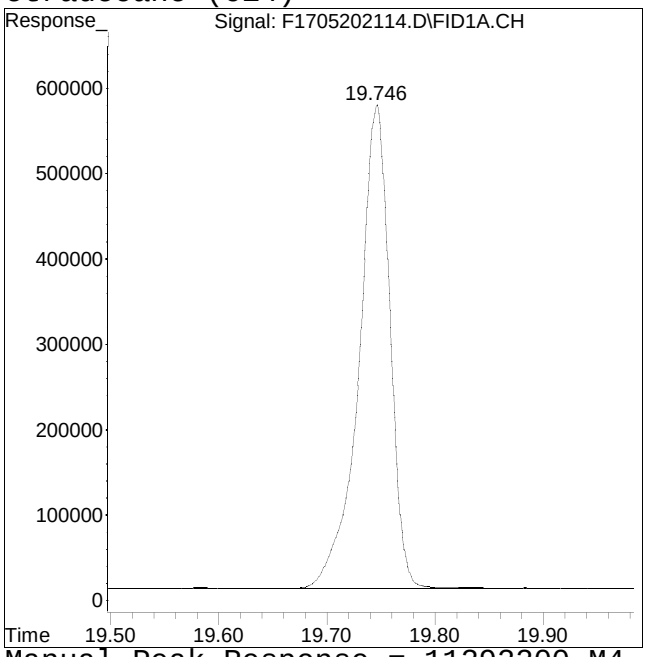
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 11250826



Manual Peak Response = 11292200 M4

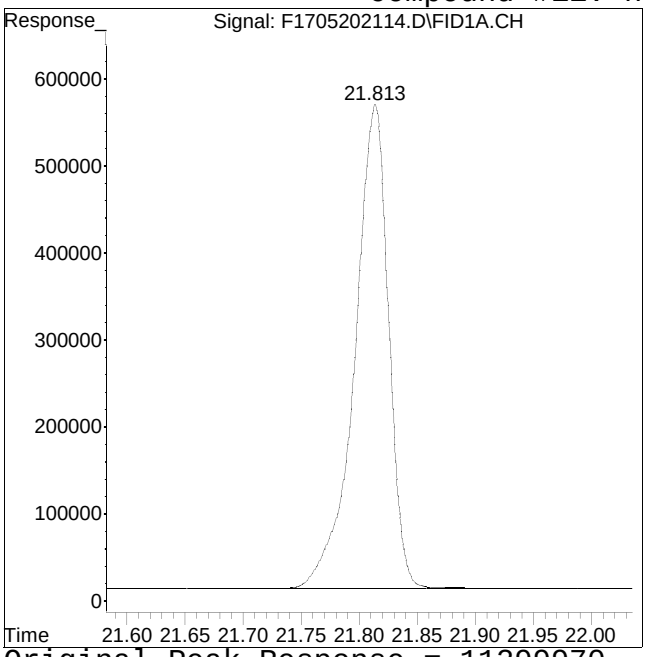
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

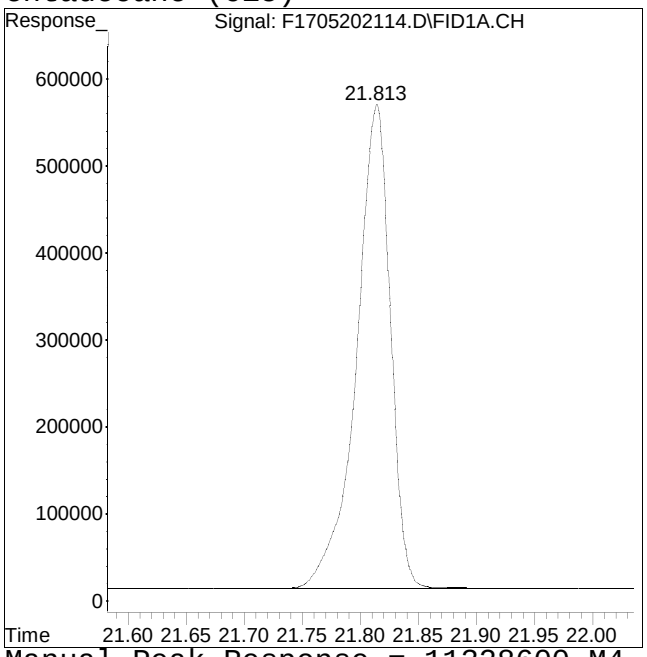
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 11299970



Manual Peak Response = 11328600 M4

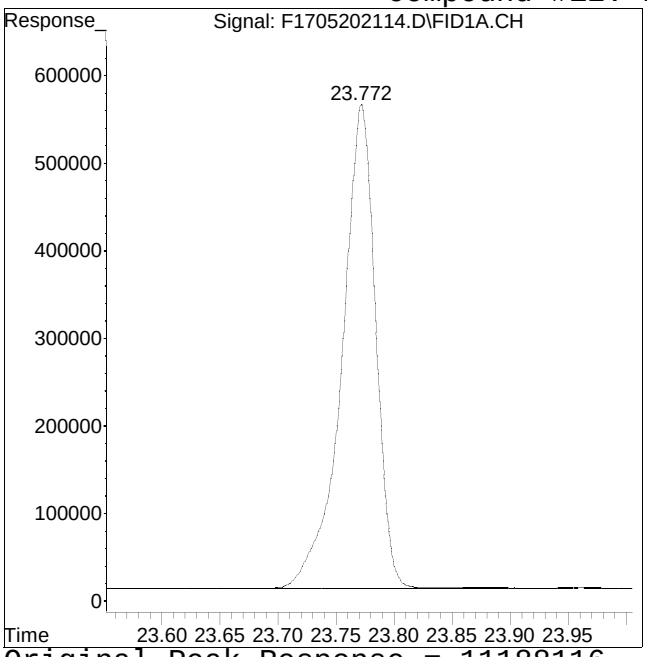
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

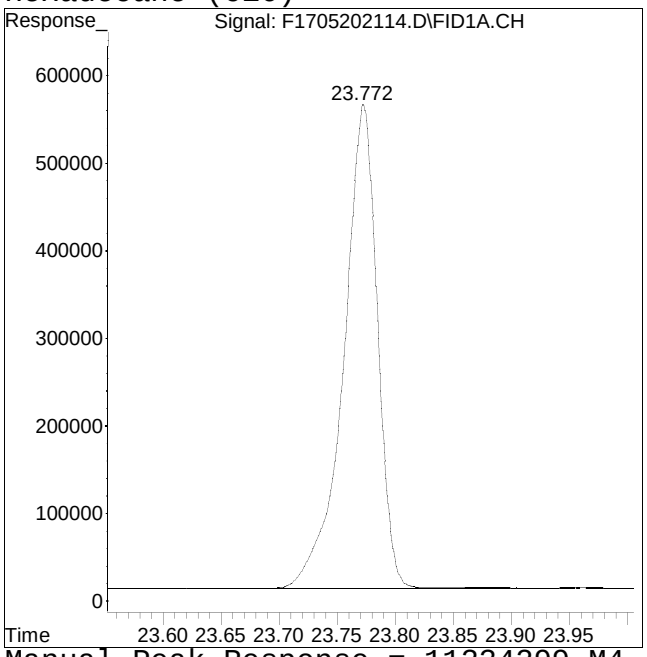
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 11188116



Manual Peak Response = 11234299 M4

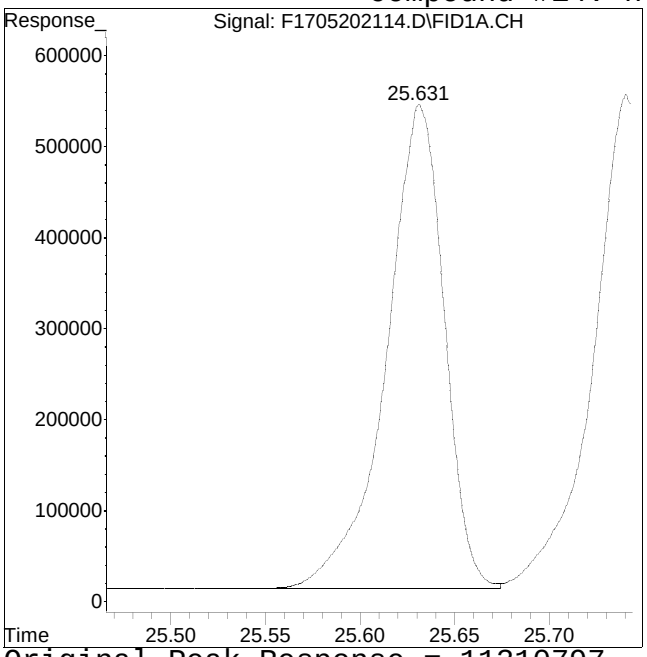
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

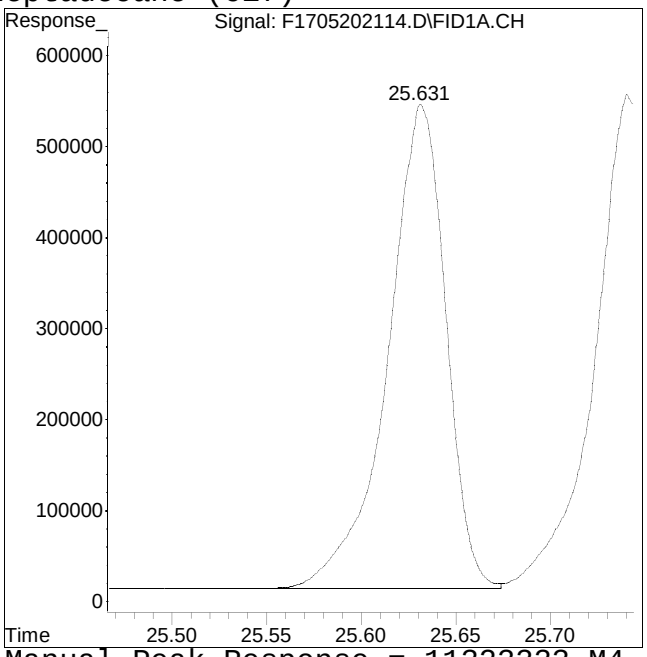
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 11310797



Manual Peak Response = 11323333 M4

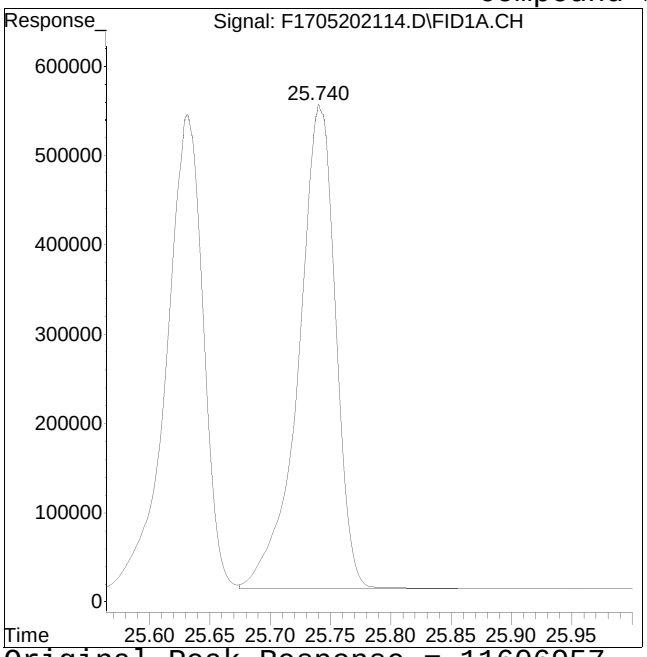
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

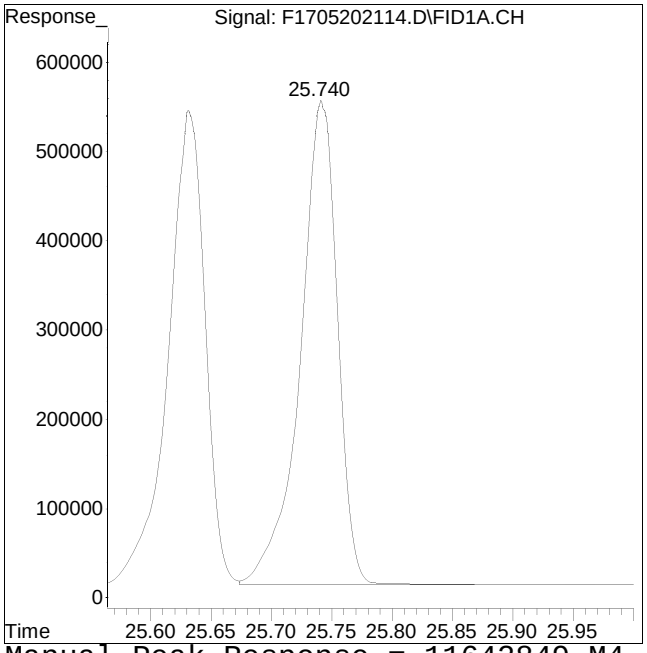
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #15: Pristane



Original Peak Response = 11606957



Manual Peak Response = 11642849 M4

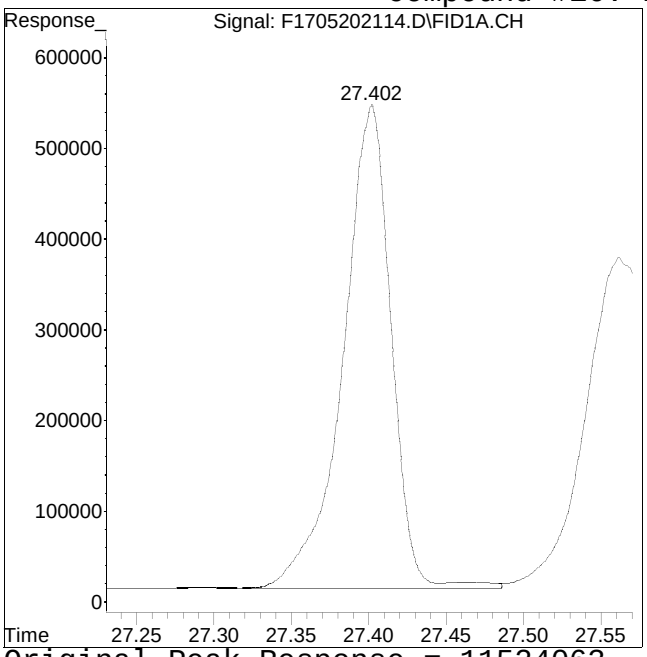
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

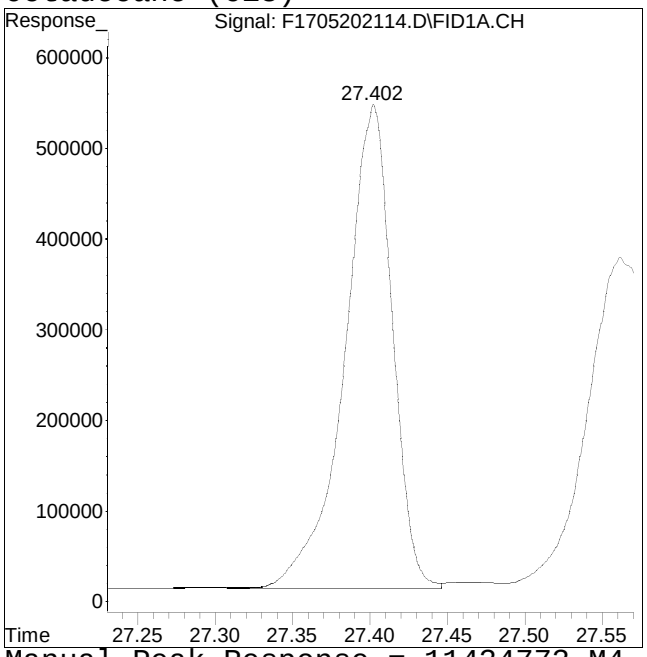
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 11524063



Manual Peak Response = 11434773 M4

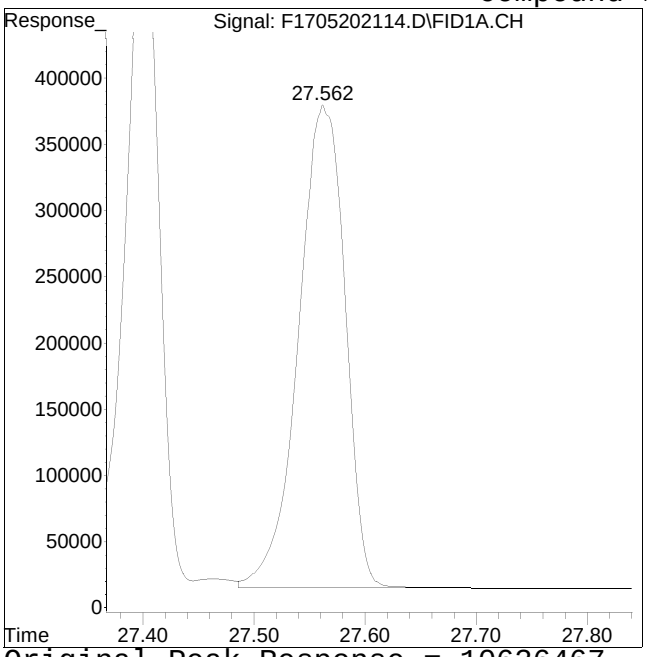
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

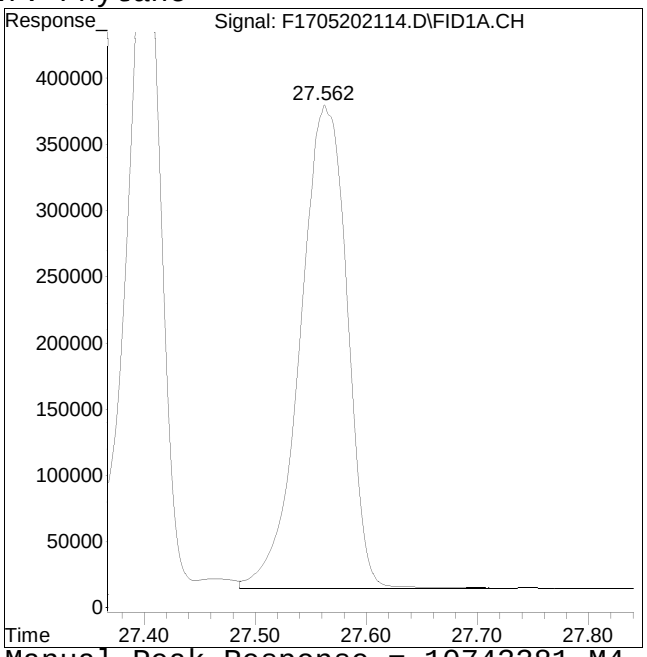
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #17: Phytane



Original Peak Response = 10636467



Manual Peak Response = 10743381 M4

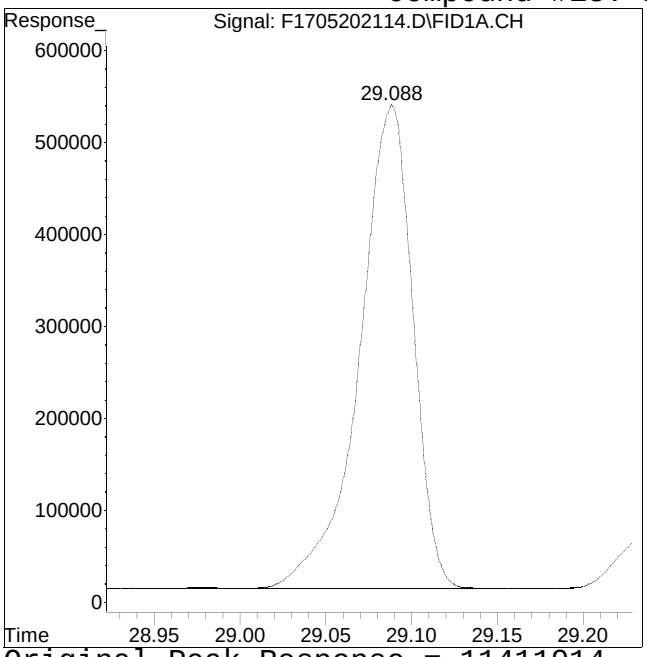
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

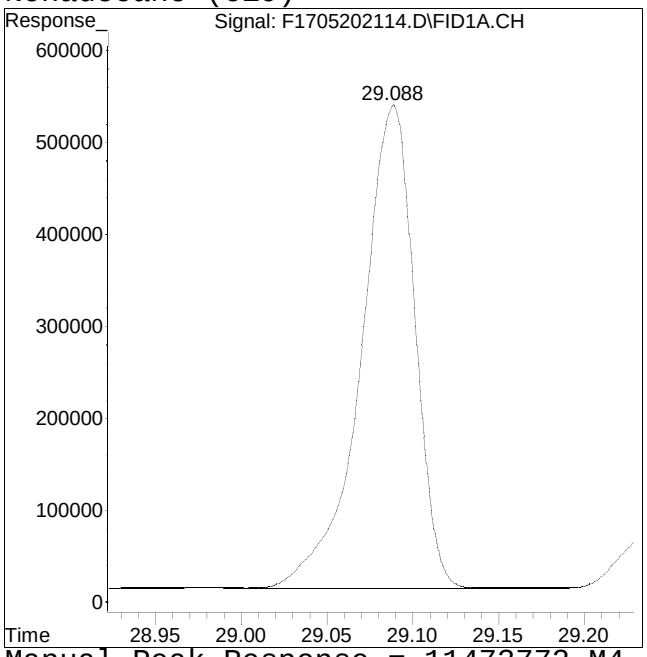
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 11411914



Manual Peak Response = 11473772 M4

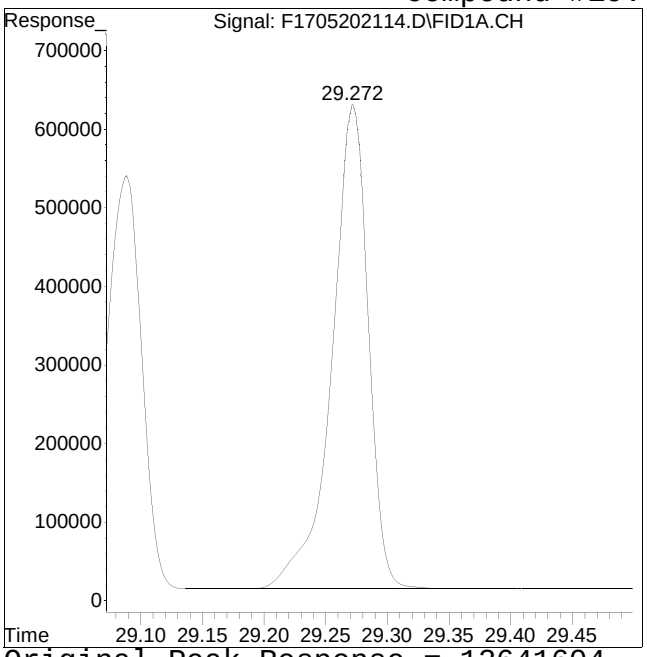
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

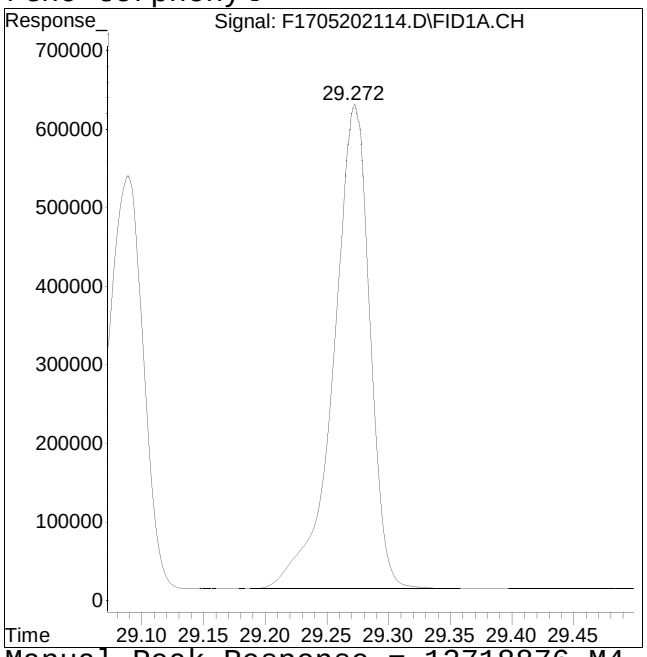
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #19: ortho-terphenyl



Original Peak Response = 12641604



Manual Peak Response = 12718876 M4

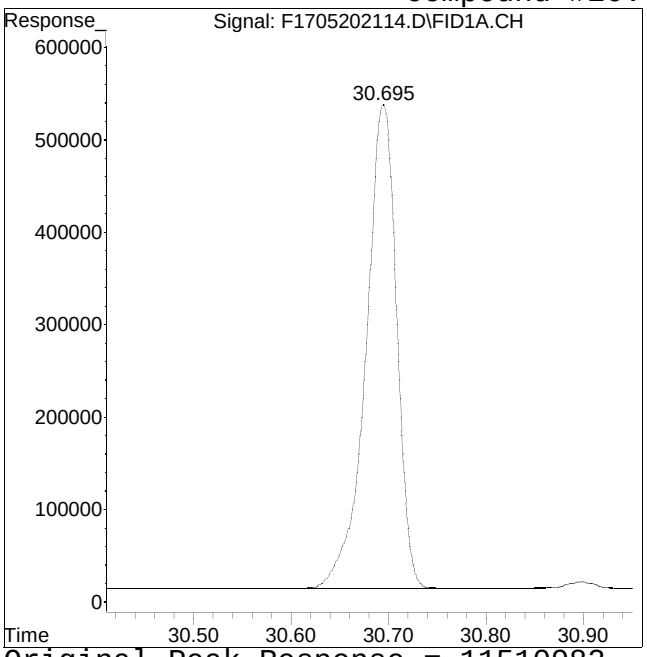
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

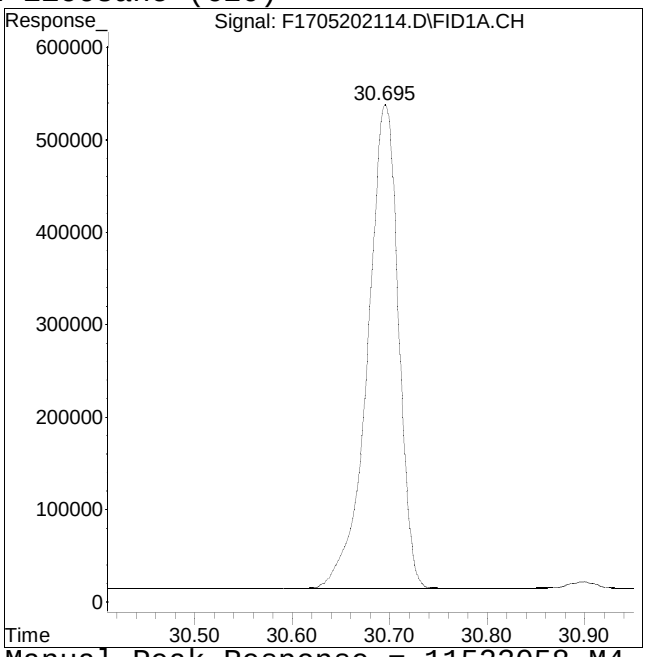
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 11510982



Manual Peak Response = 11523058 M4

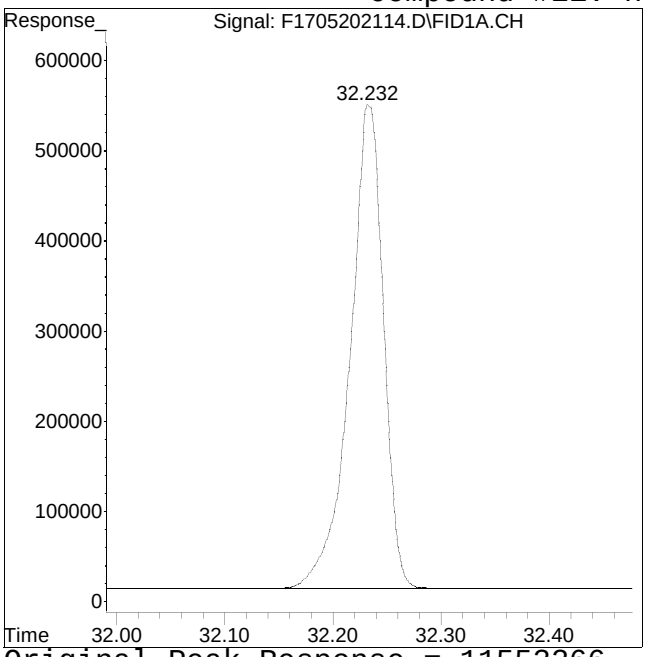
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

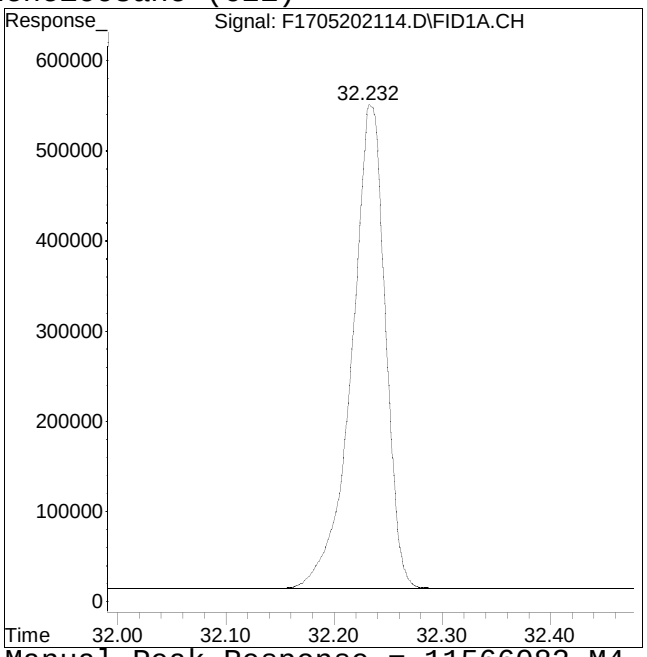
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 11553266



Manual Peak Response = 11566082 M4

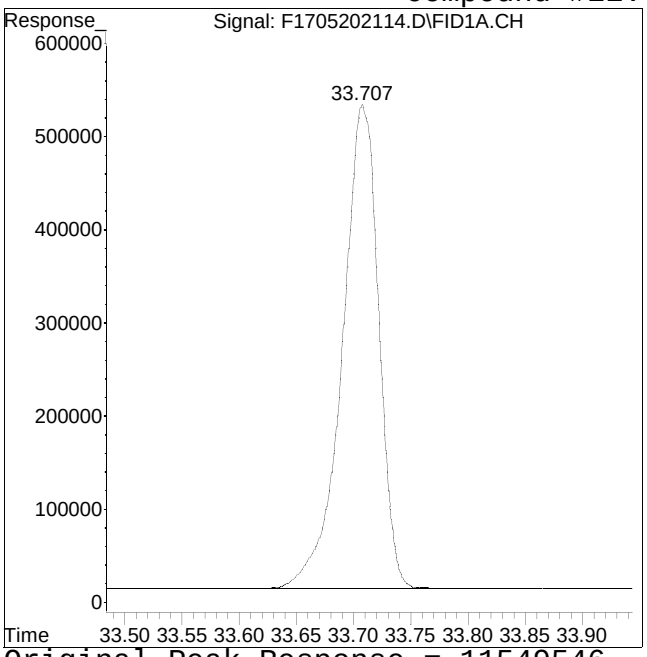
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

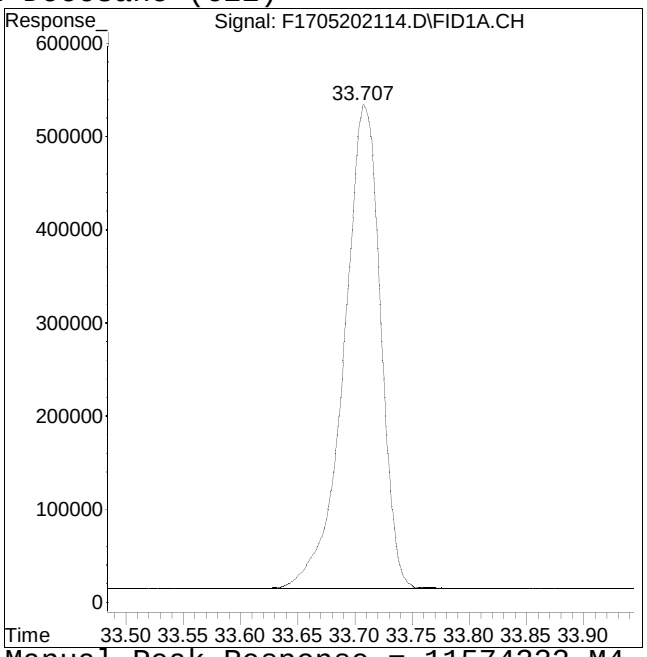
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 11549546



Manual Peak Response = 11574332 M4

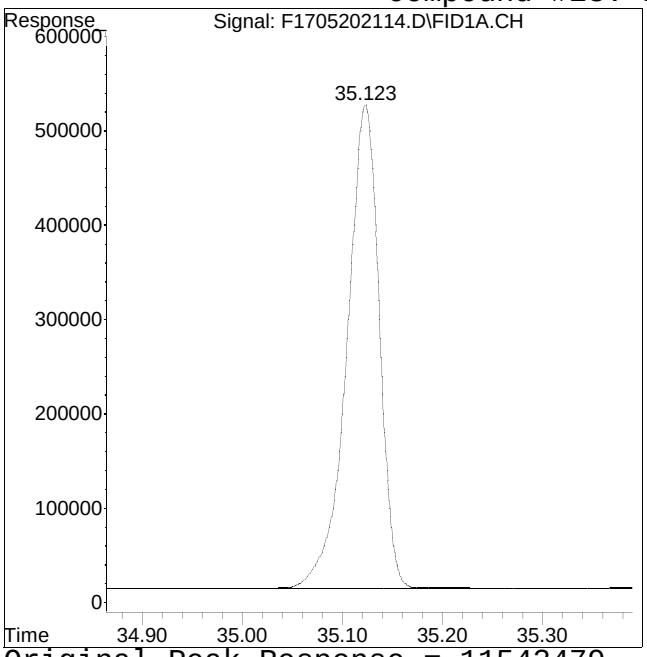
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

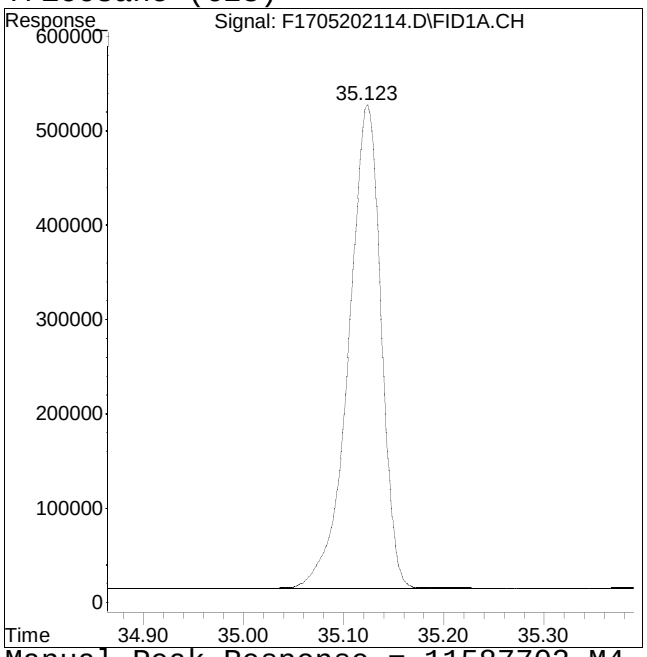
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 11543479



Manual Peak Response = 11587702 M4

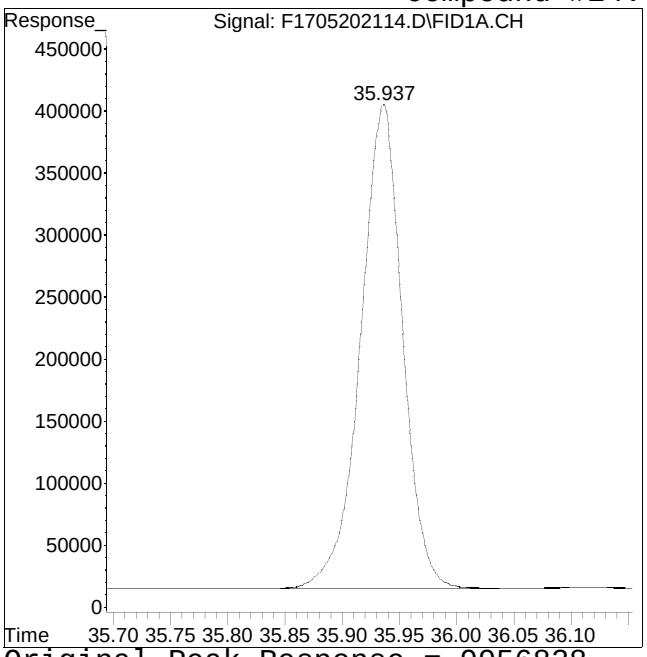
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

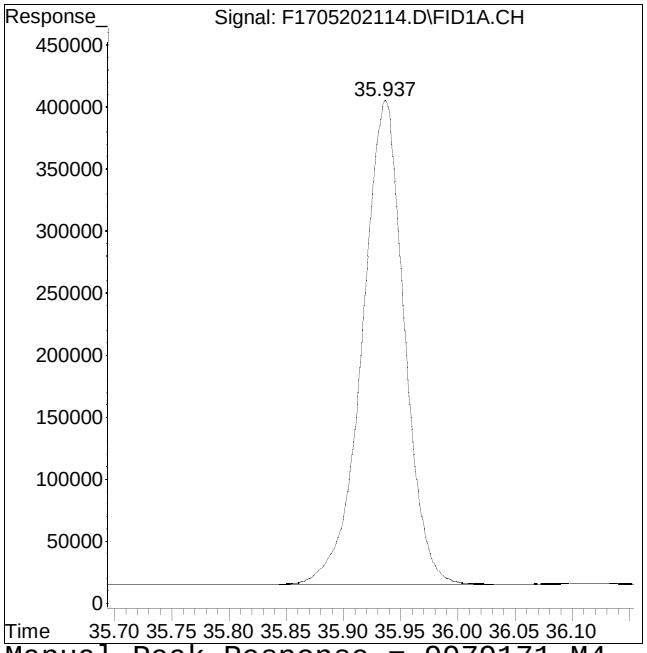
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #24: d50-Tetracosane



Original Peak Response = 9956828



Manual Peak Response = 9979171 M4

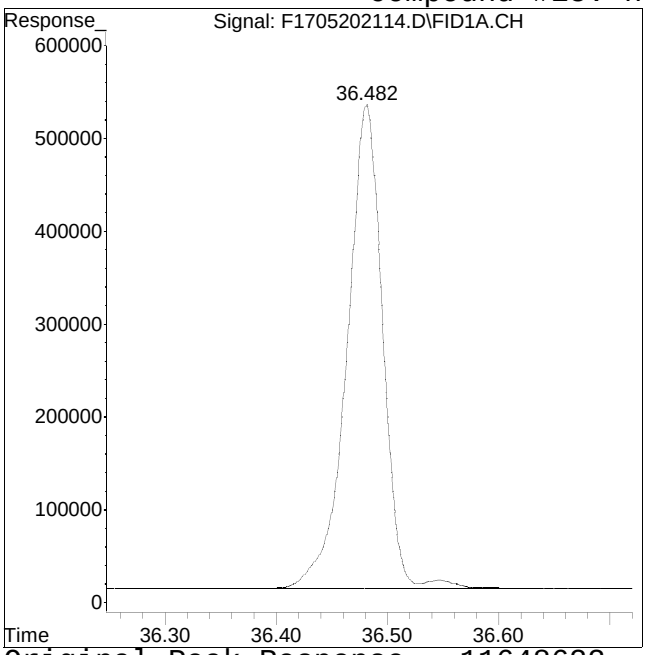
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

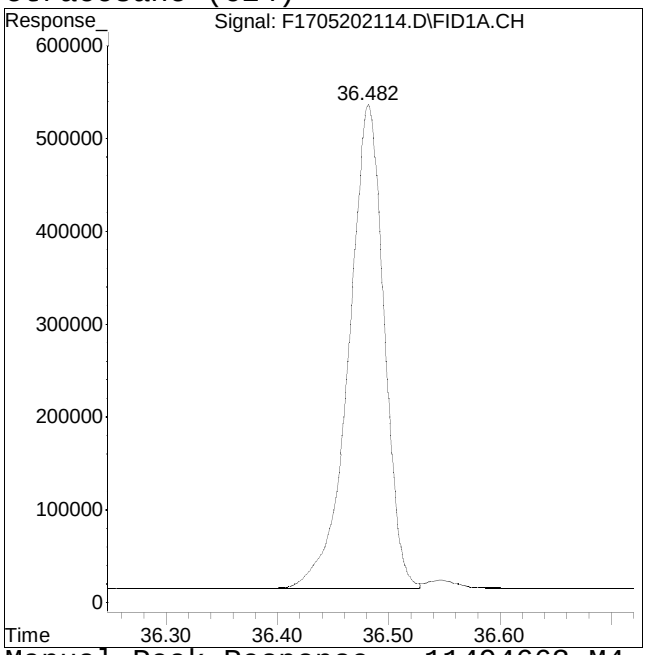
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 11648622



Manual Peak Response = 11494663 M4

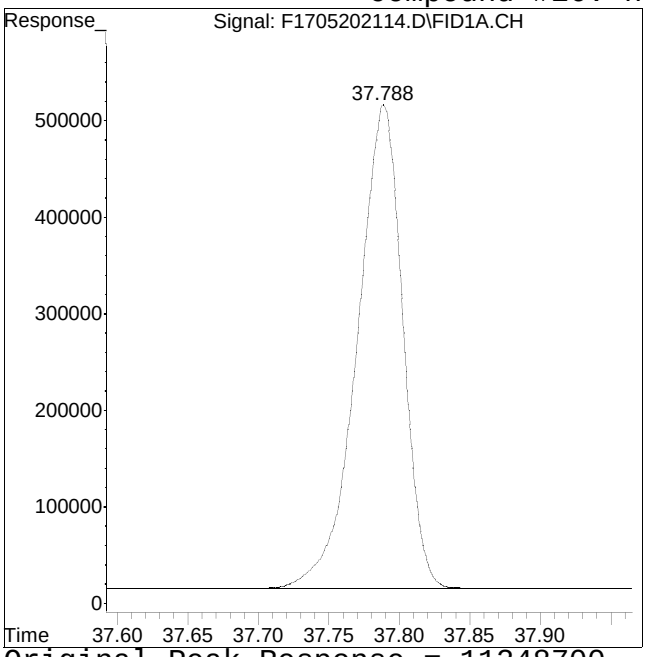
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

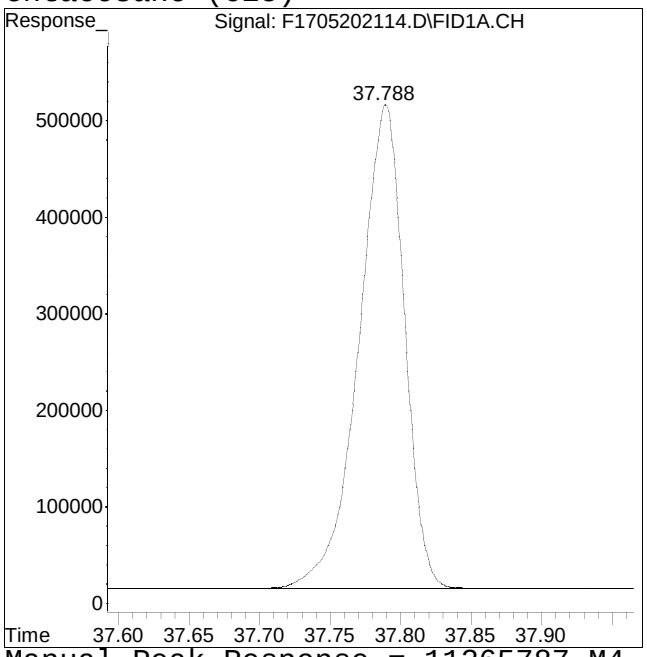
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 11248700



Manual Peak Response = 11265787 M4

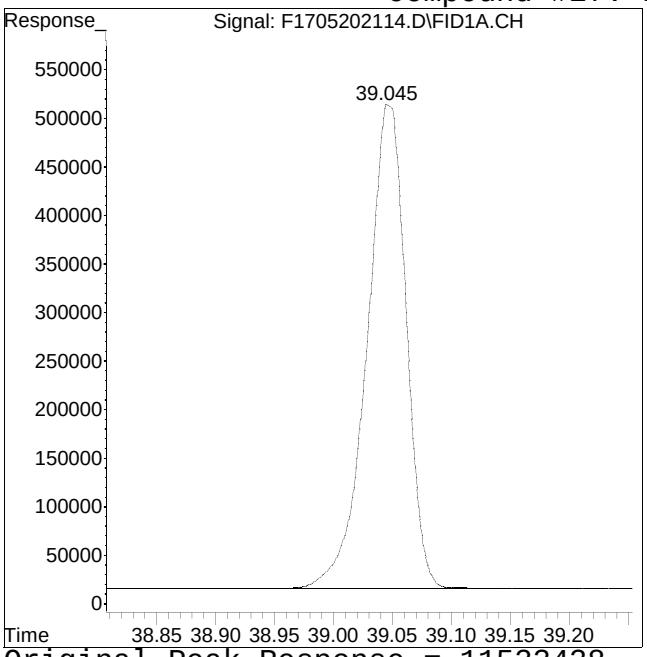
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

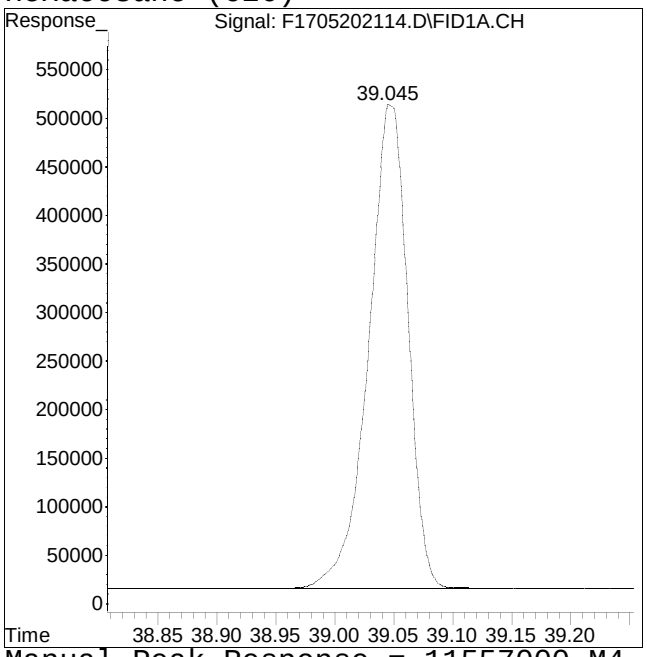
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 11533438



Manual Peak Response = 11557000 M4

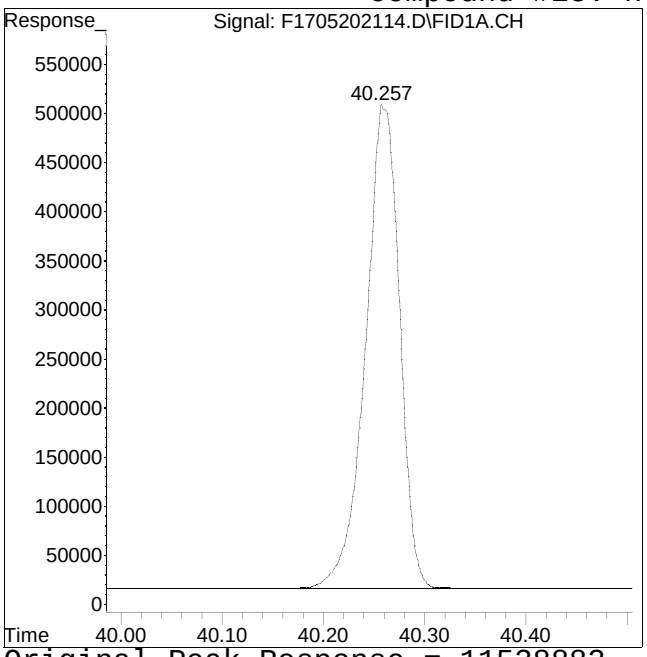
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

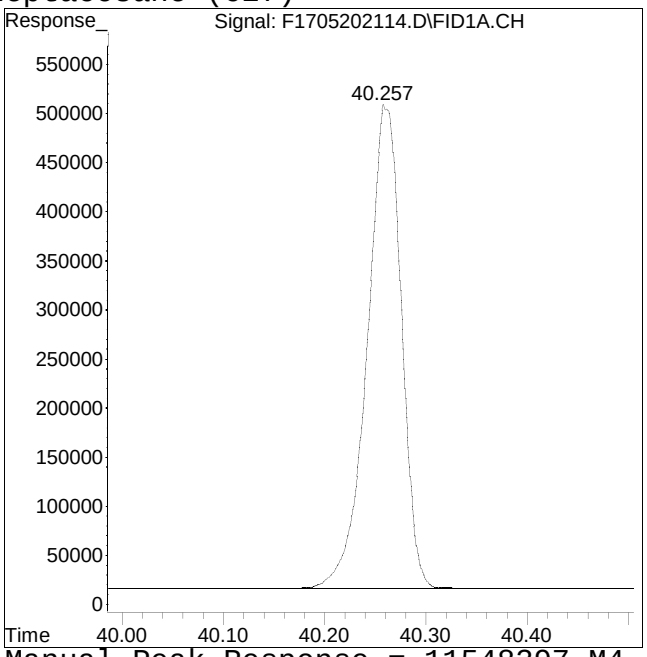
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 11538882



Manual Peak Response = 11548397 M4

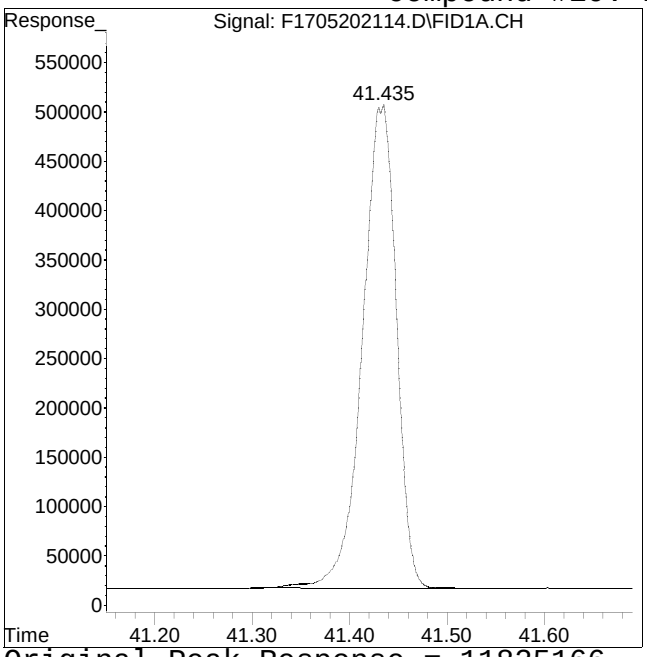
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

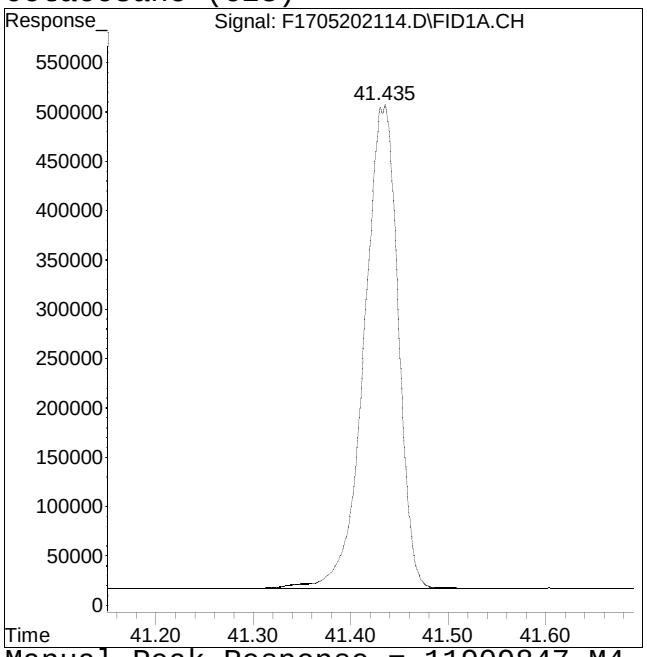
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 11825166



Manual Peak Response = 11909847 M4

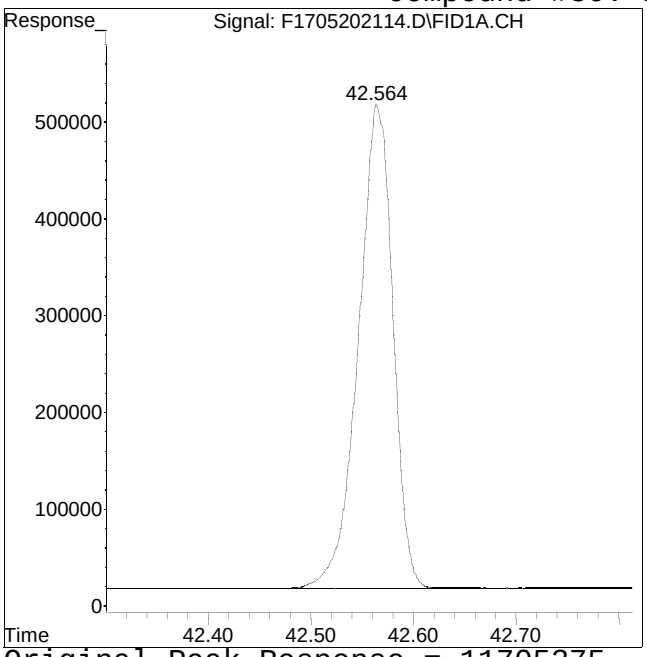
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

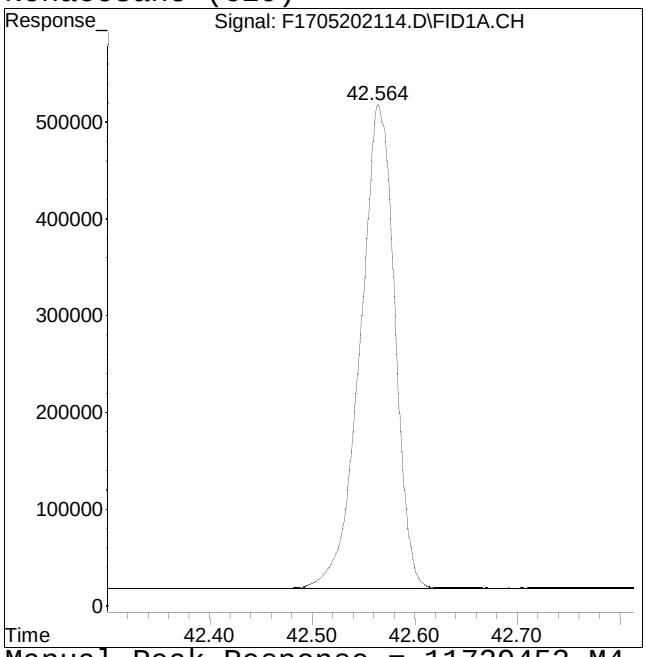
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 11705375



Manual Peak Response = 11729452 M4

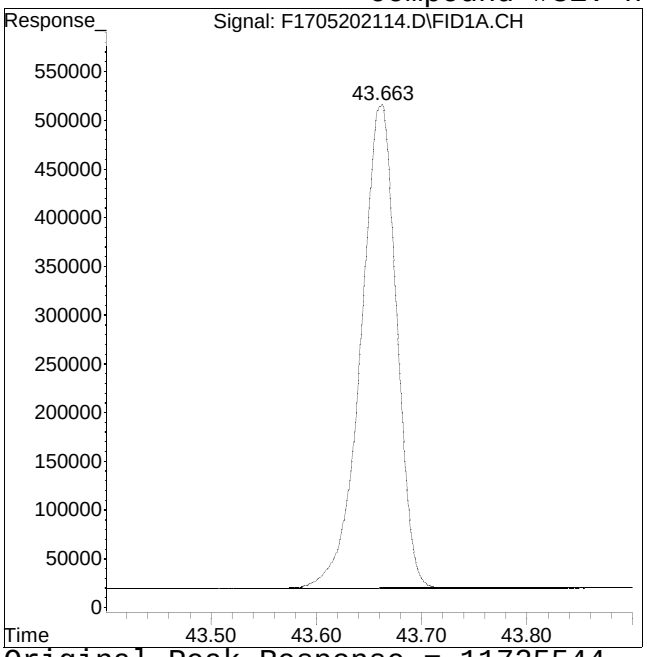
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

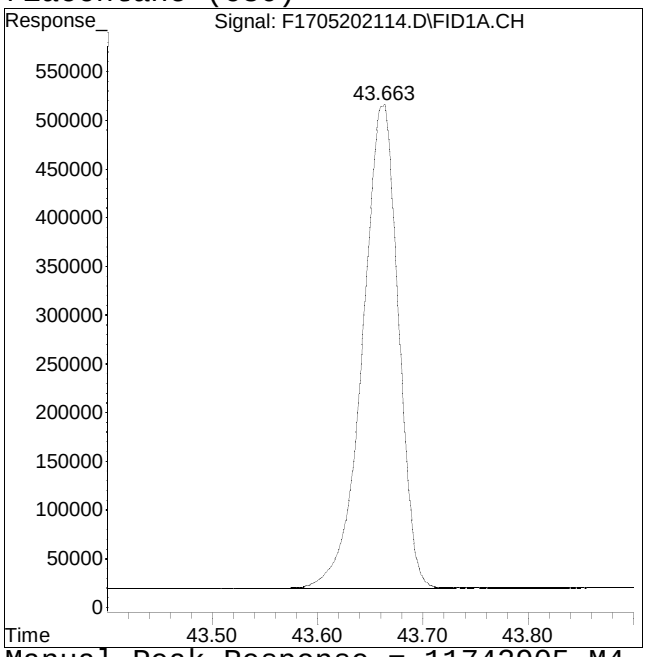
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 11725544



Manual Peak Response = 11742905 M4

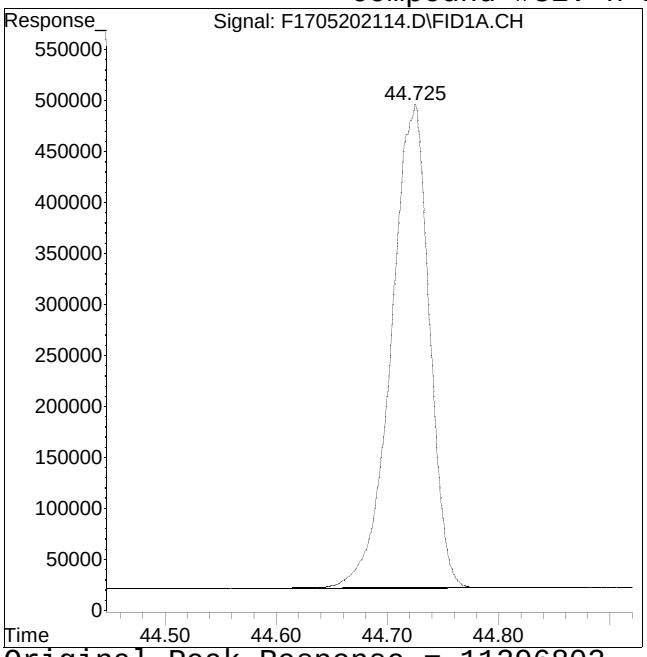
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

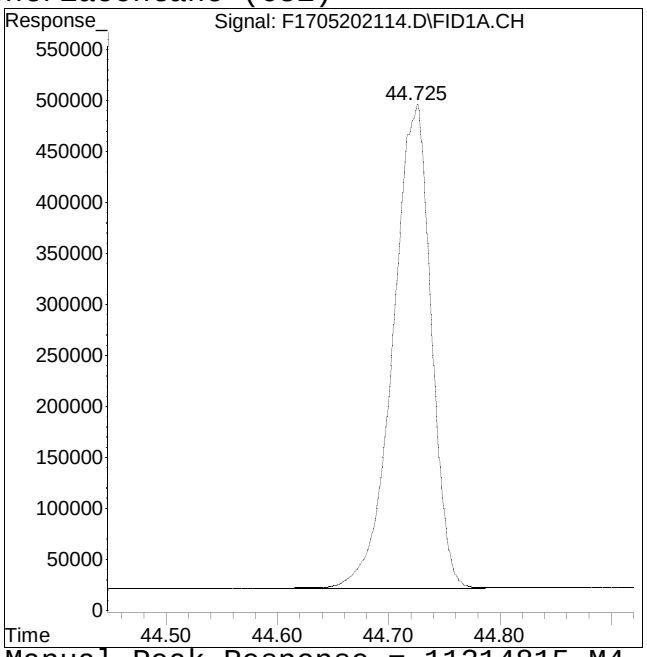
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 11296802



Manual Peak Response = 11314815 M4

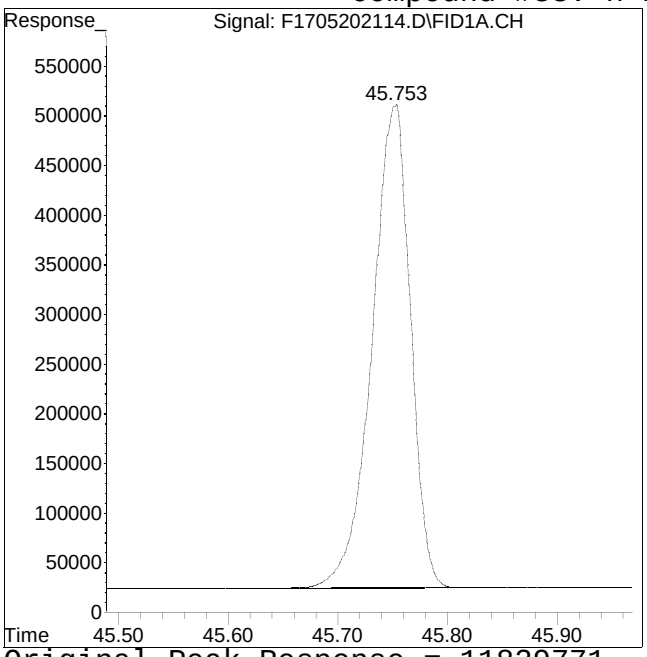
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

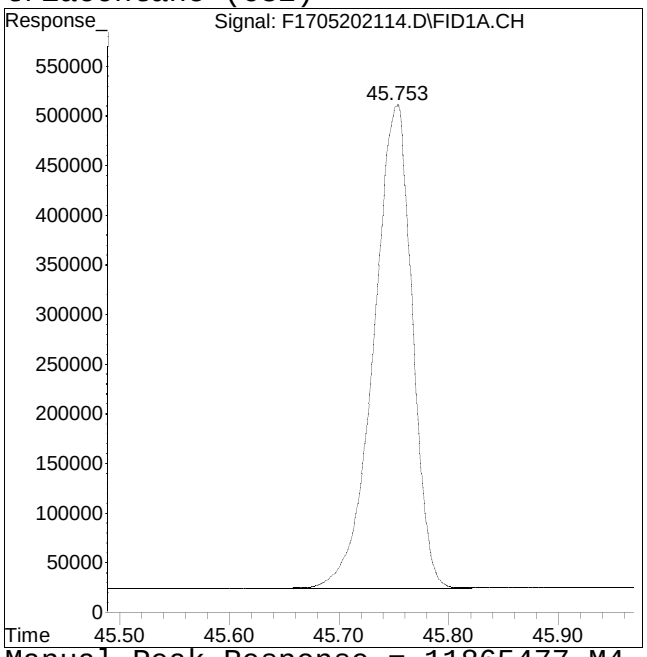
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 11829771



Manual Peak Response = 11865477 M4

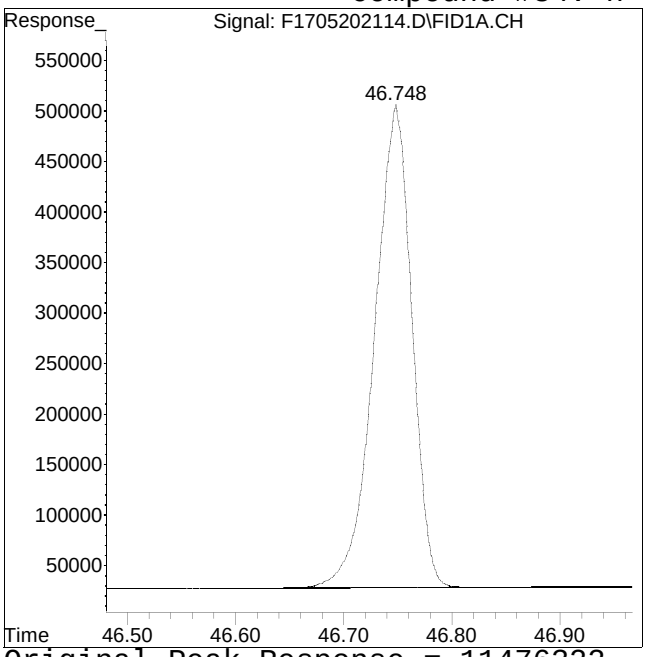
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

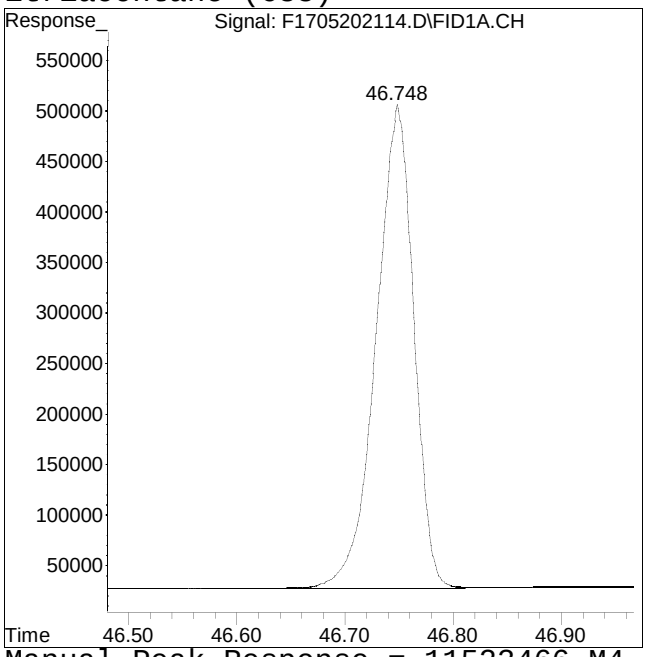
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 11476322



Manual Peak Response = 11523466 M4

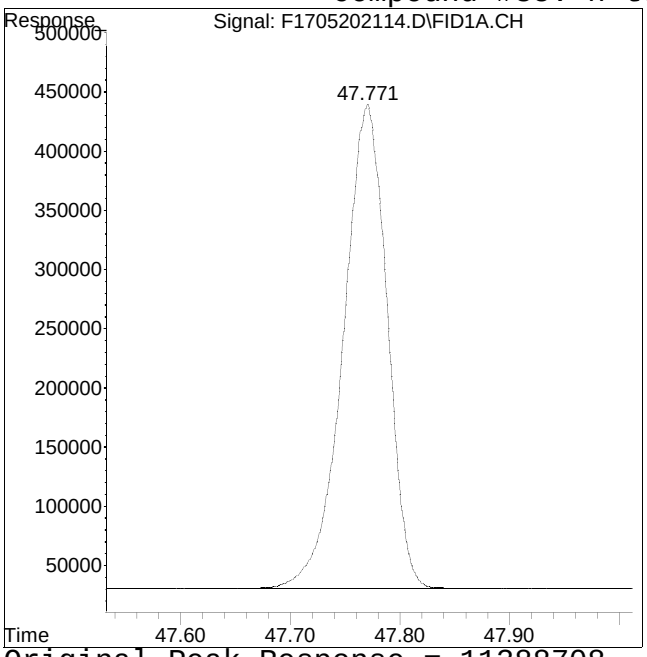
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

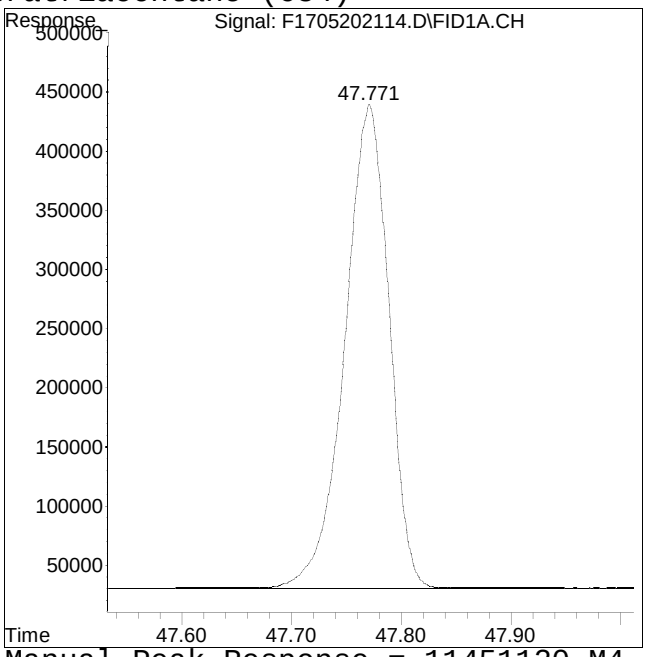
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 11388708



Manual Peak Response = 11451120 M4

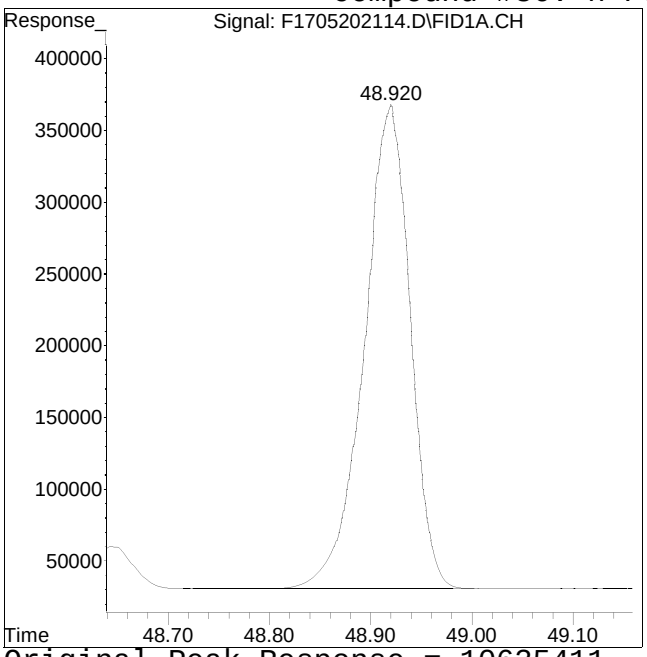
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

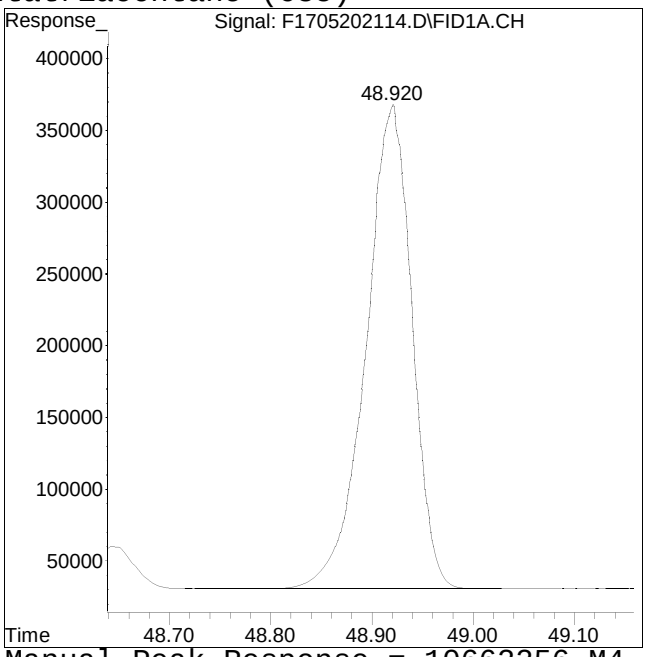
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 10635411



Manual Peak Response = 10662256 M4

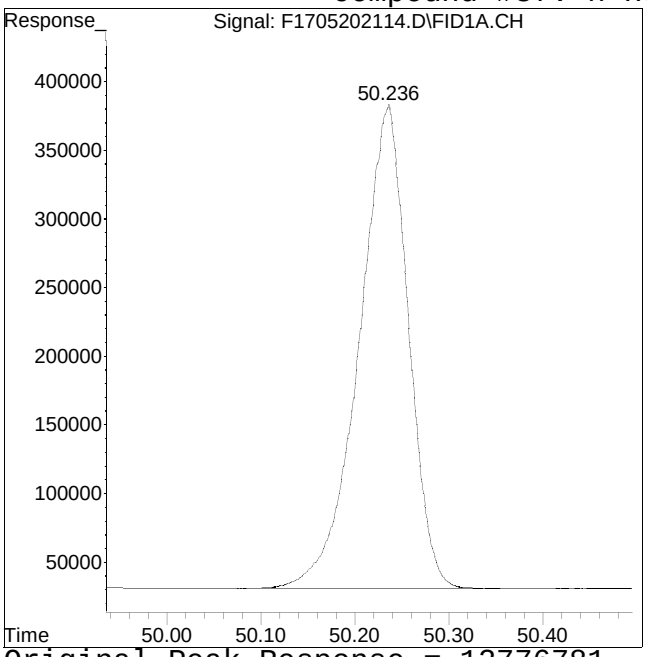
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

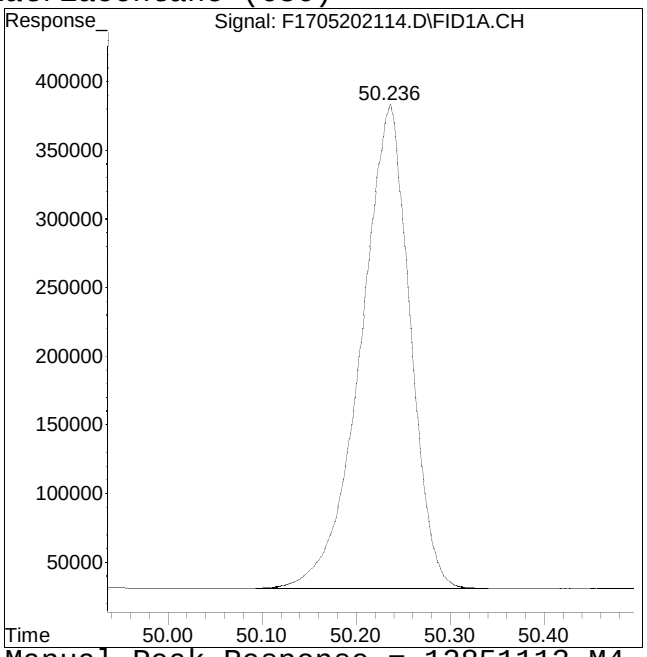
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 12776781



Manual Peak Response = 12851113 M4

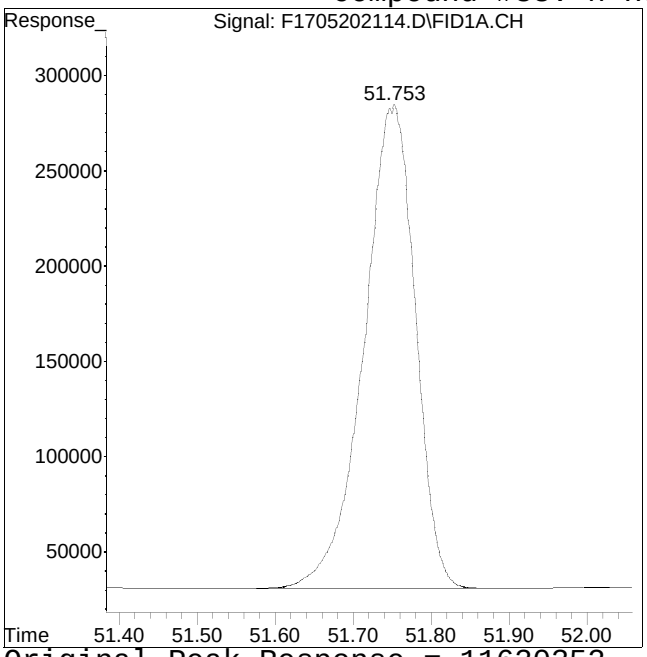
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

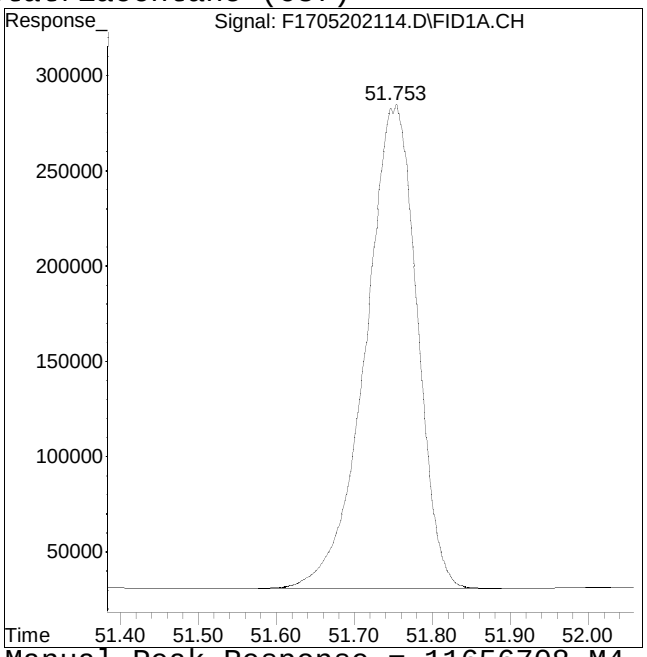
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 11630352



Manual Peak Response = 11656708 M4

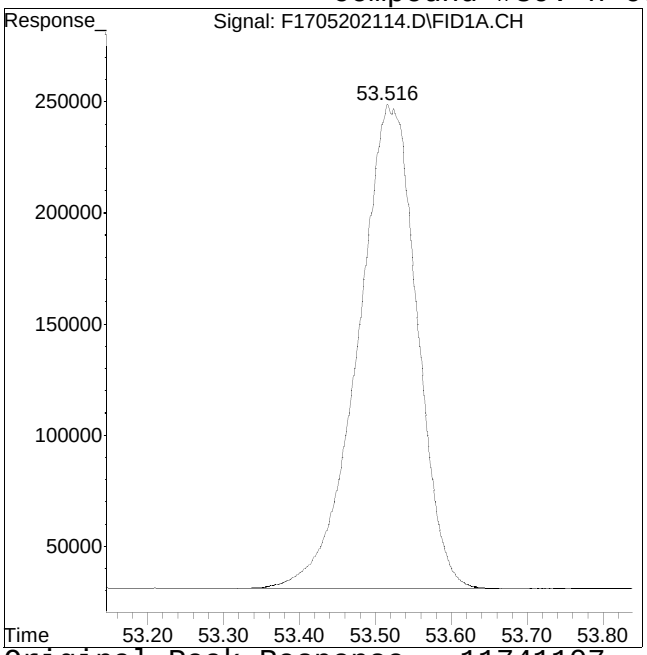
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

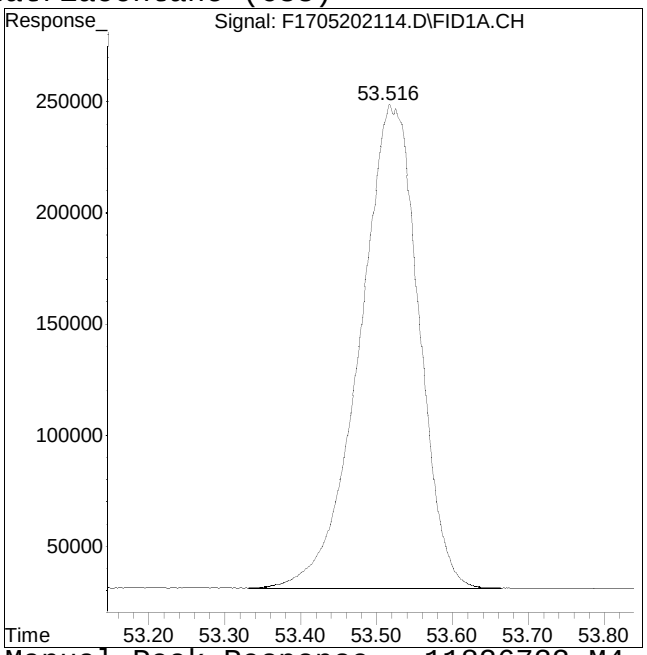
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 11741107



Manual Peak Response = 11826732 M4

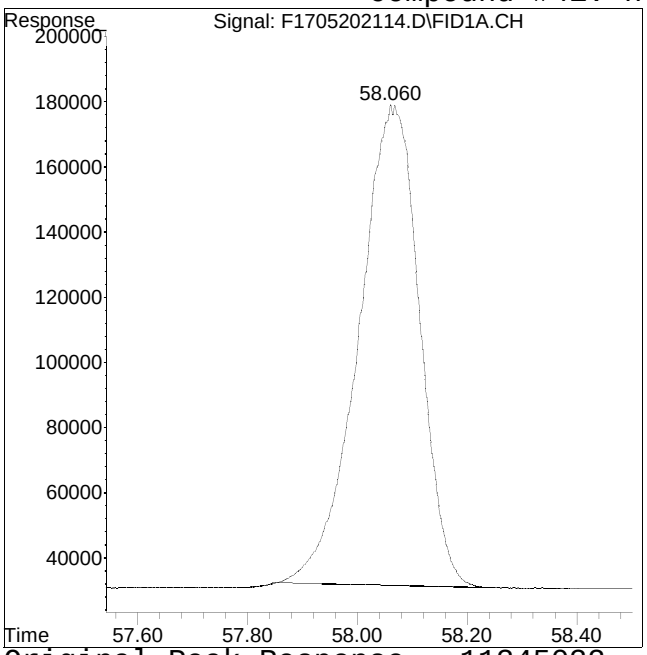
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

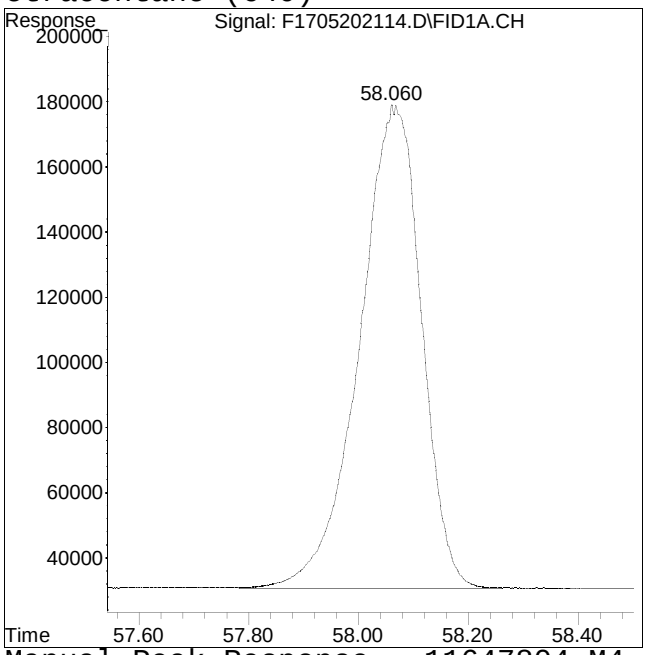
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202114.D
Date Inj'd : 5/20/2021 10:19 pm
Sample : I1705202102F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:17 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 11345032



Manual Peak Response = 11647804 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202116.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 11:47 pm
Operator : FID17:WR
Sample : I1705202103F
Misc : WG1505003,FRBD73,50ug/ml
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 28 14:02:47 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.317	53308279	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.297	58635315	50.740 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 101.48%	
24) s d50-Tetracosane	35.958	47338480	51.632 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 103.26%	
Target Compounds			
2) t n-Octane (C8)	5.626	46862753	50.847 ug/mL M4
3) t n-Nonane (C9)	7.830	48771924	49.592 ug/mL M4
4) t n-Decane (C10)	10.320	51075440	50.732 ug/mL M4
5) t n-Undecane (C11)	12.836	50678912	51.523 ug/mL M4
6) t n-Dodecane (C12)	15.266	50957984	51.665 ug/mL M4
7) t n-Tridecane (C13)	17.576	50845026	51.411 ug/mL M4
9) t n-Tetradecane (C14)	19.763	52094599	51.124 ug/mL M4
11) t n-Pentadecane (C15)	21.832	52229146	51.197 ug/mL M4
12) t n-Hexadecane (C16)	23.790	51751351	50.819 ug/mL M4
14) t n-Heptadecane (C17)	25.651	52277862	51.385 ug/mL M4
15) t Pristane	25.764	53447132	50.656 ug/mL M4
16) t n-Octadecane (C18)	27.421	52735680	50.981 ug/mL M4
17) t Phytane	27.586	49215356	50.859 ug/mL M4
18) t n-Nonadecane (C19)	29.110	52976616	51.060 ug/mL M4
20) t n-Eicosane (C20)	30.718	53233894	51.016 ug/mL M4
21) t n-Heneicosane (C21)	32.257	53418501	51.029 ug/mL M4
22) t n-Docosane (C22)	33.732	53373025	50.906 ug/mL M4
23) t n-Tricosane (C23)	35.147	53358924	50.792 ug/mL M4
25) t n-Tetracosane (C24)	36.505	53197968	50.798 ug/mL M4
26) t n-Pentacosane (C25)	37.812	52079856	50.822 ug/mL M4
27) t n-Hexacosane (C26)	39.074	53440082	50.802 ug/mL M4
28) t n-Heptacosane (C27)	40.285	53387647	50.616 ug/mL M4
29) t n-Octacosane (C28)	41.456	54460527	49.806 ug/mL M4
30) t n-Nonacosane (C29)	42.590	54143436	50.484 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202116.D
Signal(s) : FID1A.CH
Acq On : 20 May 2021 11:47 pm
Operator : FID17:WR
Sample : I1705202103F
Misc : WG1505003,FRBD73,50ug/ml
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 28 14:02:47 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

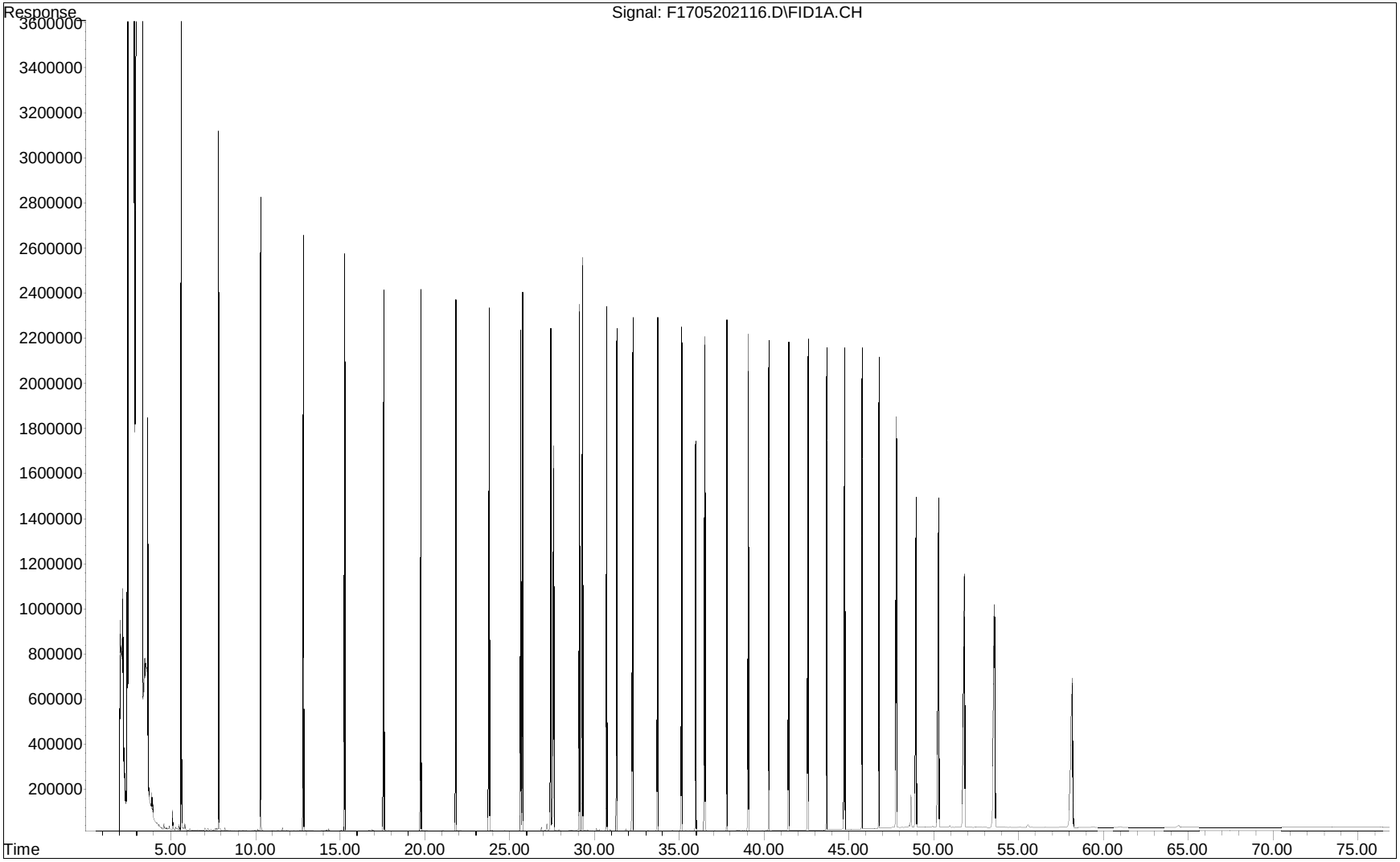
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.685	54272054	50.407 ug/mL M4
32) t	n-Hentriacontane (C31)	44.745	52296054	50.218 ug/mL M4
33) t	n-Dotriacontane (C32)	45.776	54818806	50.151 ug/mL M4
34) t	n-Tritriacontane (C33)	46.774	53208653	50.007 ug/mL M4
35) t	n-tetratriacontane (C34)	47.799	52932855	50.098 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.950	49392769	50.037 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.276	59548004	50.110 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.794	54257423	50.344 ug/mL M4
39) t	n-Octatriacontane (C38)	53.574	54921096	50.406 ug/mL M4
41) t	n-Tetracontane (C40)	58.145	54254862	50.454 ug/mL M4

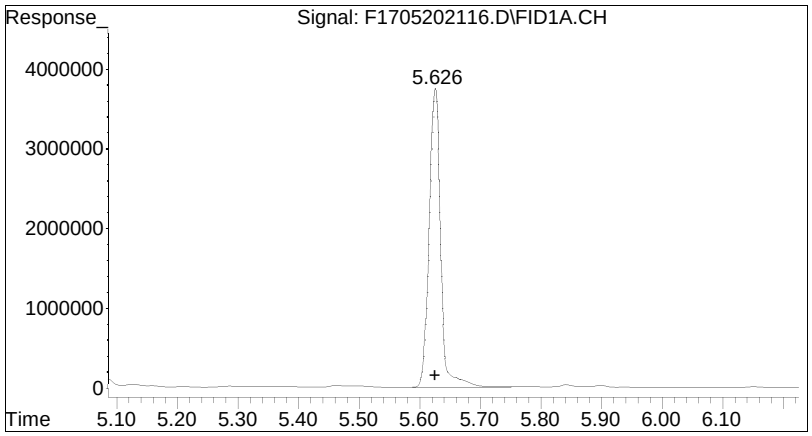
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

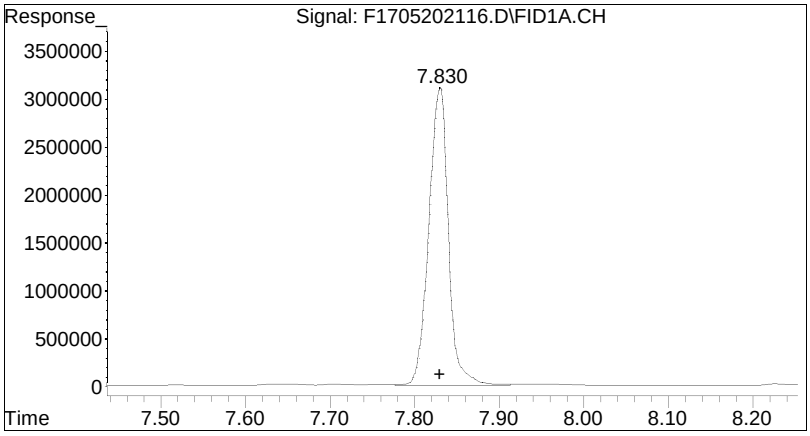
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202116.D
Operator : FID17:WR
Acquired : 20 May 2021 11:47 pm using AcqMethod FID17A.M
Sample Name: I1705202103F
Instrument: FID17
Misc Info : WG1505003,FRBD73,50ug/ml
Vial Number: 8
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M





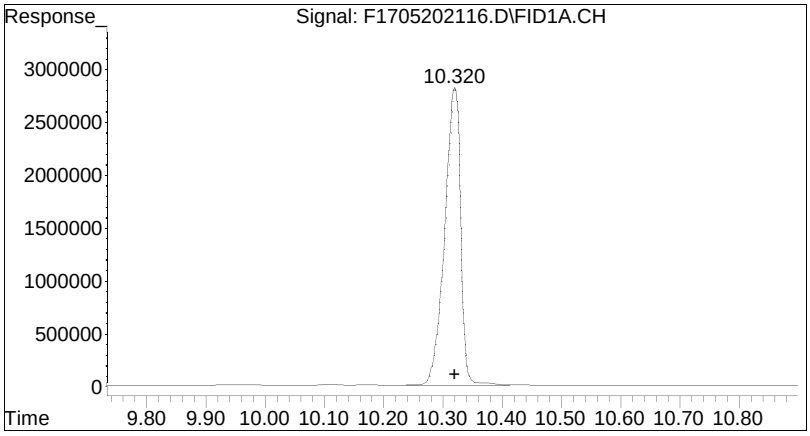
#2 n-Octane (C8)

R.T.: 5.626 min
Delta R.T.: 0.000 min
Response: 46862753
Conc: 50.85 ug/mL M4



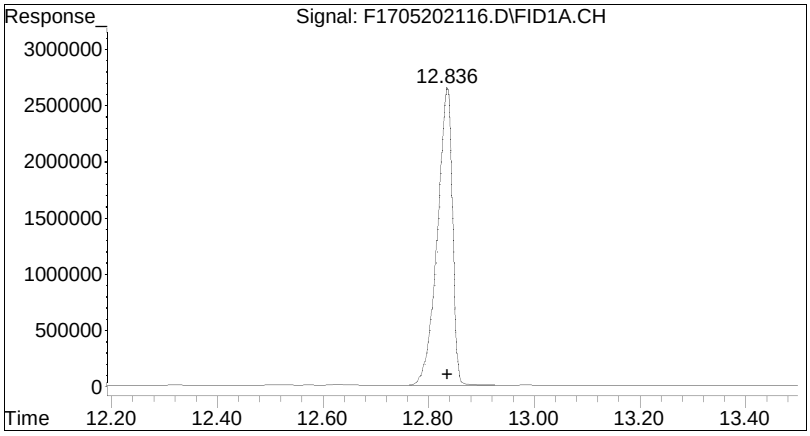
#3 n-Nonane (C9)

R.T.: 7.830 min
Delta R.T.: 0.000 min
Response: 48771924
Conc: 49.59 ug/mL M4



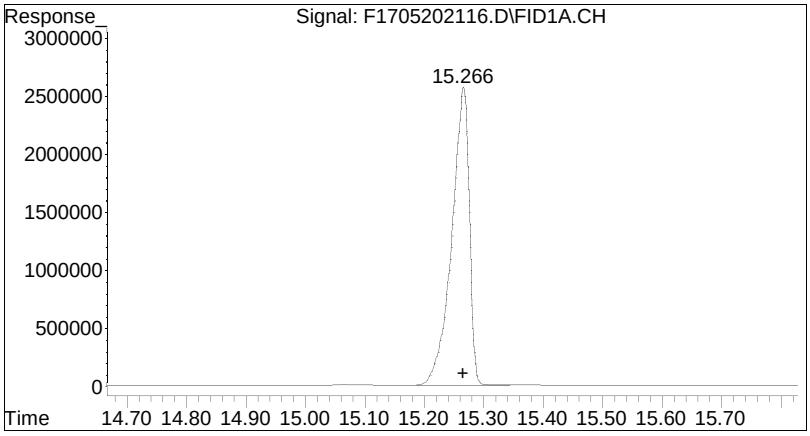
#4 n-Decane (C10)

R.T.: 10.320 min
Delta R.T.: 0.000 min
Response: 51075440
Conc: 50.73 ug/mL M4



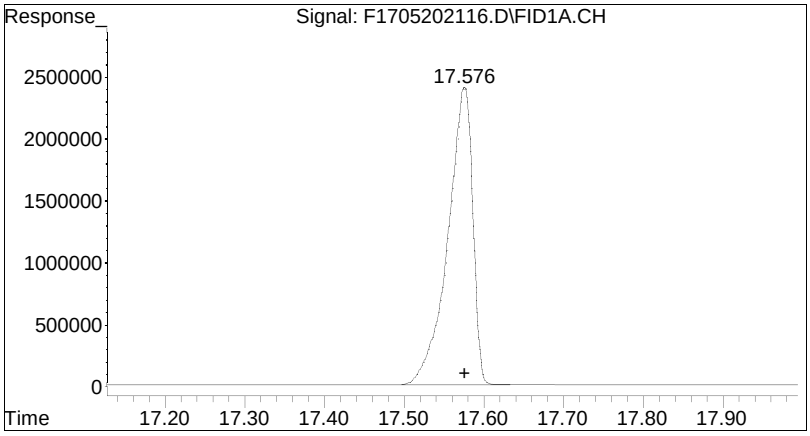
#5 n-Undecane (C11)

R.T.: 12.836 min
Delta R.T.: 0.000 min
Response: 50678912
Conc: 51.52 ug/mL M4



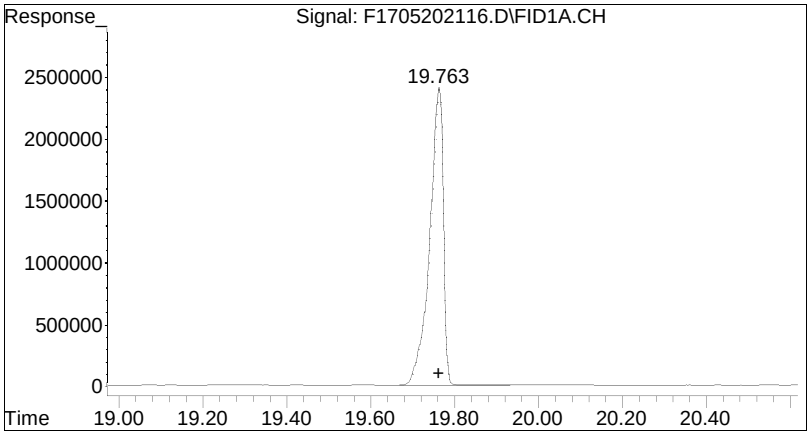
#6 n-Dodecane (C12)

R.T.:	15.266 min
Delta R.T.:	0.000 min
Response:	50957984
Conc:	51.66 ug/mL M4



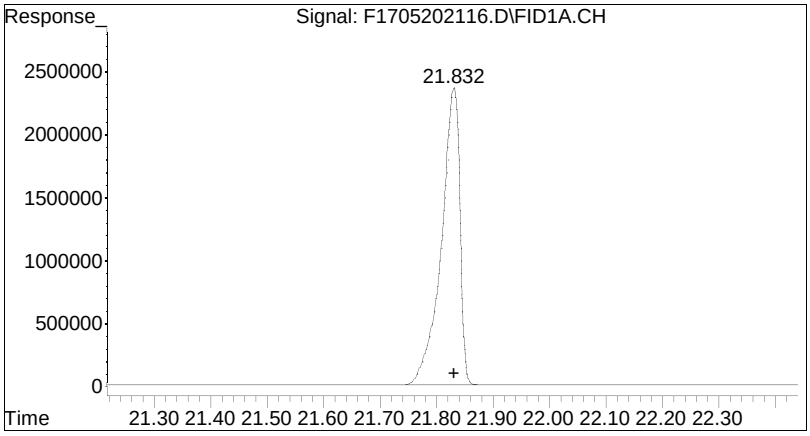
#7 n-Tridecane (C13)

R.T.: 17.576 min
Delta R.T.: 0.000 min
Response: 50845026
Conc: 51.41 ug/mL M4



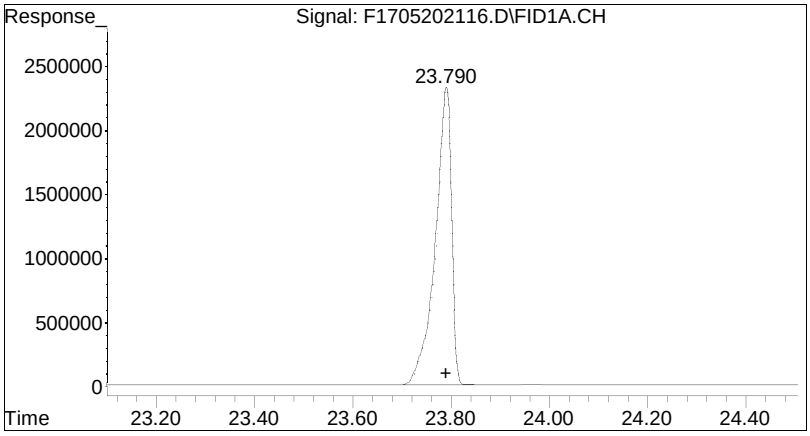
#9 n-Tetradecane (C14)

R.T.: 19.763 min
Delta R.T.: 0.000 min
Response: 52094599
Conc: 51.12 ug/mL M4



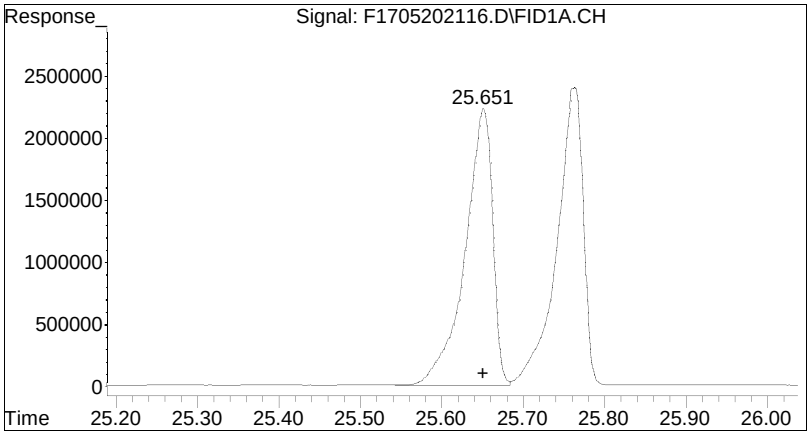
#11 n-Pentadecane (C15)

R.T.: 21.832 min
Delta R.T.: 0.000 min
Response: 52229146
Conc: 51.20 ug/mL M4



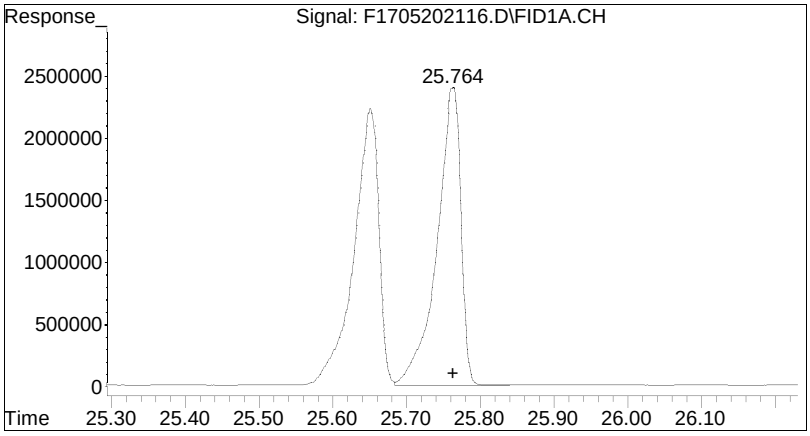
#12 n-Hexadecane (C16)

R.T.: 23.790 min
Delta R.T.: 0.000 min
Response: 51751351
Conc: 50.82 ug/mL M4



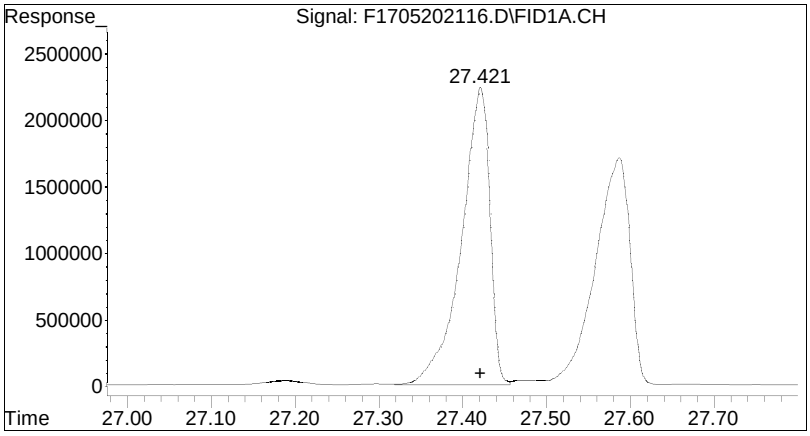
#14 n-Heptadecane (C17)

R.T.: 25.651 min
Delta R.T.: 0.000 min
Response: 52277862
Conc: 51.39 ug/mL M4



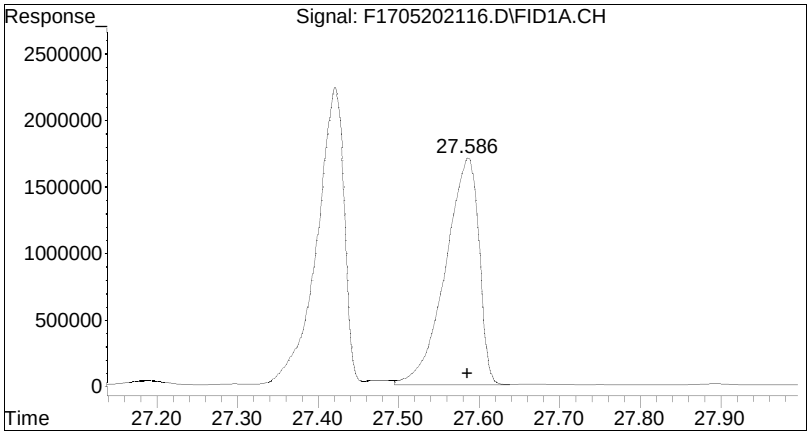
#15 Pristane

R.T.: 25.764 min
Delta R.T.: 0.000 min
Response: 53447132
Conc: 50.66 ug/mL M4



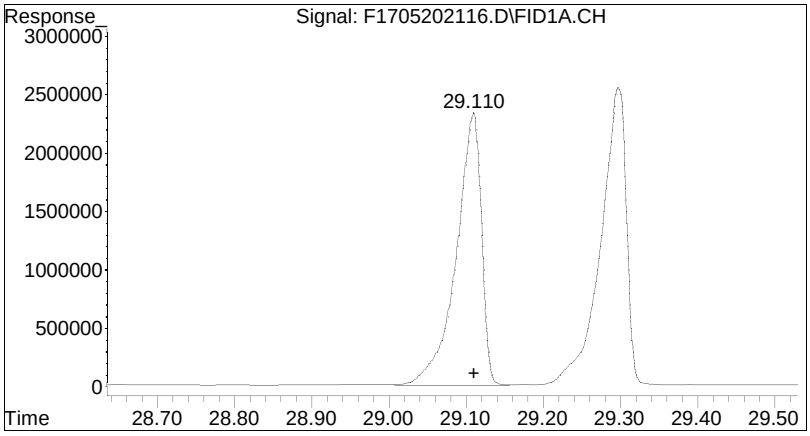
#16 n-Octadecane (C18)

R.T.: 27.421 min
Delta R.T.: 0.000 min
Response: 52735680
Conc: 50.98 ug/mL M4



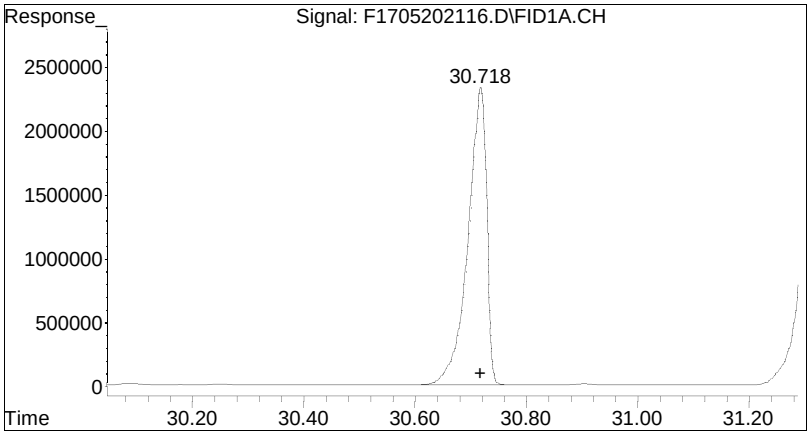
#17 Phytane

R.T.: 27.586 min
Delta R.T.: 0.000 min
Response: 49215356
Conc: 50.86 ug/mL M4



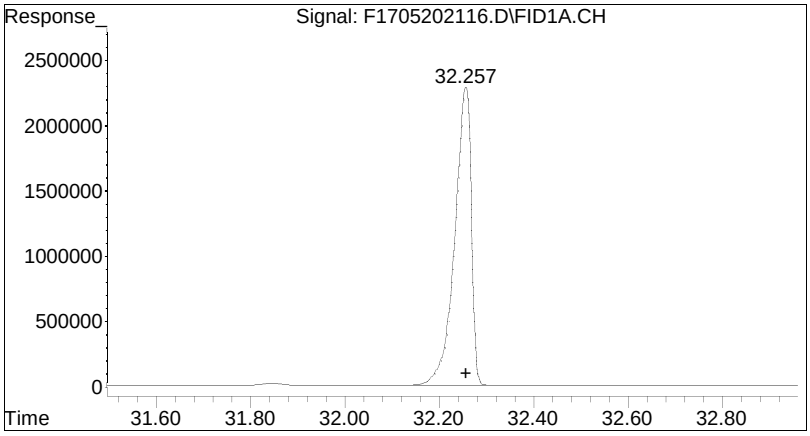
#18 n-Nonadecane (C19)

R.T.: 29.110 min
Delta R.T.: 0.000 min
Response: 52976616
Conc: 51.06 ug/mL M4



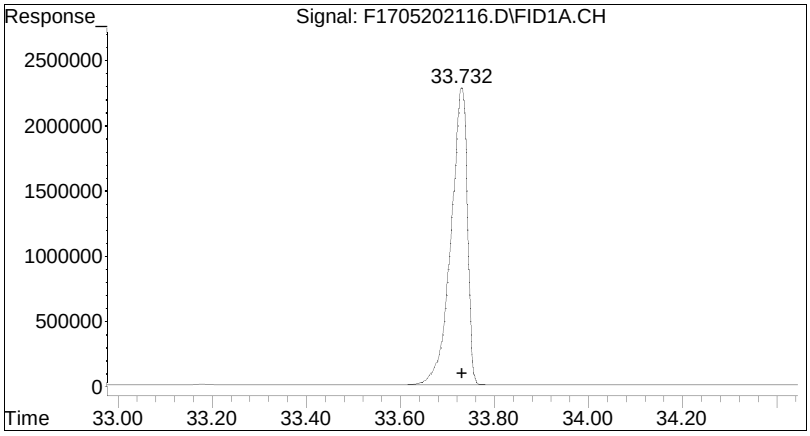
#20 n-Eicosane (C20)

R.T.: 30.718 min
Delta R.T.: 0.000 min
Response: 53233894
Conc: 51.02 ug/mL M4



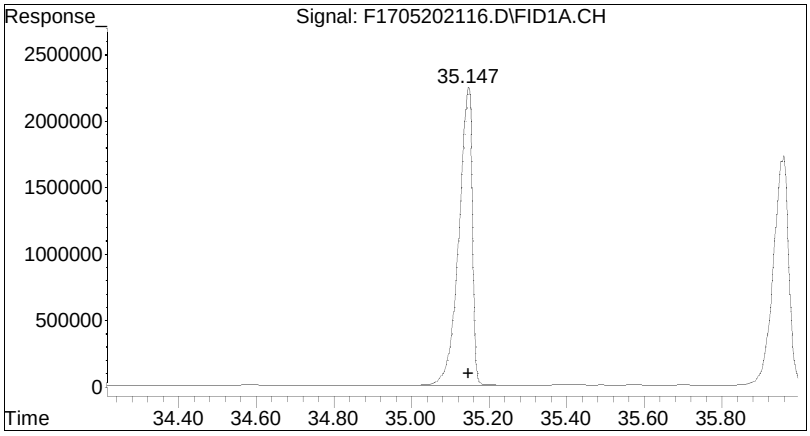
#21 n-Heneicosane (C21)

R.T.: 32.257 min
Delta R.T.: 0.000 min
Response: 53418501
Conc: 51.03 ug/mL M4



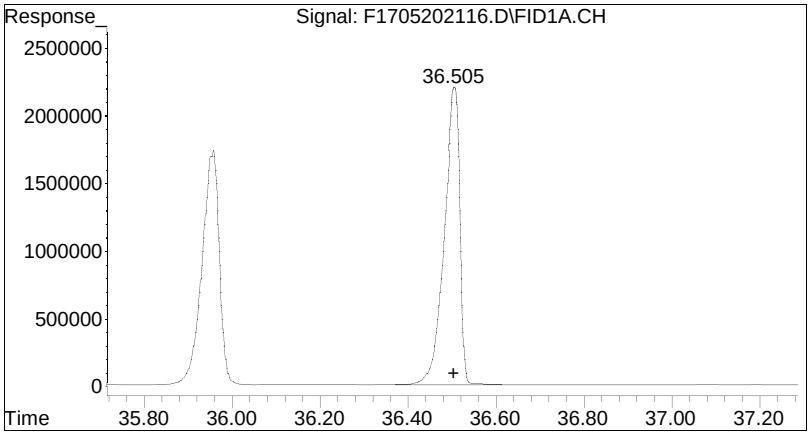
#22 n-Docosane (C22)

R.T.: 33.732 min
Delta R.T.: 0.000 min
Response: 53373025
Conc: 50.91 ug/mL M4



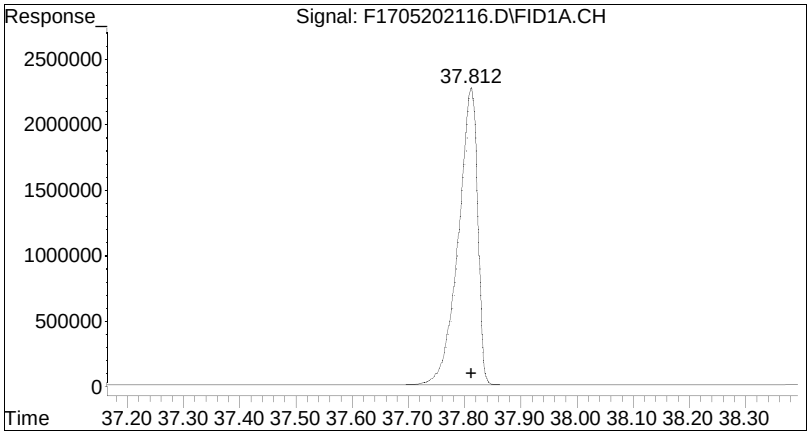
#23 n-Tricosane (C23)

R.T.: 35.147 min
Delta R.T.: 0.000 min
Response: 53358924
Conc: 50.79 ug/mL M4



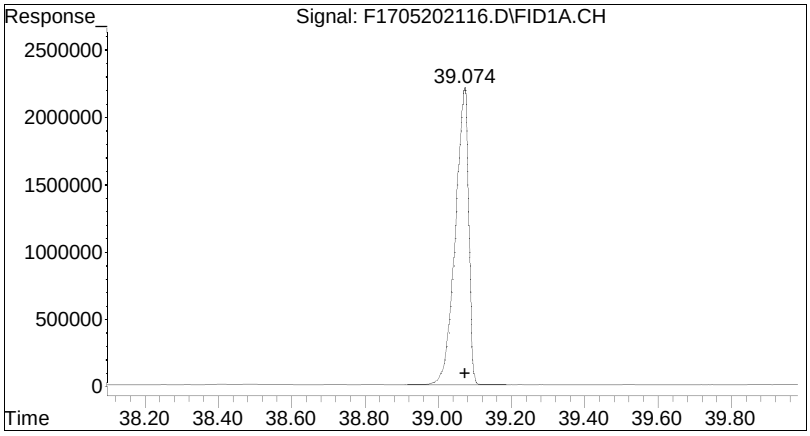
#25 n-Tetracosane (C24)

R.T.: 36.505 min
Delta R.T.: 0.000 min
Response: 53197968
Conc: 50.80 ug/mL M4



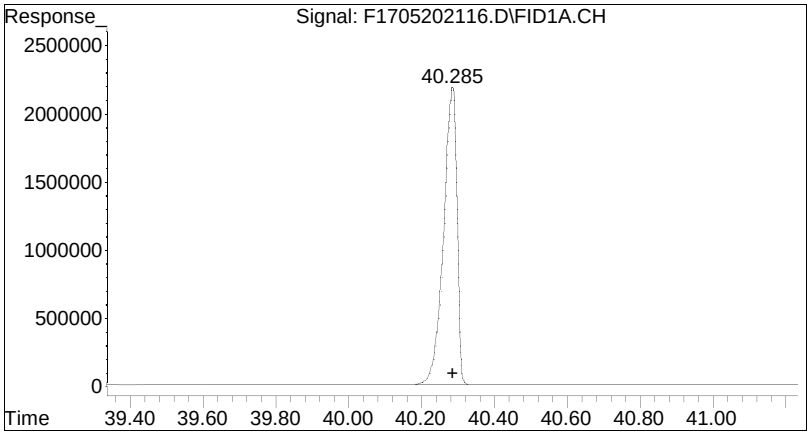
#26 n-Pentacosane (C25)

R.T.: 37.812 min
Delta R.T.: 0.000 min
Response: 52079856
Conc: 50.82 ug/mL M4



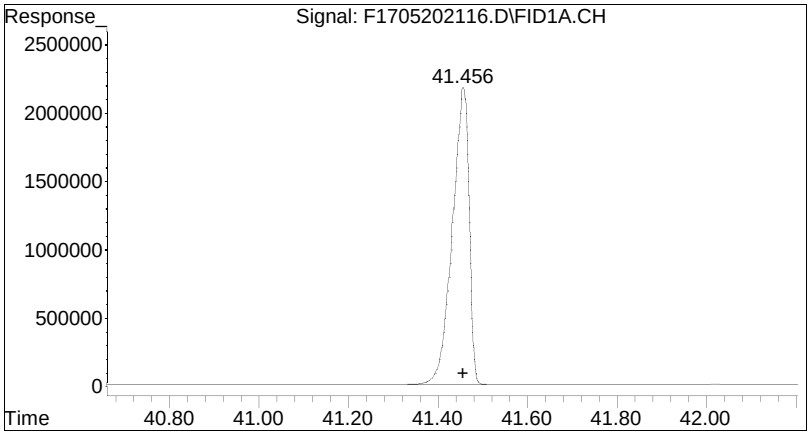
#27 n-Hexacosane (C26)

R.T.:	39.074 min
Delta R.T.:	0.000 min
Response:	53440082
Conc:	50.80 ug/mL M4



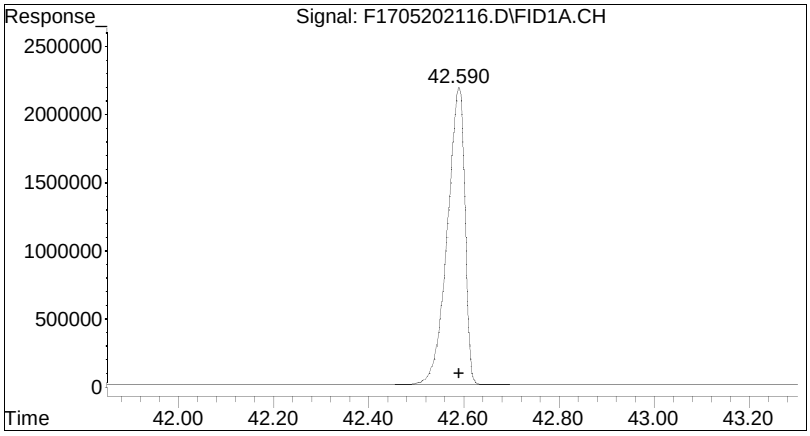
#28 n-Heptacosane (C27)

R.T.: 40.285 min
Delta R.T.: 0.000 min
Response: 53387647
Conc: 50.62 ug/mL M4



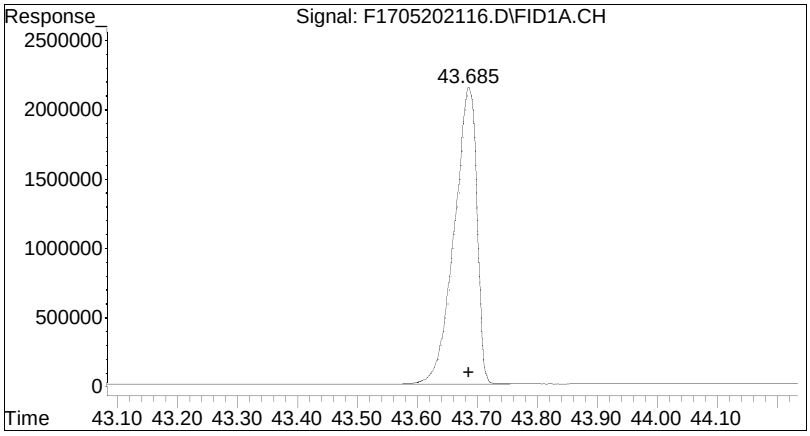
#29 n-Octacosane (C28)

R.T.: 41.456 min
Delta R.T.: 0.000 min
Response: 54460527
Conc: 49.81 ug/mL M4



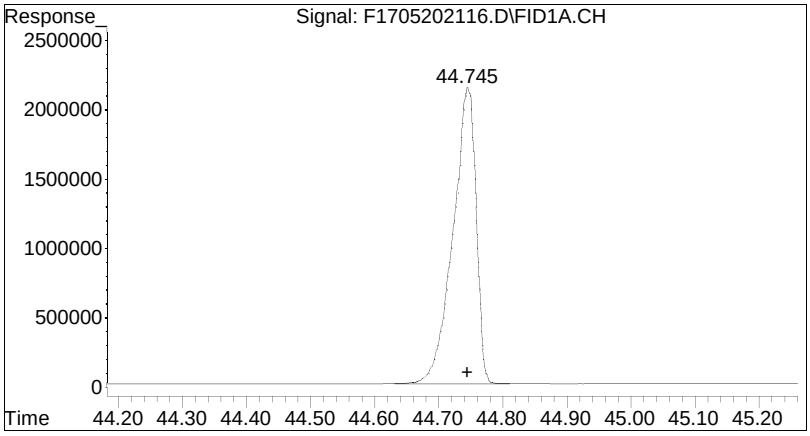
#30 n-Nonacosane (C29)

R.T.:	42.590 min
Delta R.T.:	0.000 min
Response:	54143436
Conc:	50.48 ug/mL M4



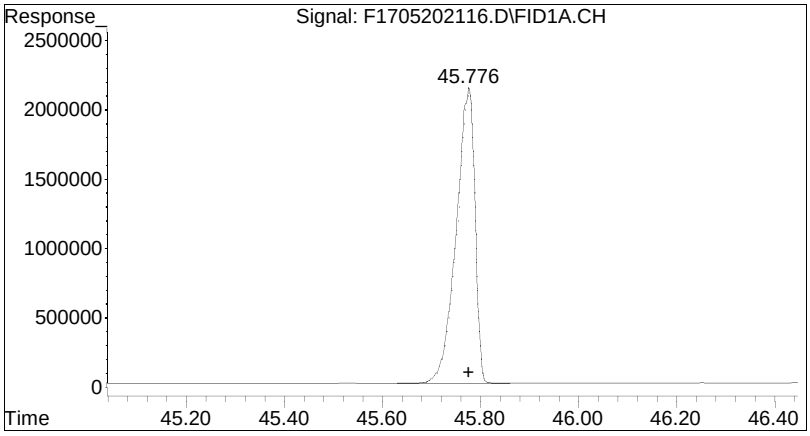
#31 n-Triacontane (C30)

R.T.: 43.685 min
Delta R.T.: 0.000 min
Response: 54272054
Conc: 50.41 ug/mL M4



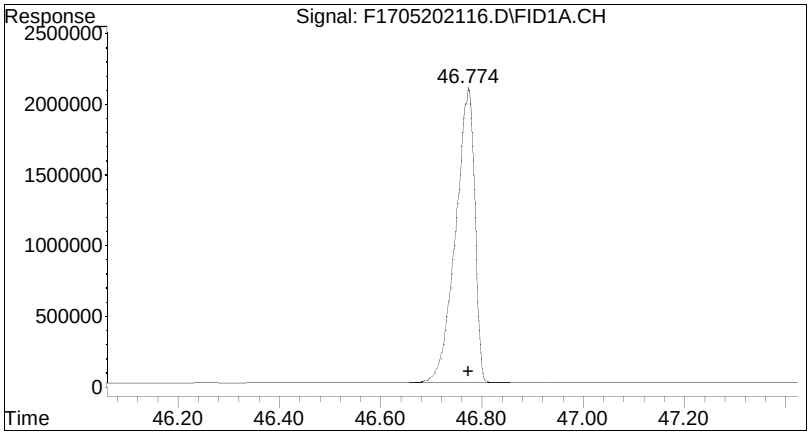
#32 n-Hentriacontane (C31)

R.T.: 44.745 min
Delta R.T.: 0.000 min
Response: 52296054
Conc: 50.22 ug/mL M4



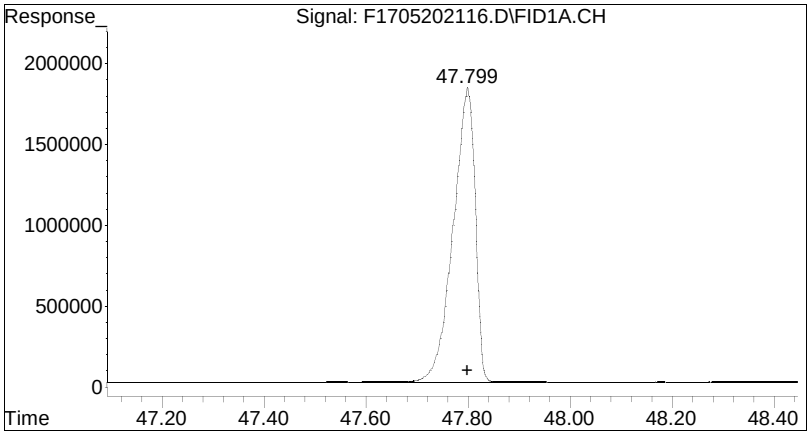
#33 n-Dotriacontane (C32)

R.T.: 45.776 min
Delta R.T.: 0.000 min
Response: 54818806
Conc: 50.15 ug/mL M4



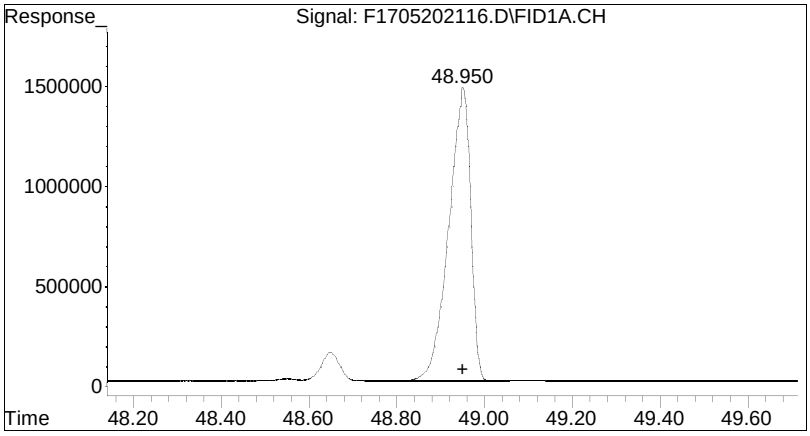
#34 n-Tritriacontane (C33)

R.T.: 46.774 min
Delta R.T.: 0.000 min
Response: 53208653
Conc: 50.01 ug/mL M4



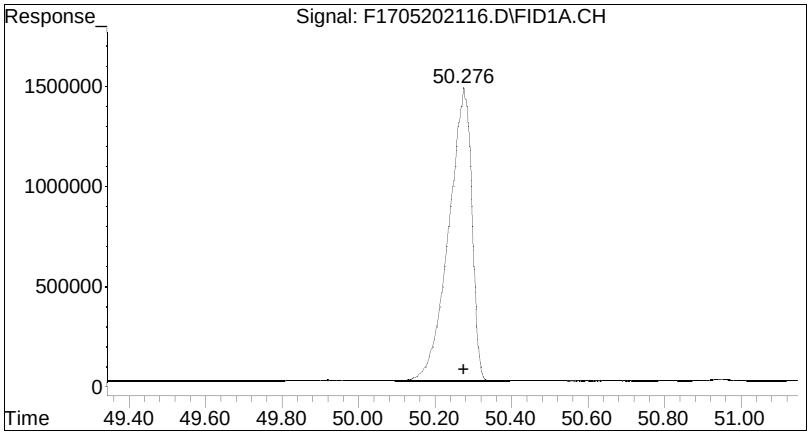
#35 n-tetratriacontane (C34)

R.T.: 47.799 min
Delta R.T.: 0.000 min
Response: 52932855
Conc: 50.10 ug/mL M4



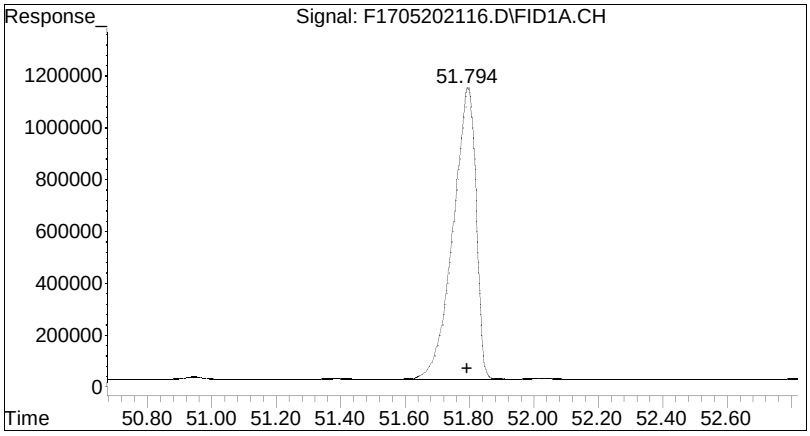
#36 n-Pentatriacontane (C35)

R.T.: 48.950 min
Delta R.T.: 0.000 min
Response: 49392769
Conc: 50.04 ug/mL M4



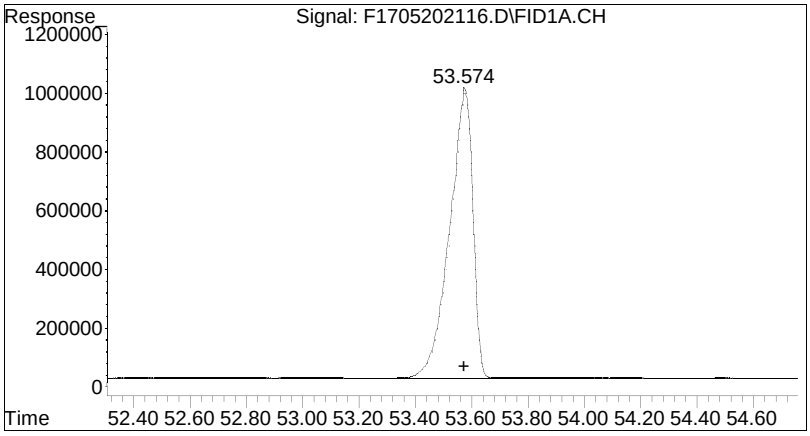
#37 n-Hexatriacontane (C36)

R.T.:	50.276 min
Delta R.T.:	0.000 min
Response:	59548004
Conc:	50.11 ug/mL M4



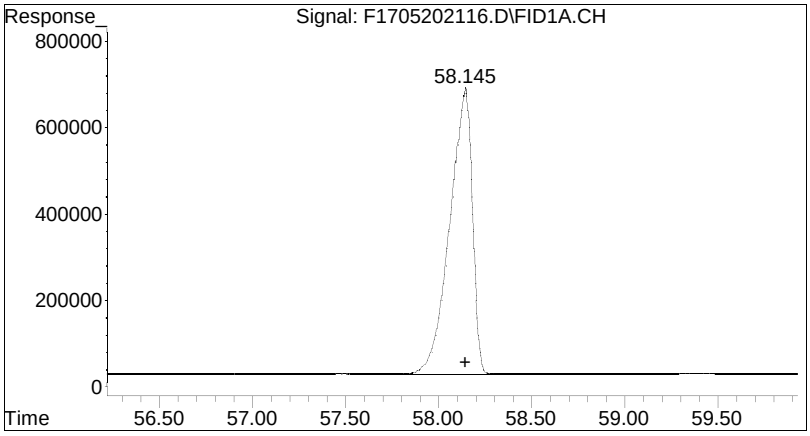
#38 n-Heptatriacontane (C37)

R.T.: 51.794 min
Delta R.T.: 0.000 min
Response: 54257423
Conc: 50.34 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.: 53.574 min
Delta R.T.: 0.000 min
Response: 54921096
Conc: 50.41 ug/mL M4



#41 n-Tetracontane (C40)

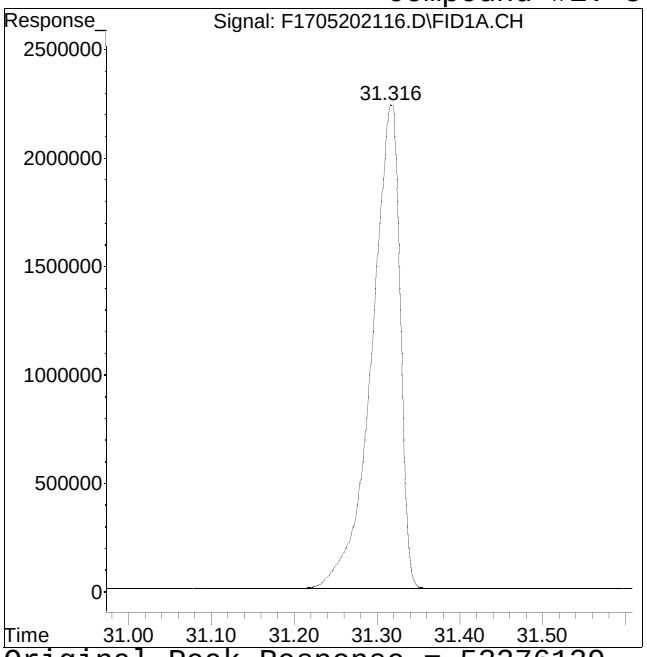
R.T.: 58.145 min
Delta R.T.: 0.000 min
Response: 54254862
Conc: 50.45 ug/mL M4

Manual Integration/Negative Proof Report

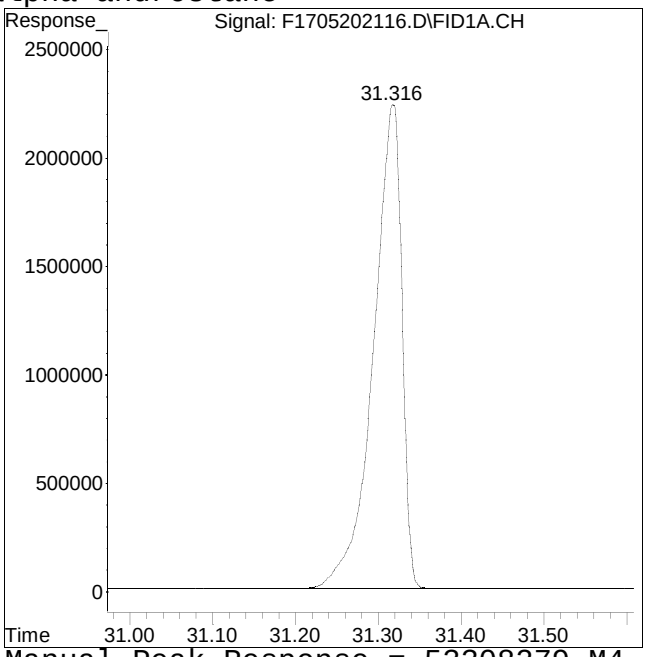
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 53276139



Manual Peak Response = 53308279 M4

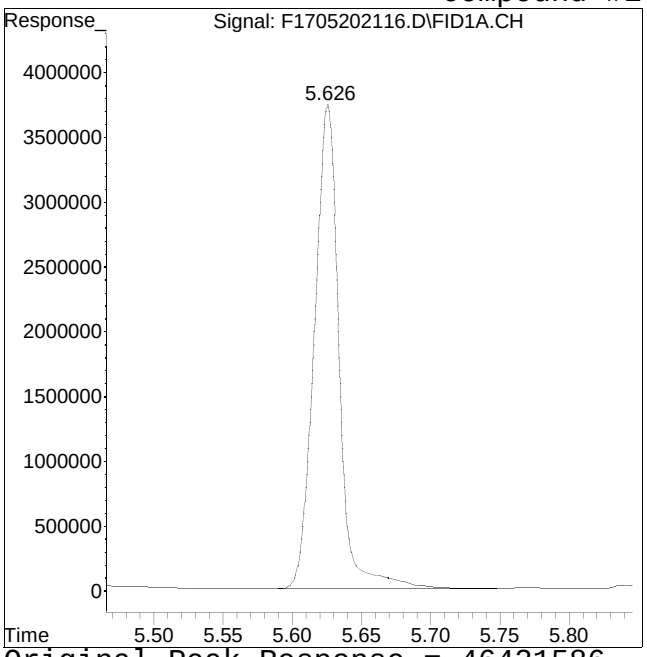
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

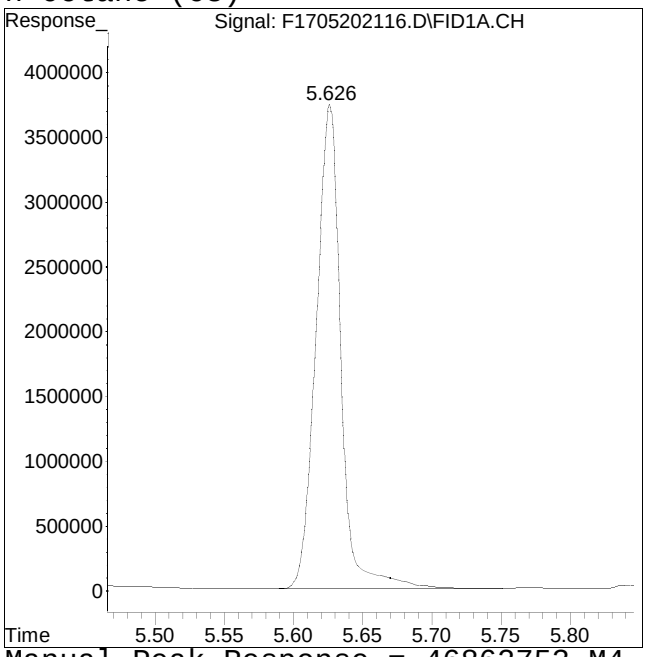
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #2: n-Octane (C8)



Original Peak Response = 46421586



Manual Peak Response = 46862753 M4

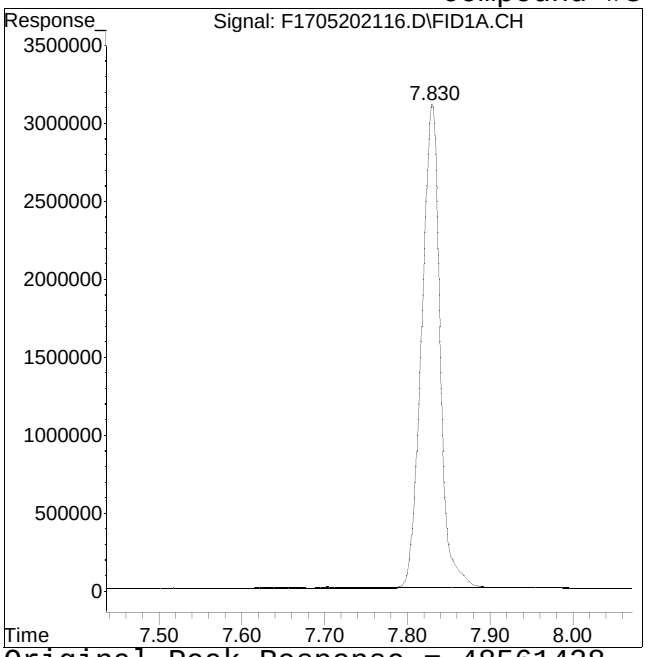
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

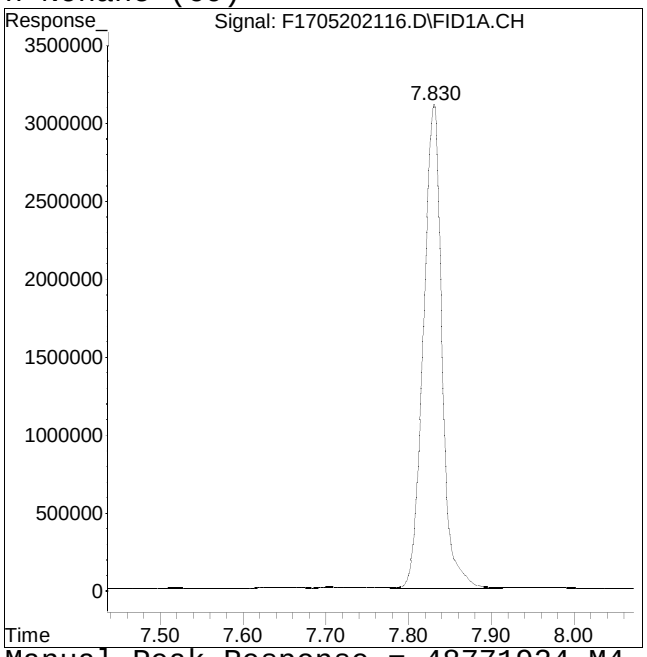
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 48561428



Manual Peak Response = 48771924 M4

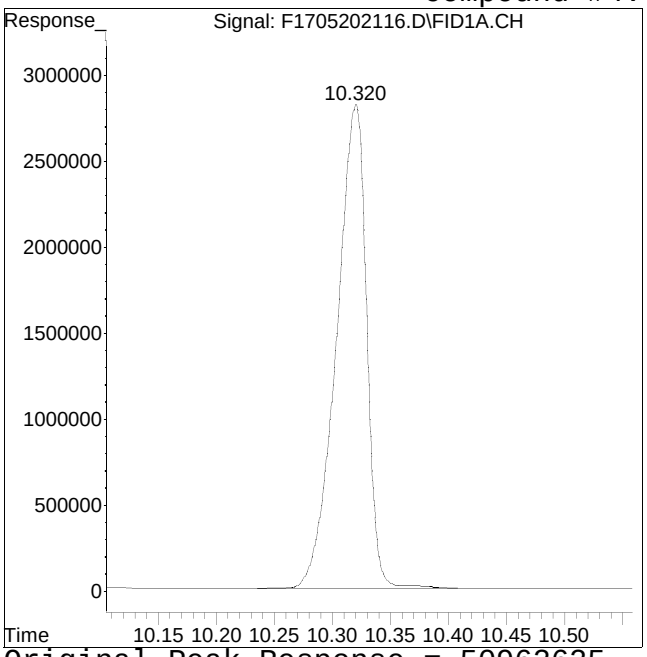
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

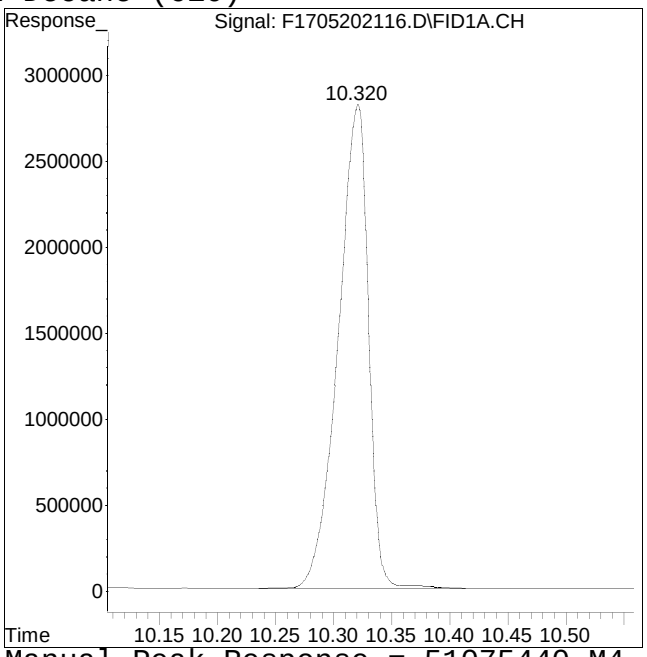
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #4: n-Decane (C10)



Original Peak Response = 50962625



Manual Peak Response = 51075440 M4

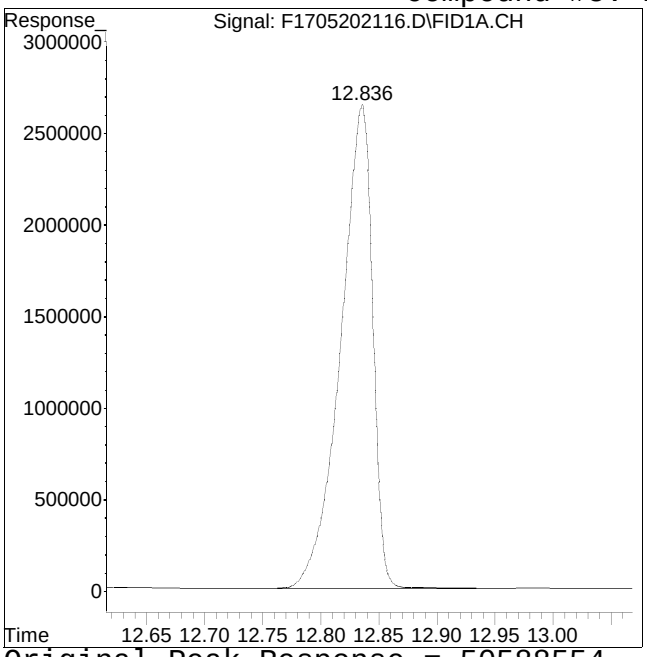
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

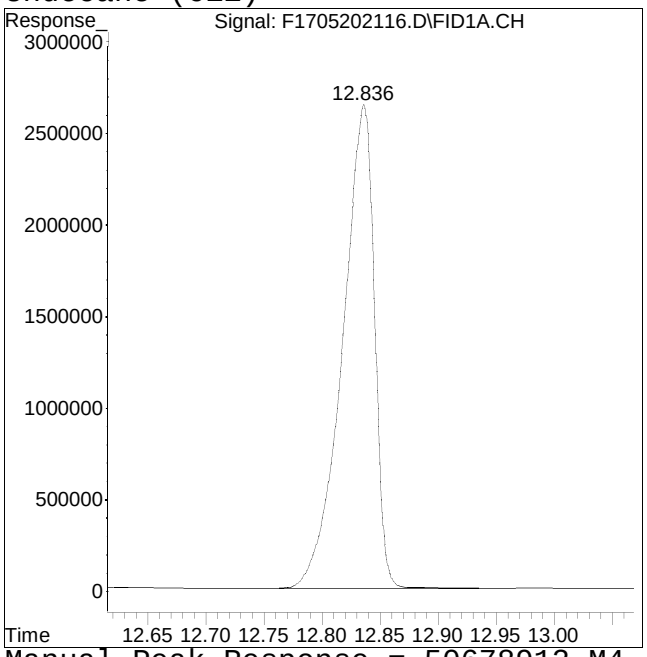
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 50588554



Manual Peak Response = 50678912 M4

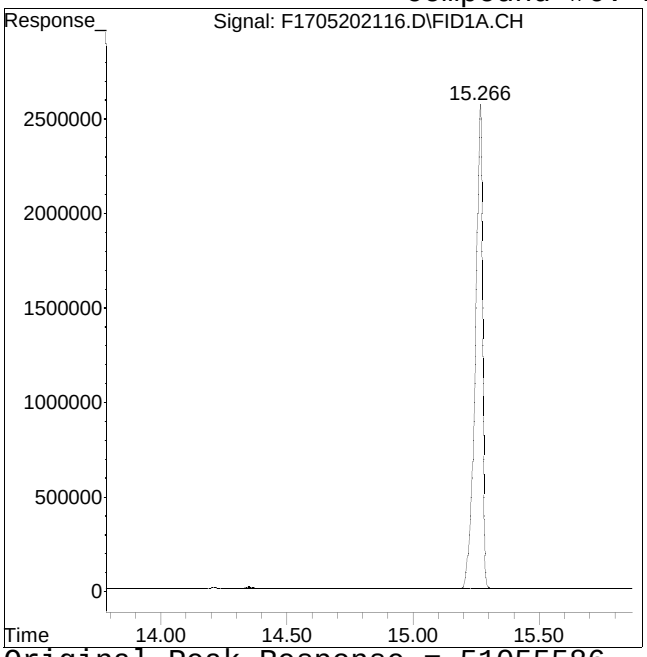
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

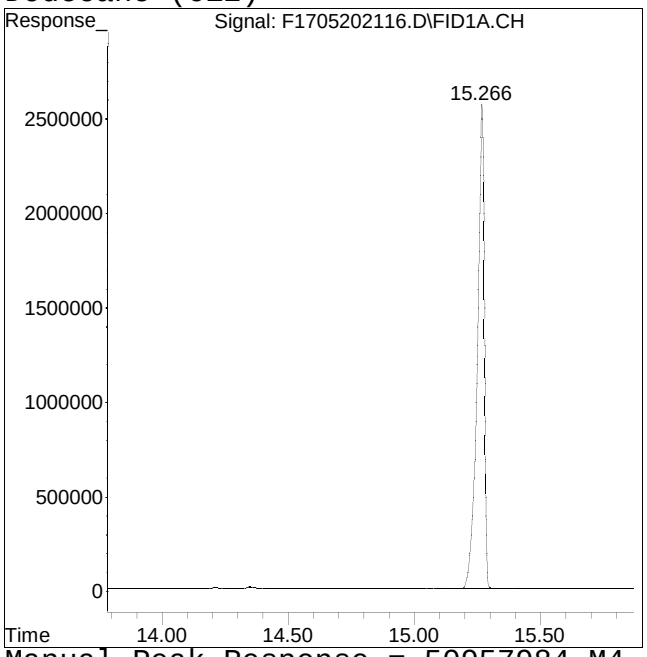
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 51055586



Manual Peak Response = 50957984 M4

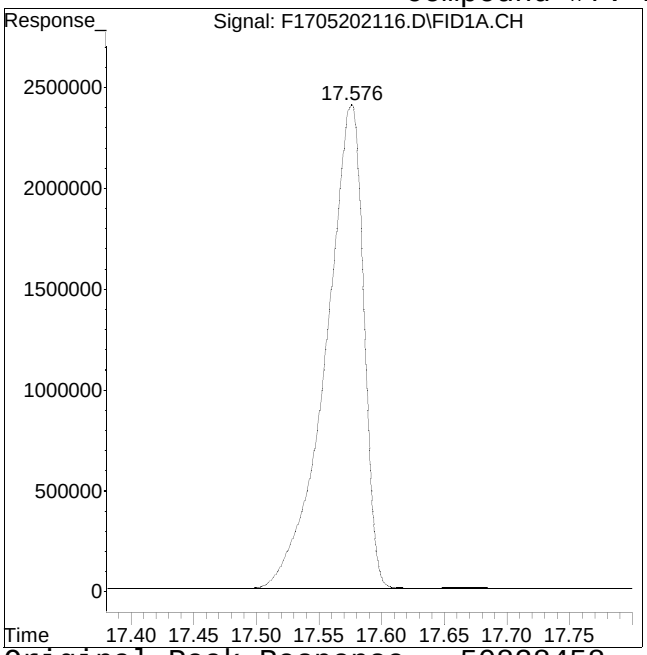
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

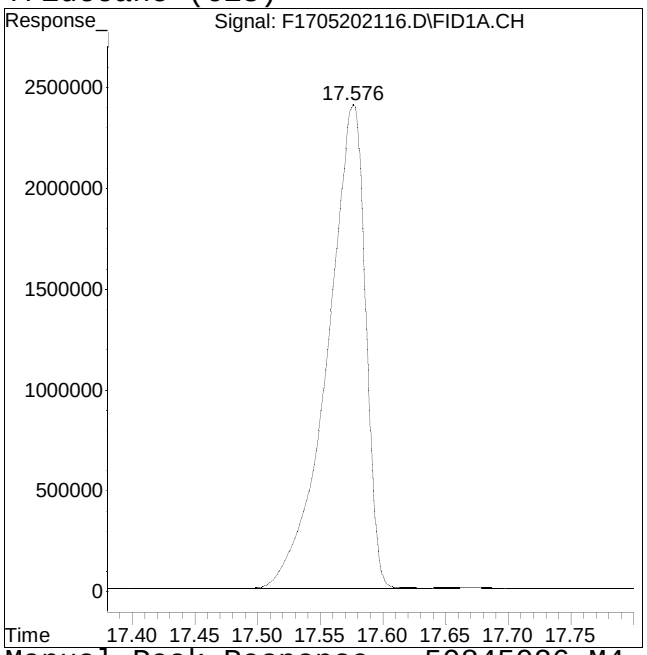
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 50838458



Manual Peak Response = 50845026 M4

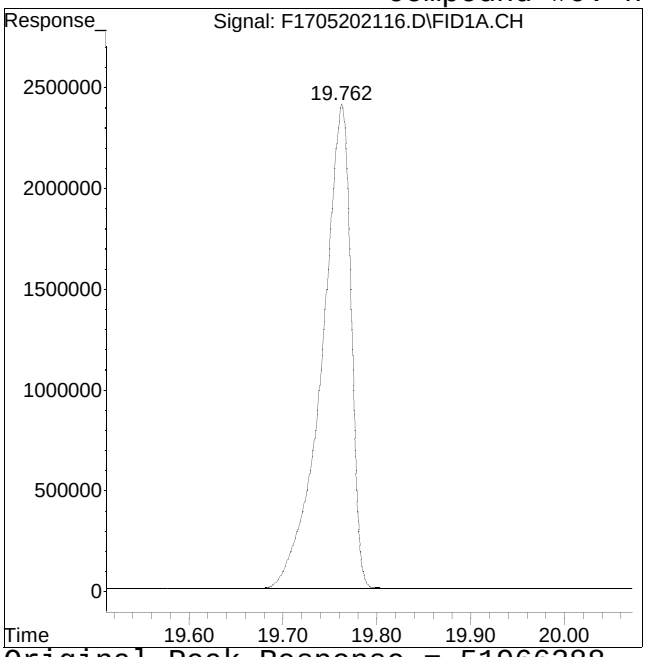
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

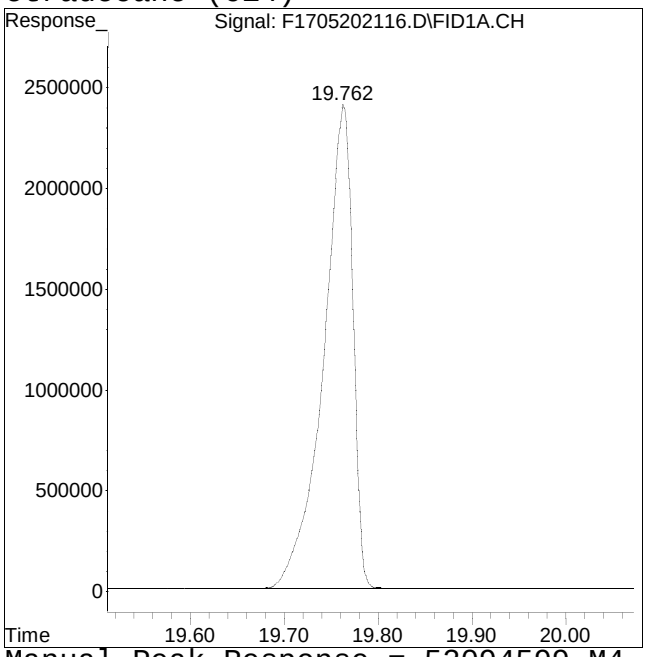
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 51966388



Manual Peak Response = 52094599 M4

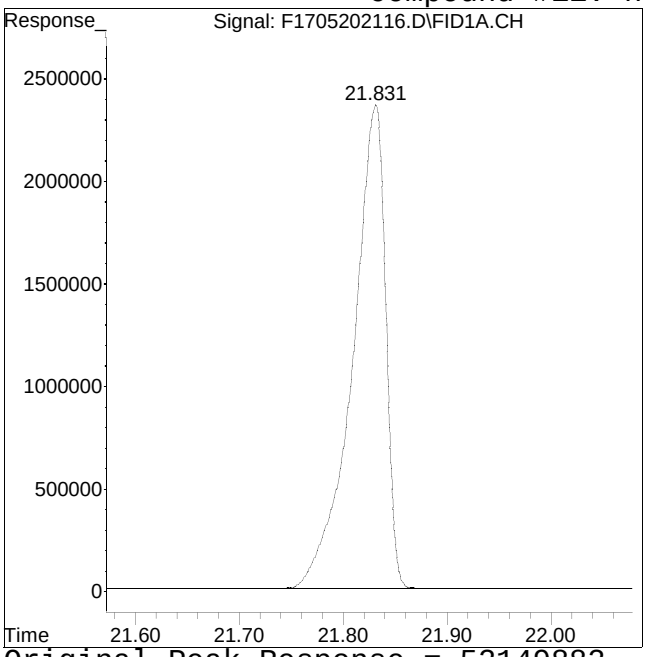
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

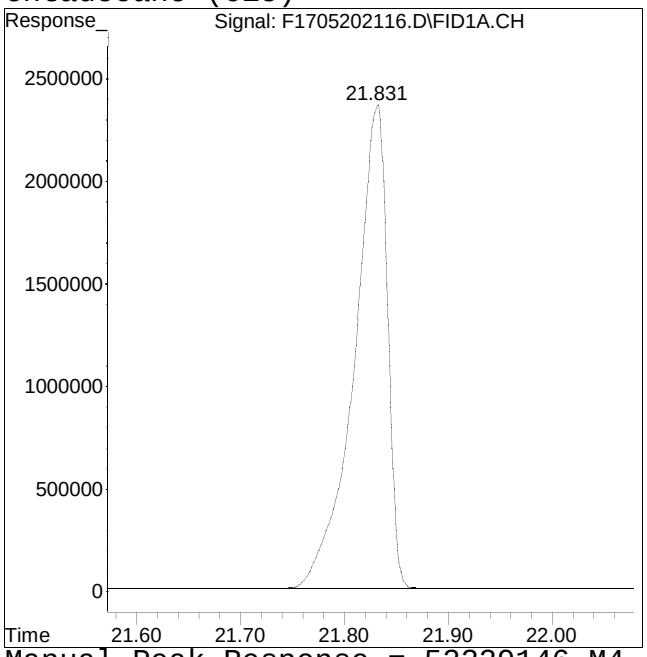
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 52149882



Manual Peak Response = 52229146 M4

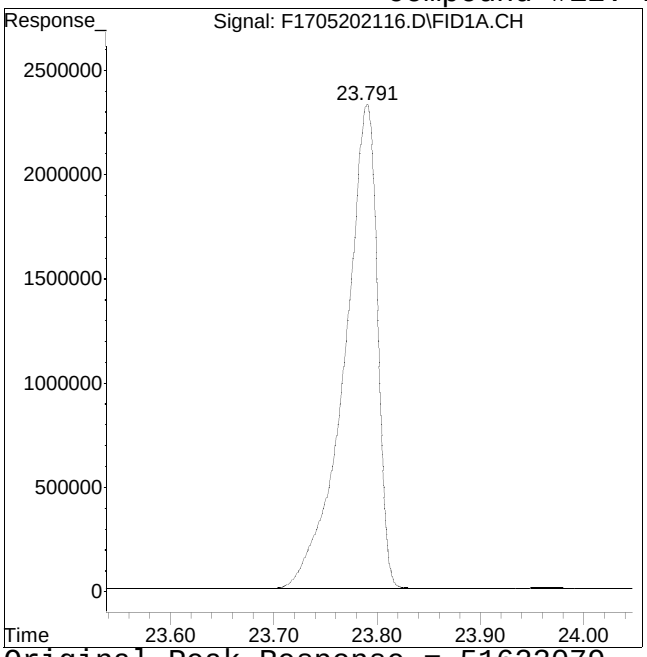
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

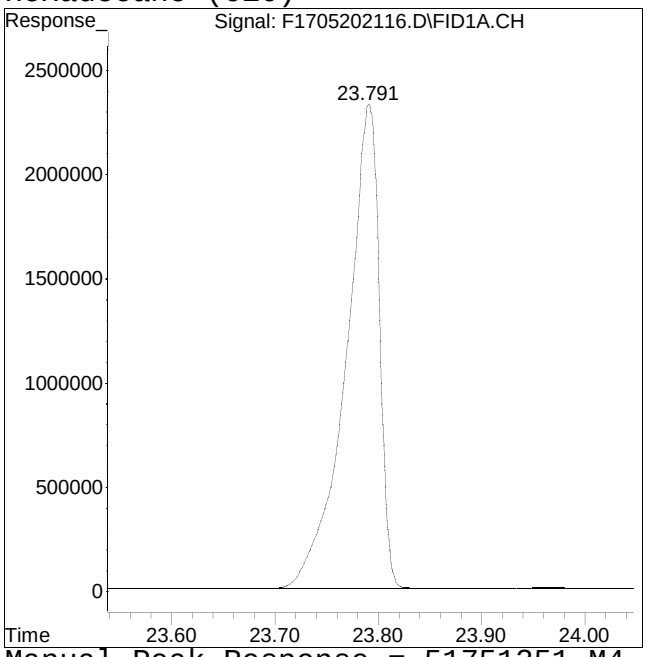
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 51623079



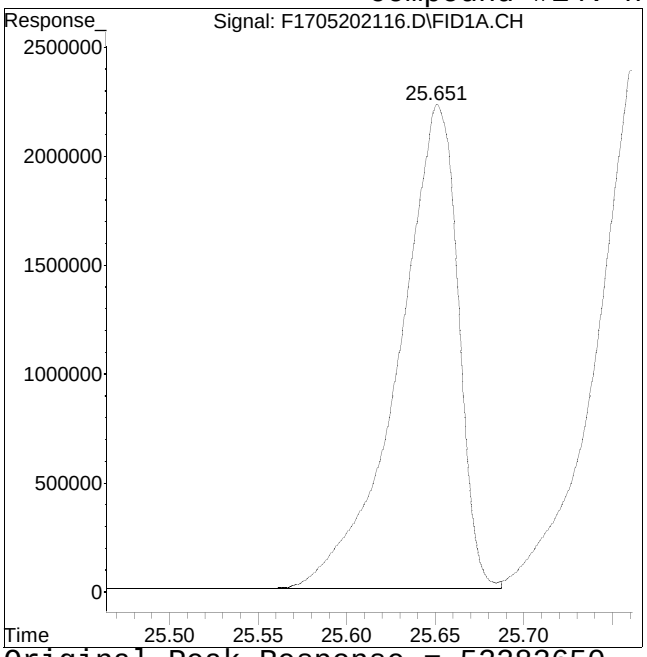
Manual Peak Response = 51751351 M4

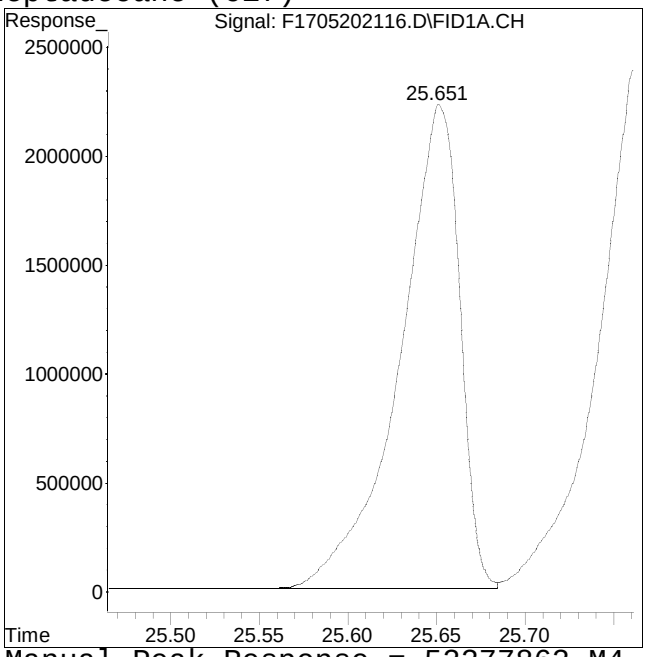
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path	: O:\Forensics\Data\FID17\202Q	Method	: HC17052021F_DRO.M
Data File	: F1705202116.D	Operator	: FID17:WR
Date Inj'd	: 5/20/2021 11:47 pm	Instrument	: FID17
Sample	: I1705202103F	Quant Date	: 5/28/2021 2:02 pm

Compound #14: n-Heptadecane (C17)





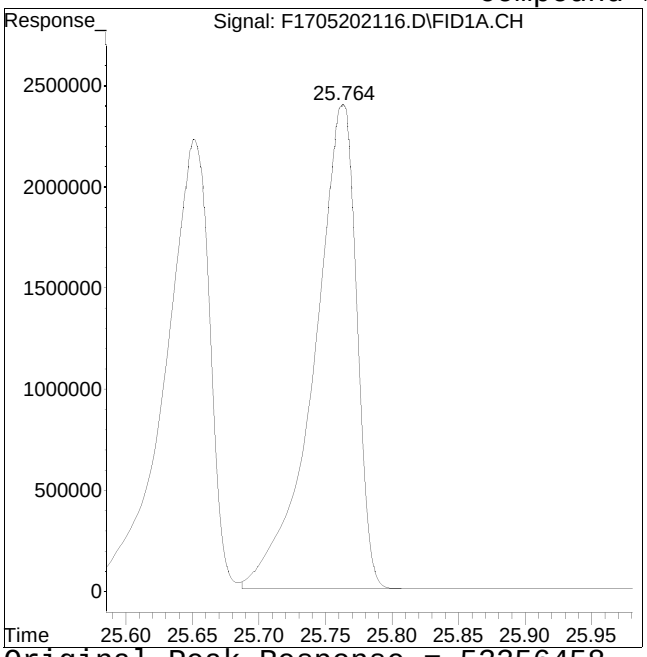
Original Peak Response = 52283650 Manual Peak Response = 52277862 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

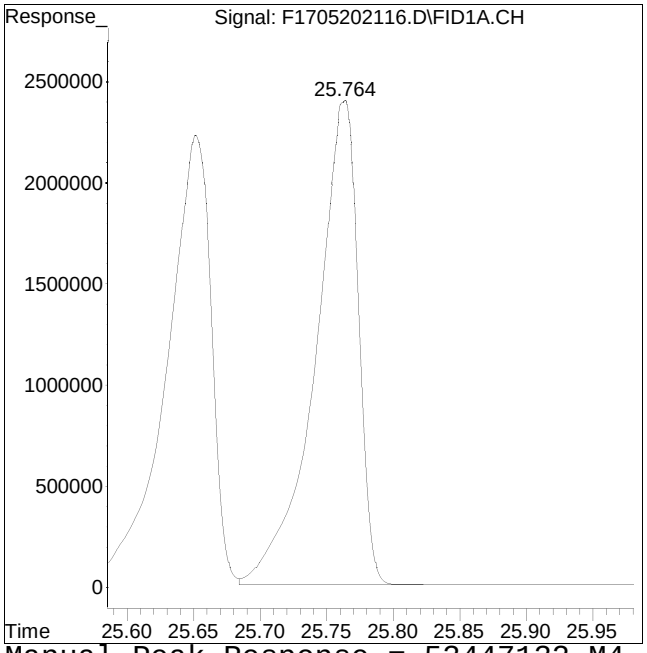
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #15: Pristane



Original Peak Response = 53356458



Manual Peak Response = 53447132 M4

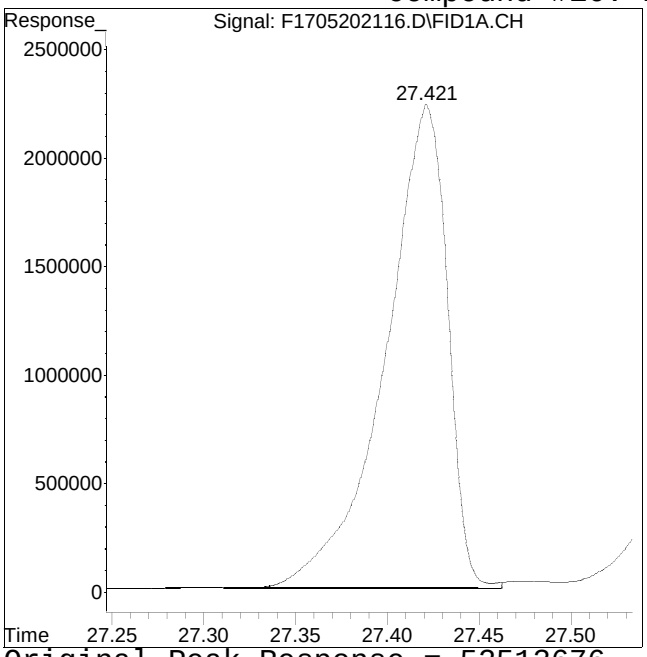
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

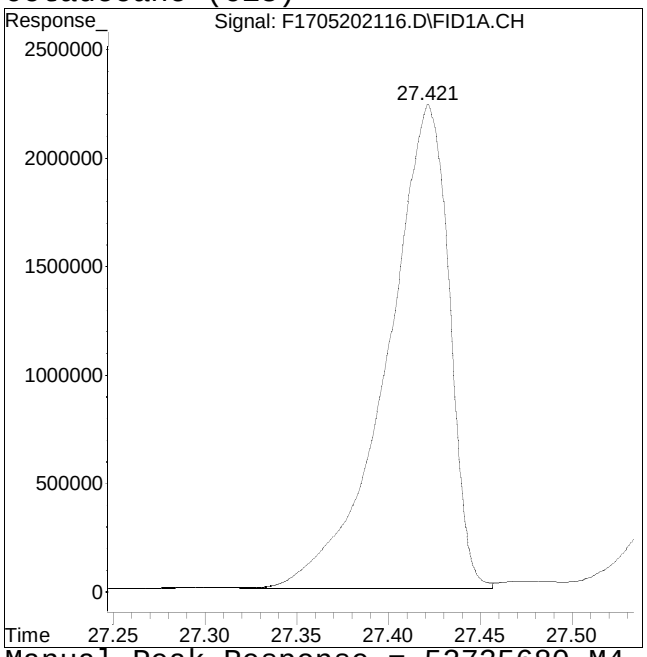
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 52513676



Manual Peak Response = 52735680 M4

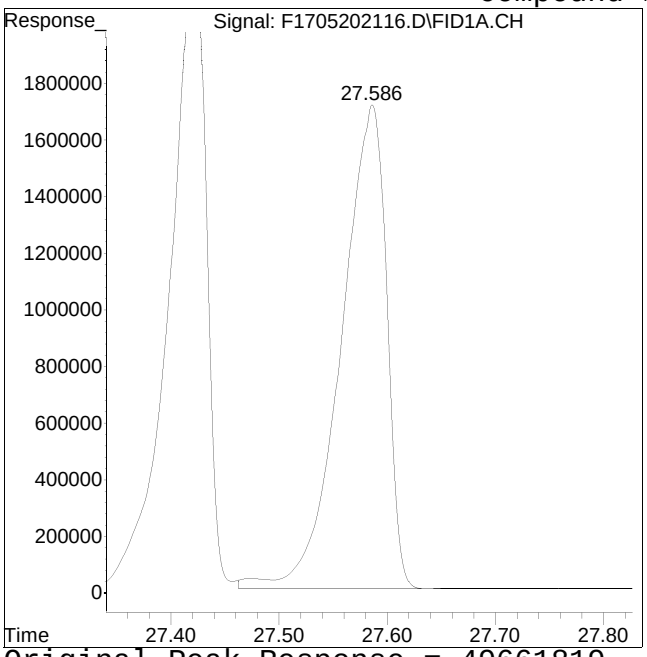
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

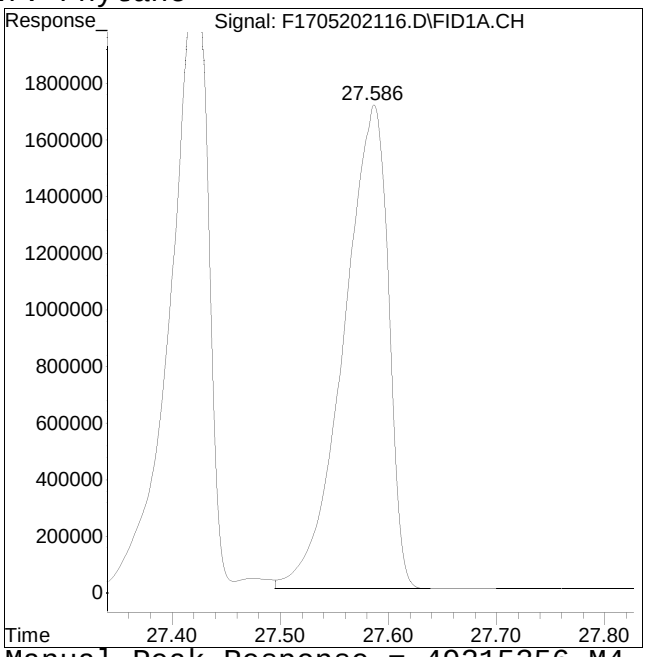
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #17: Phytane



Original Peak Response = 49661819



Manual Peak Response = 49215356 M4

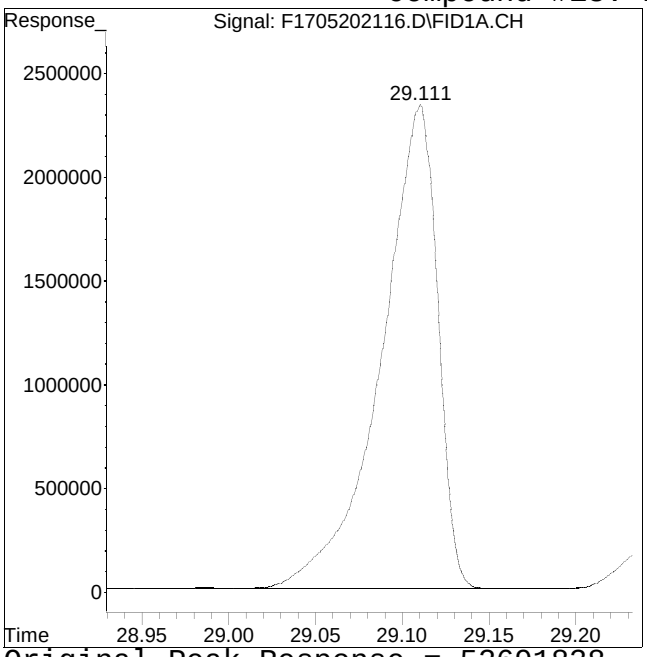
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

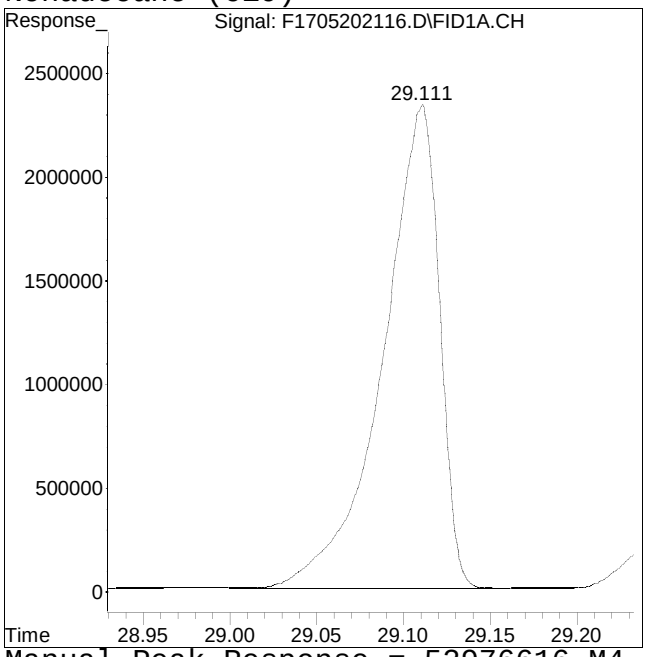
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 52691838



Manual Peak Response = 52976616 M4

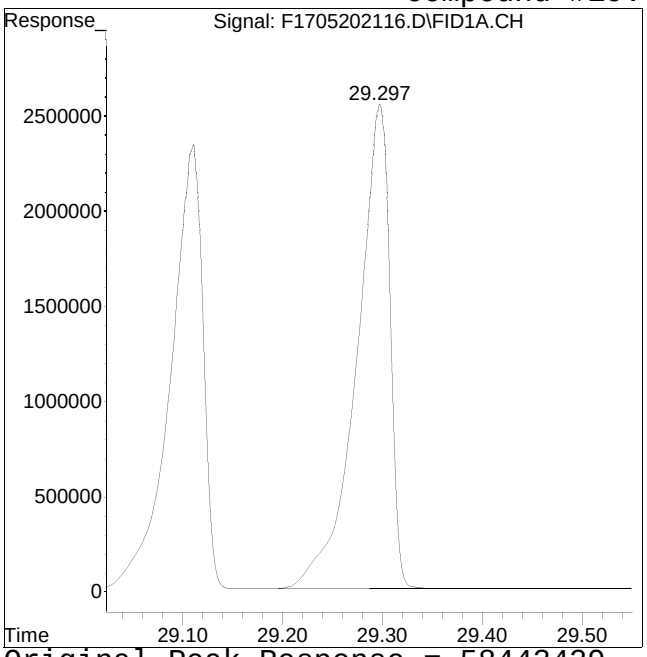
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

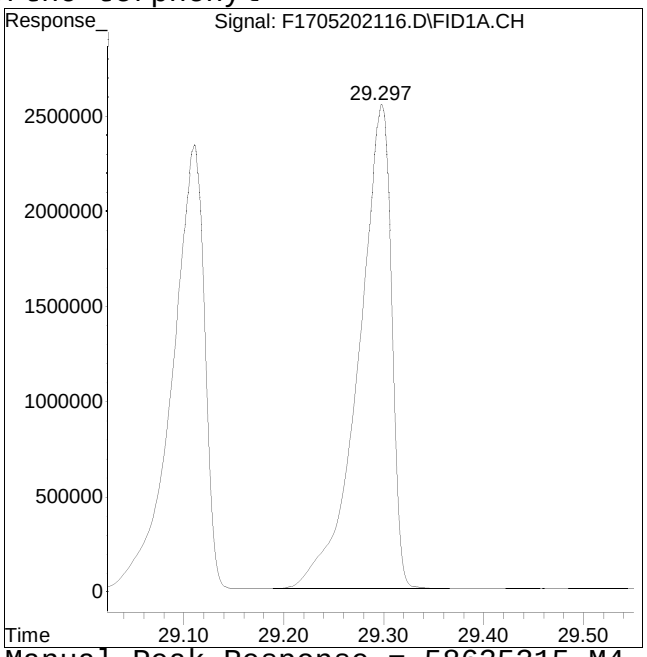
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #19: ortho-terphenyl



Original Peak Response = 58443429



Manual Peak Response = 58635315 M4

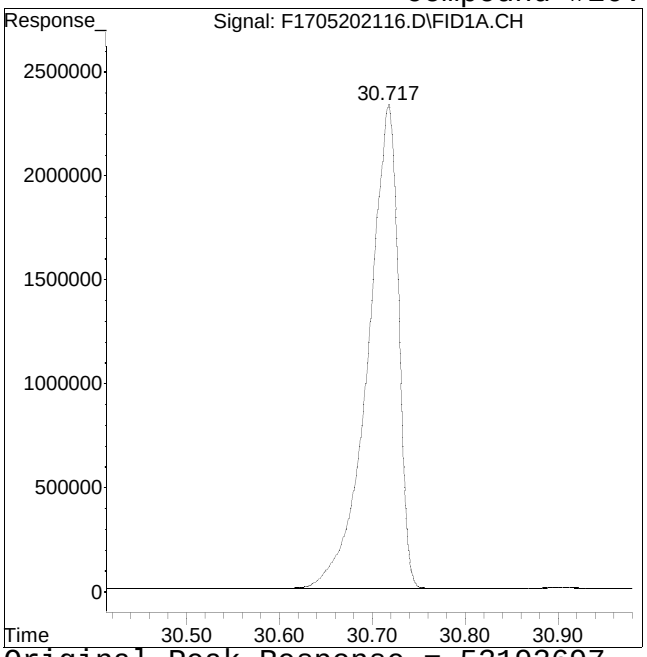
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

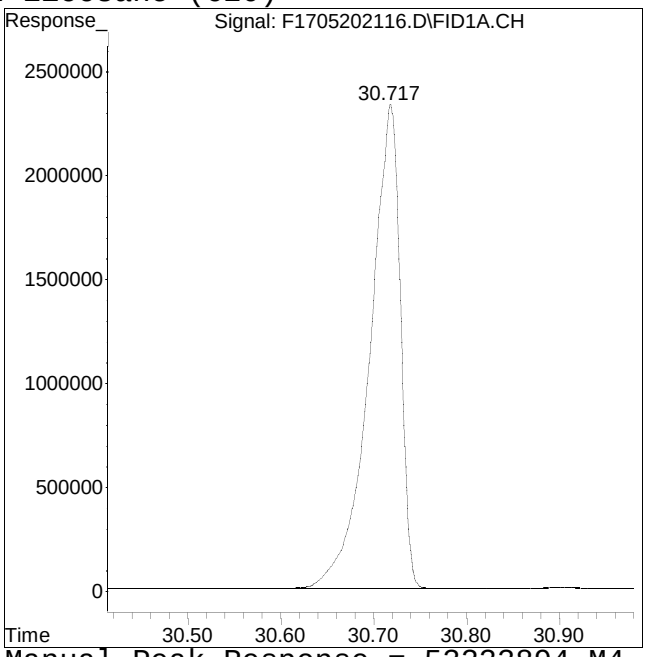
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 53193697



Manual Peak Response = 53233894 M4

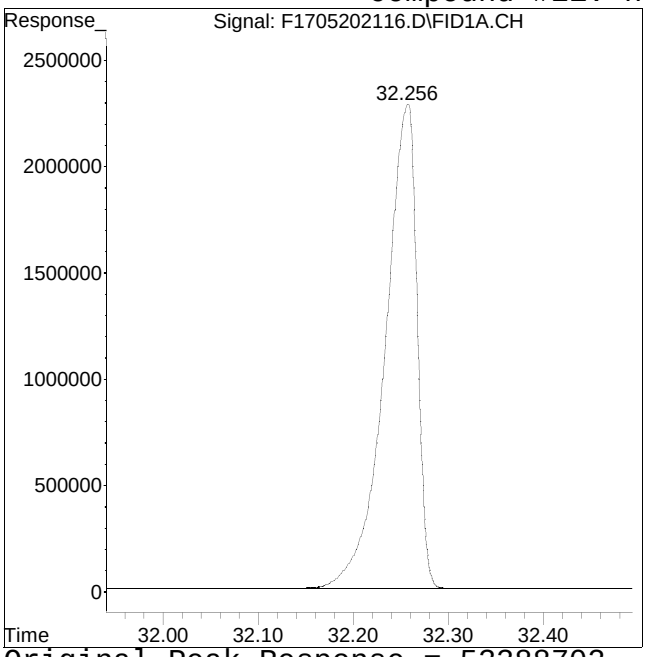
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

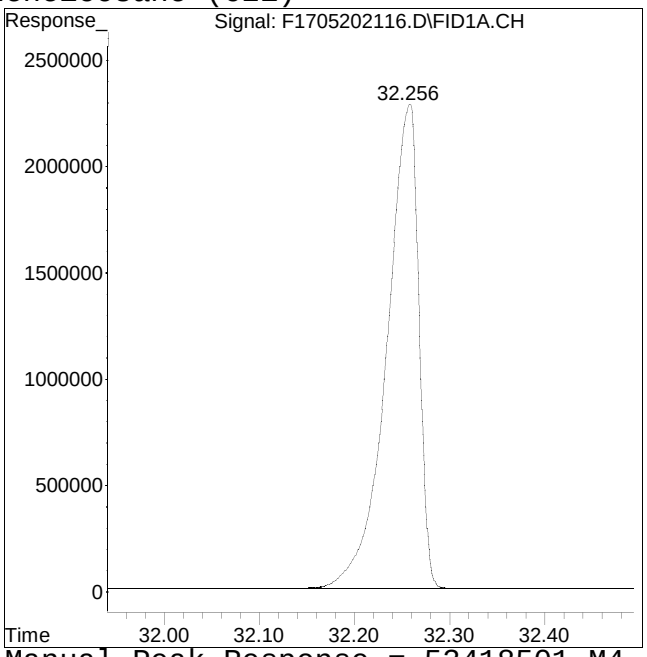
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 53388702



Manual Peak Response = 53418501 M4

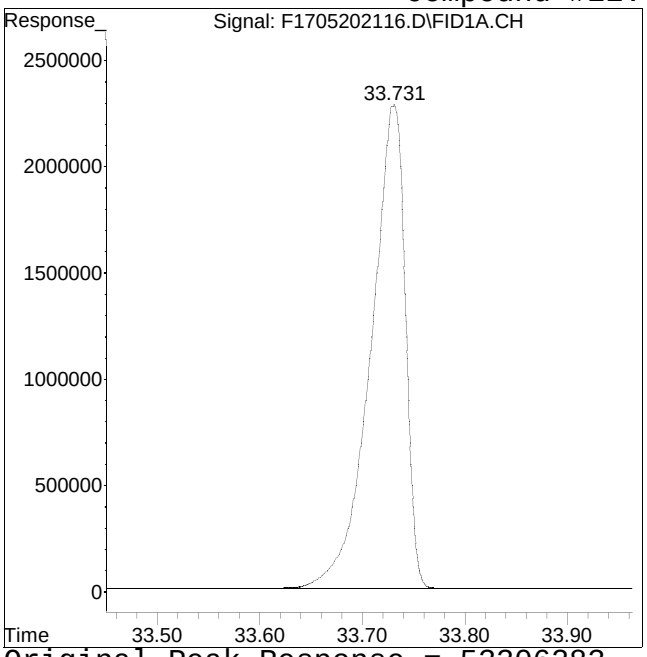
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

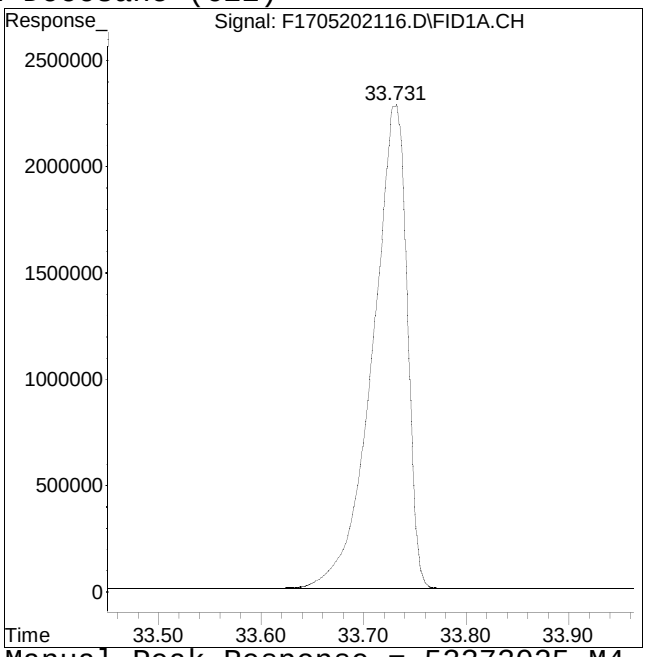
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 53306283



Manual Peak Response = 53373025 M4

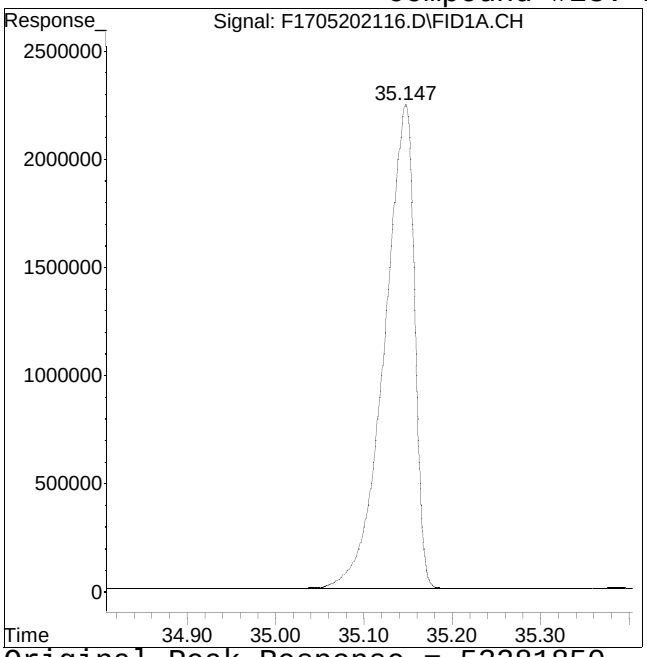
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

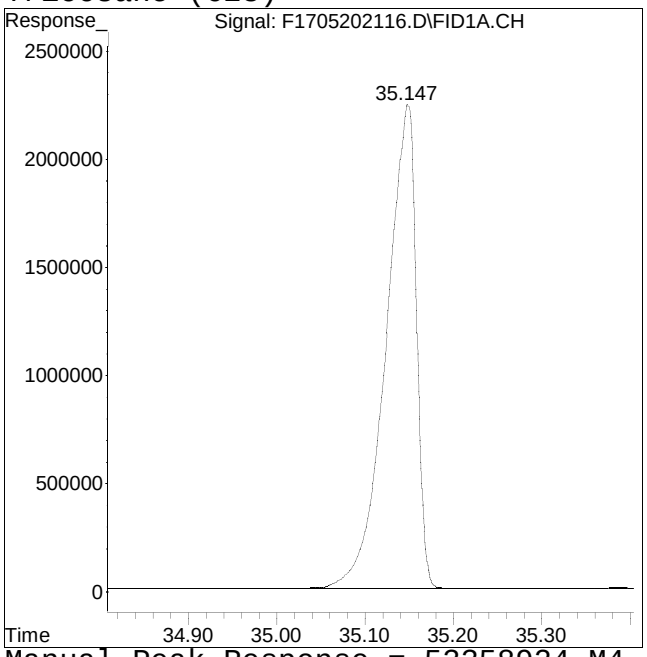
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 53281850



Manual Peak Response = 53358924 M4

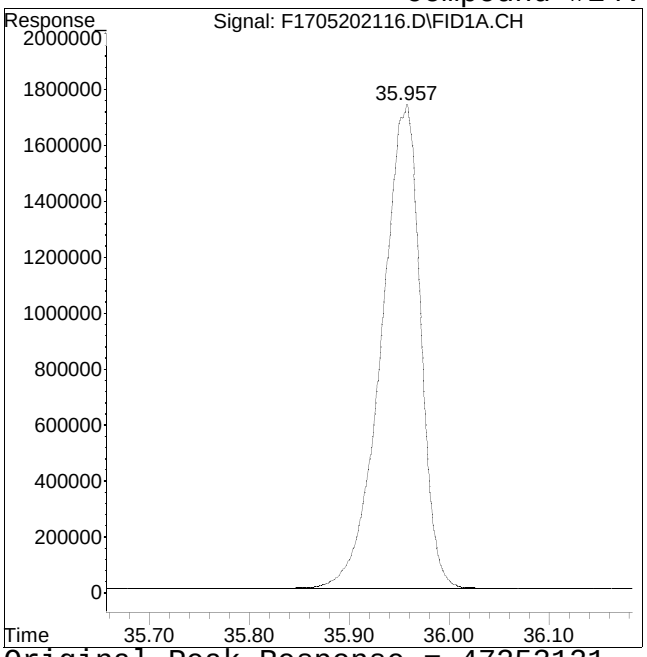
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

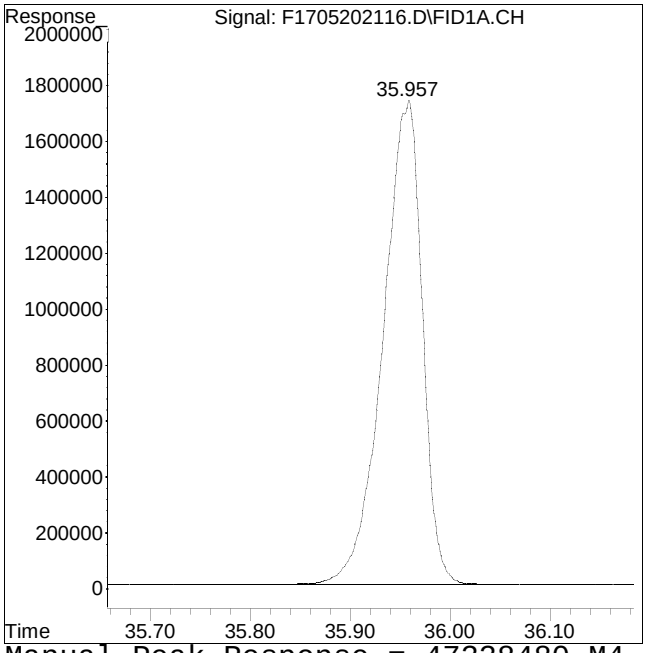
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #24: d50-Tetracosane



Original Peak Response = 47253121



Manual Peak Response = 47338480 M4

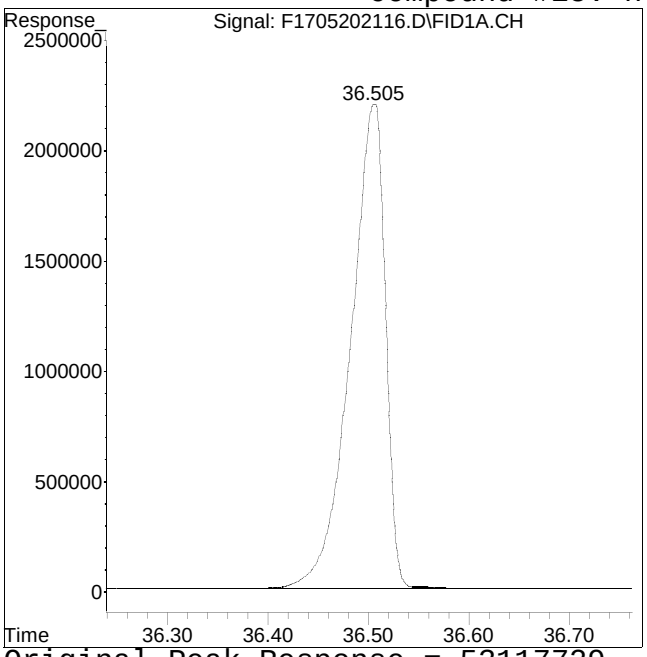
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

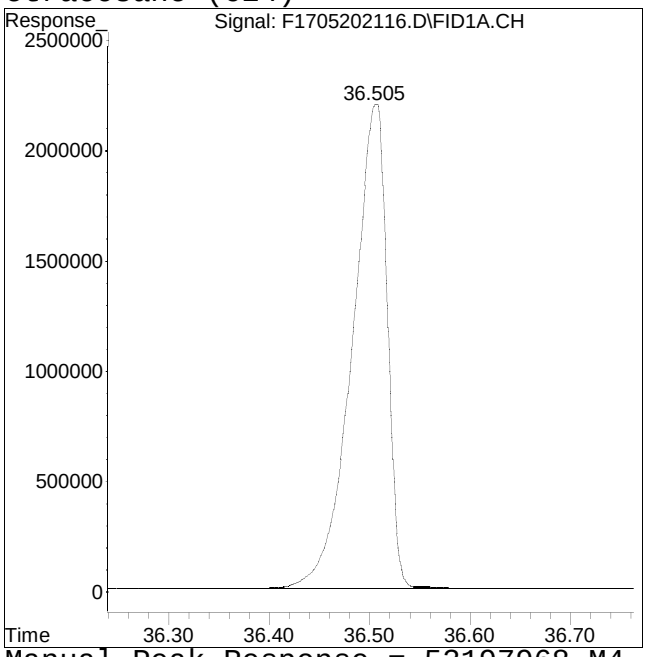
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 53117729



Manual Peak Response = 53197968 M4

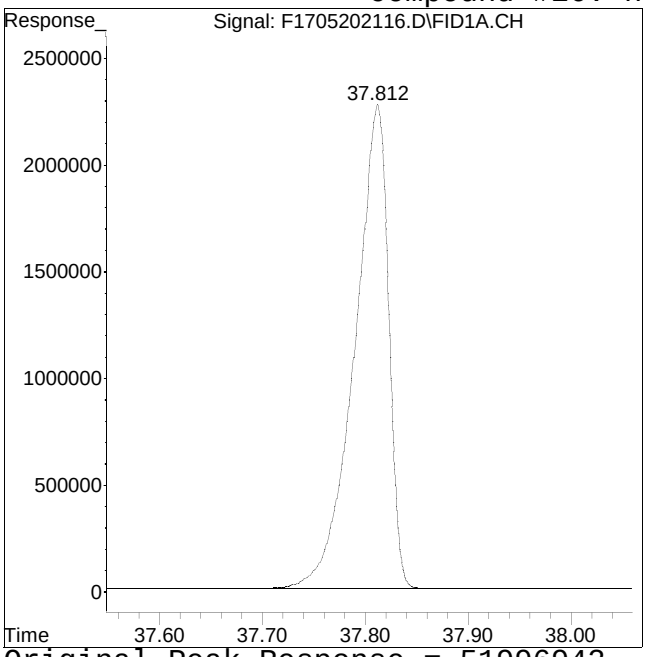
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

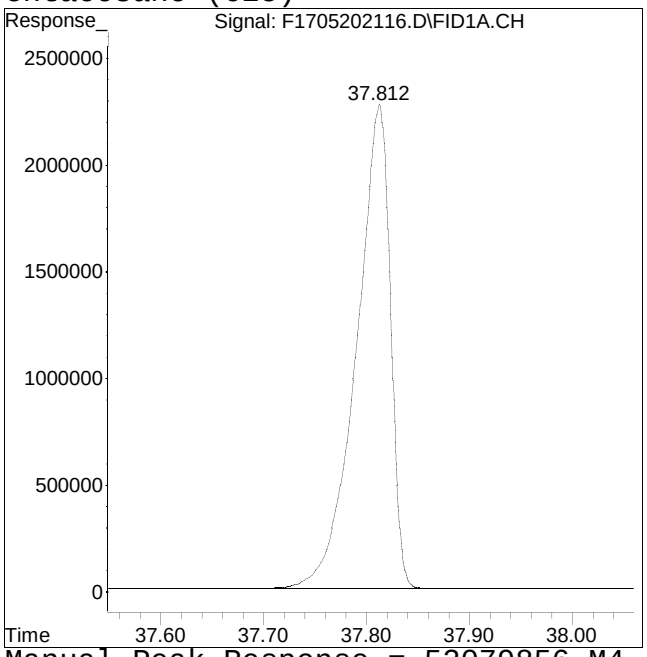
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 51996942



Manual Peak Response = 52079856 M4

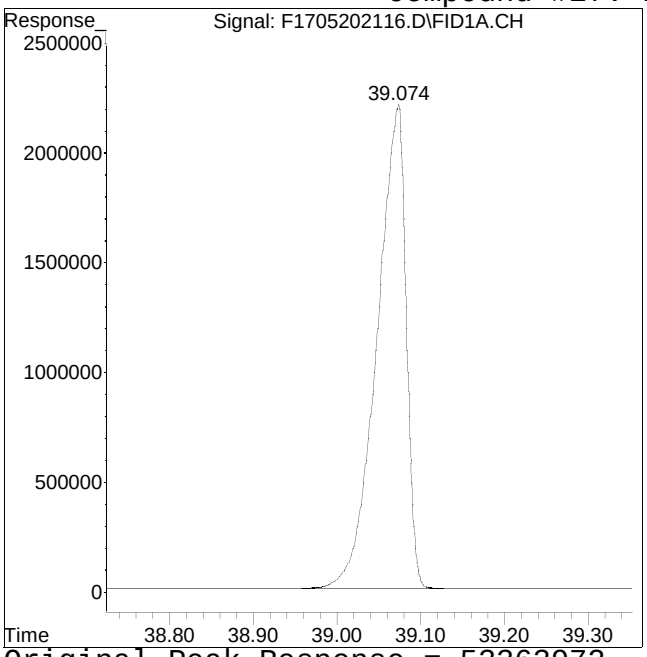
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

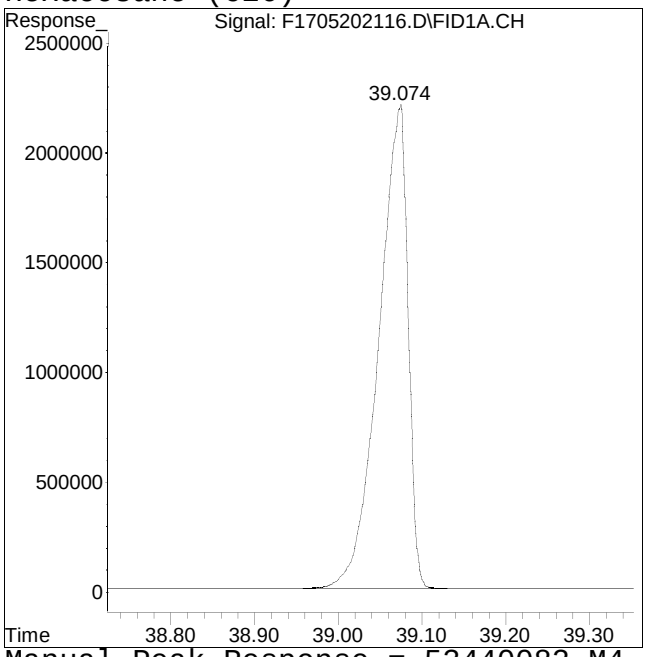
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 53363972



Manual Peak Response = 53440082 M4

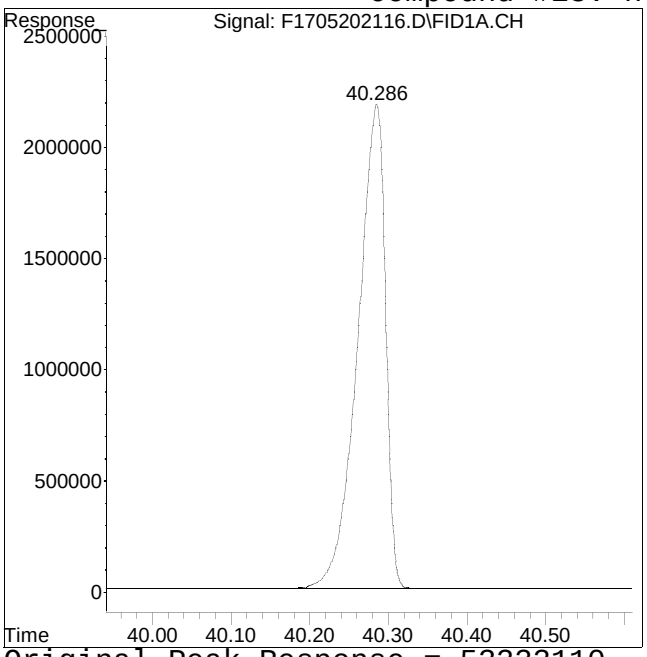
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

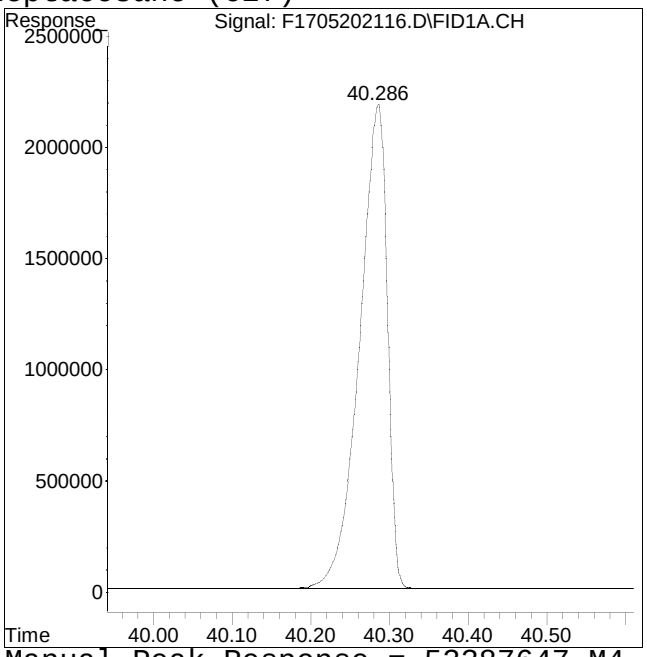
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 53333110



Manual Peak Response = 53387647 M4

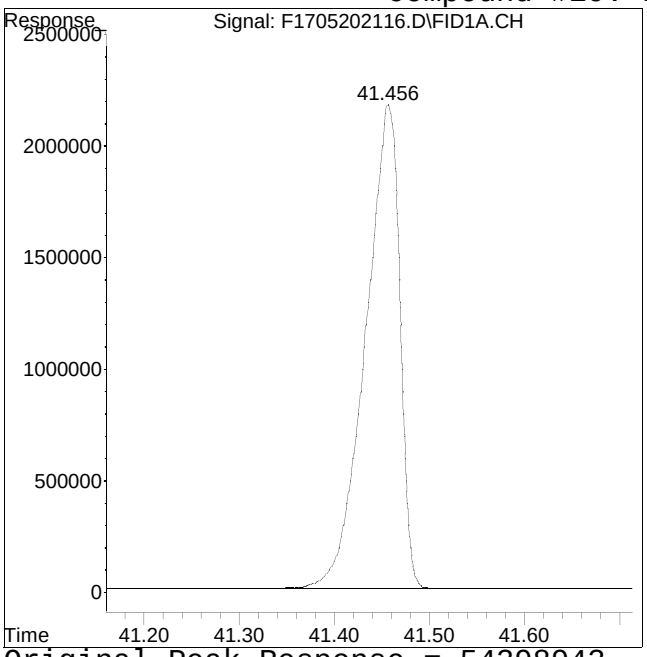
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

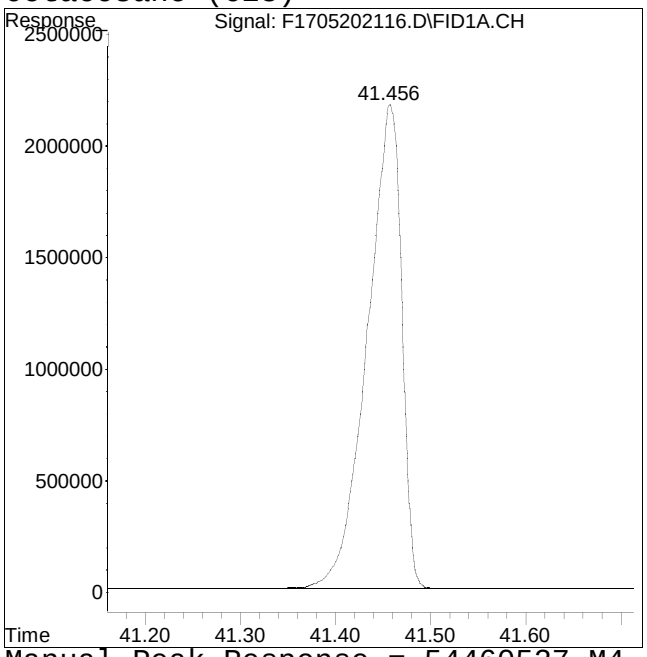
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 54398943



Manual Peak Response = 54460527 M4

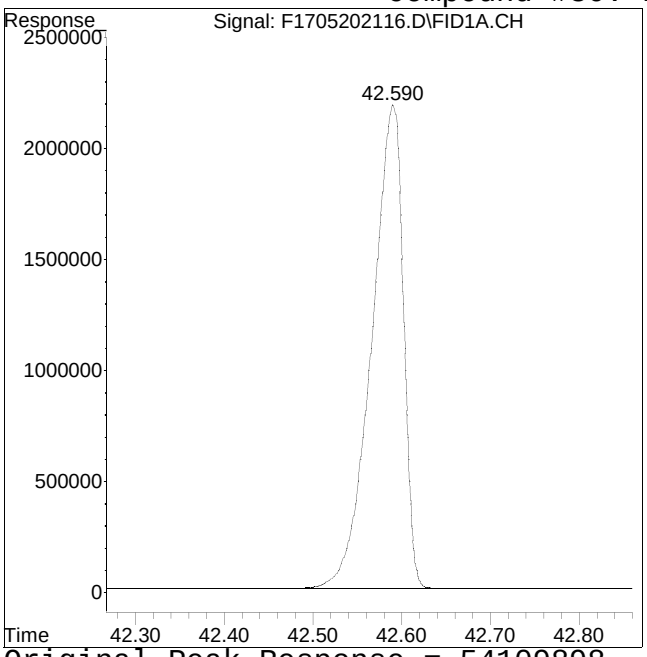
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

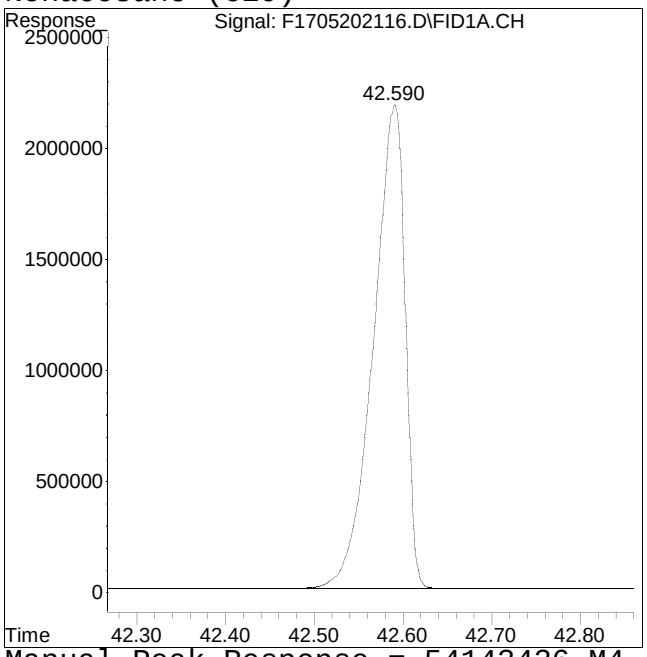
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 54109898



Manual Peak Response = 54143436 M4

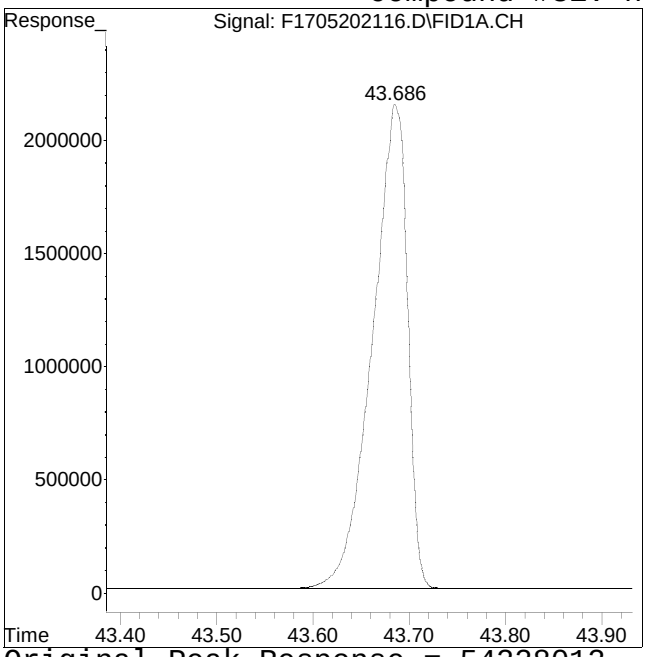
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

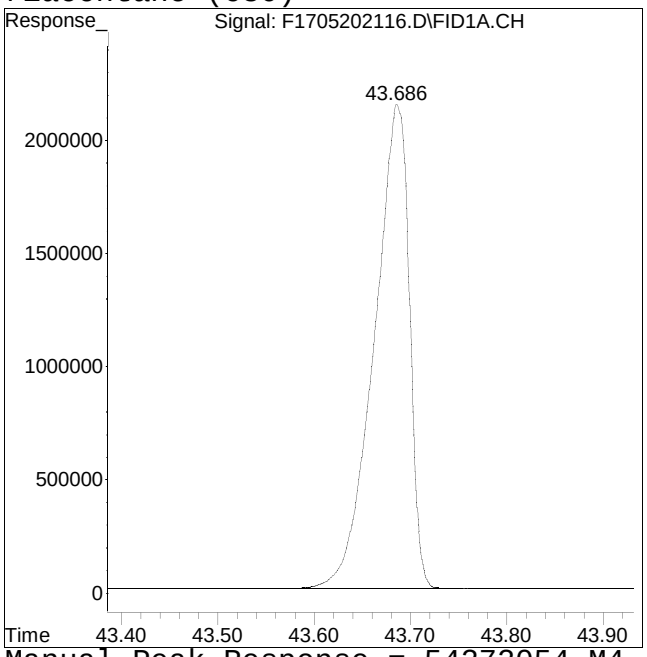
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 54228012



Manual Peak Response = 54272054 M4

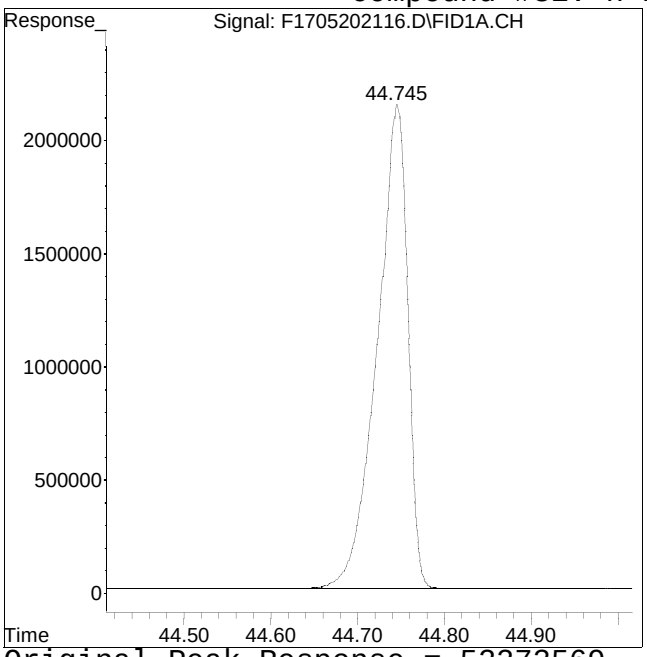
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

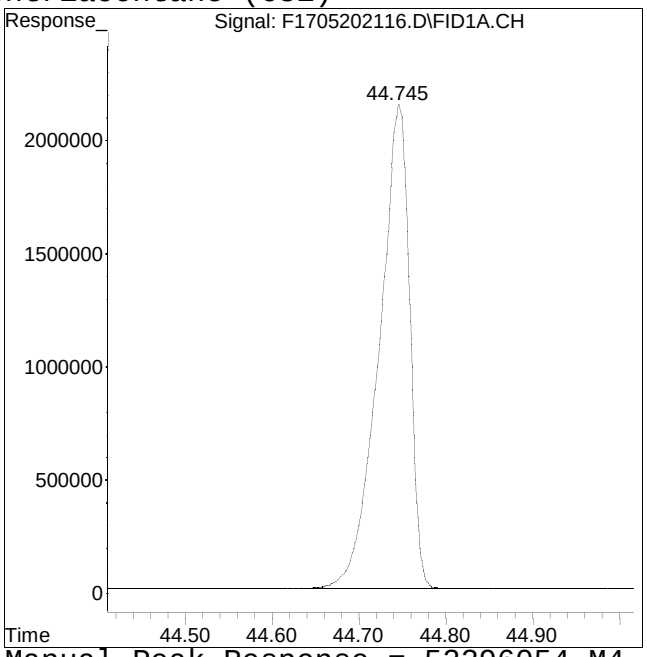
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 52273569



Manual Peak Response = 52296054 M4

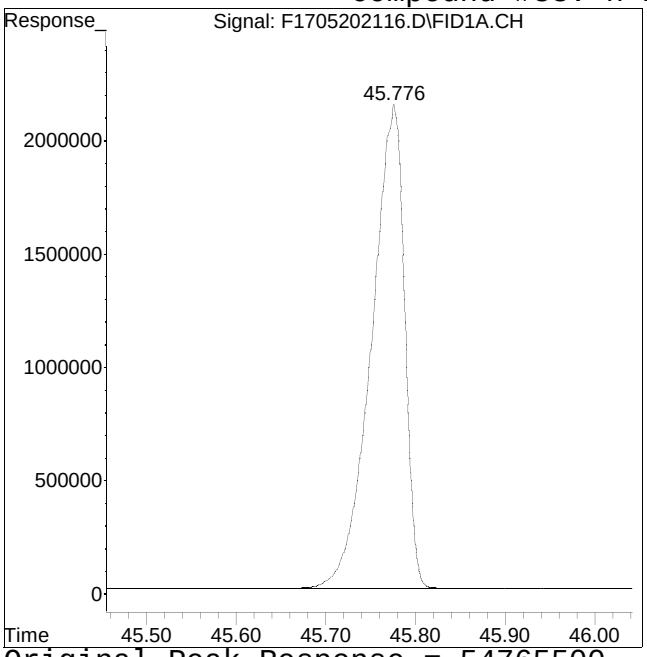
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

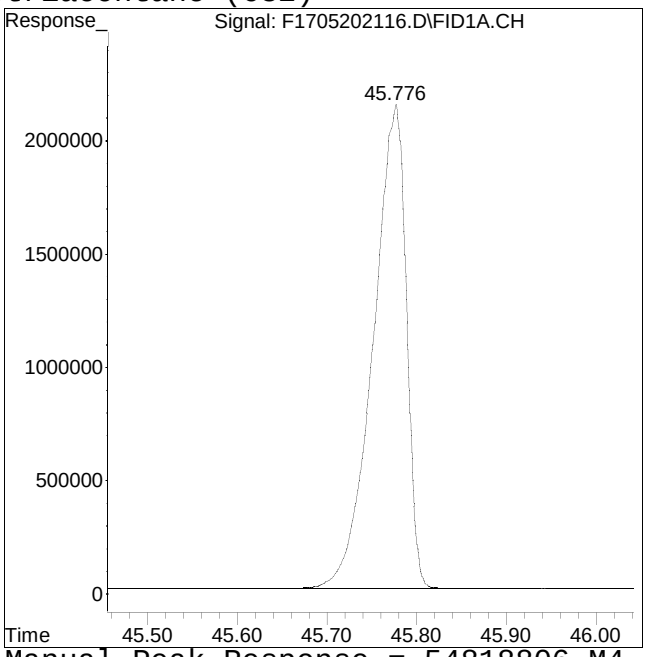
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 54765500



Manual Peak Response = 54818806 M4

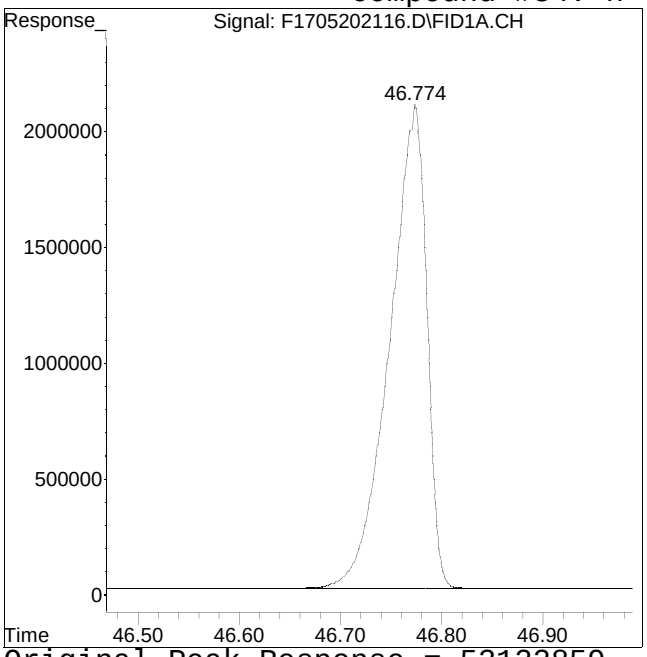
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

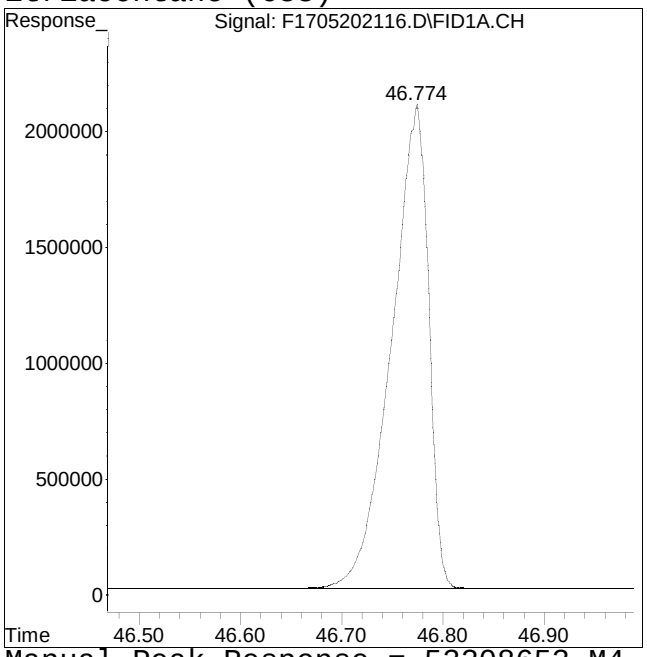
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 53122859



Manual Peak Response = 53208653 M4

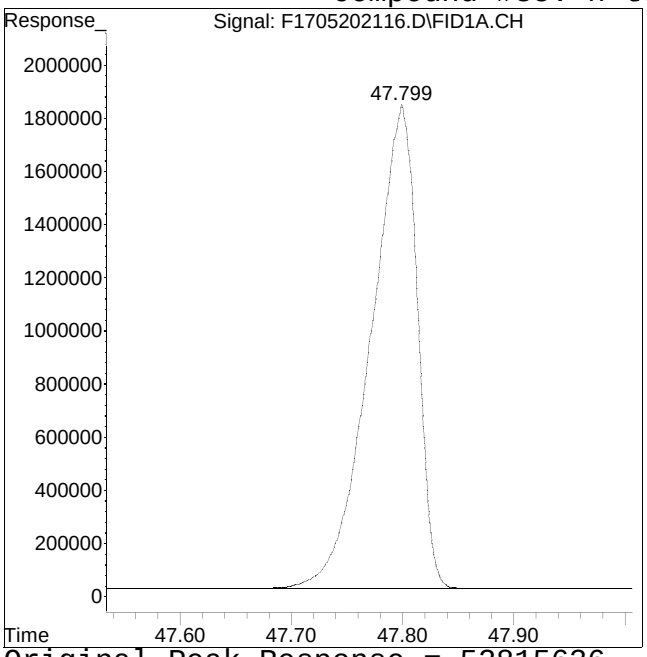
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

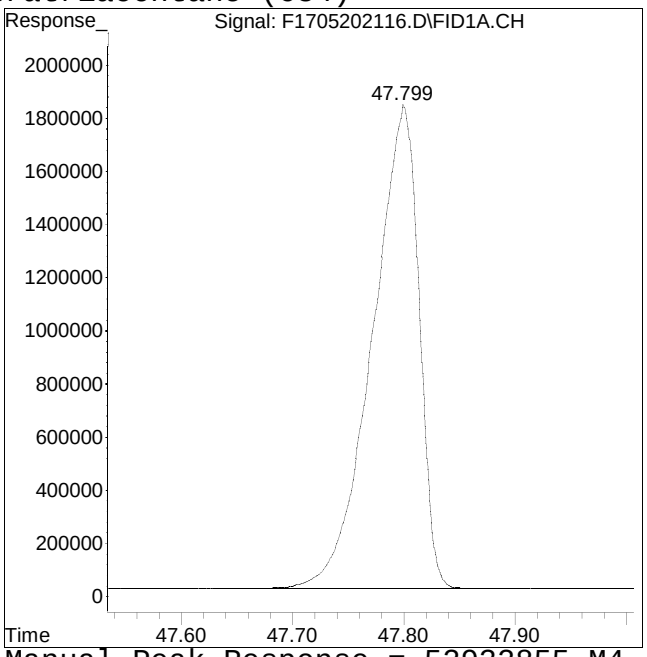
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 52815636



Manual Peak Response = 52932855 M4

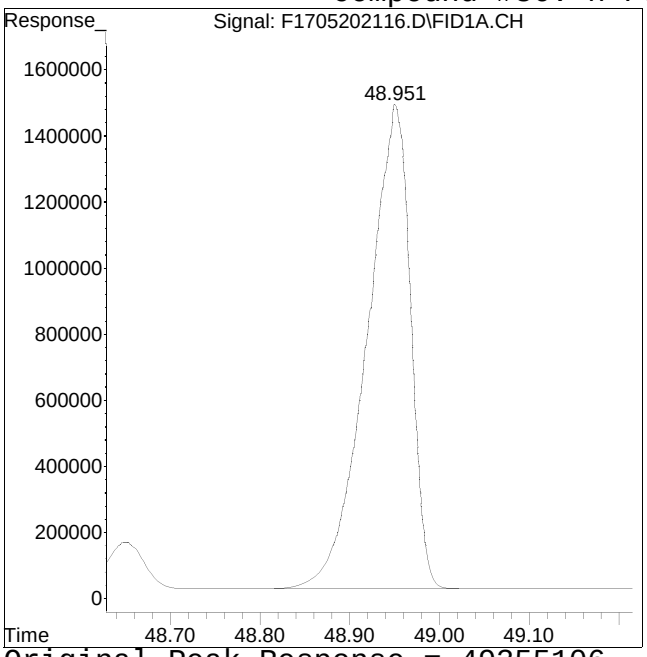
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

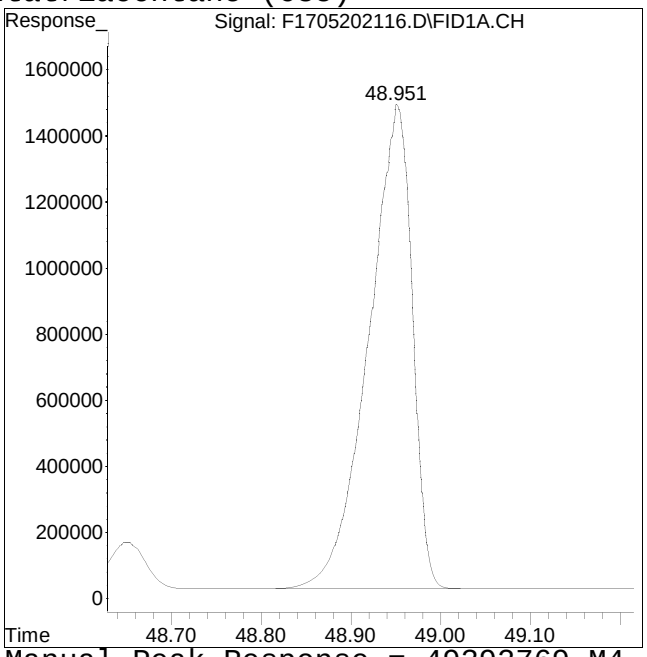
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 49355106



Manual Peak Response = 49392769 M4

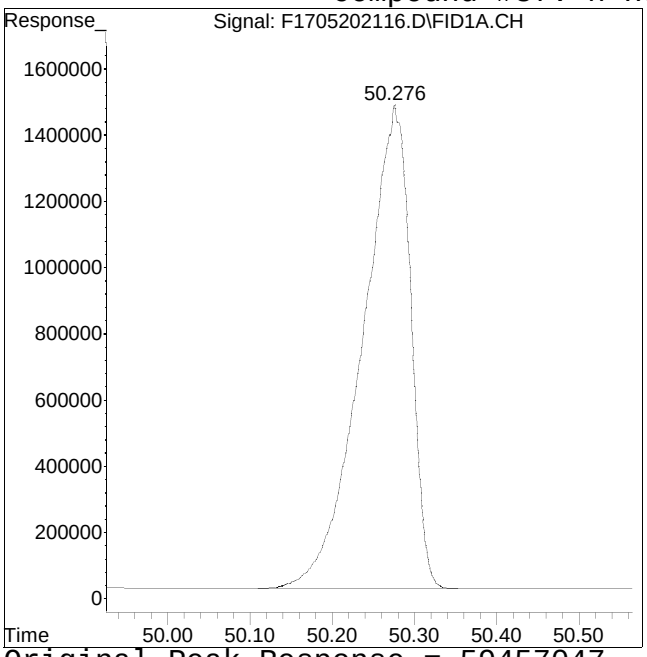
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

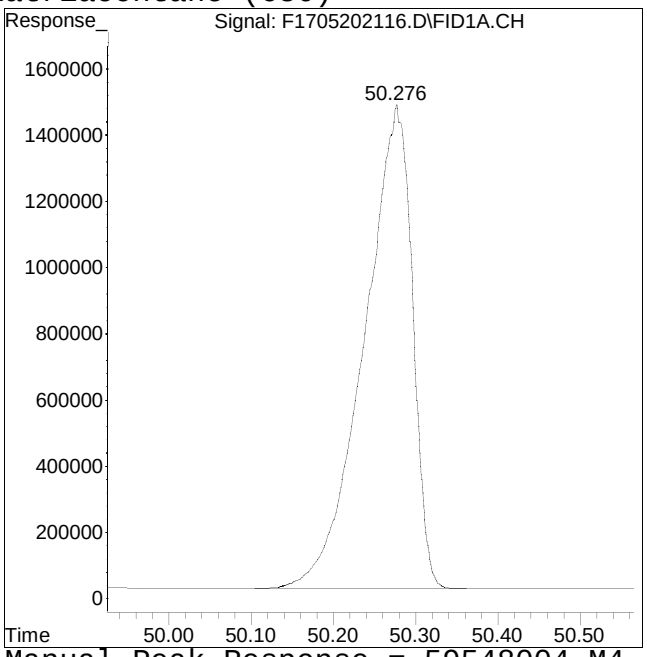
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 59457047



Manual Peak Response = 59548004 M4

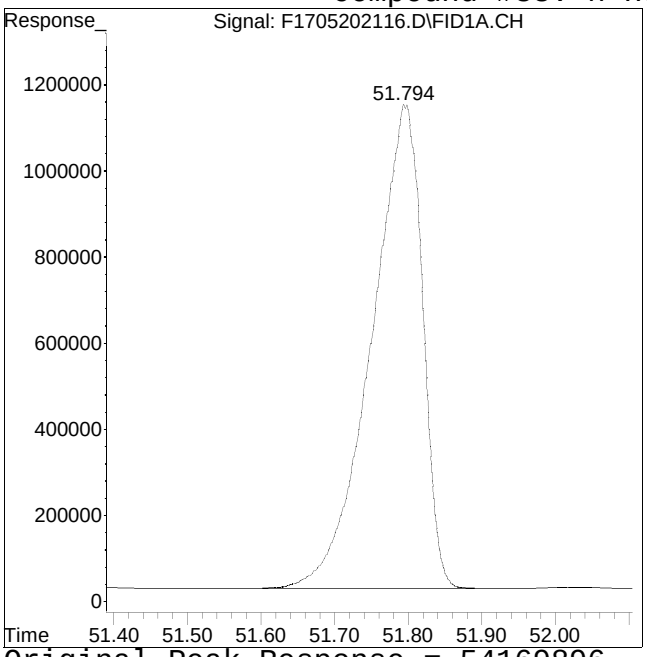
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

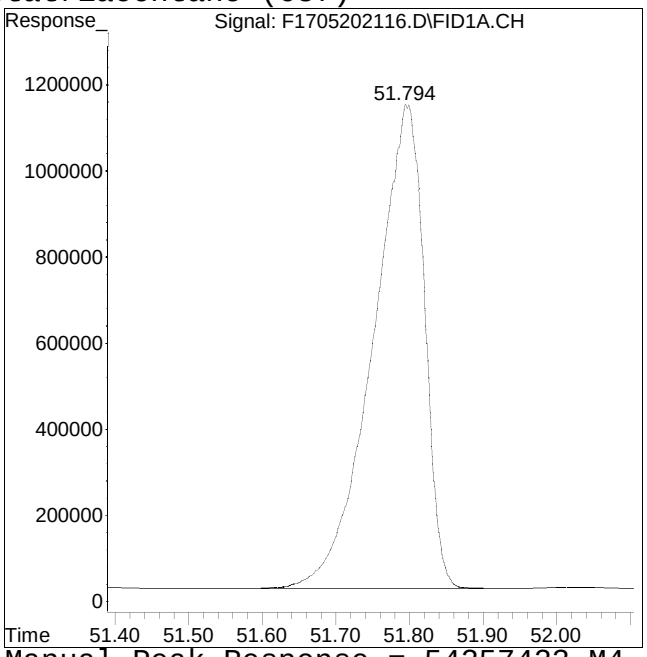
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 54169896



Manual Peak Response = 54257423 M4

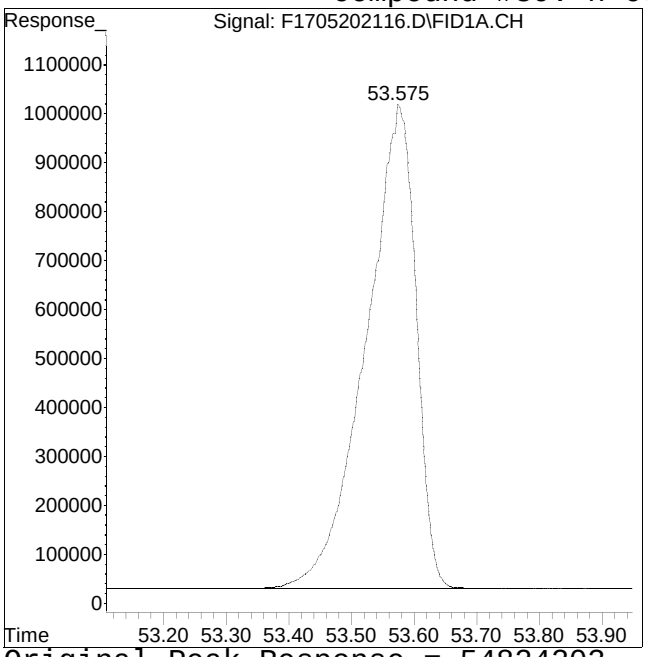
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

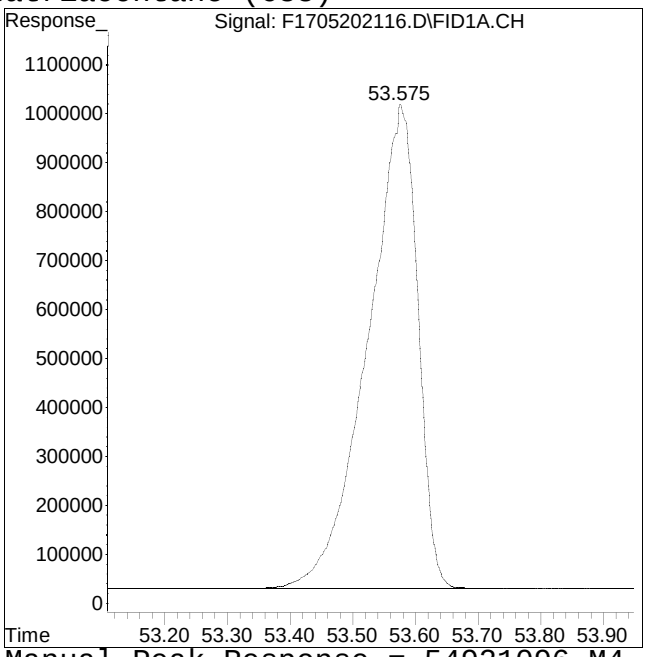
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 54824203



Manual Peak Response = 54921096 M4

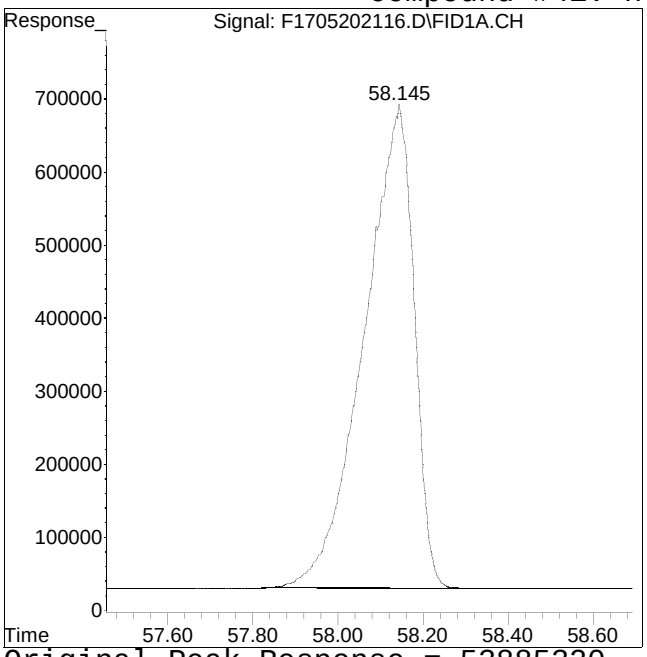
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

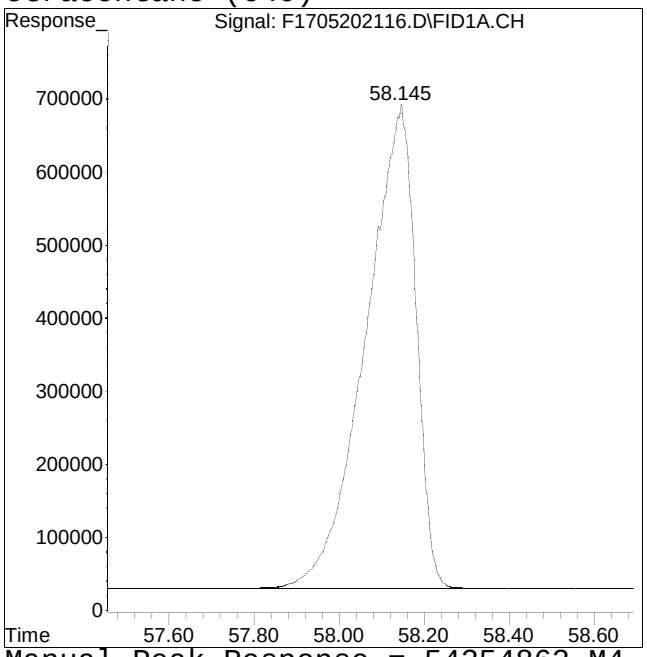
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202116.D
Date Inj'd : 5/20/2021 11:47 pm
Sample : I1705202103F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/28/2021 2:02 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 53885320



Manual Peak Response = 54254862 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202118.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 1:16 am
Operator : FID17:WR
Sample : I1705202104F
Misc : WG1505003,FRBD79,100ug/ml
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:30:21 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:24:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.320	54871636	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.320	117364622	96.775 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 193.55%#	
24) s d50-Tetracosane	35.977	93770148	97.575 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 195.15%#	
Target Compounds			
2) t n-Octane (C8)	5.661	93555203	95.520 ug/mL M4
3) t n-Nonane (C9)	7.856	96616068	90.974 ug/mL M4
4) t n-Decane (C10)	10.339	101268677	94.522 ug/mL M4
5) t n-Undecane (C11)	12.853	100584077	97.192 ug/mL M4
6) t n-Dodecane (C12)	15.283	101404379	98.064 ug/mL M4
7) t n-Tridecane (C13)	17.594	101382804	97.628 ug/mL M4
9) t n-Tetradecane (C14)	19.780	103951622	96.855 ug/mL M4
11) t n-Pentadecane (C15)	21.849	104381725	97.358 ug/mL M4
12) t n-Hexadecane (C16)	23.809	103498291	96.255 ug/mL M4
14) t n-Heptadecane (C17)	25.669	104608998	98.382 ug/mL M4
15) t Pristane	25.785	106780009	95.401 ug/mL M4
16) t n-Octadecane (C18)	27.443	105576842	97.057 ug/mL M4
17) t Phytane	27.608	98121494	96.142 ug/mL M4
18) t n-Nonadecane (C19)	29.131	106027848	97.203 ug/mL M4
20) t n-Eicosane (C20)	30.739	106535091	97.058 ug/mL M4
21) t n-Heneicosane (C21)	32.276	107060132	97.302 ug/mL M4
22) t n-Docosane (C22)	33.751	107024076	96.976 ug/mL M4
23) t n-Tricosane (C23)	35.167	107222101	96.930 ug/mL M4
25) t n-Tetracosane (C24)	36.526	107072363	97.150 ug/mL M4
26) t n-Pentacosane (C25)	37.833	105388822	98.061 ug/mL M4
27) t n-Hexacosane (C26)	39.094	108489730	98.481 ug/mL M4
28) t n-Heptacosane (C27)	40.309	108907457	98.592 ug/mL M4
29) t n-Octacosane (C28)	41.482	111710931	96.863 ug/mL M4
30) t n-Nonacosane (C29)	42.616	111802404	99.997 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202118.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 1:16 am
Operator : FID17:WR
Sample : I1705202104F
Misc : WG1505003,FRBD79,100ug/ml
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:30:21 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:24:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

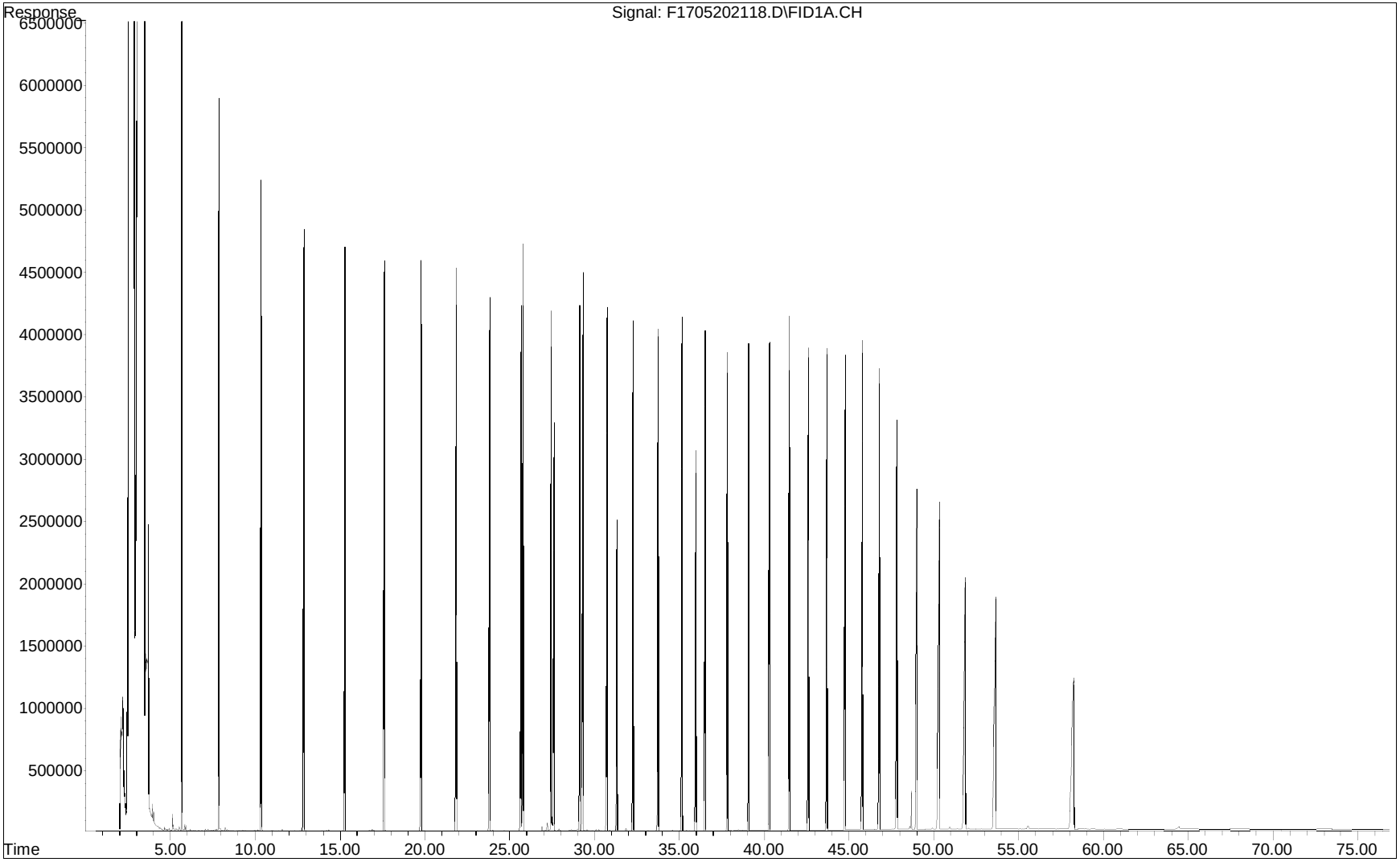
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.709	112736860	100.636 ug/mL M4
32) t	n-Hentriacontane (C31)	44.767	109283276	100.893 ug/mL M4
33) t	n-Dotriacontane (C32)	45.801	115267518	101.571 ug/mL M4
34) t	n-Tritriacontane (C33)	46.797	112385732	101.695 ug/mL M4
35) t	n-tetratriacontane (C34)	47.829	112321184	102.624 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.985	105135244	102.780 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.316	127058279	103.257 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.851	115889230	104.034 ug/mL M4
39) t	n-Octatriacontane (C38)	53.638	117351711	104.132 ug/mL M4
41) t	n-Tetracontane (C40)	58.229	116054901	104.127 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202118.D
Operator : FID17:WR
Acquired : 21 May 2021 1:16 am using AcqMethod FID17A.M
Sample Name: I1705202104F
Instrument: FID17
Misc Info : WG1505003,FRBD79,100ug/ml
Vial Number: 9
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

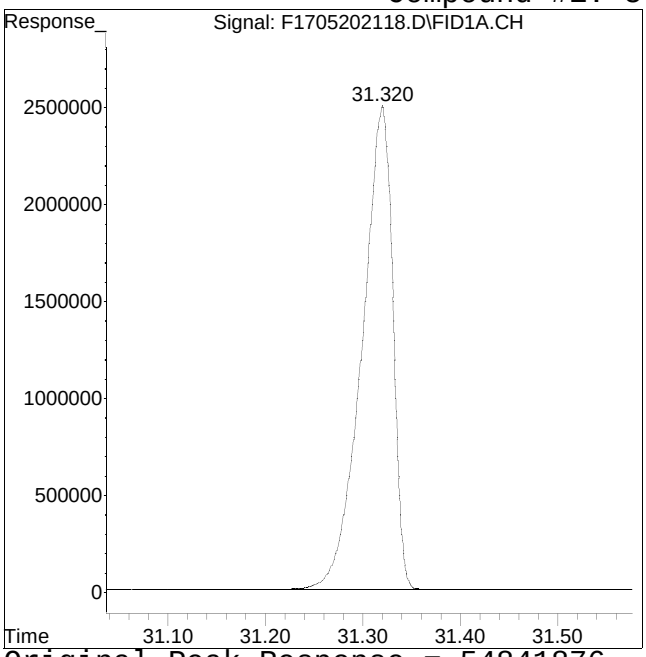


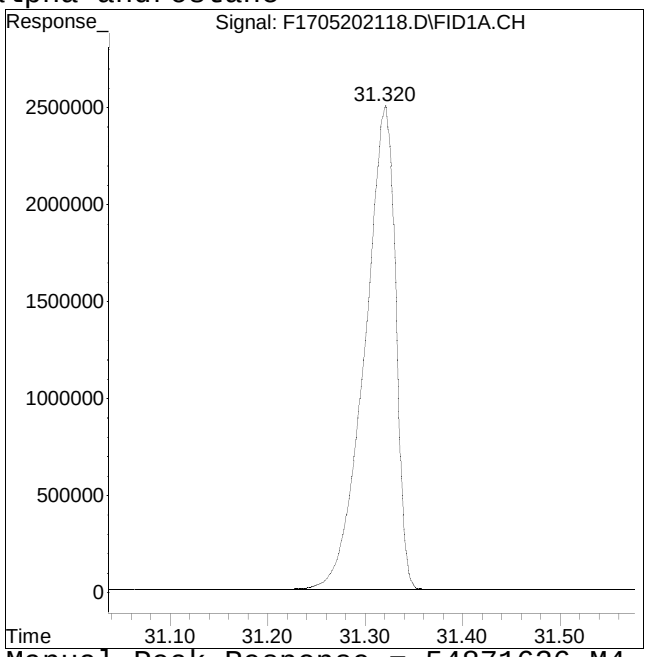
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #1: 5-alpha-androstane





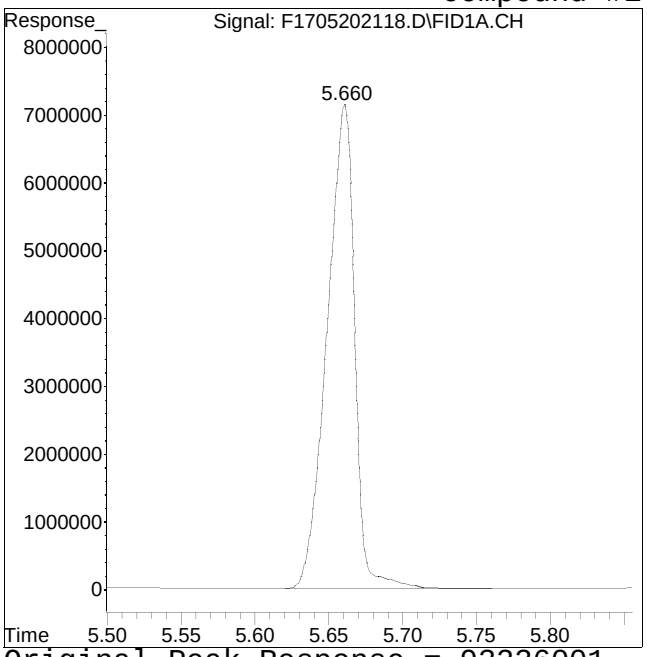
Original Peak Response = 54841876 Manual Peak Response = 54871636 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

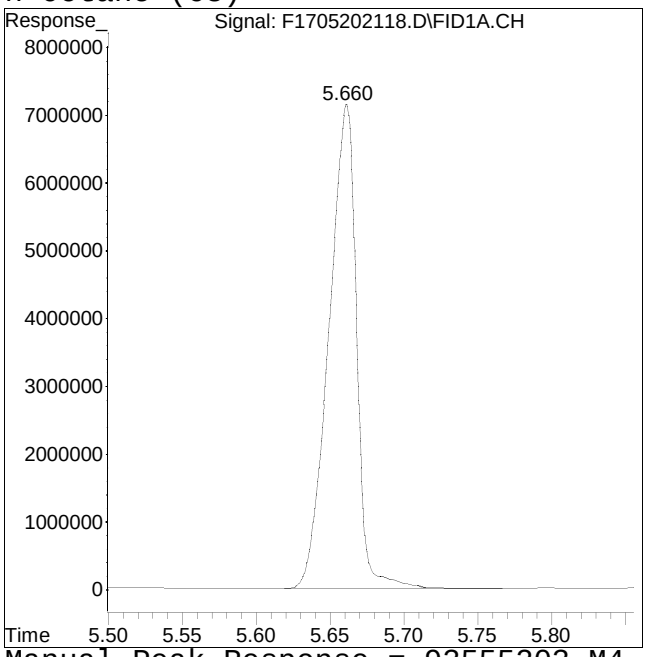
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #2: n-Octane (C8)



Original Peak Response = 93236001



Manual Peak Response = 93555203 M4

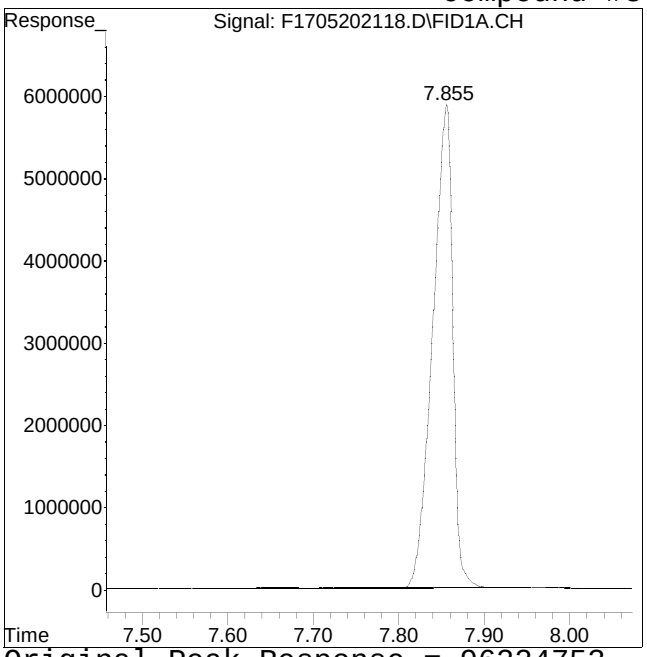
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

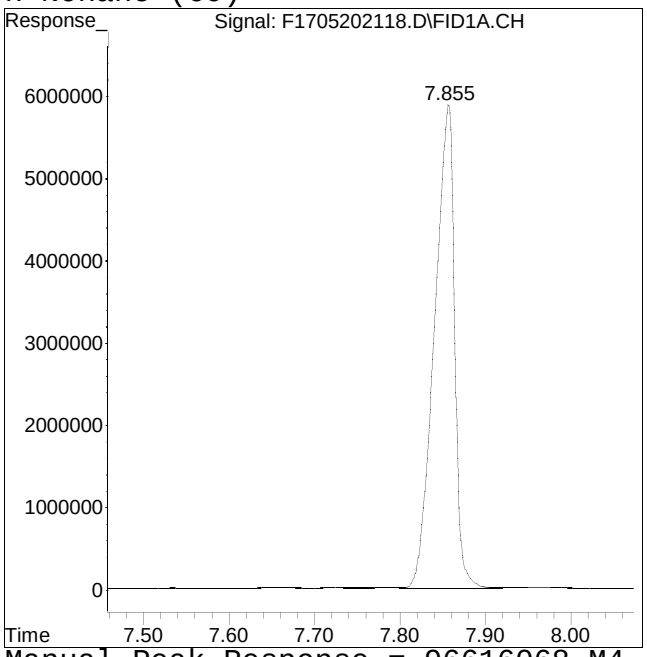
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 96224753



Manual Peak Response = 96616068 M4

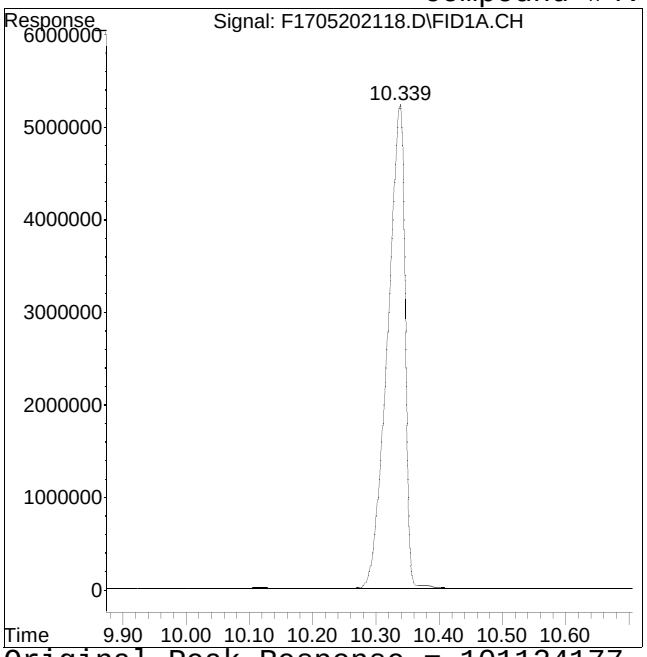
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

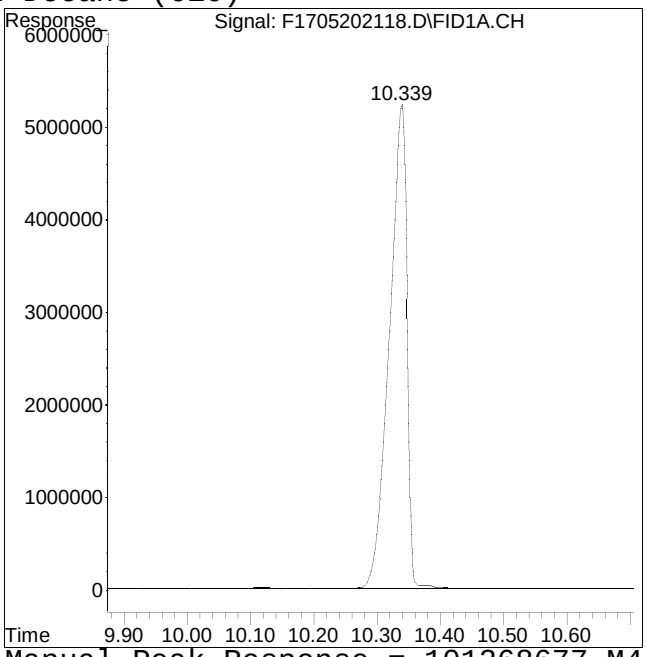
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #4: n-Decane (C10)



Original Peak Response = 101124177



Manual Peak Response = 101268677 M4

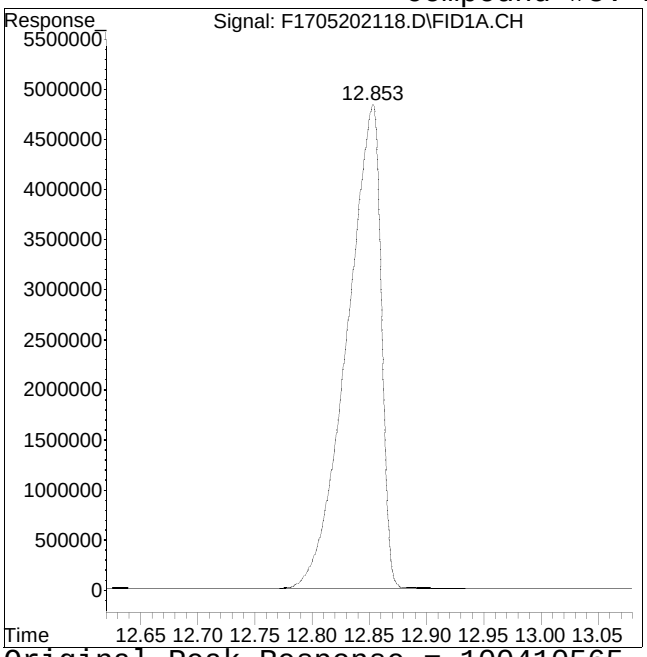
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

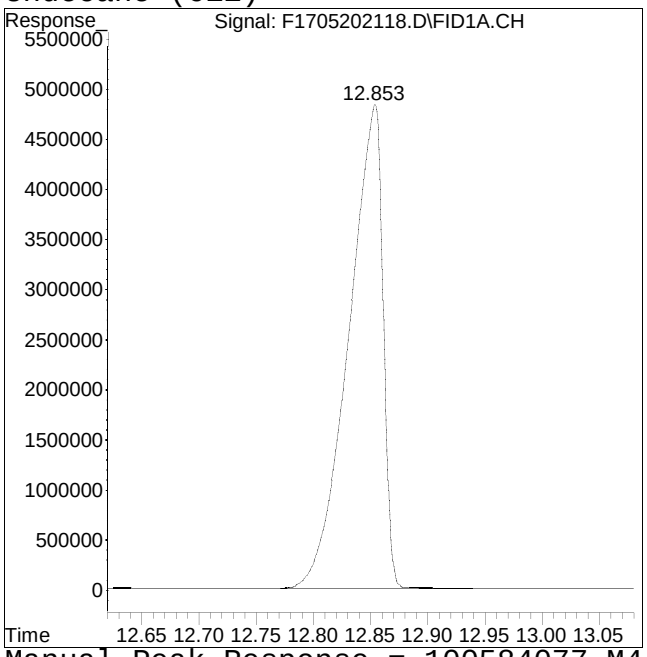
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 100410565



Manual Peak Response = 100584077 M4

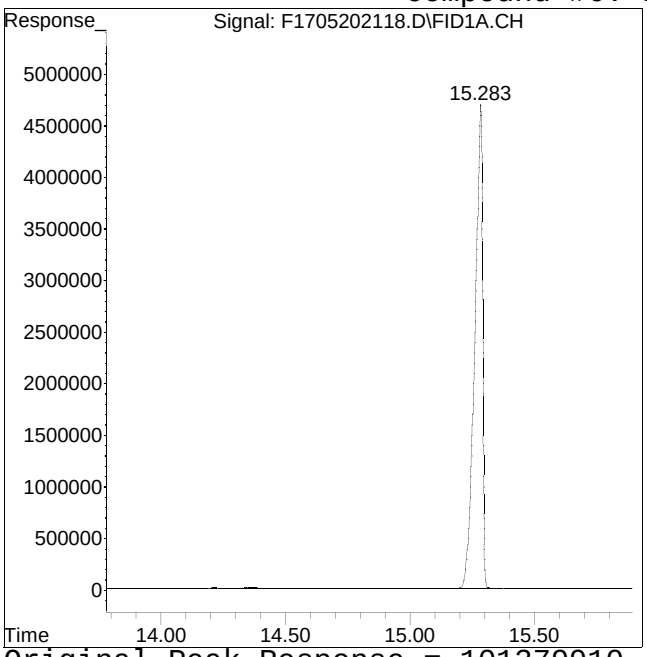
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

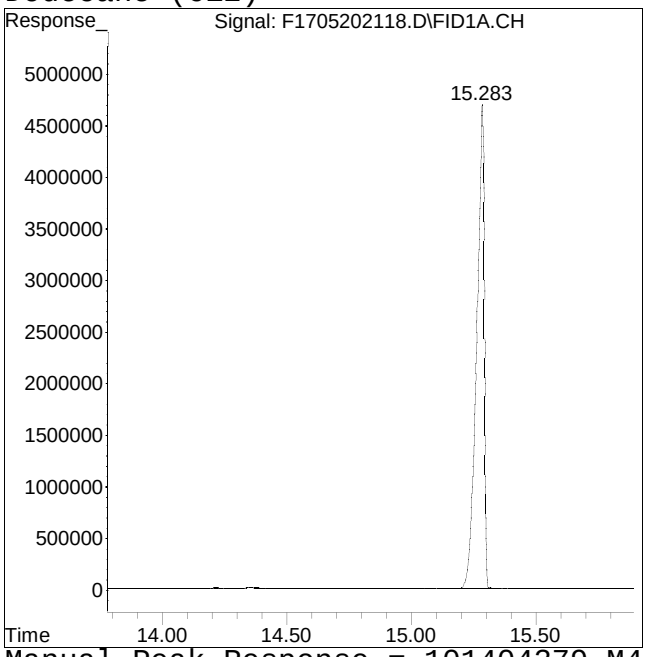
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 101379910



Manual Peak Response = 101404379 M4

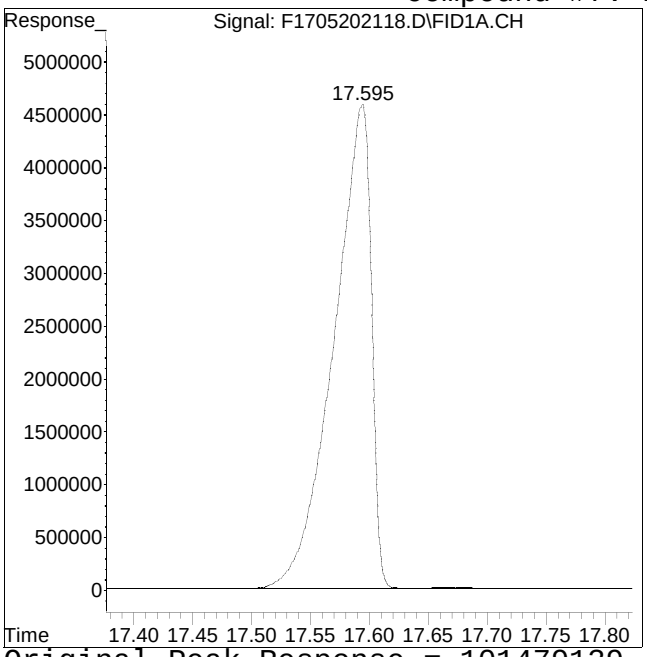
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

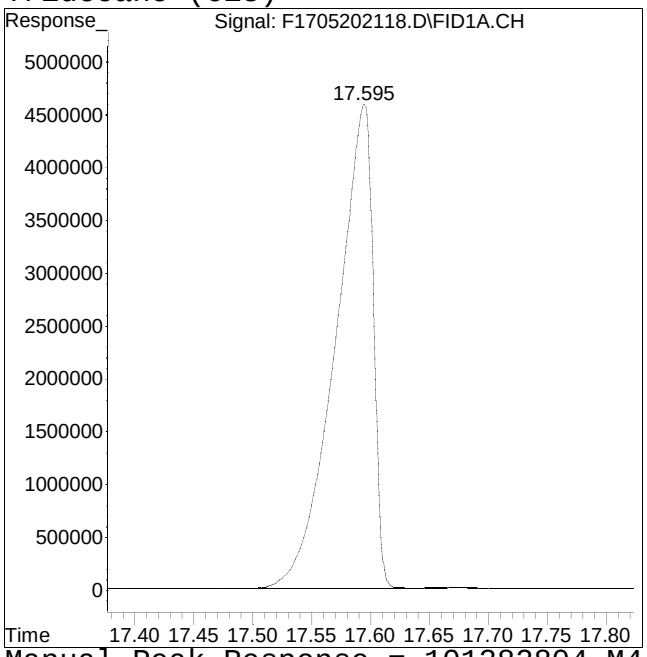
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 101479139



Manual Peak Response = 101382804 M4

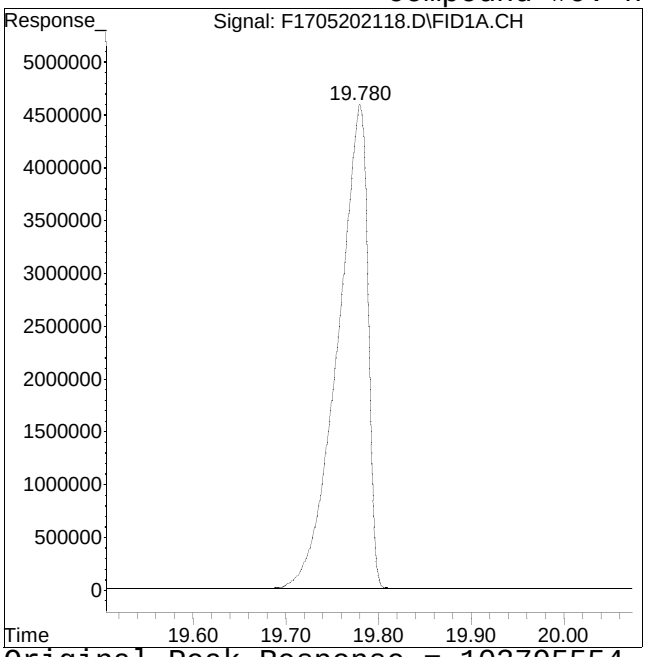
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

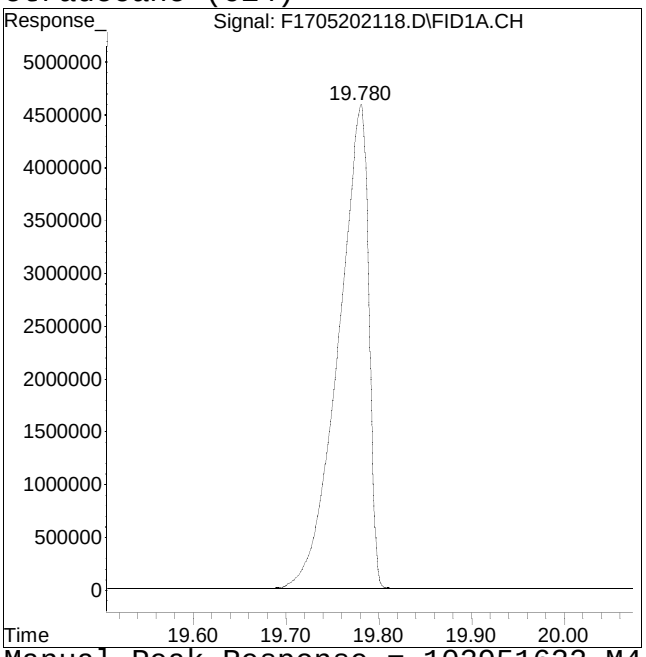
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 103795554



Manual Peak Response = 103951622 M4

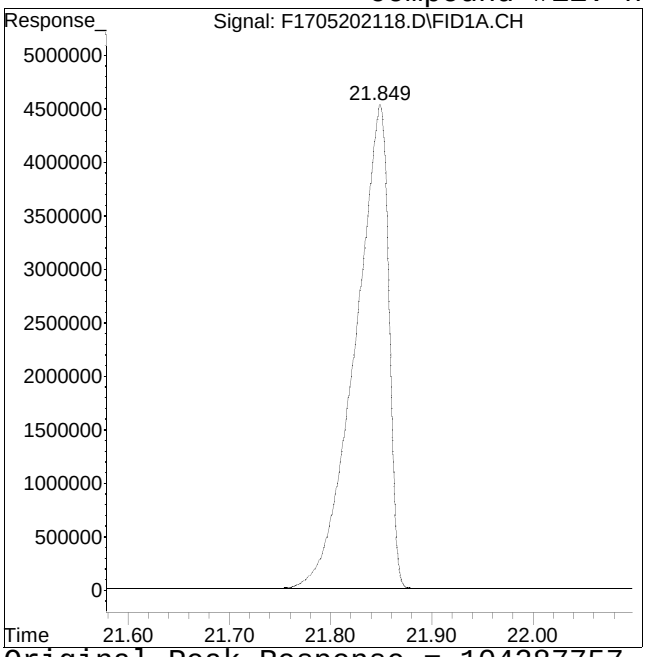
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

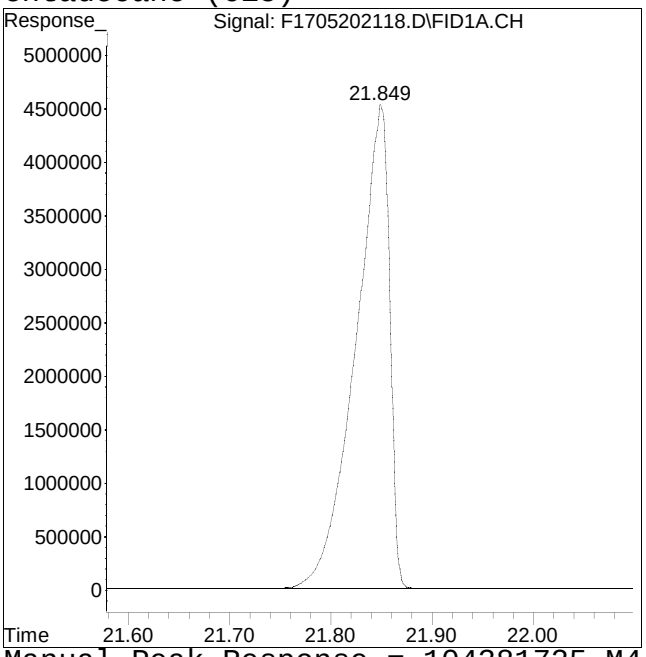
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 104287757



Manual Peak Response = 104381725 M4

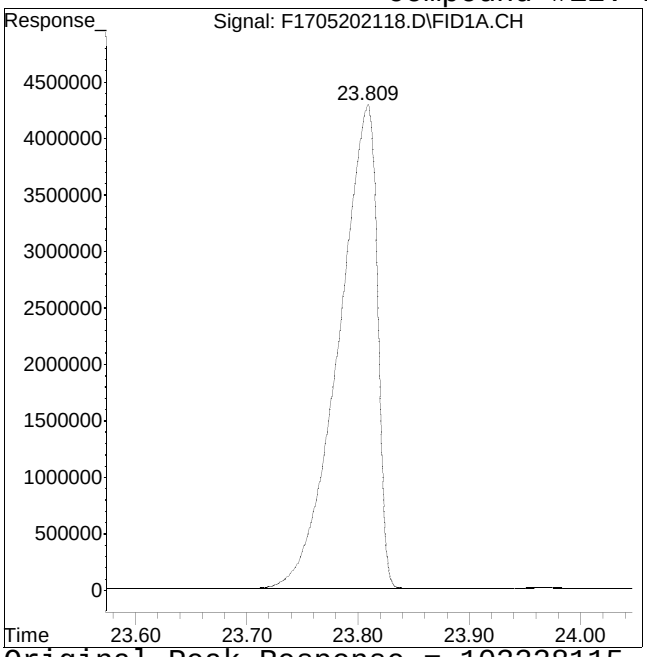
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

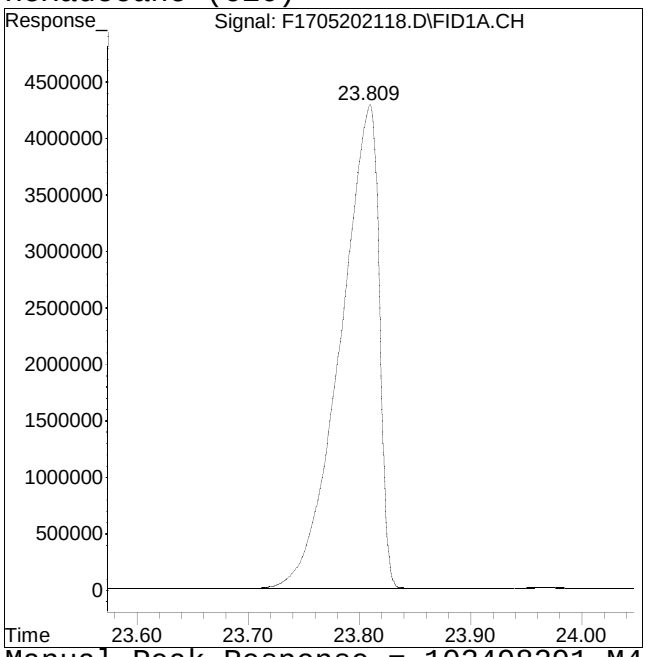
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 103338115



Manual Peak Response = 103498291 M4

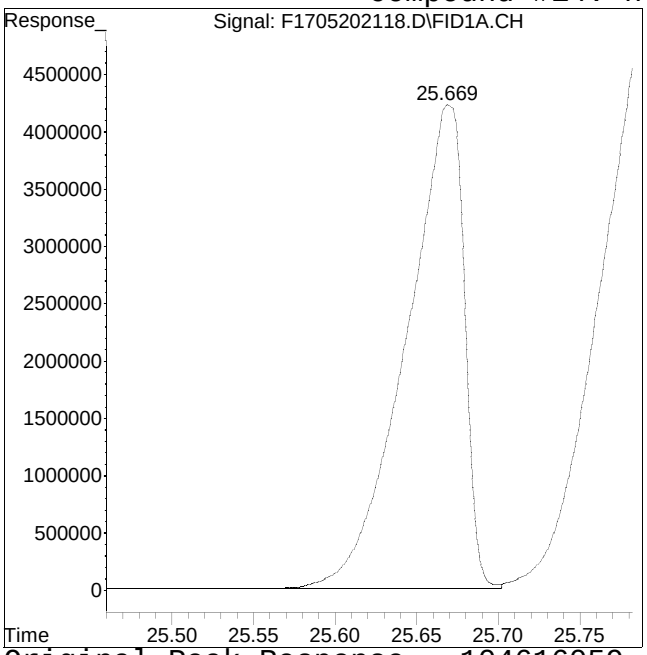
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

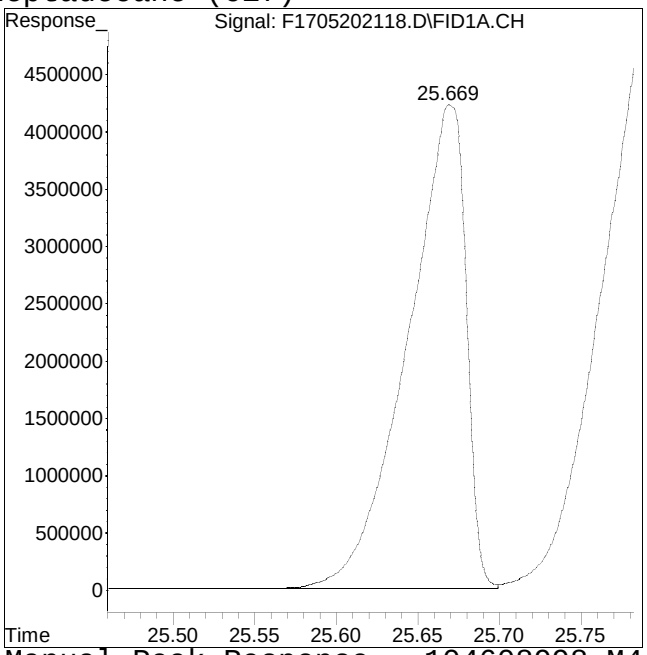
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 104616059



Manual Peak Response = 104608998 M4

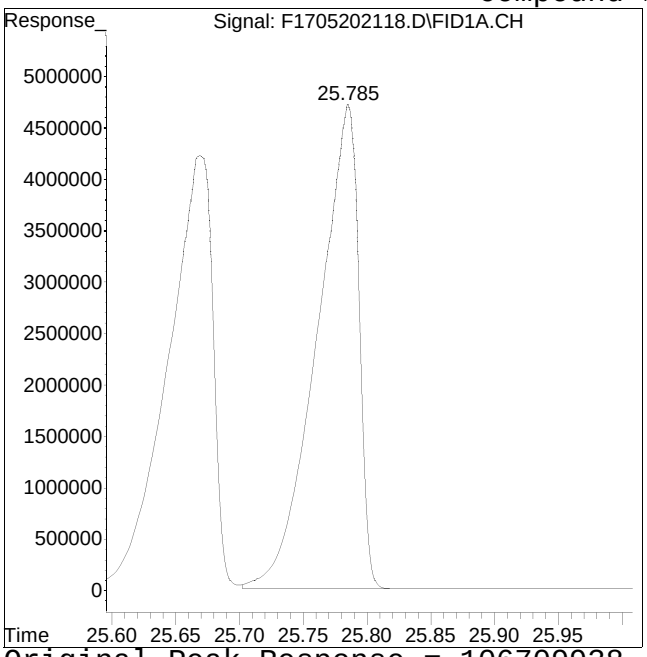
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

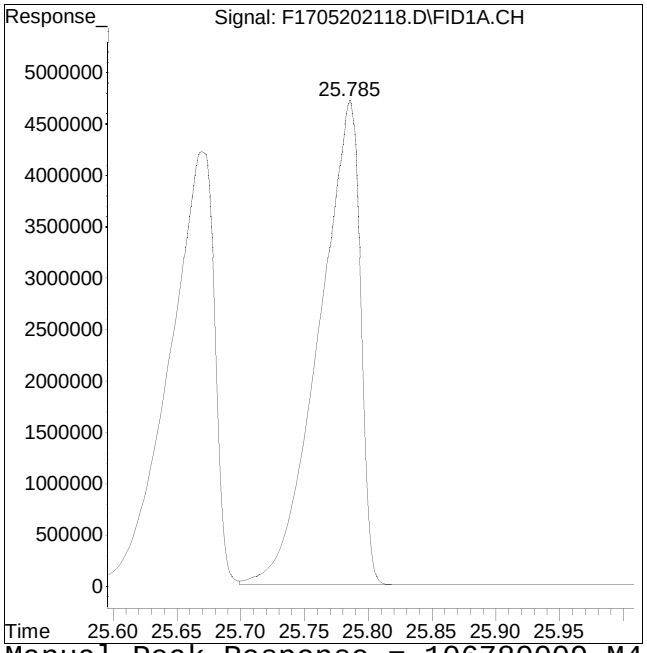
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #15: Pristane



Original Peak Response = 106709938



Manual Peak Response = 106780009 M4

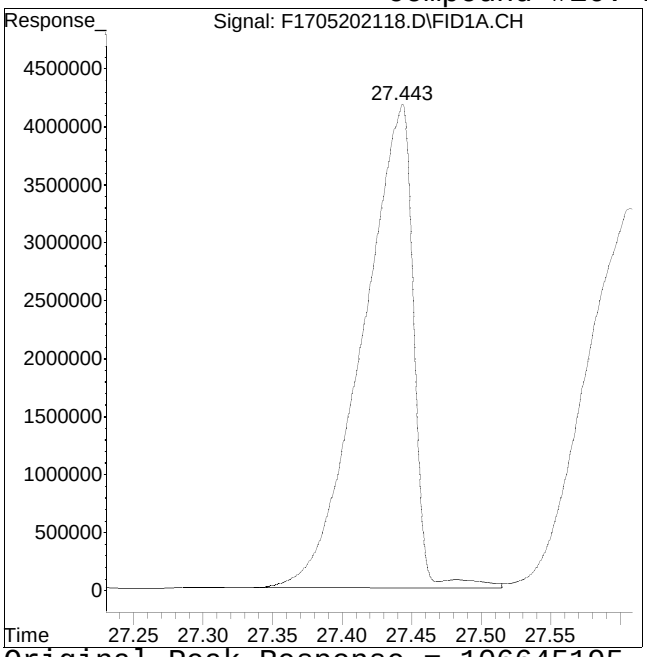
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

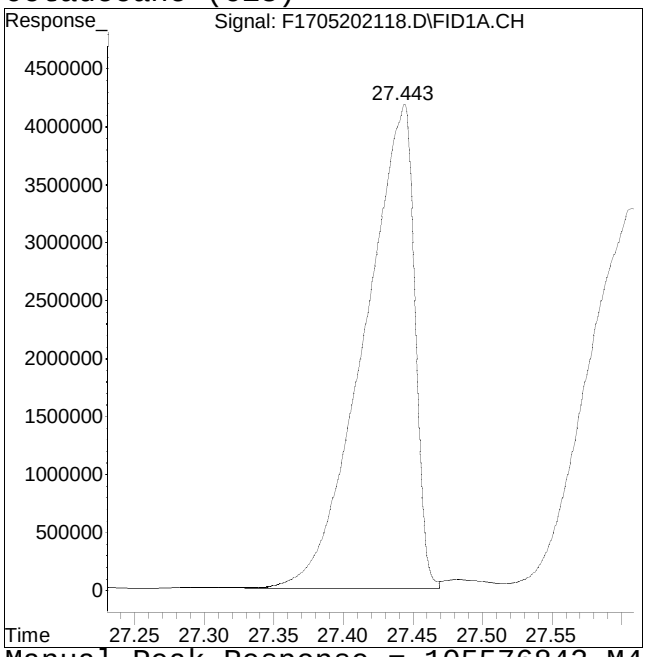
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 106645195



Manual Peak Response = 105576842 M4

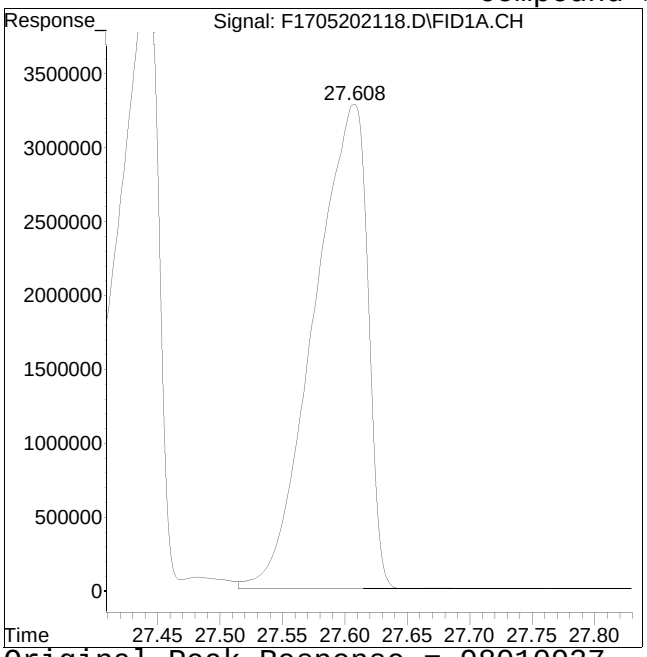
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

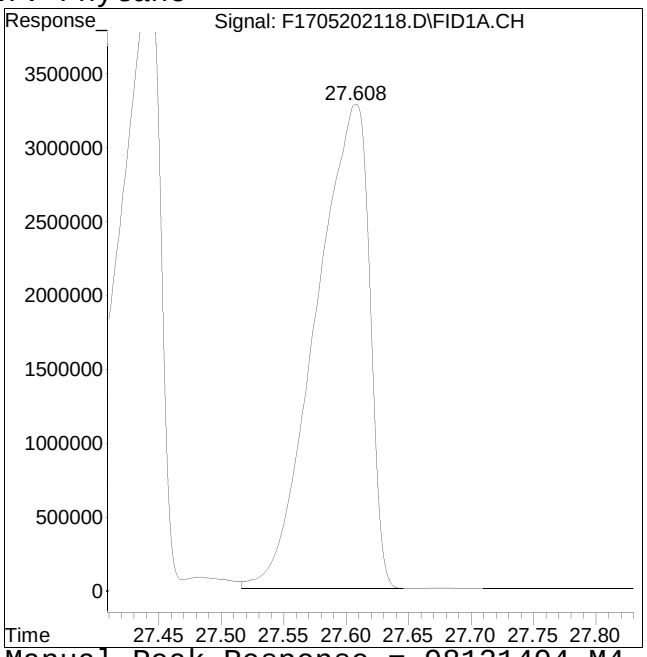
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #17: Phytane



Original Peak Response = 98010937



Manual Peak Response = 98121494 M4

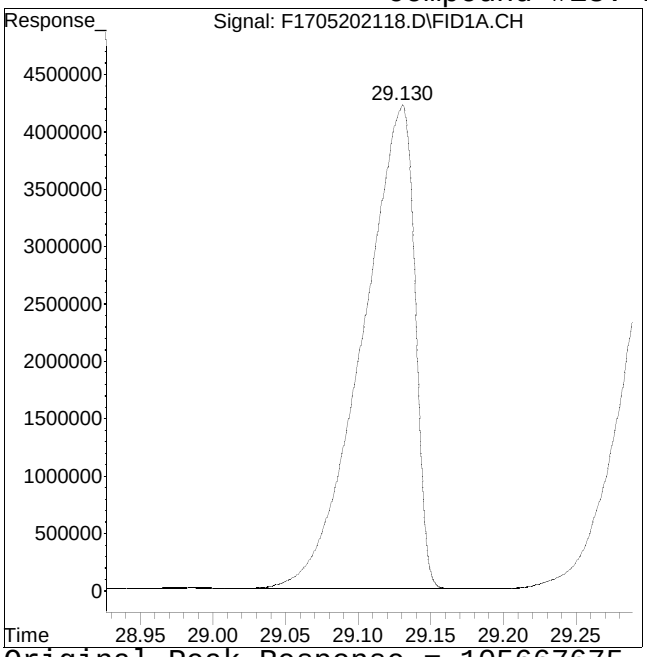
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

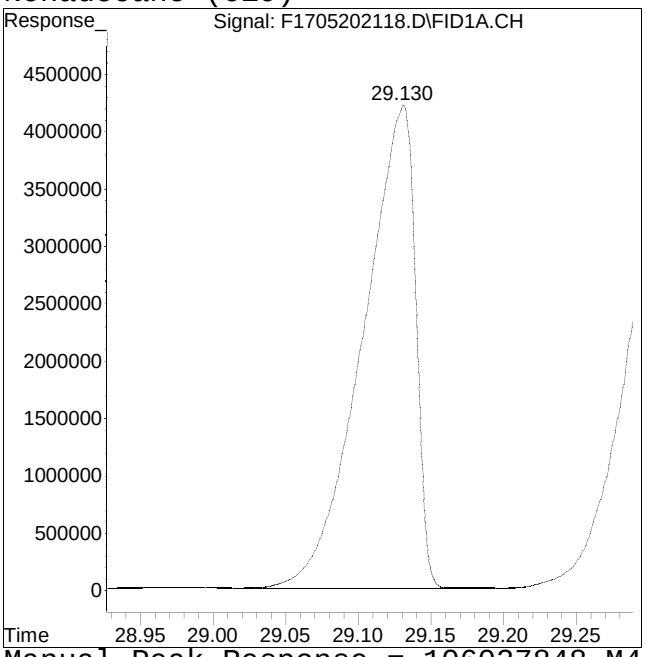
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 105667675



Manual Peak Response = 106027848 M4

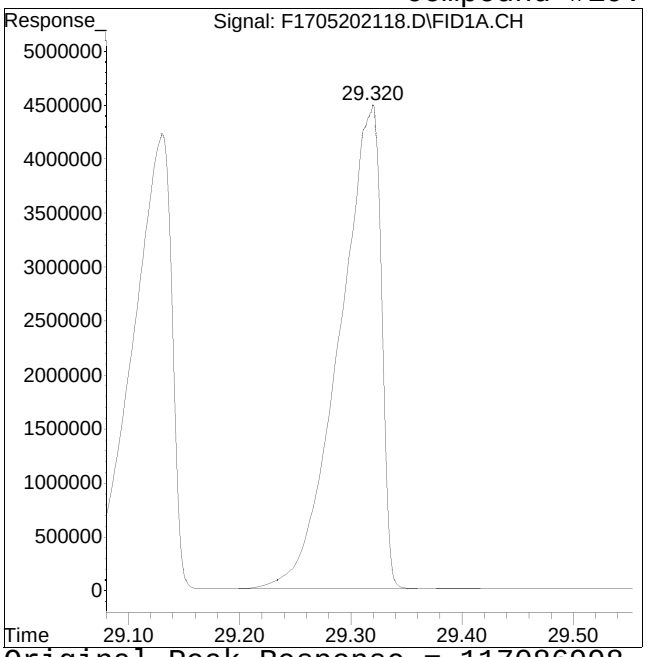
M4 = Poor automated baseline construction.

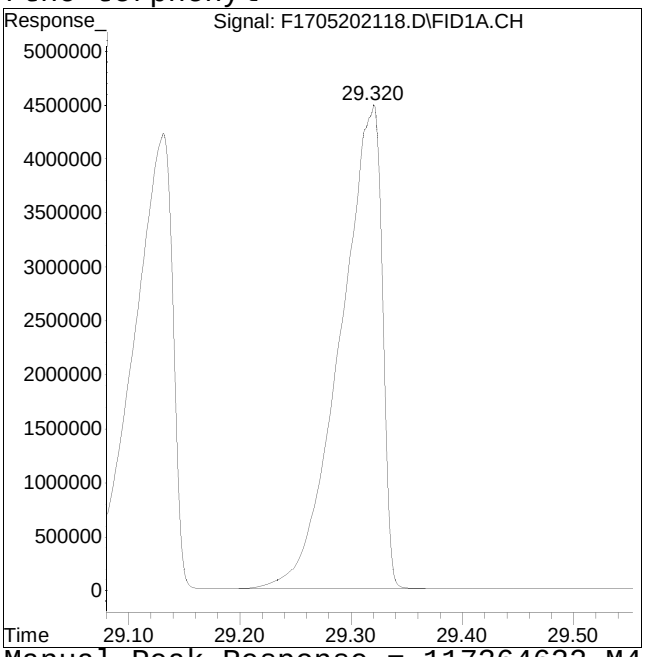
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #19: ortho-terphenyl





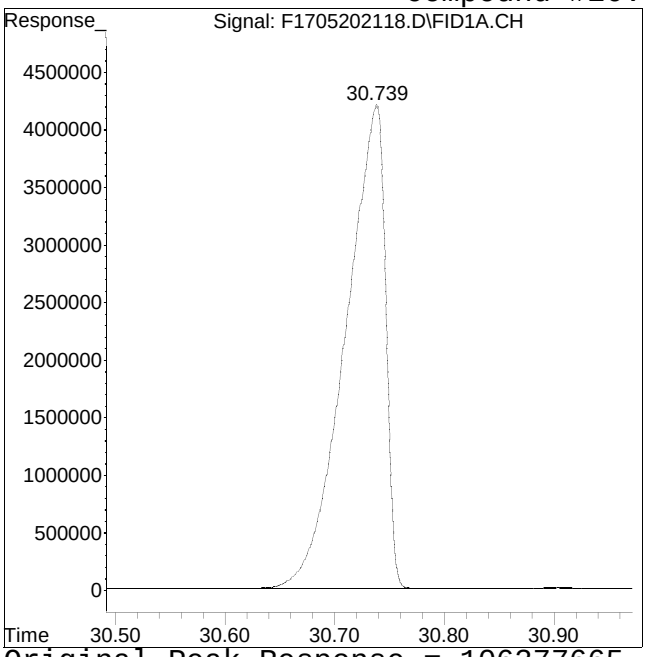
Original Peak Response = 117086998 Manual Peak Response = 117364622 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

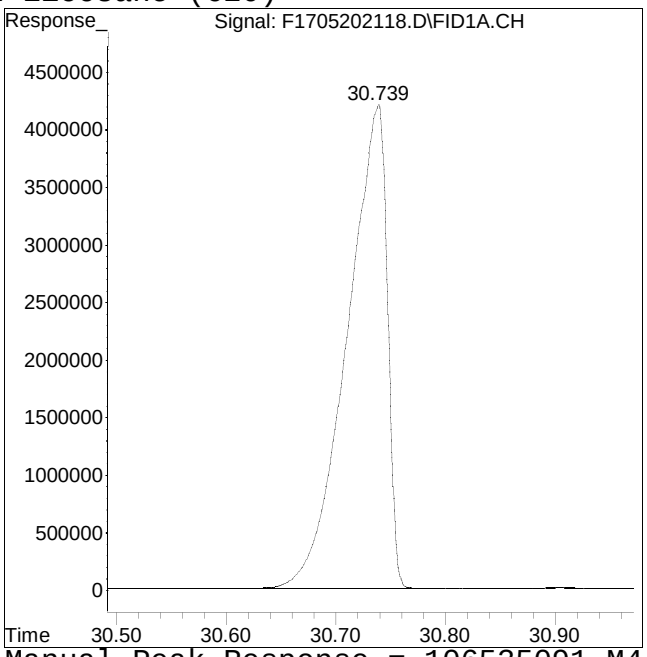
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 106377665



Manual Peak Response = 106535091 M4

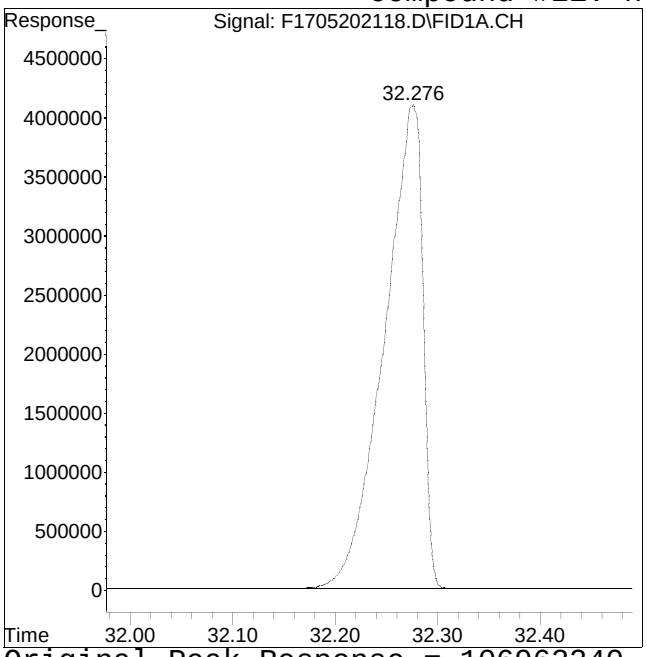
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

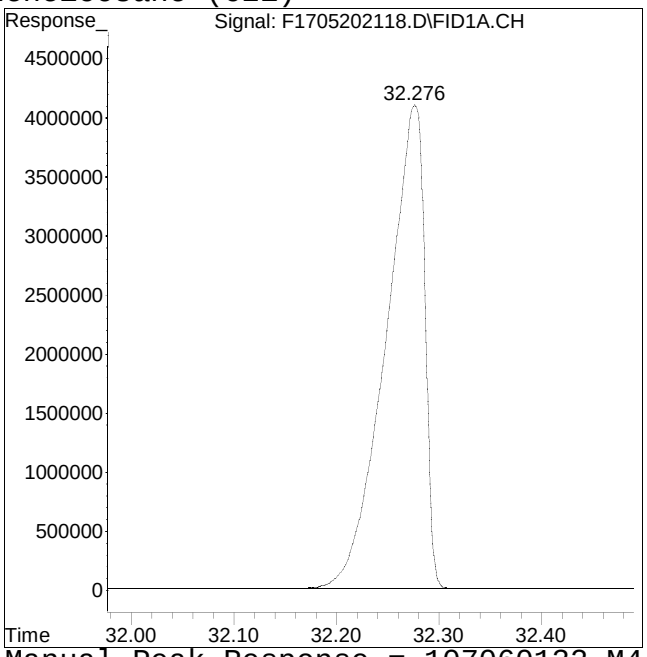
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 106962240



Manual Peak Response = 107060132 M4

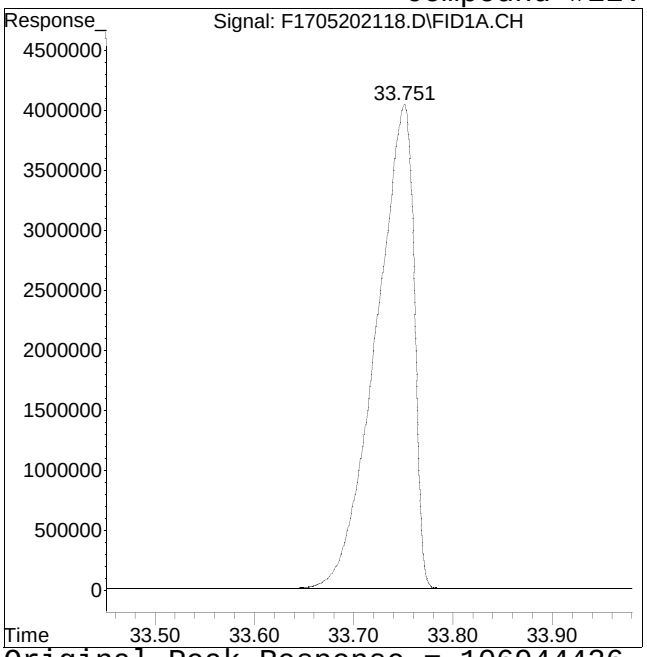
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

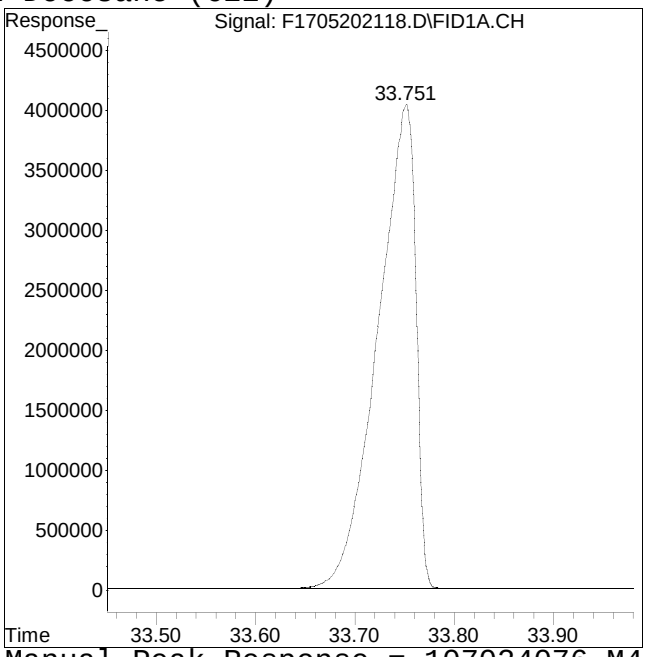
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 106944426



Manual Peak Response = 107024076 M4

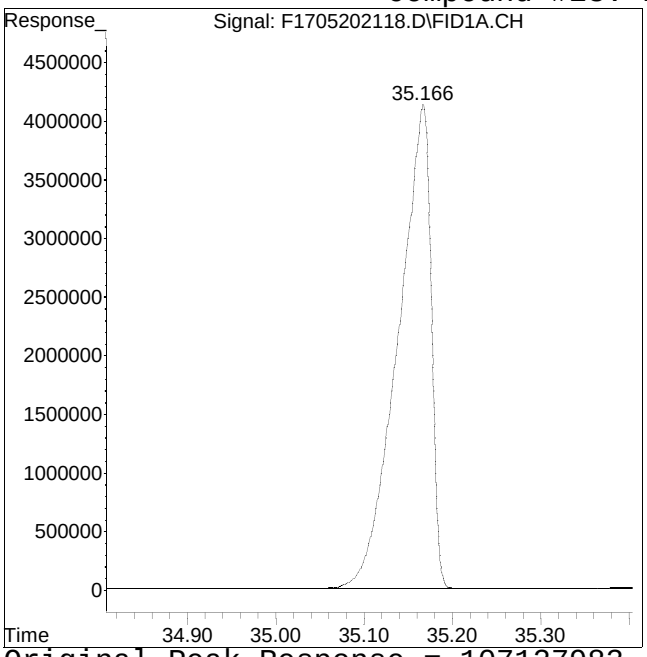
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

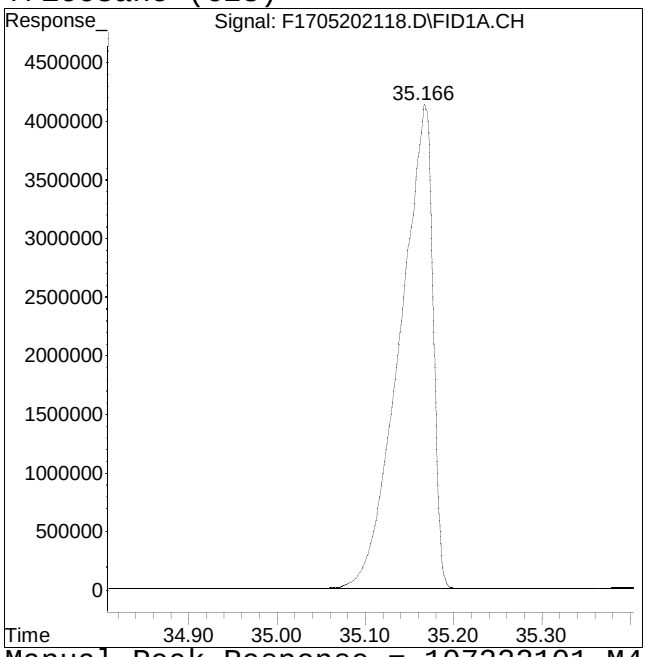
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 107127983



Manual Peak Response = 107222101 M4

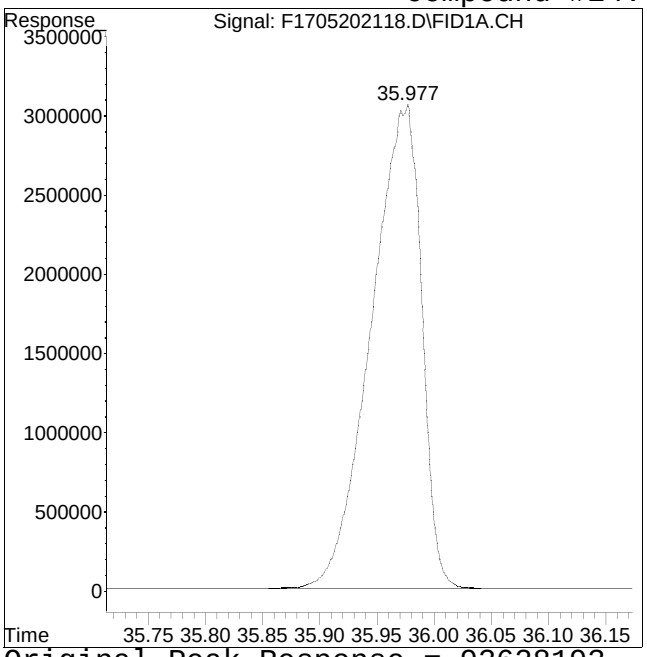
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

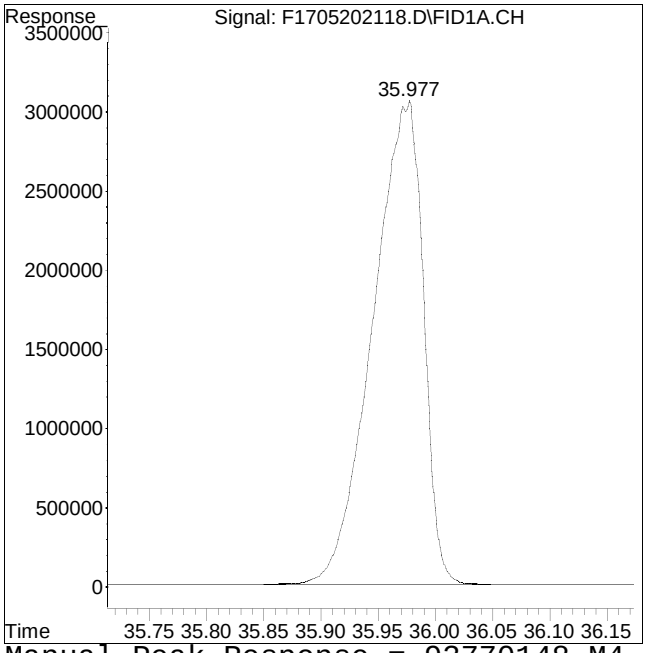
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #24: d50-Tetracosane



Original Peak Response = 93628193



Manual Peak Response = 93770148 M4

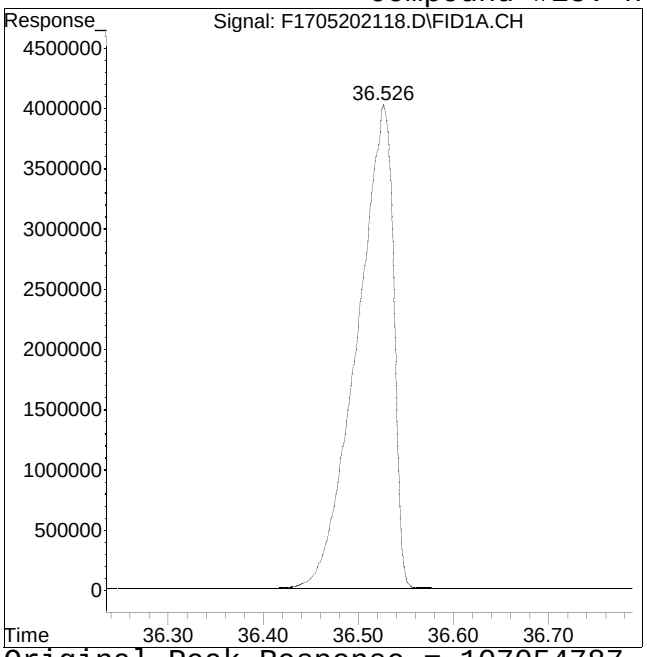
M4 = Poor automated baseline construction.

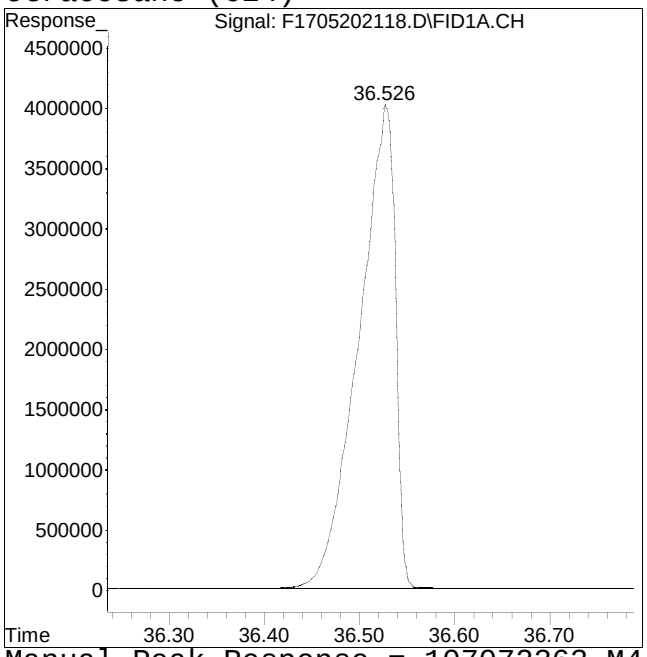
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #25: n-Tetracosane (C24)





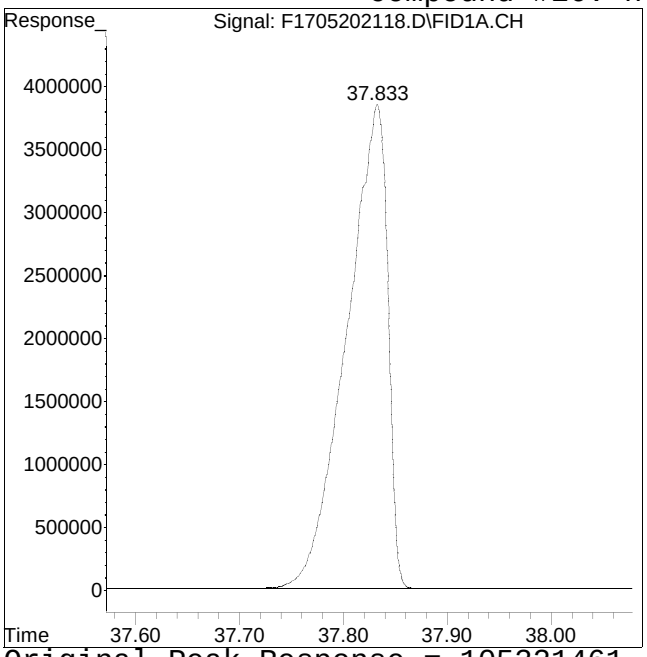
Original Peak Response = 107054787 Manual Peak Response = 107072363 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

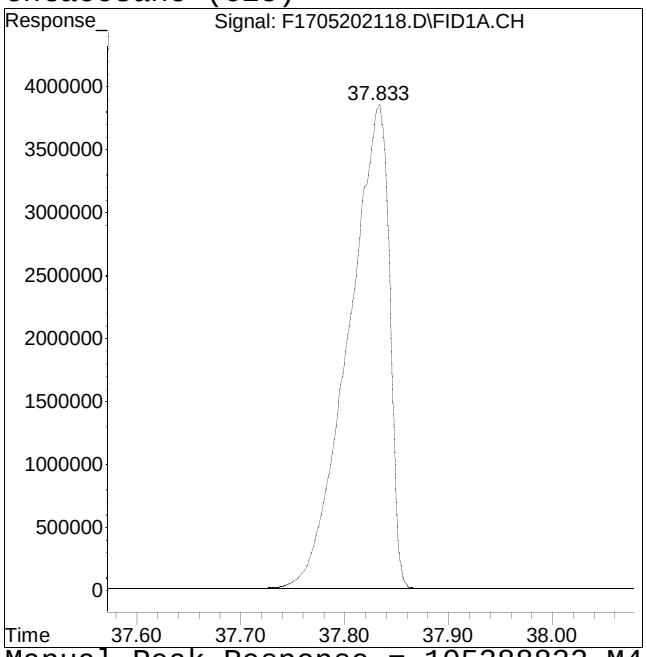
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 105321461



Manual Peak Response = 105388822 M4

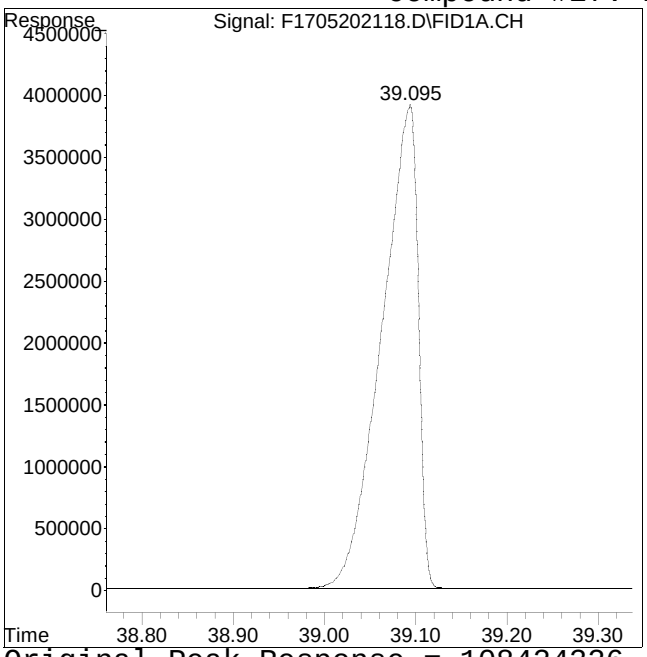
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

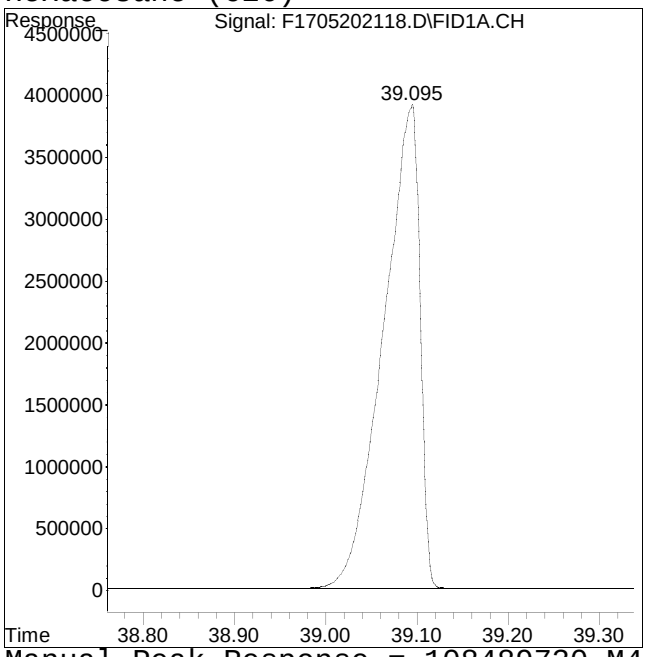
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 108424326



Manual Peak Response = 108489730 M4

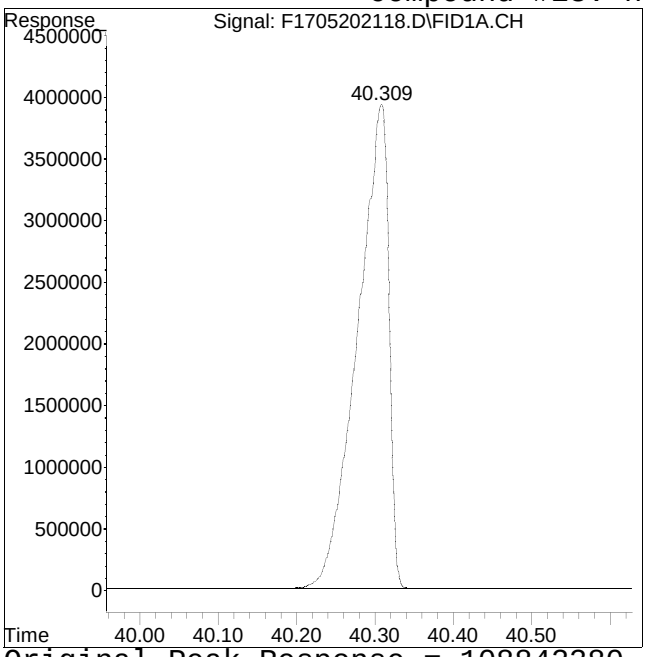
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

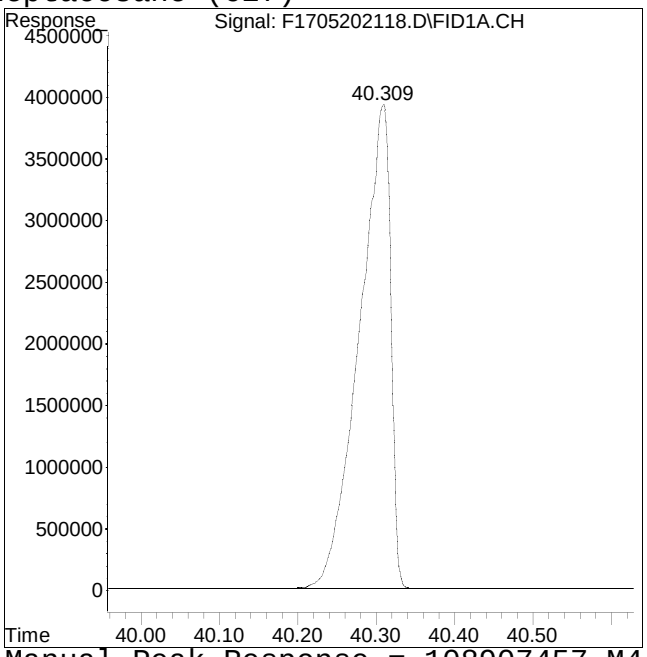
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 108842380



Manual Peak Response = 108907457 M4

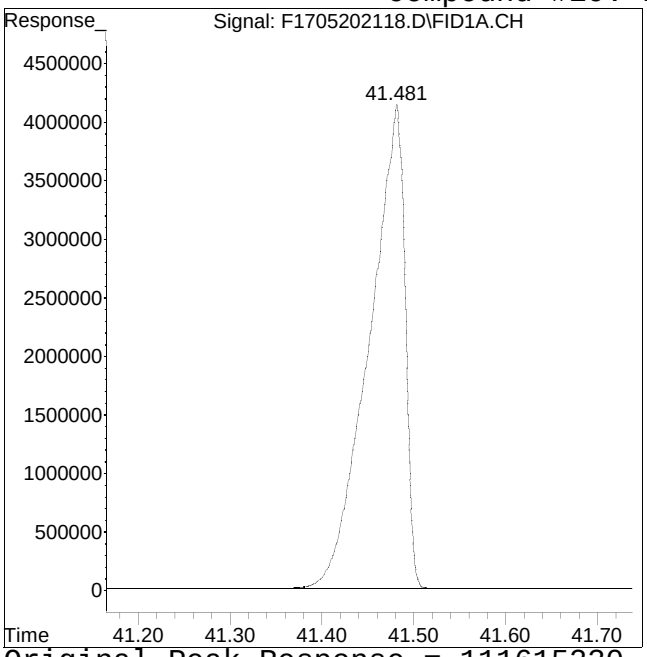
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

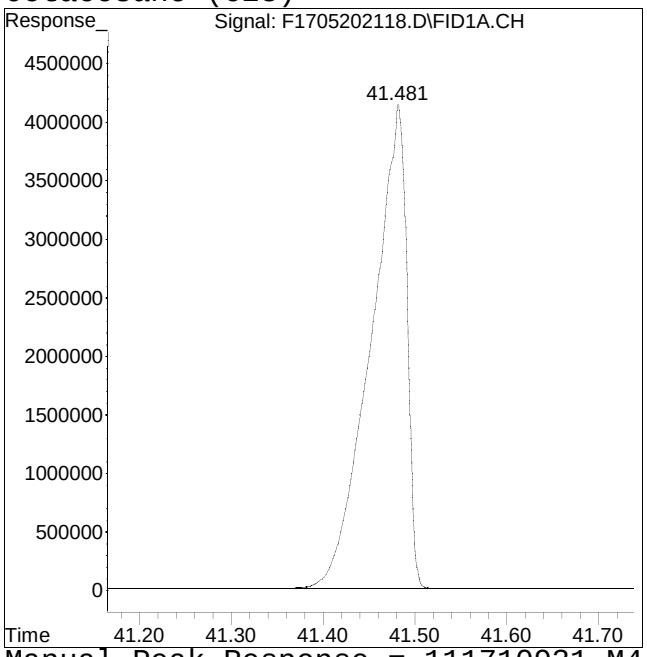
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 111615230



Manual Peak Response = 111710931 M4

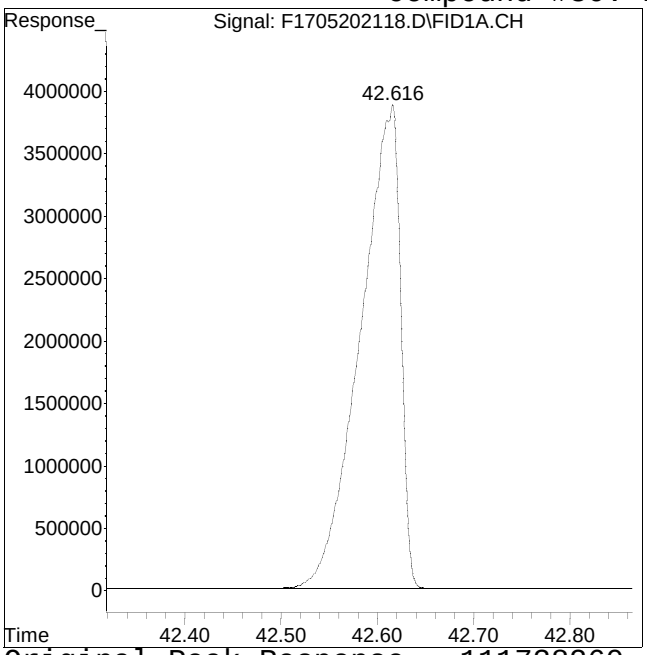
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

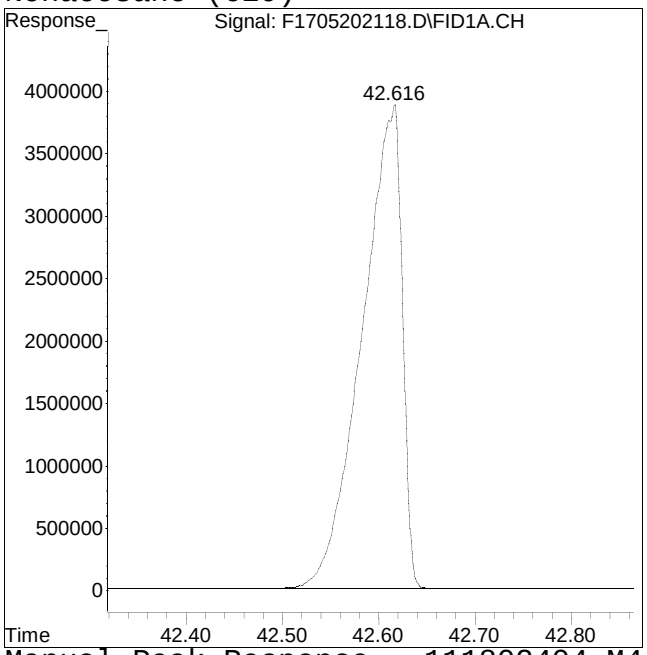
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 111738260



Manual Peak Response = 111802404 M4

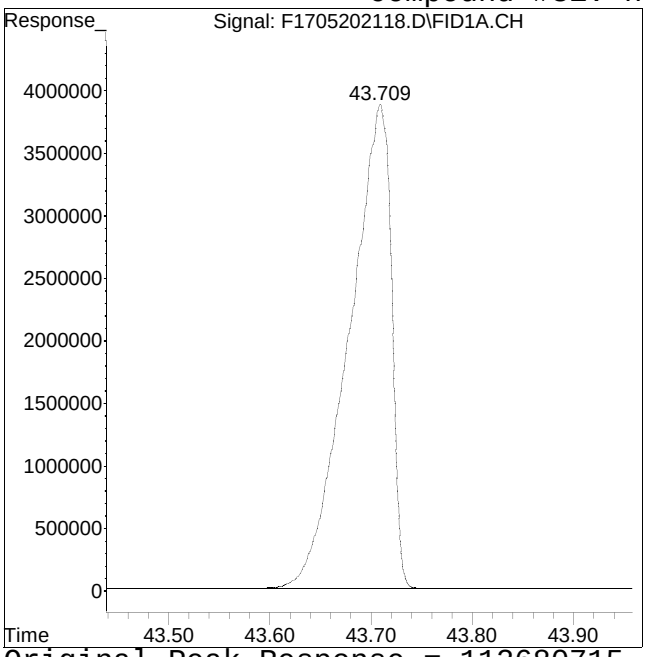
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

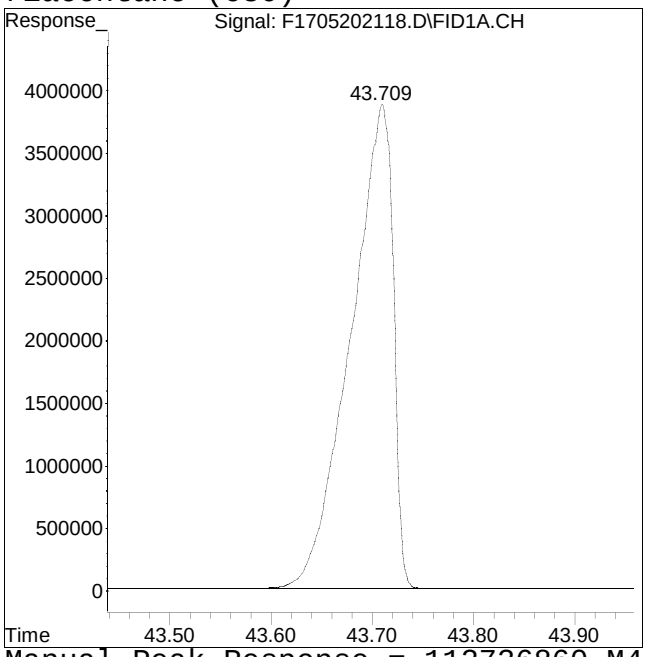
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 112680715



Manual Peak Response = 112736860 M4

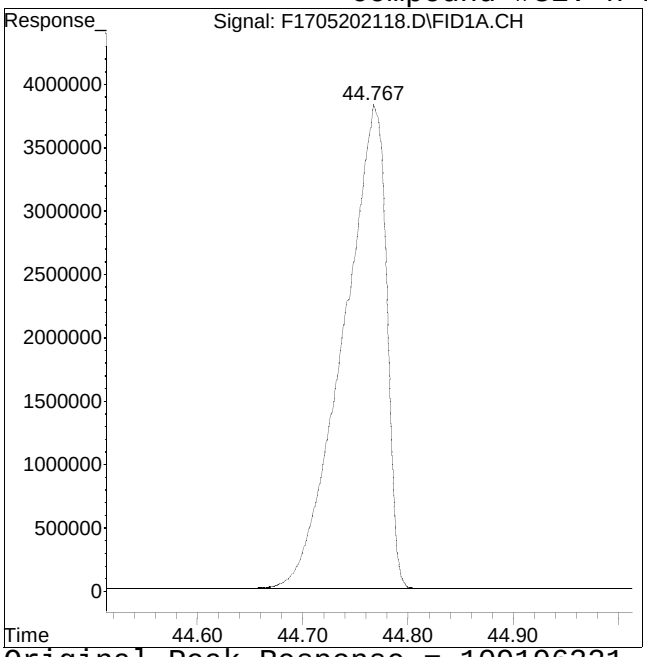
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

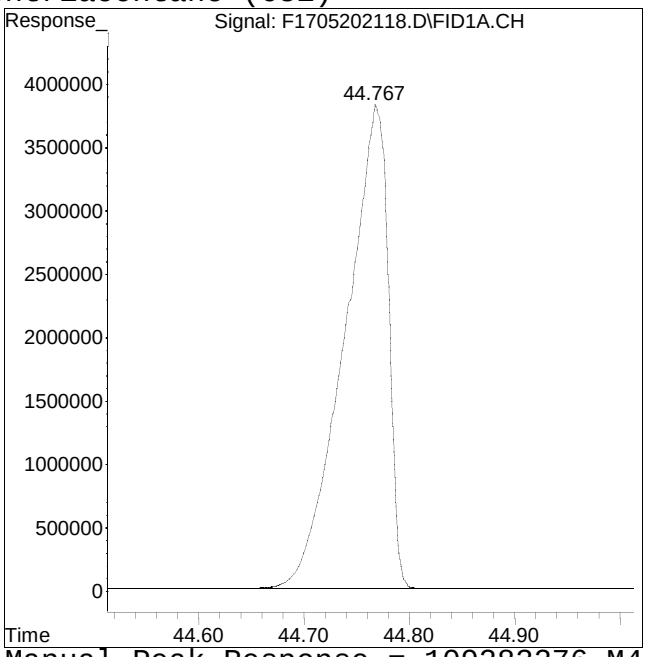
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 109196321



Manual Peak Response = 109283276 M4

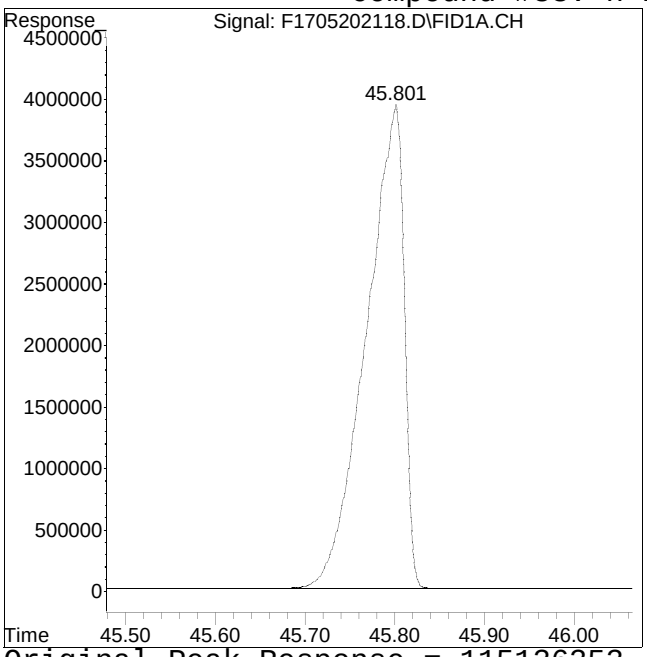
M4 = Poor automated baseline construction.

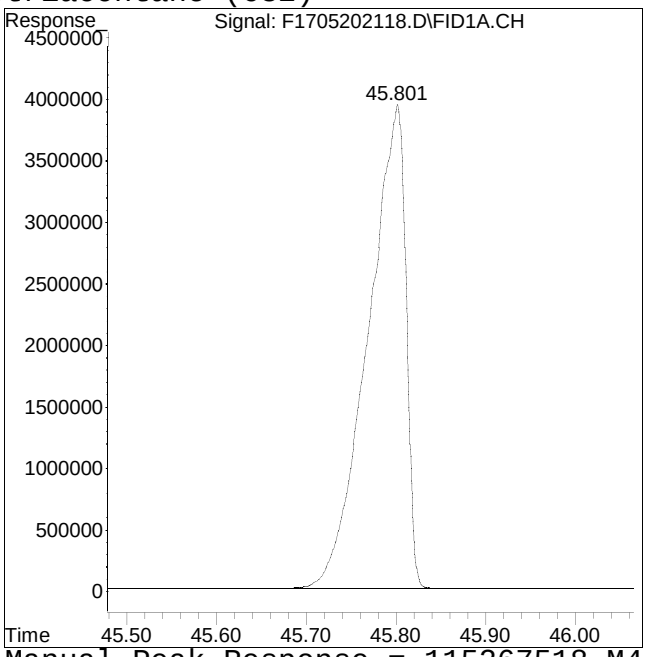
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #33: n-Dotriacontane (C32)





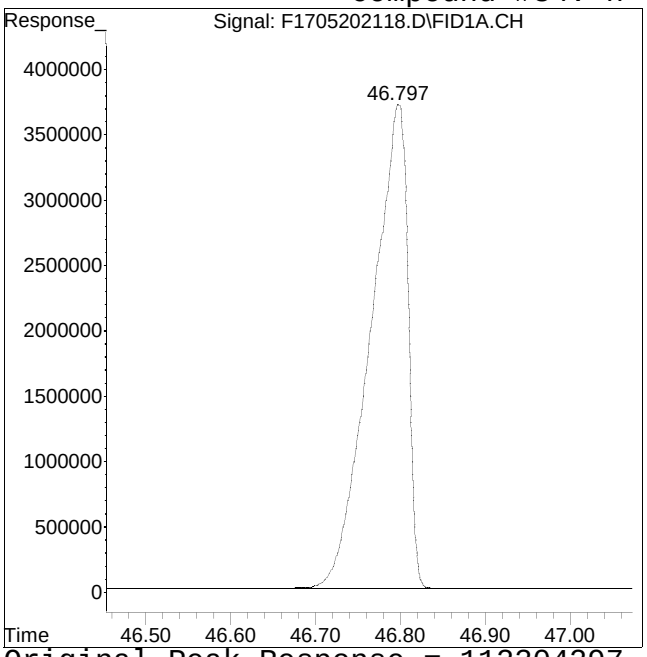
Original Peak Response = 115136353 Manual Peak Response = 115267518 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

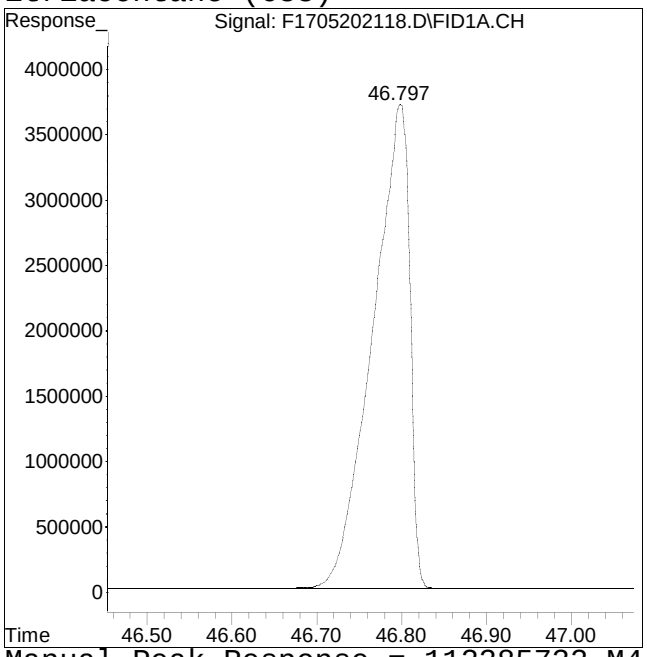
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 112304297



Manual Peak Response = 112385732 M4

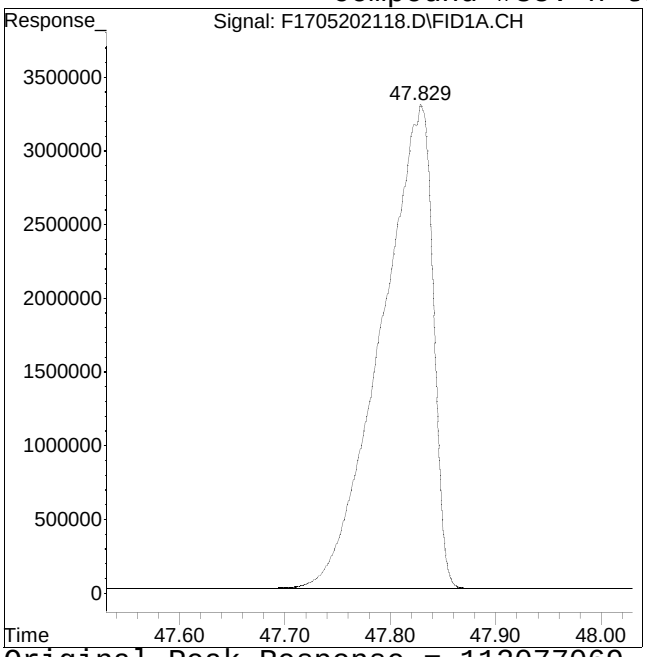
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

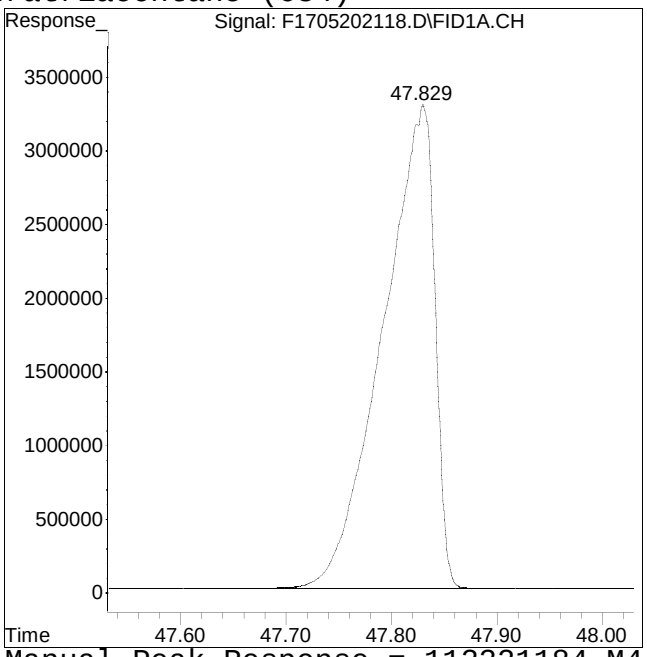
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 112077069



Manual Peak Response = 112321184 M4

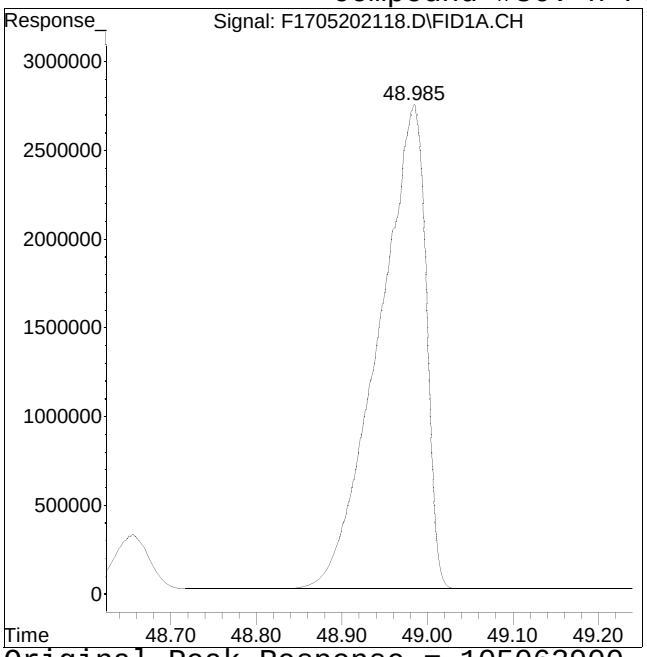
M4 = Poor automated baseline construction.

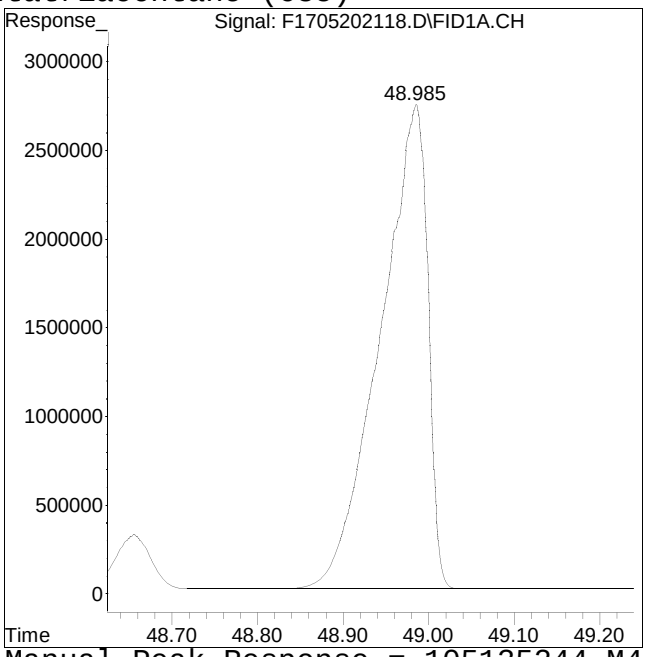
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #36: n-Pentatriacontane (C35)





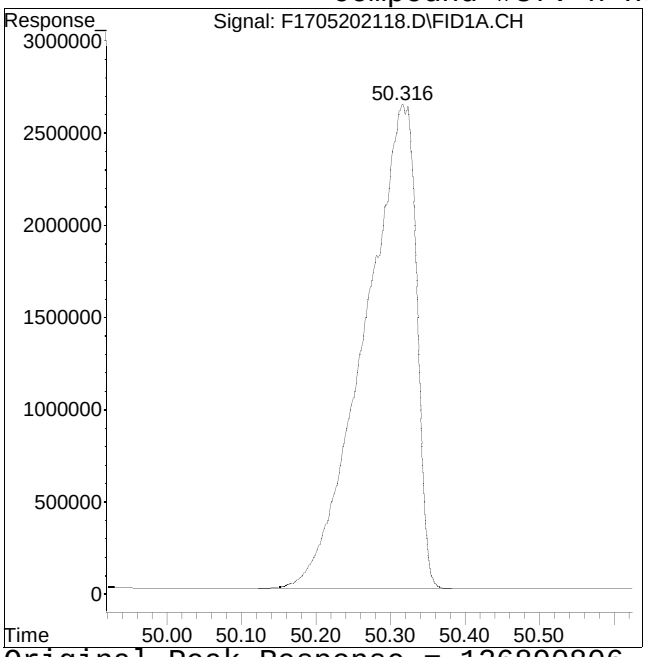
Original Peak Response = 105063900 Manual Peak Response = 105135244 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

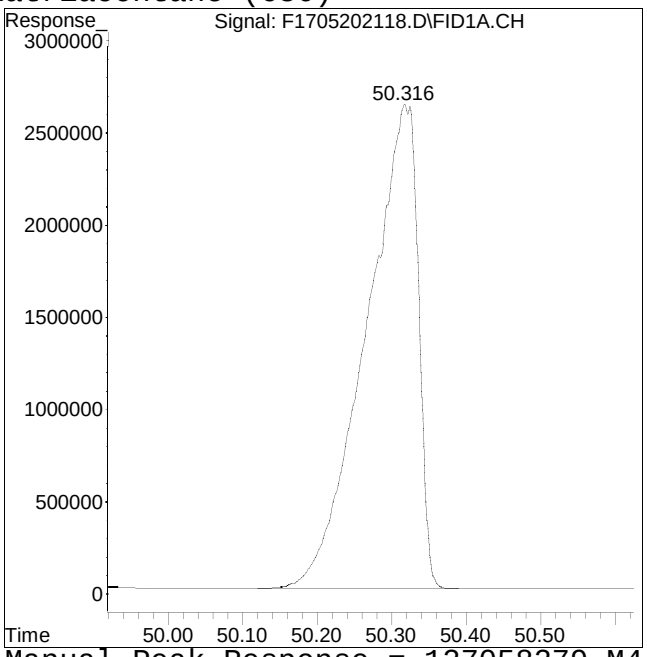
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 126890806



Manual Peak Response = 127058279 M4

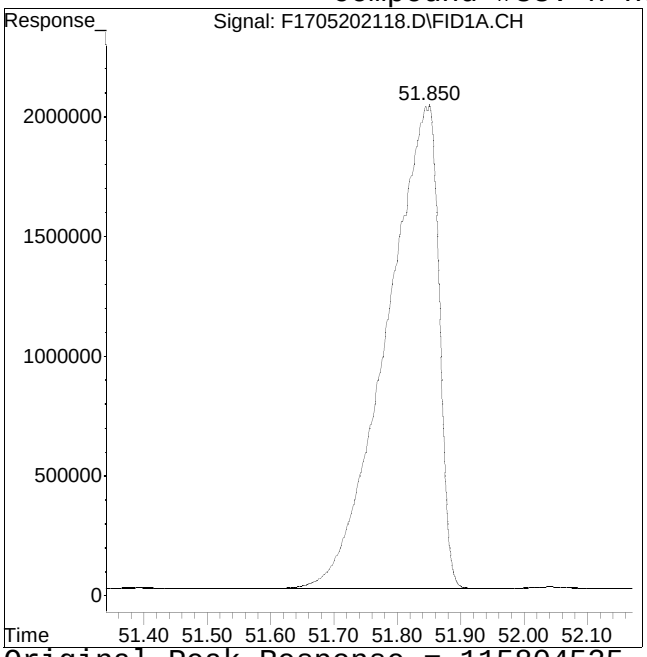
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

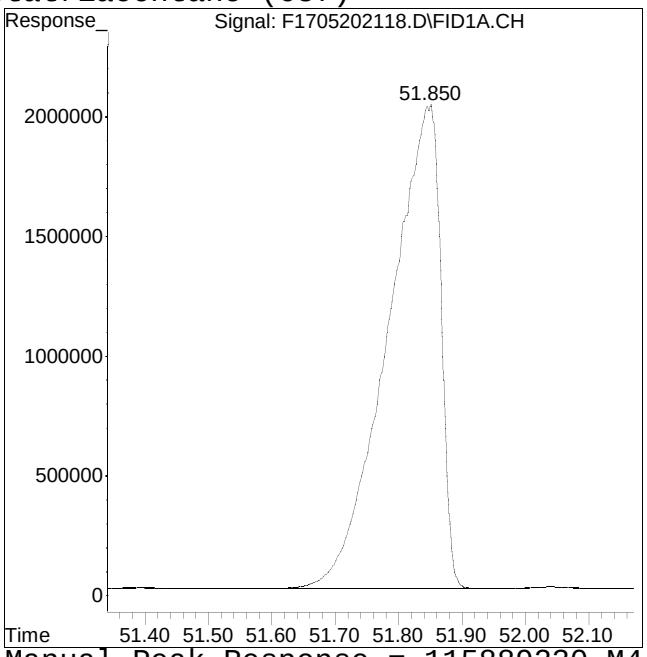
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 115804525



Manual Peak Response = 115889230 M4

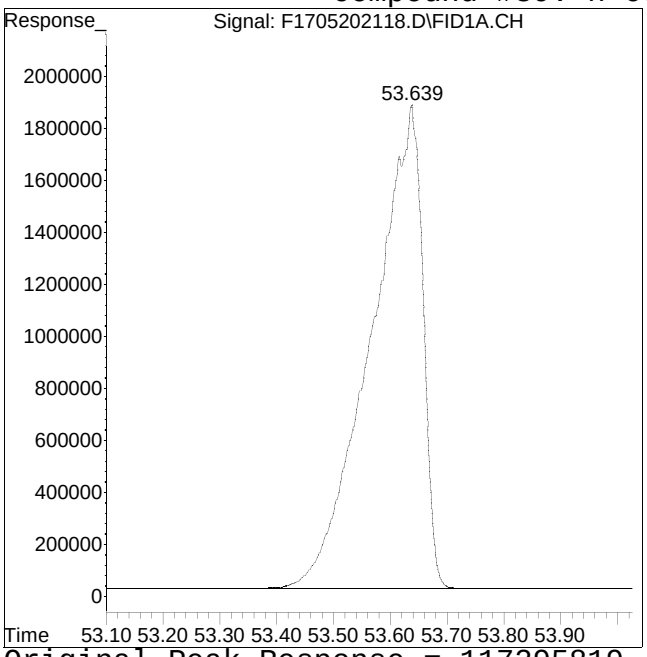
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

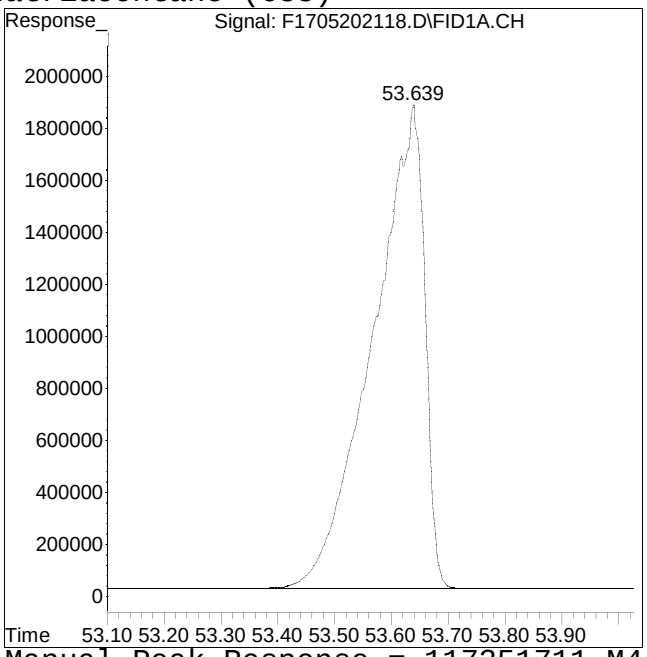
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 117295819



Manual Peak Response = 117351711 M4

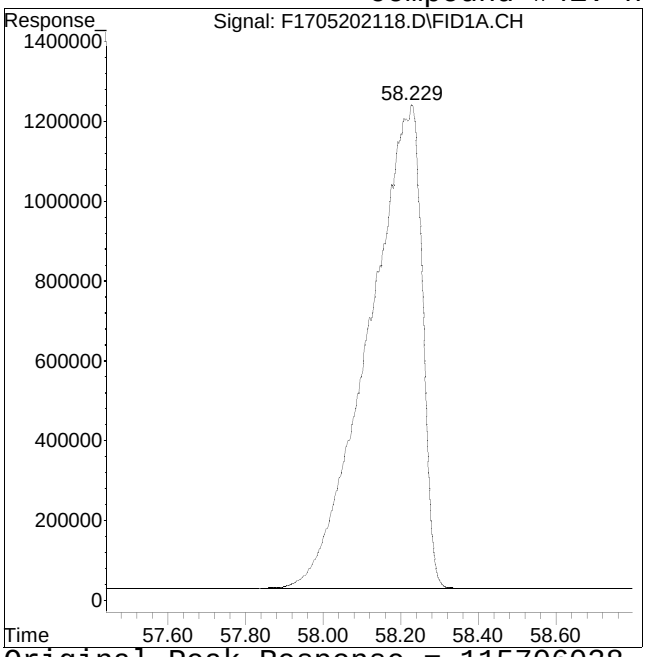
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

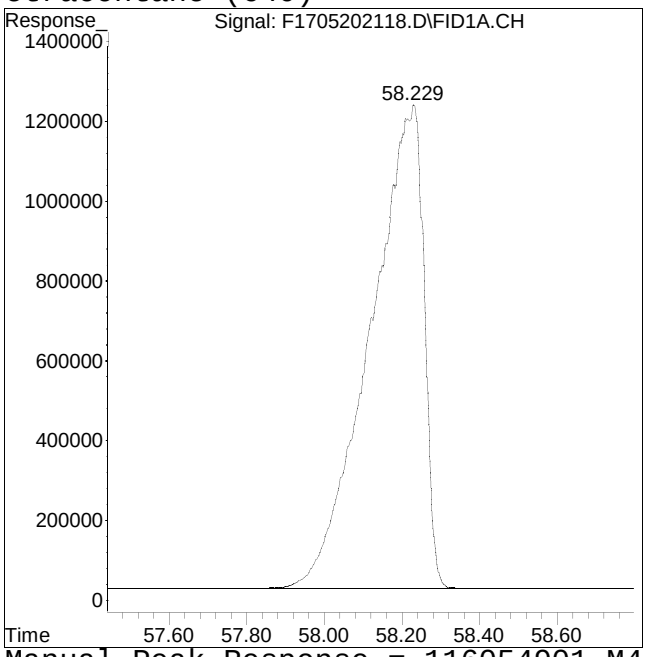
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202118.D
Date Inj'd : 5/21/2021 1:16 am
Sample : I1705202104F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:24 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 115706038



Manual Peak Response = 116054901 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202120.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 2:44 am
Operator : FID17:WR
Sample : I1705202105F
Misc : WG1505003,FRBD80,200ug/ml
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:36:45 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:30:35 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.329	60780044	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.351	249308938	187.097 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 374.19%#	
24) s d50-Tetracosane	36.003	199017511	188.102 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 376.20%#	
Target Compounds			
2) t n-Octane (C8)	5.729f	192619914	179.559 ug/mL M4
3) t n-Nonane (C9)	7.900	201433030	175.185 ug/mL M4
4) t n-Decane (C10)	10.367	211499703	180.694 ug/mL M4
5) t n-Undecane (C11)	12.874	210848120	185.232 ug/mL M4
6) t n-Dodecane (C12)	15.305	212672282	186.576 ug/mL M4
7) t n-Tridecane (C13)	17.614	212839738	186.137 ug/mL M4
9) t n-Tetradecane (C14)	19.805	218208938	185.003 ug/mL M4
11) t n-Pentadecane (C15)	21.875	219341702	185.923 ug/mL M4
12) t n-Hexadecane (C16)	23.835	217167666	184.059 ug/mL M4
14) t n-Heptadecane (C17)	25.697	221556768	188.877 ug/mL M4
15) t Pristane	25.817	222551621	181.595 ug/mL M4
16) t n-Octadecane (C18)	27.469	222568929	186.087 ug/mL M4
17) t Phytane	27.642	207645520	185.468 ug/mL M4
18) t n-Nonadecane (C19)	29.162	223138563	185.982 ug/mL M4
20) t n-Eicosane (C20)	30.768	224220195	185.784 ug/mL M4
21) t n-Heneicosane (C21)	32.306	225118581	185.965 ug/mL M4
22) t n-Docosane (C22)	33.783	224840261	185.327 ug/mL M4
23) t n-Tricosane (C23)	35.198	225071564	185.109 ug/mL M4
25) t n-Tetracosane (C24)	36.560	224349501	185.090 ug/mL M4
26) t n-Pentacosane (C25)	37.866	220635797	186.240 ug/mL M4
27) t n-Hexacosane (C26)	39.125	226867832	186.628 ug/mL M4
28) t n-Heptacosane (C27)	40.337	227180739	186.326 ug/mL M4
29) t n-Octacosane (C28)	41.515	232741442	183.629 ug/mL M4
30) t n-Nonacosane (C29)	42.648	232059129	187.380 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202120.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 2:44 am
Operator : FID17:WR
Sample : I1705202105F
Misc : WG1505003,FRBD80,200ug/ml
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:36:45 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:30:35 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

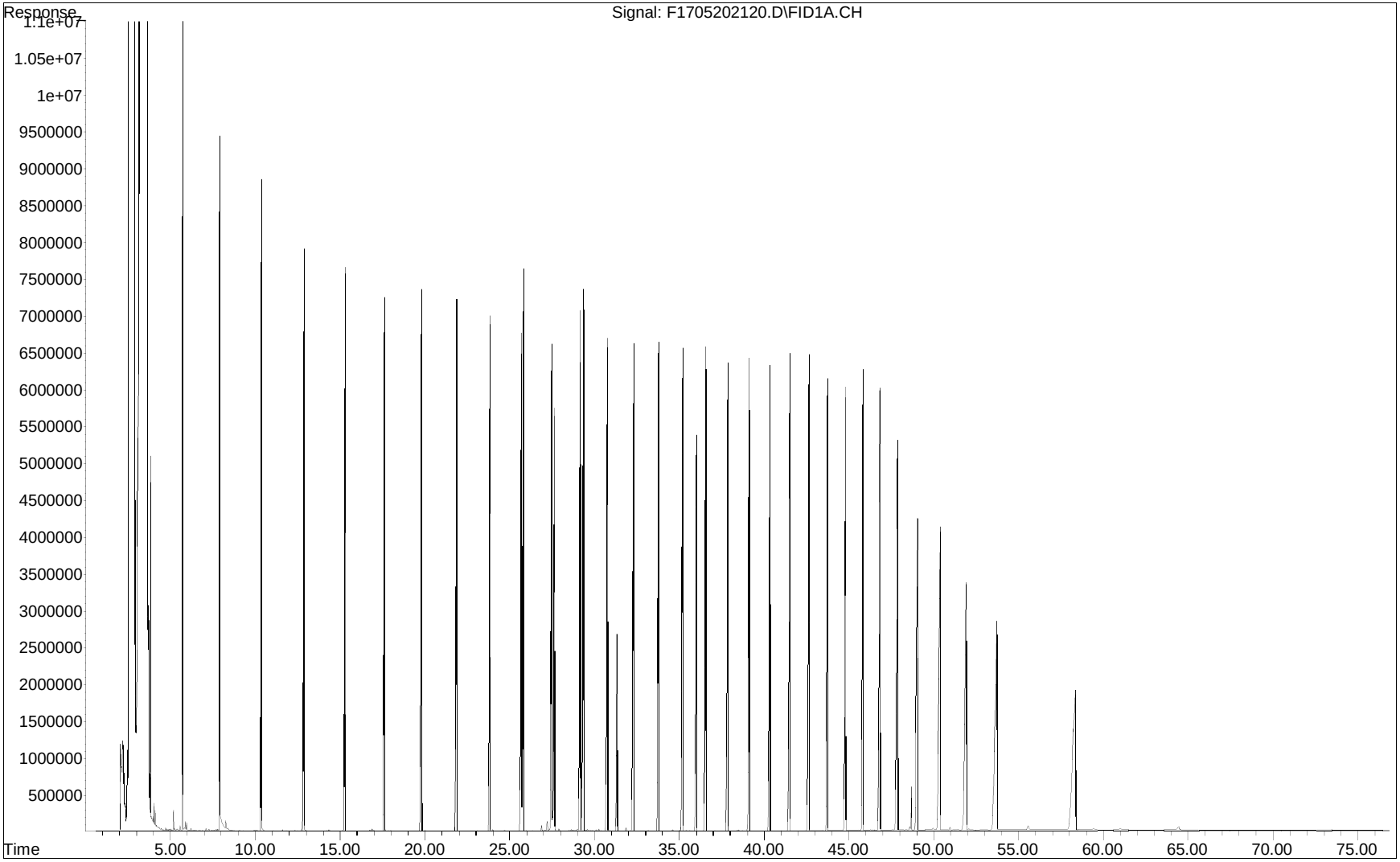
	Compound	R.T.	Response	Conc	Units	
31) t	n-Triacontane (C30)	43.748	233302652	187.717	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.806	225361978	187.416	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.837	236707432	187.568	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.836	229699744	186.852	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.870	228455680	187.214	ug/mL	M4
36) t	n-Pentatriacontane (C35)	49.027	212723470	186.447	ug/mL	M4
37) t	n-Hexatriacontane (C36)	50.381f	255619091	186.026	ug/mL	M4
38) t	n-Heptatriacontane (C37)	51.913	231704397	185.907	ug/mL	M4
39) t	n-Octatriacontane (C38)	53.710	233342360	185.017	ug/mL	M4
41) t	n-Tetracontane (C40)	58.324	228203729	182.958	ug/mL	M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

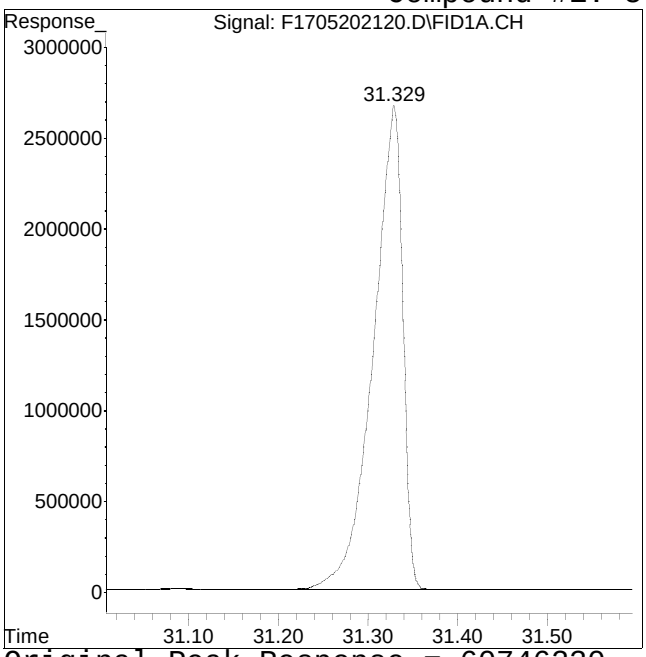
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202120.D
Operator : FID17:WR
Acquired : 21 May 2021 2:44 am using AcqMethod FID17A.M
Sample Name: I1705202105F
Instrument: FID17
Misc Info : WG1505003,FRBD80,200ug/ml
Vial Number: 10
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

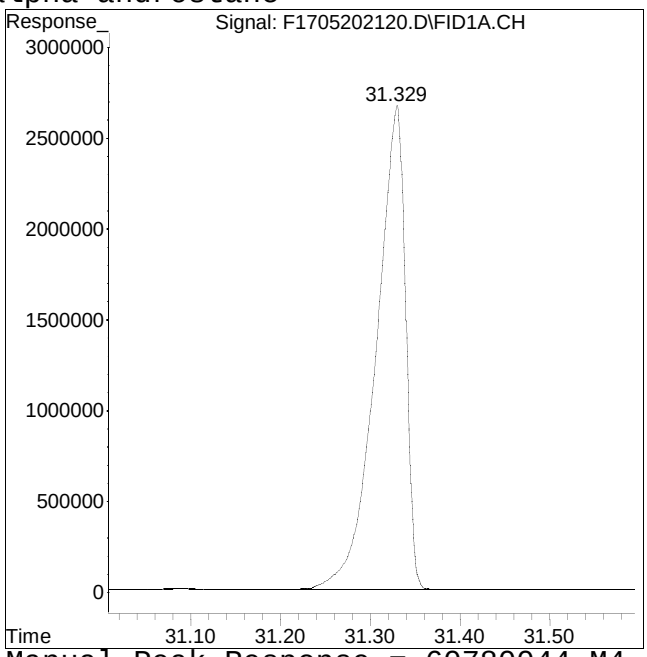


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17052021F_DRO.M
Data File : F1705202120.D Operator : FID17:WR
Date Inj'd : 5/21/2021 2:44 am Instrument : FID17
Sample : I1705202105F Quant Date : 5/27/2021 3:31 pm

Compound #1: 5-alpha-androstane





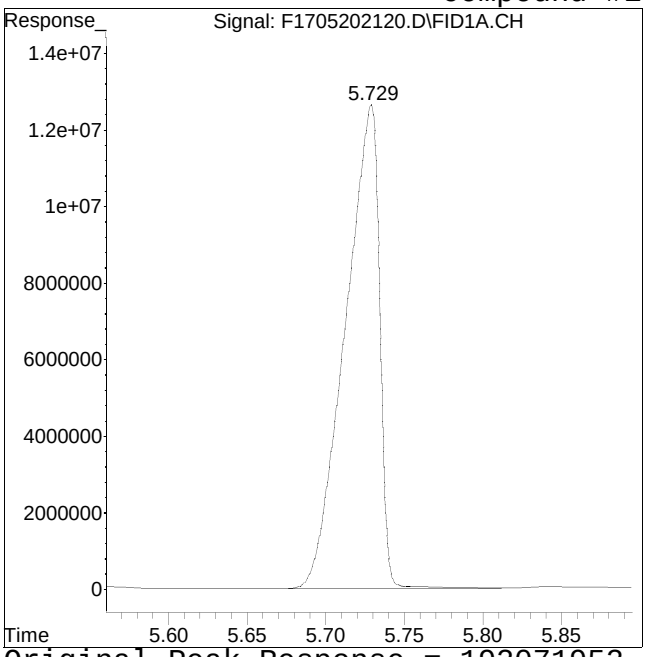
Original Peak Response = 60746230 Manual Peak Response = 60780044 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

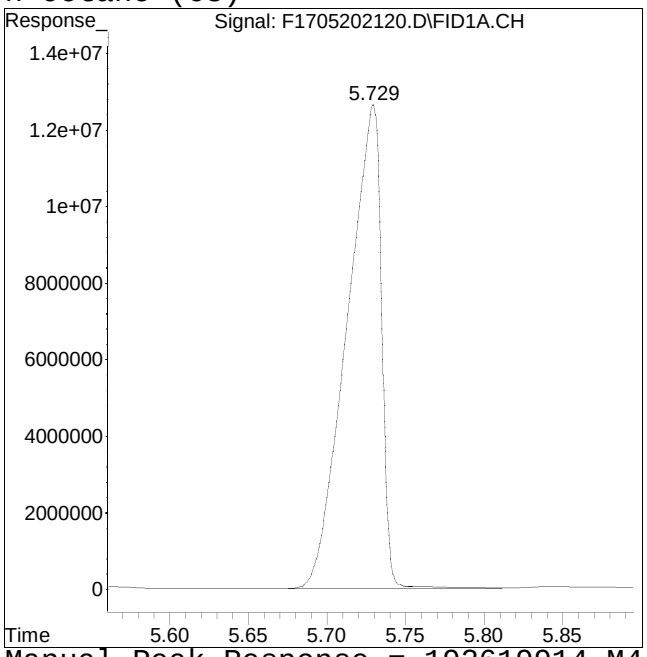
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #2: n-Octane (C8)



Original Peak Response = 192071952



Manual Peak Response = 192619914 M4

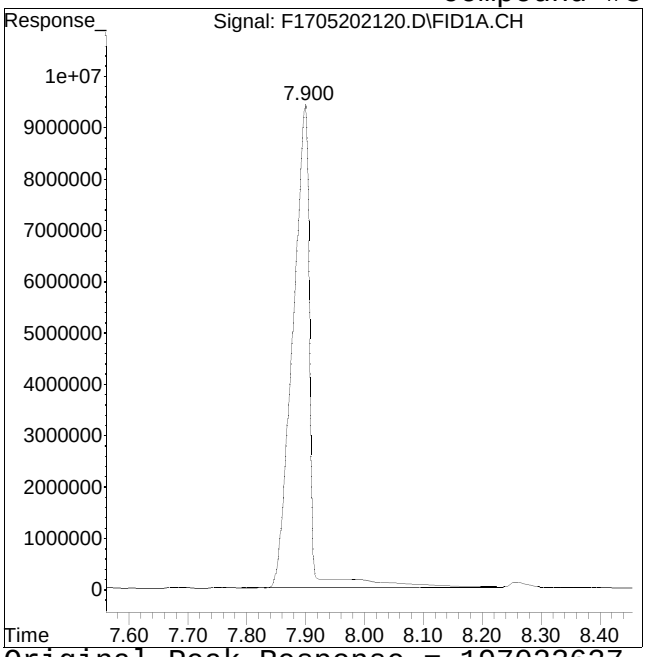
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

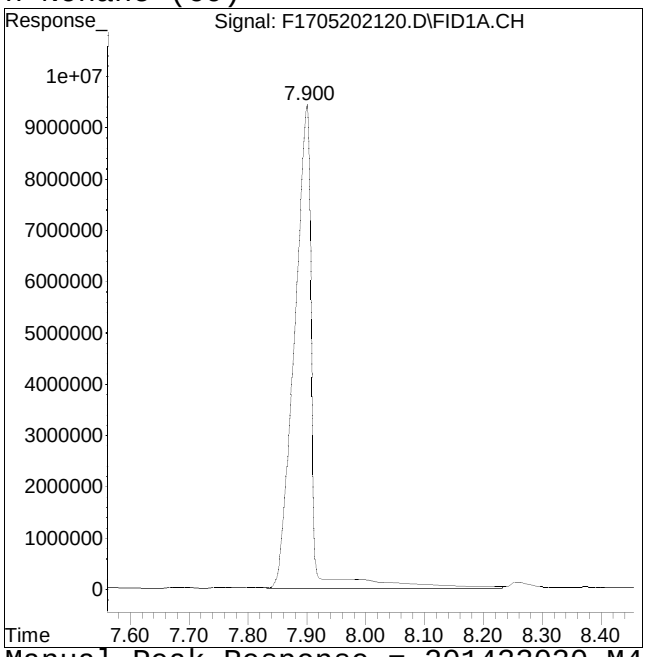
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 197023637



Manual Peak Response = 201433030 M4

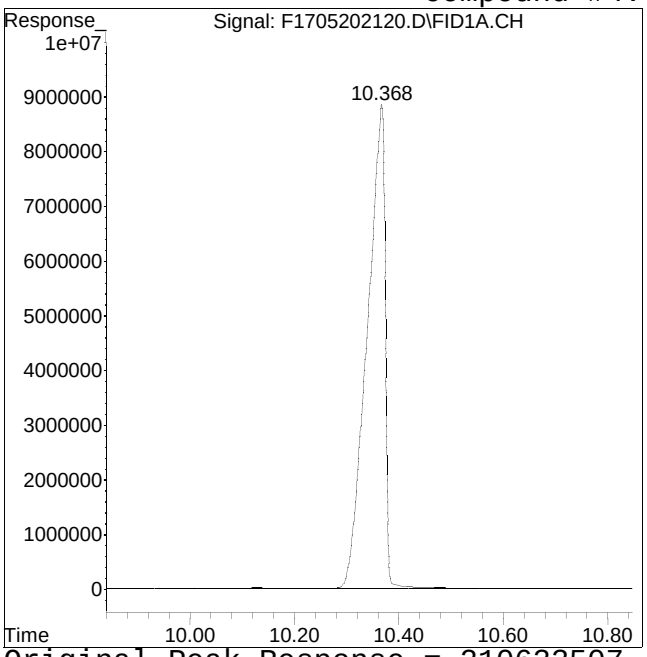
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

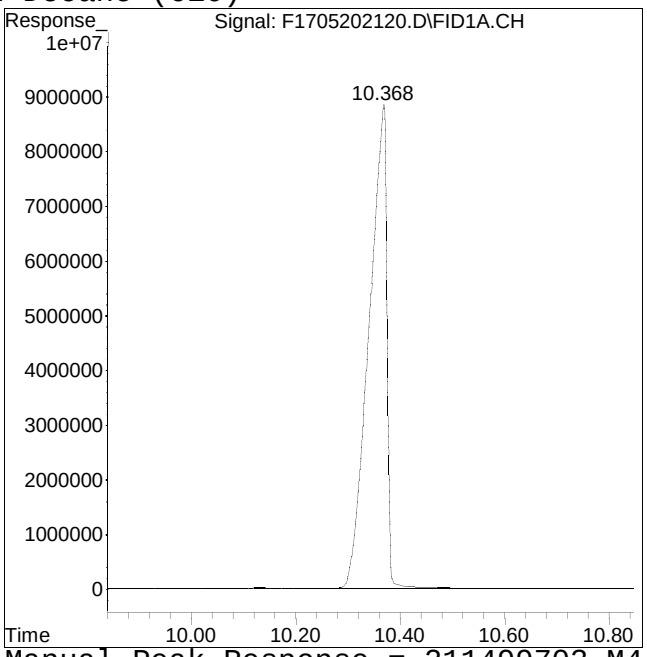
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #4: n-Decane (C10)



Original Peak Response = 210633507



Manual Peak Response = 211499703 M4

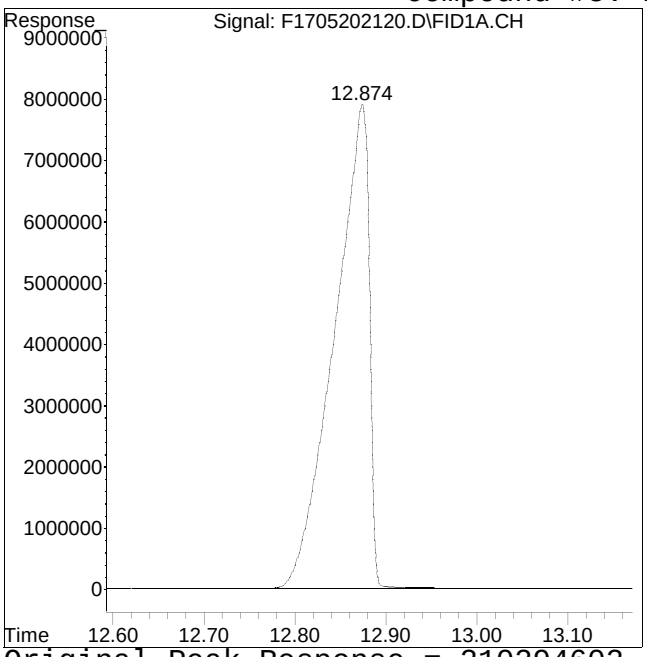
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

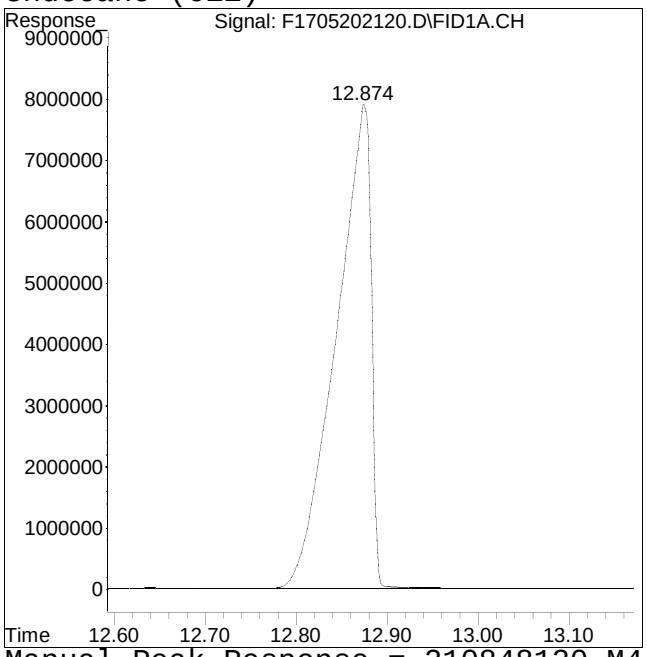
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 210294602



Manual Peak Response = 210848120 M4

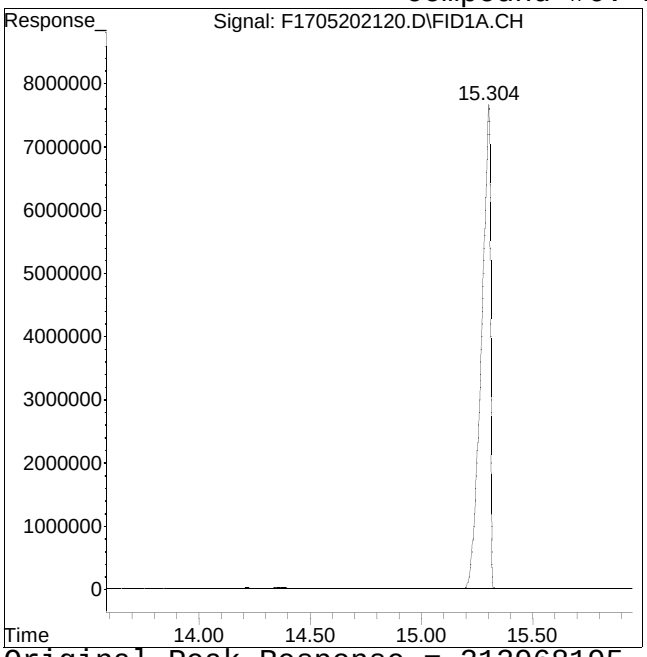
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

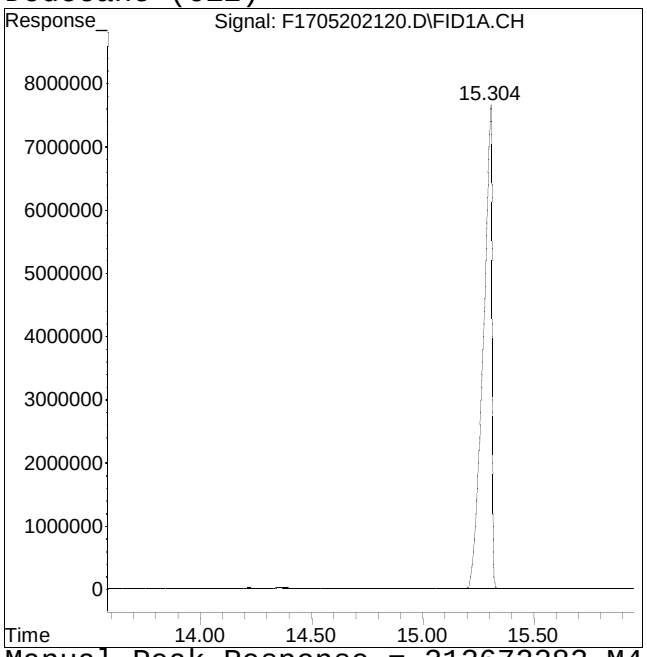
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 212968195



Manual Peak Response = 212672282 M4

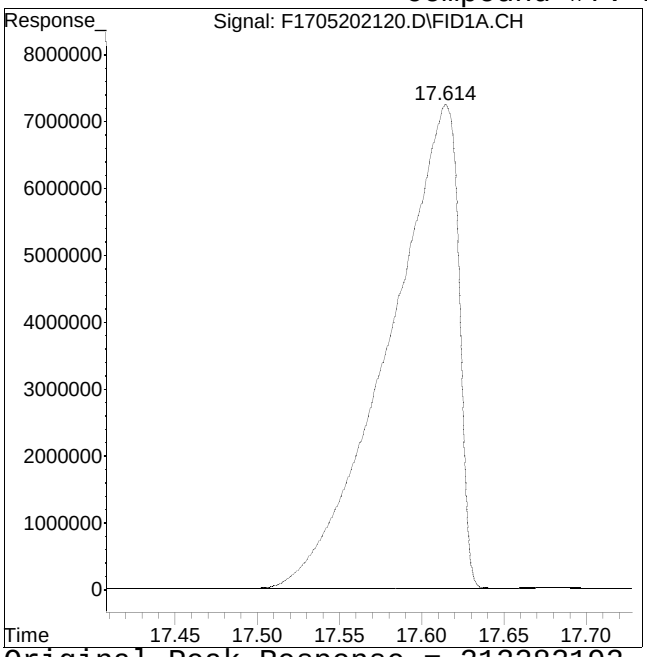
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

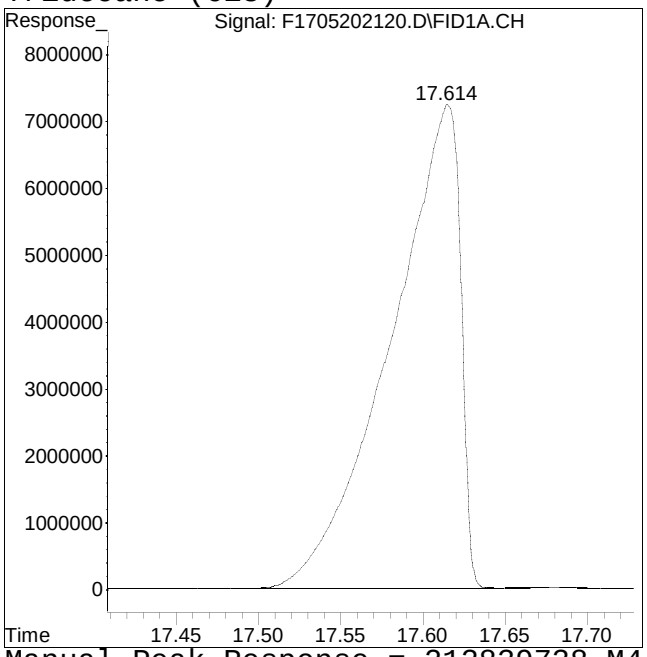
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 212282192



Manual Peak Response = 212839738 M4

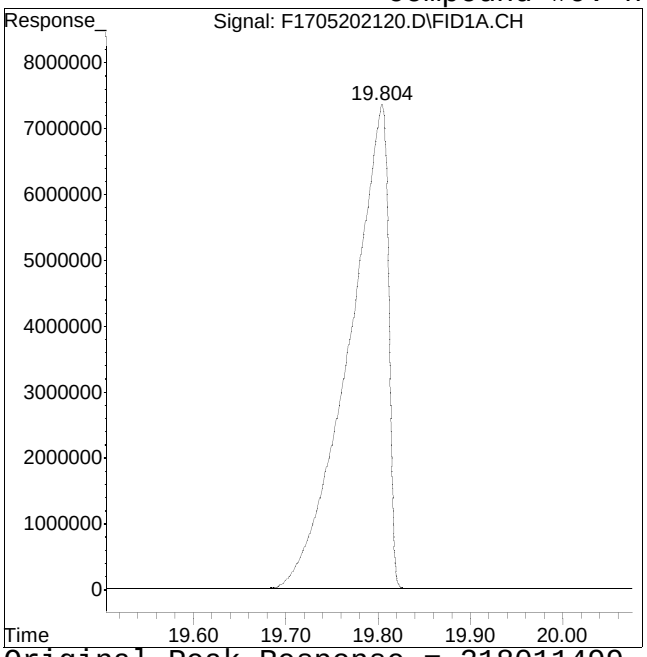
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

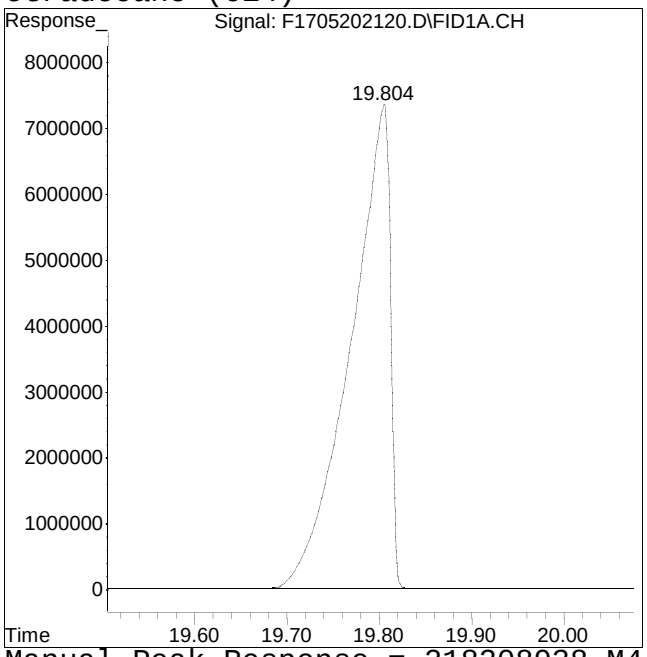
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 218011499



Manual Peak Response = 218208938 M4

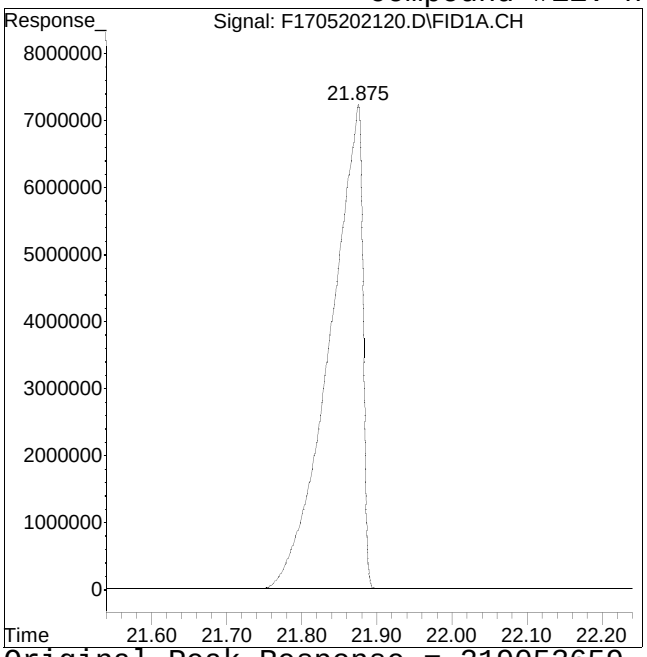
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

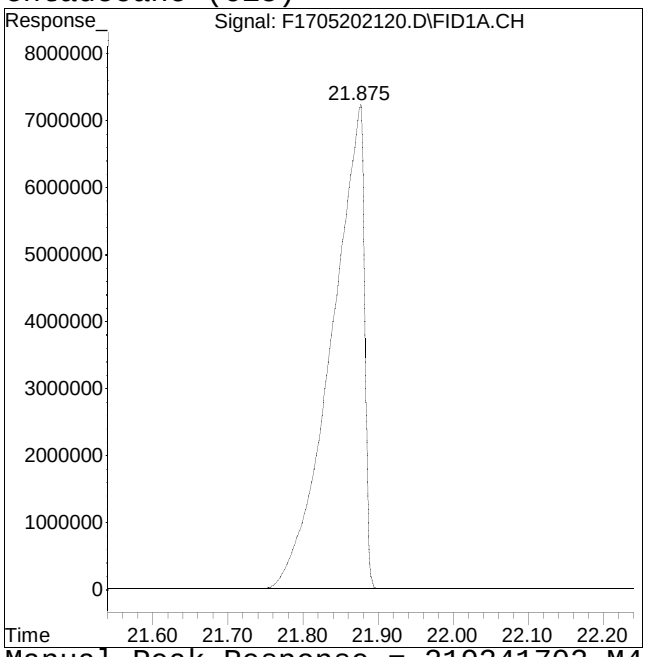
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 219053659



Manual Peak Response = 219341702 M4

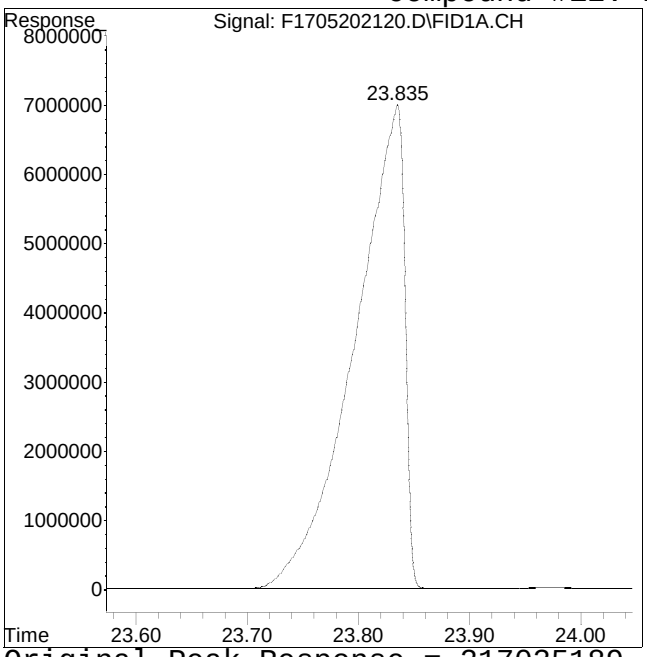
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

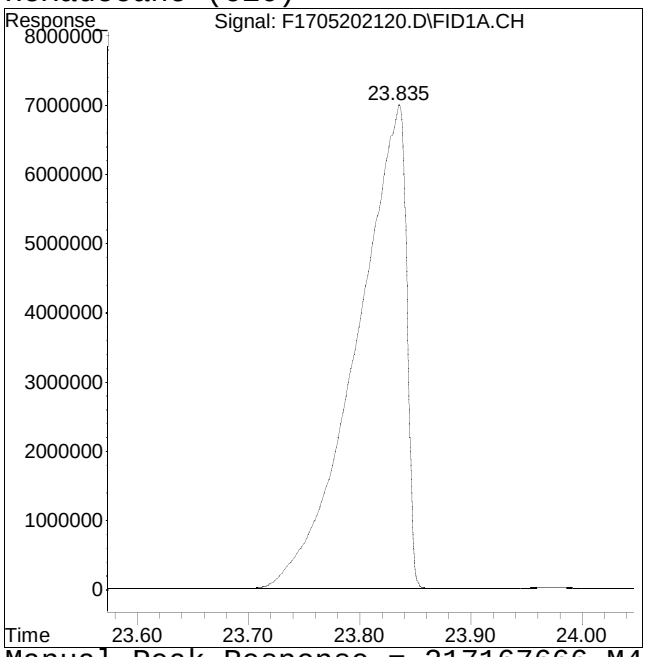
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 217035189



Manual Peak Response = 217167666 M4

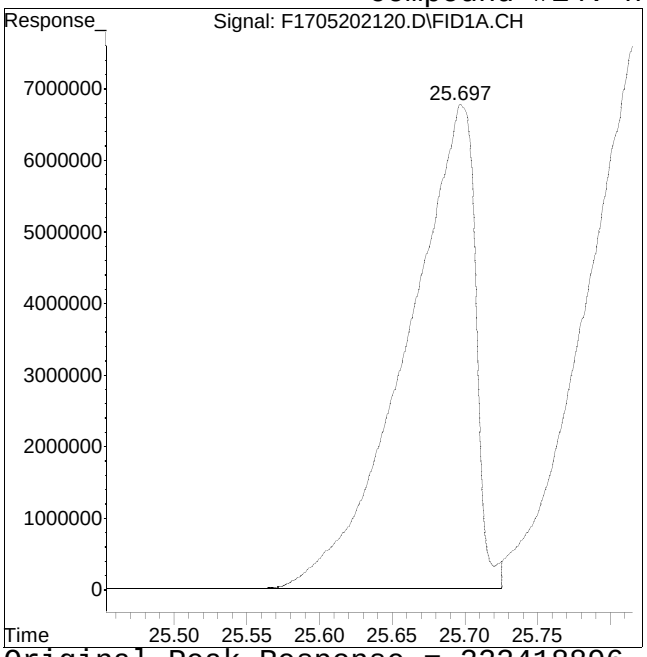
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

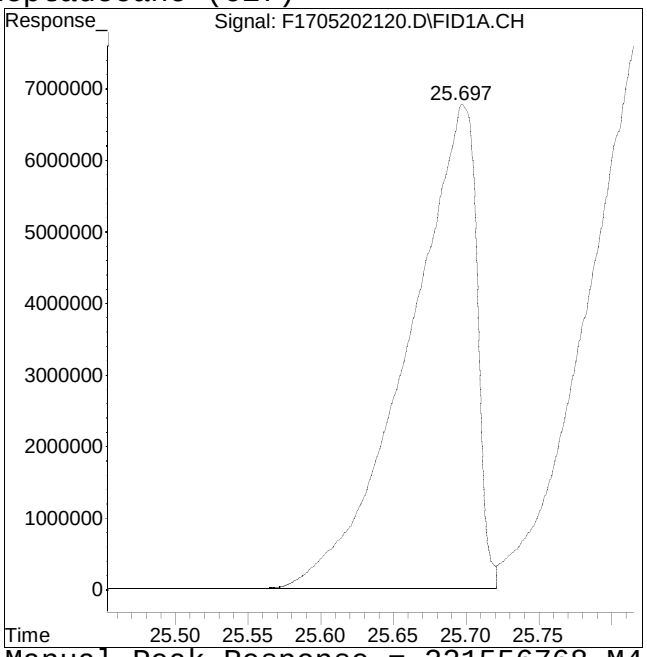
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 222418896



Manual Peak Response = 221556768 M4

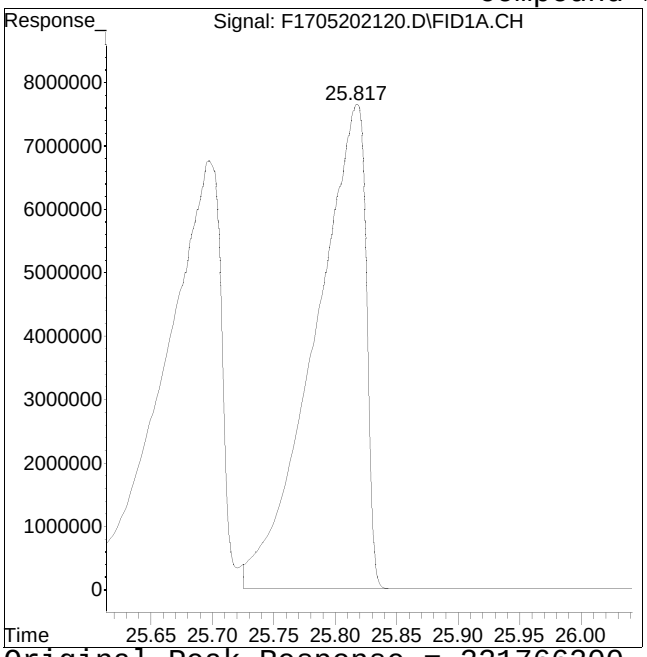
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

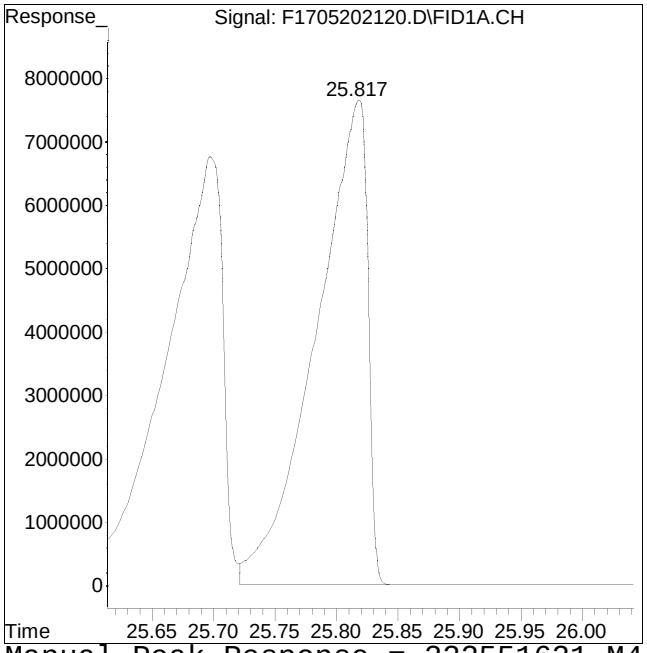
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #15: Pristane



Original Peak Response = 221766200



Manual Peak Response = 222551621 M4

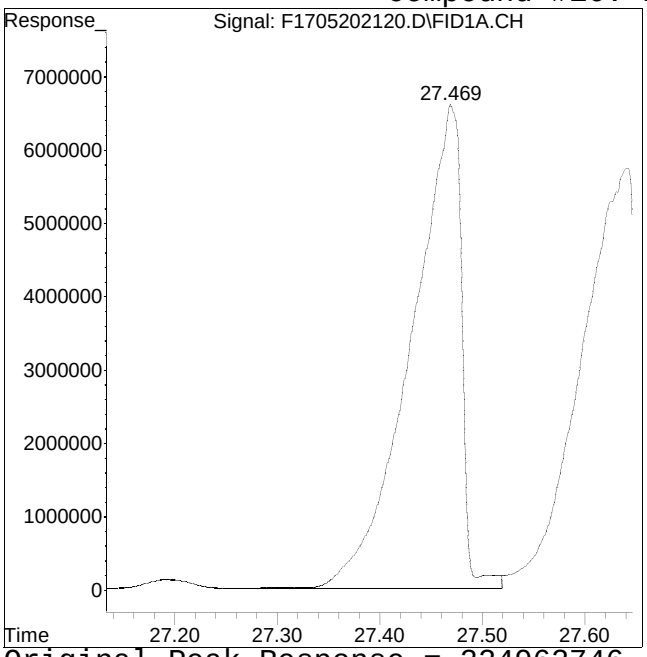
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

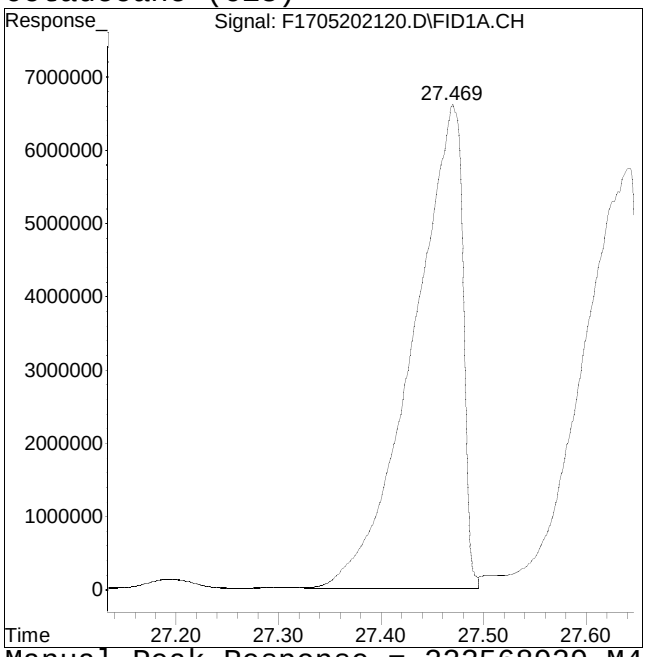
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 224962746



Manual Peak Response = 222568929 M4

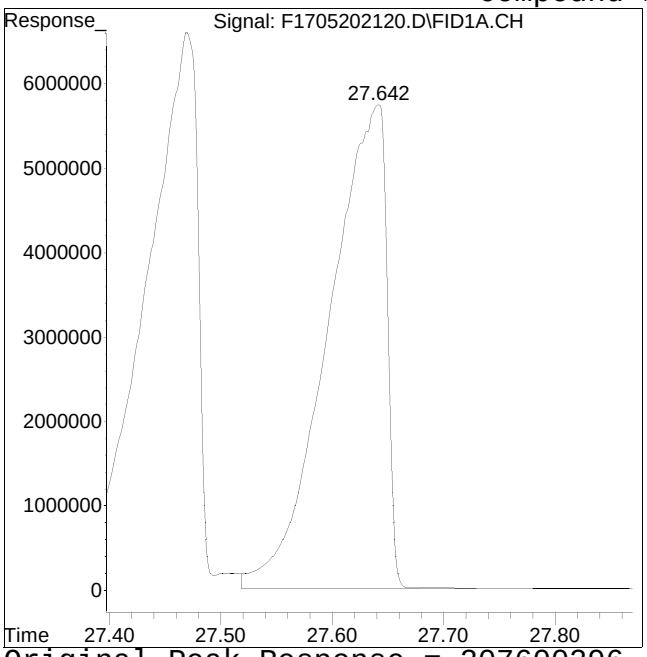
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

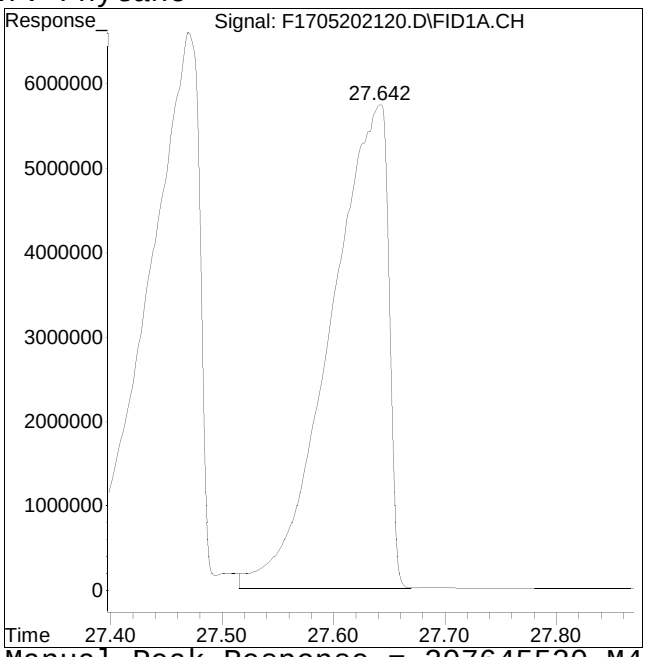
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #17: Phytane



Original Peak Response = 207600296



Manual Peak Response = 207645520 M4

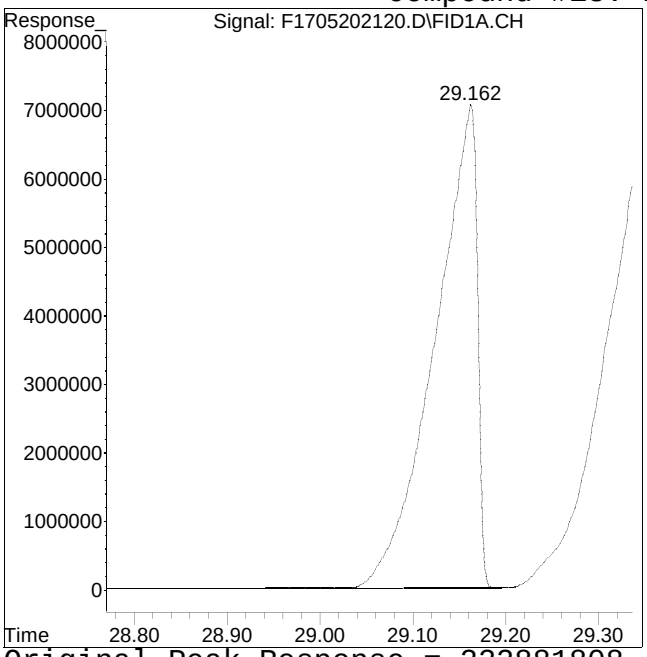
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

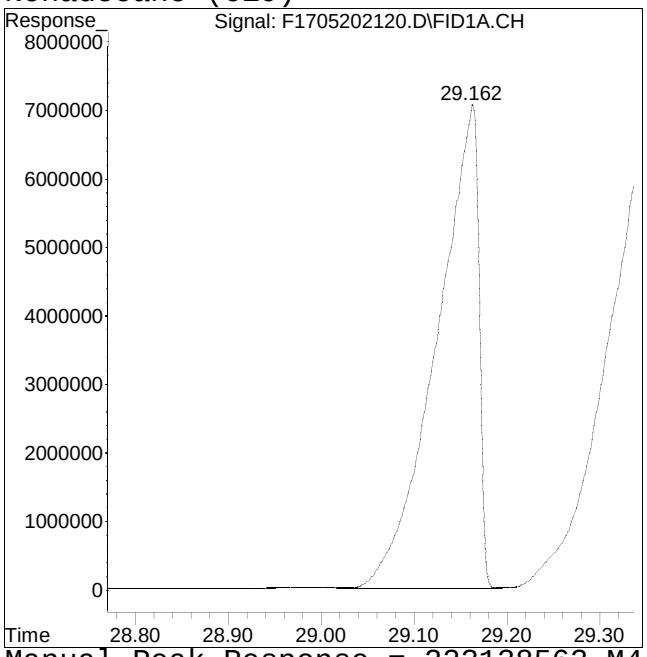
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 222881808



Manual Peak Response = 223138563 M4

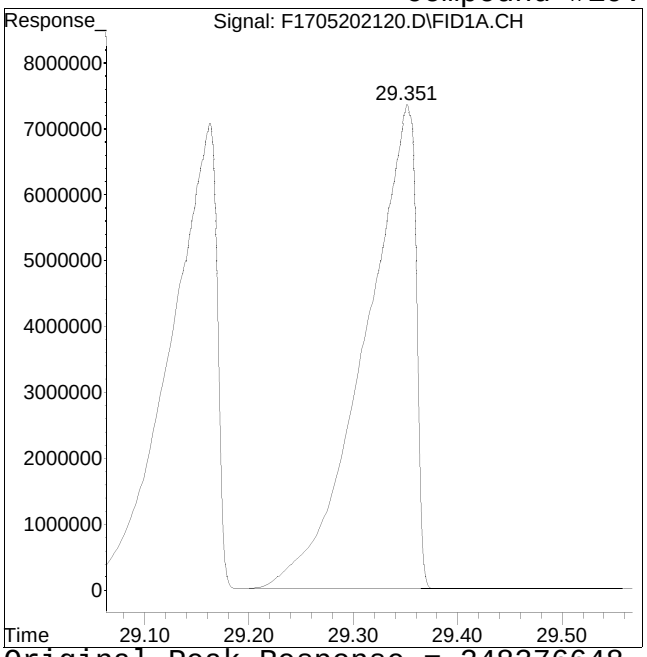
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

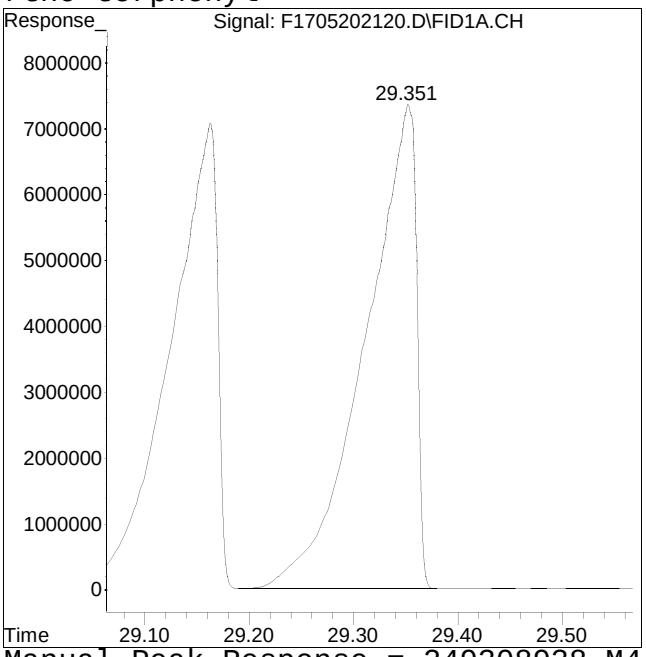
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #19: ortho-terphenyl



Original Peak Response = 248376648



Manual Peak Response = 249308938 M4

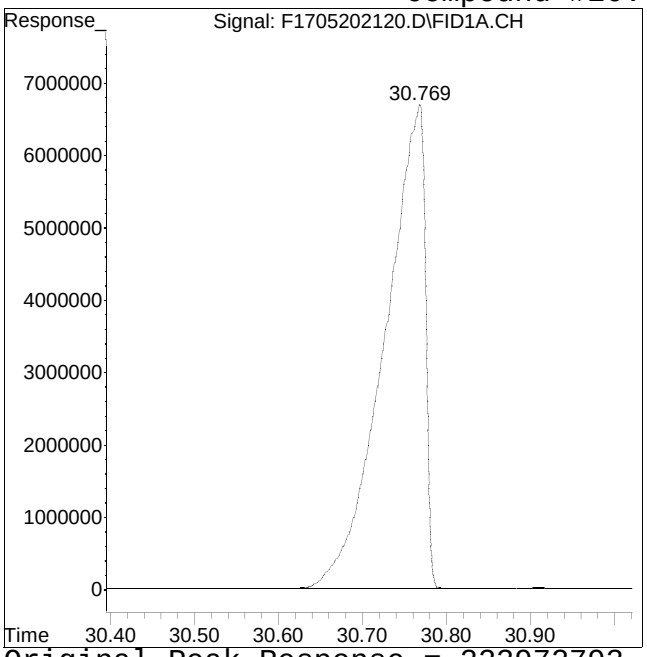
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

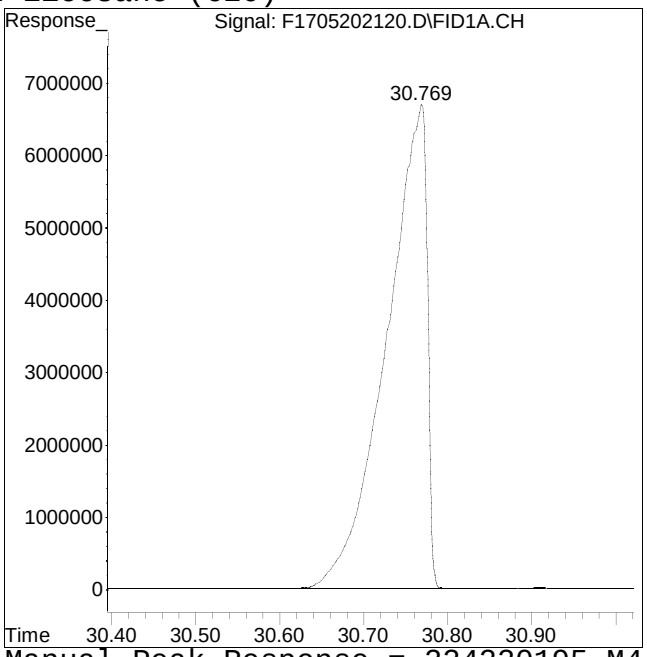
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 223972793



Manual Peak Response = 224220195 M4

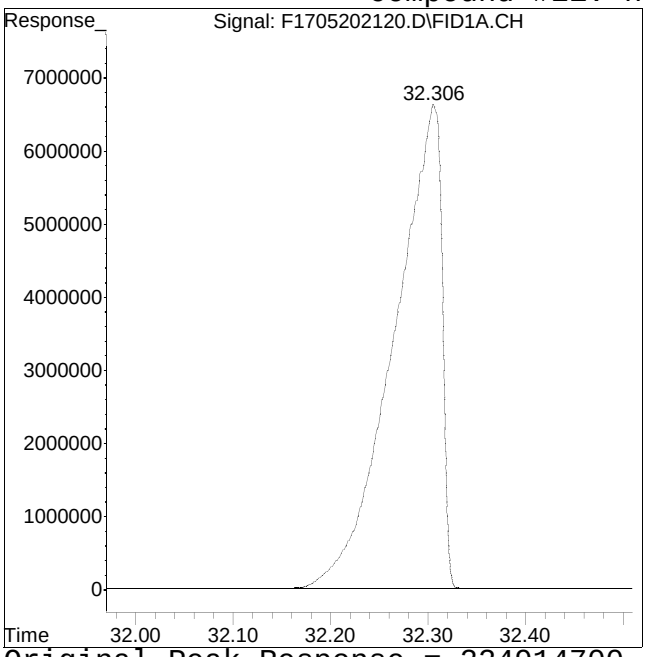
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

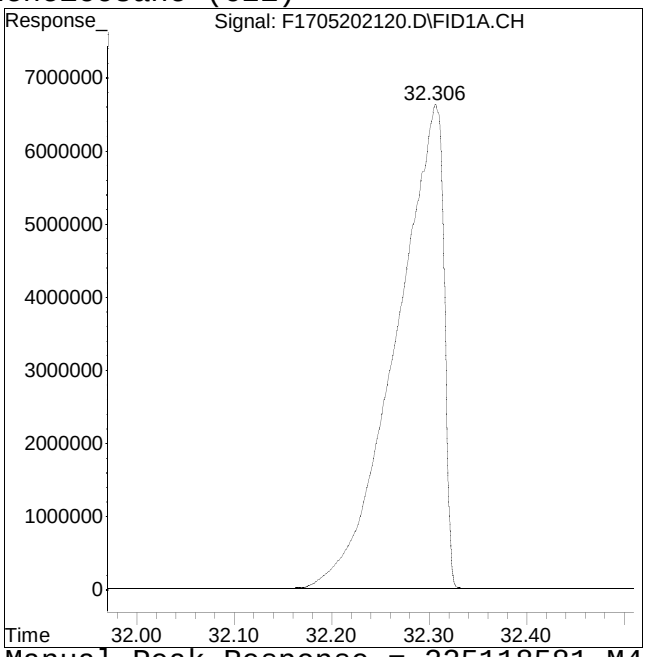
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 224914700



Manual Peak Response = 225118581 M4

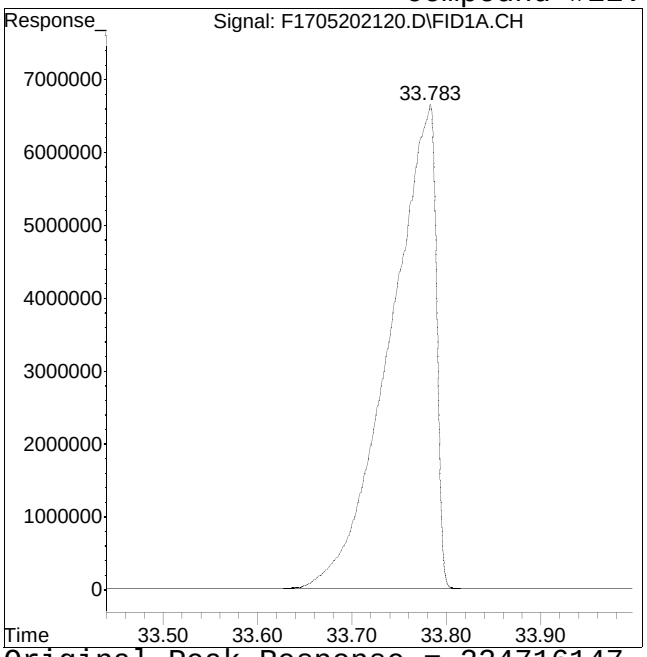
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

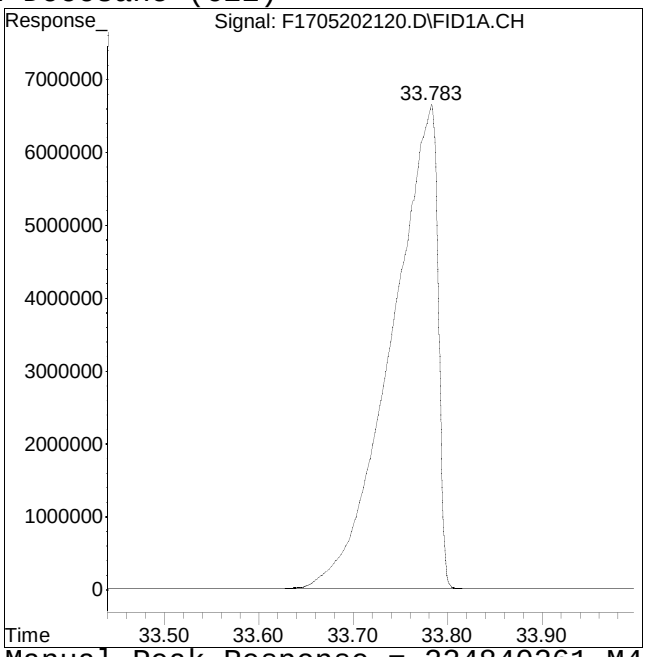
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 224716147



Manual Peak Response = 224840261 M4

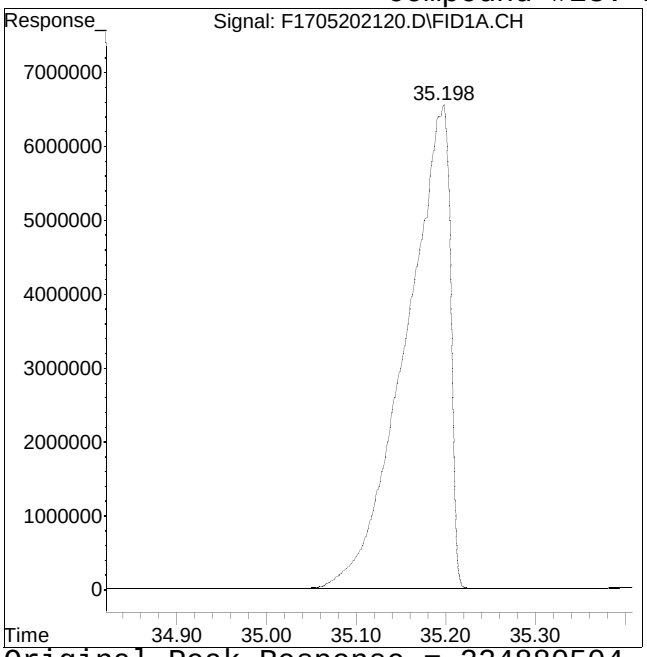
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

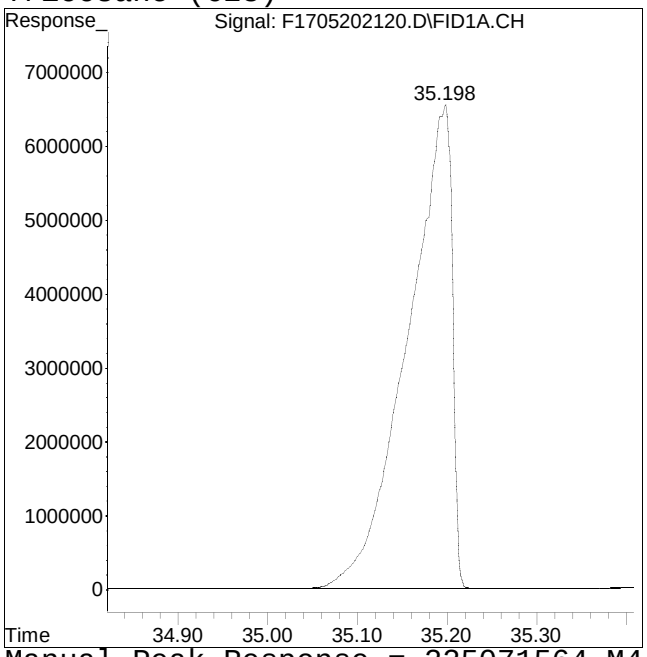
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 224880504



Manual Peak Response = 225071564 M4

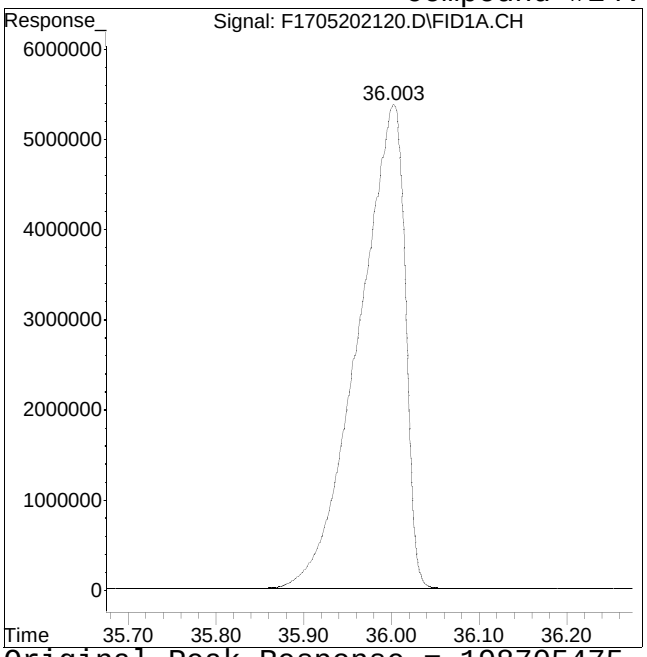
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

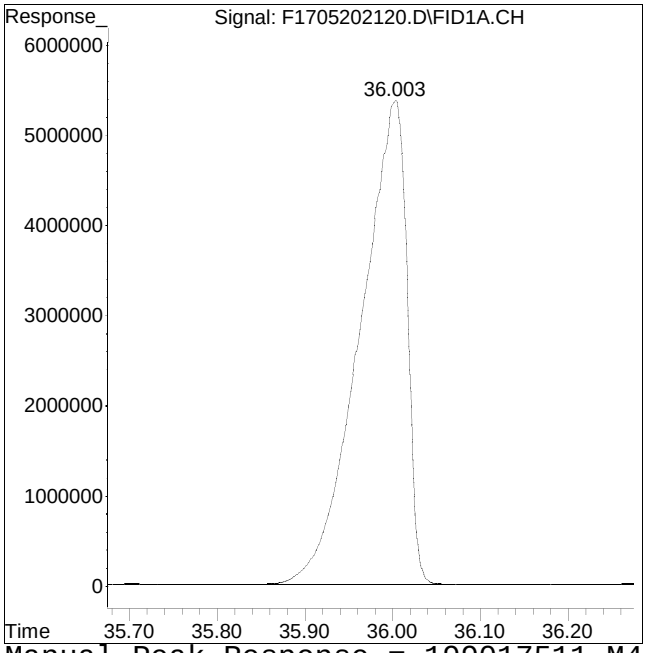
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #24: d50-Tetracosane



Original Peak Response = 198705475



Manual Peak Response = 199017511 M4

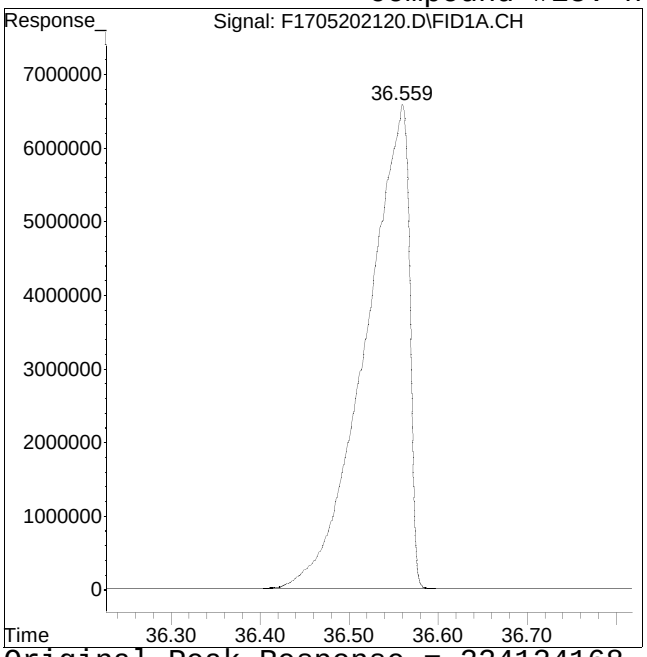
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

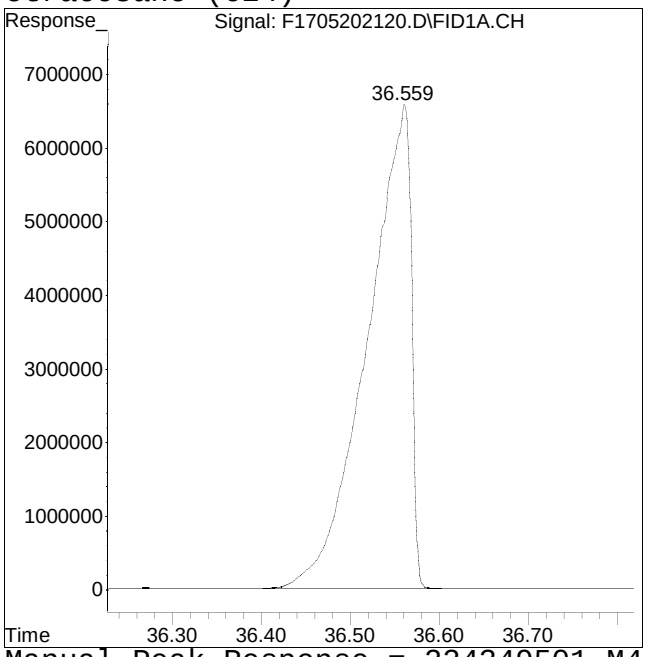
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 224124168



Manual Peak Response = 224349501 M4

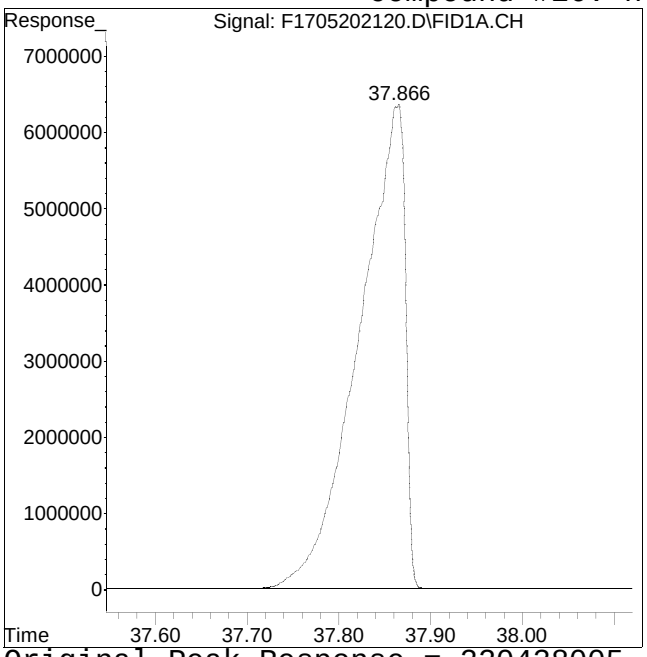
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

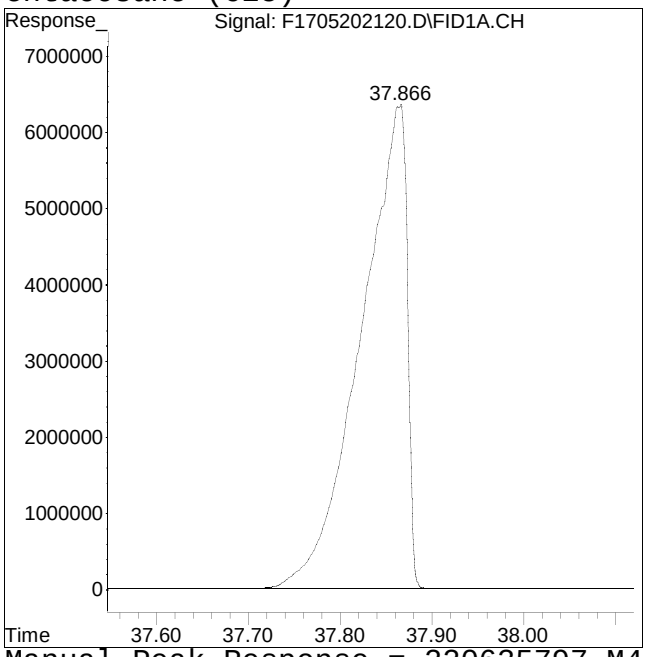
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 220438005



Manual Peak Response = 220635797 M4

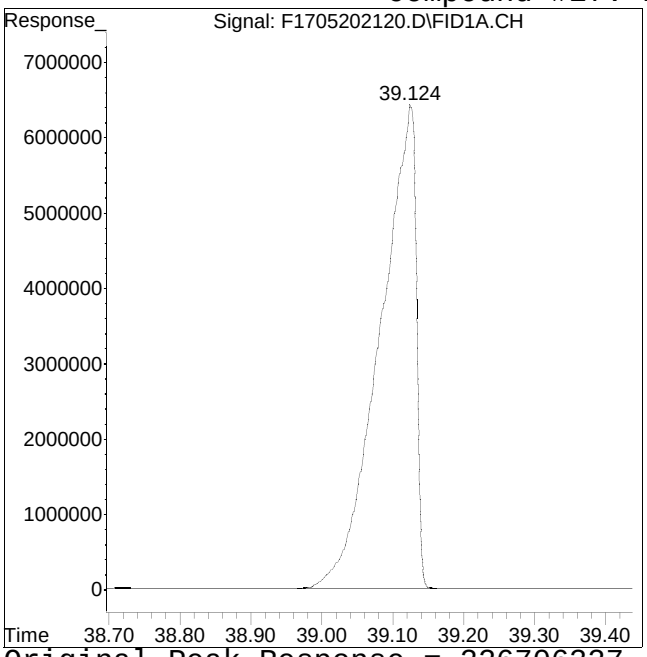
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

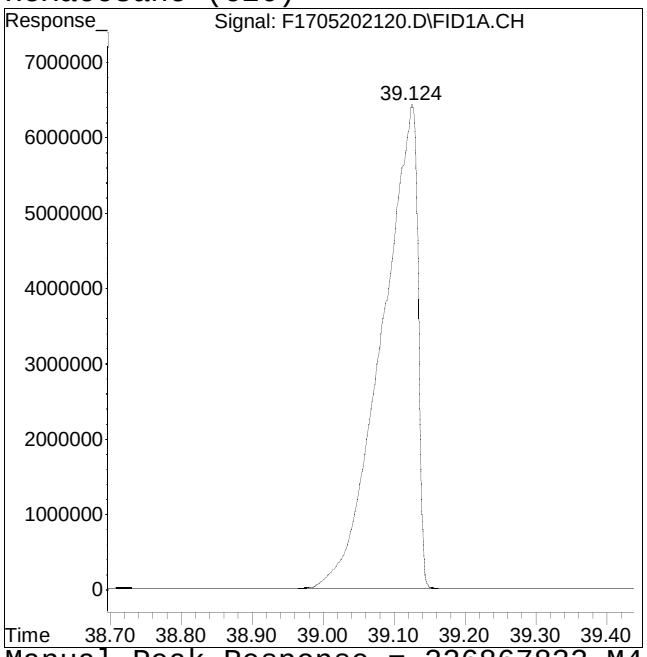
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 226706327



Manual Peak Response = 226867832 M4

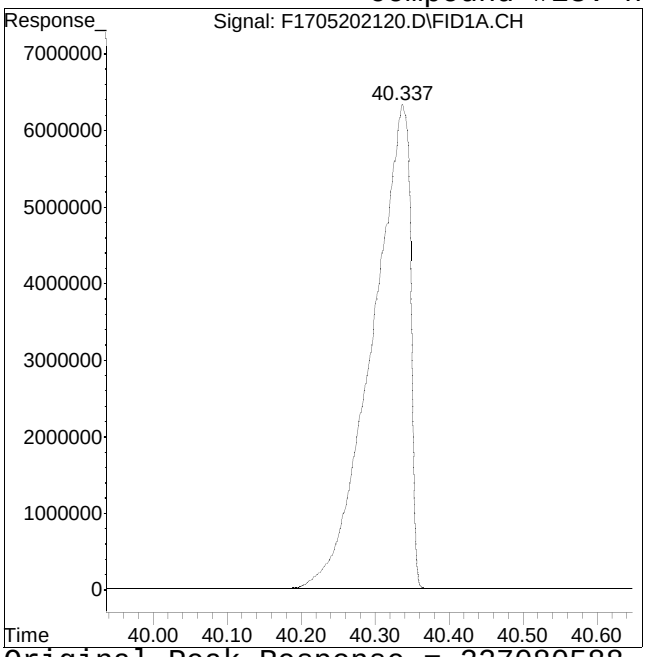
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

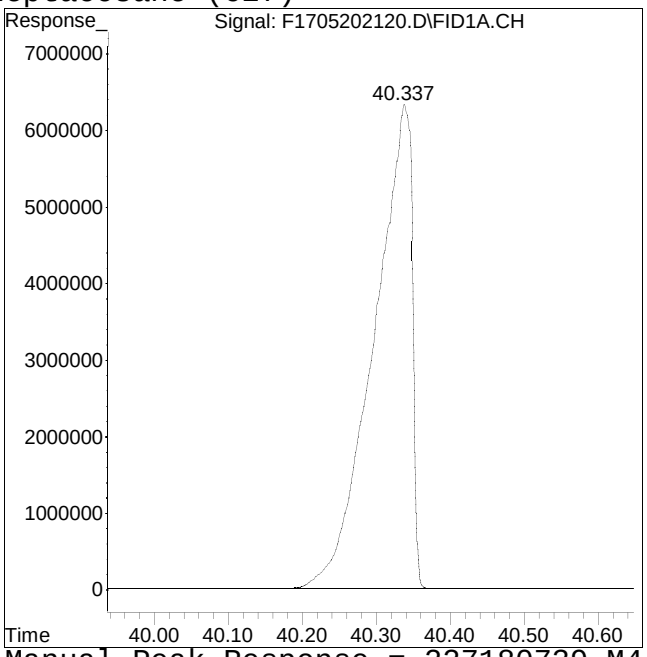
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 227080588



Manual Peak Response = 227180739 M4

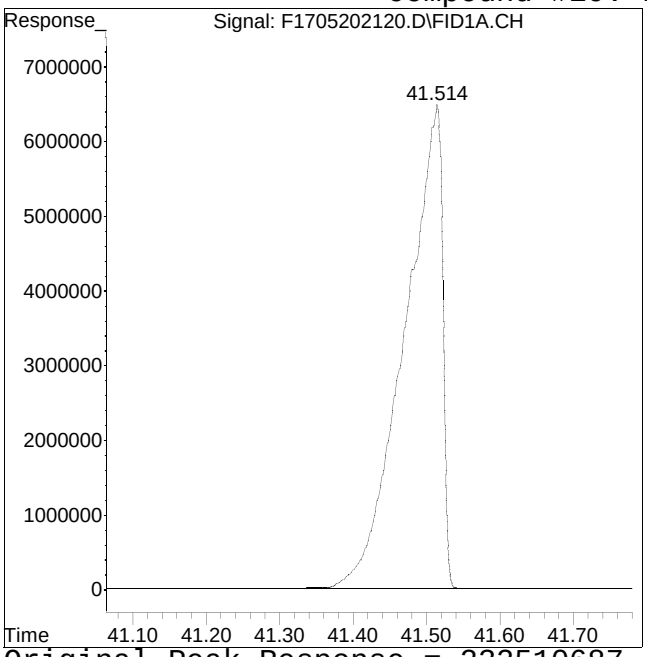
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

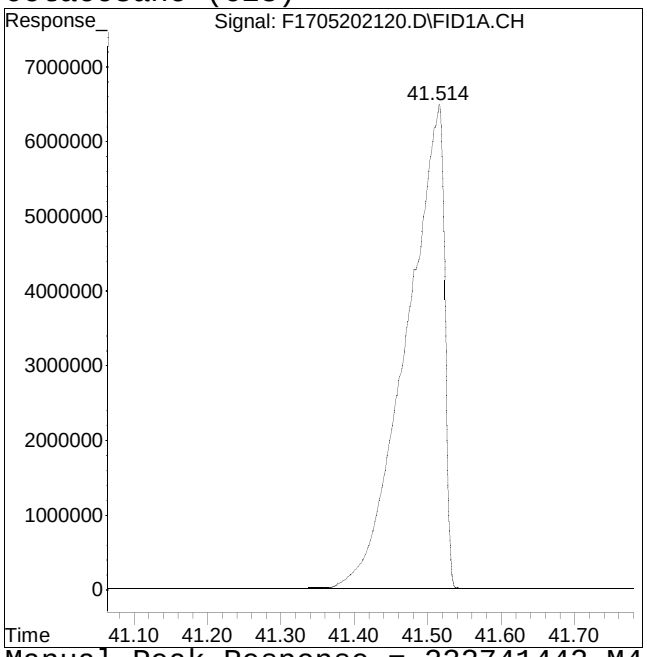
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 232510687



Manual Peak Response = 232741442 M4

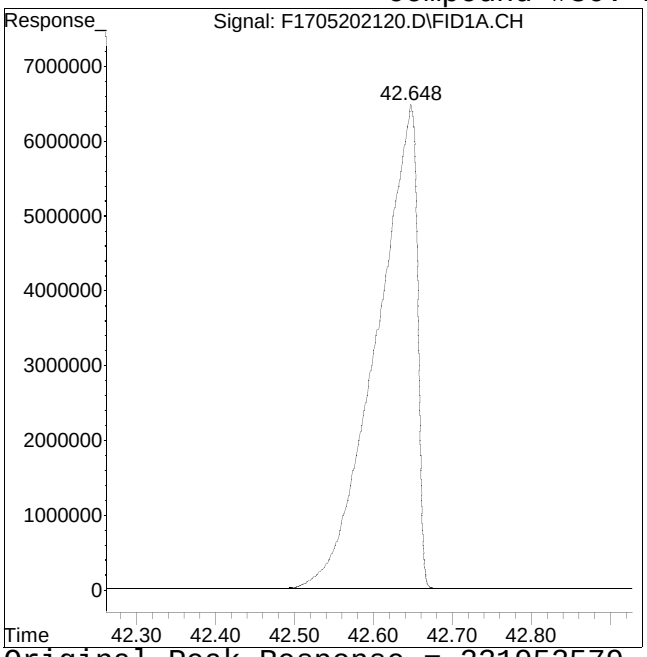
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

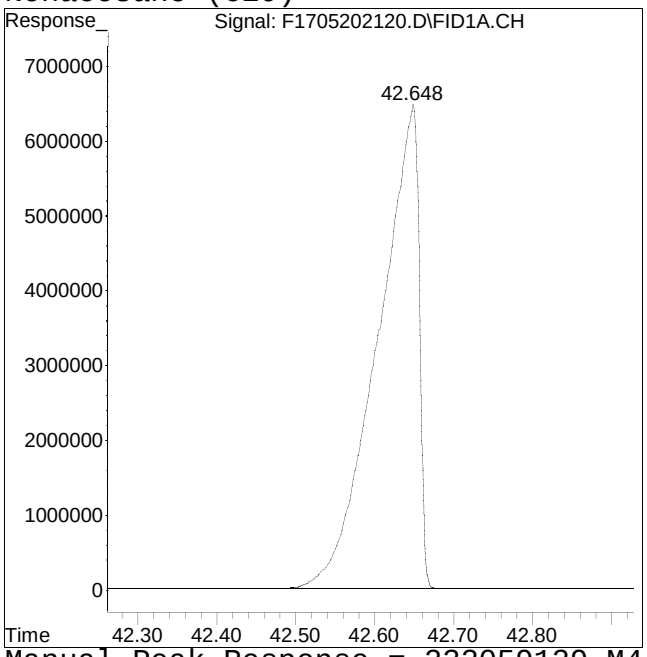
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 231952579



Manual Peak Response = 232059129 M4

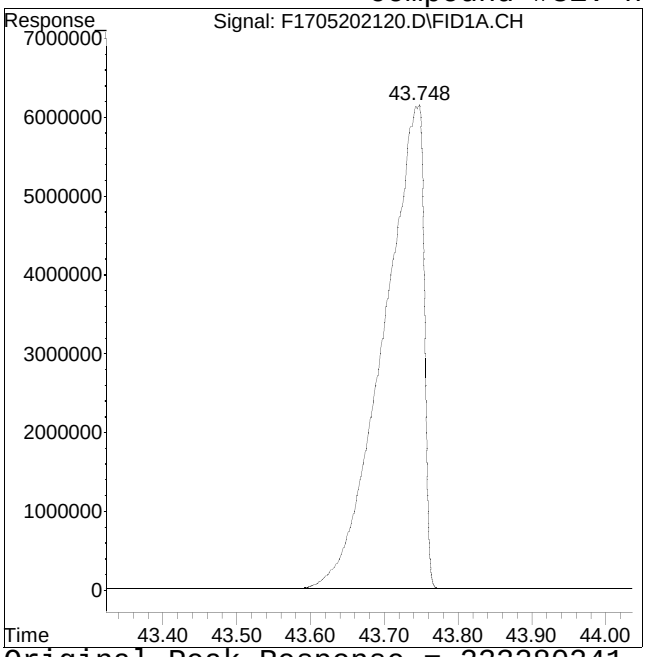
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

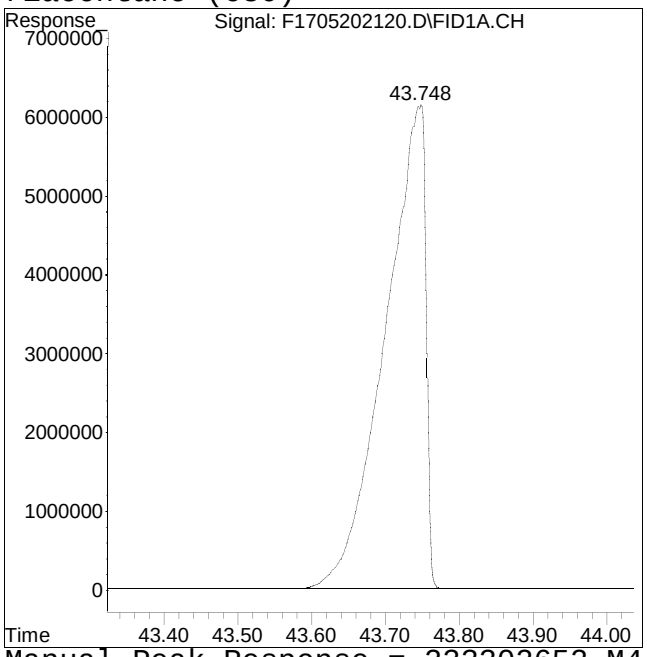
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 233280241



Manual Peak Response = 233302652 M4

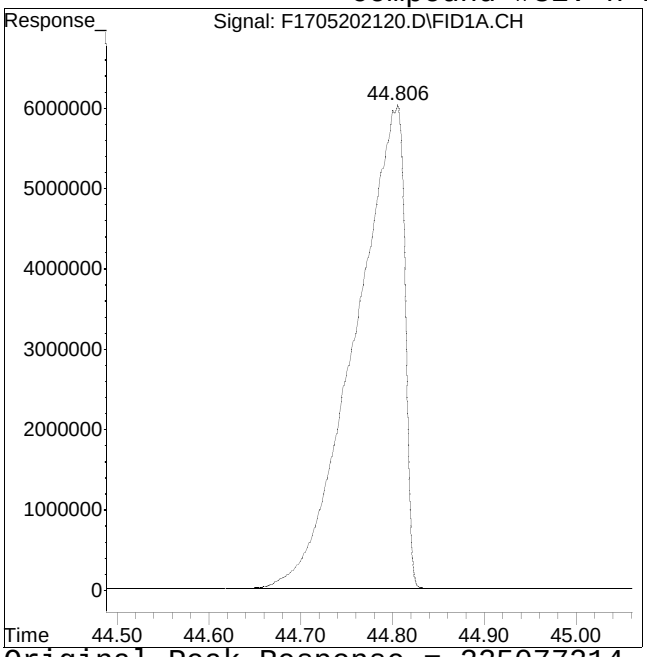
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

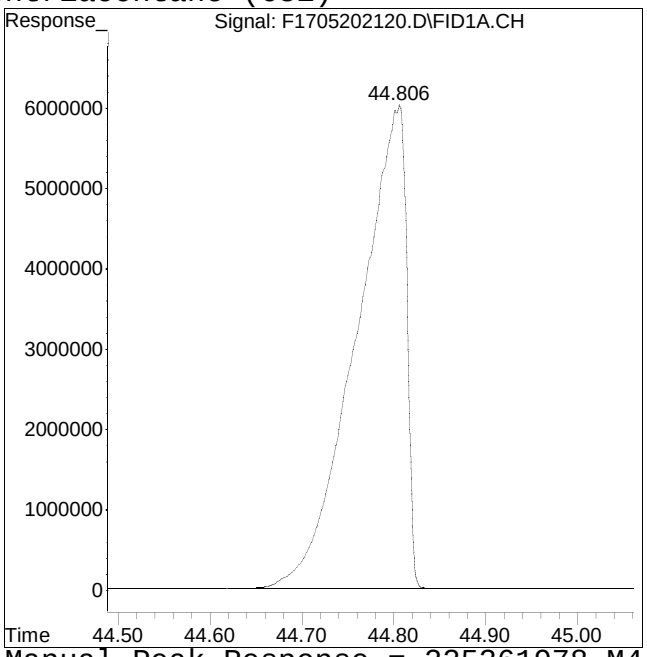
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 225077214



Manual Peak Response = 225361978 M4

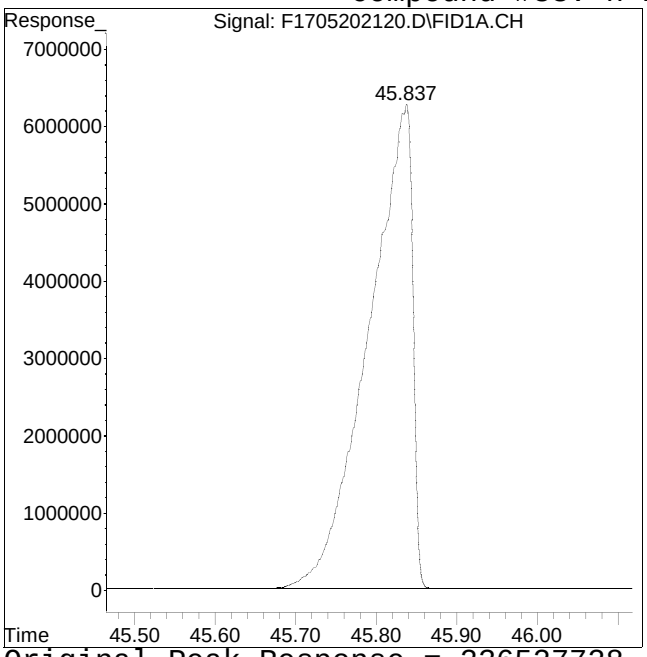
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

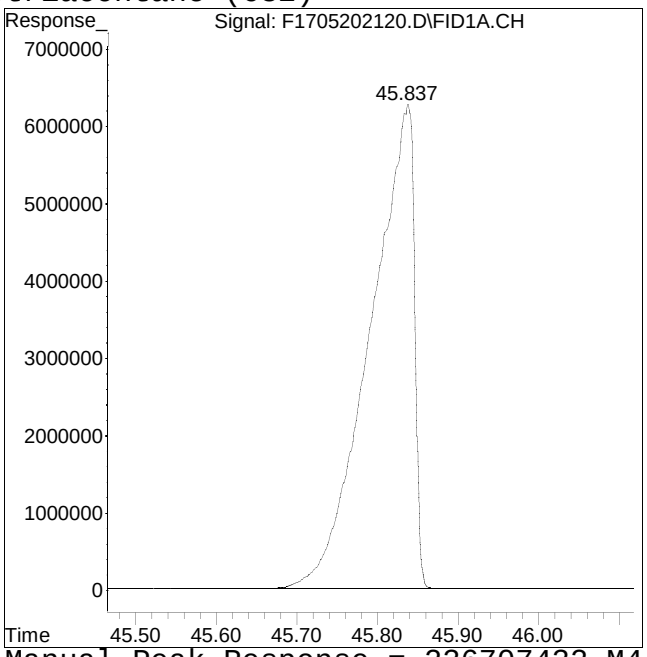
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 236527728



Manual Peak Response = 236707432 M4

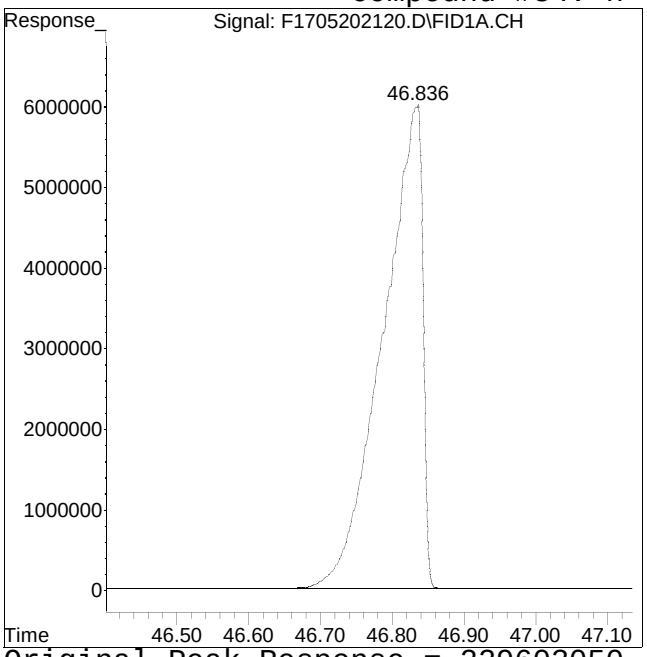
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

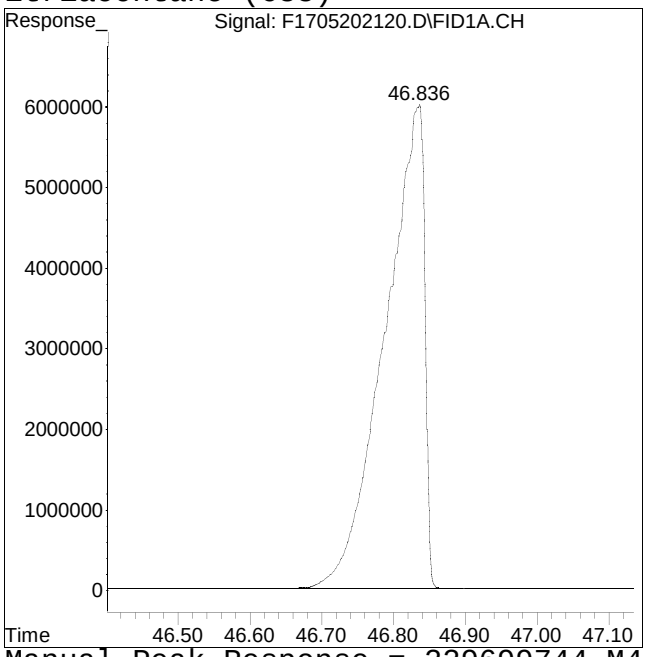
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 229603050



Manual Peak Response = 229699744 M4

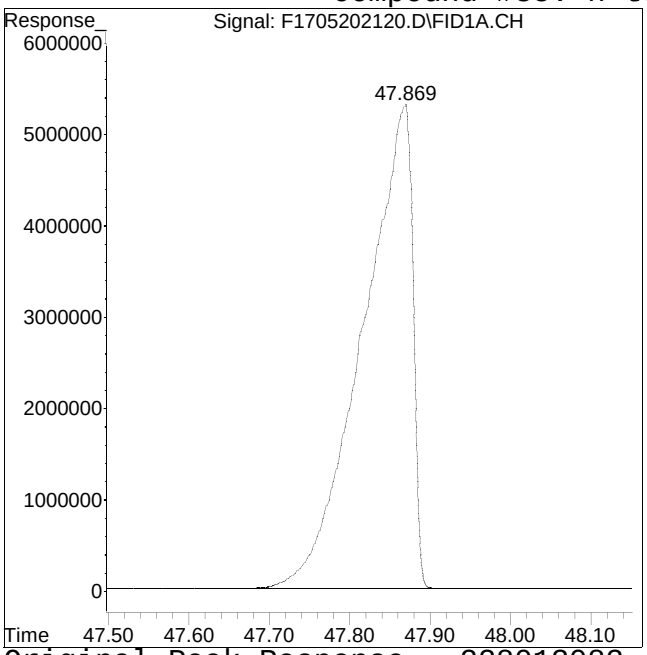
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

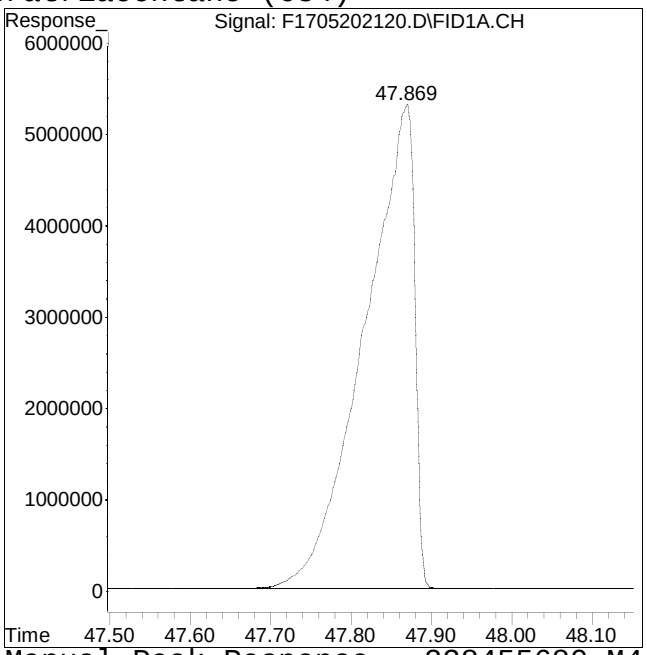
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 228013083



Manual Peak Response = 228455680 M4

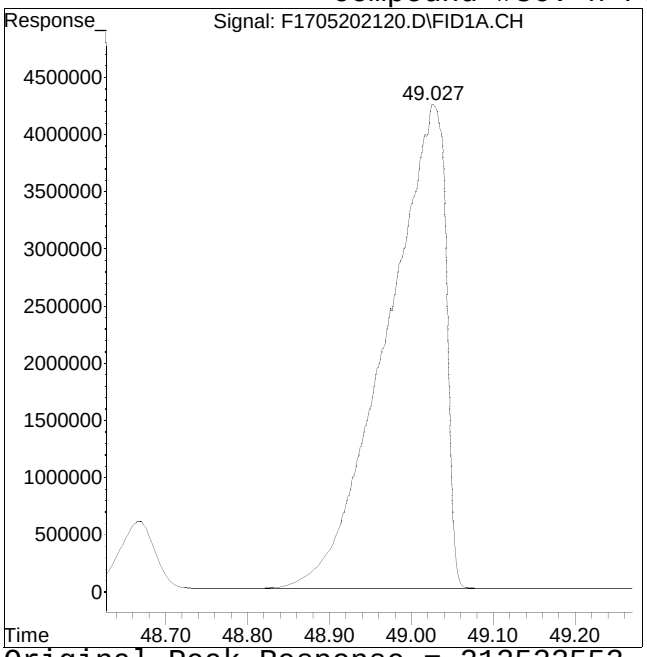
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

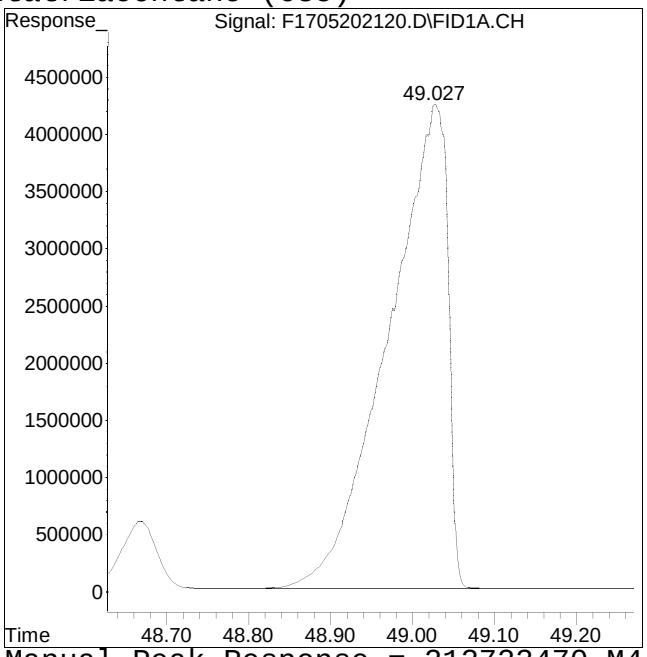
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 212523553



Manual Peak Response = 212723470 M4

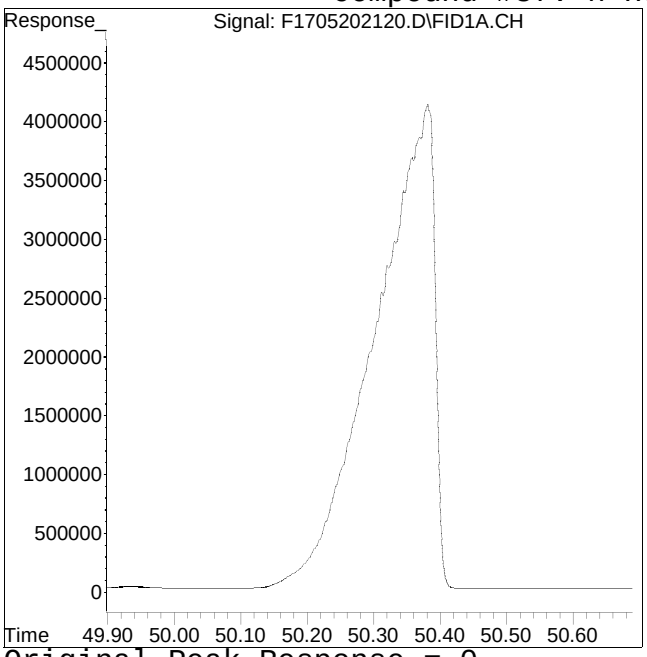
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

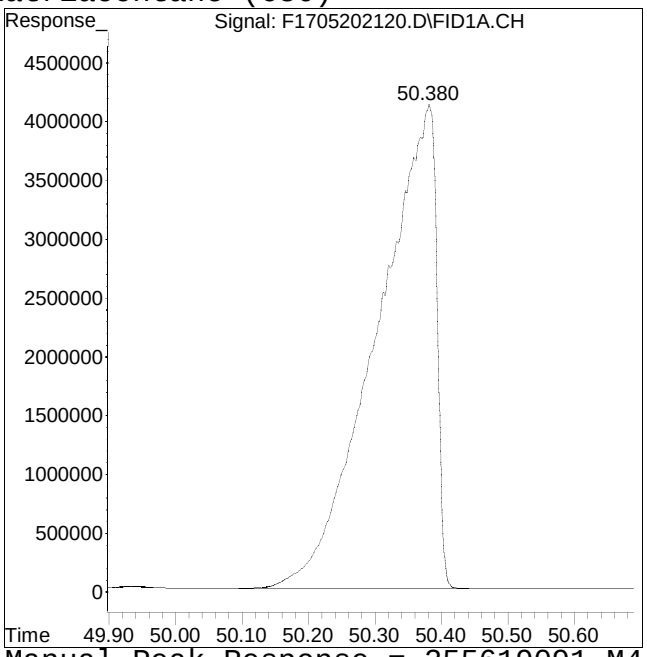
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 0



Manual Peak Response = 255619091 M4

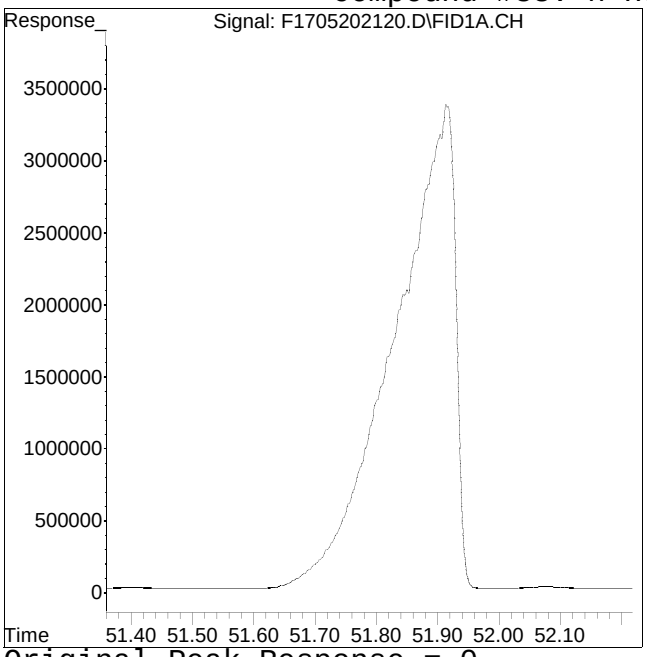
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

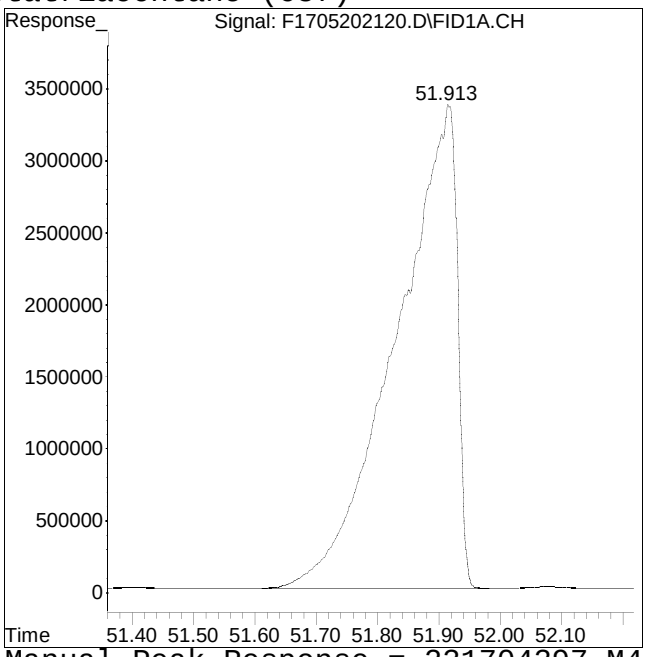
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 0



Manual Peak Response = 231704397 M4

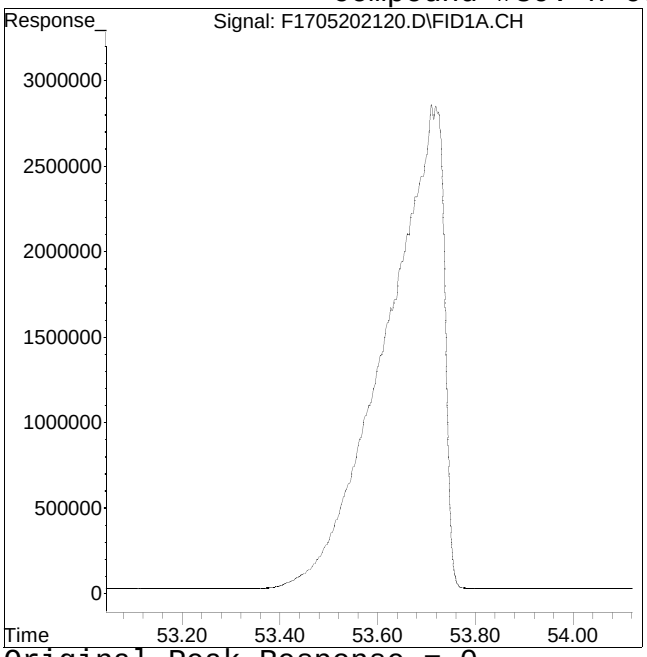
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

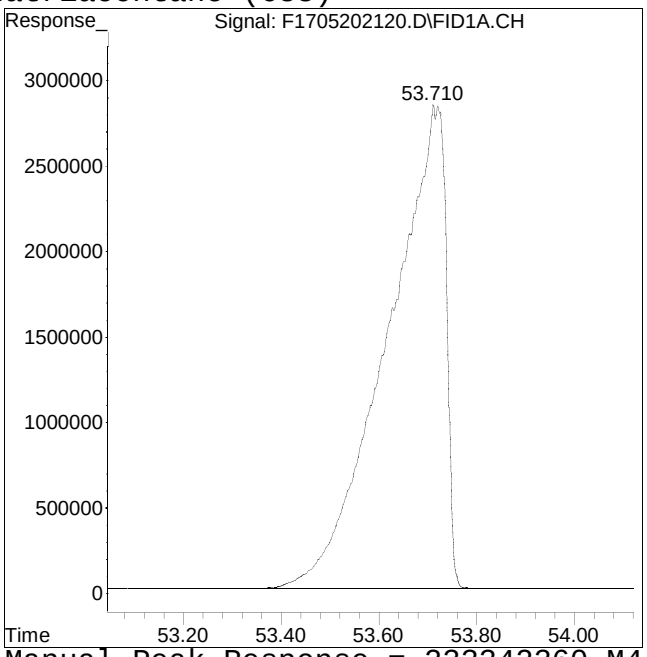
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 233342360 M4

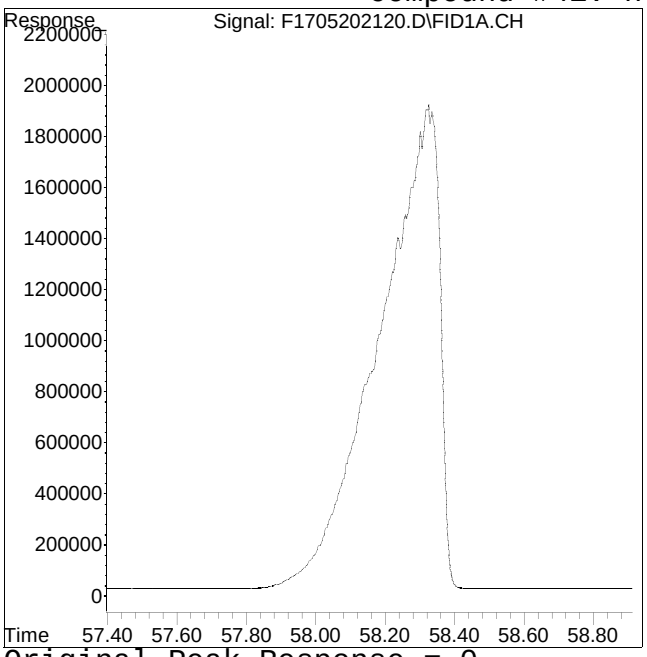
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

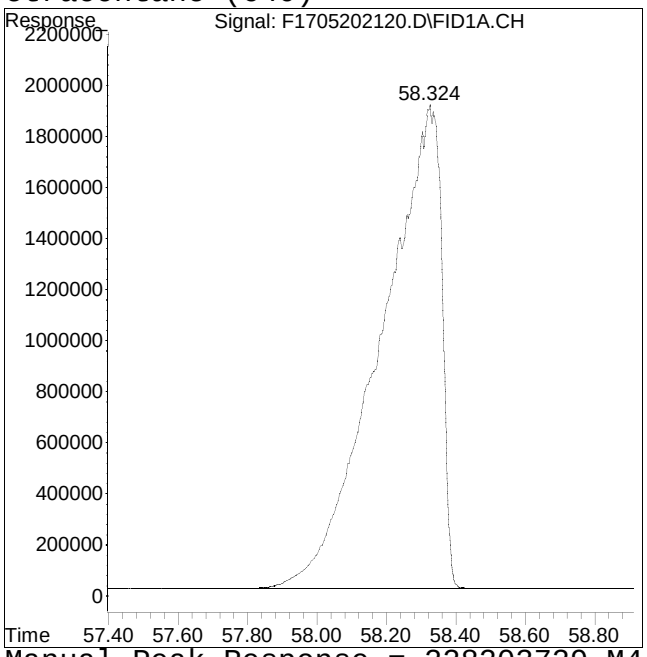
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202120.D
Date Inj'd : 5/21/2021 2:44 am
Sample : I1705202105F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:31 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 228203729 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202122.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 4:13 am
Operator : FID17:WR
Sample : I1705202106F
Misc : WG1505003,FRBD81,500ug/ml
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:39:00 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:37:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.316	57227748	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.394	625580720	505.135	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 1010.27%#			
24) s	d50-Tetracosane	36.046	491899494	499.724	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 999.45%#			
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202122.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 4:13 am
Operator : FID17:WR
Sample : I1705202106F
Misc : WG1505003,FRBD81,500ug/ml
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 15:39:00 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 15:37:04 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

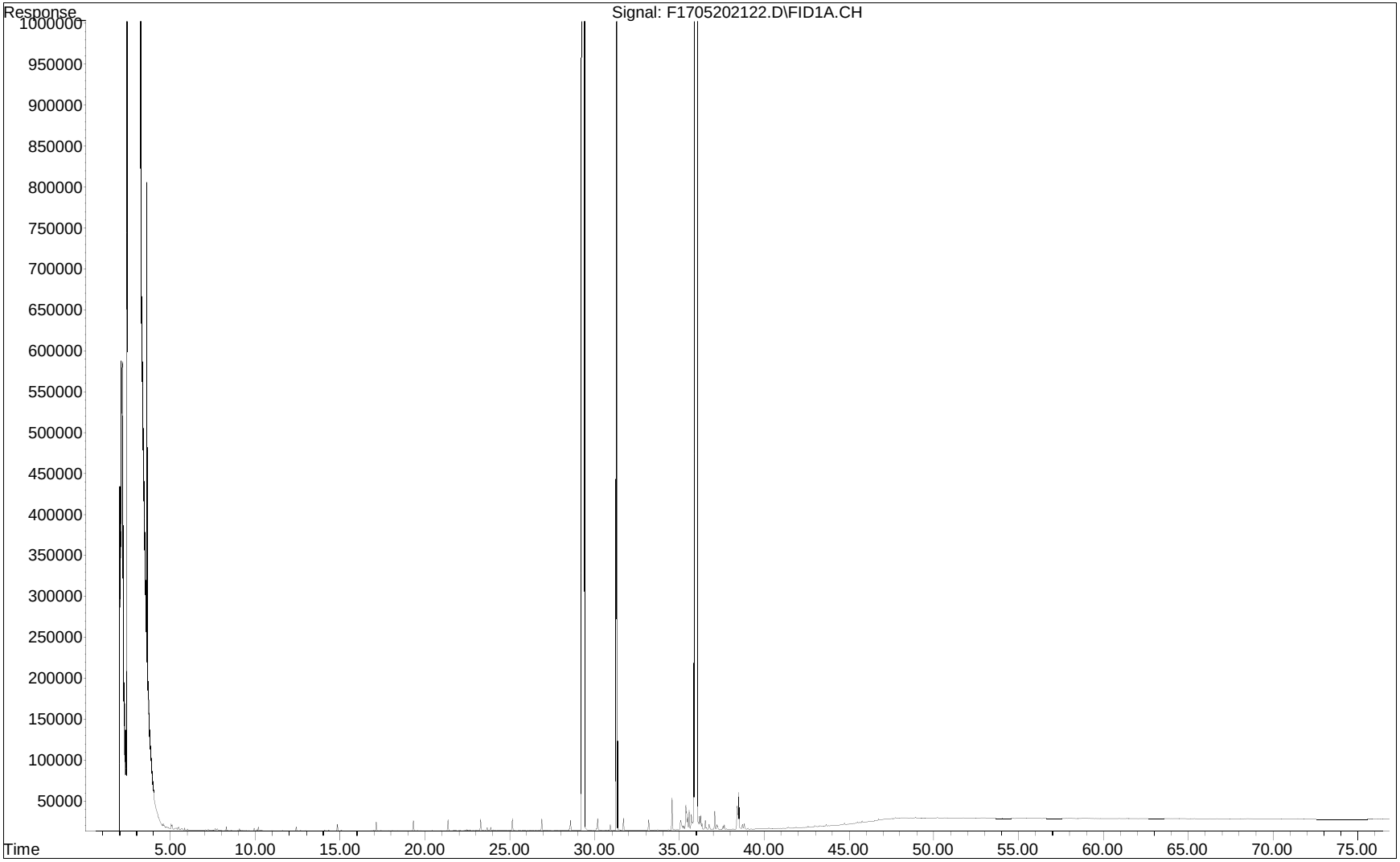
	Compound	R.T.	Response	Conc	Units
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

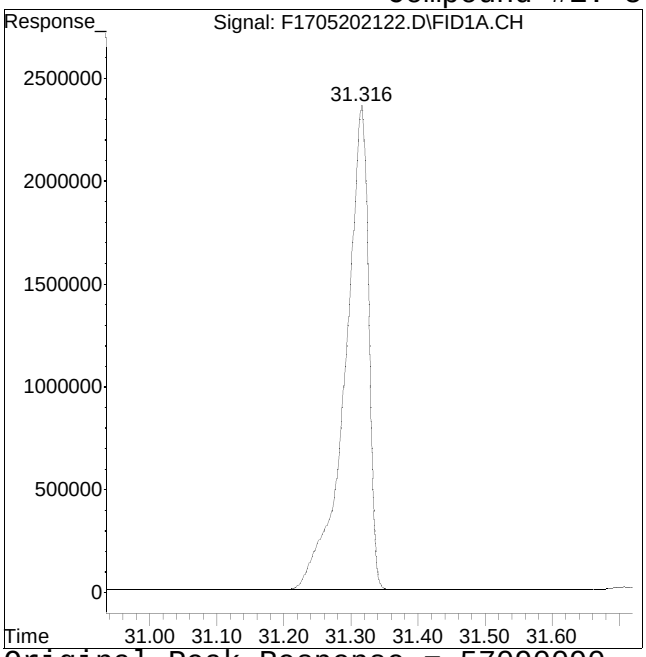
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202122.D
Operator : FID17:WR
Acquired : 21 May 2021 4:13 am using AcqMethod FID17A.M
Sample Name: I1705202106F
Instrument: FID17
Misc Info : WG1505003,FRBD81,500ug/ml
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

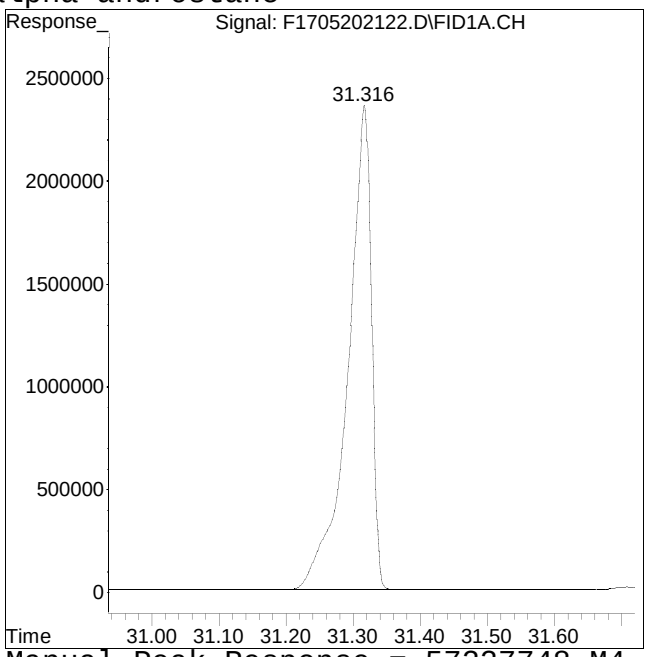


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17052021F_DRO.M
Data File : F1705202122.D Operator : FID17:WR
Date Inj'd : 5/21/2021 4:13 am Instrument : FID17
Sample : I1705202106F Quant Date : 5/27/2021 3:37 pm

Compound #1: 5-alpha-androstane





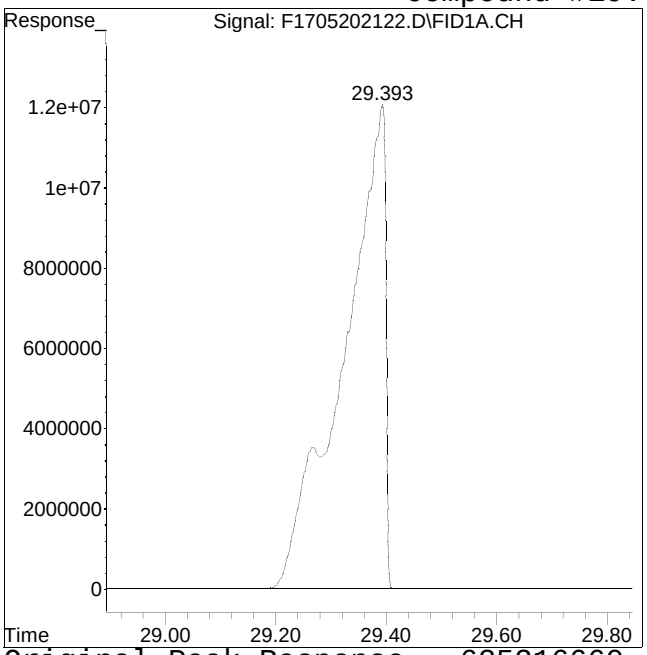
Original Peak Response = 57090090 Manual Peak Response = 57227748 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

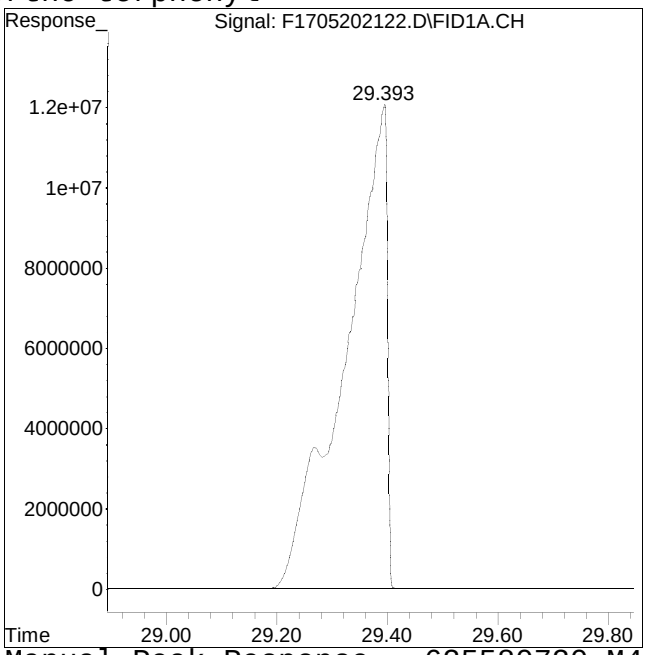
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202122.D
Date Inj'd : 5/21/2021 4:13 am
Sample : I1705202106F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:37 pm

Compound #19: ortho-terphenyl



Original Peak Response = 625216660



Manual Peak Response = 625580720 M4

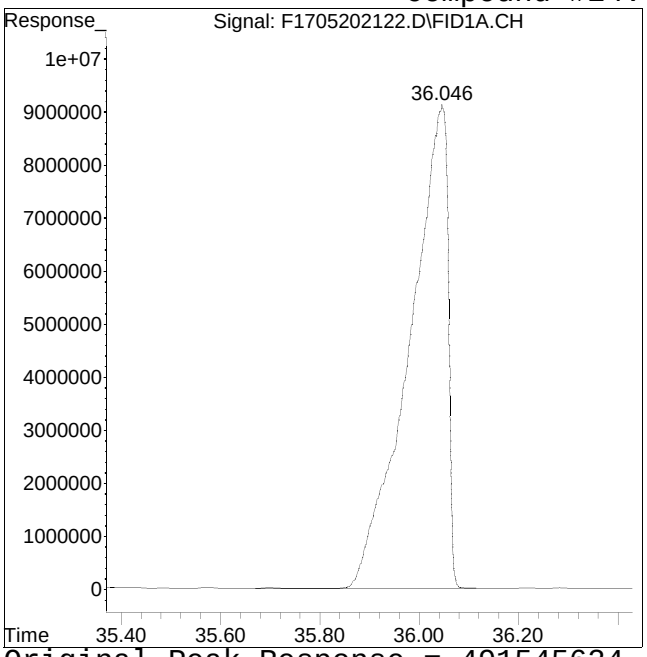
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

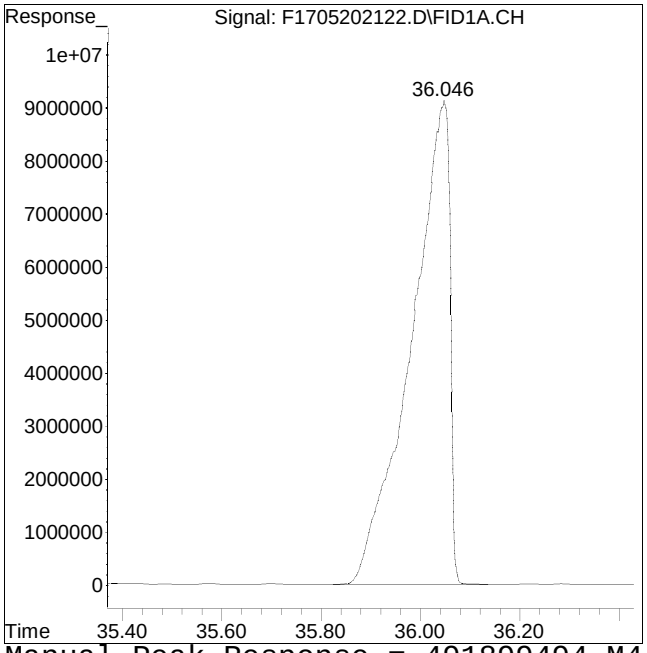
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202122.D
Date Inj'd : 5/21/2021 4:13 am
Sample : I1705202106F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 3:37 pm

Compound #24: d50-Tetracosane



Original Peak Response = 491545624



Manual Peak Response = 491899494 M4

M4 = Poor automated baseline construction.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202126.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 7:10 am
Operator : FID17:WR
Sample : CQ1705202101F
Misc : WG1505003,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:10:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	113	0.00
2	t	n-Octane (C8)	0.864	0.806	6.7	104	0.00
3	t	n-Nonane (C9)	0.922	0.885	4.0	110	0.00
4	t	n-Decane (C10)	0.944	0.923	2.2	109	0.00
5	t	n-Undecane (C11)	0.923	0.921	0.2	110	0.00
6	t	n-Dodecane (C12)	0.925	0.937	-1.3	111	0.00
7	t	n-Tridecane (C13)	0.928	0.922	0.6	110	0.00
9	t	n-Tetradecane (C14)	0.956	0.940	1.7	109	0.00
11	t	n-Pentadecane (C15)	0.957	0.943	1.5	109	0.00
12	t	n-Hexadecane (C16)	0.955	0.956	-0.1	112	0.00
14	t	n-Heptadecane (C17)	0.954	0.926	2.9	107	0.00
15	t	Pristane	0.990	0.952	3.8	108	0.00
16	t	n-Octadecane (C18)	0.970	0.939	3.2	108	0.00
17	t	Phytane	0.908	0.861	5.2	106	0.00
18	t	n-Nonadecane (C19)	0.973	0.954	2.0	109	0.00
19	s	ortho-terphenyl	1.084	1.104	-1.8	114	0.00
20	t	n-Eicosane (C20)	0.979	0.962	1.7	109	0.00
21	t	n-Heneicosane (C21)	0.982	0.962	2.0	109	0.00
22	t	n-Docosane (C22)	0.983	0.991	-0.8	112	0.00
23	t	n-Tricosane (C23)	0.985	0.942	4.4	107	0.00
24	s	d50-Tetracosane	0.860	0.865	-0.6	110	0.00
25	t	n-Tetracosane (C24)	0.982	0.964	1.8	109	0.00
26	t	n-Pentacosane (C25)	0.961	0.952	0.9	110	0.00
27	t	n-Hexacosane (C26)	0.987	0.976	1.1	110	0.00
28	t	n-Heptacosane (C27)	0.989	0.940	5.0	106	0.00
29	t	n-Octacosane (C28)	1.026	0.971	5.4	108	0.00
30	t	n-Nonacosane (C29)	1.006	0.961	4.5	107	0.00
31	t	n-Triacontane (C30)	1.010	0.964	4.6	107	0.00
32	t	n-Hentriacontane (C31)	0.977	0.947	3.1	109	0.00
33	t	n-Dotriacontane (C32)	1.025	0.948	7.5	104	0.00
34	t	n-Tritriacontane (C33)	0.998	0.946	5.2	107	0.00
35	t	n-tetratriacontane (C34)	0.991	0.962	2.9	110	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202126.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 7:10 am
Operator : FID17:WR
Sample : CQ1705202101F
Misc : WG1505003,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:10:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.933	-0.8	114	0.00
37 t	n-Hexatriacontane (C36)	1.115	0.991	11.1	101	0.00
38 t	n-Heptatriacontane (C37)	1.011	0.943	6.7	105	0.00
39 t	n-Octatriacontane (C38)	1.022	0.977	4.4	107	0.00
41 t	n-Tetracontane (C40)	1.009	0.887	12.1	99	-0.01

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.03	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202126.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 7:10 am
Operator : FID17:WR
Sample : CQ1705202101F
Misc : WG1505003,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:10:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.313	60431004	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.294	66731161	50.940 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 101.88%	
24) s d50-Tetracosane	35.953	52287156	50.308 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 100.62%	
Target Compounds			
2) t n-Octane (C8)	5.634	48677991	46.592 ug/mL M4
3) t n-Nonane (C9)	7.832	53485759	47.975 ug/mL M4
4) t n-Decane (C10)	10.318	55801662	48.893 ug/mL M4
5) t n-Undecane (C11)	12.833	55662276	49.920 ug/mL M4
6) t n-Dodecane (C12)	15.263	56645652	50.662 ug/mL M4
7) t n-Tridecane (C13)	17.574	55716065	49.696 ug/mL M4
9) t n-Tetradecane (C14)	19.759	56791817	49.165 ug/mL M4
11) t n-Pentadecane (C15)	21.827	56971479	49.264 ug/mL M4
12) t n-Hexadecane (C16)	23.787	57798725	50.068 ug/mL M4
14) t n-Heptadecane (C17)	25.649	55957481	48.519 ug/mL M4
15) t Pristane	25.761	57545646	48.112 ug/mL M4
16) t n-Octadecane (C18)	27.417	56773246	48.415 ug/mL M4
17) t Phytane	27.583	52025288	47.426 ug/mL M4
18) t n-Nonadecane (C19)	29.105	57663073	49.026 ug/mL M4
20) t n-Eicosane (C20)	30.715	58128852	49.141 ug/mL M4
21) t n-Heneicosane (C21)	32.253	58118216	48.975 ug/mL M4
22) t n-Docosane (C22)	33.727	59879423	50.381 ug/mL M4
23) t n-Tricosane (C23)	35.141	56896330	47.776 ug/mL M4
25) t n-Tetracosane (C24)	36.503	58227519	49.047 ug/mL M4
26) t n-Pentacosane (C25)	37.810	57511809	49.508 ug/mL M4
27) t n-Hexacosane (C26)	39.067	58979418	49.460 ug/mL M4
28) t n-Heptacosane (C27)	40.282	56778438	47.486 ug/mL M4
29) t n-Octacosane (C28)	41.454	58676379	47.337 ug/mL M4
30) t n-Nonacosane (C29)	42.585	58069356	47.763 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202126.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 7:10 am
Operator : FID17:WR
Sample : CQ1705202101F
Misc : WG1505003,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:10:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

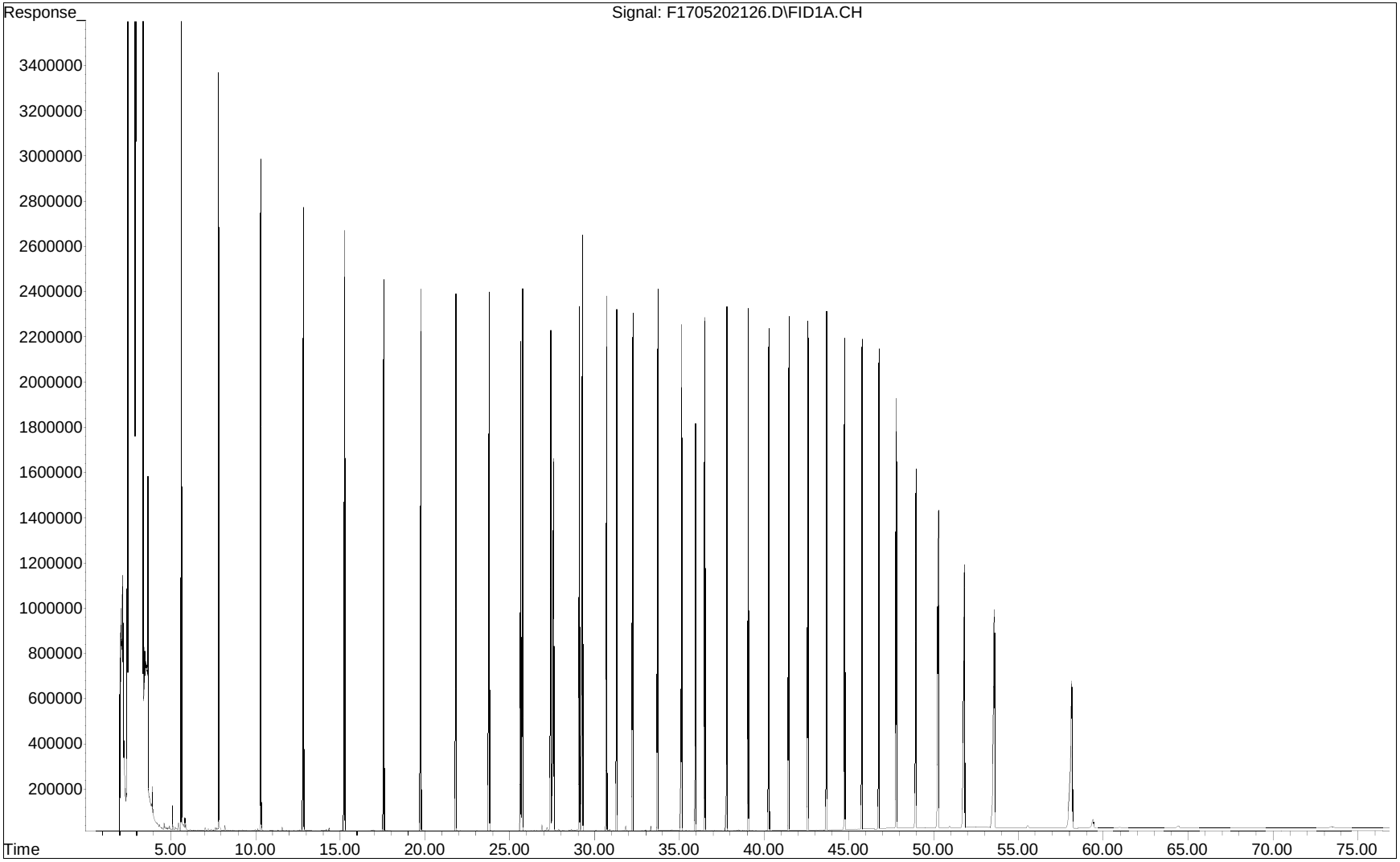
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.682	58266055	47.738 ug/mL M4
32) t	n-Hentriacontane (C31)	44.744	57246918	48.493 ug/mL M4
33) t	n-Dotriacontane (C32)	45.770	57276637	46.223 ug/mL M4
34) t	n-Tritriacontane (C33)	46.770	57185523	47.410 ug/mL M4
35) t	n-tetratriacontane (C34)	47.796	58145113	48.544 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.947	56378870	50.383 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.268	59901079	44.466 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.785	56961346	46.624 ug/mL M4
39) t	n-Octatriacontane (C38)	53.573	59030227	47.791 ug/mL M4
41) t	n-Tetracontane (C40)	58.131	53596293	43.967 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202126.D
Operator : FID17:WR
Acquired : 21 May 2021 7:10 am using AcqMethod FID17A.M
Sample Name: CQ1705202101F
Instrument: FID17
Misc Info : WG1505003,FRBD82,50ug/ml
Vial Number: 13
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

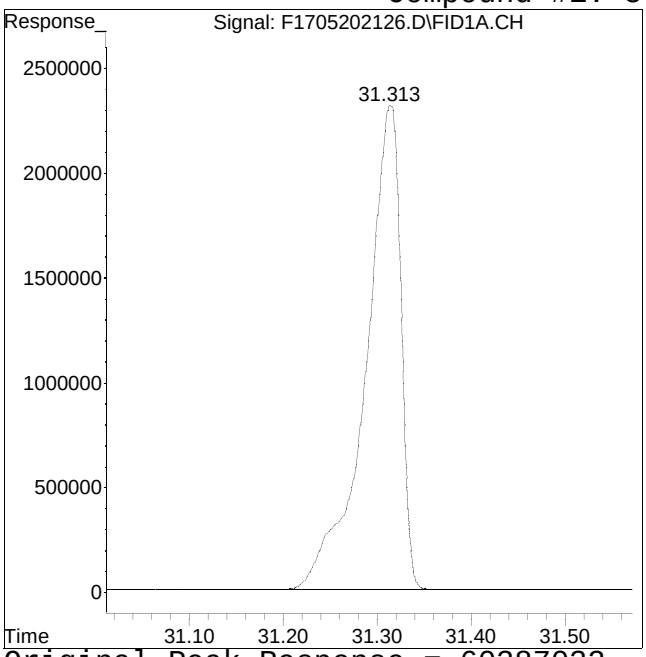


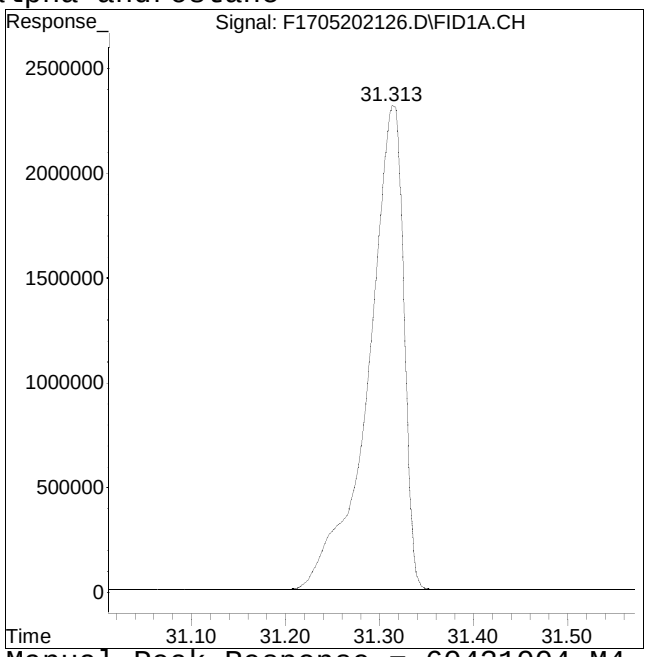
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #1: 5-alpha-androstane





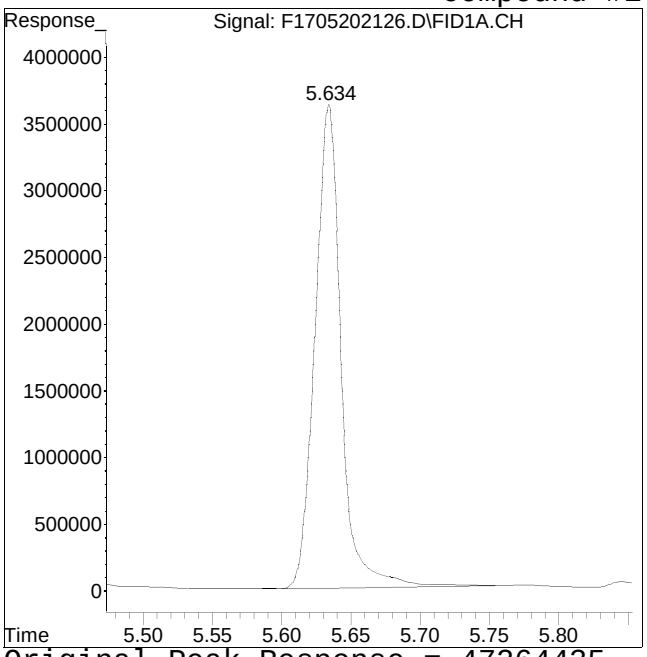
Original Peak Response = 60387032 Manual Peak Response = 60431004 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

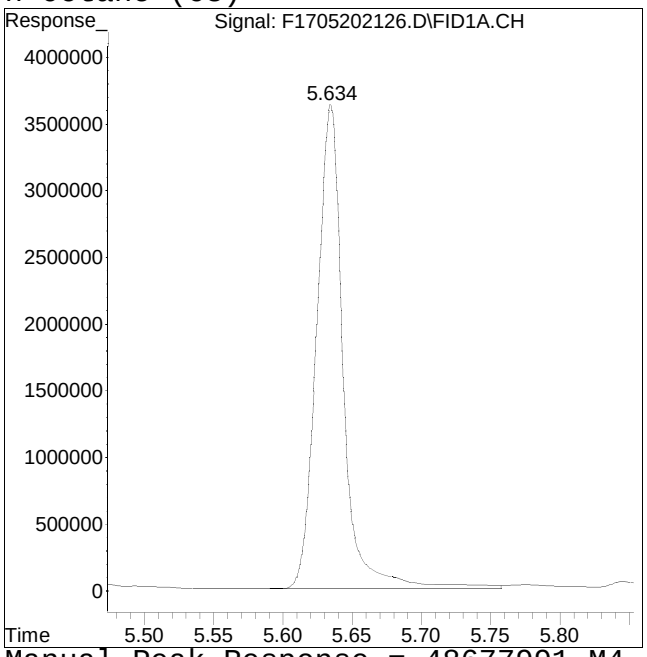
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #2: n-Octane (C8)



Original Peak Response = 47264435



Manual Peak Response = 48677991 M4

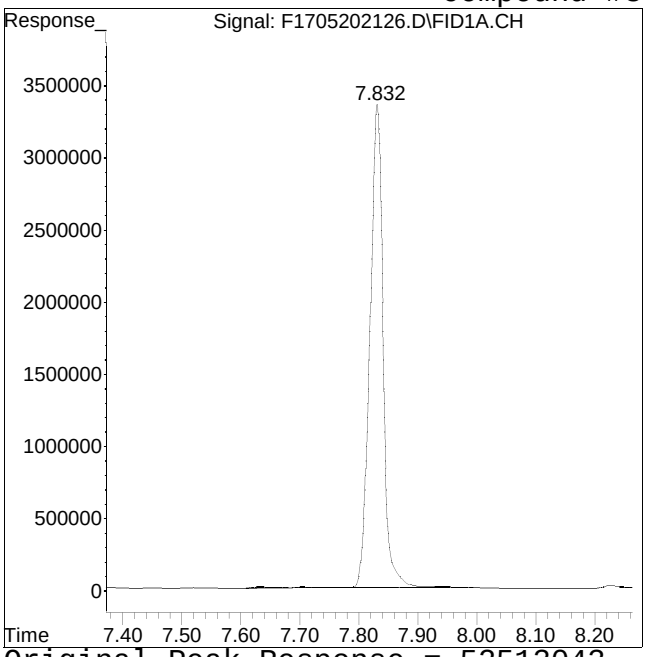
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

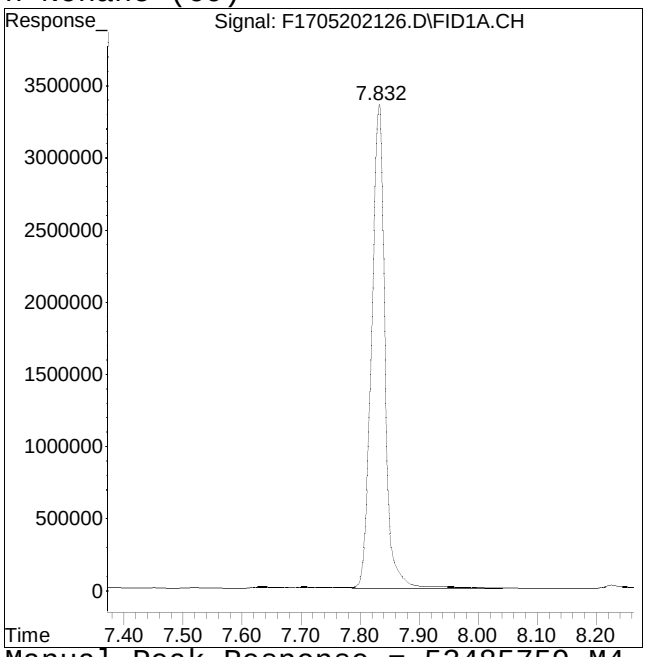
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 52513043



Manual Peak Response = 53485759 M4

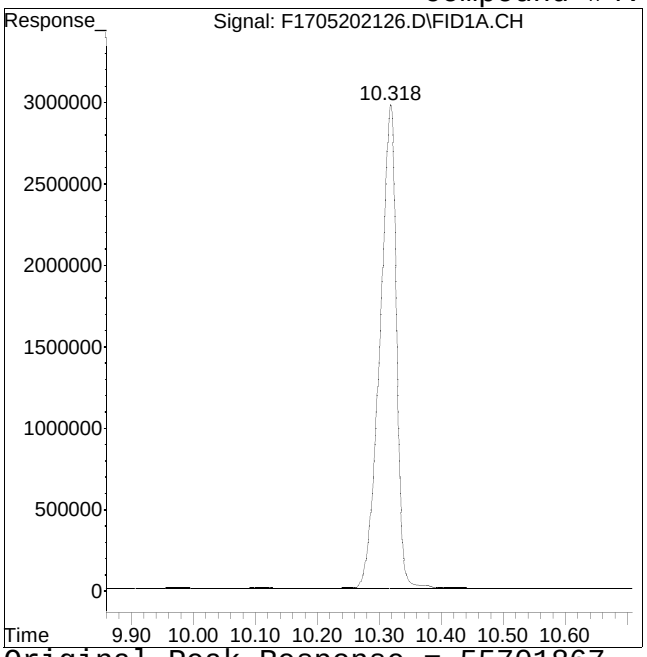
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

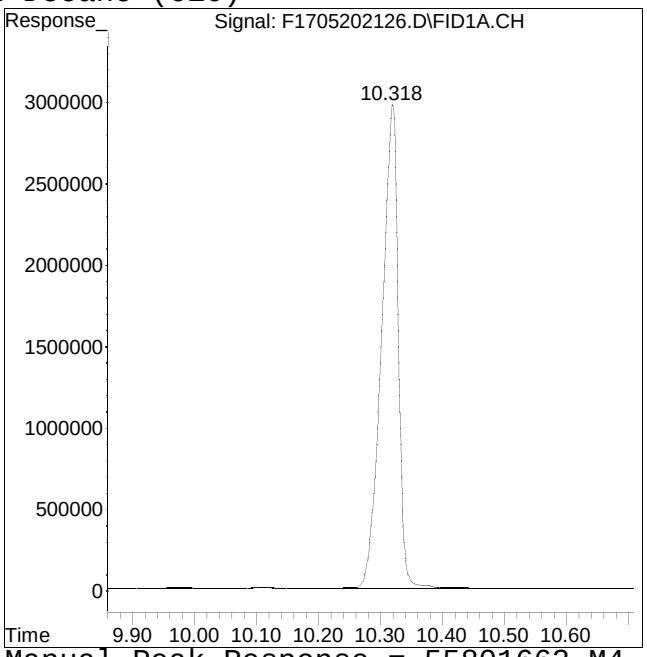
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #4: n-Decane (C10)



Original Peak Response = 55701867



Manual Peak Response = 55801662 M4

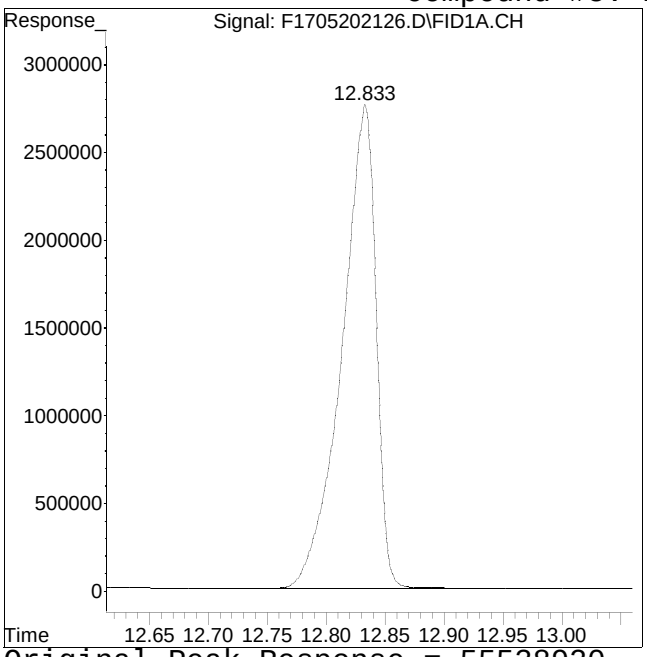
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

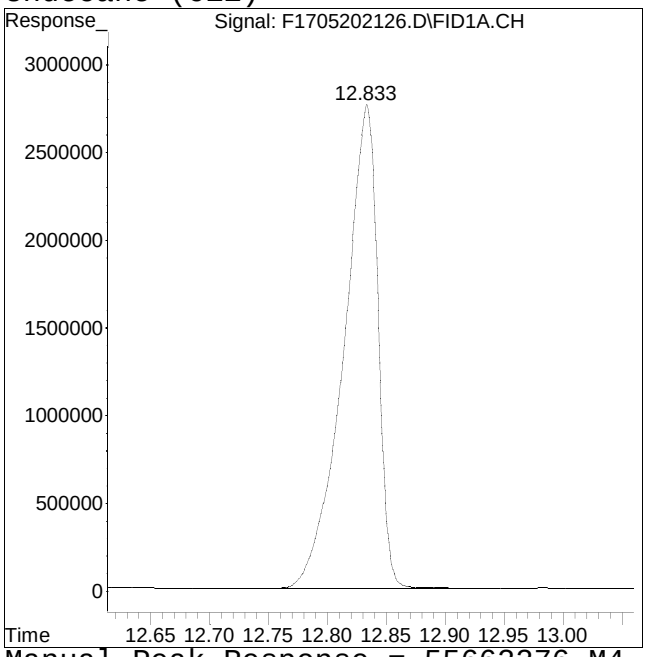
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 55538920



Manual Peak Response = 55662276 M4

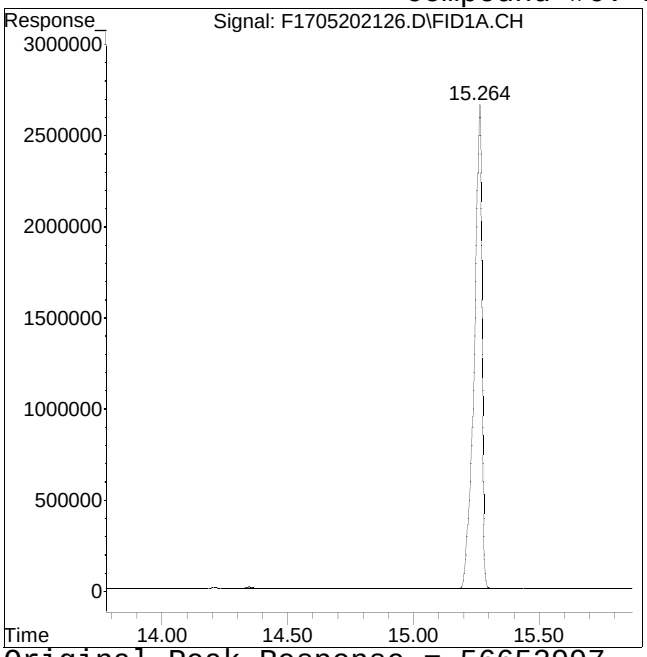
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

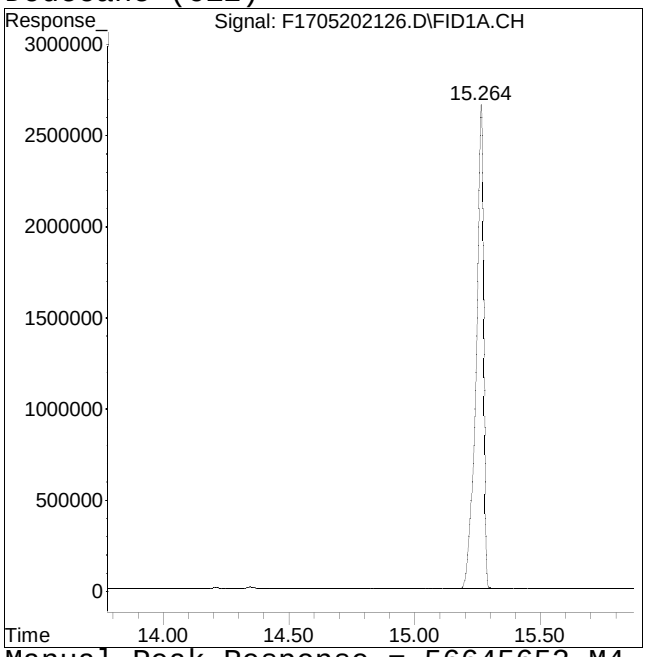
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 56652997



Manual Peak Response = 56645652 M4

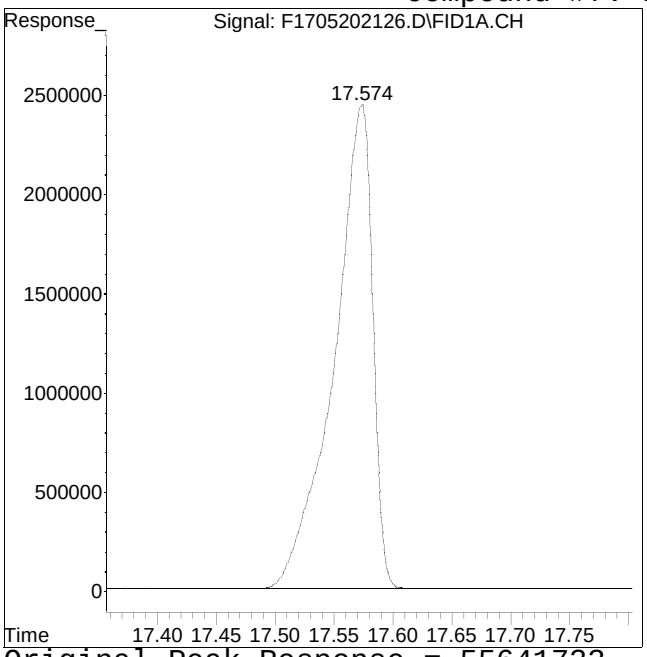
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

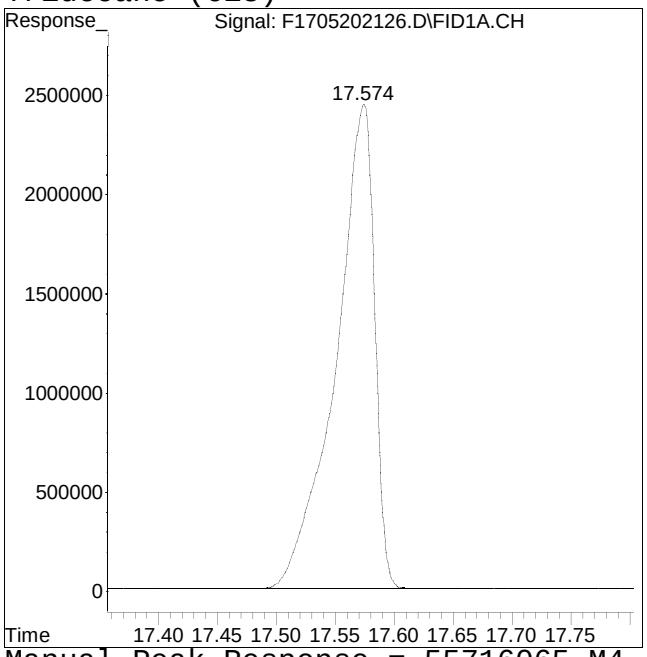
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 55641733



Manual Peak Response = 55716065 M4

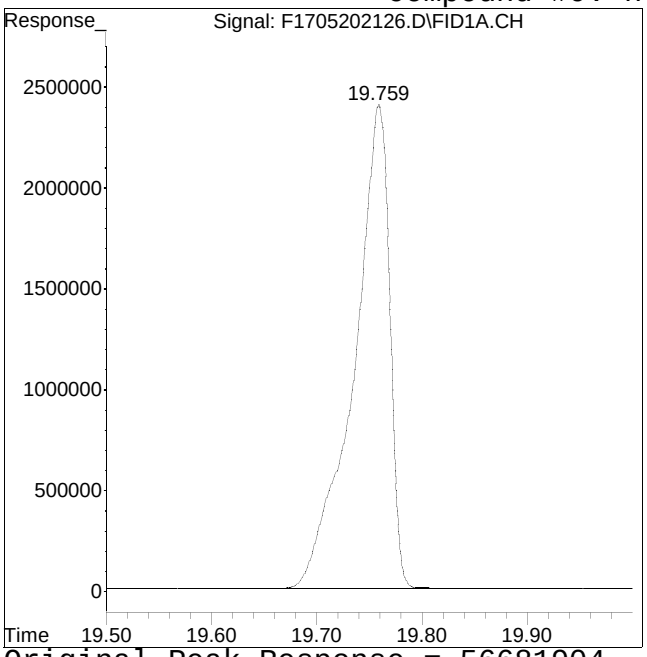
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

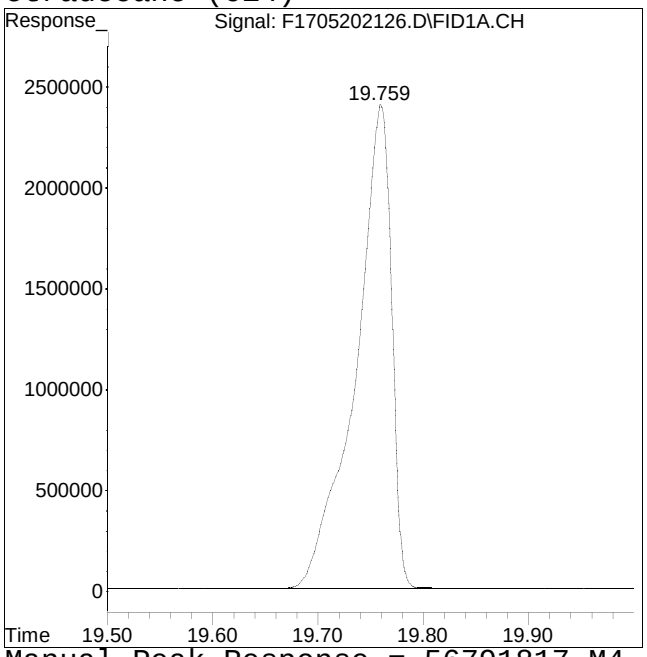
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 56681904



Manual Peak Response = 56791817 M4

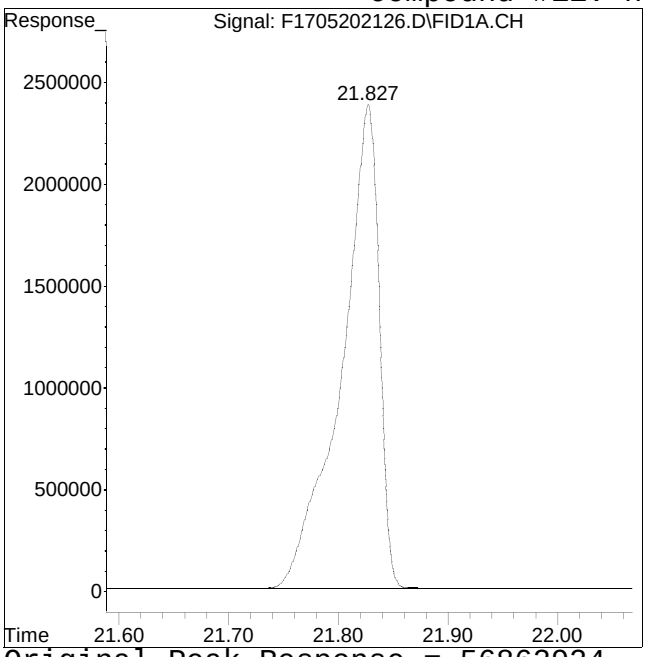
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

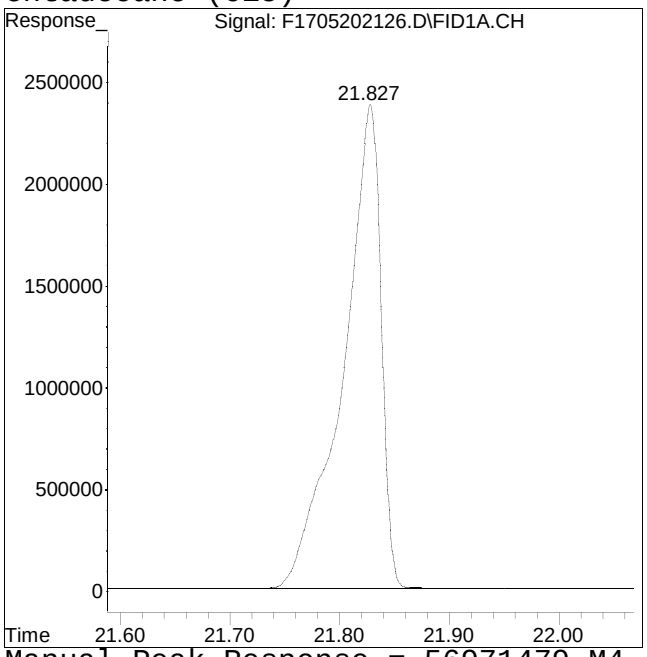
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 56862924



Manual Peak Response = 56971479 M4

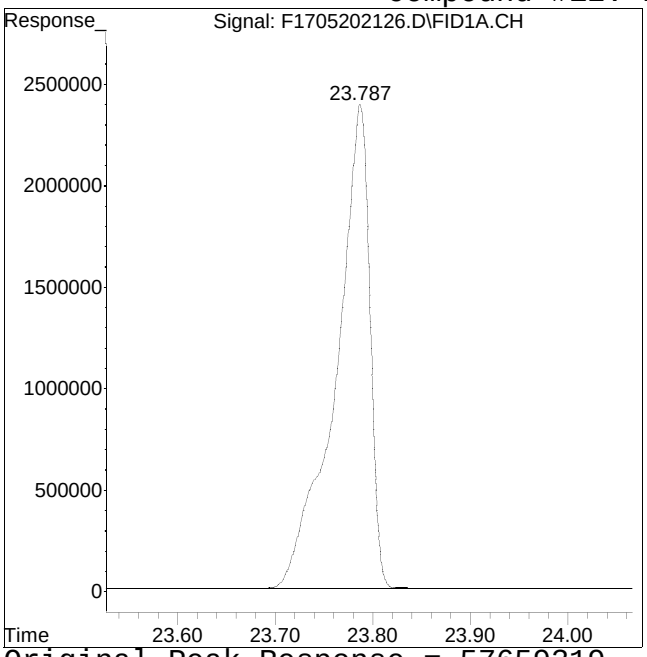
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

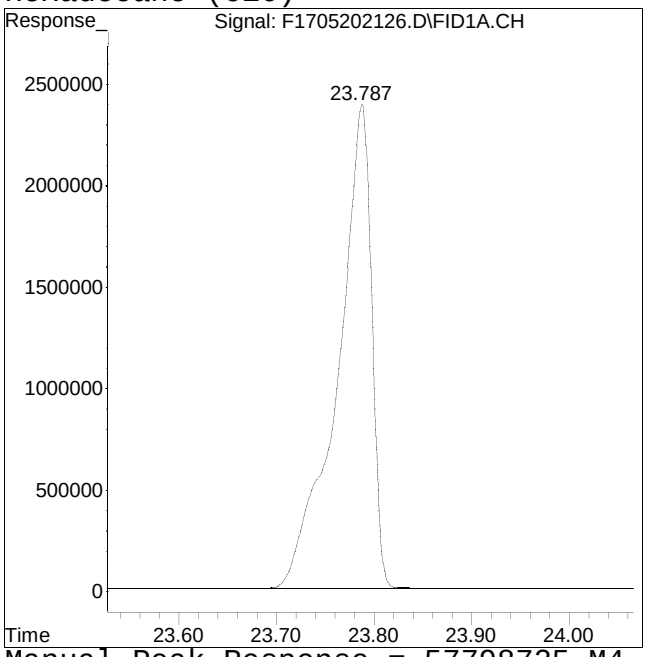
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 57659319



Manual Peak Response = 57798725 M4

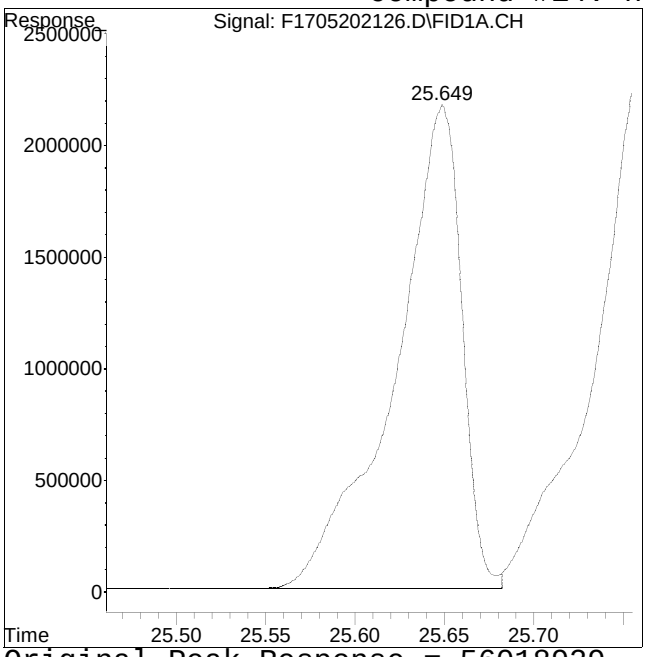
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

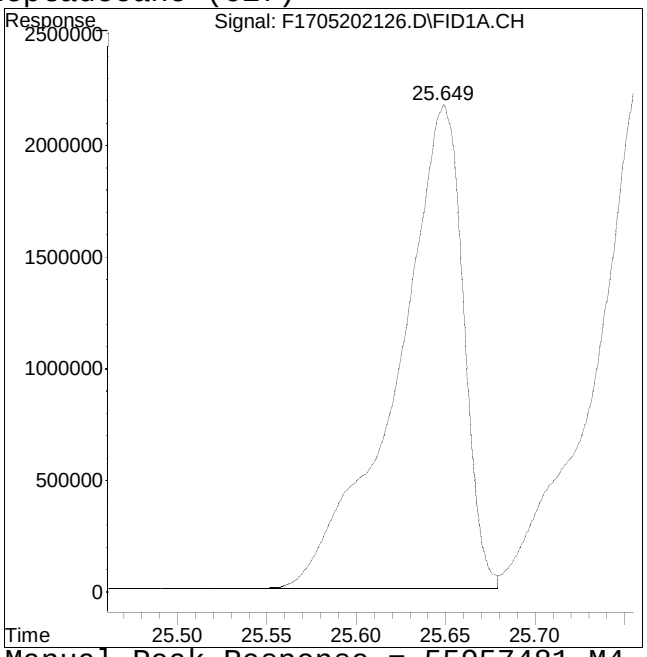
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 56018929



Manual Peak Response = 55957481 M4

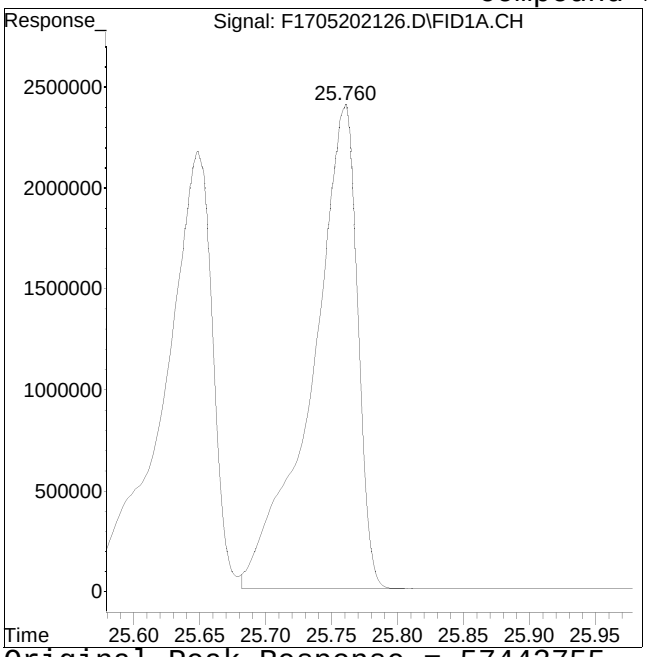
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

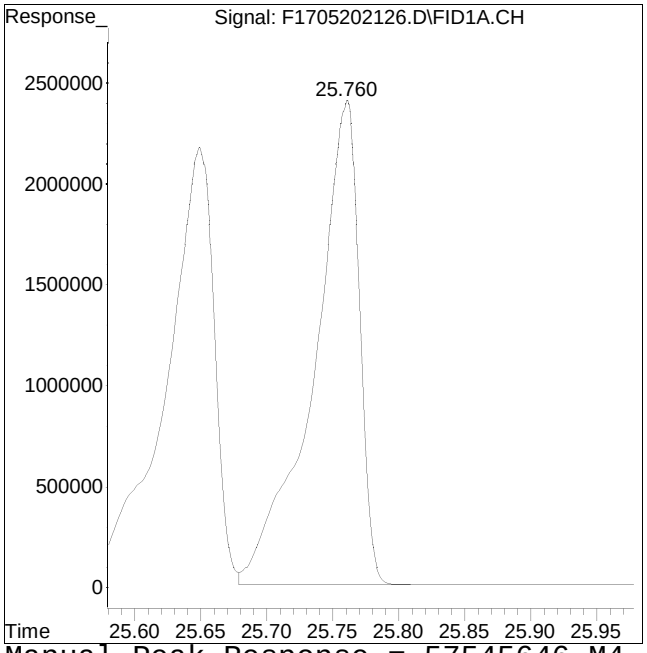
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #15: Pristane



Original Peak Response = 57443755



Manual Peak Response = 57545646 M4

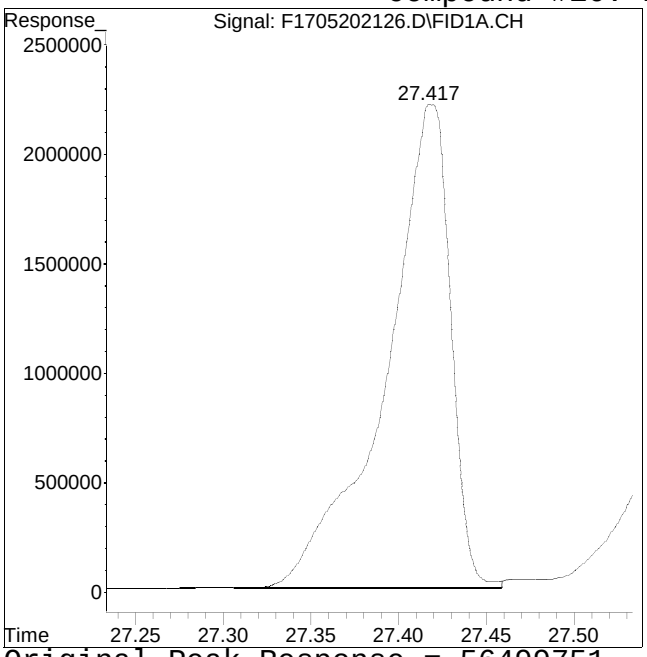
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

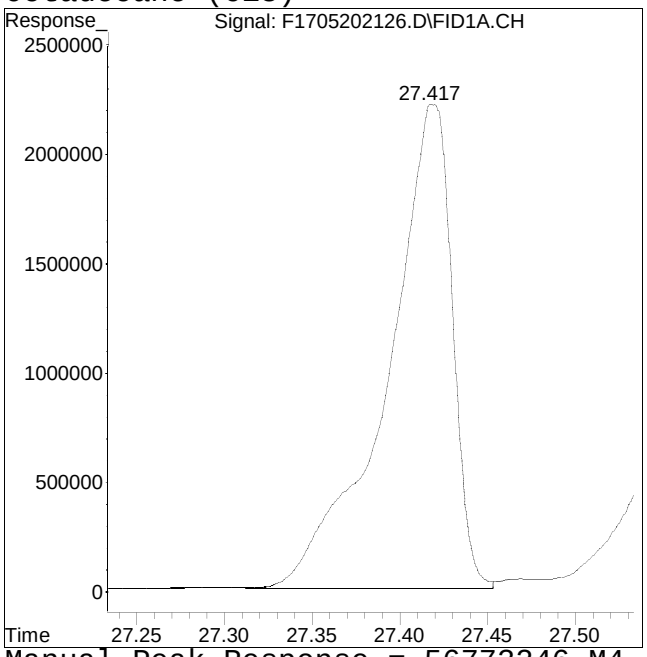
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 56499751



Manual Peak Response = 56773246 M4

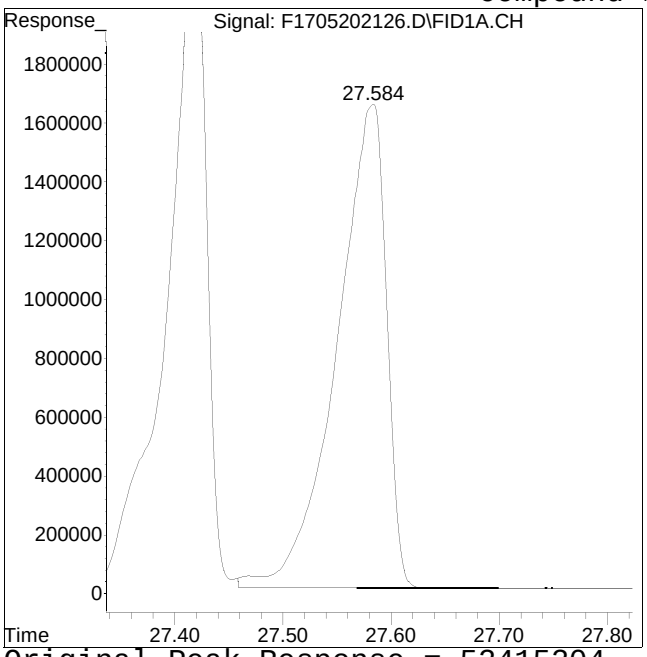
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

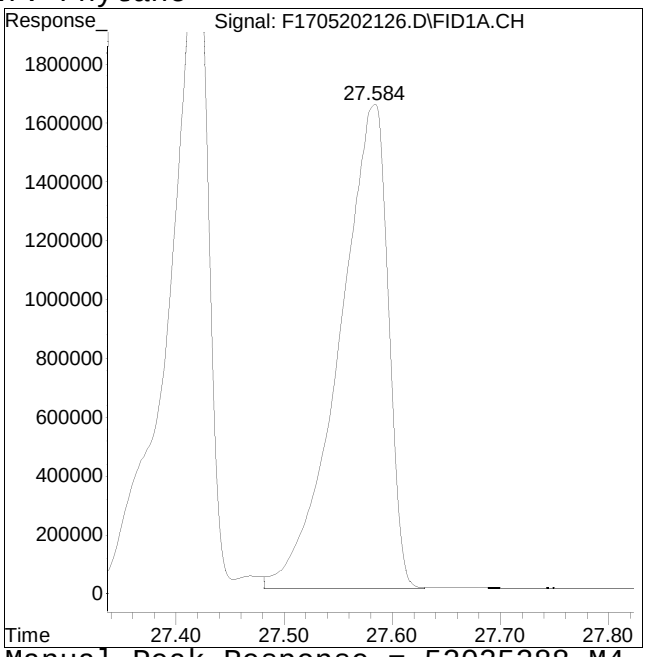
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #17: Phytane



Original Peak Response = 52415204



Manual Peak Response = 52025288 M4

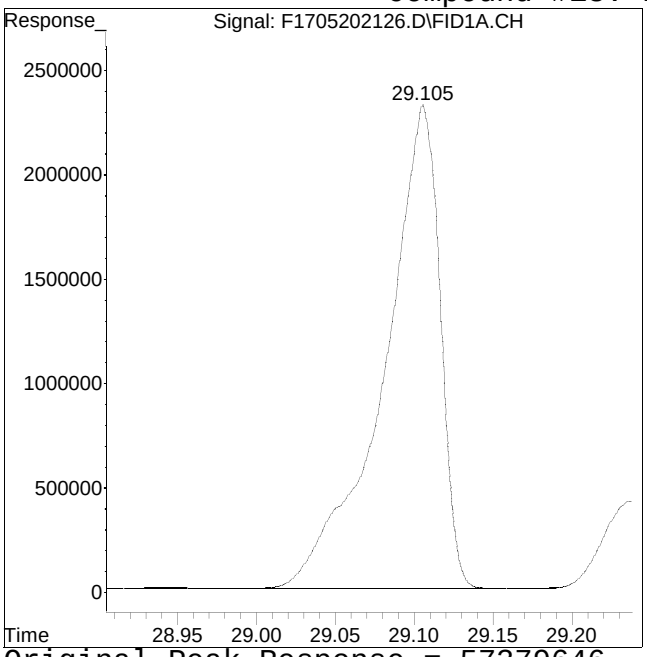
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

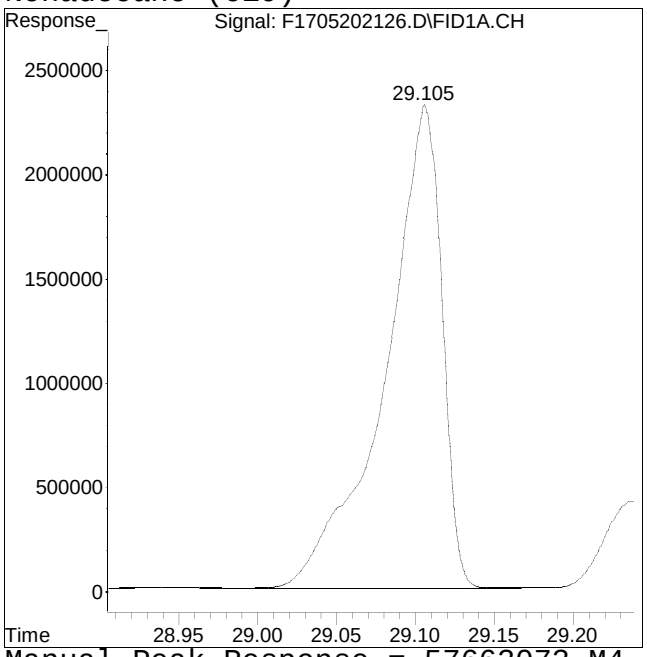
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 57379646



Manual Peak Response = 57663073 M4

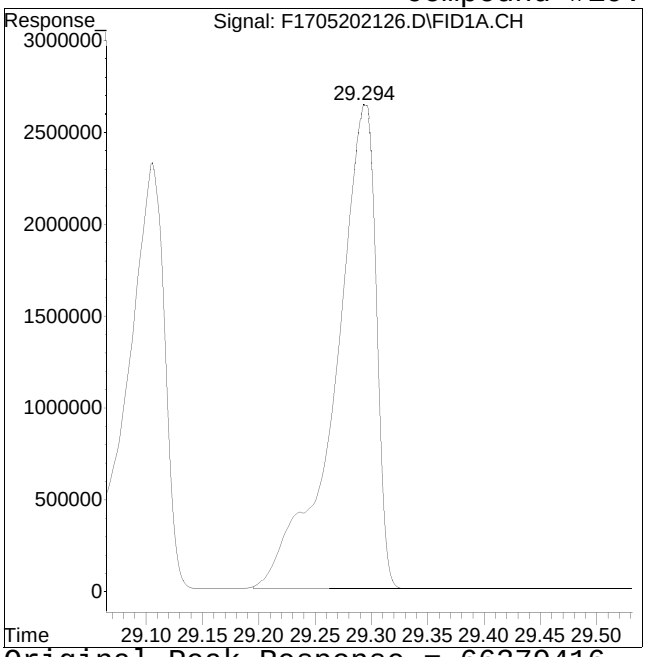
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

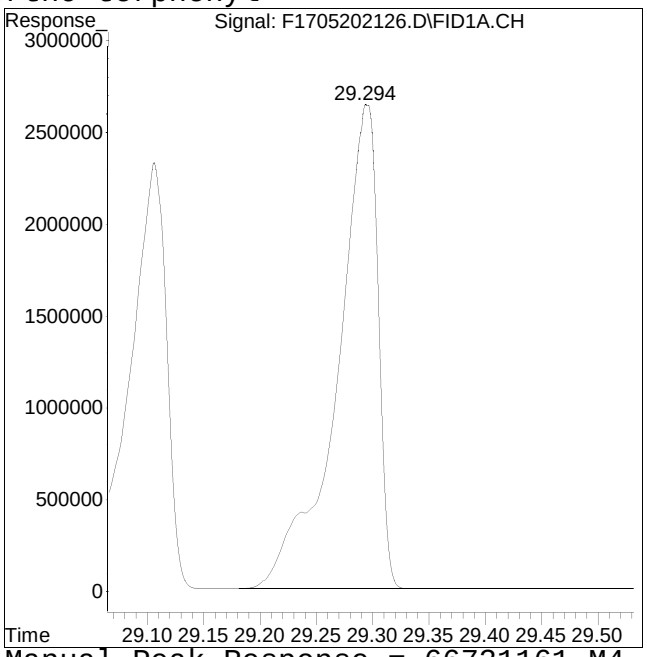
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #19: ortho-terphenyl



Original Peak Response = 66379416



Manual Peak Response = 66731161 M4

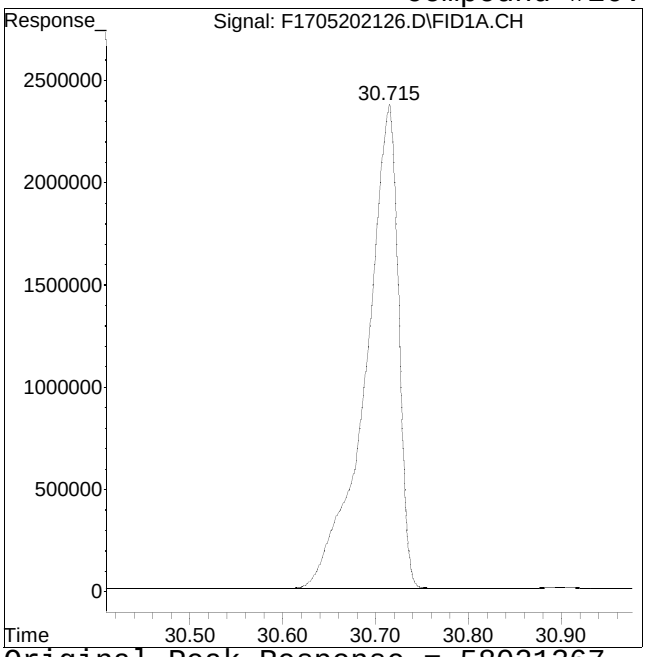
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

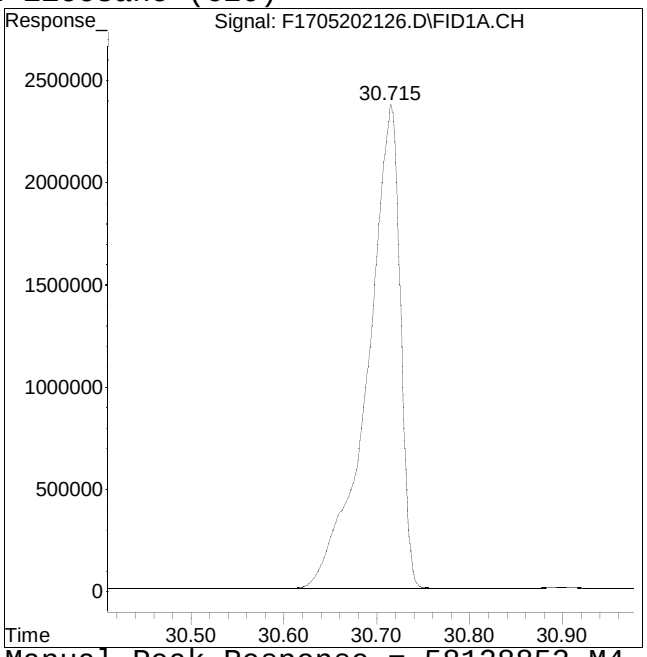
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 58021367



Manual Peak Response = 58128852 M4

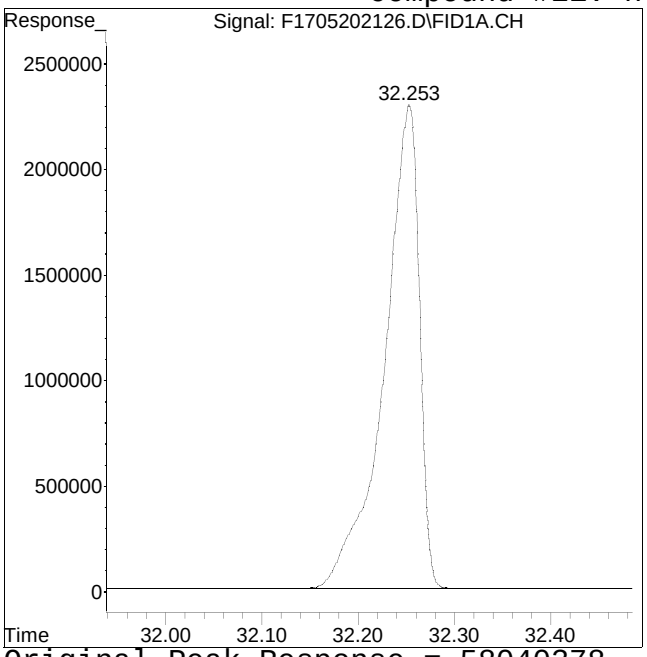
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

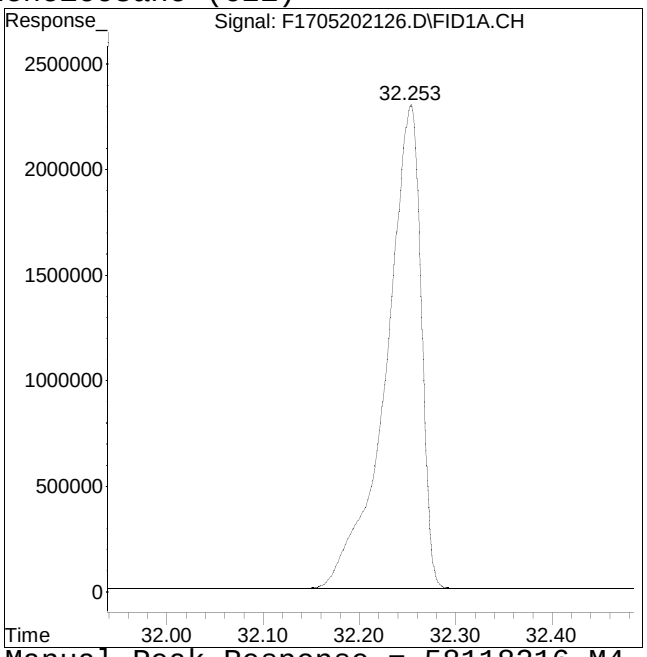
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 58040378



Manual Peak Response = 58118216 M4

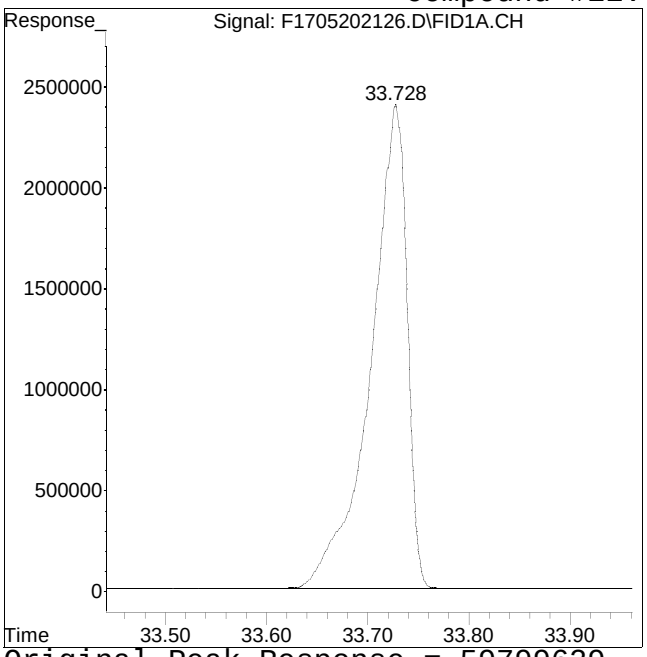
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

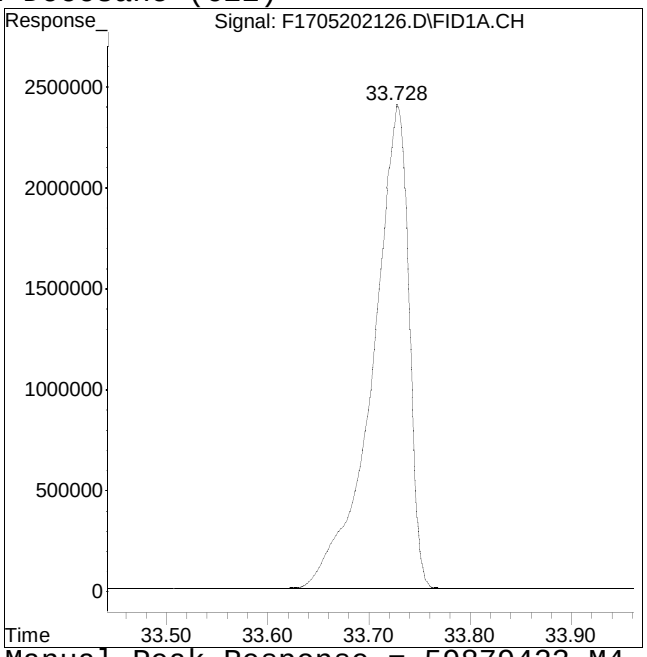
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 59799629



Manual Peak Response = 59879423 M4

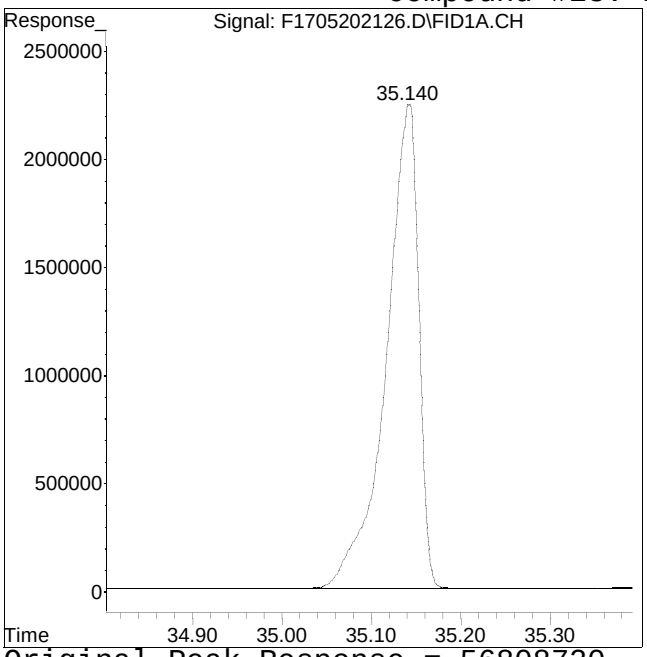
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

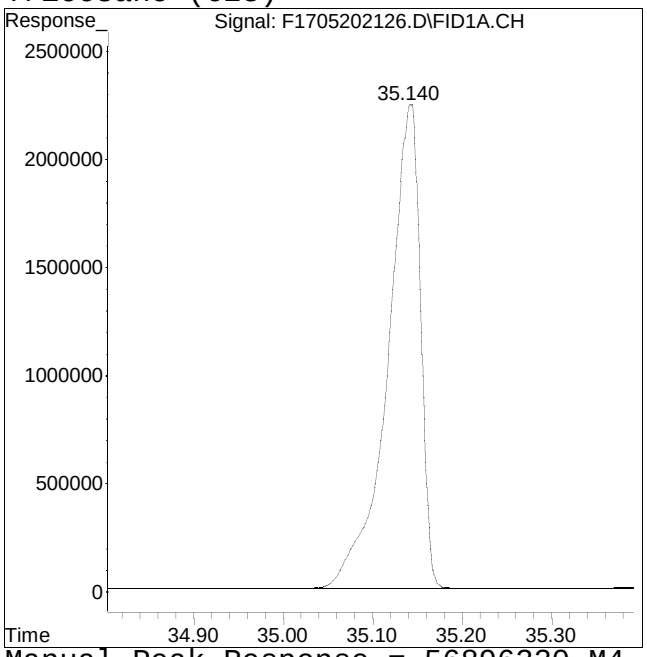
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 56808720



Manual Peak Response = 56896330 M4

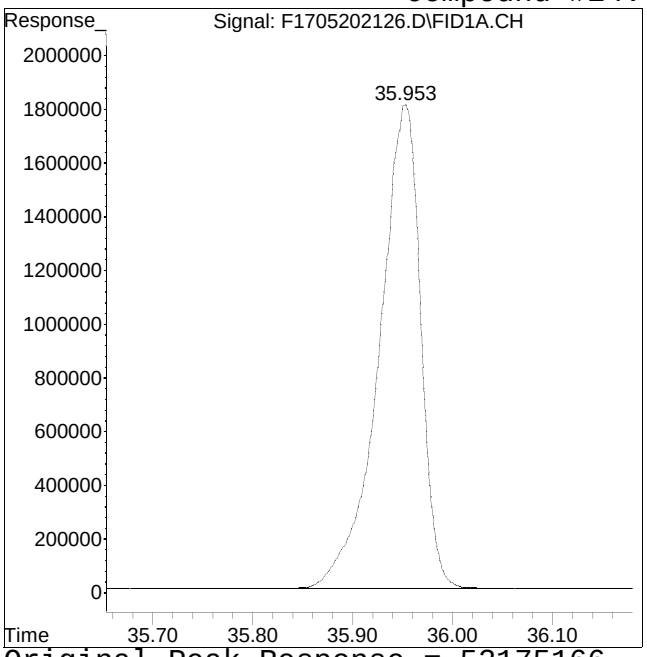
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

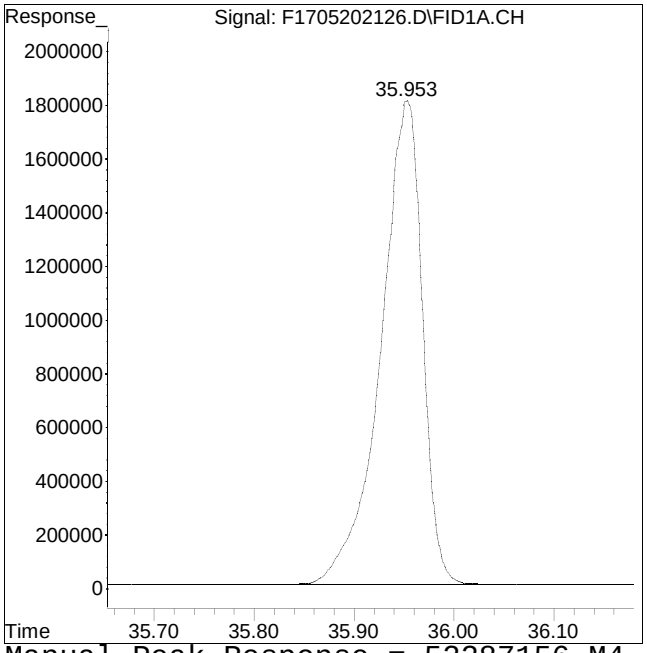
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #24: d50-Tetracosane



Original Peak Response = 52175166



Manual Peak Response = 52287156 M4

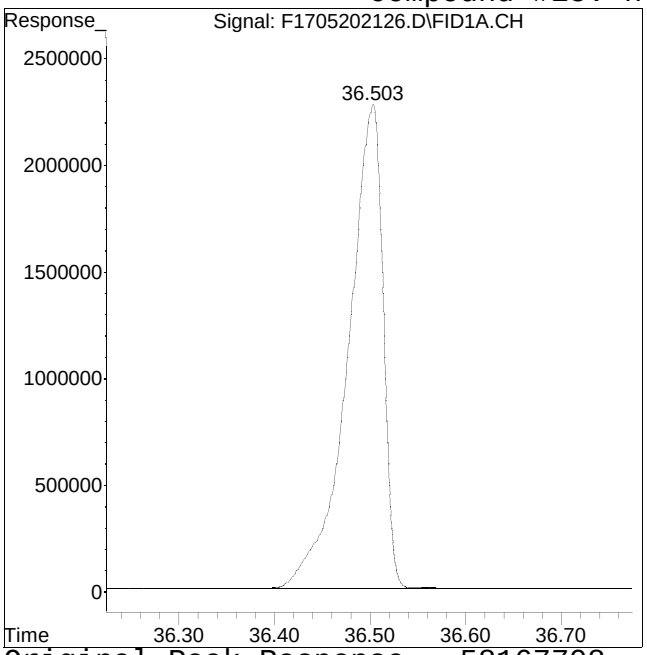
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

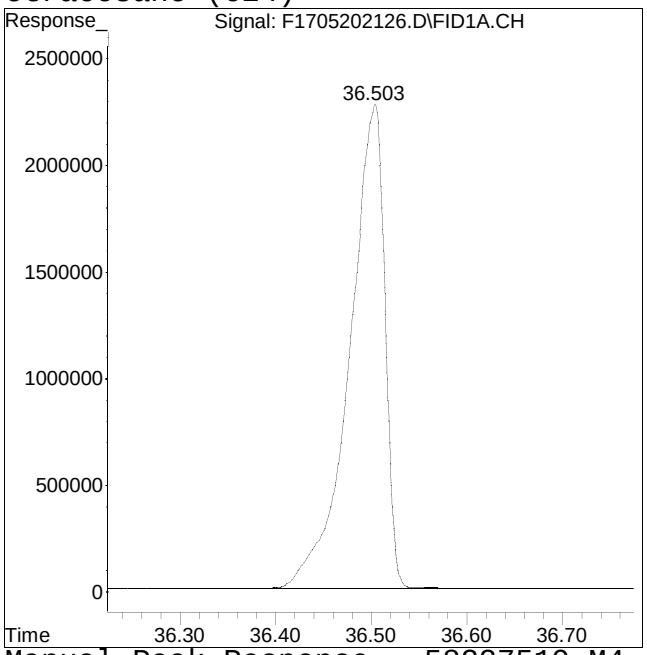
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 58167708



Manual Peak Response = 58227519 M4

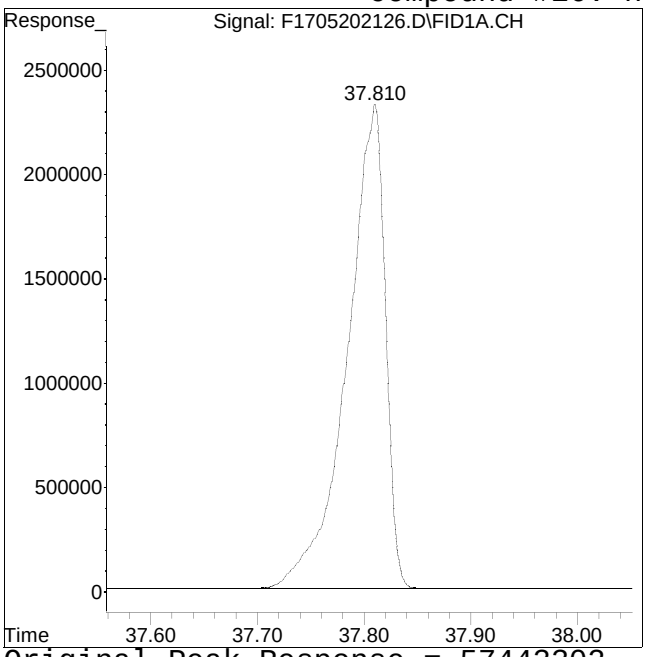
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

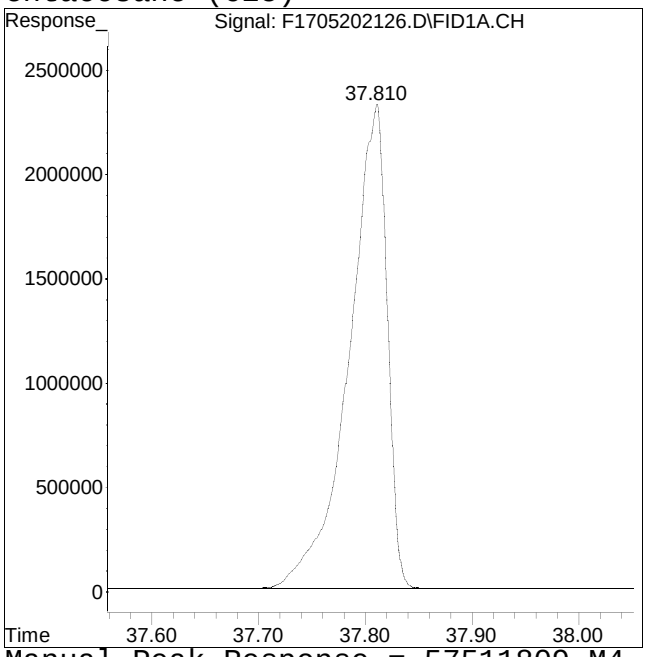
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 57443302



Manual Peak Response = 57511809 M4

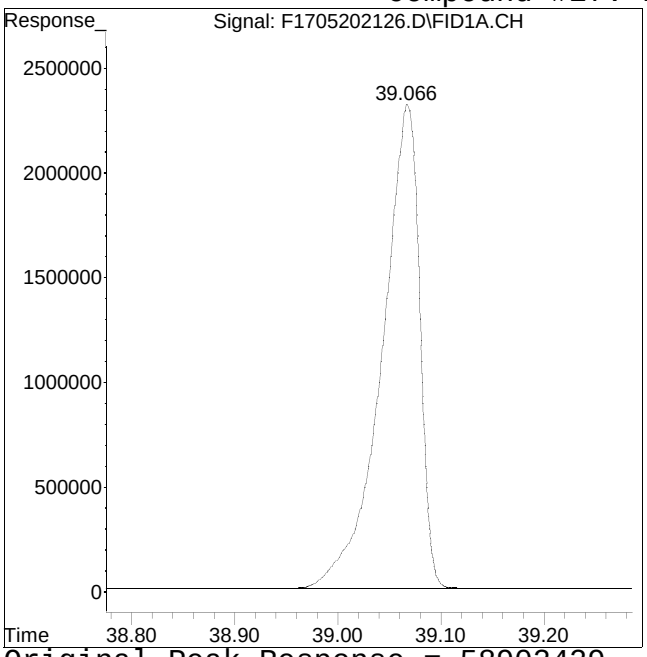
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

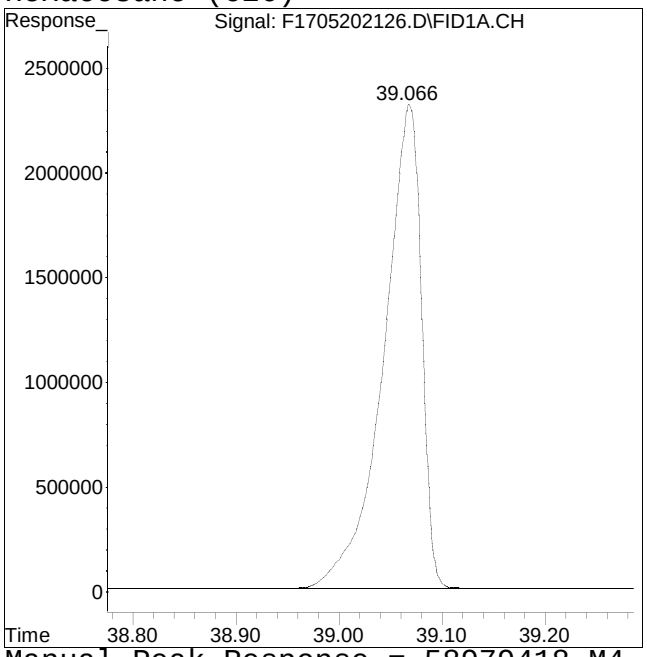
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 58902429



Manual Peak Response = 58979418 M4

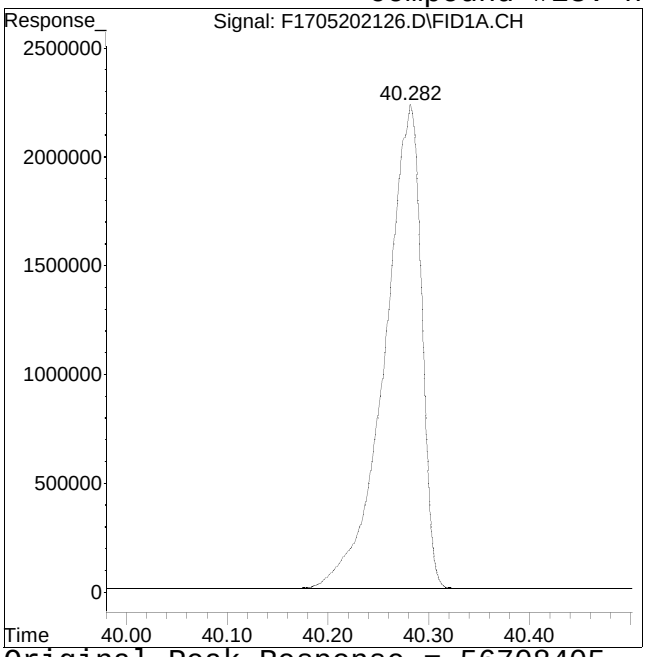
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

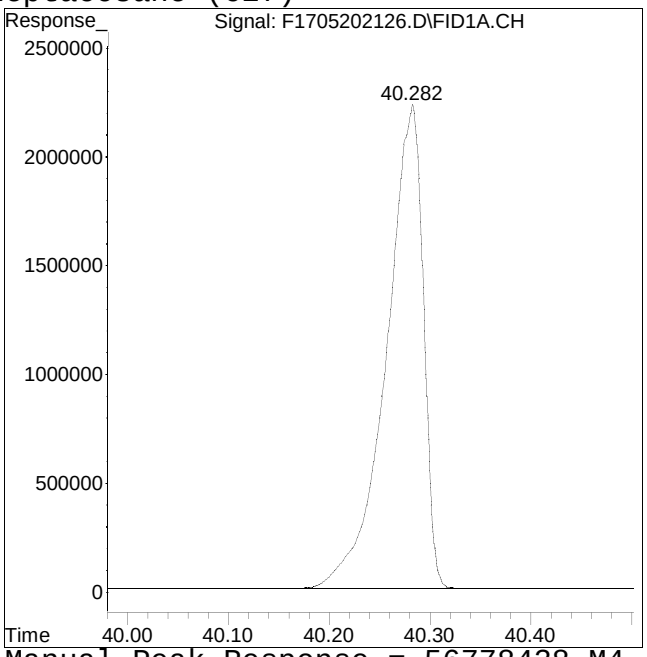
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 56708405



Manual Peak Response = 56778438 M4

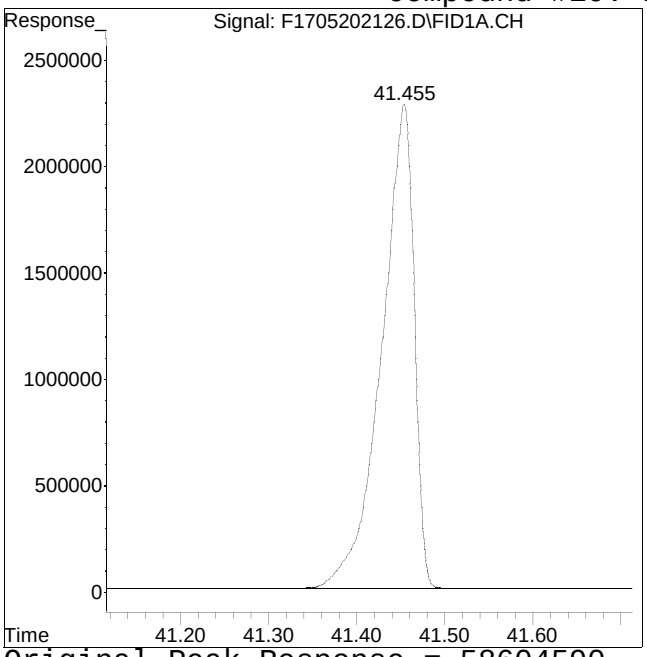
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

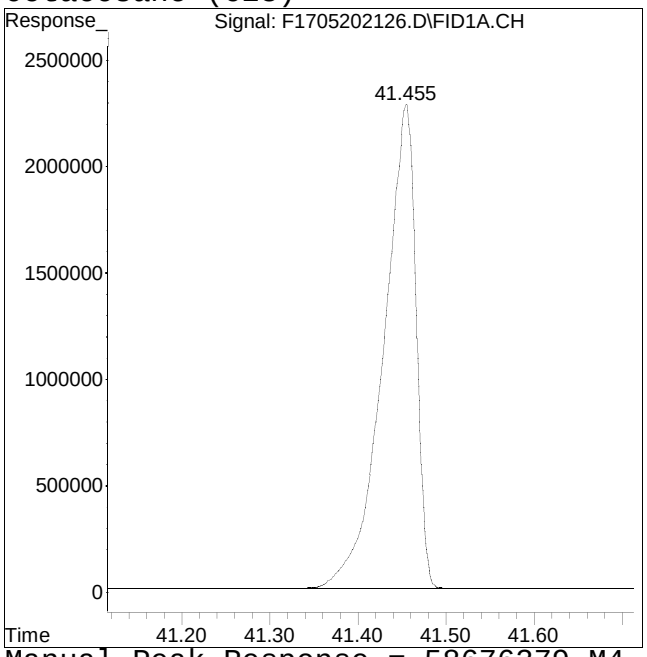
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 58604590



Manual Peak Response = 58676379 M4

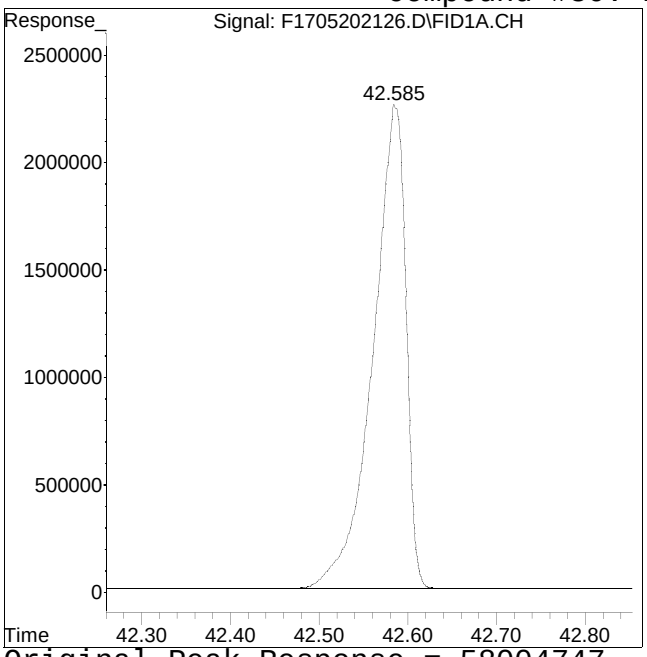
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

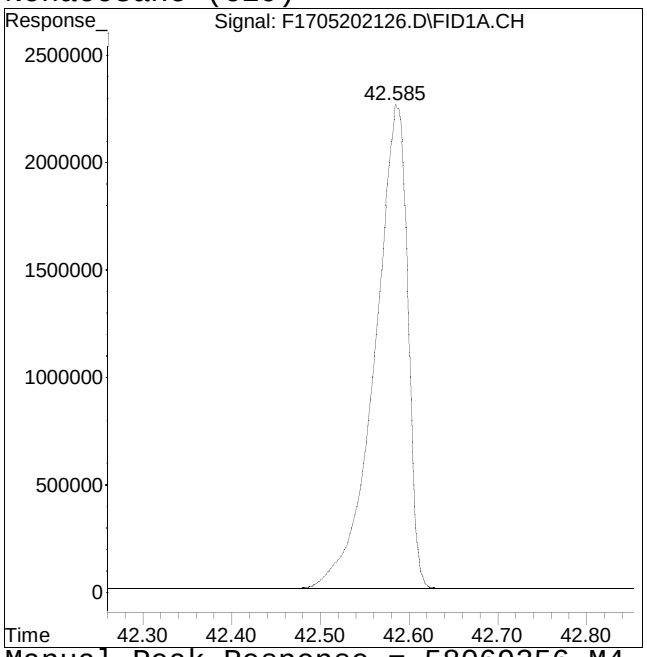
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 58004747



Manual Peak Response = 58069356 M4

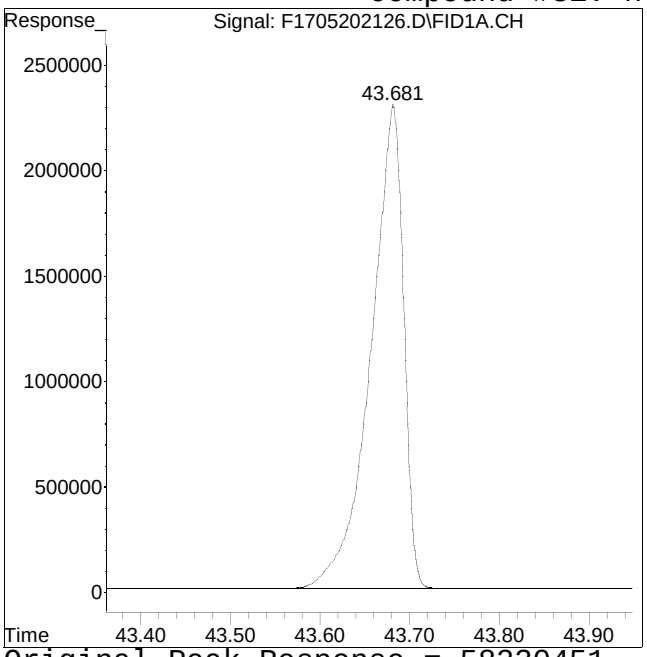
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

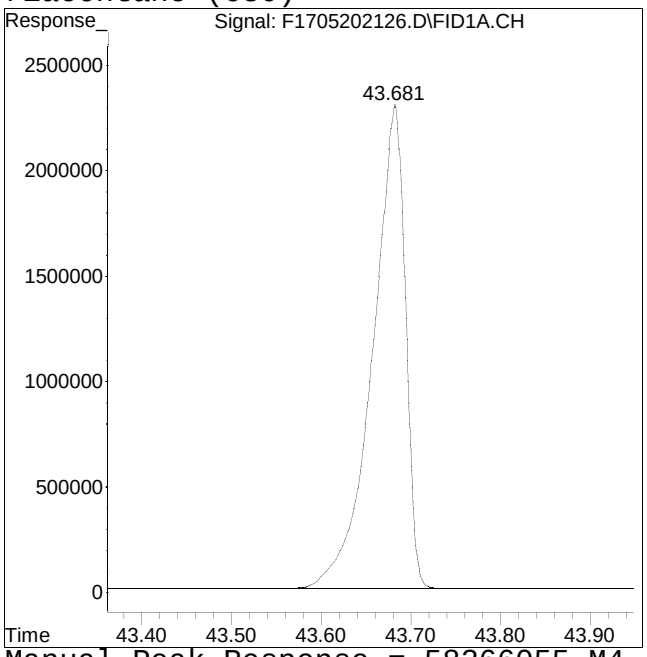
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 58230451



Manual Peak Response = 58266055 M4

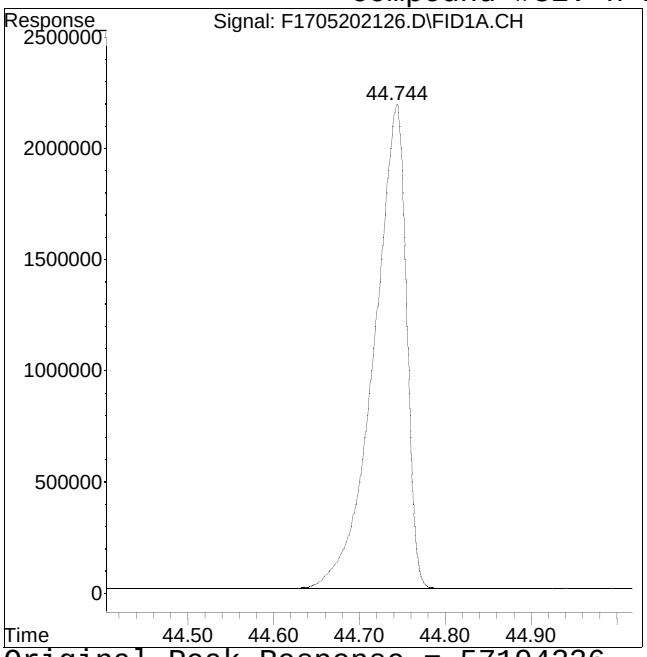
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

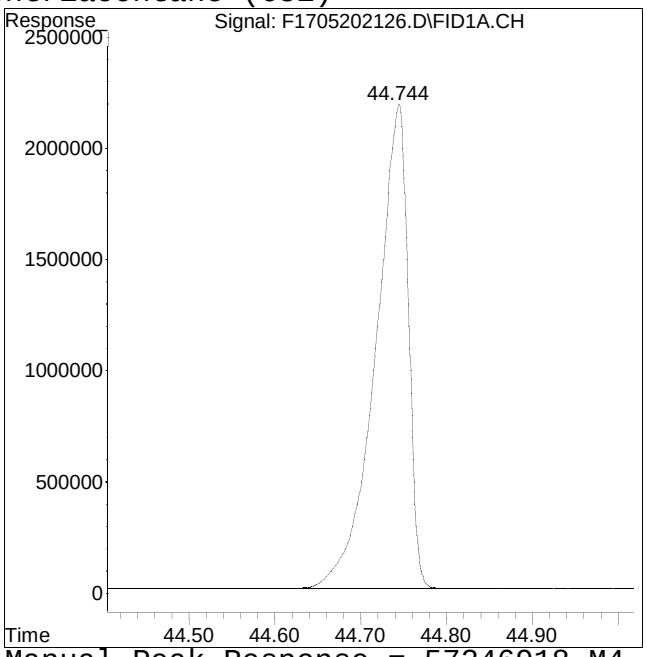
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 57194236



Manual Peak Response = 57246918 M4

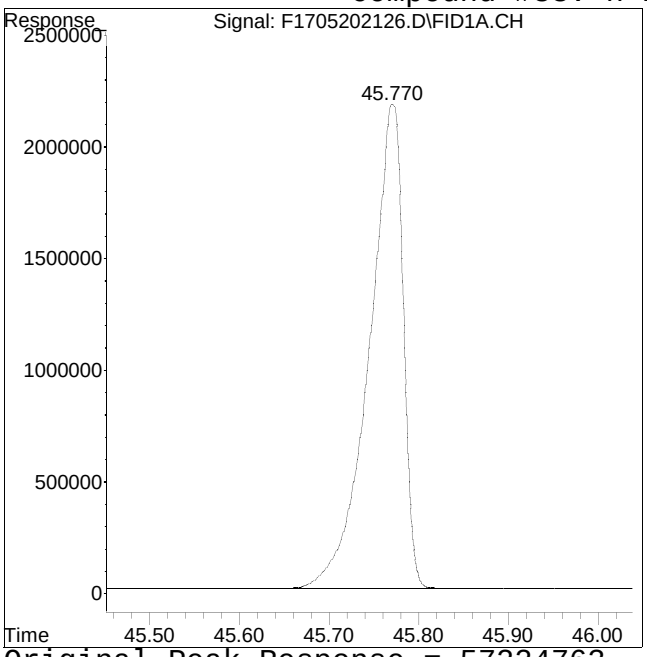
M4 = Poor automated baseline construction.

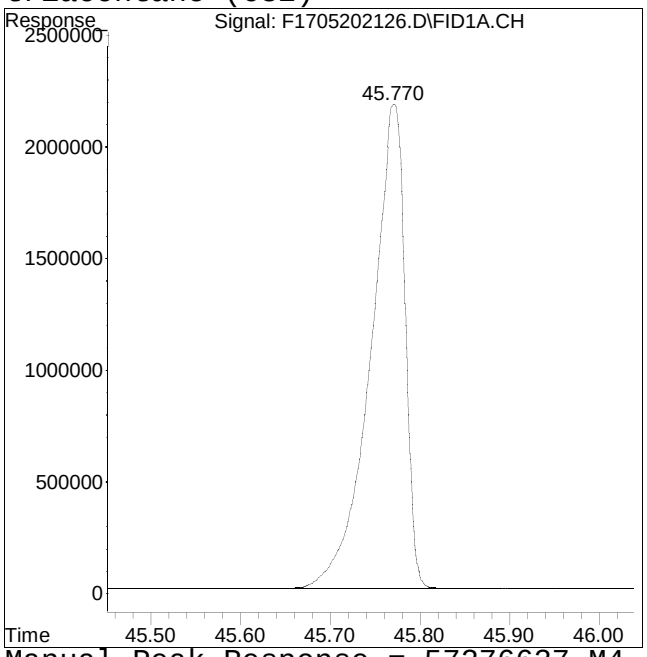
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #33: n-Dotriacontane (C32)





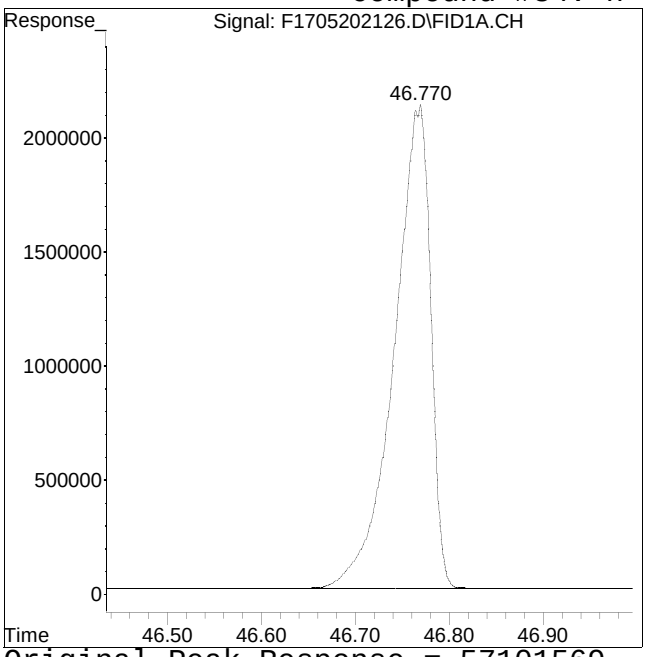
Original Peak Response = 57224763 Manual Peak Response = 57276637 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

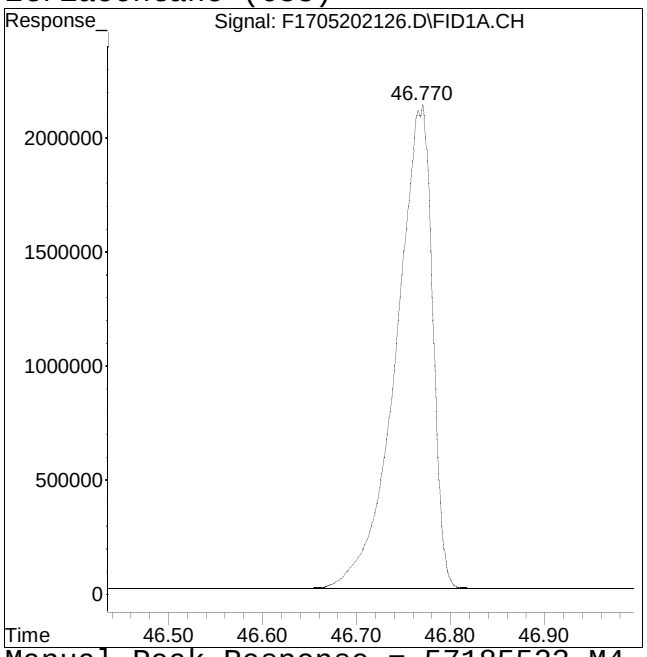
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 57101569



Manual Peak Response = 57185523 M4

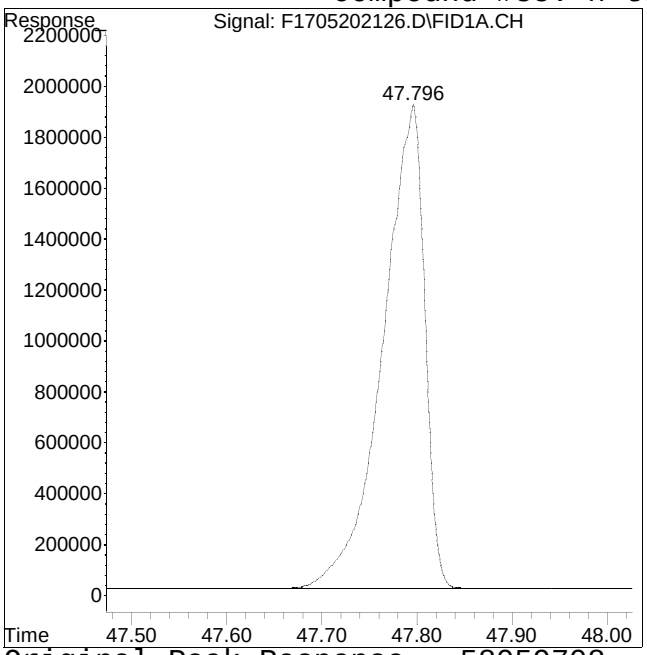
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

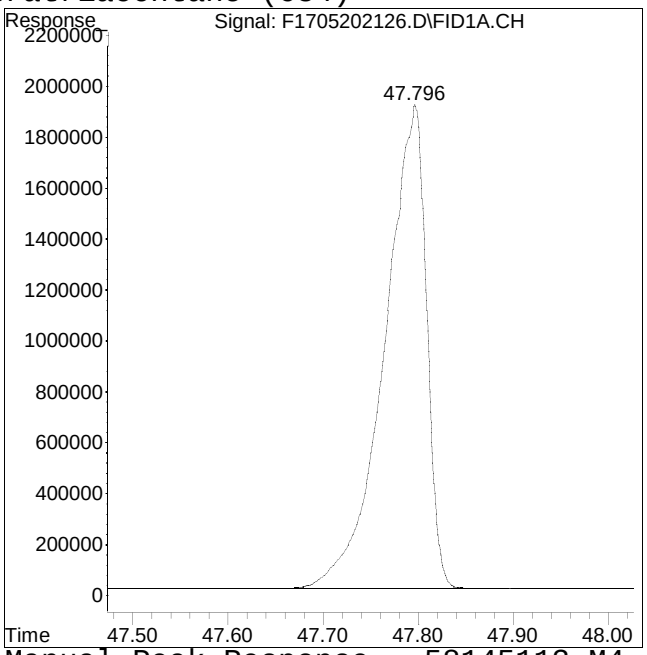
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 58059708



Manual Peak Response = 58145113 M4

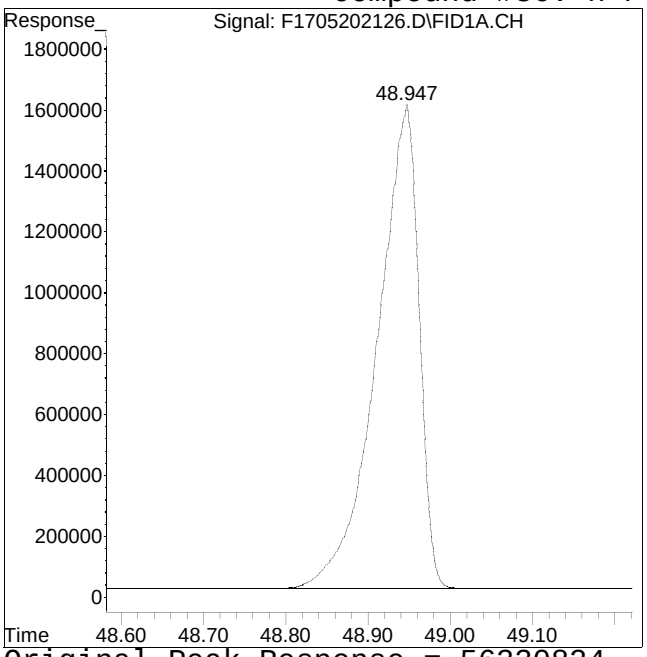
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

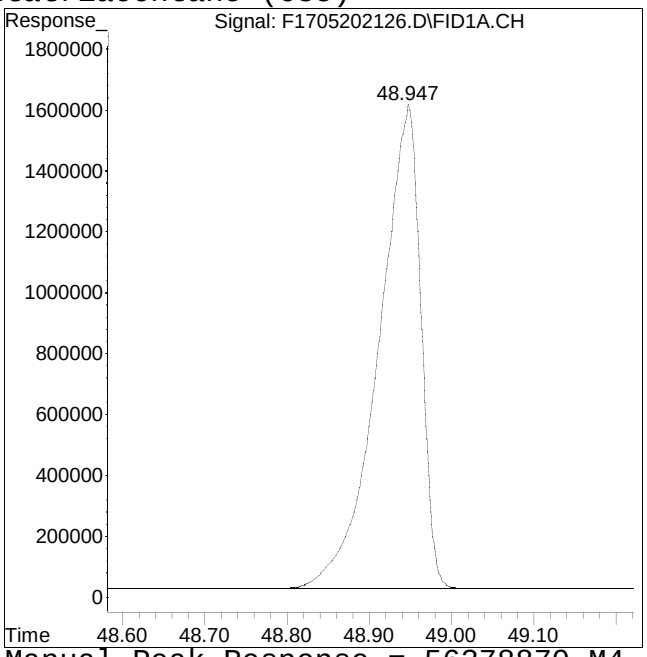
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 56330824



Manual Peak Response = 56378870 M4

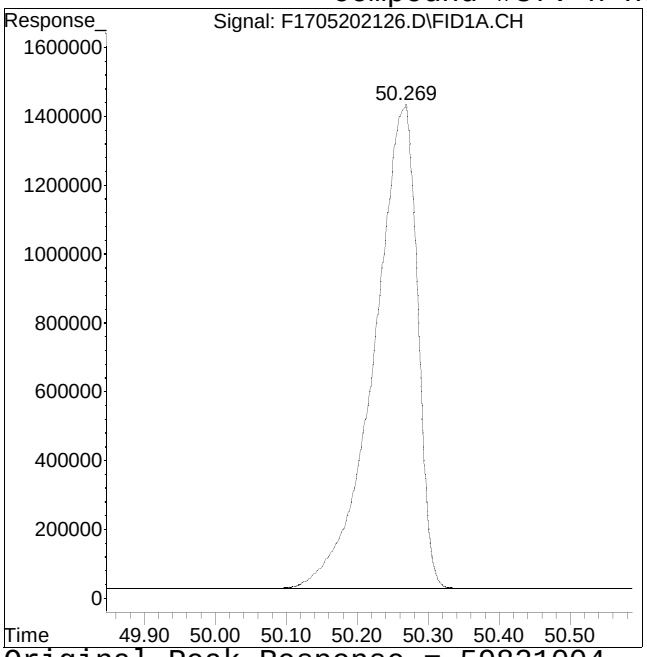
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

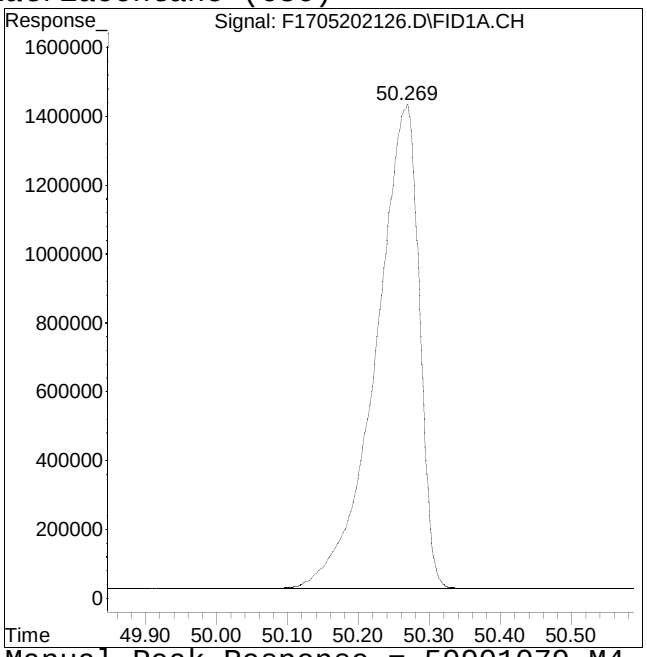
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 59821004



Manual Peak Response = 59901079 M4

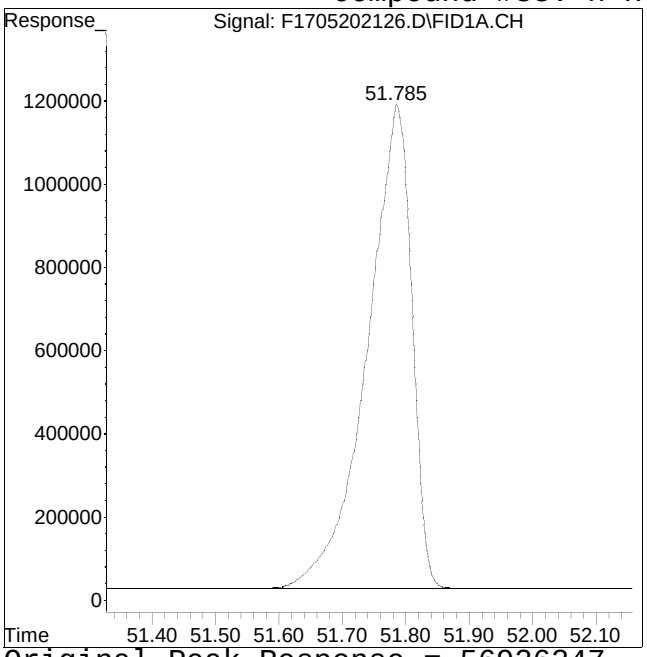
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

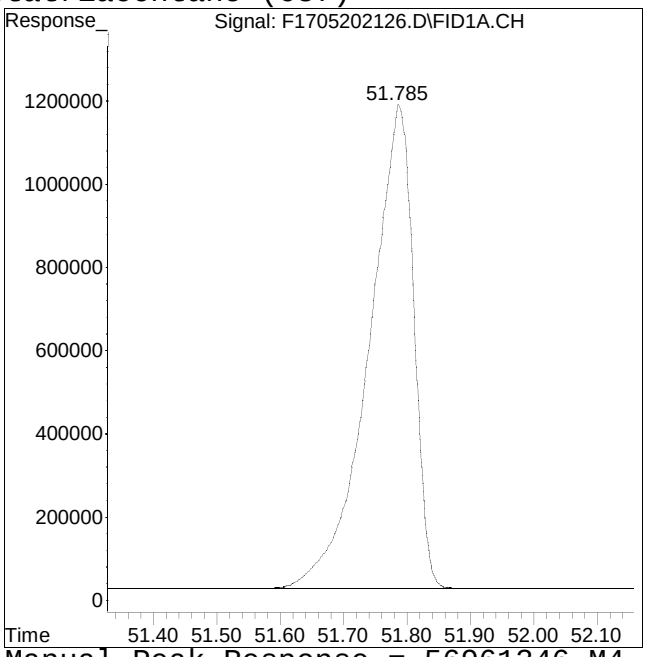
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 56926247



Manual Peak Response = 56961346 M4

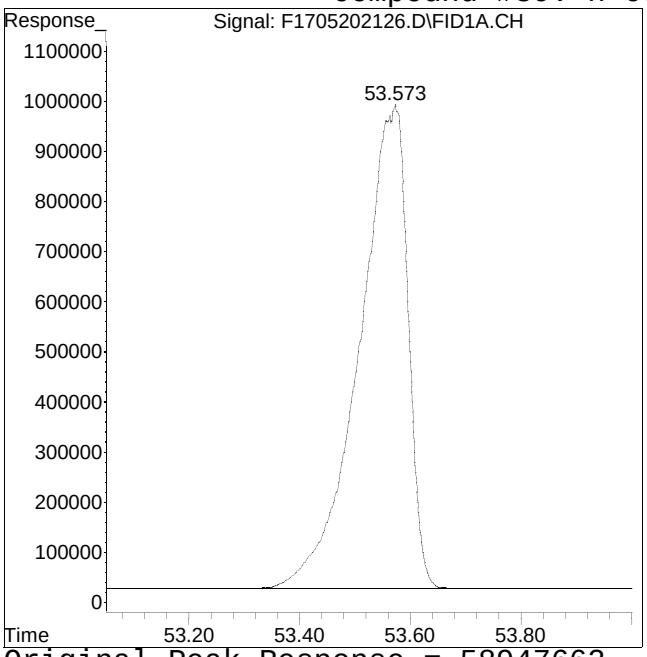
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

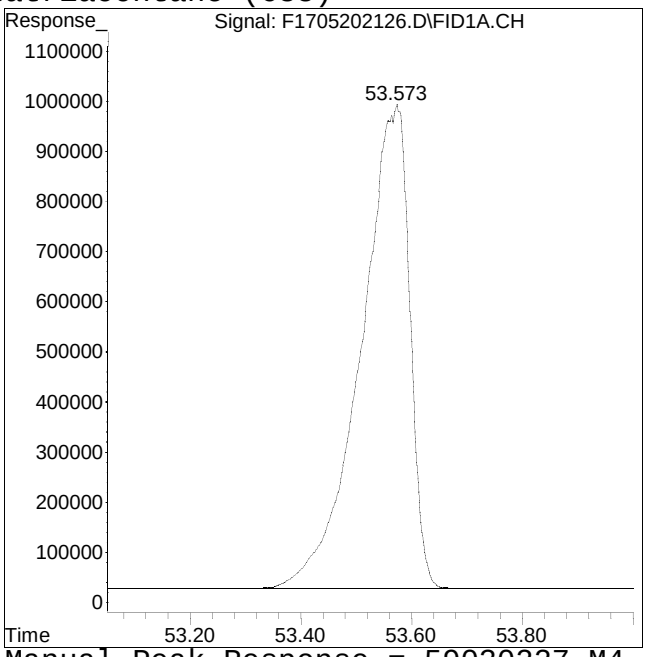
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 58947662



Manual Peak Response = 59030227 M4

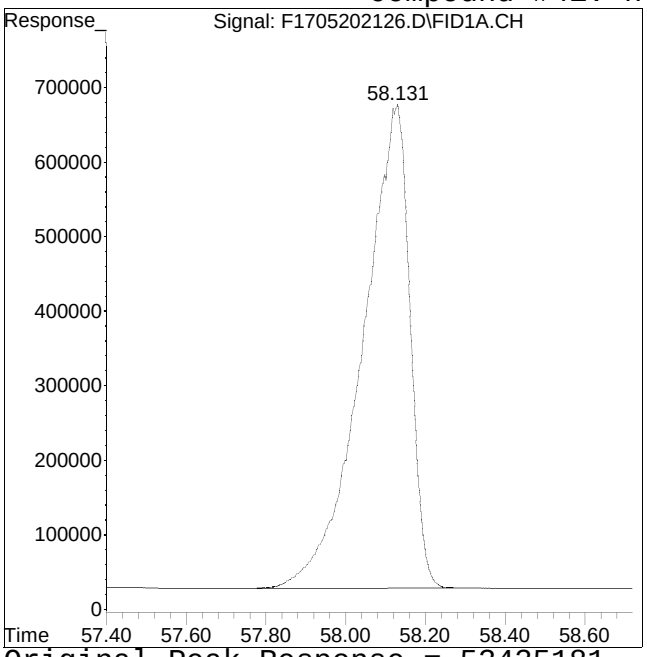
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

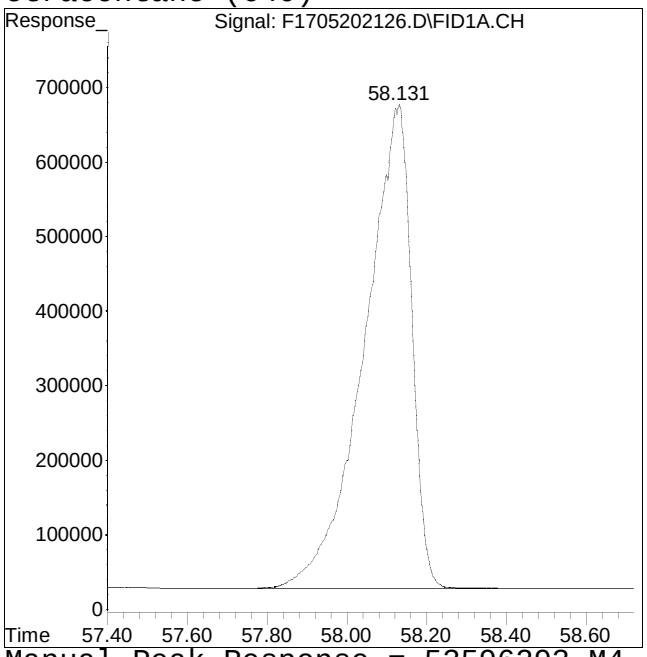
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202126.D
Date Inj'd : 5/21/2021 7:10 am
Sample : CQ1705202101F

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:04 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 53435181



Manual Peak Response = 53596293 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202130.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 10:07 am
Operator : FID17:WR
Sample : WG1505003-1,0.10054
Misc : WG1505003,FRBD62,10.054ug/ml
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:30:24 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1705202101F
Blank File : F1705202128.D

Sub List : SHC - SHC

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.324	60585272	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.298	54325120	41.364 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 82.73%	
24) s d50-Tetracosane	35.960	53344686	51.195 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 102.39%	
Target Compounds			
2) t n-Octane (C8)	5.606	92691242	88.493 ug/mL M4
3) t n-Nonane (C9)	7.821	69928951	62.565 ug/mL M4
4) t n-Decane (C10)	10.317	58104981	50.782 ug/mL M4
5) t n-Undecane (C11)	12.836	52663443	47.110 ug/mL M4
6) t n-Dodecane (C12)	15.265	48798290	43.532 ug/mL M4
7) t n-Tridecane (C13)	17.577	45482073	40.465 ug/mL M4
8) t 1380	19.249	10920224	9.430 ug/mL M4
9) t n-Tetradecane (C14)	19.761	41442066	35.785 ug/mL M4
10) t 1470	21.046	16356247	14.107 ug/mL M4
11) t n-Pentadecane (C15)	21.830	41182941	35.521 ug/mL M4
12) t n-Hexadecane (C16)	23.788	38055175	32.881 ug/mL M4
13) t 1650	24.691	12713730	10.996 ug/mL M4
14) t n-Heptadecane (C17)	25.649	33056204	28.589 ug/mL M4
15) t Pristane	25.747	26846492	22.388 ug/mL M4
16) t n-Octadecane (C18)	27.416	28935553	24.613 ug/mL M4
17) t Phytane	27.577	14310976	13.013 ug/mL M4
18) t n-Nonadecane (C19)	29.105	29201966	24.765 ug/mL M4
20) t n-Eicosane (C20)	30.711	28220031	23.796 ug/mL M4
21) t n-Heneicosane (C21)	32.248	25862599	21.738 ug/mL M4
22) t n-Docosane (C22)	33.723	24381323	20.461 ug/mL M4
23) t n-Tricosane (C23)	35.139	21679172	18.158 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202130.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 10:07 am
Operator : FID17:WR
Sample : WG1505003-1,0.10054
Misc : WG1505003,FRBD62,10.054ug/ml
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:30:24 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1705202101F
Blank File : F1705202128.D

Sub List : SHC - SHC

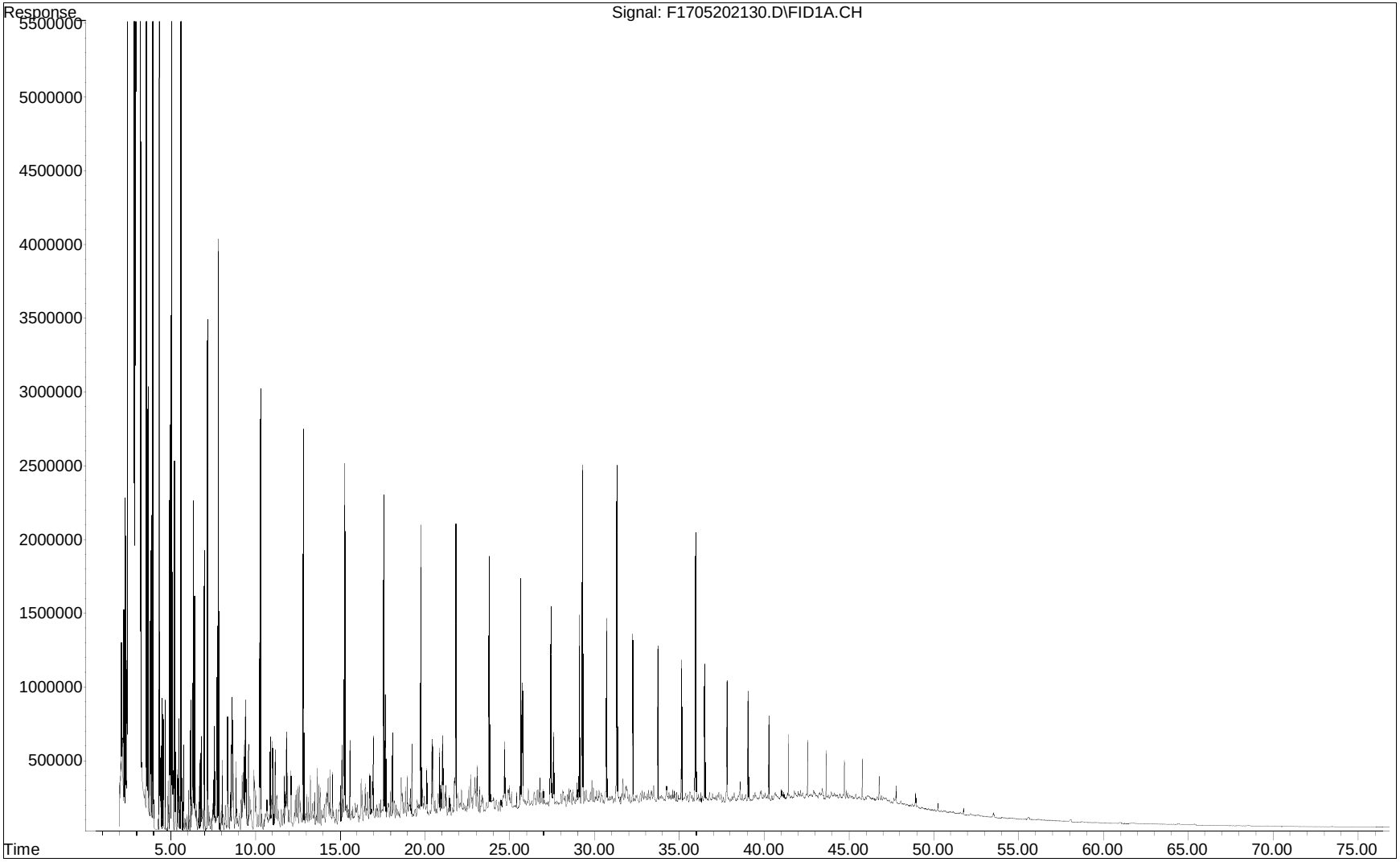
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	36.496	20306669	17.061	ug/mL	M4
26) t	n-Pentacosane (C25)	37.801	19467223	16.715	ug/mL	M4
27) t	n-Hexacosane (C26)	39.058	17404010	14.558	ug/mL	M4
28) t	n-Heptacosane (C27)	40.272	13297910	11.093	ug/mL	M4
29) t	n-Octacosane (C28)	41.442	9758990	7.853	ug/mL	M4
30) t	n-Nonacosane (C29)	42.572	9521699	7.812	ug/mL	M4
31) t	n-Triacontane (C30)	43.668	7817772	6.389	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.727	6398616	5.406	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.754	6895955	5.551	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.752	4008837	3.315	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.773	4018885	3.347	ug/mL	M4
36) t	n-Pentatriacontane (C35)	48.920	3476985	3.099	ug/mL	M4
37) t	n-Hexatriacontane (C36)	50.228	2300095	1.703	ug/mL	M4
38) t	n-Heptatriacontane (C37)	51.753	2053231	1.676	ug/mL	M4
39) t	n-Octatriacontane (C38)	53.526	1776959	1.435	ug/mL	M4
40) t	n-Nonatriacontane (C39)	55.601	1071186	0.877	ug/mL	M4
41) t	n-Tetracontane (C40)	58.062	1027669	0.841	ug/mL	M4
42) h	C9-C44 Total Petroleu...	40.642	7012714990	5918.857	ug/mL	m
42) h	C9-C44 Total Petroleu BS	40.642	6704202598	5658.467	ug/mLm	
46) h	Total Resolved Hydroc...	38.937	2309550069	1949.302	ug/mL	m

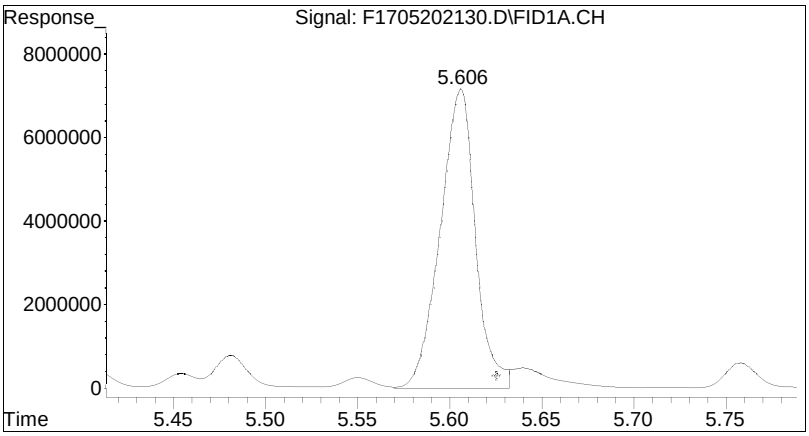
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

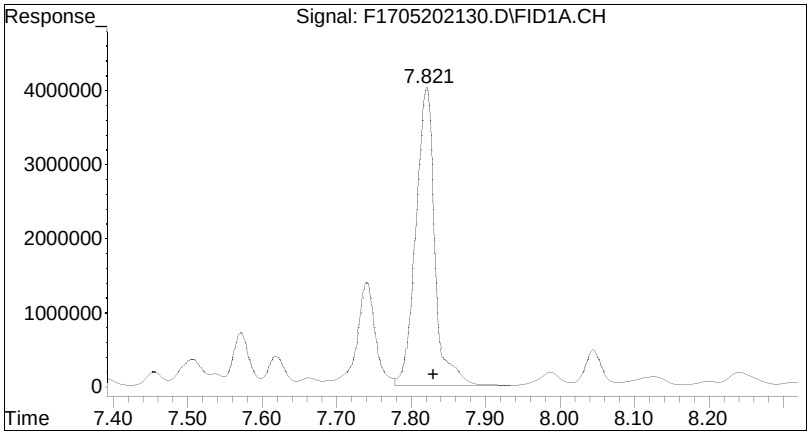
File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202130.D
Operator : FID17:WR
Acquired : 21 May 2021 10:07 am using AcqMethod FID17A.M
Sample Name: WG1505003-1,0.10054
Instrument: FID17
Misc Info : WG1505003,FRBD62,10.054ug/ml
Vial Number: 15
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M





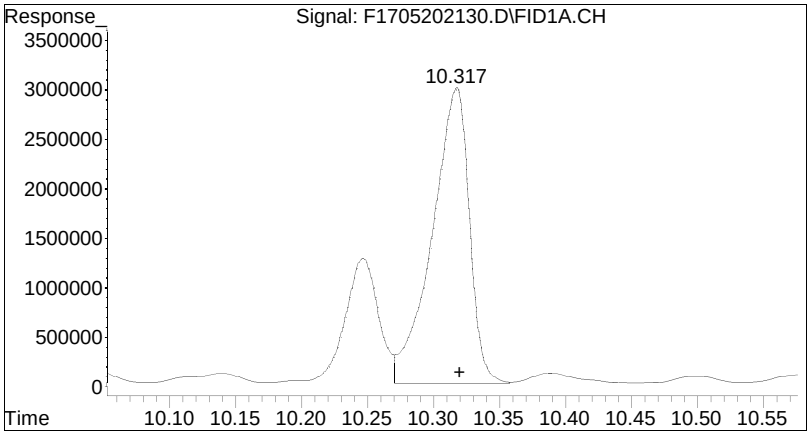
#2 n-Octane (C8)

R.T.:	5.606 min
Delta R.T.:	-0.020 min
Response:	92691242
Conc:	88.49 ug/mL M4



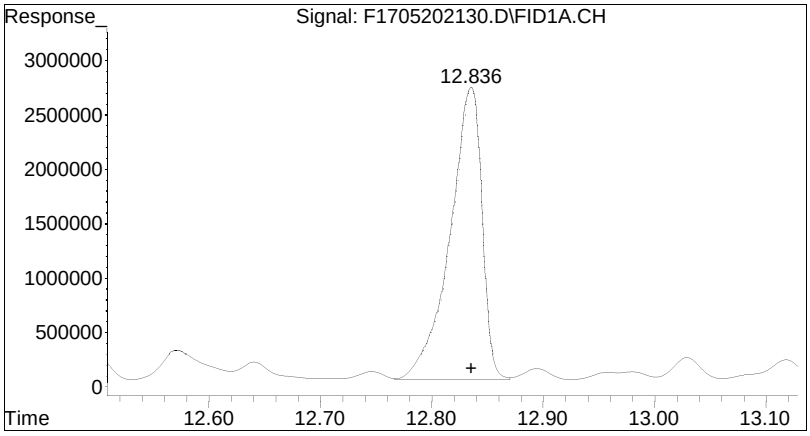
#3 n-Nonane (C9)

R.T.: 7.821 min
Delta R.T.: -0.009 min
Response: 69928951
Conc: 62.56 ug/mL M4



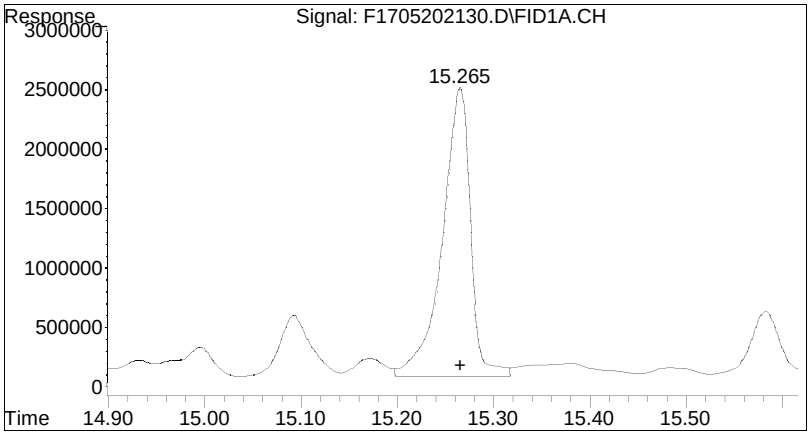
#4 n-Decane (C10)

R.T.: 10.317 min
Delta R.T.: -0.003 min
Response: 58104981
Conc: 50.78 ug/mL M4



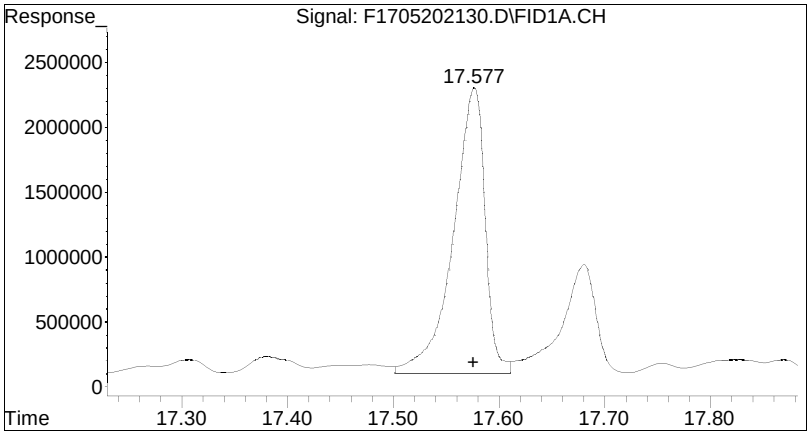
#5 n-Undecane (C11)

R.T.:	12.836 min
Delta R.T.:	0.000 min
Response:	52663443
Conc:	47.11 ug/mL M4



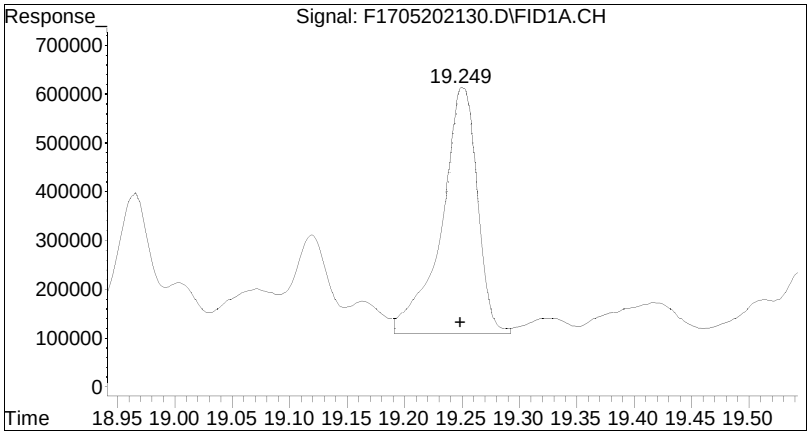
#6 n-Dodecane (C12)

R.T.: 15.265 min
Delta R.T.: 0.000 min
Response: 48798290
Conc: 43.53 ug/mL M4



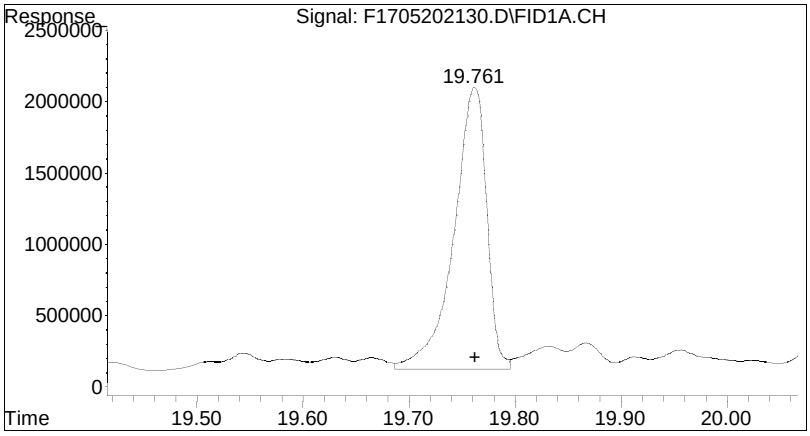
#7 n-Tridecane (C13)

R.T.: 17.577 min
Delta R.T.: 0.000 min
Response: 45482073
Conc: 40.46 ug/mL M4



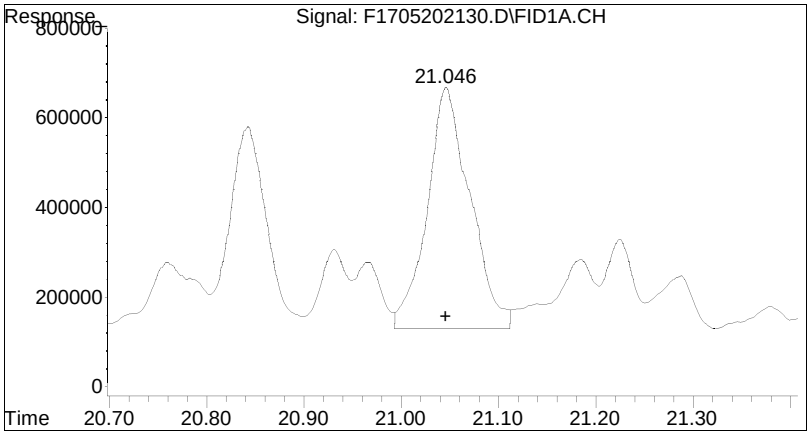
#8 1380

R.T.: 19.249 min
Delta R.T.: 0.000 min
Response: 10920224
Conc: 9.43 ug/mL M4



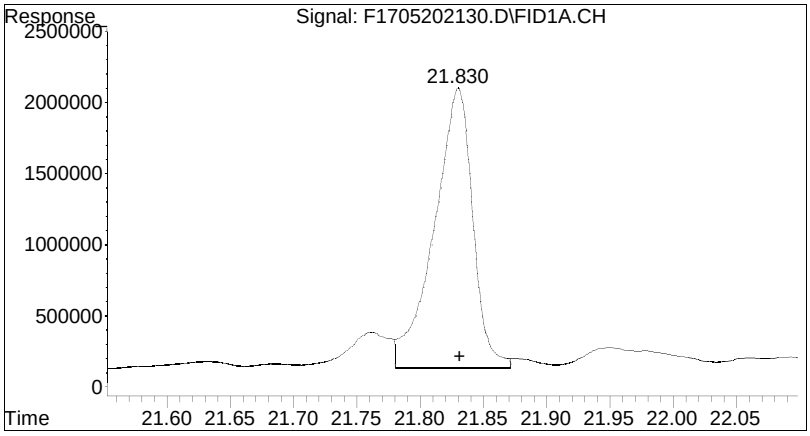
#9 n-Tetradecane (C14)

R.T.:	19.761 min
Delta R.T.:	-0.001 min
Response:	41442066
Conc:	35.79 ug/mL M4



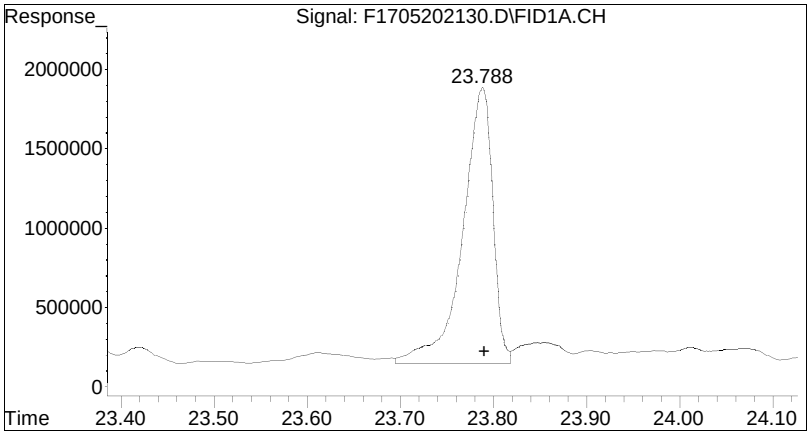
#10 1470

R.T.: 21.046 min
Delta R.T.: 0.000 min
Response: 16356247
Conc: 14.11 ug/mL M4



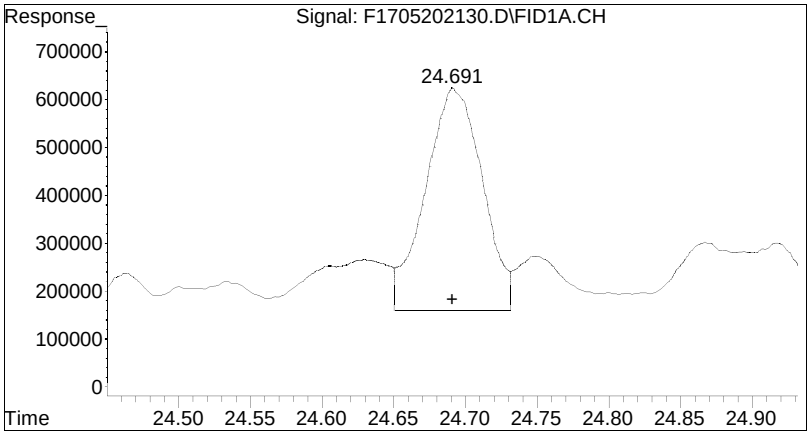
#11 n-Pentadecane (C15)

R.T.: 21.830 min
Delta R.T.: -0.001 min
Response: 41182941
Conc: 35.52 ug/mL M4



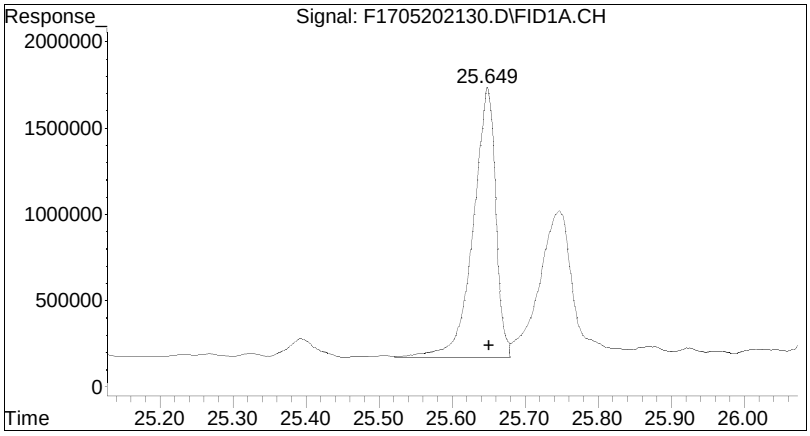
#12 n-Hexadecane (C16)

R.T.:	23.788 min
Delta R.T.:	-0.002 min
Response:	38055175
Conc:	32.88 ug/mL M4



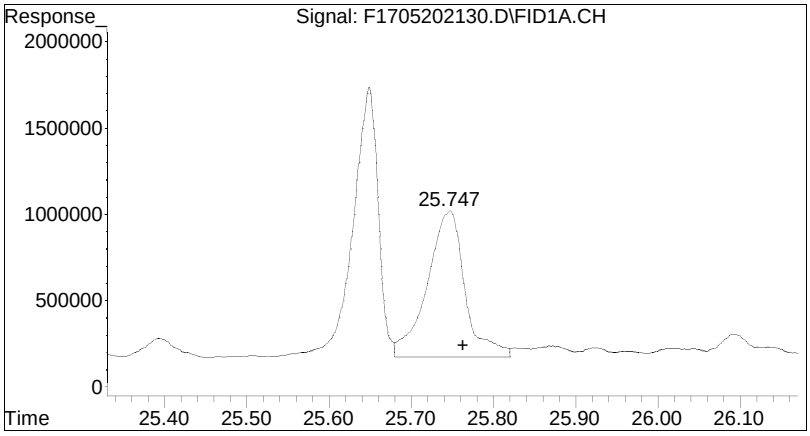
#13 1650

R.T.: 24.691 min
Delta R.T.: 0.000 min
Response: 12713730
Conc: 11.00 ug/mL M4



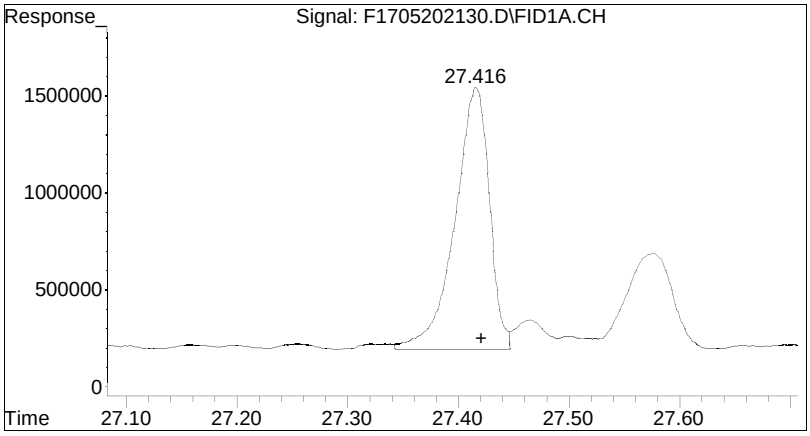
#14 n-Heptadecane (C17)

R.T.: 25.649 min
Delta R.T.: -0.002 min
Response: 33056204
Conc: 28.59 ug/mL M4



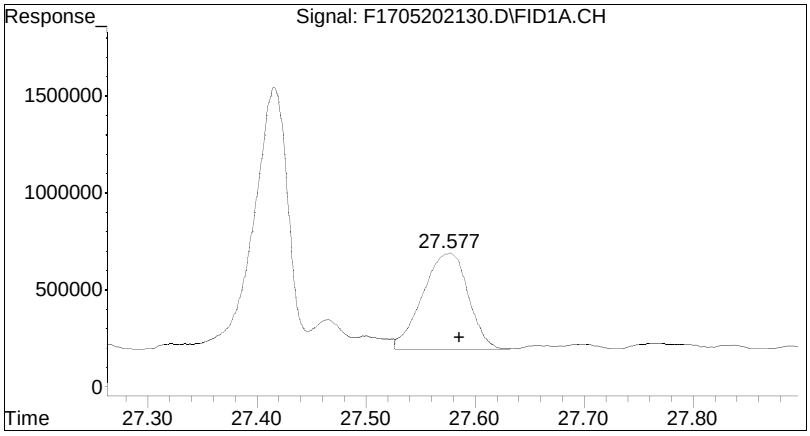
#15 Pristane

R.T.: 25.747 min
Delta R.T.: -0.017 min
Response: 26846492
Conc: 22.39 ug/mL M4



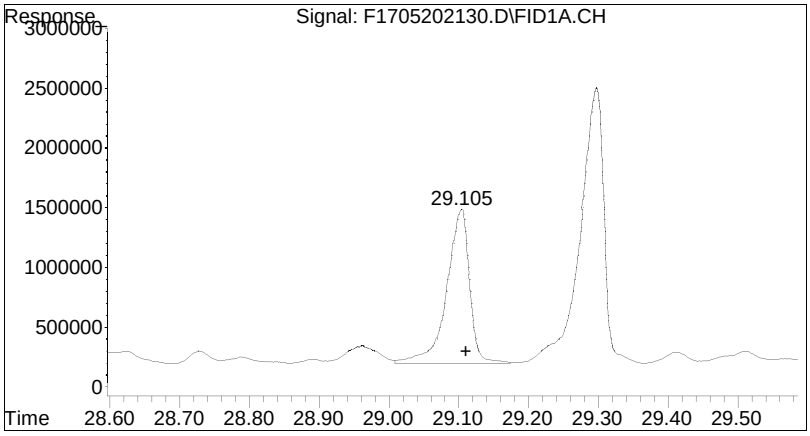
#16 n-Octadecane (C18)

R.T.: 27.416 min
Delta R.T.: -0.005 min
Response: 28935553
Conc: 24.61 ug/mL M4



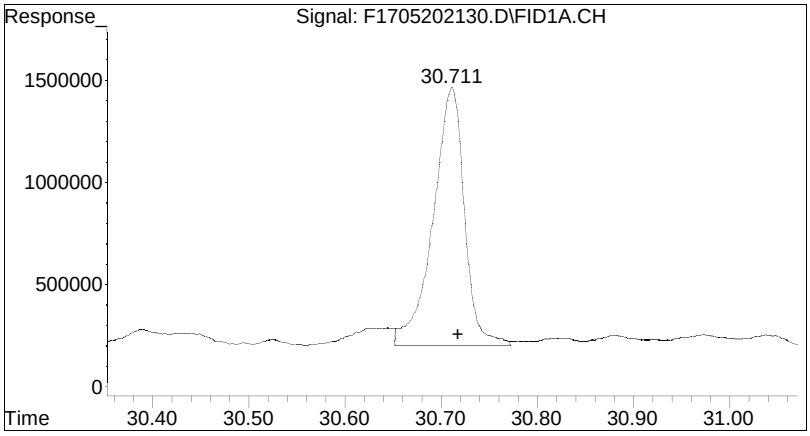
#17 Phytane

R.T.: 27.577 min
Delta R.T.: -0.009 min
Response: 14310976
Conc: 13.01 ug/mL M4



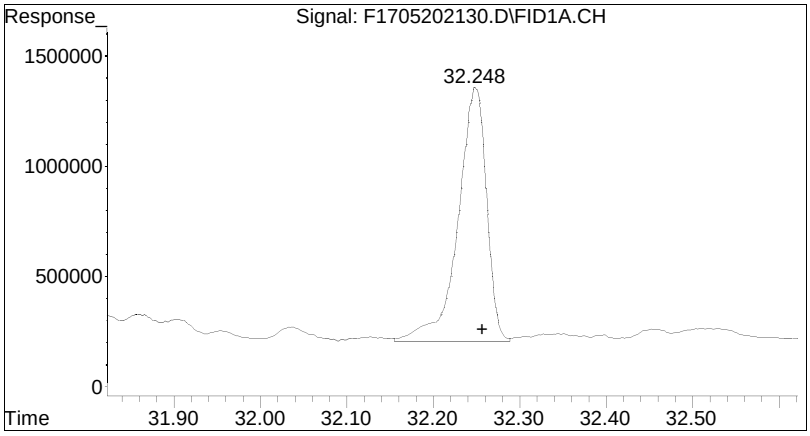
#18 n-Nonadecane (C19)

R.T.: 29.105 min
Delta R.T.: -0.006 min
Response: 29201966
Conc: 24.76 ug/mL M4



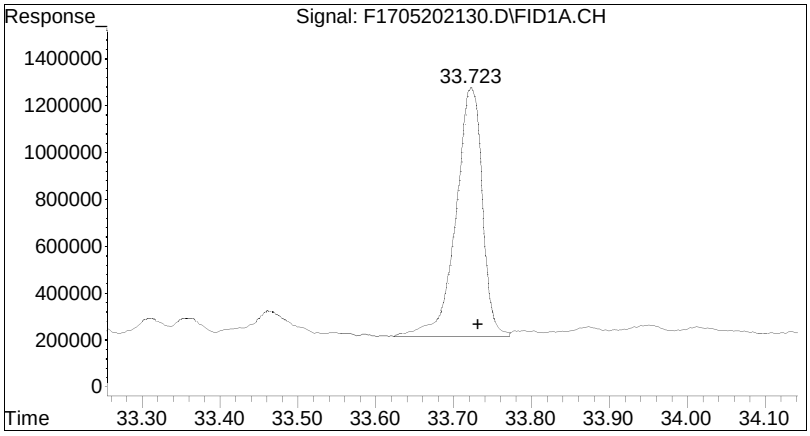
#20 n-Eicosane (C20)

R.T.: 30.711 min
Delta R.T.: -0.006 min
Response: 28220031
Conc: 23.80 ug/mL M4



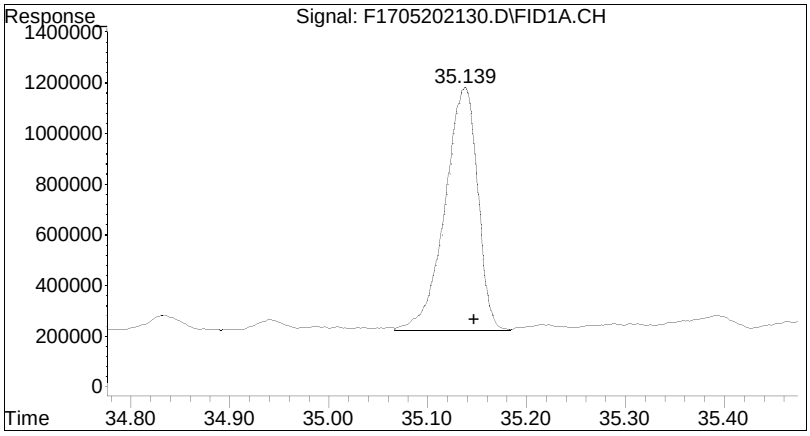
#21 n-Heneicosane (C21)

R.T.: 32.248 min
Delta R.T.: -0.009 min
Response: 25862599
Conc: 21.74 ug/mL M4



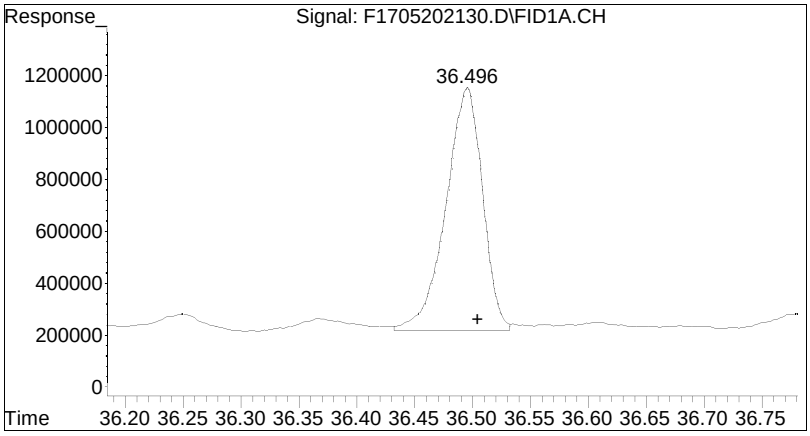
#22 n-Docosane (C22)

R.T.: 33.723 min
Delta R.T.: -0.009 min
Response: 24381323
Conc: 20.46 ug/mL M4



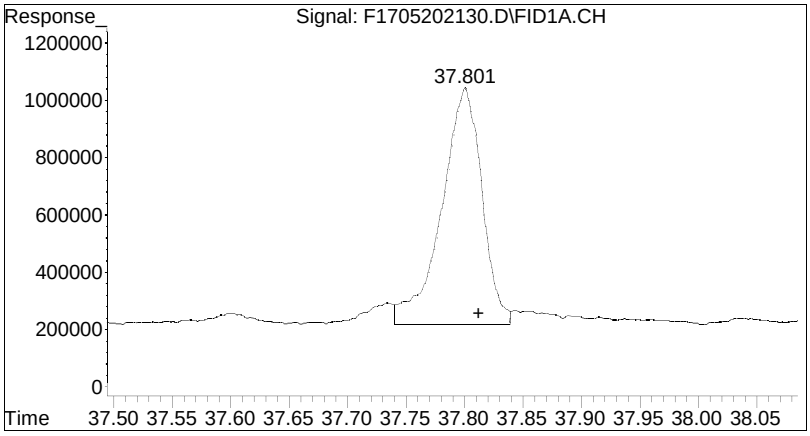
#23 n-Tricosane (C23)

R.T.: 35.139 min
Delta R.T.: -0.008 min
Response: 21679172
Conc: 18.16 ug/mL M4



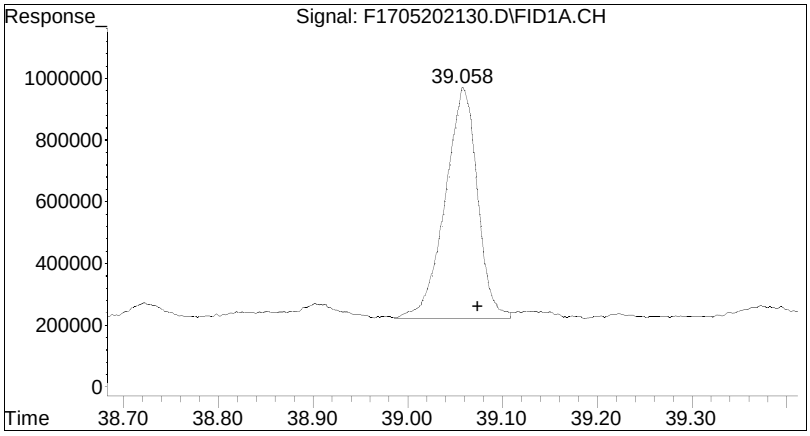
#25 n-Tetracosane (C24)

R.T.: 36.496 min
Delta R.T.: -0.009 min
Response: 20306669
Conc: 17.06 ug/mL M4



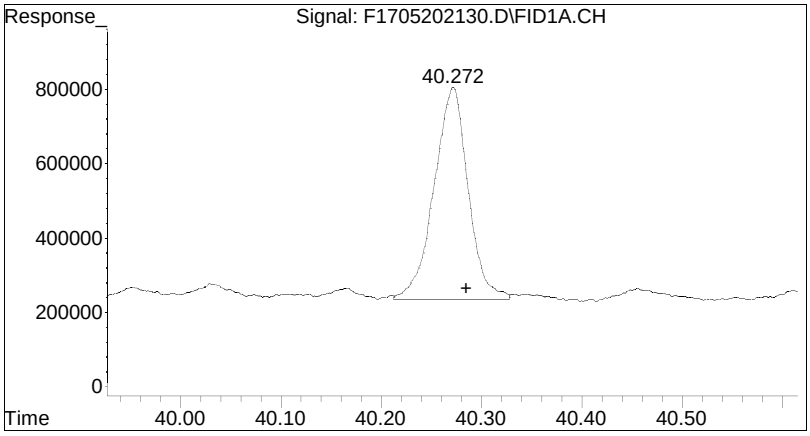
#26 n-Pentacosane (C25)

R.T.: 37.801 min
Delta R.T.: -0.012 min
Response: 19467223
Conc: 16.72 ug/mL M4



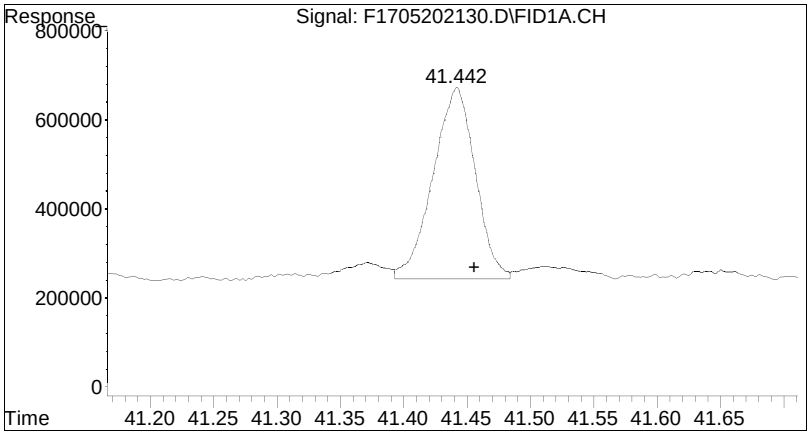
#27 n-Hexacosane (C26)

R.T.: 39.058 min
Delta R.T.: -0.016 min
Response: 17404010
Conc: 14.56 ug/mL M4



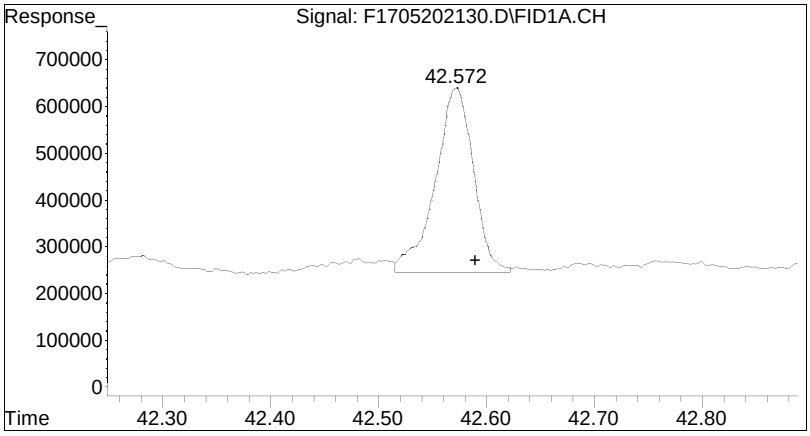
#28 n-Heptacosane (C27)

R.T.: 40.272 min
Delta R.T.: -0.013 min
Response: 13297910
Conc: 11.09 ug/mL M4



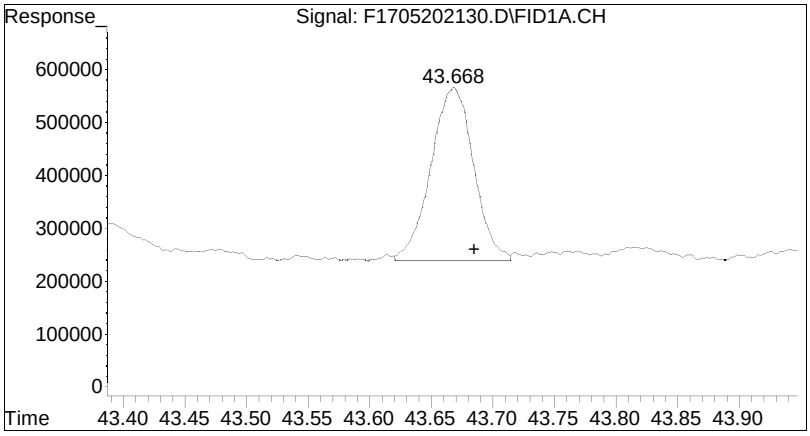
#29 n-Octacosane (C28)

R.T.:	41.442 min
Delta R.T.:	-0.014 min
Response:	9758990
Conc:	7.85 ug/mL M4



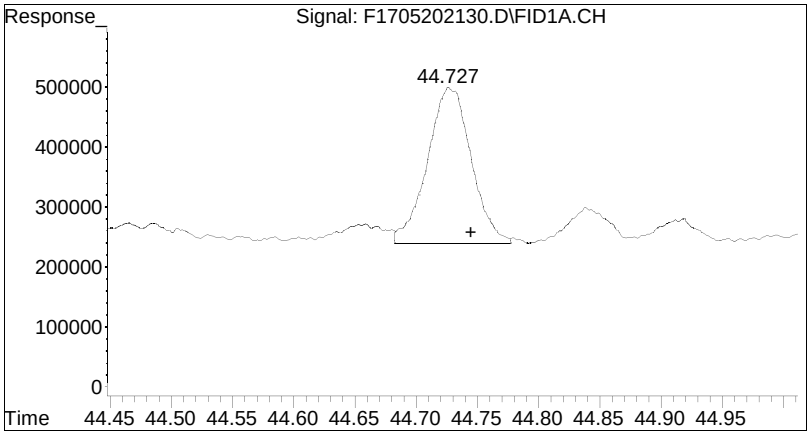
#30 n-Nonacosane (C29)

R.T.:	42.572 min
Delta R.T.:	-0.018 min
Response:	9521699
Conc:	7.81 ug/mL M4



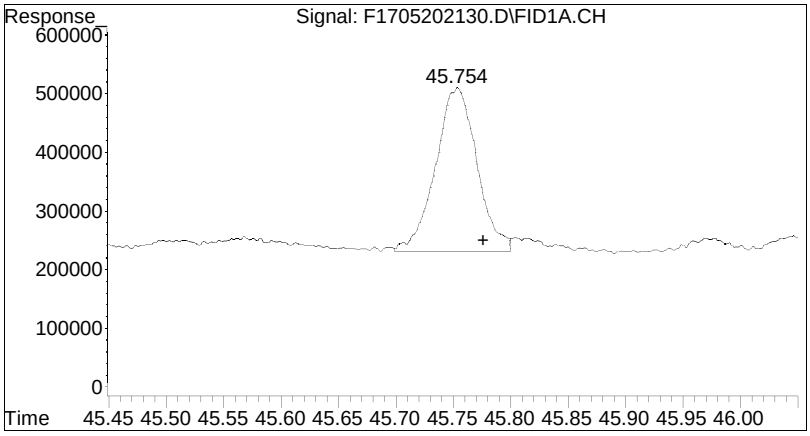
#31 n-Triacontane (C30)

R.T.:	43.668 min
Delta R.T.:	-0.017 min
Response:	7817772
Conc:	6.39 ug/mL M4



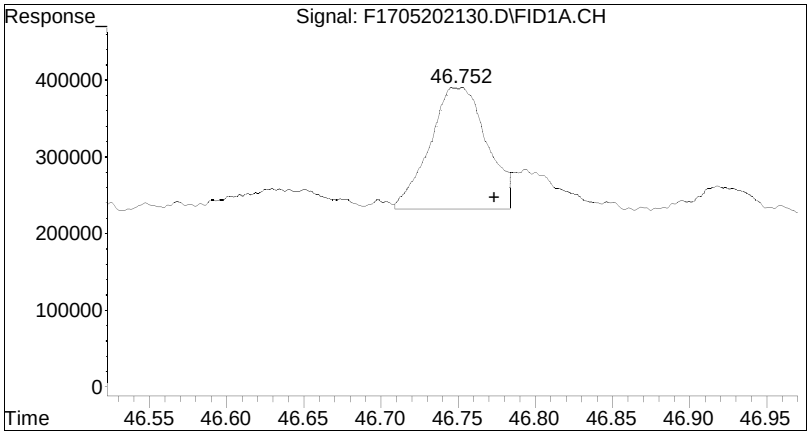
#32 n-Hentriacontane (C31)

R.T.:	44.727 min
Delta R.T.:	-0.019 min
Response:	6398616
Conc:	5.41 ug/mL M4



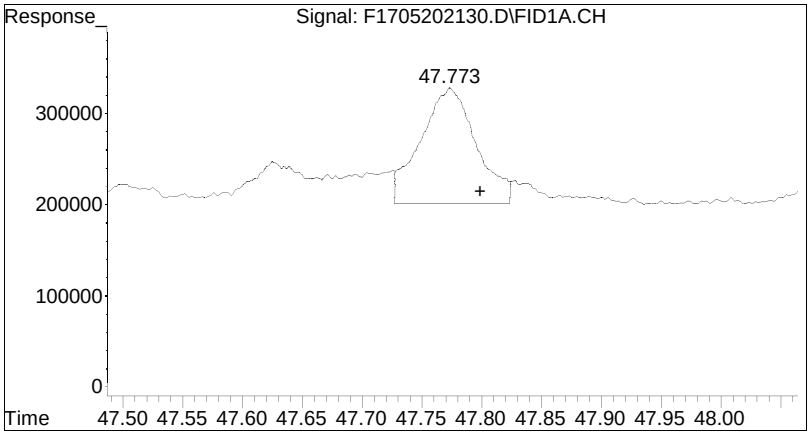
#33 n-Dotriacontane (C32)

R.T.:	45.754 min
Delta R.T.:	-0.023 min
Response:	6895955
Conc:	5.55 ug/mL M4



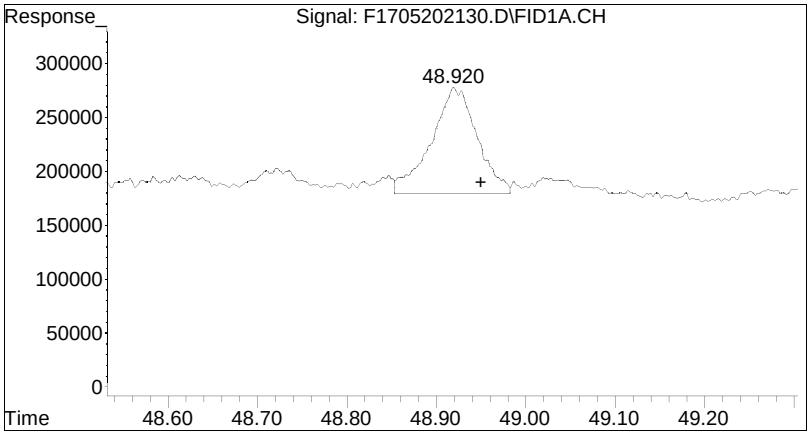
#34 n-Tritriacontane (C33)

R.T.:	46.752 min
Delta R.T.:	-0.021 min
Response:	4008837
Conc:	3.32 ug/mL M4



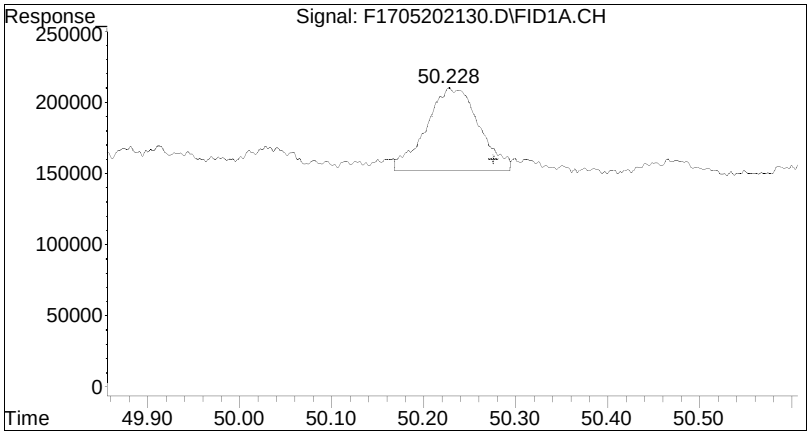
#35 n-tetratriacontane (C34)

R.T.:	47.773 min
Delta R.T.:	-0.026 min
Response:	4018885
Conc:	3.35 ug/mL M4



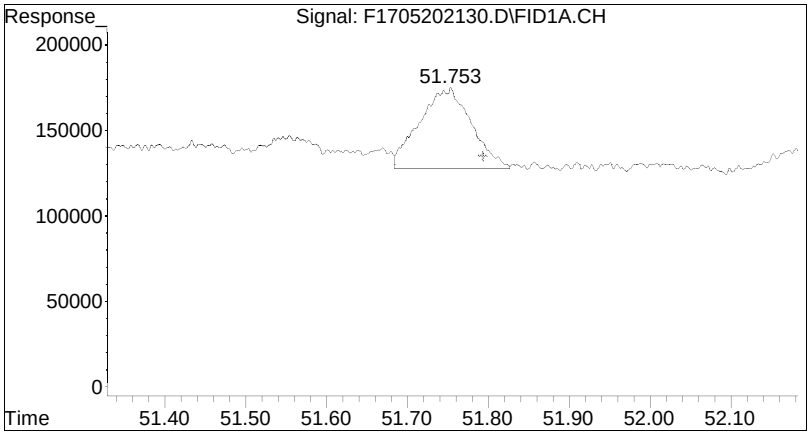
#36 n-Pentatriacontane (C35)

R.T.:	48.920 min
Delta R.T.:	-0.031 min
Response:	3476985
Conc:	3.10 ug/mL M4



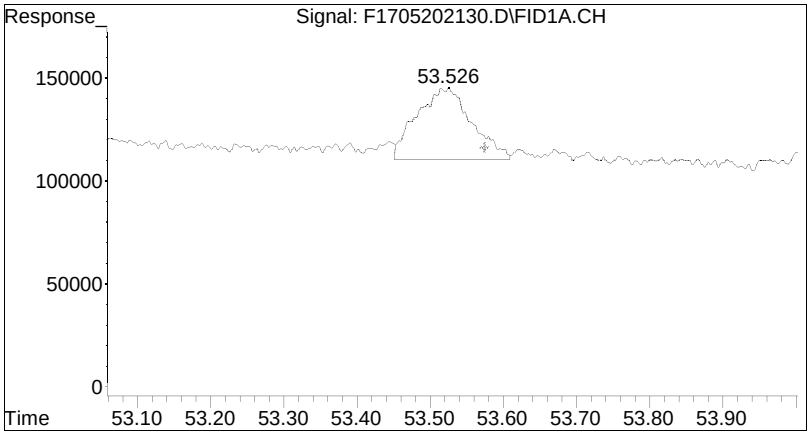
#37 n-Hexatriacontane (C36)

R.T.:	50.228 min
Delta R.T.:	-0.048 min
Response:	2300095
Conc:	1.70 ug/mL M4



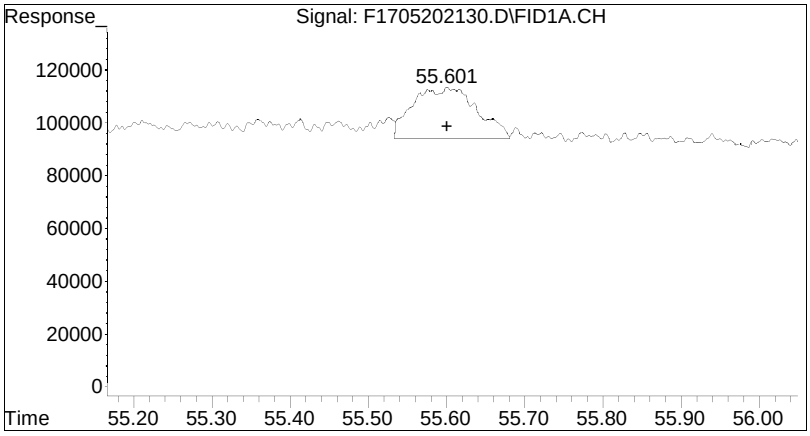
#38 n-Heptatriacontane (C37)

R.T.:	51.753 min
Delta R.T.:	-0.040 min
Response:	2053231
Conc:	1.68 ug/mL M4



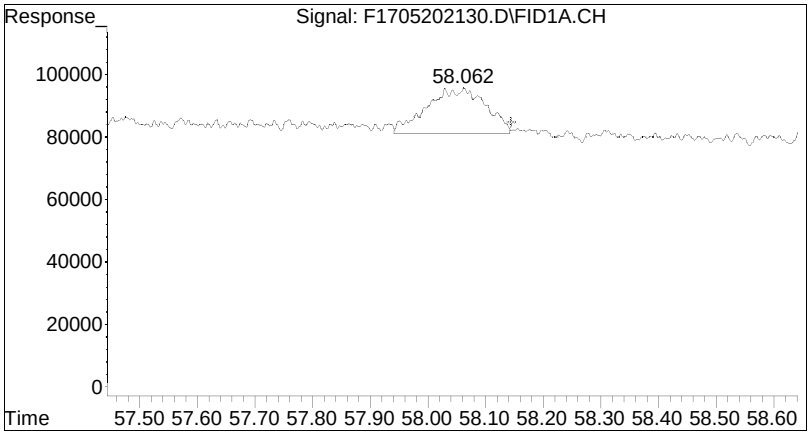
#39 n-Octatriacontane (C38)

R.T.:	53.526 min
Delta R.T.:	-0.049 min
Response:	1776959
Conc:	1.43 ug/mL M4



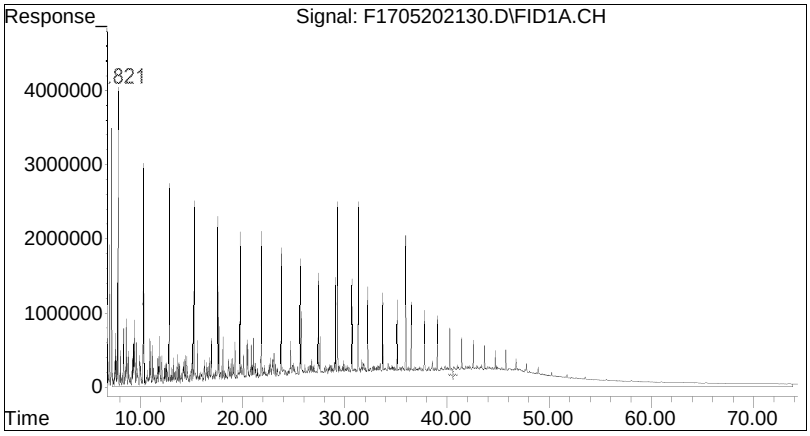
#40 n-Nonatriacontane (C39)

R.T.:	55.601 min
Delta R.T.:	0.000 min
Response:	1071186
Conc:	0.88 ug/mL M4



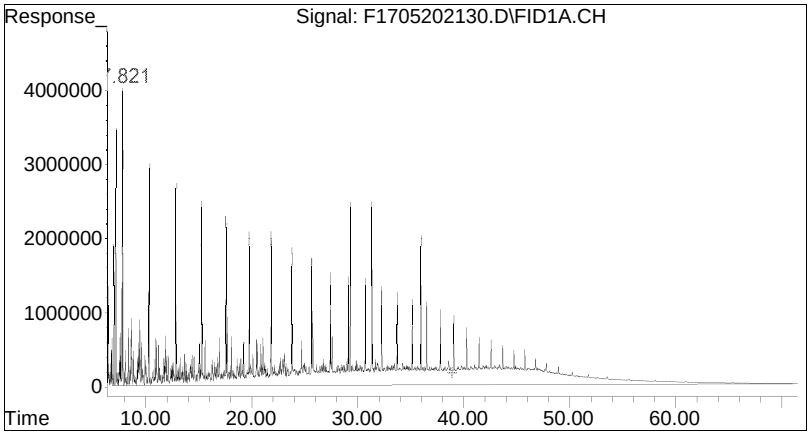
#41 n-Tetracontane (C40)

R.T.:	58.062 min
Delta R.T.:	-0.083 min
Response:	1027669
Conc:	0.84 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 40.642 min
Delta R.T.: 0.000 min
Response: 7012714990
Conc: 5918.86 ug/mL m



#46 Total Resolved Hydrocarbo

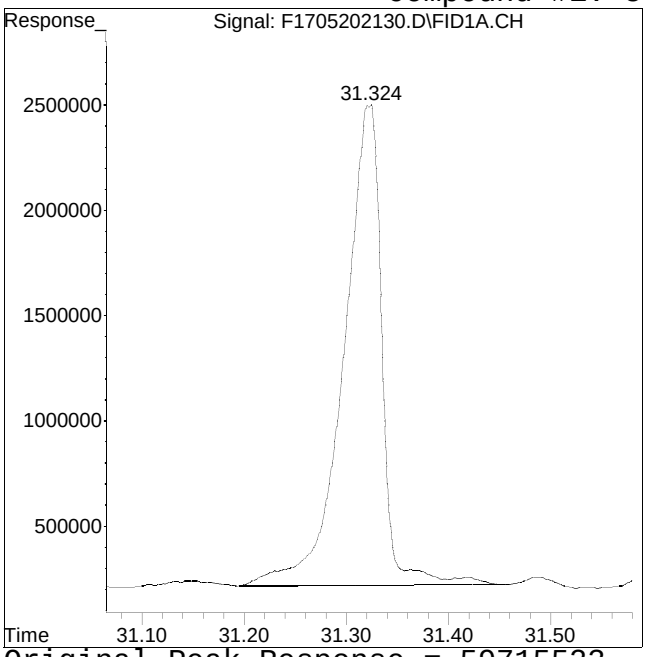
R.T.: 38.937 min
Delta R.T.: 0.000 min
Response: 2309550069
Conc: 1949.30 ug/mL m

Manual Integration/Negative Proof Report

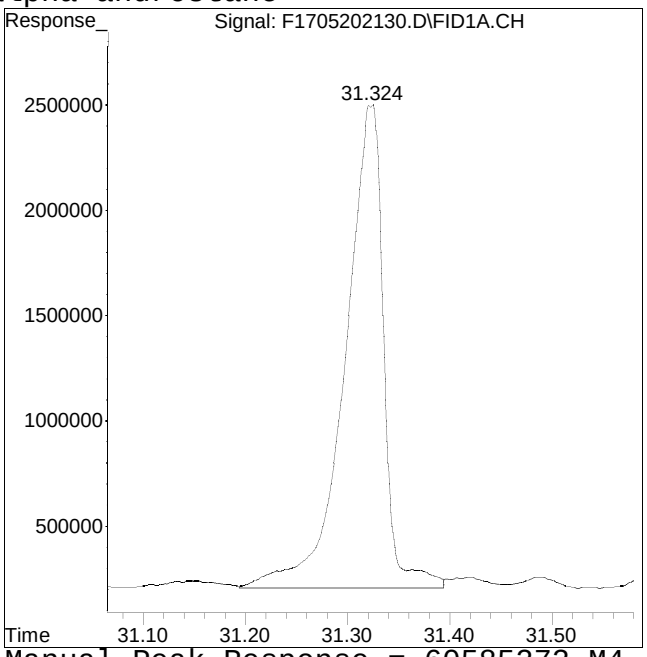
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 59715523



Manual Peak Response = 60585272 M4

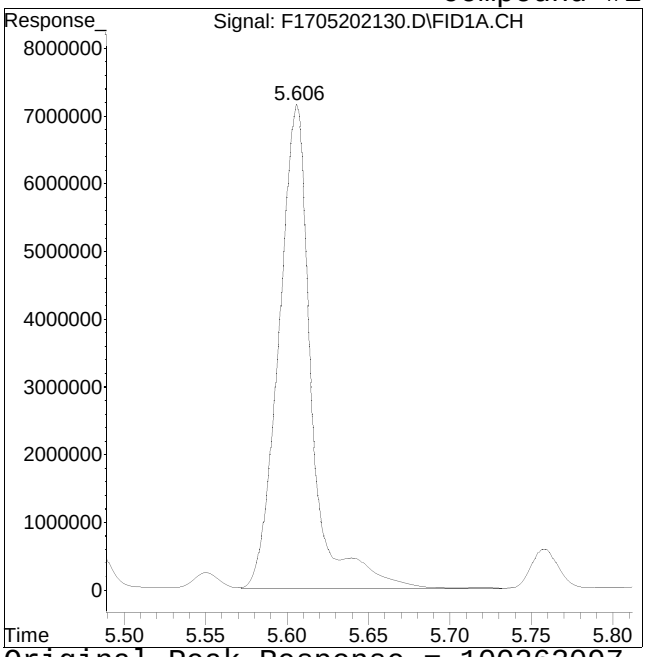
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

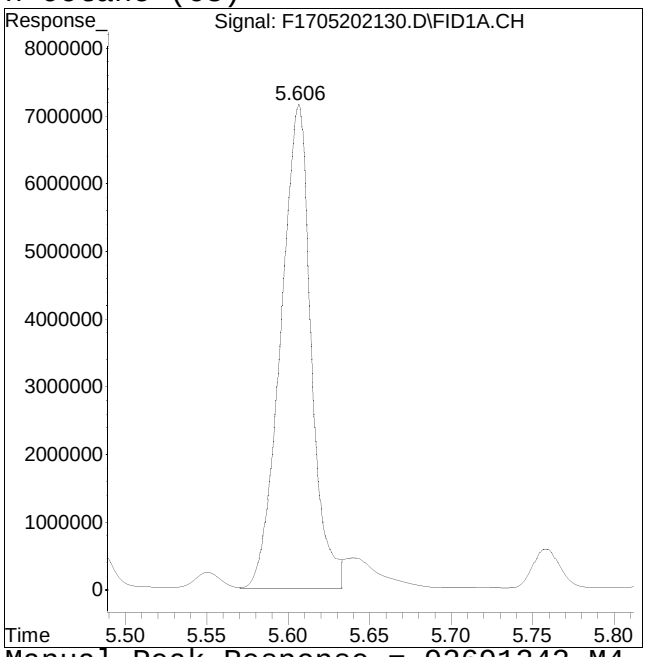
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #2: n-Octane (C8)



Original Peak Response = 100263097



Manual Peak Response = 92691242 M4

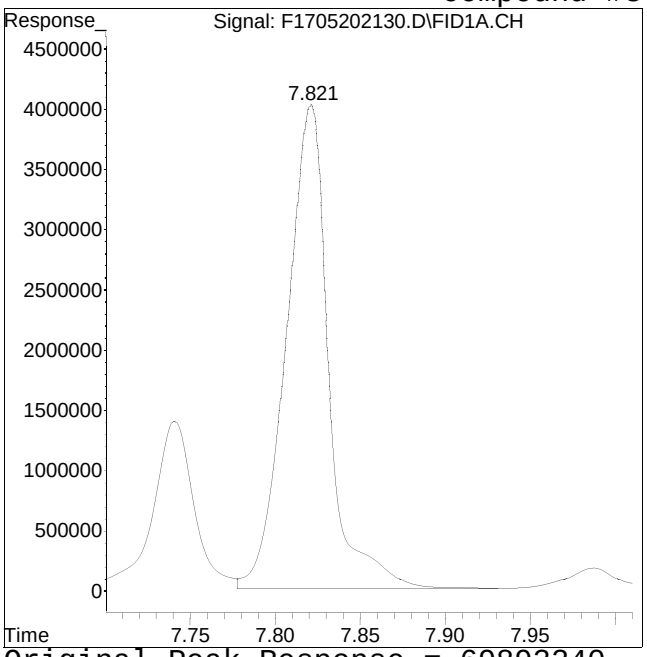
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

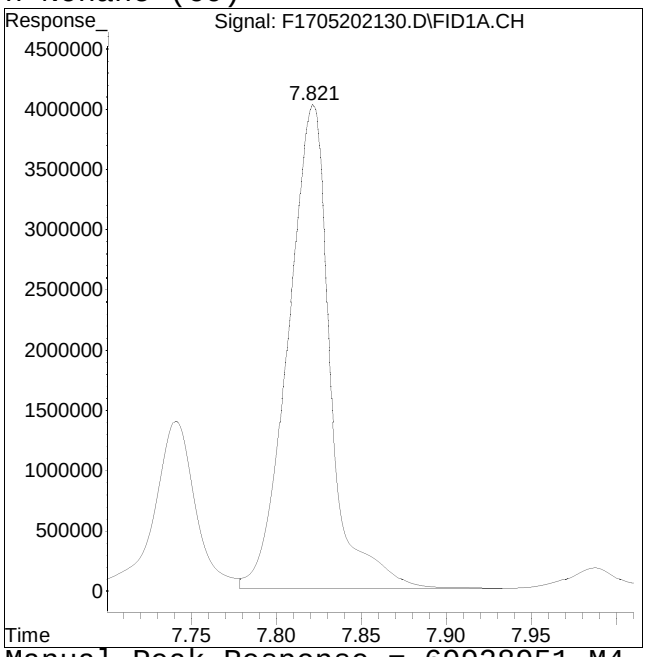
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 69893240



Manual Peak Response = 69928951 M4

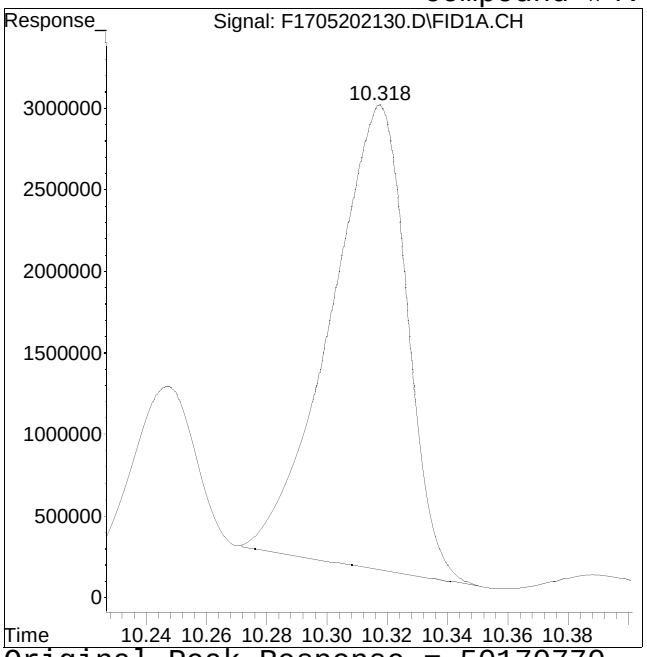
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

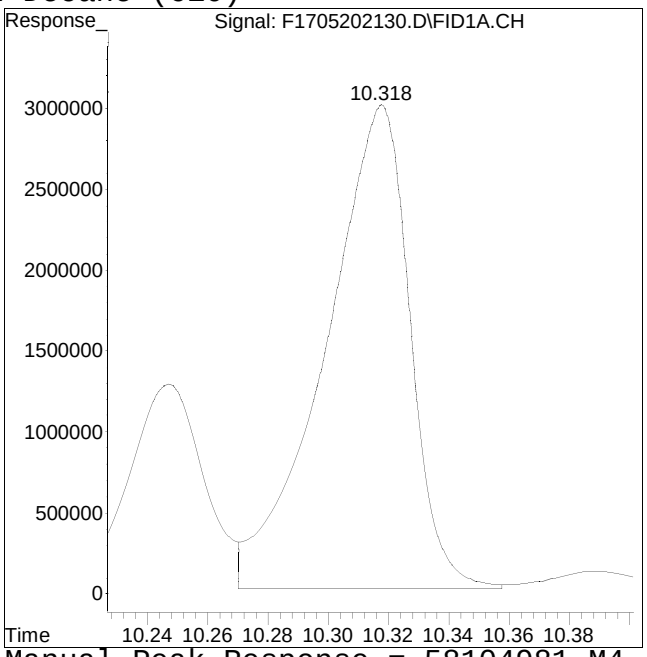
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #4: n-Decane (C10)



Original Peak Response = 50170770



Manual Peak Response = 58104981 M4

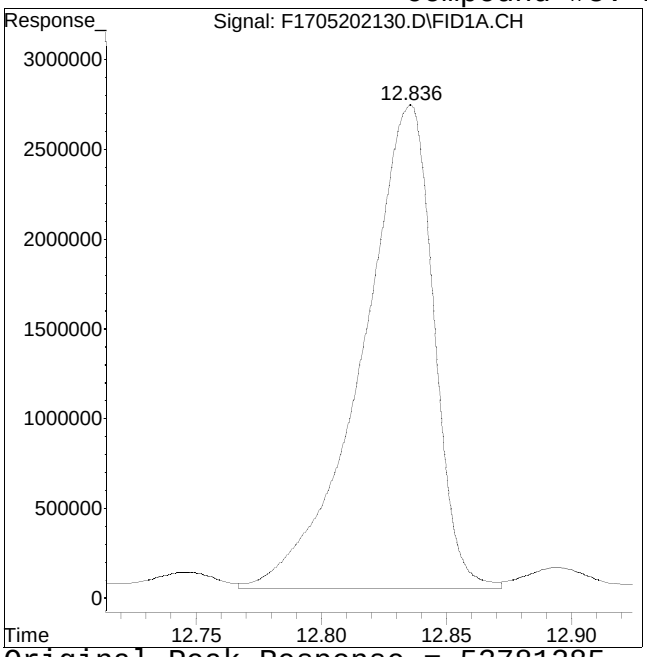
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

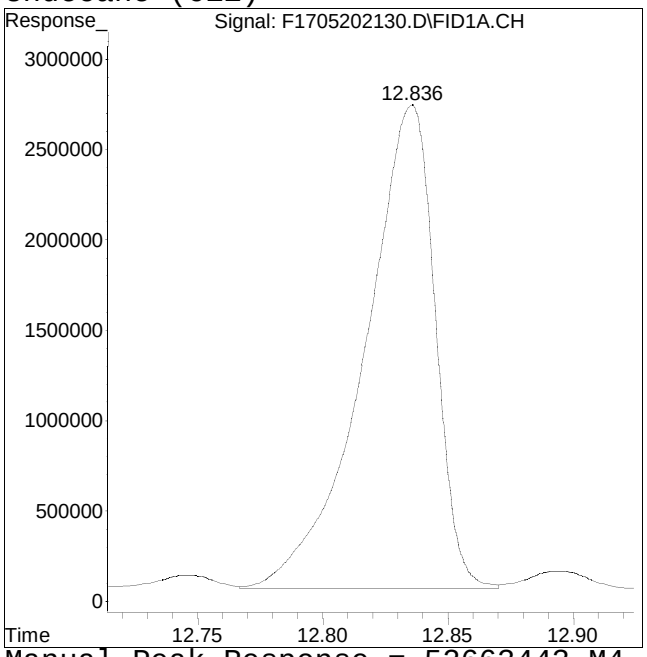
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 53781285



Manual Peak Response = 52663443 M4

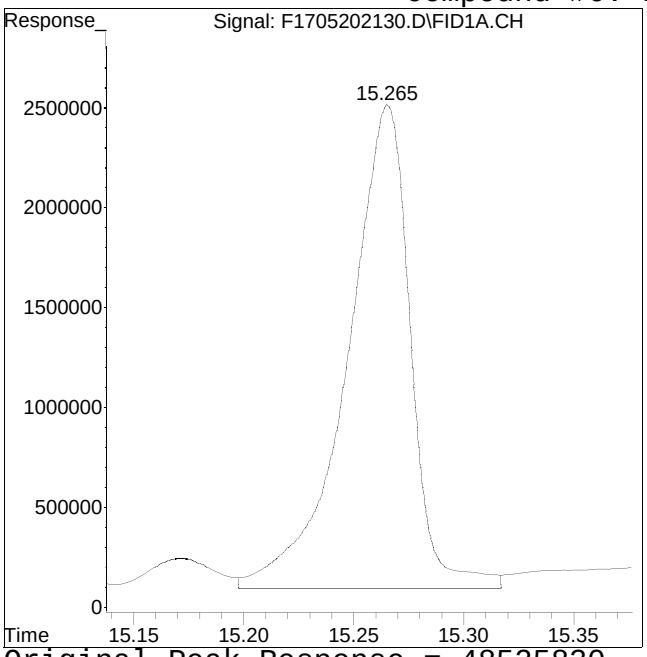
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

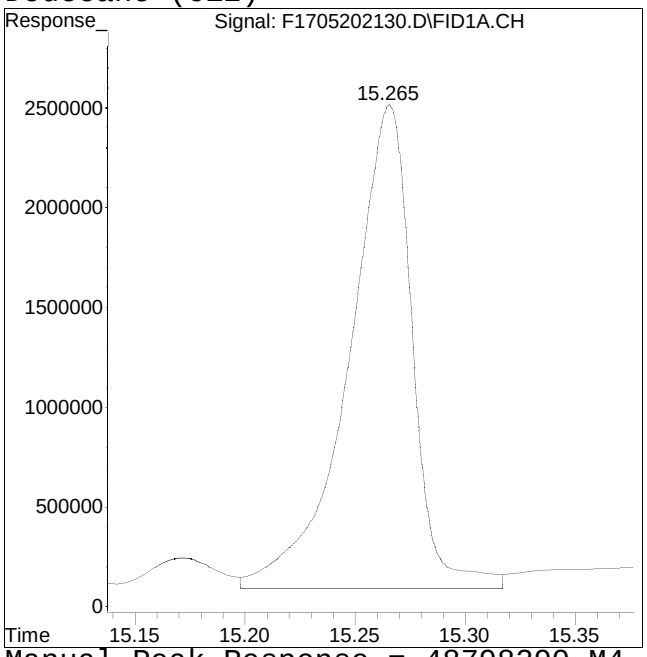
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 48525830



Manual Peak Response = 48798290 M4

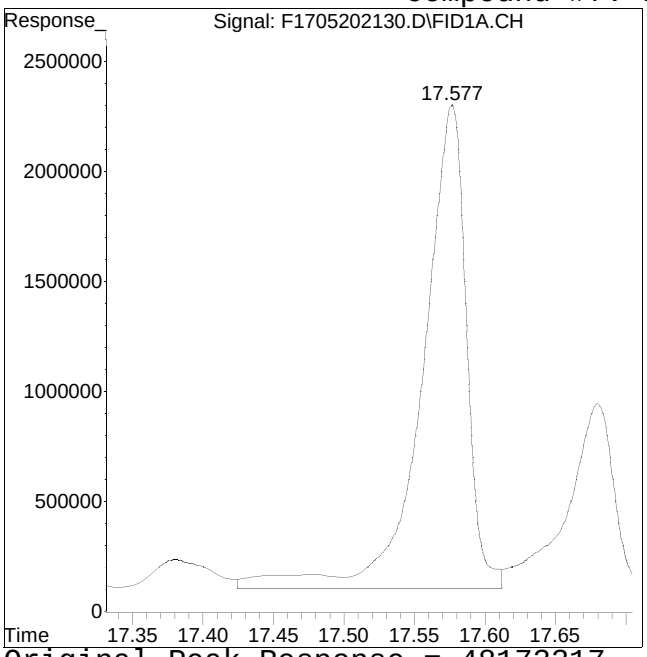
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

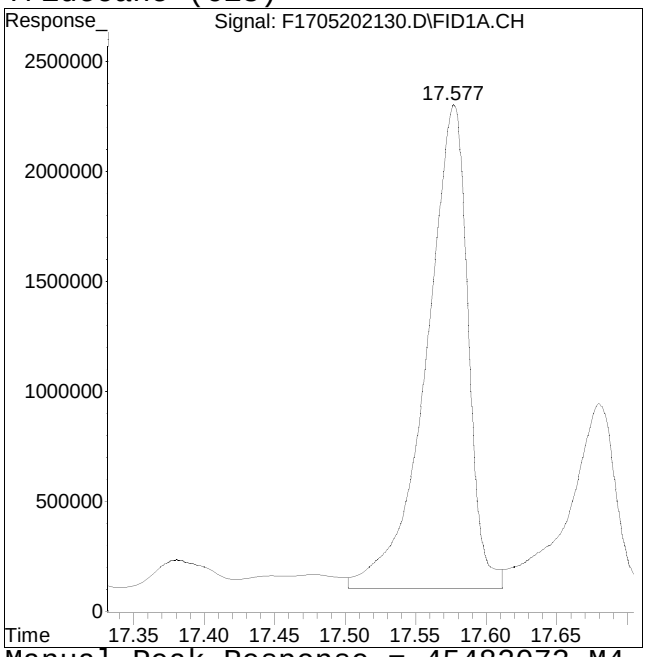
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 48173317



Manual Peak Response = 45482073 M4

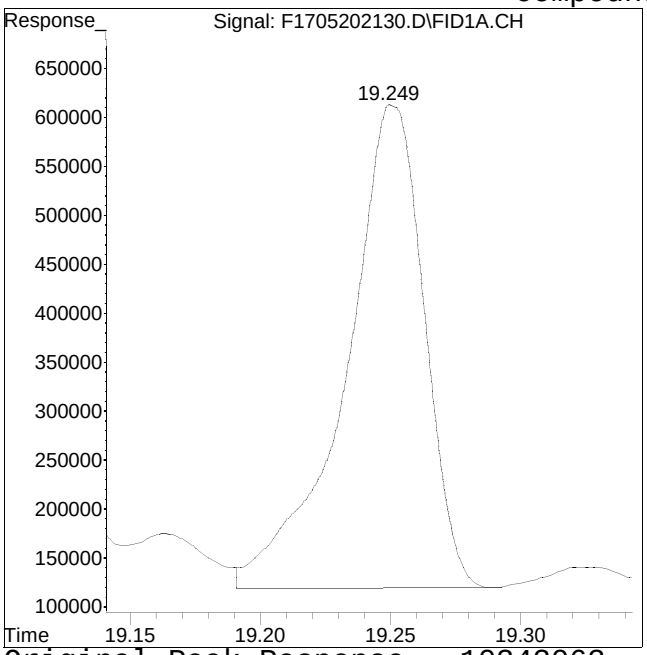
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

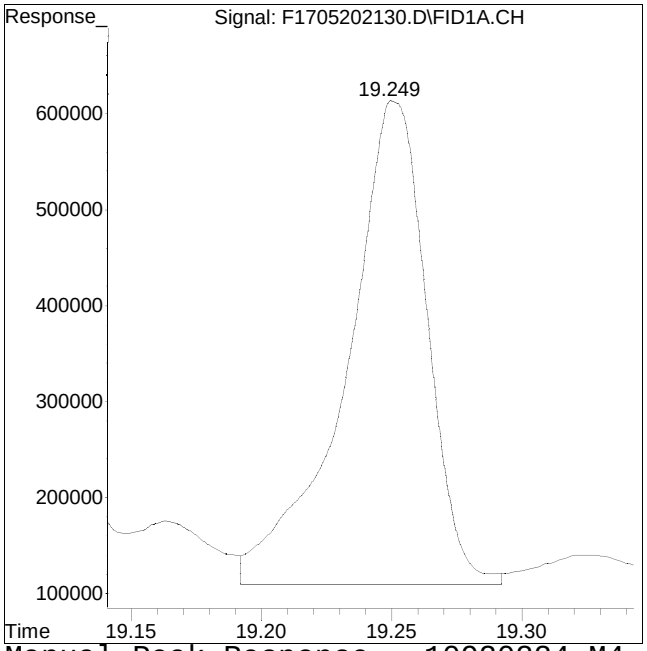
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #8: 1380



Original Peak Response = 10343063



Manual Peak Response = 10920224 M4

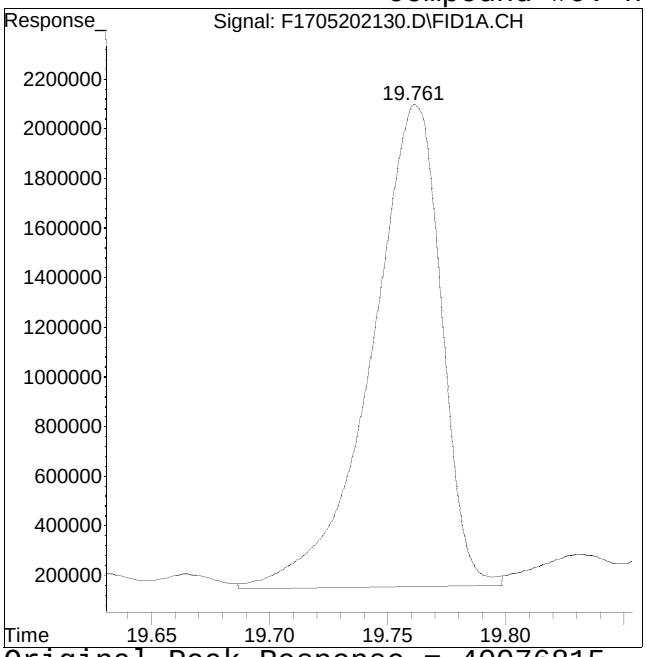
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

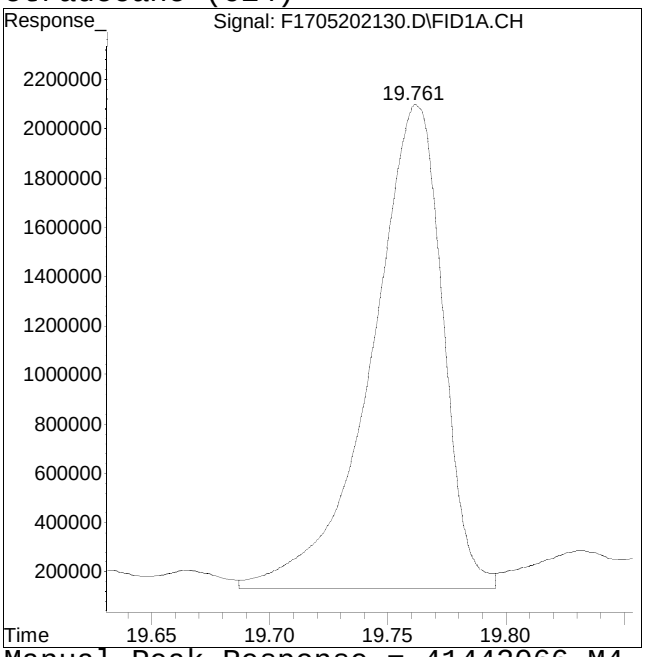
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 40076815



Manual Peak Response = 41442066 M4

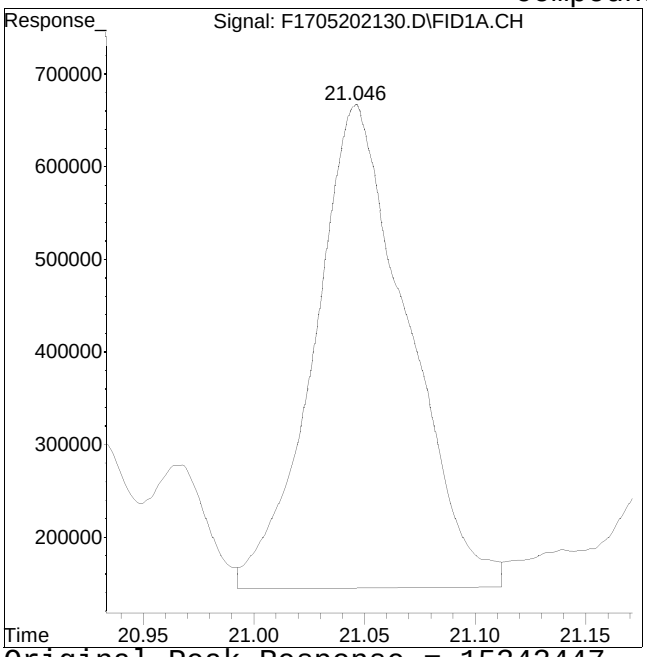
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

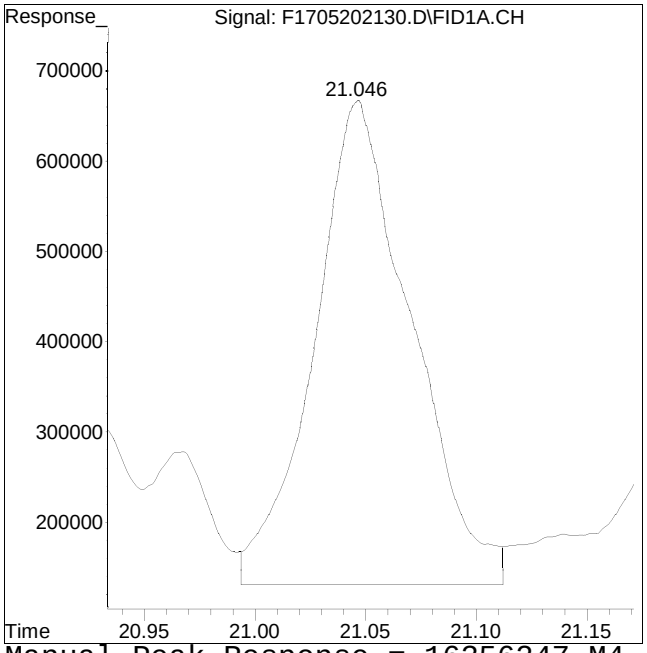
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #10: 1470



Original Peak Response = 15343447



Manual Peak Response = 16356247 M4

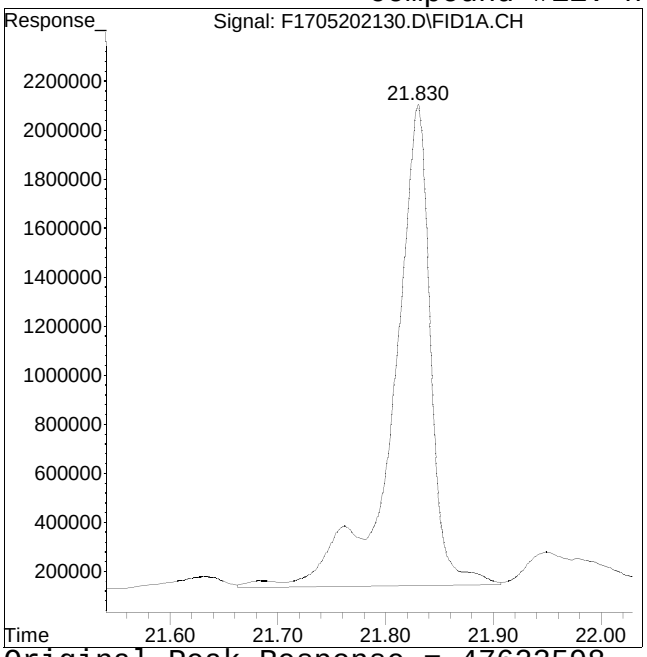
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

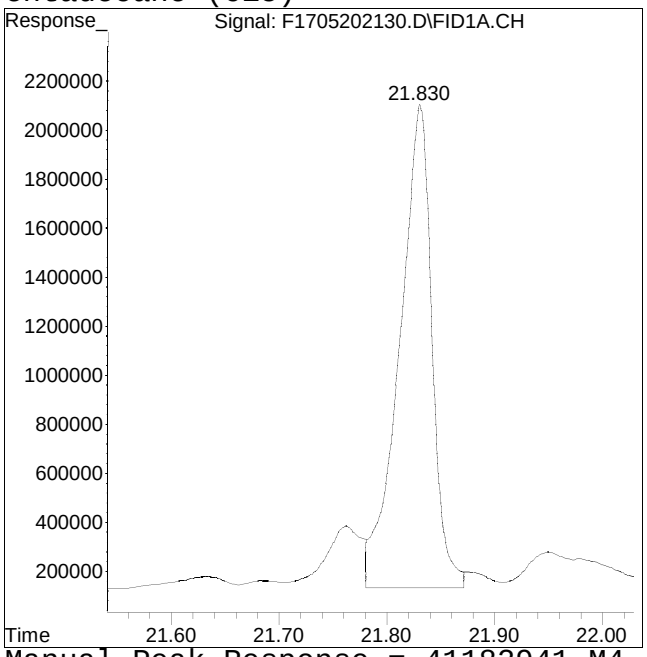
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 47623598



Manual Peak Response = 41182941 M4

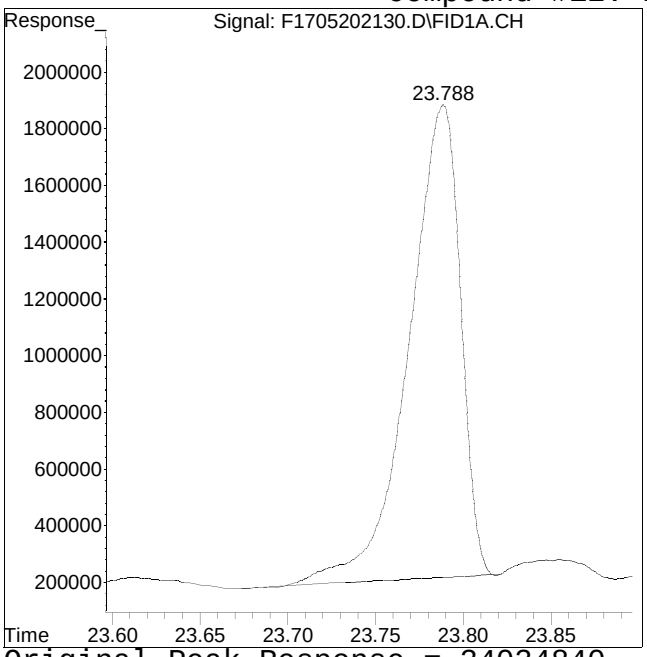
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

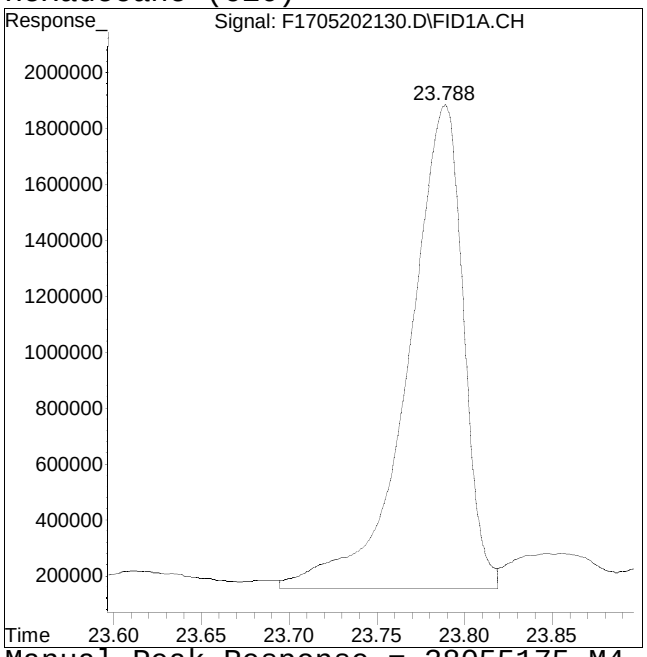
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 34034840



Manual Peak Response = 38055175 M4

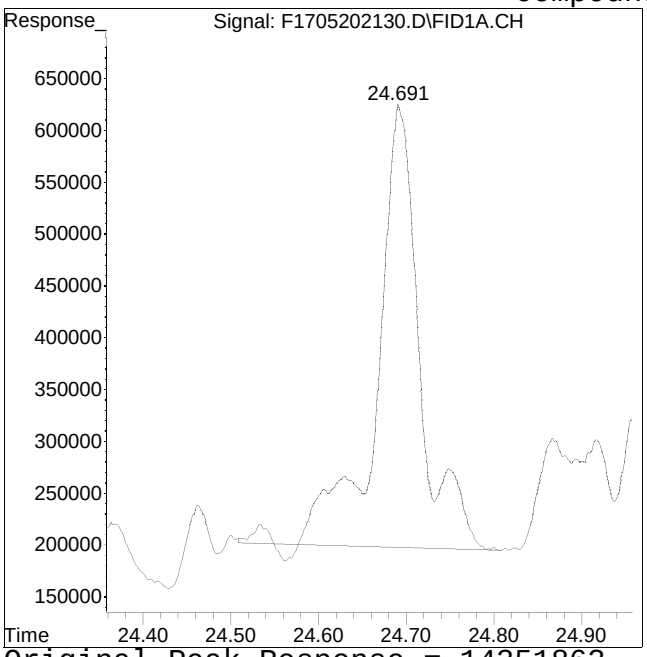
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

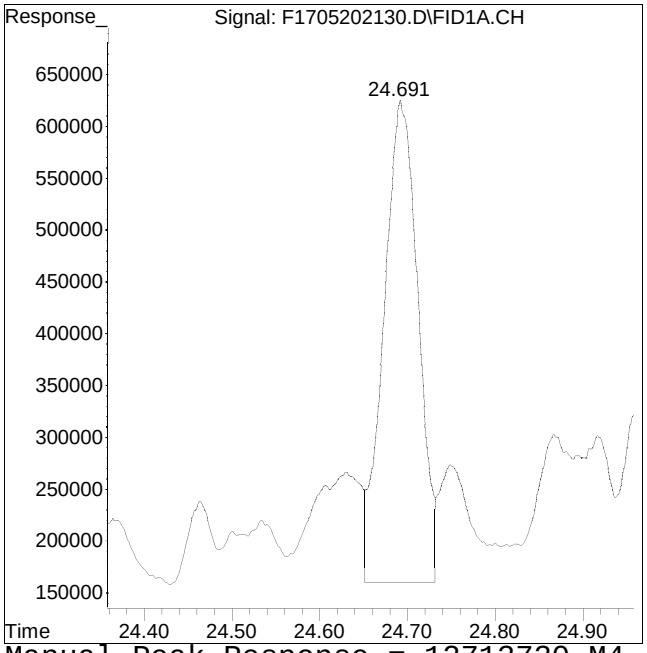
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #13: 1650



Original Peak Response = 14351863



Manual Peak Response = 12713730 M4

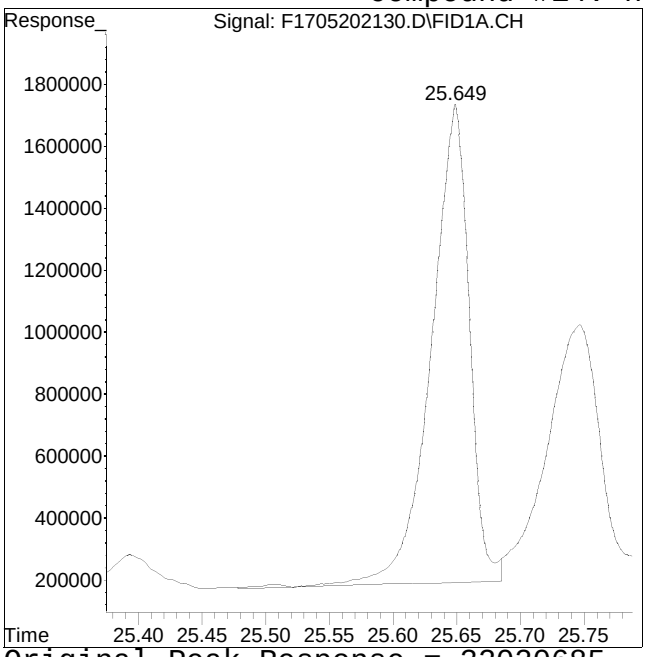
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

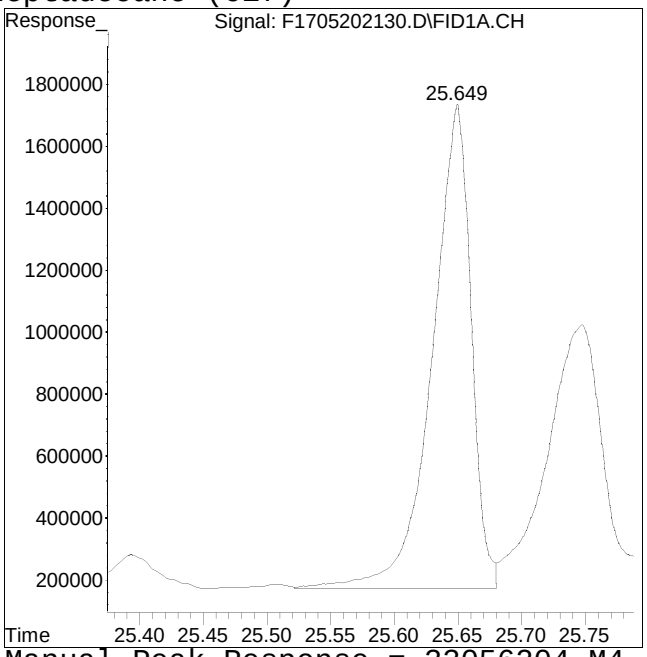
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 32020685



Manual Peak Response = 33056204 M4

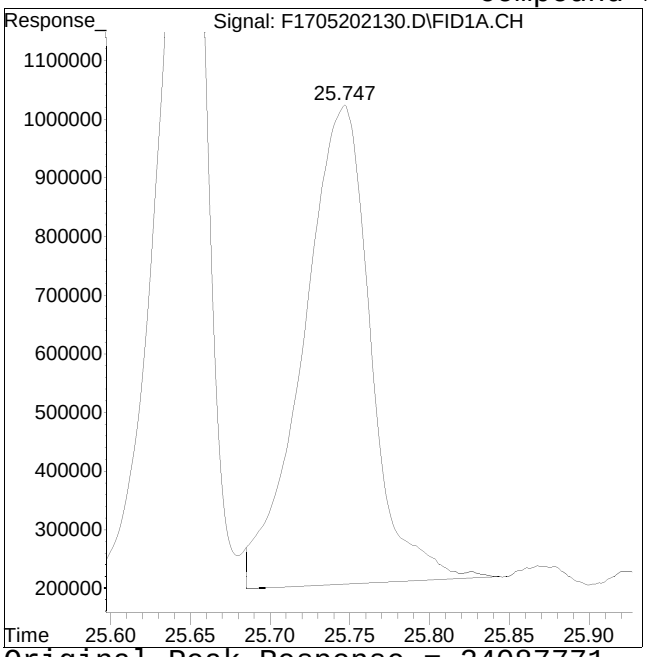
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

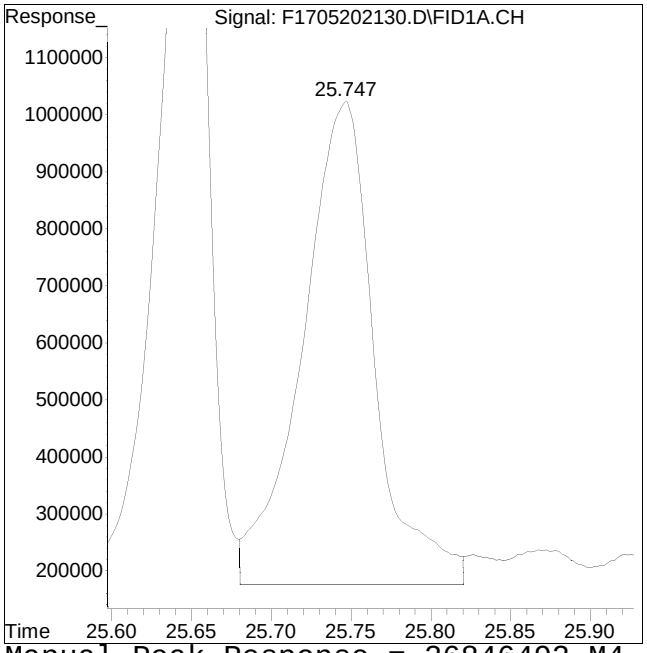
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #15: Pristane



Original Peak Response = 24087771



Manual Peak Response = 26846492 M4

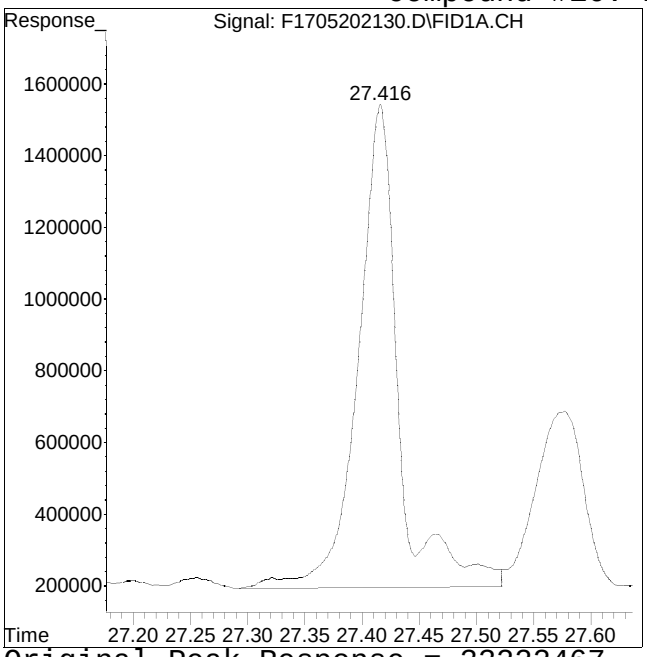
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

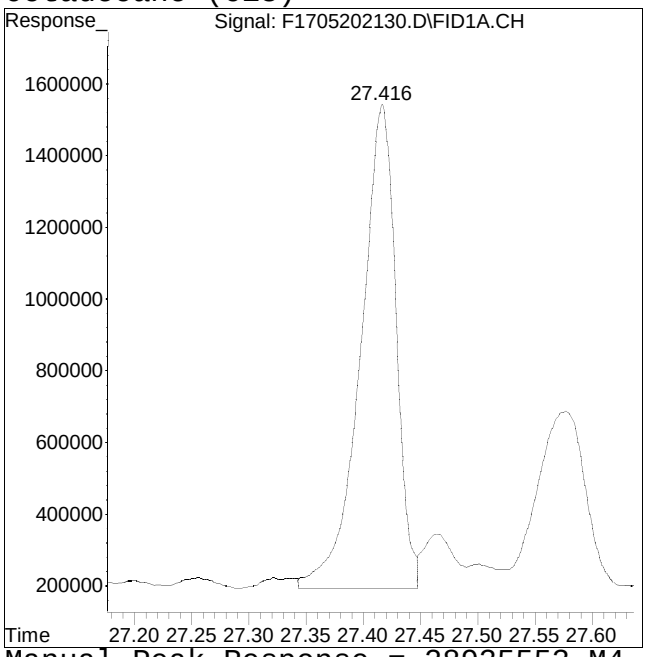
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 33222467



Manual Peak Response = 28935553 M4

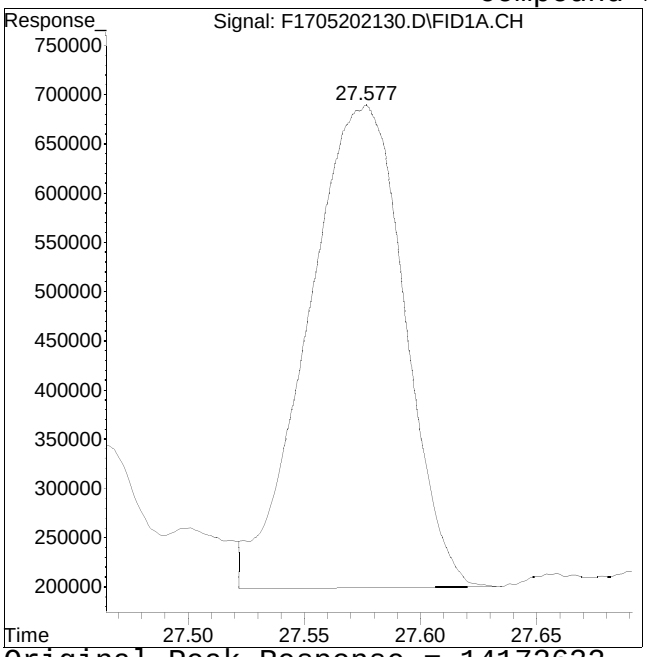
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

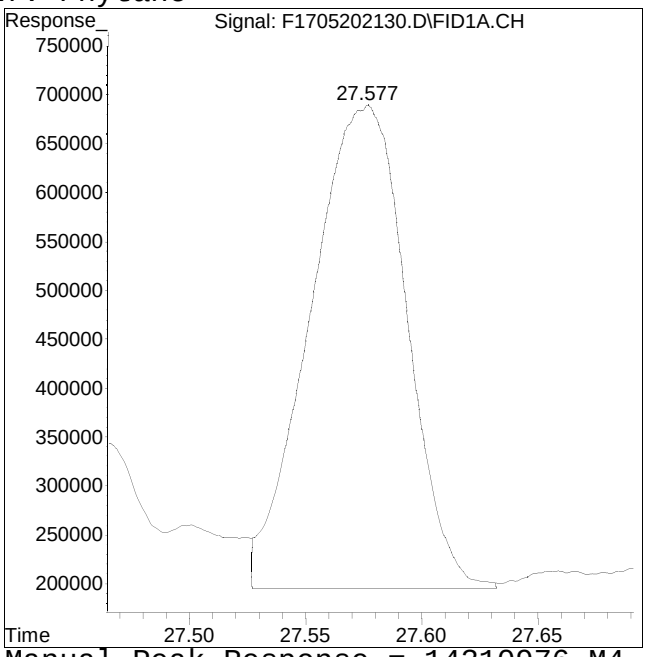
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #17: Phytane



Original Peak Response = 14173632



Manual Peak Response = 14310976 M4

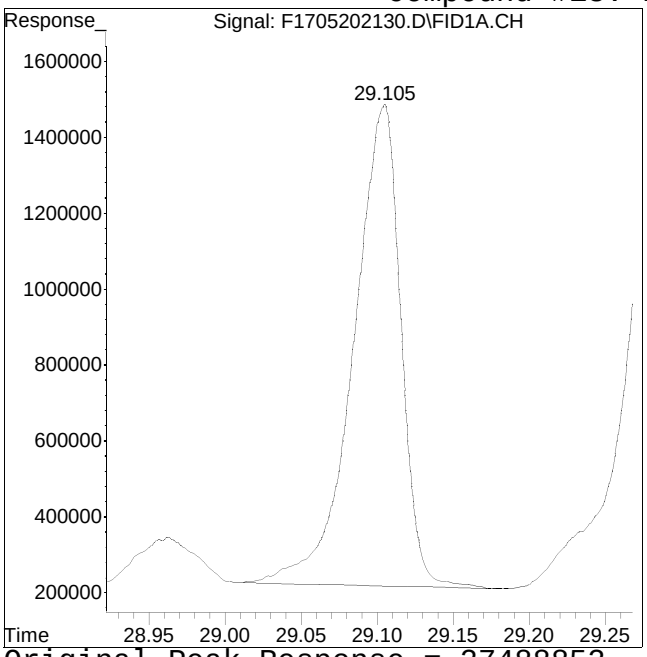
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

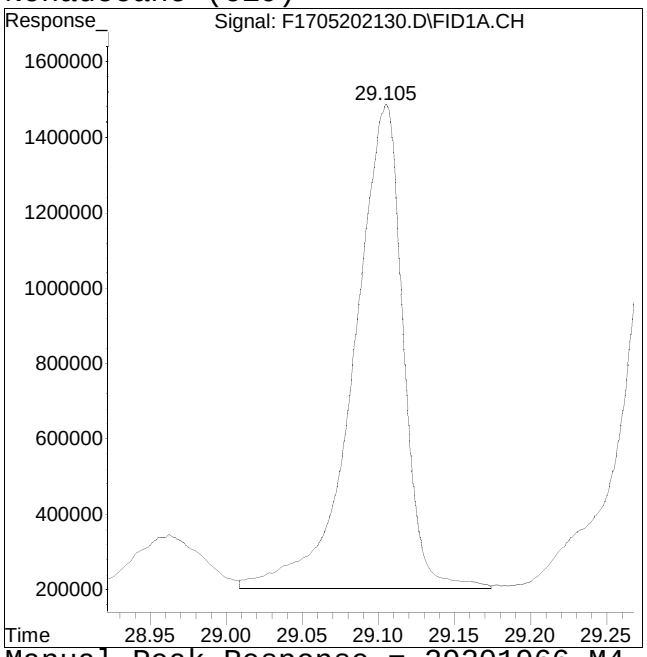
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 27488852



Manual Peak Response = 29201966 M4

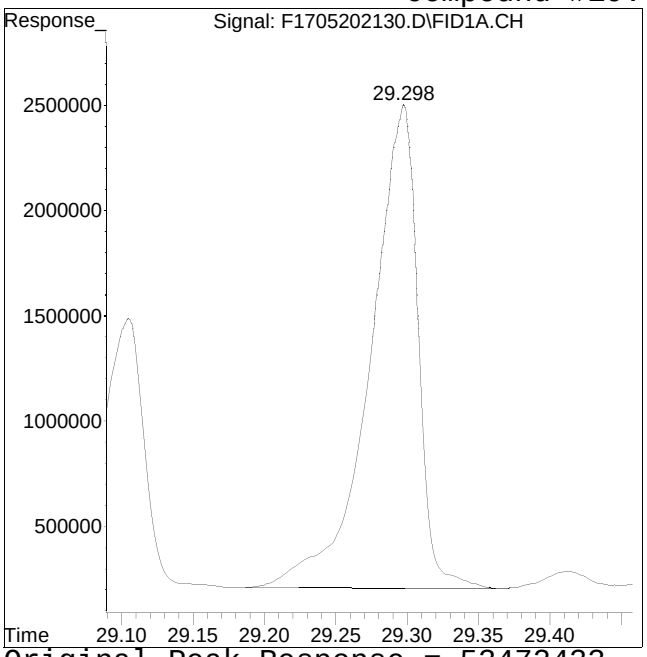
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

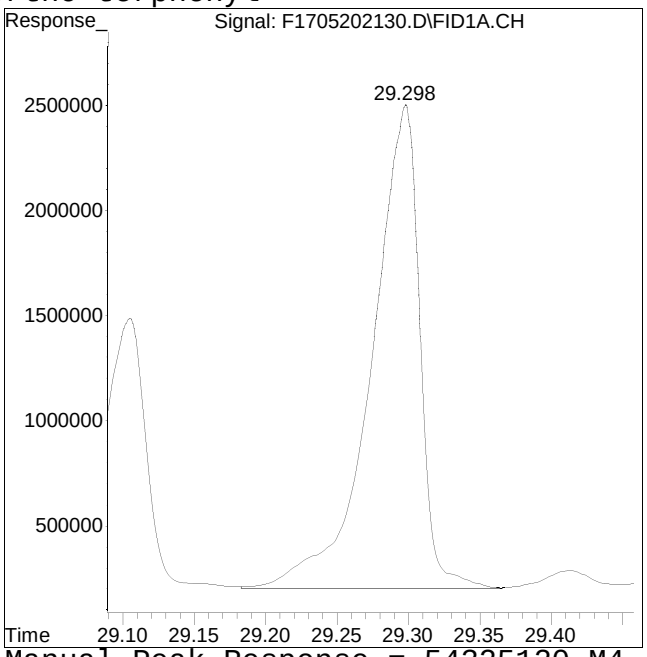
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #19: ortho-terphenyl



Original Peak Response = 53472433



Manual Peak Response = 54325120 M4

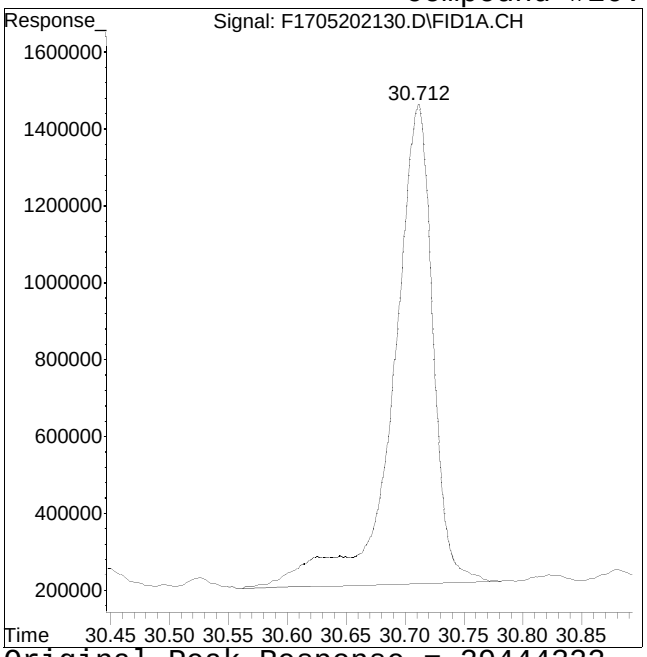
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

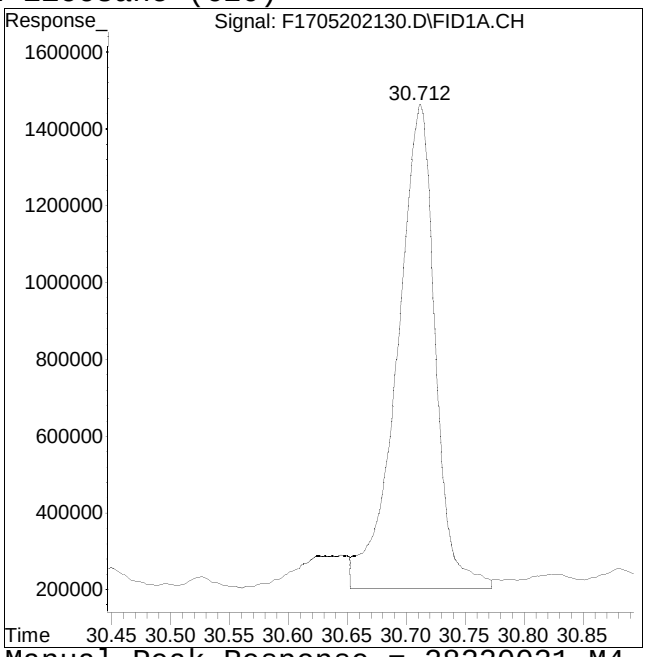
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 29444322



Manual Peak Response = 28220031 M4

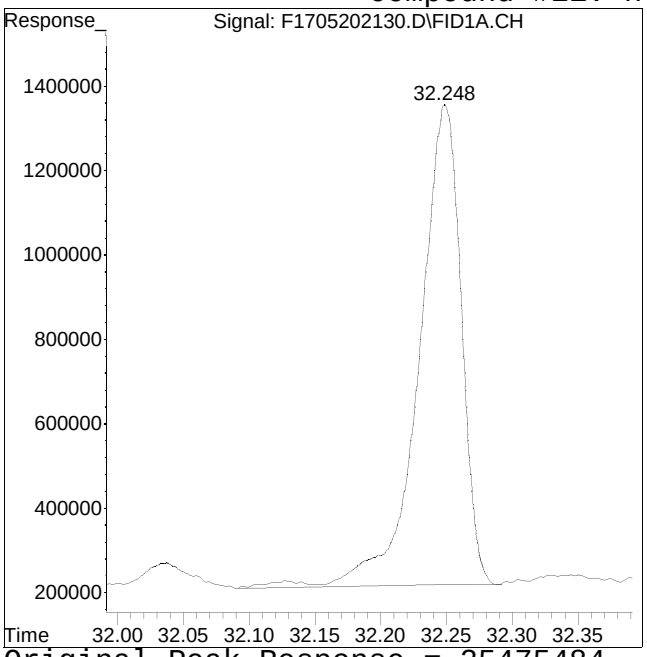
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

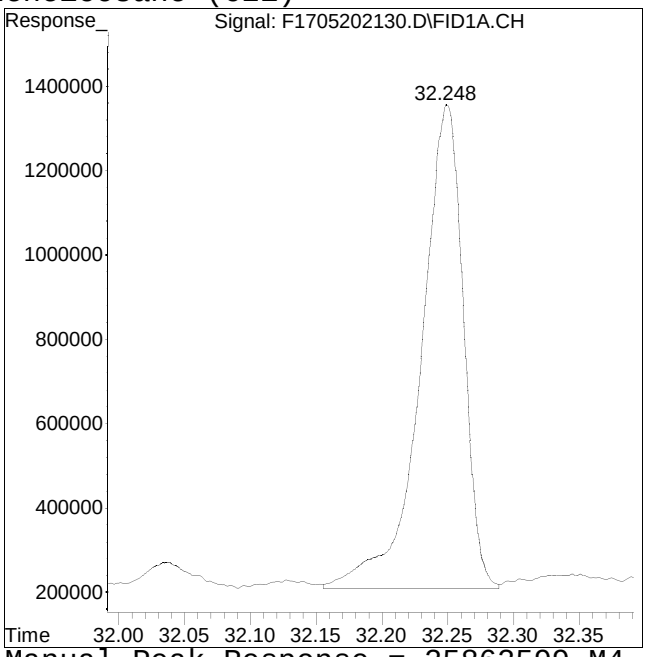
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 25475484



Manual Peak Response = 25862599 M4

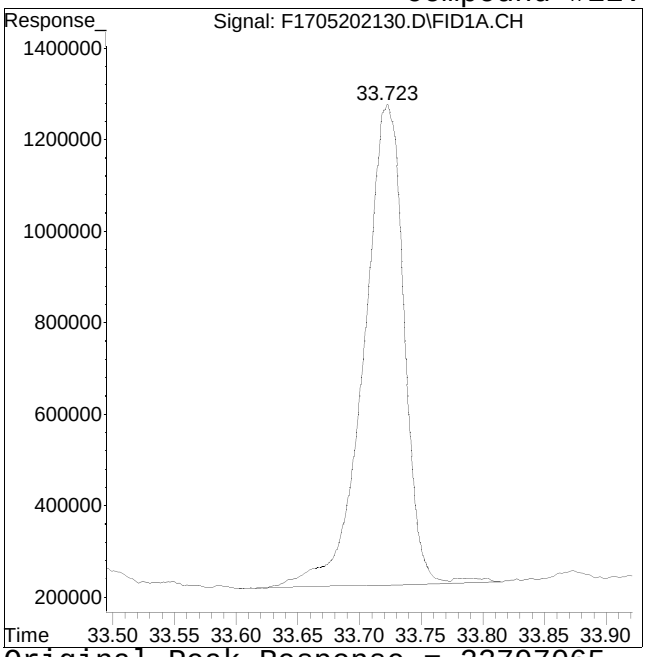
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

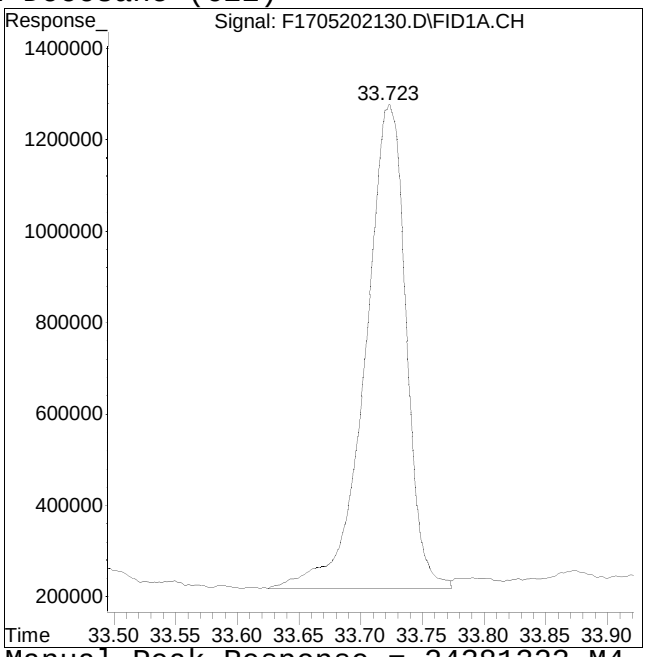
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 23797065



Manual Peak Response = 24381323 M4

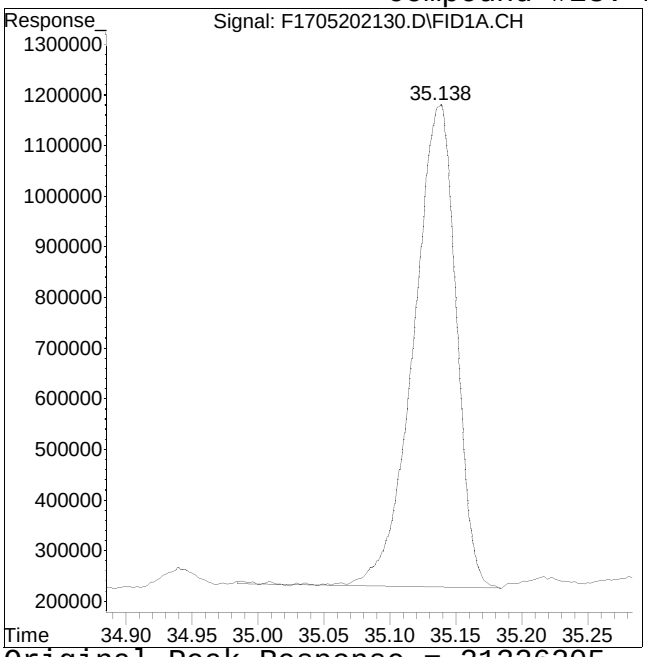
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

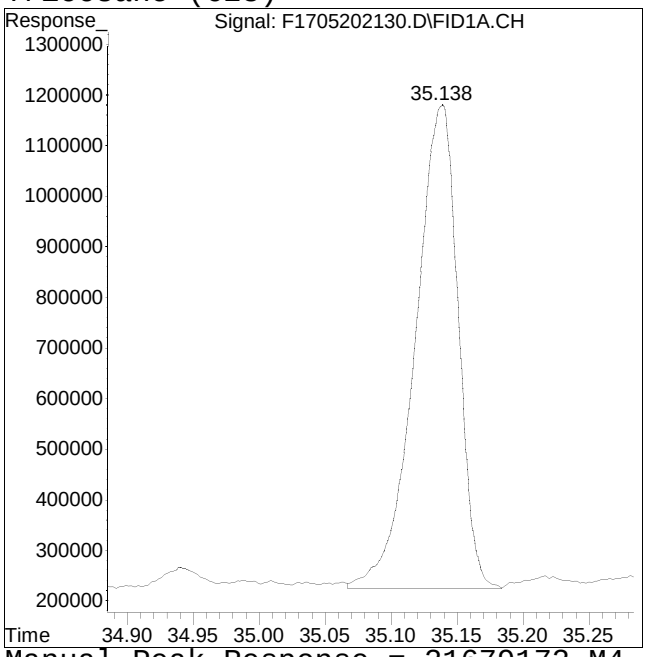
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 21326205



Manual Peak Response = 21679172 M4

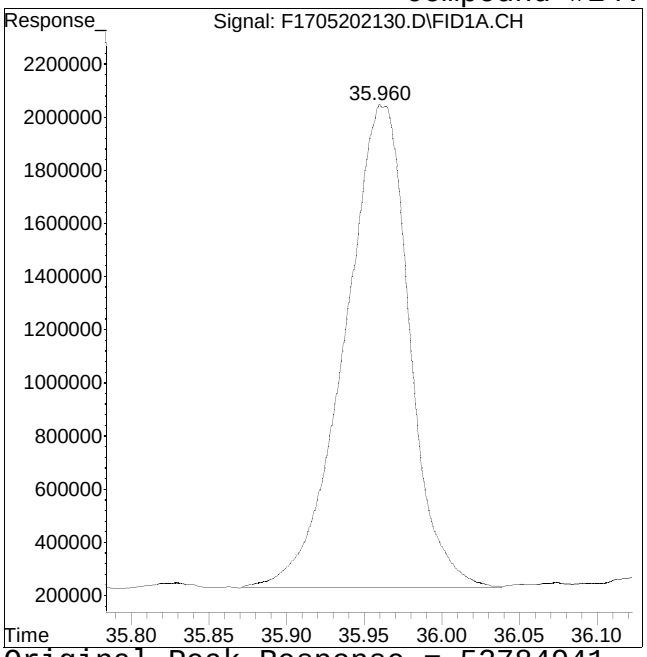
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

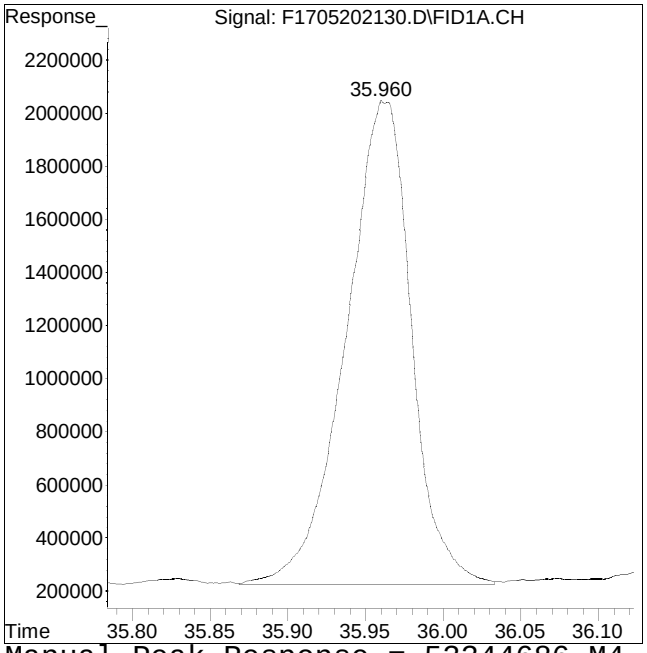
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #24: d50-Tetracosane



Original Peak Response = 52784941



Manual Peak Response = 53344686 M4

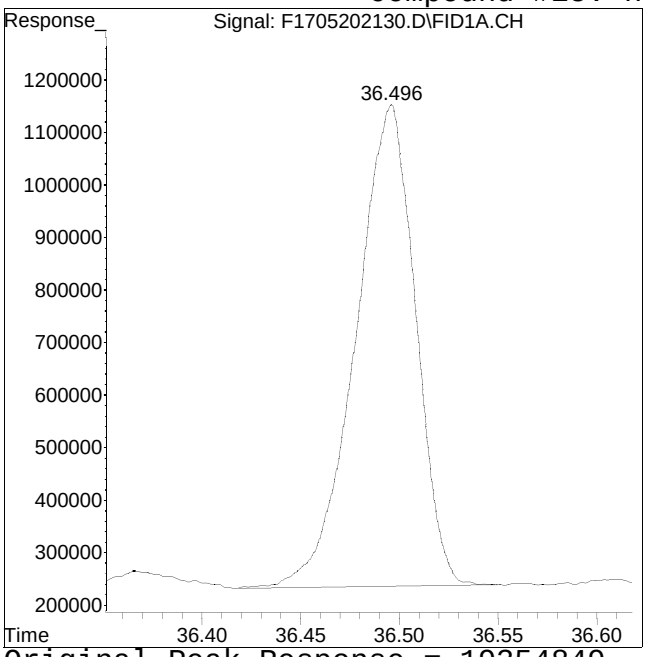
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

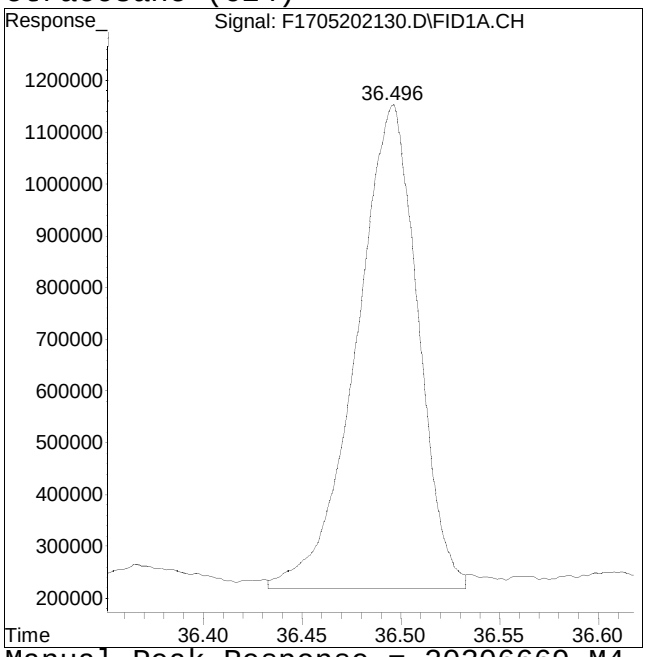
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 19354849



Manual Peak Response = 20306669 M4

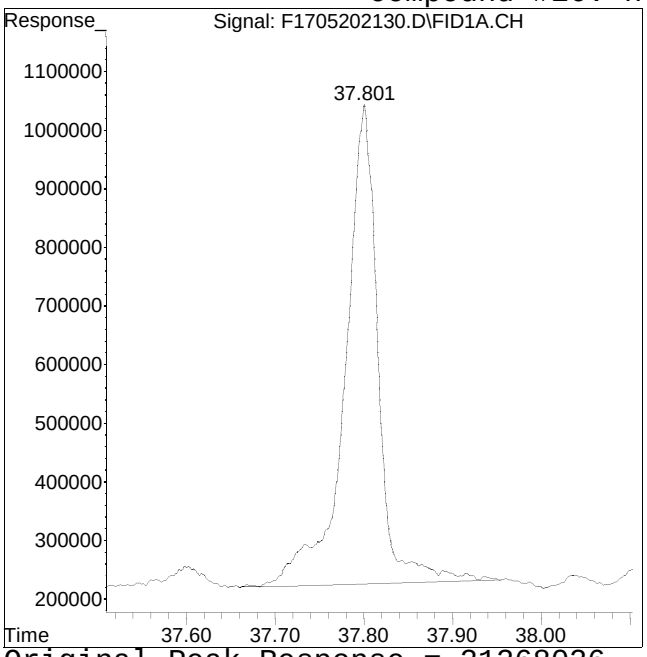
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

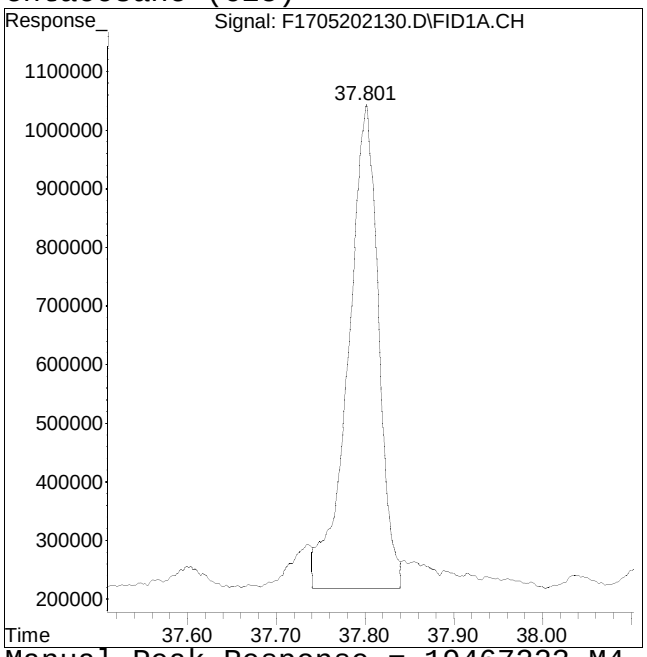
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 21268026



Manual Peak Response = 19467223 M4

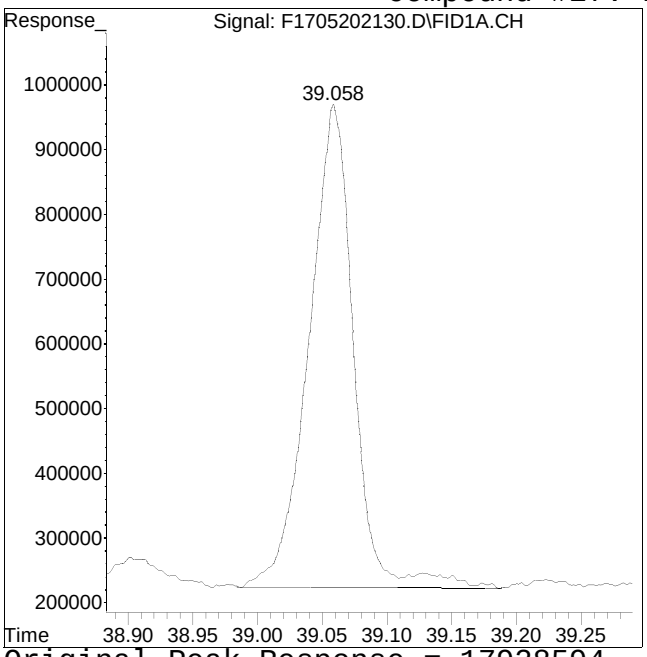
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

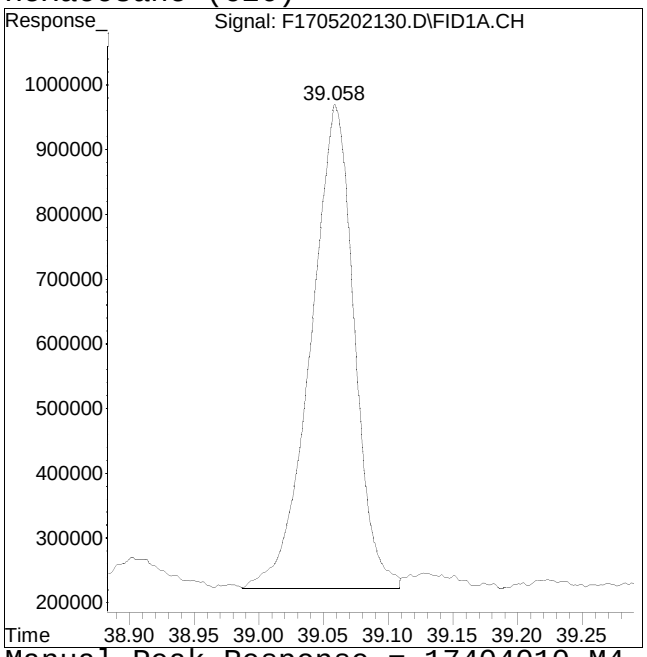
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 17928594



Manual Peak Response = 17404010 M4

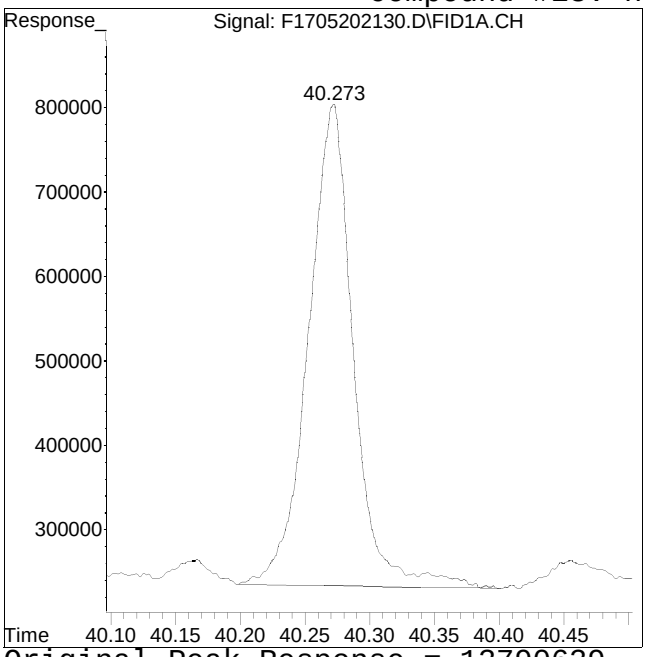
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

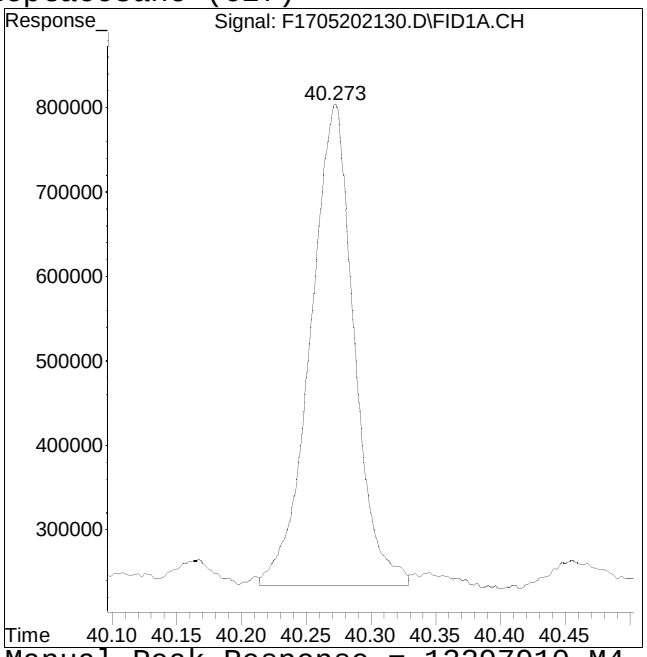
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 13790639



Manual Peak Response = 13297910 M4

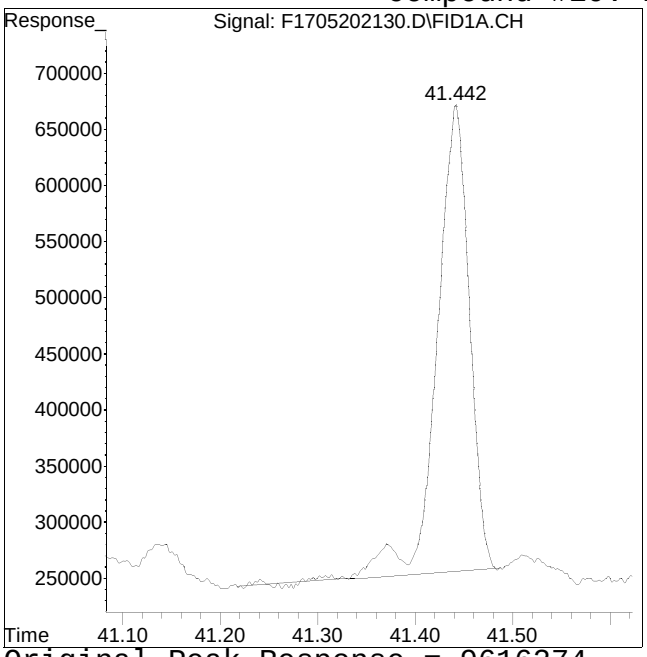
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

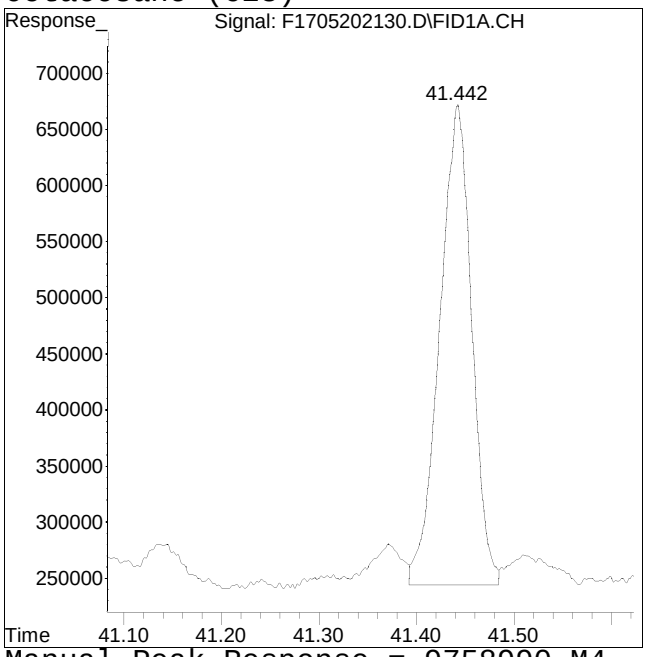
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 9616274



Manual Peak Response = 9758990 M4

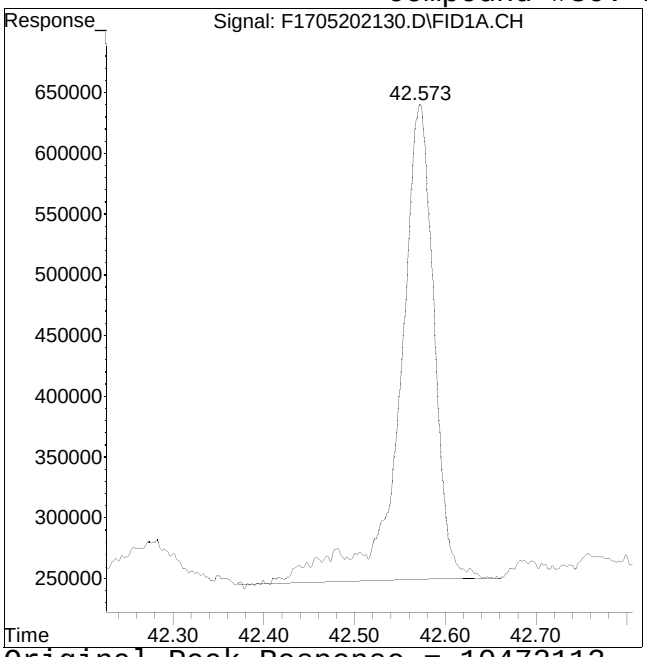
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

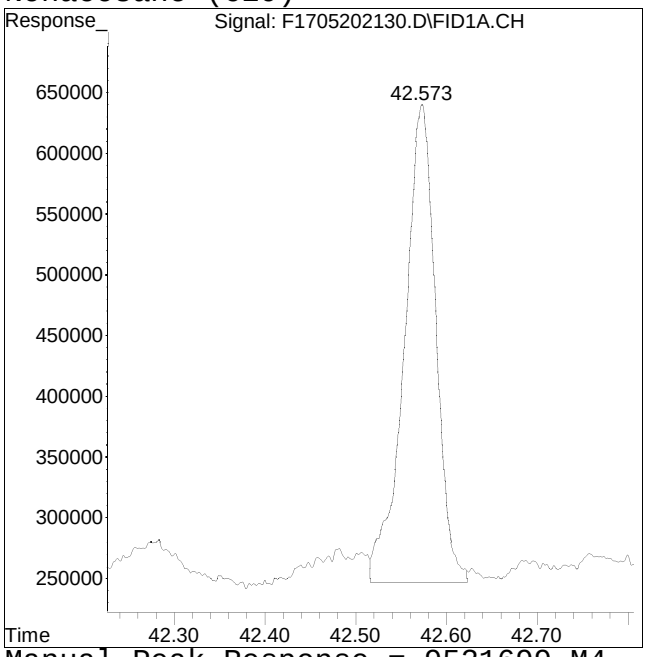
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 10472113



Manual Peak Response = 9521699 M4

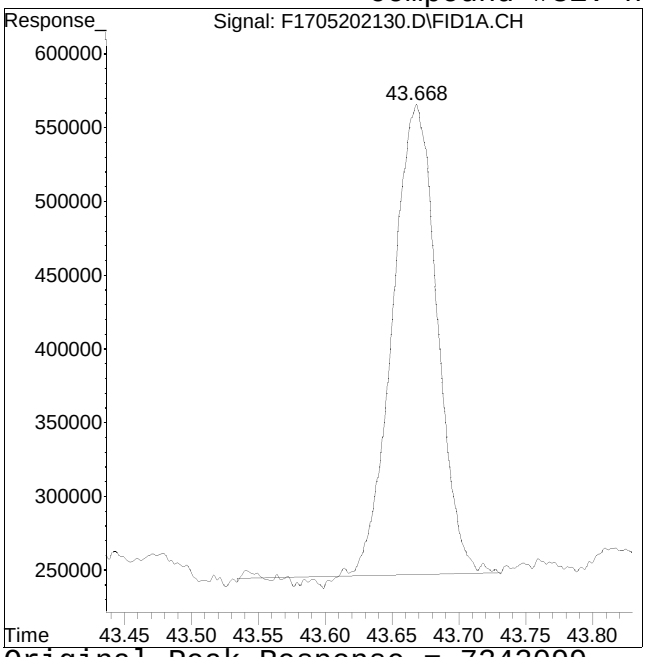
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

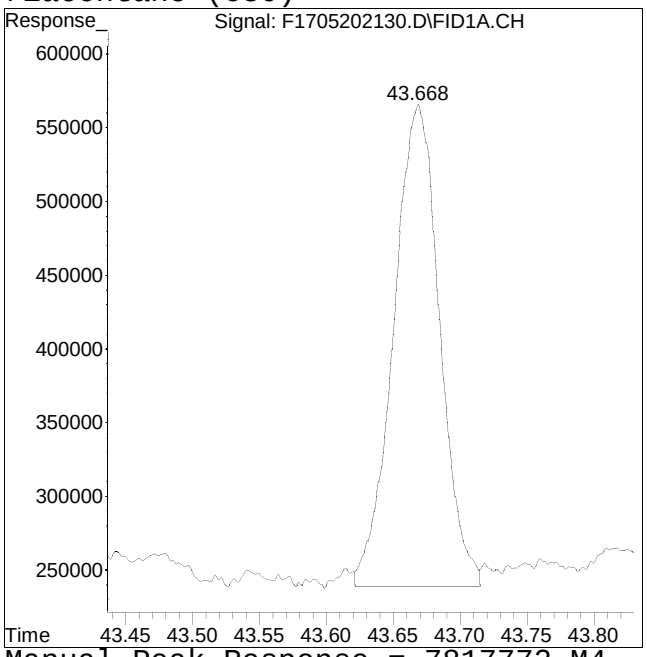
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 7343099



Manual Peak Response = 7817772 M4

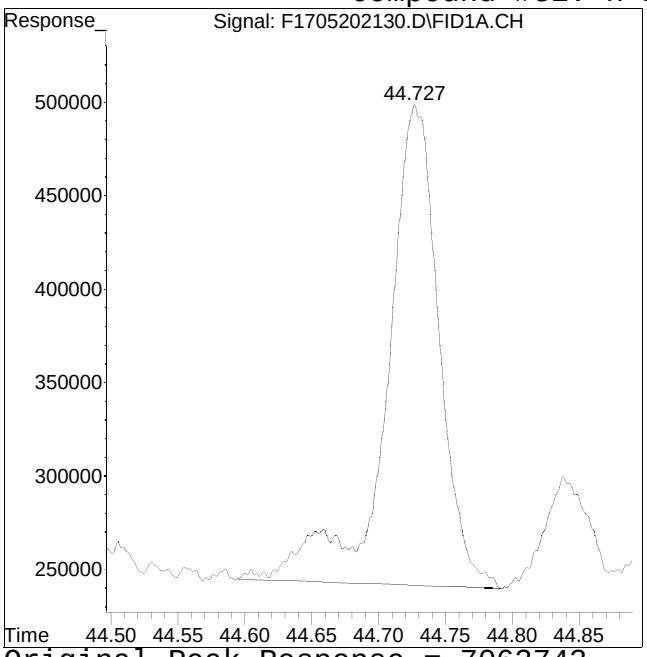
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

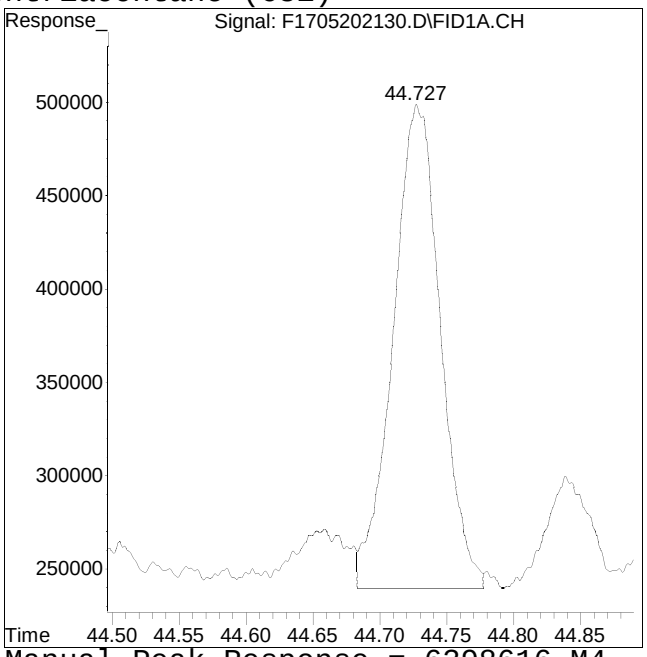
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 7063743



Manual Peak Response = 6398616 M4

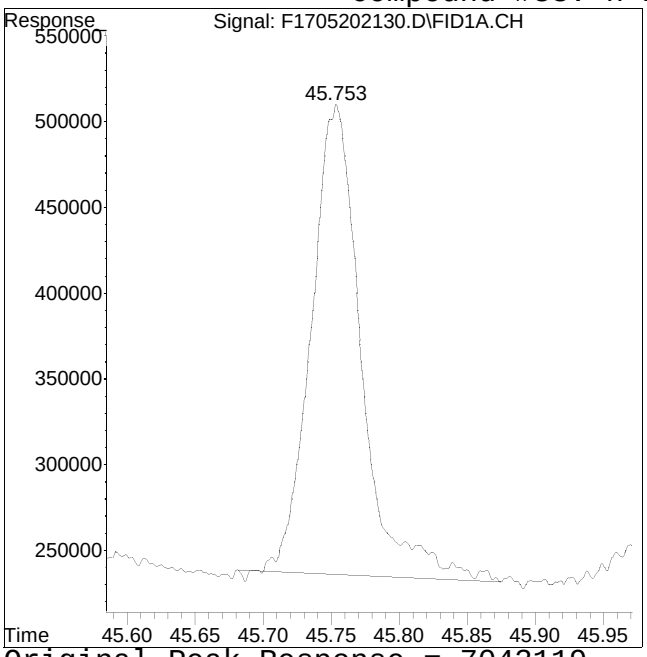
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

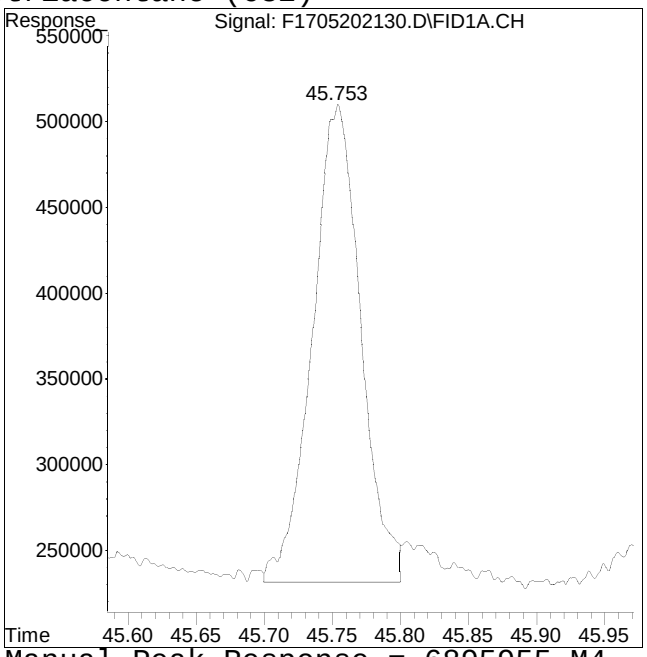
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 7043119



Manual Peak Response = 6895955 M4

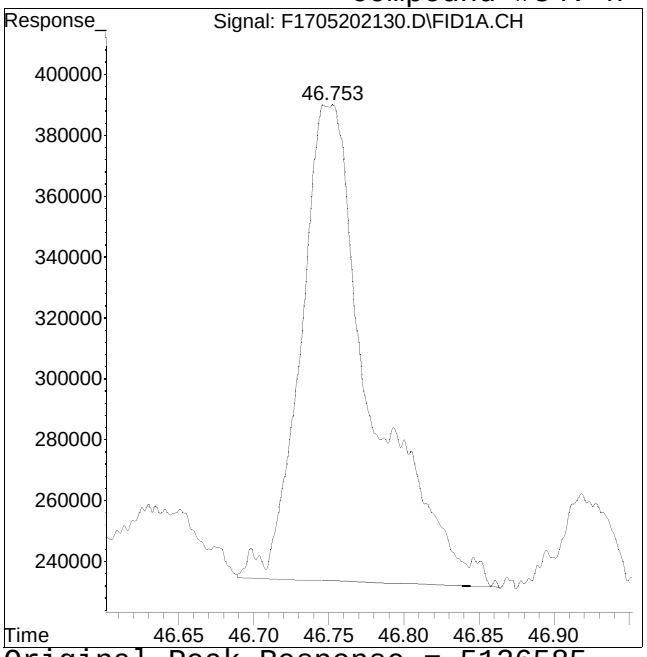
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

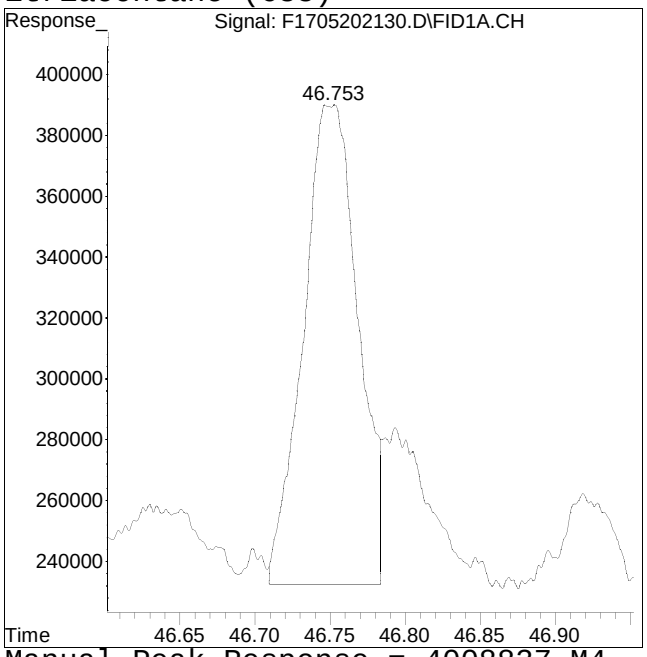
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 5126585



Manual Peak Response = 4008837 M4

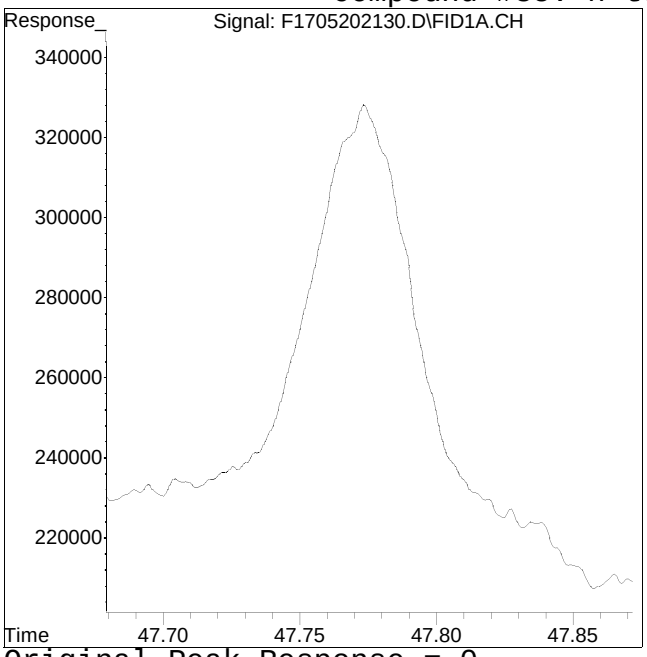
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

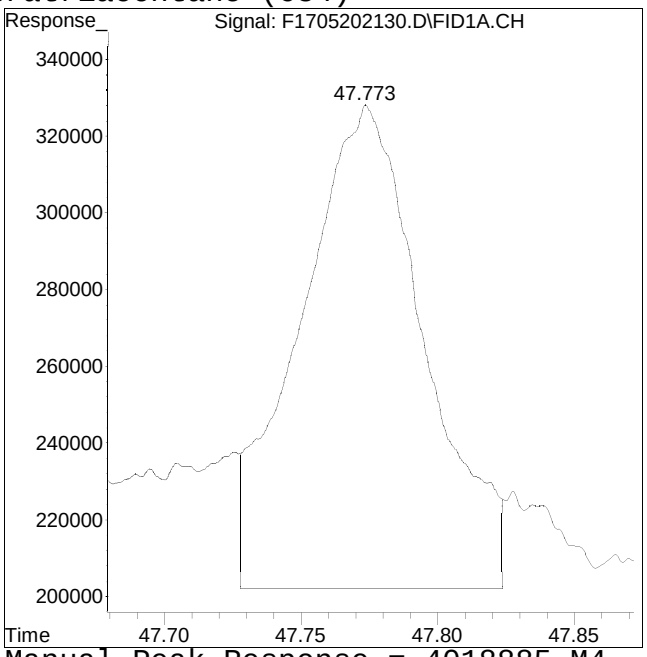
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 0



Manual Peak Response = 4018885 M4

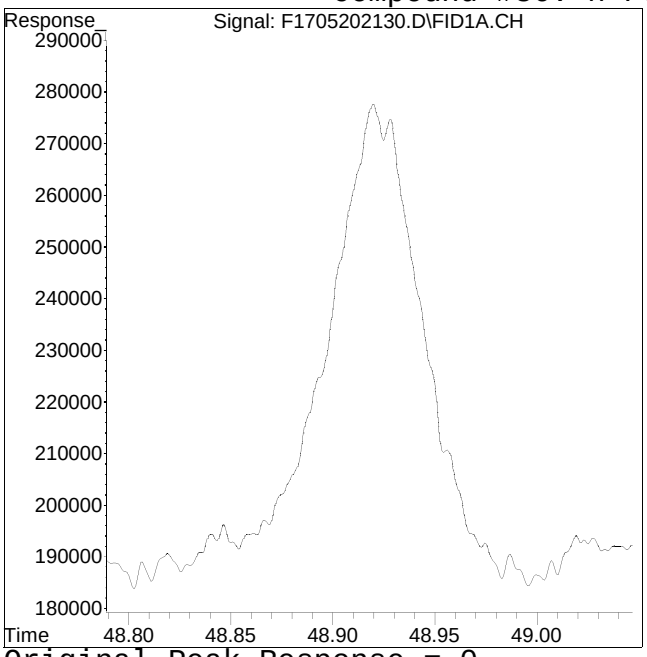
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

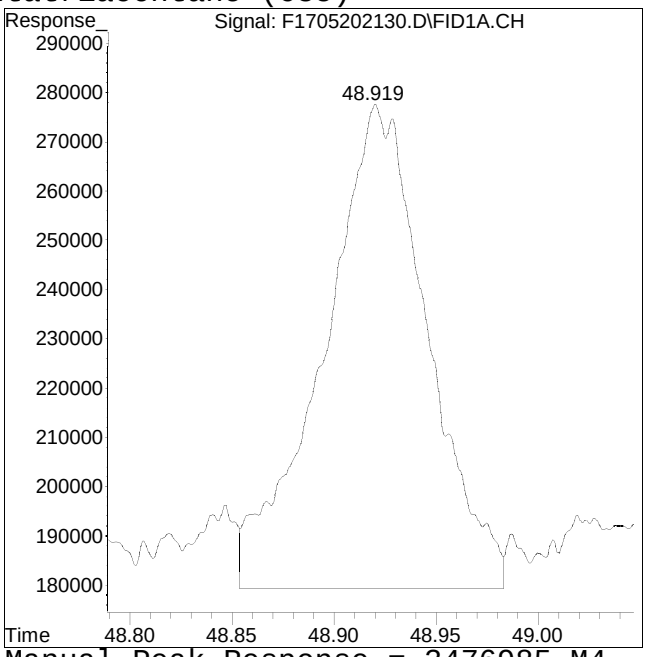
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 0



Manual Peak Response = 3476985 M4

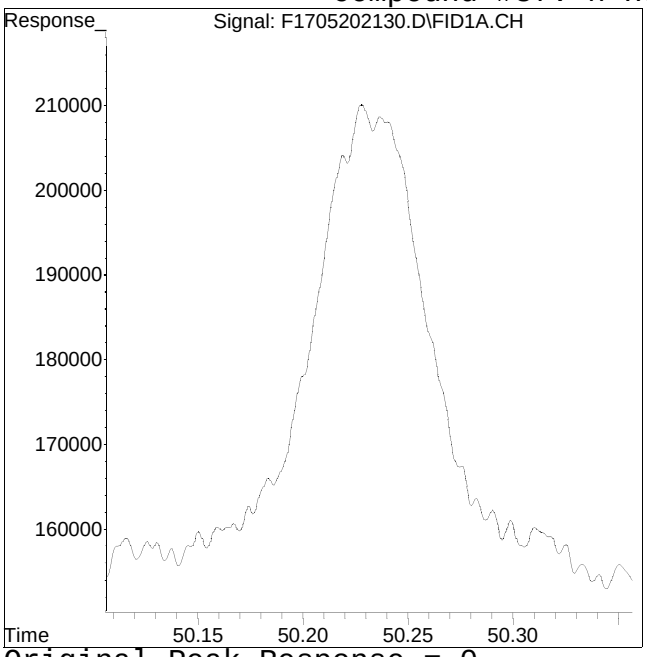
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

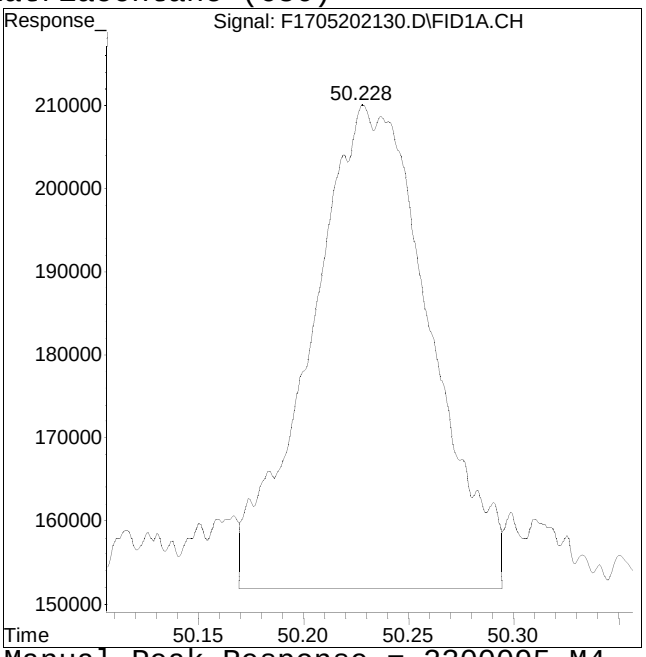
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 0



Manual Peak Response = 2300095 M4

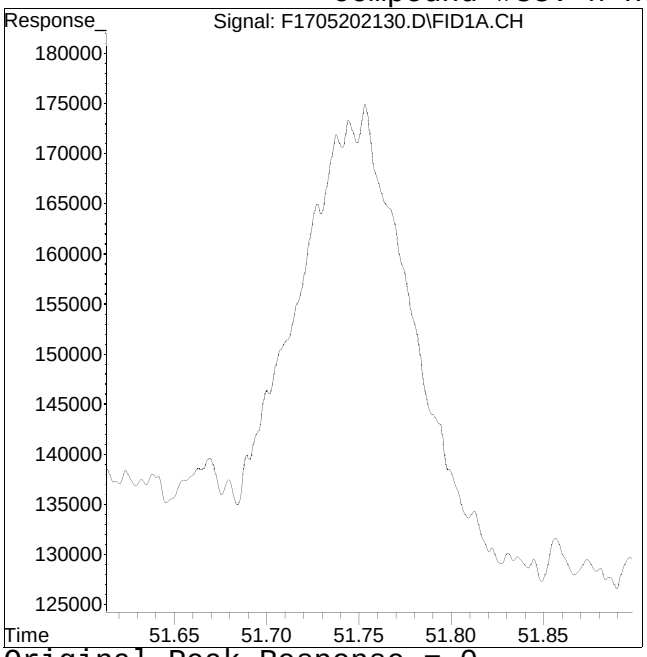
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

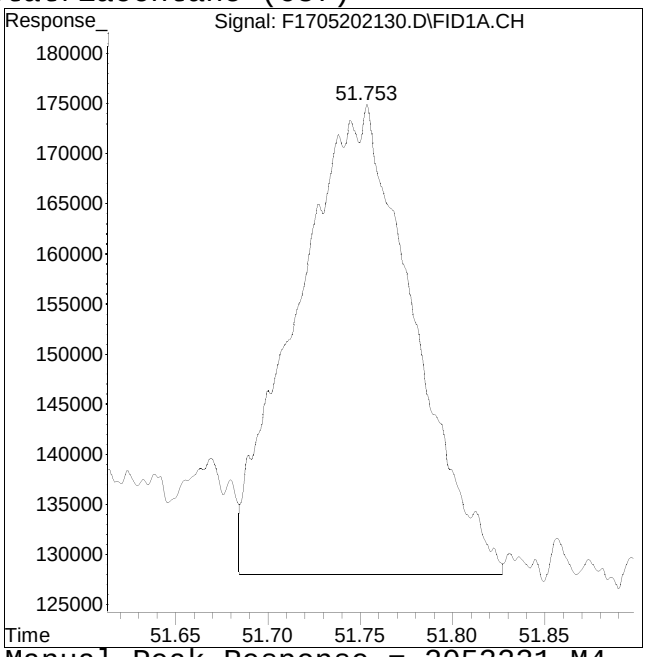
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 0



Manual Peak Response = 2053231 M4

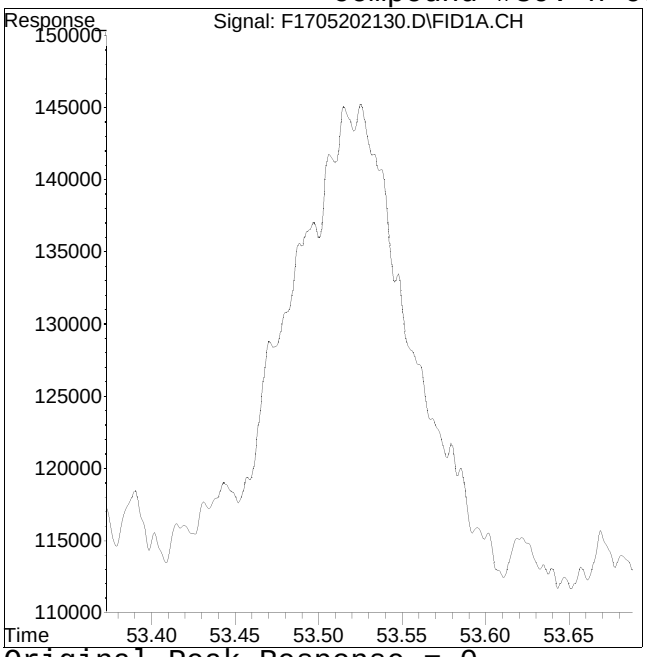
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

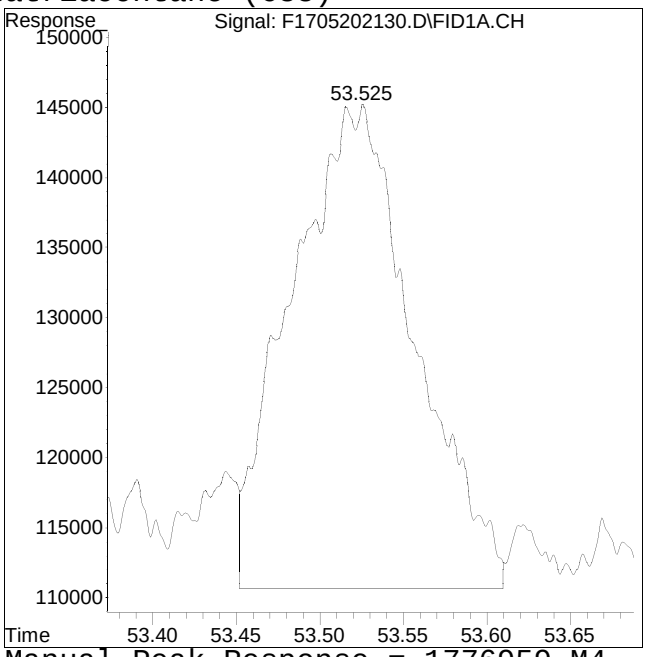
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 1776959 M4

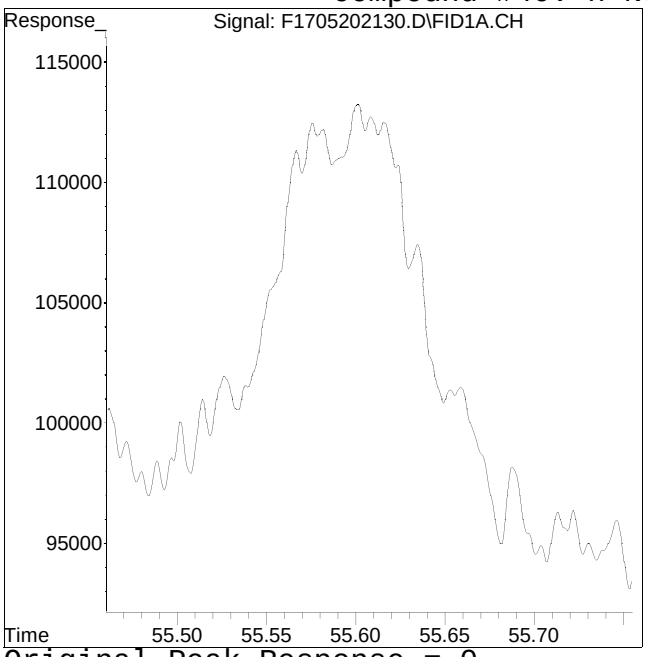
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

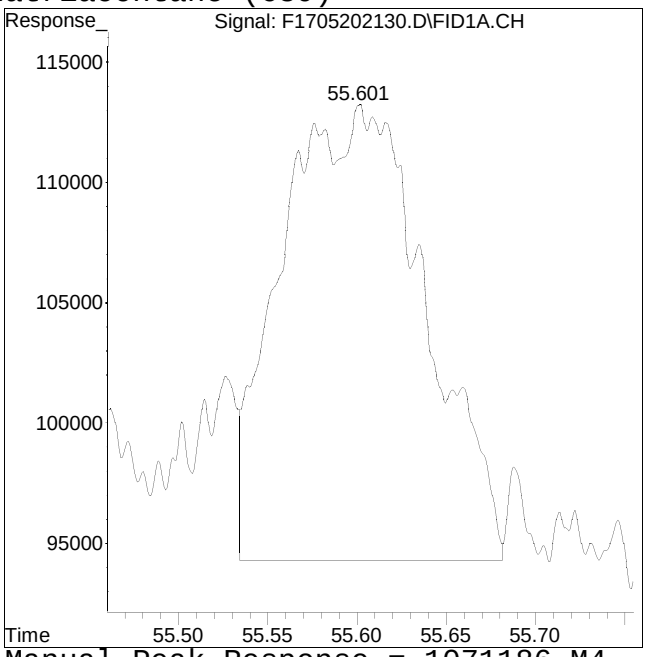
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #40: n-Nonatriacontane (C39)



Original Peak Response = 0



Manual Peak Response = 1071186 M4

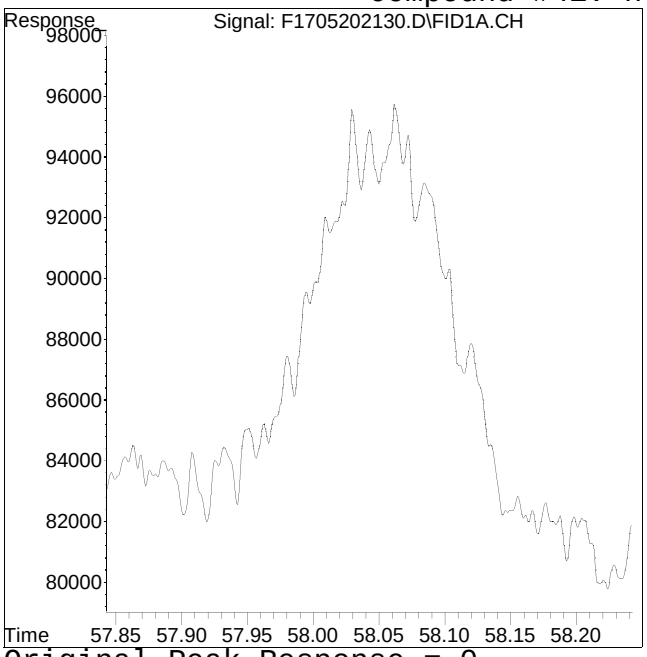
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

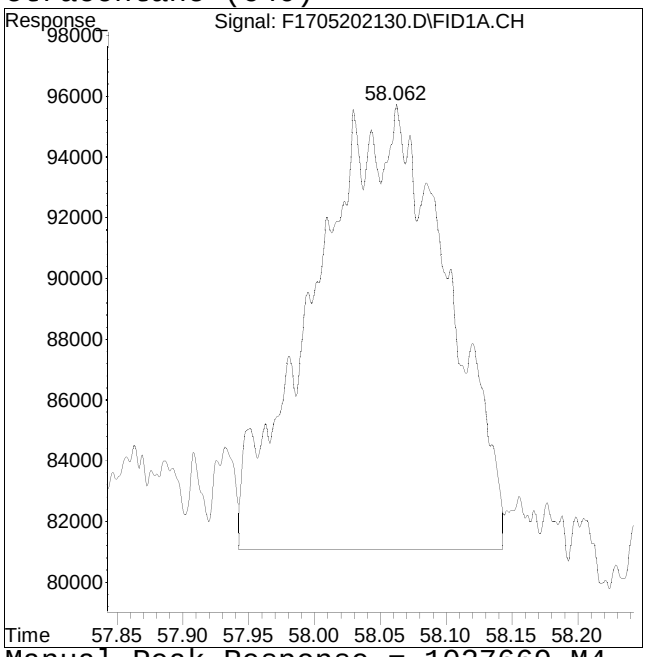
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 1027669 M4

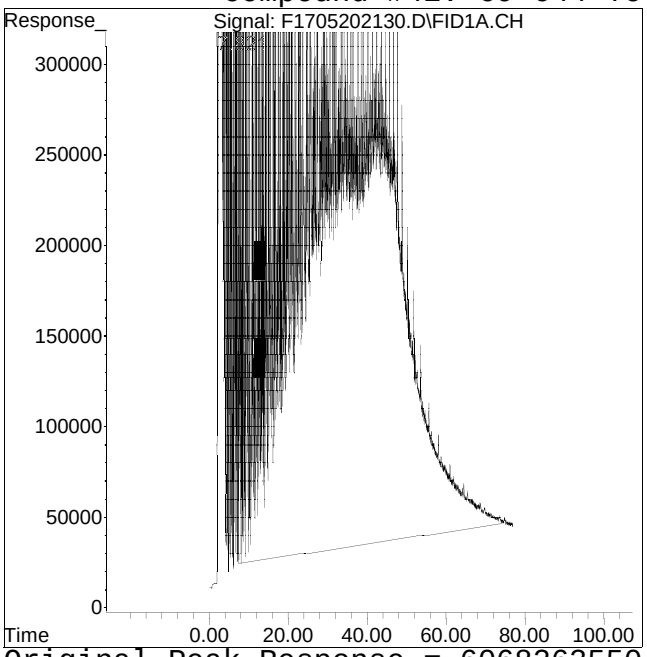
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

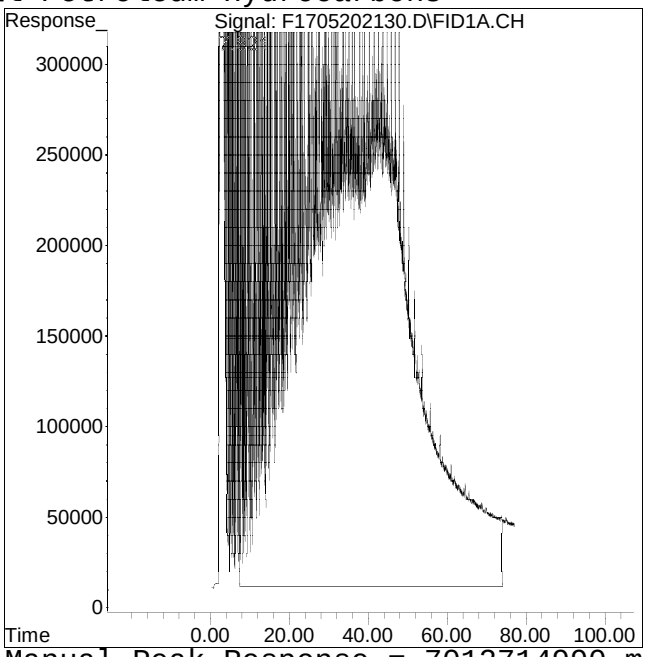
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #42: C9-C44 Total Petroleum Hydrocarbons



Original Peak Response = 6068263550



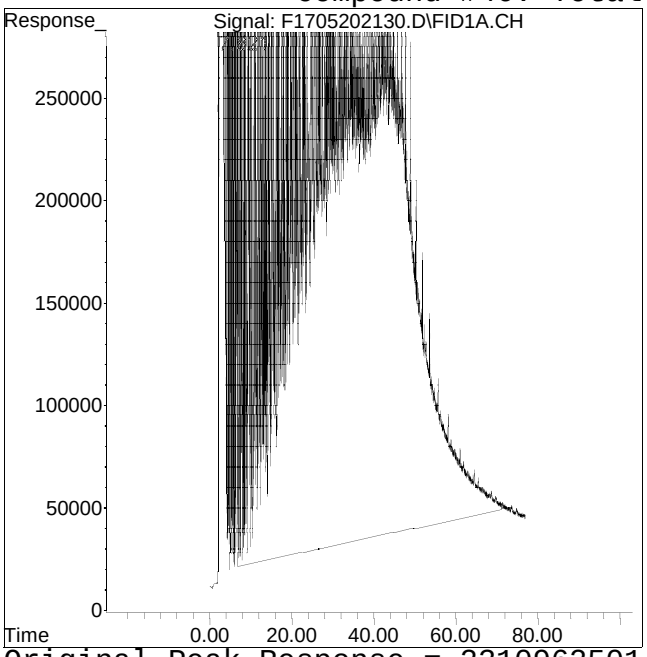
Manual Peak Response = 7012714990 m

Manual Integration/Negative Proof Report

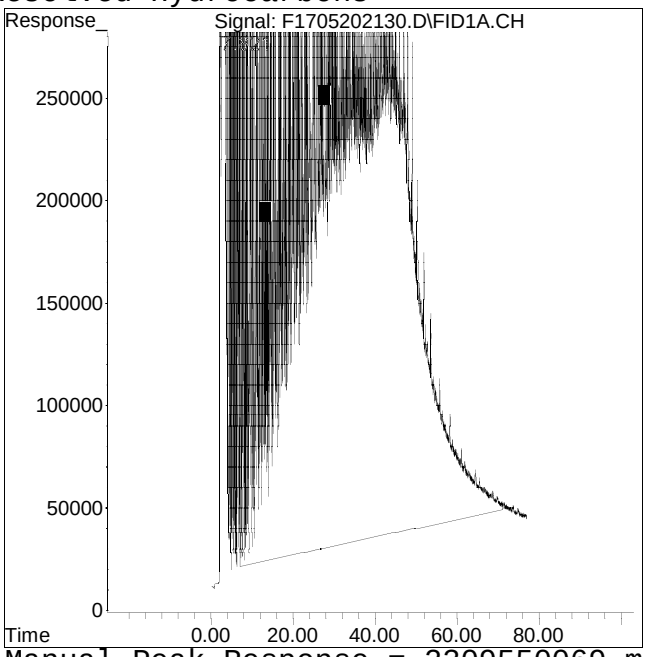
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1705202130.D
Date Inj'd : 5/21/2021 10:07 am
Sample : WG1505003-1,0.10054

Method : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:28 pm

Compound #46: Total Resolved Hydrocarbons



Original Peak Response = 2310962501



Manual Peak Response = 2309550069 m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20\
Data File : F1705202128.D
Signal(s) : FID1A.CH
Acq On : 21 May 2021 8:39 am
Operator : FID17:WR
Sample : IB1705202101F
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: May 27 16:29:47 2021
Quant Method : O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Thu May 27 16:02:11 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : TPH - TPH

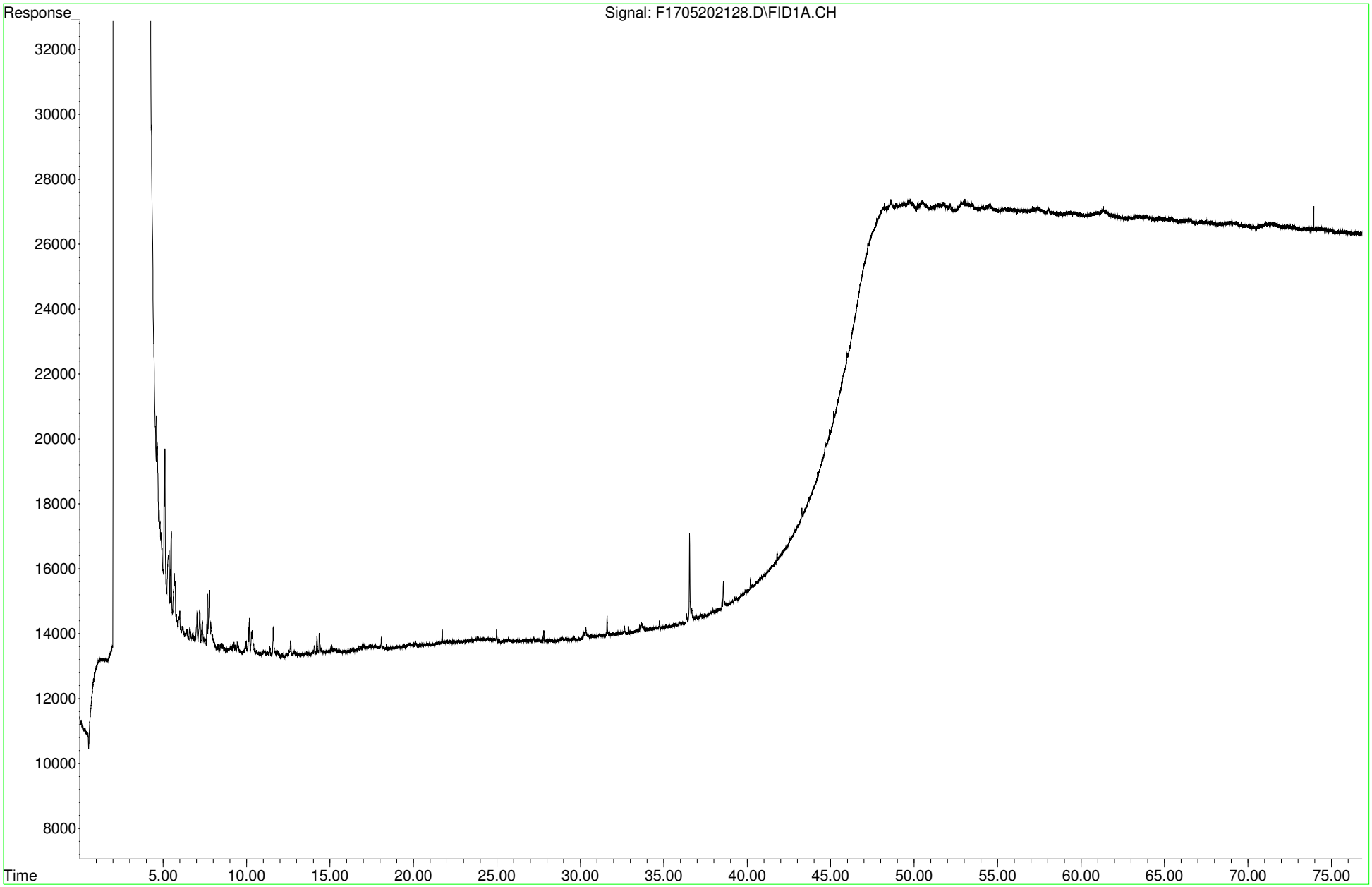
	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.316	5738	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
24) s	d50-Tetracosane	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
	Target Compounds					
42) h	C9-C44 Total Petroleu...	40.642	308512392	2749239.815	ug/mL	M5
46) h	Total Resolved Hydroc...	38.937	2087921	18606.044	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\MAY\MAY20\F1705202128.D
Operator : FID17:WR
Acquired : 21 May 2021 8:39 am using AcqMethod FID17A.M
Sample Name: IB1705202101F
Instrument: FID17
Misc Info :
Vial Number: 14
CurrentMeth: O:\Forensics\Data\FID17\2021\MAY\MAY20\HC17052021F_DRO.M

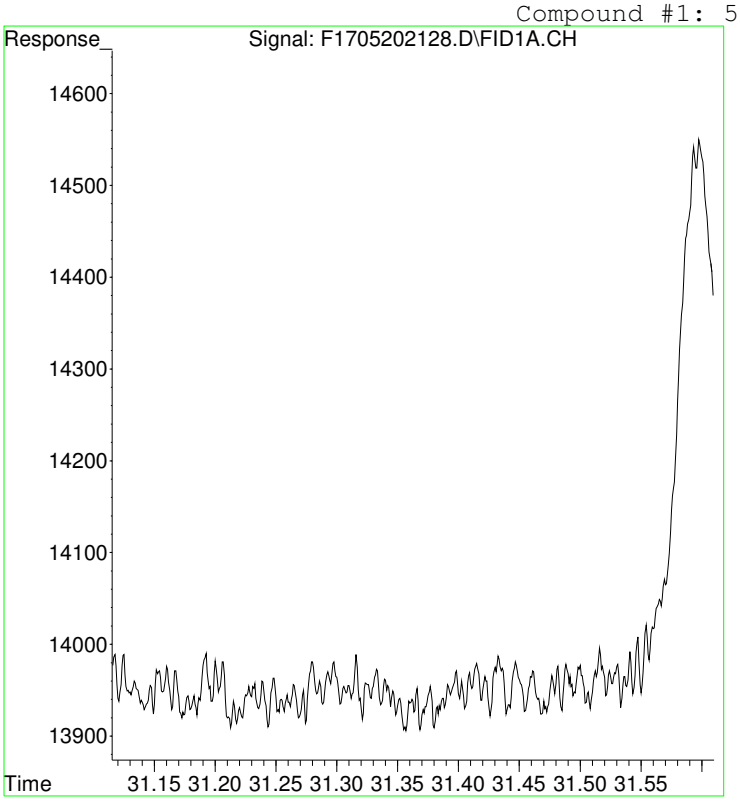


Manual Integration/Negative Proof Report

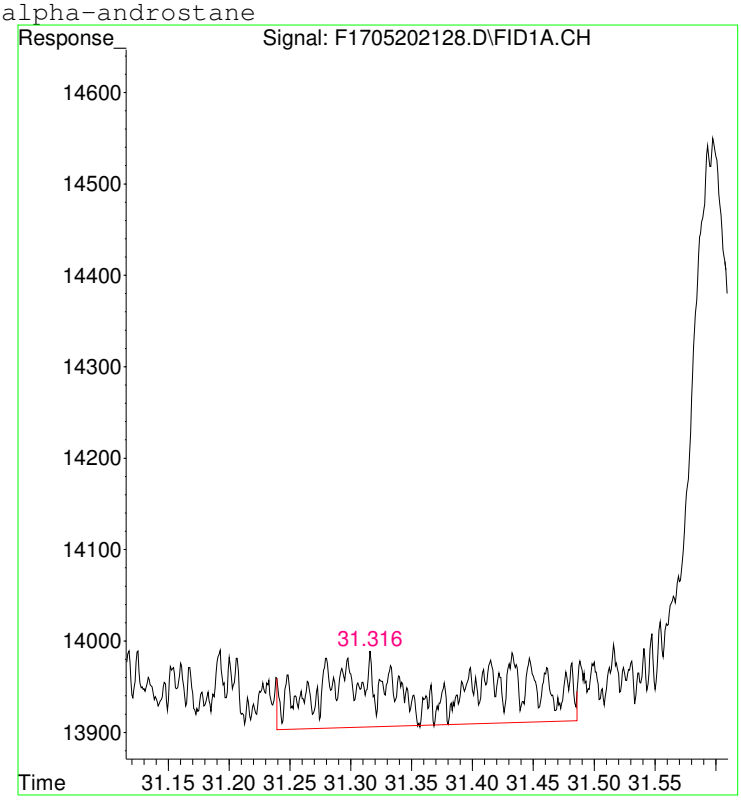
Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20
Data File : F1705202128.D
Date Inj'd : 5/21/2021 8:39 am
Sample : IB1705202101F

QMethod : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:29 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 0



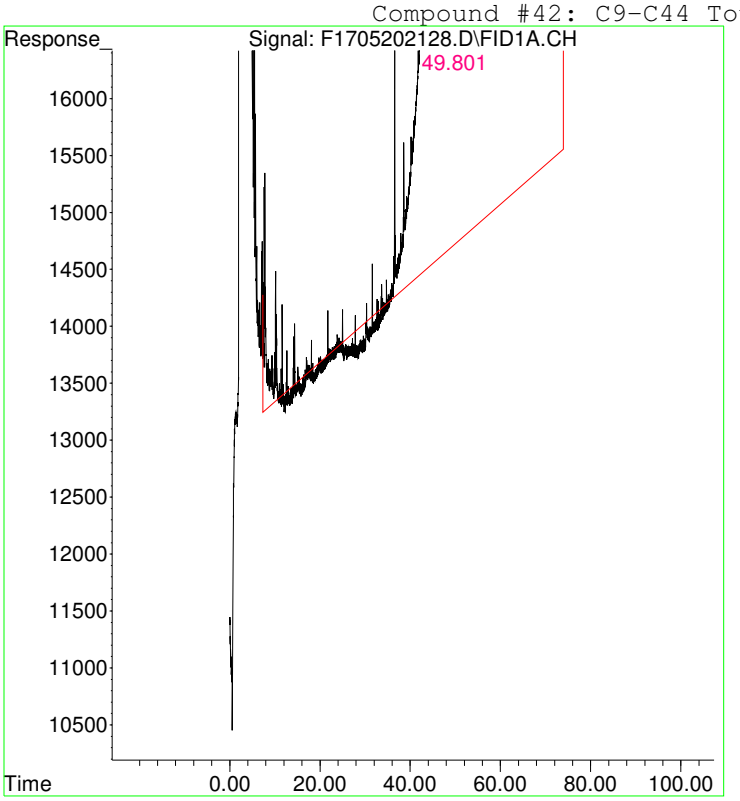
Manual Peak Response = 5738 M4

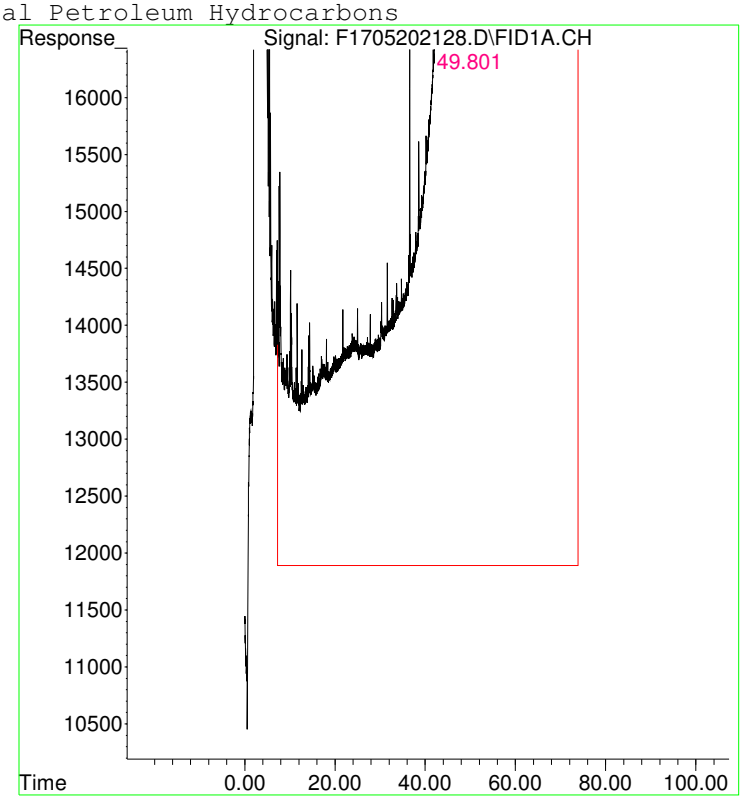
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20QMethod : HC17052021F_DRO.M
Data File : F1705202128.D Operator : FID17:WR
Date Inj'd : 5/21/2021 8:39 am Instrument : FID17
Sample : IB1705202101F Quant Date : 5/27/2021 4:29 pm

Compound #42: C9-C44 Total Petroleum Hydrocarbons





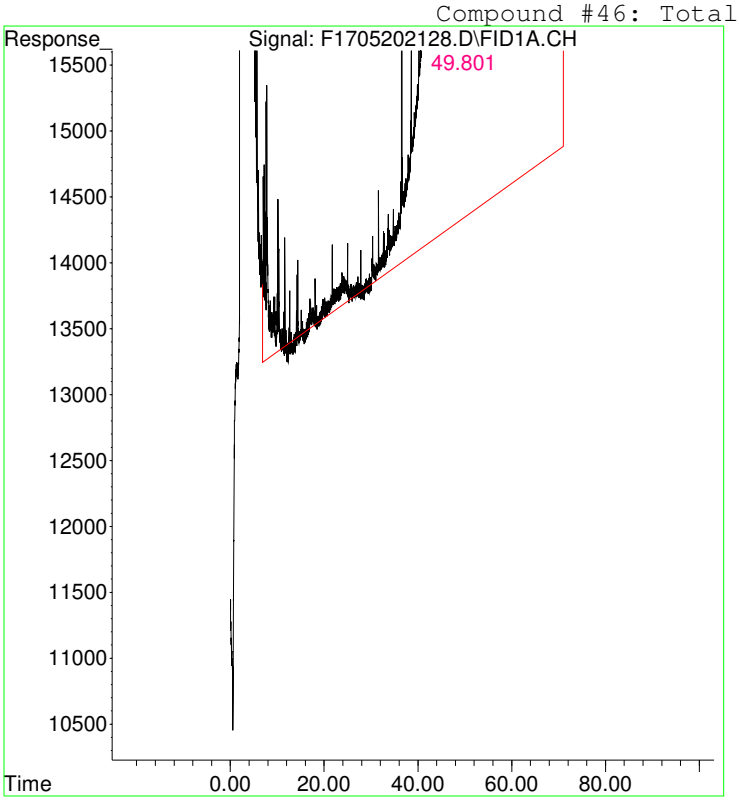
Original Peak Response = 210215964 Manual Peak Response = 308512392 M5
M5 = Manual integration over a retention time range required, i.e. for hydrocarbon range methods.

Manual Integration/Negative Proof Report

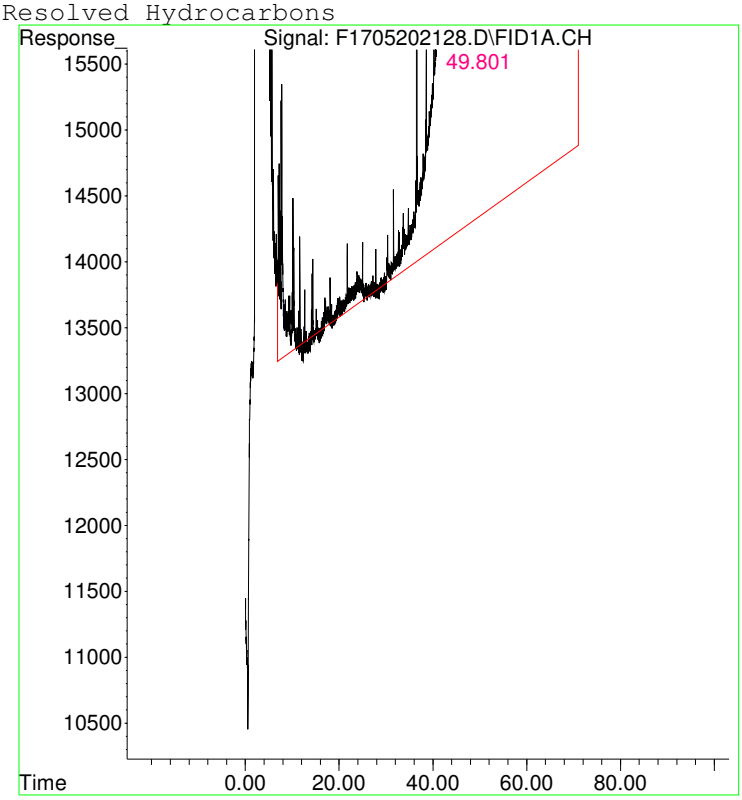
Data Path : O:\Forensics\Data\FID17\2021\MAY\MAY20
Data File : F1705202128.D
Date Inj'd : 5/21/2021 8:39 am
Sample : IB1705202101F

QMethod : HC17052021F_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 5/27/2021 4:29 pm

Compound #46: Total Resolved Hydrocarbons



Original Peak Response = 2087921



Manual Peak Response = 2087921 m

Response Factor Report FID 18

Method Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Method File : HC18110521F_DRO.M
Title : FID Forensics
Last Update : Wed Nov 17 10:31:04 2021
Response Via : Initial Calibration

Calibration Files
1 =f18110521012.D 10 =f18110521014.D 50 =f18110521016.D 100 =f18110521018.D 200 =f18110521020.D
500 =f18110521022.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.843	0.810	0.831	0.812	0.758		0.811	3.99
3)	t	n-Nonane (C9)	0.817	0.811	0.860	0.843	0.792		0.825	3.24
4)	t	n-Decane (C10)	0.757	0.765	0.848	0.869	0.832		0.814	6.17
5)	t	n-Undecane (C11)	0.763	0.830	0.914	0.897	0.837		0.848	7.09
6)	t	n-Dodecane (C12)	0.865	0.851	0.919	0.908	0.851		0.879	3.71
7)	t	n-Tridecane (...	0.897	0.873	0.933	0.914	0.858		0.895	3.39
8)	t	1380	0.957	0.898	0.953	0.939	0.884		0.926	3.60
9)	t	n-Tetradecane...	0.957	0.898	0.953	0.939	0.884		0.926	3.60
10)	t	1470	0.935	0.933	0.952	0.953	0.894		0.933	2.56
11)	t	n-Pentadecane...	0.935	0.933	0.952	0.953	0.894		0.933	2.56
12)	t	n-Hexadecane ...	0.971	0.948	0.978	0.945	0.890		0.946	3.65
13)	t	1650	0.807	0.914	0.984	0.955	0.912		0.914	7.33
14)	t	n-Heptadecane...	0.807	0.914	0.984	0.955	0.912		0.914	7.33
15)	t	Pristane	1.118	1.040	1.011	0.980	0.915		1.013	7.40
16)	t	n-Octadecane ...	0.939	0.974	1.021	0.968	0.923		0.965	3.90
17)	t	Phytane	0.943	0.931	0.939	0.906	0.854		0.915	4.00
18)	t	n-Nonadecane ...	0.967	0.983	1.008	0.979	0.921		0.972	3.30
19)	s	ortho-terphenyl	1.102	1.074	1.221	1.079	1.029	1.184	1.115	6.54
20)	t	n-Eicosane (C20)	0.996	0.995	1.023	0.983	0.929		0.985	3.51
21)	t	n-Heneicosane...	1.001	1.010	1.021	0.986	0.934		0.990	3.46
22)	t	n-Docosane (C22)	1.026	1.014	1.041	0.983	0.933		1.000	4.26
23)	t	n-Tricosane (...	1.054	1.021	1.047	0.983	0.935		1.008	4.90
24)	s	d50-Tetracosane	0.883	0.886	1.009	0.862	0.831	0.985	0.909	7.82
25)	t	n-Tetracosane...	0.981	1.067	1.001	0.980	0.934		0.993	4.85
26)	t	n-Pentacosane...	1.020	1.004	1.033	0.960	0.918		0.987	4.80
27)	t	n-Hexacosane ...	1.036	1.033	1.067	0.985	0.943		1.013	4.84
28)	t	n-Heptacosane...	1.032	1.037	1.034	0.986	0.944		1.006	4.05
29)	t	n-Octacosane ...	1.053	1.059	1.079	1.007	0.964		1.032	4.51
30)	t	n-Nonacosane ...	1.029	1.056	1.077	1.001	0.959		1.024	4.52
31)	t	n-Triacontane...	1.013	1.063	1.079	1.003	0.960		1.023	4.70

Response Factor Report FID 18

Method Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Method File : HC18110521F_DRO.M
Title : FID Forensics
Last Update : Wed Nov 17 10:31:04 2021
Response Via : Initial Calibration

Calibration Files
1 =f18110521012.D 10 =f18110521014.D 50 =f18110521016.D 100 =f18110521018.D 200 =f18110521020.D
500 =f18110521022.D

	Compound	1	10	50	100	200	500	Avg	%RSD
32) t	n-Hentriacont...	0.969	1.025	1.045	0.964	0.923		0.985	4.99
33) t	n-Dotriaconta...	0.992	1.069	1.077	1.006	0.960		1.021	4.96
34) t	n-Tritriacont...	0.947	1.036	1.042	0.973	0.925		0.984	5.35
35) t	n-tetratriaco...	0.932	1.017	1.027	0.961	0.902		0.968	5.56
36) t	n-Pentatriaco...	0.858	0.953	1.043	0.896	0.824		0.915	9.42
37) t	n-Hexatriacon...	1.019	1.124	1.112	1.066	0.954		1.055	6.63
38) t	n-Heptatriaco...	0.928	1.017	1.017	0.969	0.843		0.955	7.65
39) t	n-Octatriacon...	0.924	1.030	1.049	0.973	0.819		0.959	9.62
40) t	n-Nonatriacon...	0.927	1.022	1.049	0.944	0.759		0.940	12.09
41) t	n-Tetracontan...	0.927	1.022	1.049	0.944	0.759		0.940	12.09
42) h	C9-C44 Total ...	0.954	0.982	1.009	0.960	0.898		0.960	4.28
43) h	C9-C40 Total ...	0.954	0.982	1.009	0.960	0.898		0.960	4.28
44) h	C10-C28 DRO	0.950	0.958	0.992	0.957	0.907		0.953	3.20
45) h	C28-C40 ORO	0.966	1.039	1.058	0.980	0.899		0.989	6.39
46) h	Total Resolve...	0.954	0.982	1.009	0.960	0.898		0.960	4.28

(#) = Out of Range

rfupdate

RSF Update Summary Report

Method Path.....: O:\Forensics\Data\FID18\2021\NOV\NOV05\
Method File.....: HC18110521F_DRO.M
Method Title.....: FID Forensics
Last Update.....: Wed Nov 17 10:03:26 2021

Generating Average Response Factor For: C9-C44 Total Petroleum Hydrocarbons

No	Compound	Level	Conc	Response
1	n-Nonane (C9)	1	1.00000	987948.826
2	n-Decane (C10)	1	1.00000	914679.000
3	n-Undecane (C11)	1	1.00000	922362.081
4	n-Dodecane (C12)	1	1.00000	1045227.308
5	n-Tridecane (C13)	1	1.00000	1084185.616
6	n-Tetradecane (C14)	1	1.00000	1156986.134
7	n-Pentadecane (C15)	1	1.00000	1129436.362
8	n-Hexadecane (C16)	1	1.00000	1173535.212
9	n-Heptadecane (C17)	1	1.00000	975437.914
10	Pristane	1	1.00000	1351549.018
11	n-Octadecane (C18)	1	1.00000	1134836.297
12	Phytane	1	1.00000	1140255.508
13	n-Nonadecane (C19)	1	1.00000	1168658.806
14	n-Eicosane (C20)	1	1.00000	1203747.468
15	n-Heneicosane (C21)	1	1.00000	1209772.026
16	n-Docosane (C22)	1	1.00000	1240161.506
17	n-Tricosane (C23)	1	1.00000	1273305.826
18	n-Tetracosane (C24)	1	1.00000	1185717.763
19	n-Pentacosane (C25)	1	1.00000	1232715.482
20	n-Hexacosane (C26)	1	1.00000	1252609.825
21	n-Heptacosane (C27)	1	1.00000	1247196.227
22	n-Octacosane (C28)	1	1.00000	1273069.080
23	n-Nonacosane (C29)	1	1.00000	1244115.383
24	n-Triacontane (C30)	1	1.00000	1224079.624
25	n-Hentriacontane (C31)	1	1.00000	1171157.581
26	n-Dotriacontane (C32)	1	1.00000	1198364.978
27	n-Tritriacontane (C33)	1	1.00000	1144059.975
28	n-tetratriacontane (C34)	1	1.00000	1126362.274
29	n-Pentatriacontane (C35)	1	1.00000	1037339.457
30	n-Hexatriacontane (C36)	1	1.00000	1231097.795
31	n-Heptatriacontane (C37)	1	1.00000	1121135.329
32	n-Octatriacontane (C38)	1	1.00000	1116597.778
33	n-Tetracontane (C40)	1	1.00000	1120643.610
Avg RSF For: C9-C44 Total Petroleum			1.00000	1152677.184
1	n-Nonane (C9)	2	10.00000	9575049.128
2	n-Decane (C10)	2	10.00000	9041437.584
3	n-Undecane (C11)	2	10.00000	9799659.166
4	n-Dodecane (C12)	2	10.00000	10047256.797
5	n-Tridecane (C13)	2	10.00000	10310737.221
6	n-Tetradecane (C14)	2	10.00000	10610936.797
7	n-Pentadecane (C15)	2	10.00000	11025545.447
8	n-Hexadecane (C16)	2	10.00000	11195314.734
9	n-Heptadecane (C17)	2	10.00000	10801582.501

		rfupdate	
10 Pristane	2	10.00000	12287589.132
11 n-Octadecane (C18)	2	10.00000	11508464.580
12 Phytane	2	10.00000	10992168.484
13 n-Nonadecane (C19)	2	10.00000	11606682.526
14 n-Eicosane (C20)	2	10.00000	11755182.147
15 n-Heneicosane (C21)	2	10.00000	11930540.675
16 n-Docosane (C22)	2	10.00000	11981969.262
17 n-Tricosane (C23)	2	10.00000	12054595.430
18 n-Tetracosane (C24)	2	10.00000	12601199.576
19 n-Pentacosane (C25)	2	10.00000	11859180.702
20 n-Hexacosane (C26)	2	10.00000	12200715.326
21 n-Heptacosane (C27)	2	10.00000	12247901.695
22 n-Octacosane (C28)	2	10.00000	12510570.688
23 n-Nonacosane (C29)	2	10.00000	12467884.338
24 n-Triacontane (C30)	2	10.00000	12558841.375
25 n-Hentriacontane (C31)	2	10.00000	12109685.106
26 n-Dotriacontane (C32)	2	10.00000	12630347.728
27 n-Tritriacontane (C33)	2	10.00000	12235753.773
28 n-tetratriacontane (C34)	2	10.00000	12008205.434
29 n-Pentatriacontane (C35)	2	10.00000	11253331.046
30 n-Hexatriacontane (C36)	2	10.00000	13281831.135
31 n-Heptatriacontane (C37)	2	10.00000	12016365.359
32 n-Octatriacontane (C38)	2	10.00000	12167429.912
33 n-Tetracontane (C40)	2	10.00000	12077894.434
Avg RSF For: C9-C44 Total Petroleum		10.00000	11598540.886

1 n-Nonane (C9)	3	50.00000	52143414.604
2 n-Decane (C10)	3	50.00000	51409989.250
3 n-Undecane (C11)	3	50.00000	55461909.257
4 n-Dodecane (C12)	3	50.00000	55749749.802
5 n-Tridecane (C13)	3	50.00000	56602629.030
6 n-Tetradecane (C14)	3	50.00000	57838850.645
7 n-Pentadecane (C15)	3	50.00000	57744075.415
8 n-Hexadecane (C16)	3	50.00000	59305434.961
9 n-Heptadecane (C17)	3	50.00000	59687590.493
10 Pristane	3	50.00000	61320164.952
11 n-Octadecane (C18)	3	50.00000	61939025.419
12 Phytane	3	50.00000	56930216.378
13 n-Nonadecane (C19)	3	50.00000	61175013.129
14 n-Eicosane (C20)	3	50.00000	62027755.746
15 n-Heneicosane (C21)	3	50.00000	61959250.256
16 n-Docosane (C22)	3	50.00000	63126899.722
17 n-Tricosane (C23)	3	50.00000	63515781.712
18 n-Tetracosane (C24)	3	50.00000	60737364.540
19 n-Pentacosane (C25)	3	50.00000	62650973.182
20 n-Hexacosane (C26)	3	50.00000	64754893.441
21 n-Heptacosane (C27)	3	50.00000	62700601.526
22 n-Octacosane (C28)	3	50.00000	65442745.787
23 n-Nonacosane (C29)	3	50.00000	65314210.741
24 n-Triacontane (C30)	3	50.00000	65436293.710
25 n-Hentriacontane (C31)	3	50.00000	63369157.566
26 n-Dotriacontane (C32)	3	50.00000	65313936.386
27 n-Tritriacontane (C33)	3	50.00000	63209731.628
28 n-tetratriacontane (C34)	3	50.00000	62305045.846
29 n-Pentatriacontane (C35)	3	50.00000	63275912.634
30 n-Hexatriacontane (C36)	3	50.00000	67441802.151
31 n-Heptatriacontane (C37)	3	50.00000	61719641.084
32 n-Octatriacontane (C38)	3	50.00000	63635432.776
33 n-Tetracontane (C40)	3	50.00000	63641415.691
Avg RSF For: C9-C44 Total Petroleum		50.00000	61178391.196

1	n-Nonane (C9)	4	100.00000	111325505.946
2	n-Decane (C10)	4	100.00000	114791251.286
3	n-Undecane (C11)	4	100.00000	118511116.456
4	n-Dodecane (C12)	4	100.00000	119951332.223
5	n-Tridecane (C13)	4	100.00000	120664430.603
6	n-Tetradecane (C14)	4	100.00000	123997542.664
7	n-Pentadecane (C15)	4	100.00000	125824254.968
8	n-Hexadecane (C16)	4	100.00000	124774656.119
9	n-Heptadecane (C17)	4	100.00000	126059127.061
10	Pristane	4	100.00000	129447409.187
11	n-Octadecane (C18)	4	100.00000	127884241.181
12	Phytane	4	100.00000	119676633.384
13	n-Nonadecane (C19)	4	100.00000	129335574.200
14	n-Eicosane (C20)	4	100.00000	129793924.370
15	n-Heneicosane (C21)	4	100.00000	130220295.034
16	n-Docosane (C22)	4	100.00000	129811061.907
17	n-Tricosane (C23)	4	100.00000	129755264.250
18	n-Tetracosane (C24)	4	100.00000	129360474.076
19	n-Pentacosane (C25)	4	100.00000	126809835.097
20	n-Hexacosane (C26)	4	100.00000	130070383.202
21	n-Heptacosane (C27)	4	100.00000	130203304.634
22	n-Octacosane (C28)	4	100.00000	132963933.051
23	n-Nonacosane (C29)	4	100.00000	132215805.927
24	n-Triacontane (C30)	4	100.00000	132395647.290
25	n-Hentriacontane (C31)	4	100.00000	127341956.356
26	n-Dotriacontane (C32)	4	100.00000	132897491.988
27	n-Tritriacontane (C33)	4	100.00000	128440928.170
28	n-tetratriacontane (C34)	4	100.00000	126957165.550
29	n-Pentatriacontane (C35)	4	100.00000	118359561.612
30	n-Hexatriacontane (C36)	4	100.00000	140814802.547
31	n-Heptatriacontane (C37)	4	100.00000	128018811.655
32	n-Octatriacontane (C38)	4	100.00000	128468932.047
33	n-Tetracontane (C40)	4	100.00000	124640069.901
Avg RSF For: C9-C44 Total Petroleum			100.00000	126720688.604

1	n-Nonane (C9)	5	200.00000	218651858.763
2	n-Decane (C10)	5	200.00000	229469570.939
3	n-Undecane (C11)	5	200.00000	230963382.258
4	n-Dodecane (C12)	5	200.00000	234830243.252
5	n-Tridecane (C13)	5	200.00000	236729543.603
6	n-Tetradecane (C14)	5	200.00000	243918414.772
7	n-Pentadecane (C15)	5	200.00000	246681082.190
8	n-Hexadecane (C16)	5	200.00000	245595239.850
9	n-Heptadecane (C17)	5	200.00000	251581798.292
10	Pristane	5	200.00000	252561323.140
11	n-Octadecane (C18)	5	200.00000	254729915.770
12	Phytane	5	200.00000	235765988.724
13	n-Nonadecane (C19)	5	200.00000	254162502.178
14	n-Eicosane (C20)	5	200.00000	256349324.206
15	n-Heneicosane (C21)	5	200.00000	257670445.710
16	n-Docosane (C22)	5	200.00000	257587713.347
17	n-Tricosane (C23)	5	200.00000	257992743.818
18	n-Tetracosane (C24)	5	200.00000	257843688.049
19	n-Pentacosane (C25)	5	200.00000	253272926.634
20	n-Hexacosane (C26)	5	200.00000	260177966.748
21	n-Heptacosane (C27)	5	200.00000	260460853.415
22	n-Octacosane (C28)	5	200.00000	265974985.958
23	n-Nonacosane (C29)	5	200.00000	264558929.838
24	n-Triacontane (C30)	5	200.00000	264798286.976

25	n-Hentriacontane (C31)	5	200.00000	254750177.468
26	n-Dotriacontane (C32)	5	200.00000	264916946.230
27	n-Tritriacontane (C33)	5	200.00000	255169960.629
28	n-tetratriacontane (C34)	5	200.00000	248862258.783
29	n-Pentatriacontane (C35)	5	200.00000	227339067.616
30	n-Hexatriacontane (C36)	5	200.00000	263390946.750
31	n-Heptatriacontane (C37)	5	200.00000	232551791.578
32	n-Octatriacontane (C38)	5	200.00000	226128025.894
33	n-Tetracontane (C40)	5	200.00000	209448146.720
Avg RSF For: C9-C44 Total Petroleum			200.00000	247723819.700

Generating Average Response Factor For: C10-C28 DRO

No	Compound	Level	Conc	Response
1	n-Decane (C10)	1	1.00000	914679.000
2	n-Undecane (C11)	1	1.00000	922362.081
3	n-Dodecane (C12)	1	1.00000	1045227.308
4	n-Tridecane (C13)	1	1.00000	1084185.616
5	n-Tetradecane (C14)	1	1.00000	1156986.134
6	n-Pentadecane (C15)	1	1.00000	1129436.362
7	n-Hexadecane (C16)	1	1.00000	1173535.212
8	n-Heptadecane (C17)	1	1.00000	975437.914
9	n-Octadecane (C18)	1	1.00000	1134836.297
10	n-Nonadecane (C19)	1	1.00000	1168658.806
11	n-Eicosane (C20)	1	1.00000	1203747.468
12	n-Heneicosane (C21)	1	1.00000	1209772.026
13	n-Docosane (C22)	1	1.00000	1240161.506
14	n-Tricosane (C23)	1	1.00000	1273305.826
15	n-Tetracosane (C24)	1	1.00000	1185717.763
16	n-Pentacosane (C25)	1	1.00000	1232715.482
17	n-Hexacosane (C26)	1	1.00000	1252609.825
18	n-Heptacosane (C27)	1	1.00000	1247196.227
19	n-Octacosane (C28)	1	1.00000	1273069.080
Avg RSF For: C10-C28 DRO			1.00000	1148612.628
1	n-Decane (C10)	2	10.00000	9041437.584
2	n-Undecane (C11)	2	10.00000	9799659.166
3	n-Dodecane (C12)	2	10.00000	10047256.797
4	n-Tridecane (C13)	2	10.00000	10310737.221
5	n-Tetradecane (C14)	2	10.00000	10610936.797
6	n-Pentadecane (C15)	2	10.00000	11025545.447
7	n-Hexadecane (C16)	2	10.00000	11195314.734
8	n-Heptadecane (C17)	2	10.00000	10801582.501
9	n-Octadecane (C18)	2	10.00000	11508464.580
10	n-Nonadecane (C19)	2	10.00000	11606682.526
11	n-Eicosane (C20)	2	10.00000	11755182.147
12	n-Heneicosane (C21)	2	10.00000	11930540.675
13	n-Docosane (C22)	2	10.00000	11981969.262
14	n-Tricosane (C23)	2	10.00000	12054595.430
15	n-Tetracosane (C24)	2	10.00000	12601199.576
16	n-Pentacosane (C25)	2	10.00000	11859180.702
17	n-Hexacosane (C26)	2	10.00000	12200715.326
18	n-Heptacosane (C27)	2	10.00000	12247901.695
19	n-Octacosane (C28)	2	10.00000	12510570.688
Avg RSF For: C10-C28 DRO			10.00000	11320498.571

1	n-Decane (C10)	3	50.00000	51409989.250
2	n-Undecane (C11)	3	50.00000	55461909.257
3	n-Dodecane (C12)	3	50.00000	55749749.802
4	n-Tridecane (C13)	3	50.00000	56602629.030
5	n-Tetradecane (C14)	3	50.00000	57838850.645
6	n-Pentadecane (C15)	3	50.00000	57744075.415
7	n-Hexadecane (C16)	3	50.00000	59305434.961
8	n-Heptadecane (C17)	3	50.00000	59687590.493
9	n-Octadecane (C18)	3	50.00000	61939025.419
10	n-Nonadecane (C19)	3	50.00000	61175013.129
11	n-Eicosane (C20)	3	50.00000	62027755.746
12	n-Heneicosane (C21)	3	50.00000	61959250.256
13	n-Docosane (C22)	3	50.00000	63126899.722
14	n-Tricosane (C23)	3	50.00000	63515781.712
15	n-Tetracosane (C24)	3	50.00000	60737364.540
16	n-Pentacosane (C25)	3	50.00000	62650973.182
17	n-Hexacosane (C26)	3	50.00000	64754893.441
18	n-Heptacosane (C27)	3	50.00000	62700601.526
19	n-Octacosane (C28)	3	50.00000	65442745.787
Avg RSF For: C10-C28 DRO			50.00000	60201607.017

1	n-Decane (C10)	4	100.00000	114791251.286
2	n-Undecane (C11)	4	100.00000	118511116.456
3	n-Dodecane (C12)	4	100.00000	119951332.223
4	n-Tridecane (C13)	4	100.00000	120664430.603
5	n-Tetradecane (C14)	4	100.00000	123997542.664
6	n-Pentadecane (C15)	4	100.00000	125824254.968
7	n-Hexadecane (C16)	4	100.00000	124774656.119
8	n-Heptadecane (C17)	4	100.00000	126059127.061
9	n-Octadecane (C18)	4	100.00000	127884241.181
10	n-Nonadecane (C19)	4	100.00000	129335574.200
11	n-Eicosane (C20)	4	100.00000	129793924.370
12	n-Heneicosane (C21)	4	100.00000	130220295.034
13	n-Docosane (C22)	4	100.00000	129811061.907
14	n-Tricosane (C23)	4	100.00000	129755264.250
15	n-Tetracosane (C24)	4	100.00000	129360474.076
16	n-Pentacosane (C25)	4	100.00000	126809835.097
17	n-Hexacosane (C26)	4	100.00000	130070383.202
18	n-Heptacosane (C27)	4	100.00000	130203304.634
19	n-Octacosane (C28)	4	100.00000	132963933.051
Avg RSF For: C10-C28 DRO			100.00000	126356947.494

1	n-Decane (C10)	5	200.00000	229469570.939
2	n-Undecane (C11)	5	200.00000	230963382.258
3	n-Dodecane (C12)	5	200.00000	234830243.252
4	n-Tridecane (C13)	5	200.00000	236729543.603
5	n-Tetradecane (C14)	5	200.00000	243918414.772
6	n-Pentadecane (C15)	5	200.00000	246681082.190
7	n-Hexadecane (C16)	5	200.00000	245595239.850
8	n-Heptadecane (C17)	5	200.00000	251581798.292
9	n-Octadecane (C18)	5	200.00000	254729915.770
10	n-Nonadecane (C19)	5	200.00000	254162502.178
11	n-Eicosane (C20)	5	200.00000	256349324.206
12	n-Heneicosane (C21)	5	200.00000	257670445.710
13	n-Docosane (C22)	5	200.00000	257587713.347
14	n-Tricosane (C23)	5	200.00000	257992743.818
15	n-Tetracosane (C24)	5	200.00000	257843688.049

16	n-Pentacosane (C25)	5	200.00000	253272926.634
17	n-Hexacosane (C26)	5	200.00000	260177966.748
18	n-Heptacosane (C27)	5	200.00000	260460853.415
19	n-Octacosane (C28)	5	200.00000	265974985.958
Avg RSF For: C10-C28 DRO			200.00000	250315386.368

Generating Average Response Factor For: C28-C40 ORO

No	Compound	Level	Conc	Response
1	n-Octacosane (C28)	1	1.00000	1273069.080
2	n-Nonacosane (C29)	1	1.00000	1244115.383
3	n-Triacontane (C30)	1	1.00000	1224079.624
4	n-Hentriacontane (C31)	1	1.00000	1171157.581
5	n-Dotriacontane (C32)	1	1.00000	1198364.978
6	n-Tritriacontane (C33)	1	1.00000	1144059.975
7	n-tetratriacontane (C34)	1	1.00000	1126362.274
8	n-Pentatriacontane (C35)	1	1.00000	1037339.457
9	n-Hexatriacontane (C36)	1	1.00000	1231097.795
10	n-Heptatriacontane (C37)	1	1.00000	1121135.329
11	n-Octatriacontane (C38)	1	1.00000	1116597.778
12	n-Tetracontane (C40)	1	1.00000	1120643.610
Avg RSF For: C28-C40 ORO			1.00000	1167335.239
1	n-Octacosane (C28)	2	10.00000	12510570.688
2	n-Nonacosane (C29)	2	10.00000	12467884.338
3	n-Triacontane (C30)	2	10.00000	12558841.375
4	n-Hentriacontane (C31)	2	10.00000	12109685.106
5	n-Dotriacontane (C32)	2	10.00000	12630347.728
6	n-Tritriacontane (C33)	2	10.00000	12235753.773
7	n-tetratriacontane (C34)	2	10.00000	12008205.434
8	n-Pentatriacontane (C35)	2	10.00000	11253331.046
9	n-Hexatriacontane (C36)	2	10.00000	13281831.135
10	n-Heptatriacontane (C37)	2	10.00000	12016365.359
11	n-Octatriacontane (C38)	2	10.00000	12167429.912
12	n-Tetracontane (C40)	2	10.00000	12077894.434
Avg RSF For: C28-C40 ORO			10.00000	12276511.694
1	n-Octacosane (C28)	3	50.00000	65442745.787
2	n-Nonacosane (C29)	3	50.00000	65314210.741
3	n-Triacontane (C30)	3	50.00000	65436293.710
4	n-Hentriacontane (C31)	3	50.00000	63369157.566
5	n-Dotriacontane (C32)	3	50.00000	65313936.386
6	n-Tritriacontane (C33)	3	50.00000	63209731.628
7	n-tetratriacontane (C34)	3	50.00000	62305045.846
8	n-Pentatriacontane (C35)	3	50.00000	63275912.634
9	n-Hexatriacontane (C36)	3	50.00000	67441802.151
10	n-Heptatriacontane (C37)	3	50.00000	61719641.084
11	n-Octatriacontane (C38)	3	50.00000	63635432.776
12	n-Tetracontane (C40)	3	50.00000	63641415.691
Avg RSF For: C28-C40 ORO			50.00000	64175443.833
1	n-Octacosane (C28)	4	100.00000	132963933.051

		rfupdate		
2	n-Nonacosane (C29)	4	100.00000	132215805.927
3	n-Triacontane (C30)	4	100.00000	132395647.290
4	n-Hentriacontane (C31)	4	100.00000	127341956.356
5	n-Dotriacontane (C32)	4	100.00000	132897491.988
6	n-Tritriacontane (C33)	4	100.00000	128440928.170
7	n-tetratriacontane (C34)	4	100.00000	126957165.550
8	n-Pentatriacontane (C35)	4	100.00000	118359561.612
9	n-Hexatriacontane (C36)	4	100.00000	140814802.547
10	n-Heptatriacontane (C37)	4	100.00000	128018811.655
11	n-Octatriacontane (C38)	4	100.00000	128468932.047
12	n-Tetracontane (C40)	4	100.00000	124640069.901
Avg RSF For: C28-C40 ORO			100.00000	129459592.175

1	n-Octacosane (C28)	5	200.00000	265974985.958
2	n-Nonacosane (C29)	5	200.00000	264558929.838
3	n-Triacontane (C30)	5	200.00000	264798286.976
4	n-Hentriacontane (C31)	5	200.00000	254750177.468
5	n-Dotriacontane (C32)	5	200.00000	264916946.230
6	n-Tritriacontane (C33)	5	200.00000	255169960.629
7	n-tetratriacontane (C34)	5	200.00000	248862258.783
8	n-Pentatriacontane (C35)	5	200.00000	227339067.616
9	n-Hexatriacontane (C36)	5	200.00000	263390946.750
10	n-Heptatriacontane (C37)	5	200.00000	232551791.578
11	n-Octatriacontane (C38)	5	200.00000	226128025.894
12	n-Tetracontane (C40)	5	200.00000	209448146.720
Avg RSF For: C28-C40 ORO			200.00000	248157460.370

Generating Reference Response Factors

No	Compound	No	Refrence Compound
8	1380	9	n-Tetradecane (C14)
10	1470	11	n-Pentadecane (C15)
13	1650	14	n-Heptadecane (C17)
40	n-Nonatriacontane (C39)	41	n-Tetracontane (C40)
43	C9-C40 Total Petroleum Hydrocarbons	42	C9-C44 Total Petroleum Hydrocarbons
46	Total Resolved Hydrocarbons	42	C9-C44 Total Petroleum Hydrocarbons

Abacus Response Factor Update Macro Ver. 1.0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521012.D
Signal(s) : FID1A.ch
Acq On : 05 Nov 2021 07:59 pm
Operator : FID18:WR
Sample : I1811052101F
Misc : WG1581201,FRBD77,1ug/ml
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 09:40:56 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 09:31:00 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.339	60427214	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.308	1331963	0.903 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	1.81%#
24) s	d50-Tetracosane	35.943	1067253	0.875 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	1.75%#
	Target Compounds			
2) t	n-Octane (C8)	5.750	1018644	1.014 ug/mL M4
3) t	n-Nonane (C9)	7.968	987949	0.951 ug/mL M4
4) t	n-Decane (C10)	10.448	914679	0.893 ug/mL M4
5) t	n-Undecane (C11)	12.954	922362	0.835 ug/mL M4
6) t	n-Dodecane (C12)	15.374	1045227	0.941 ug/mL M4
7) t	n-Tridecane (C13)	17.670	1084186	0.961 ug/mL M4
9) t	n-Tetradecane (C14)	19.842	1156986	1.004 ug/mL M4
11) t	n-Pentadecane (C15)	21.899	1129436	0.982 ug/mL M4
12) t	n-Hexadecane (C16)	23.848	1173535	0.993 ug/mL M4
14) t	n-Heptadecane (C17)	25.693	975438	0.820 ug/mL M4
15) t	Pristane	25.793	1351549	1.106 ug/mL M4
16) t	n-Octadecane (C18)	27.451	1134836	0.920 ug/mL M4
17) t	Phytane	27.607	1140256	1.005 ug/mL M4
18) t	n-Nonadecane (C19)	29.122	1168659	0.959 ug/mL M4
20) t	n-Eicosane (C20)	30.730	1203747	0.974 ug/mL M4
21) t	n-Heneicosane (C21)	32.261	1209772	0.980 ug/mL M4
22) t	n-Docosane (C22)	33.729	1240162	0.986 ug/mL M4
23) t	n-Tricosane (C23)	35.138	1273306	1.006 ug/mL M4
25) t	n-Tetracosane (C24)	36.490	1185718	0.980 ug/mL M4
26) t	n-Pentacosane (C25)	37.790	1232715	0.988 ug/mL M4
27) t	n-Hexacosane (C26)	39.043	1252610	0.971 ug/mL M4
28) t	n-Heptacosane (C27)	40.252	1247196	0.998 ug/mL M4
29) t	n-Octacosane (C28)	41.420	1273069	0.976 ug/mL M4
30) t	n-Nonacosane (C29)	42.547	1244115	0.956 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521012.D
Signal(s) : FID1A.ch
Acq On : 05 Nov 2021 07:59 pm
Operator : FID18:WR
Sample : I1811052101F
Misc : WG1581201,FRBD77,1ug/ml
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 09:40:56 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 09:31:00 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

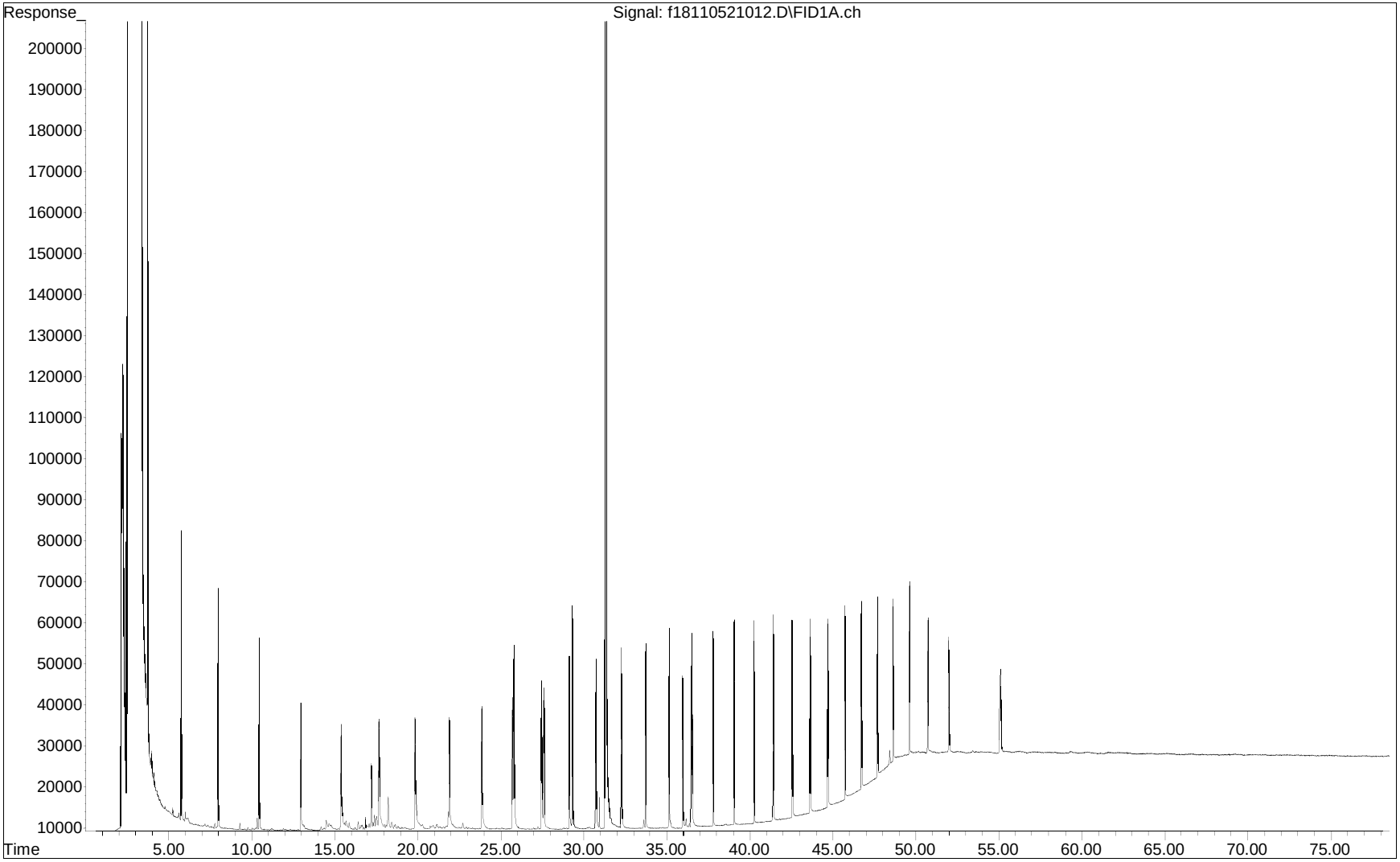
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.640	1224080	0.939 ug/mL M4
32) t	n-Hentriacontane (C31)	44.697	1171158	0.928 ug/mL M4
33) t	n-Dotriacontane (C32)	45.722	1198365	0.921 ug/mL M4
34) t	n-Tritriacontane (C33)	46.717	1144060	0.908 ug/mL M4
35) t	n-tetratriacontane (C34)	47.684	1126362	0.907 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.623	1037339	0.823 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.615	1231098	0.916 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.720	1121135	0.912 ug/mL M4
39) t	n-Octatriacontane (C38)	51.971	1116598	0.881 ug/mL M4
41) t	n-Tetracontane (C40)	55.090	1120644	0.884 ug/mL M4

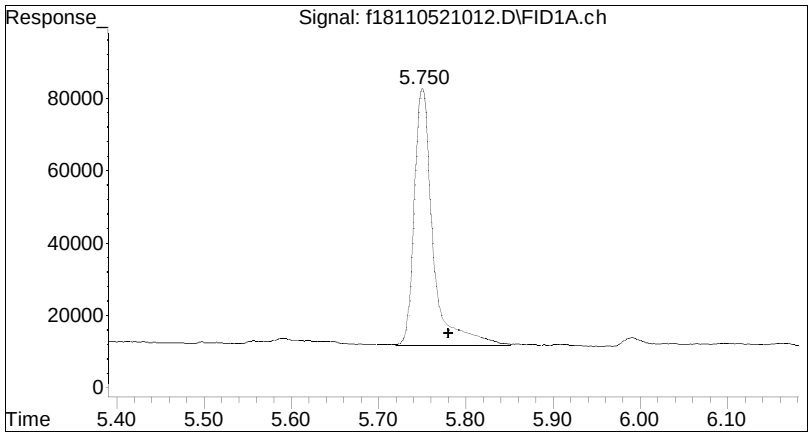
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

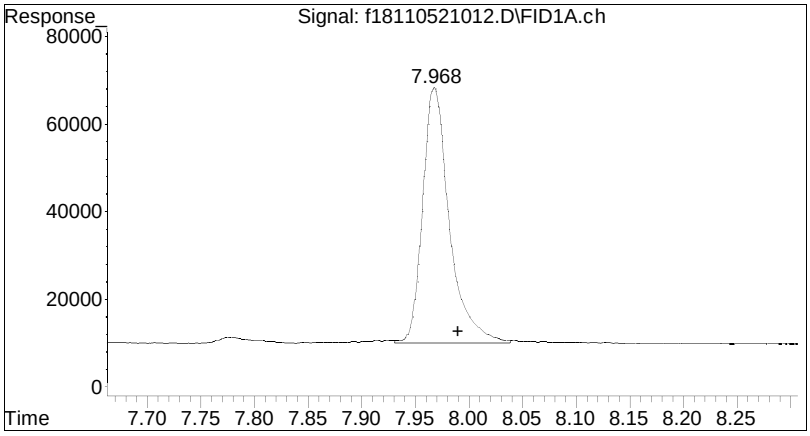
File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521012.D
Operator : FID18:WR
Acquired : 05 Nov 2021 07:59 pm using AcqMethod FID18.M
Sample Name: I1811052101F
Instrument: FID 18
Misc Info : WG1581201,FRBD77,1ug/ml
Vial Number: 6
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M





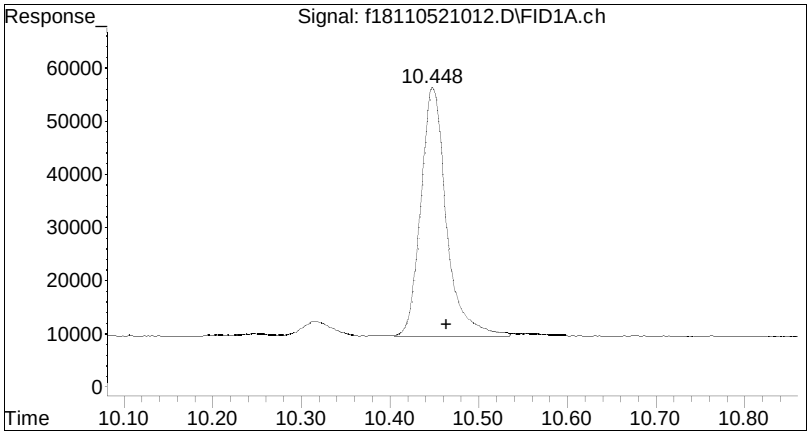
#2 n-Octane (C8)

R.T.:	5.750 min
Delta R.T.:	-0.030 min
Response:	1018644
Conc:	1.01 ug/mL M4



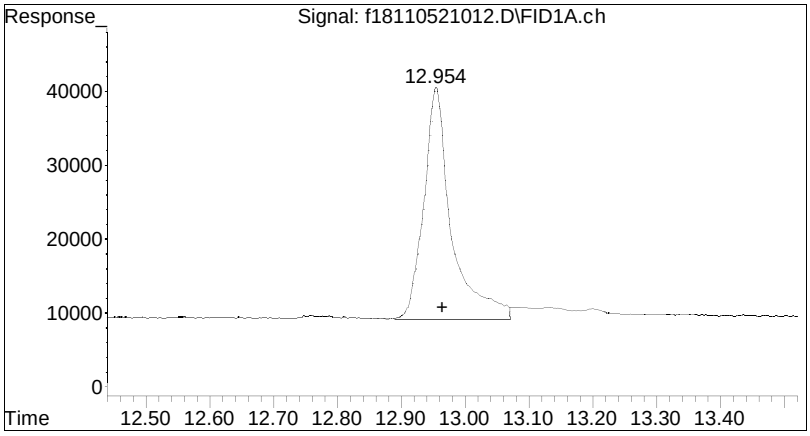
#3 n-Nonane (C9)

R.T.:	7.968 min
Delta R.T.:	-0.022 min
Response:	987949
Conc:	0.95 ug/mL M4



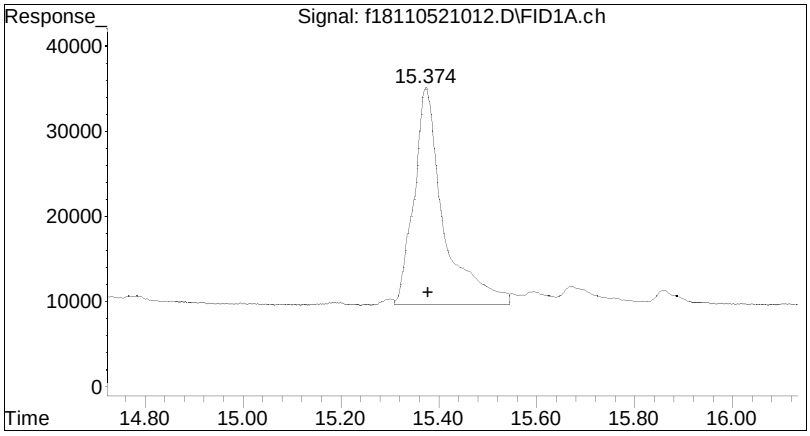
#4 n-Decane (C10)

R.T.:	10.448 min
Delta R.T.:	-0.016 min
Response:	914679
Conc:	0.89 ug/mL M4



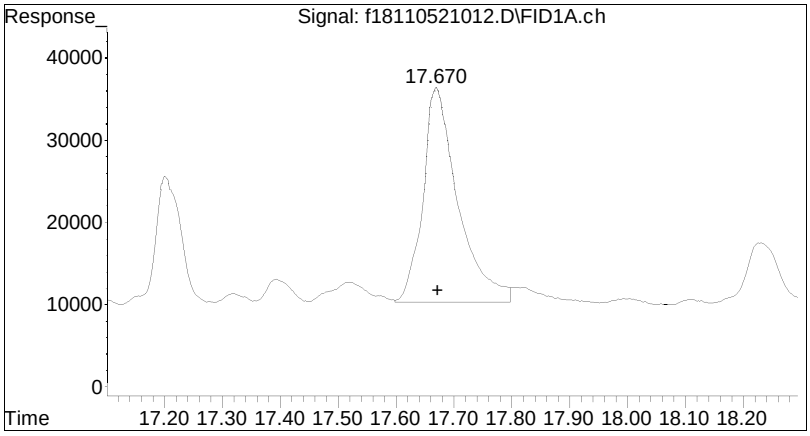
#5 n-Undecane (C11)

R.T.:	12.954 min
Delta R.T.:	-0.010 min
Response:	922362
Conc:	0.83 ug/mL M4



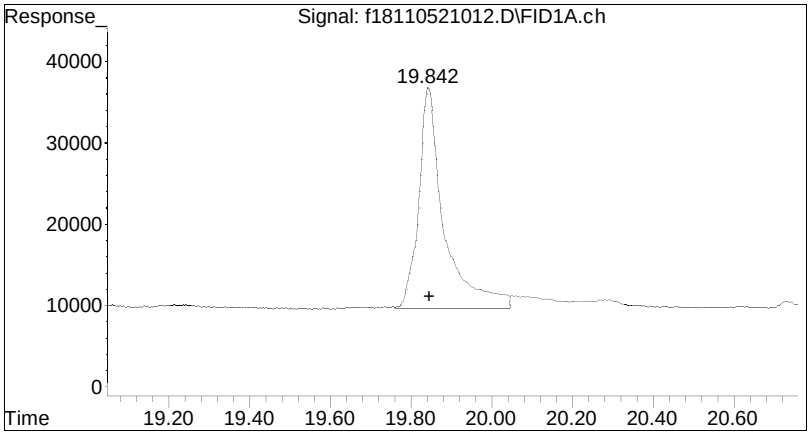
#6 n-Dodecane (C12)

R.T.:	15.374 min
Delta R.T.:	-0.004 min
Response:	1045227
Conc:	0.94 ug/mL M4



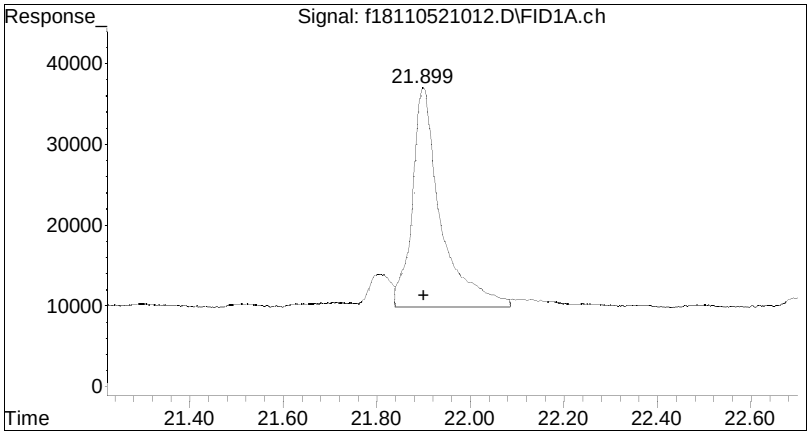
#7 n-Tridecane (C13)

R.T.:	17.670 min
Delta R.T.:	-0.002 min
Response:	1084186
Conc:	0.96 ug/mL M4



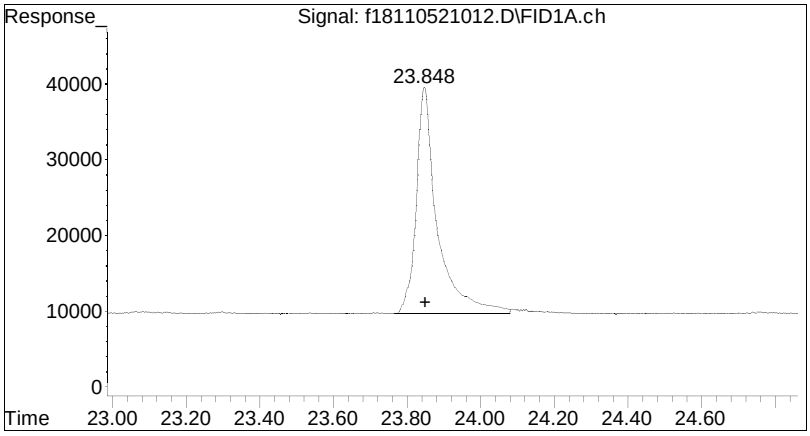
#9 n-Tetradecane (C14)

R.T.:	19.842 min
Delta R.T.:	-0.004 min
Response:	1156986
Conc:	1.00 ug/mL M4



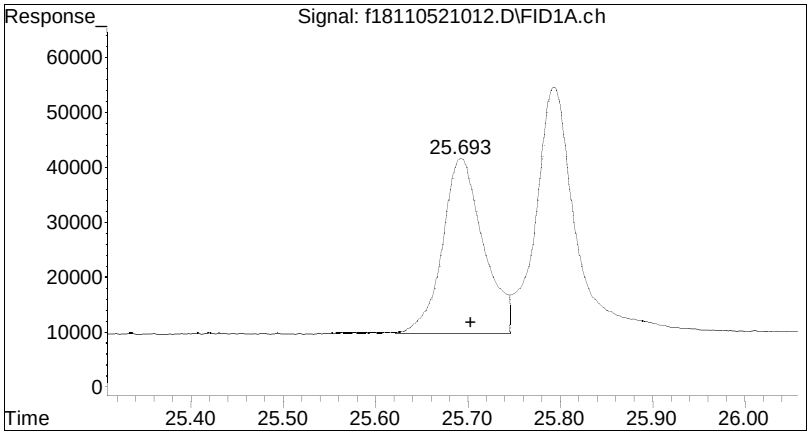
#11 n-Pentadecane (C15)

R.T.:	21.899 min
Delta R.T.:	-0.002 min
Response:	1129436
Conc:	0.98 ug/mL M4



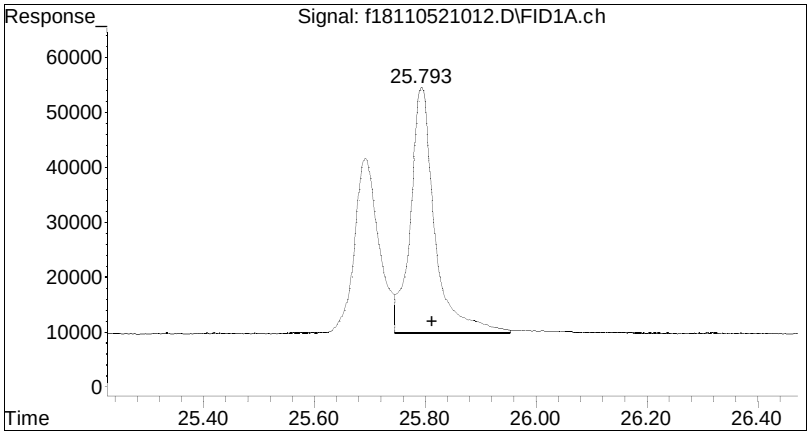
#12 n-Hexadecane (C16)

R.T.:	23.848 min
Delta R.T.:	-0.003 min
Response:	1173535
Conc:	0.99 ug/mL M4



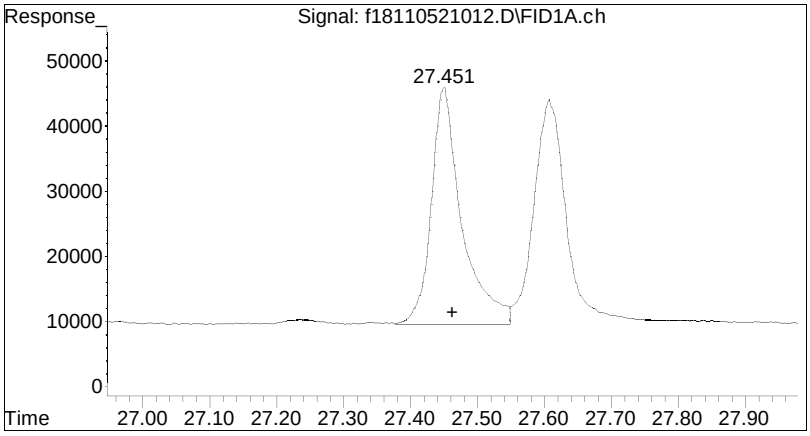
#14 n-Heptadecane (C17)

R.T.:	25.693 min
Delta R.T.:	-0.011 min
Response:	975438
Conc:	0.82 ug/mL M4



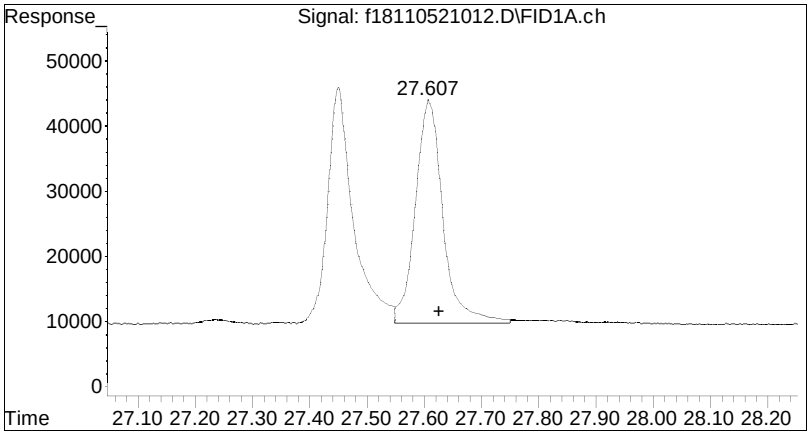
#15 Pristane

R.T.:	25.793 min
Delta R.T.:	-0.019 min
Response:	1351549
Conc:	1.11 ug/mL M4



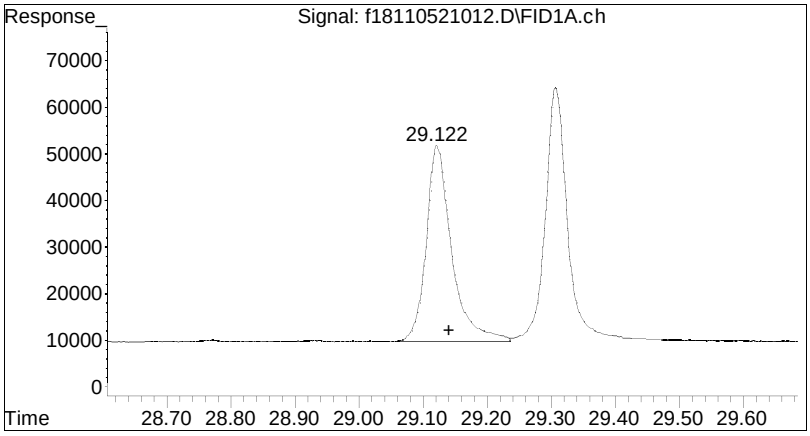
#16 n-Octadecane (C18)

R.T.:	27.451 min
Delta R.T.:	-0.012 min
Response:	1134836
Conc:	0.92 ug/mL M4



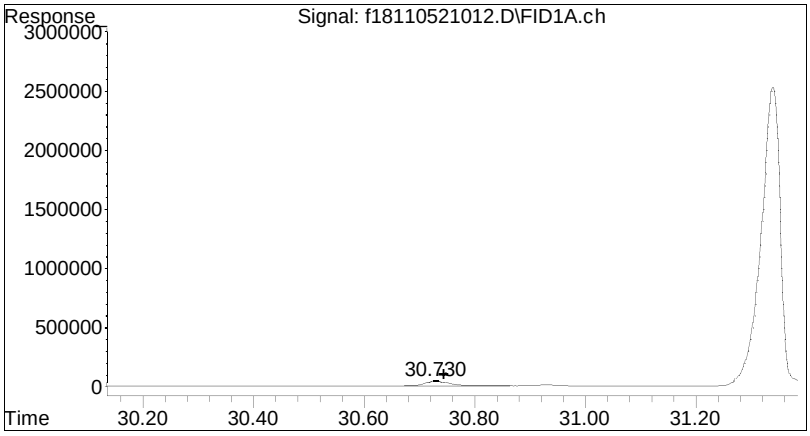
#17 Phytane

R.T.:	27.607 min
Delta R.T.:	-0.019 min
Response:	1140256
Conc:	1.01 ug/mL M4



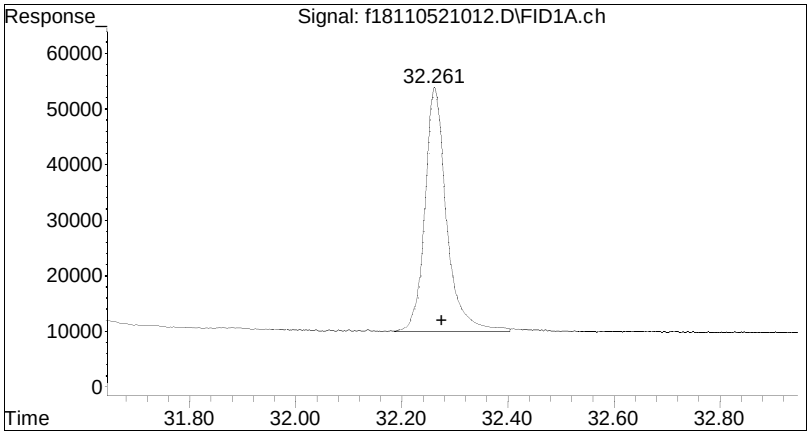
#18 n-Nonadecane (C19)

R.T.:	29.122 min
Delta R.T.:	-0.019 min
Response:	1168659
Conc:	0.96 ug/mL M4



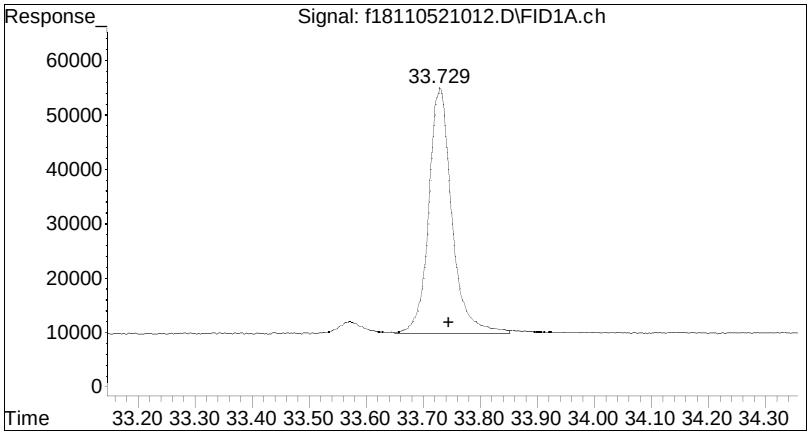
#20 n-Eicosane (C20)

R.T.:	30.730 min
Delta R.T.:	-0.015 min
Response:	1203747
Conc:	0.97 ug/mL M4



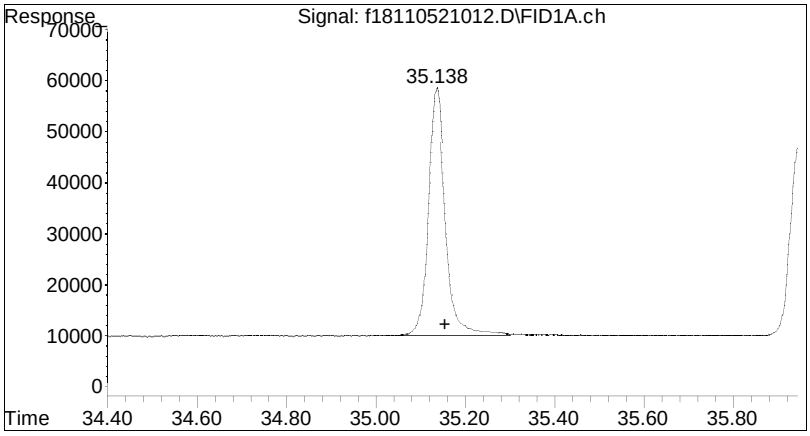
#21 n-Heneicosane (C21)

R.T.:	32.261 min
Delta R.T.:	-0.014 min
Response:	1209772
Conc:	0.98 ug/mL M4



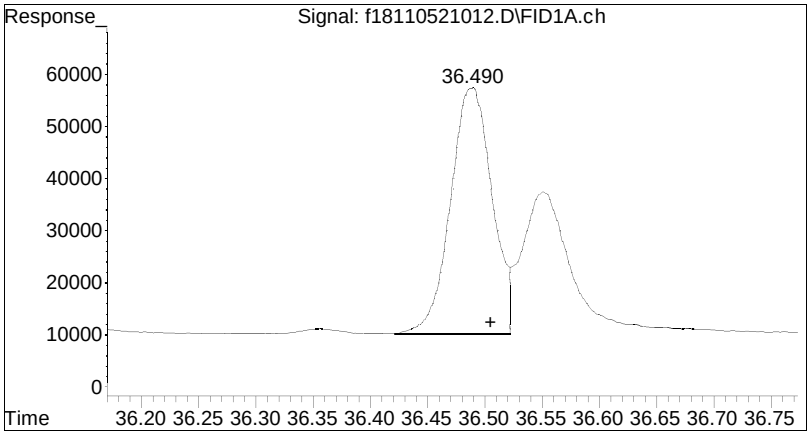
#22 n-Docosane (C22)

R.T.:	33.729 min
Delta R.T.:	-0.016 min
Response:	1240162
Conc:	0.99 ug/mL M4



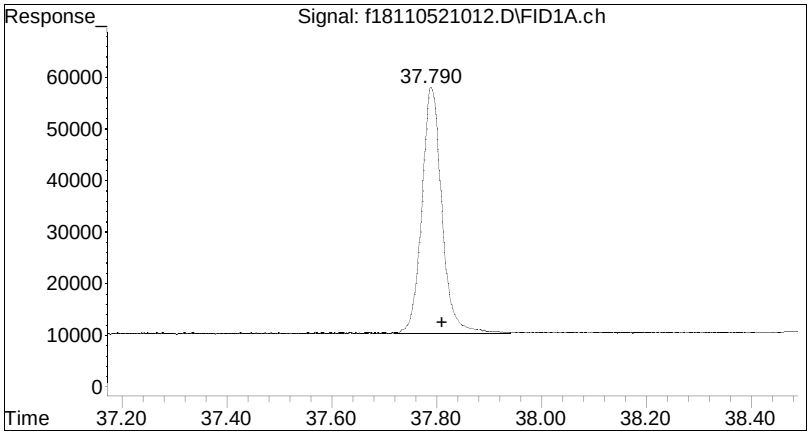
#23 n-Tricosane (C23)

R.T.:	35.138 min
Delta R.T.:	-0.017 min
Response:	1273306
Conc:	1.01 ug/mL M4



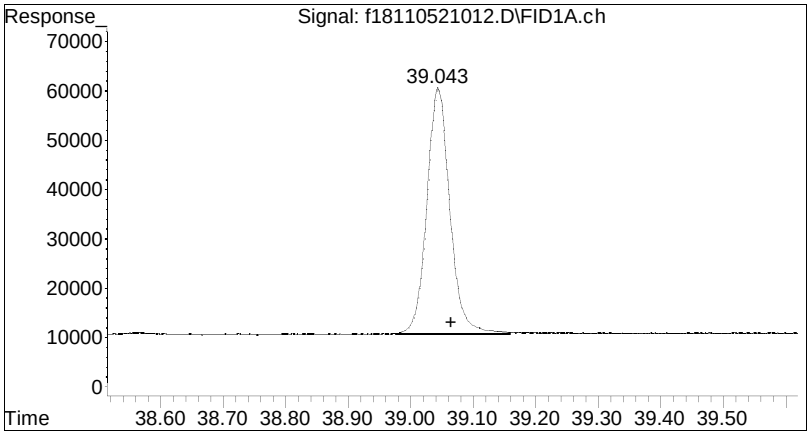
#25 n-Tetracosane (C24)

R.T.:	36.490 min
Delta R.T.:	-0.015 min
Response:	1185718
Conc:	0.98 ug/mL M4



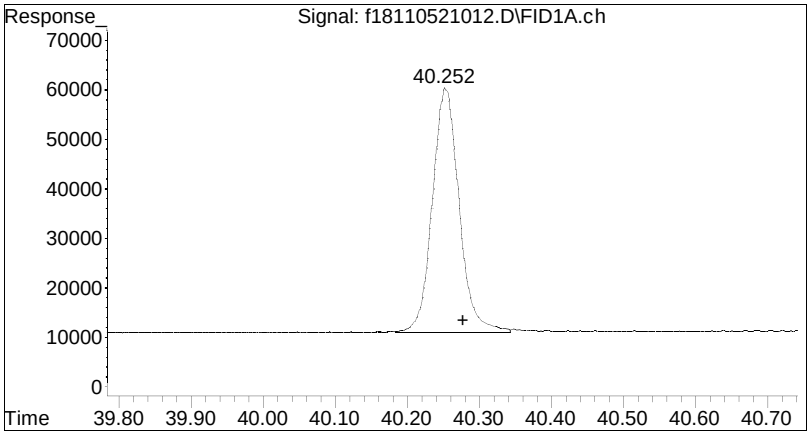
#26 n-Pentacosane (C25)

R.T.:	37.790 min
Delta R.T.:	-0.020 min
Response:	1232715
Conc:	0.99 ug/mL M4



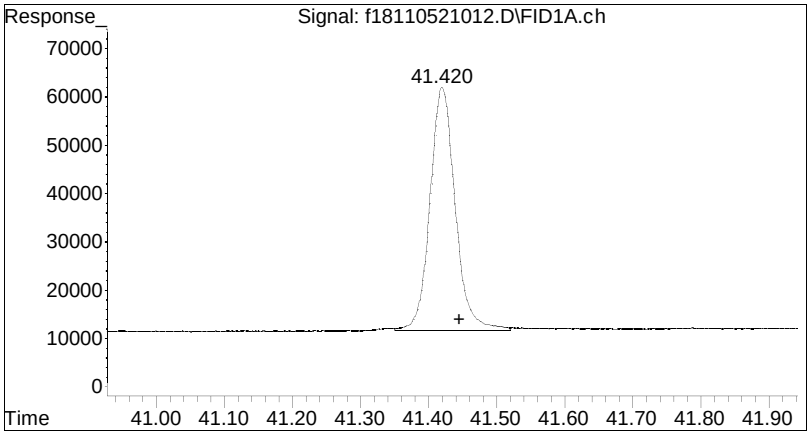
#27 n-Hexacosane (C26)

R.T.:	39.043 min
Delta R.T.:	-0.021 min
Response:	1252610
Conc:	0.97 ug/mL M4



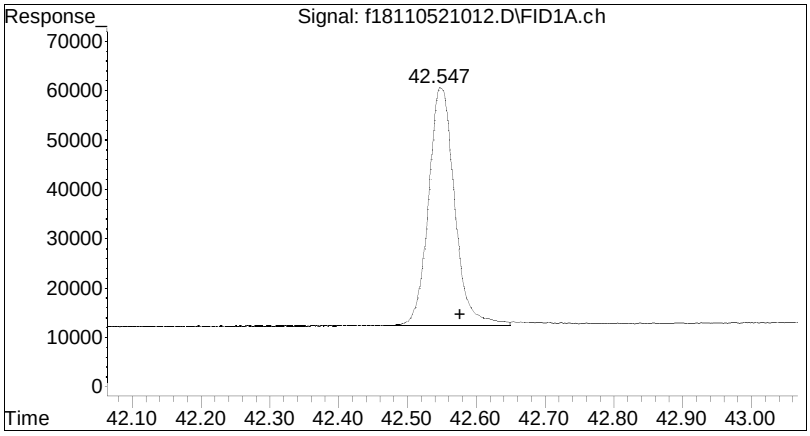
#28 n-Heptacosane (C27)

R.T.:	40.252 min
Delta R.T.:	-0.026 min
Response:	1247196
Conc:	1.00 ug/mL M4



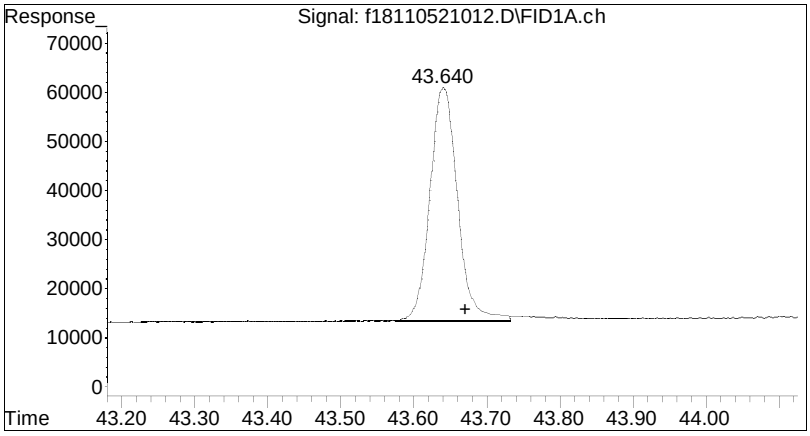
#29 n-Octacosane (C28)

R.T.:	41.420 min
Delta R.T.:	-0.025 min
Response:	1273069
Conc:	0.98 ug/mL M4



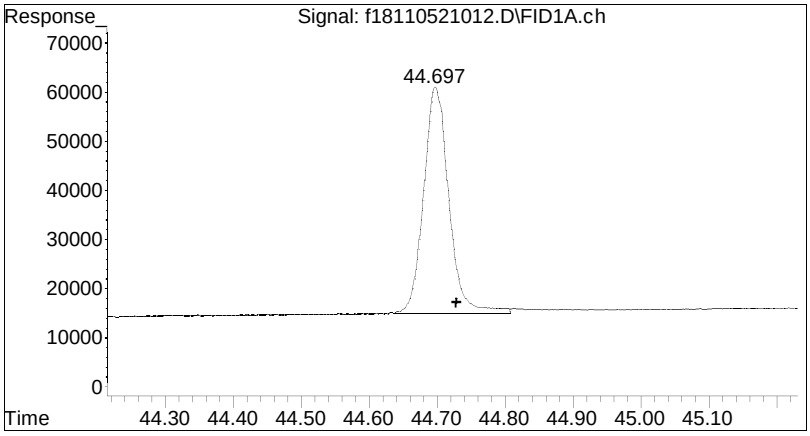
#30 n-Nonacosane (C29)

R.T.:	42.547 min
Delta R.T.:	-0.030 min
Response:	1244115
Conc:	0.96 ug/mL M4



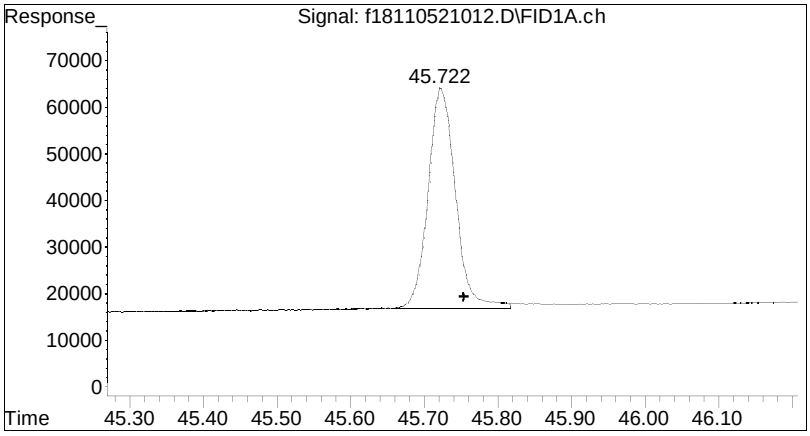
#31 n-Triacontane (C30)

R.T.:	43.640 min
Delta R.T.:	-0.031 min
Response:	1224080
Conc:	0.94 ug/mL M4



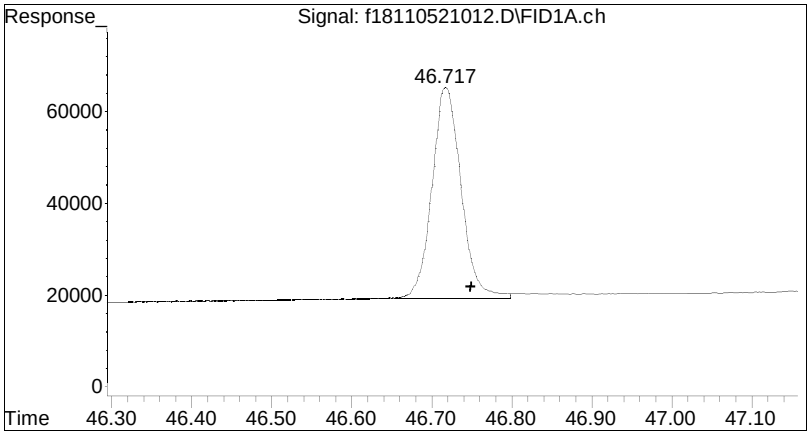
#32 n-Hentriacontane (C31)

R.T.:	44.697 min
Delta R.T.:	-0.032 min
Response:	1171158
Conc:	0.93 ug/mL M4



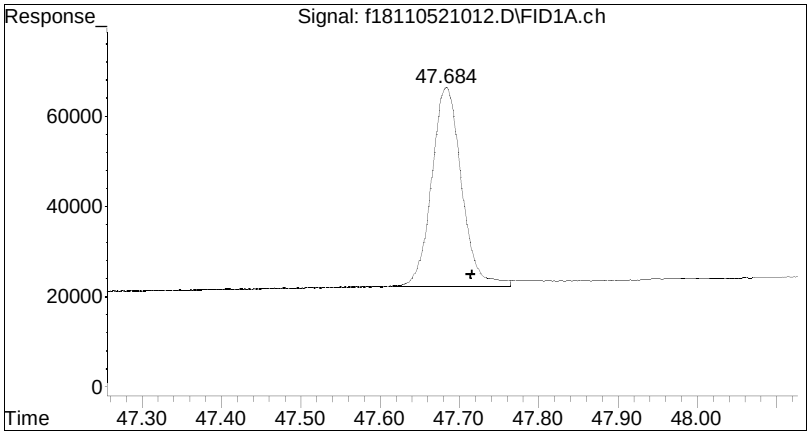
#33 n-Dotriacontane (C32)

R.T.:	45.722 min
Delta R.T.:	-0.032 min
Response:	1198365
Conc:	0.92 ug/mL M4



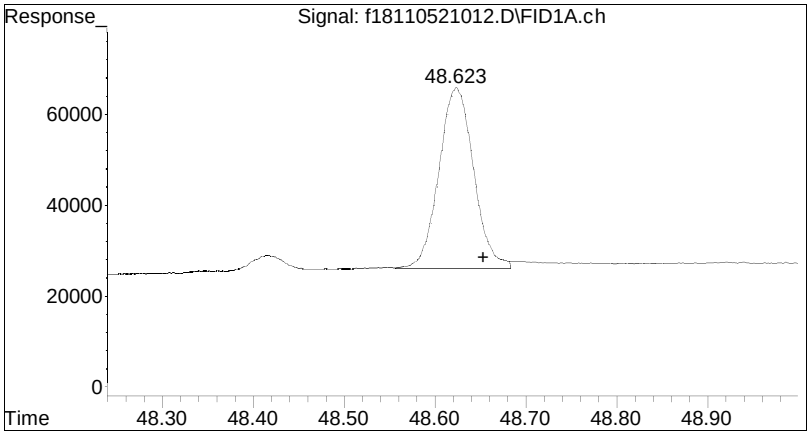
#34 n-Tritriacontane (C33)

R.T.:	46.717 min
Delta R.T.:	-0.032 min
Response:	1144060
Conc:	0.91 ug/mL M4



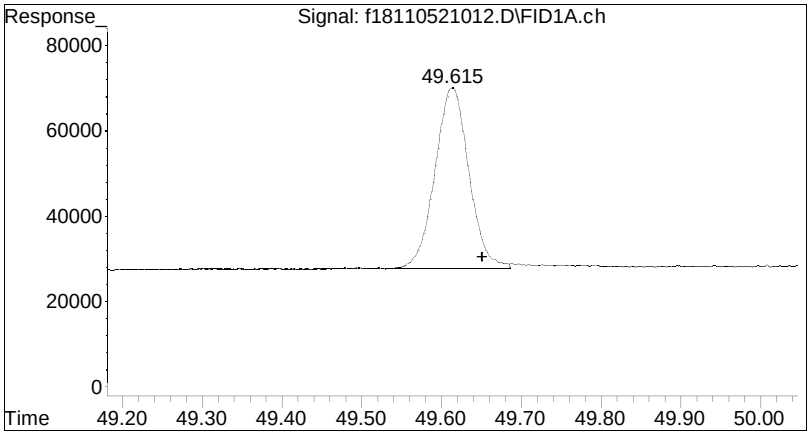
#35 n-tetratriacontane (C34)

R.T.:	47.684 min
Delta R.T.:	-0.032 min
Response:	1126362
Conc:	0.91 ug/mL M4



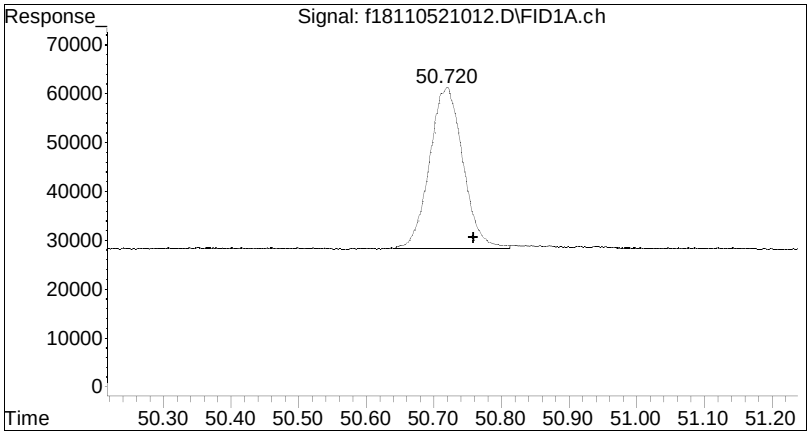
#36 n-Pentatriacontane (C35)

R.T.:	48.623 min
Delta R.T.:	-0.030 min
Response:	1037339
Conc:	0.82 ug/mL M4



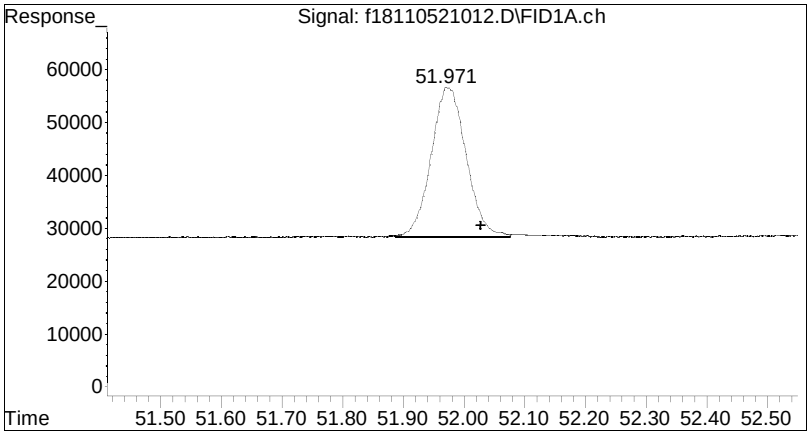
#37 n-Hexatriacontane (C36)

R.T.:	49.615 min
Delta R.T.:	-0.037 min
Response:	1231098
Conc:	0.92 ug/mL M4



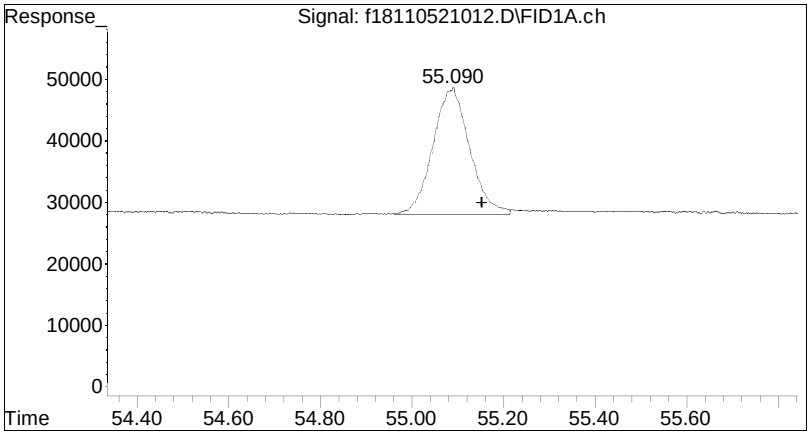
#38 n-Heptatriacontane (C37)

R.T.:	50.720 min
Delta R.T.:	-0.038 min
Response:	1121135
Conc:	0.91 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.:	51.971 min
Delta R.T.:	-0.057 min
Response:	1116598
Conc:	0.88 ug/mL M4



#41 n-Tetracontane (C40)

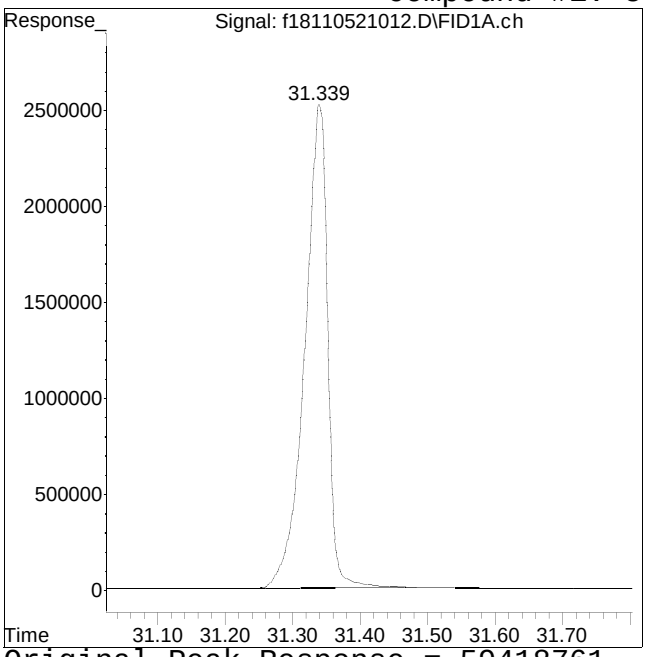
R.T.:	55.090 min
Delta R.T.:	-0.063 min
Response:	1120644
Conc:	0.88 ug/mL M4

Manual Integration/Negative Proof Report

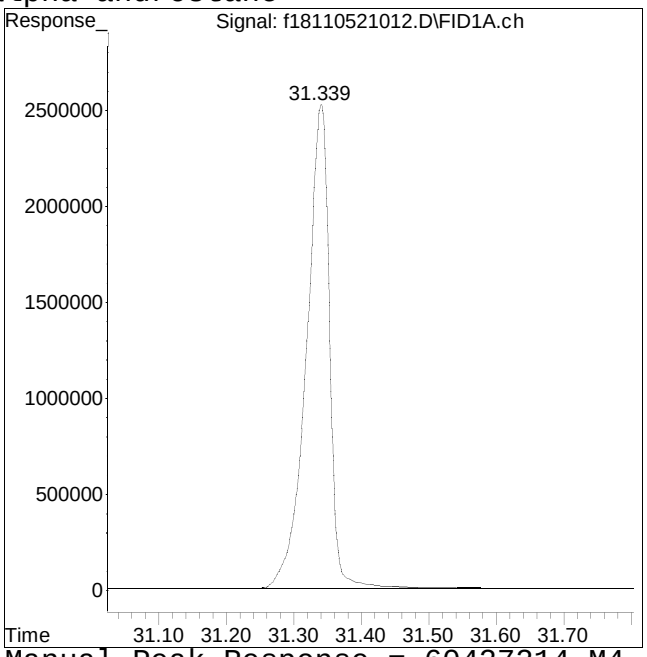
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #1: 5-alpha-androstane



Original Peak Response = 59418761



Manual Peak Response = 60427214 M4

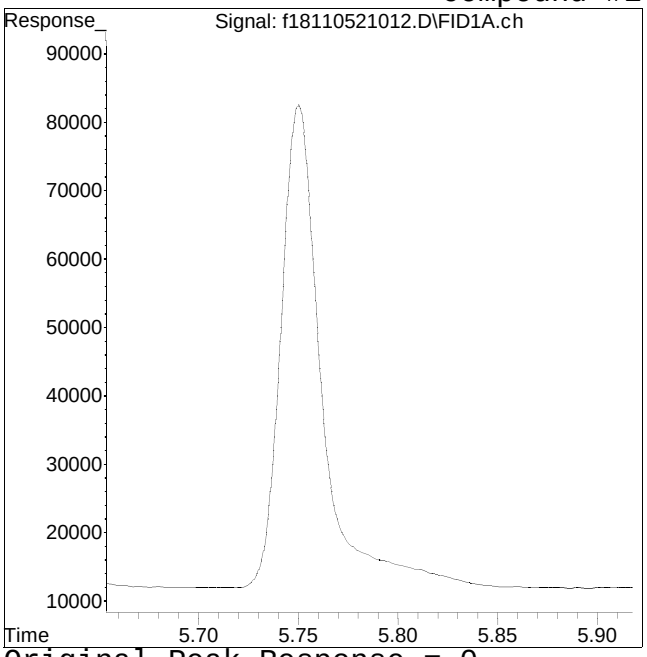
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

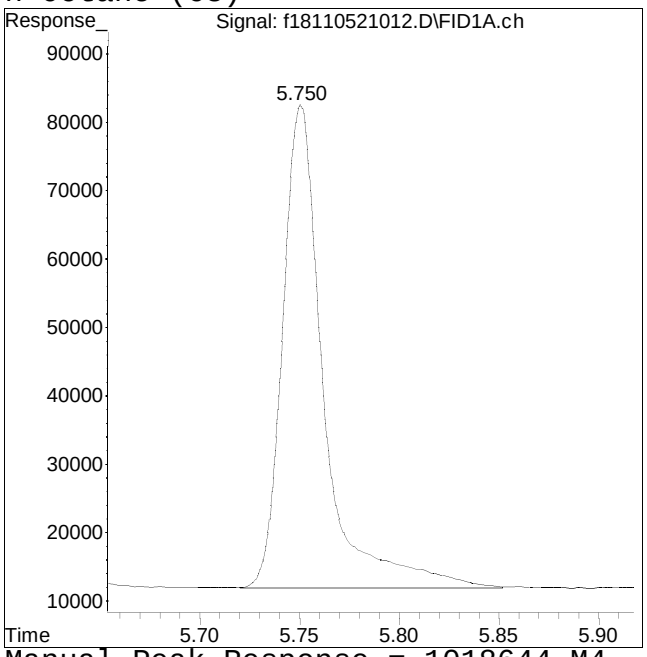
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #2: n-Octane (C8)



Original Peak Response = 0



Manual Peak Response = 1018644 M4

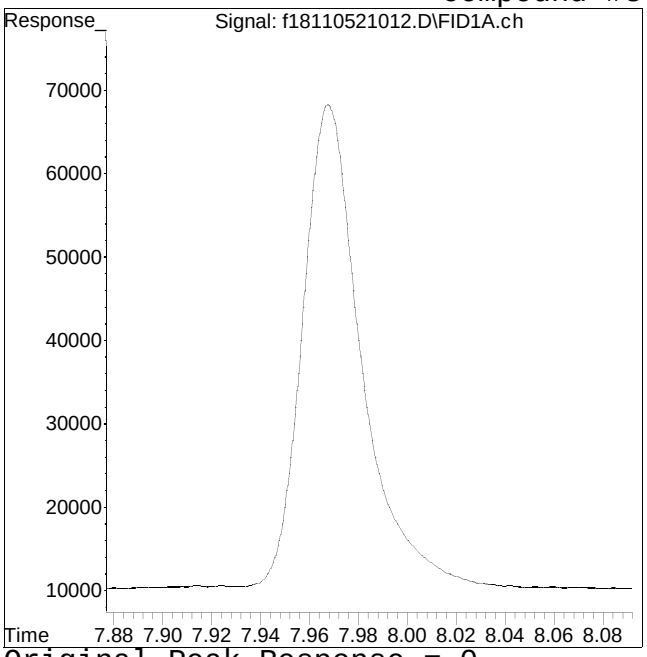
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

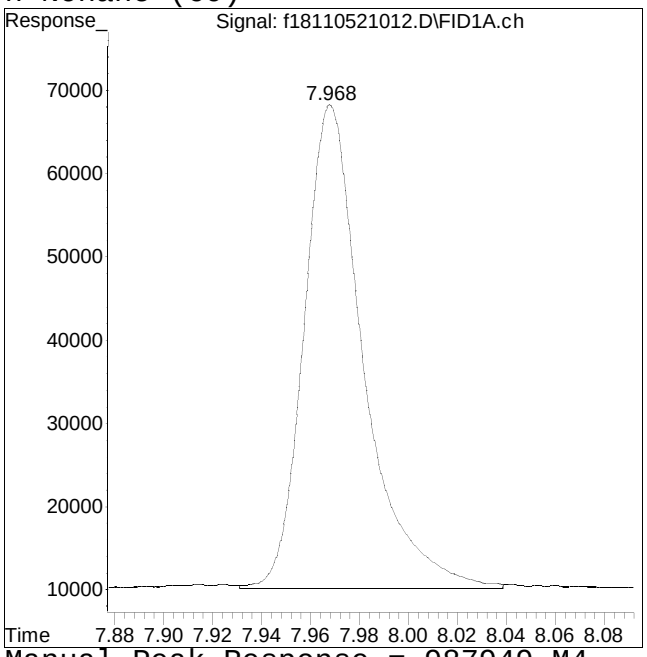
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #3: n-Nonane (C9)



Original Peak Response = 0



Manual Peak Response = 987949 M4

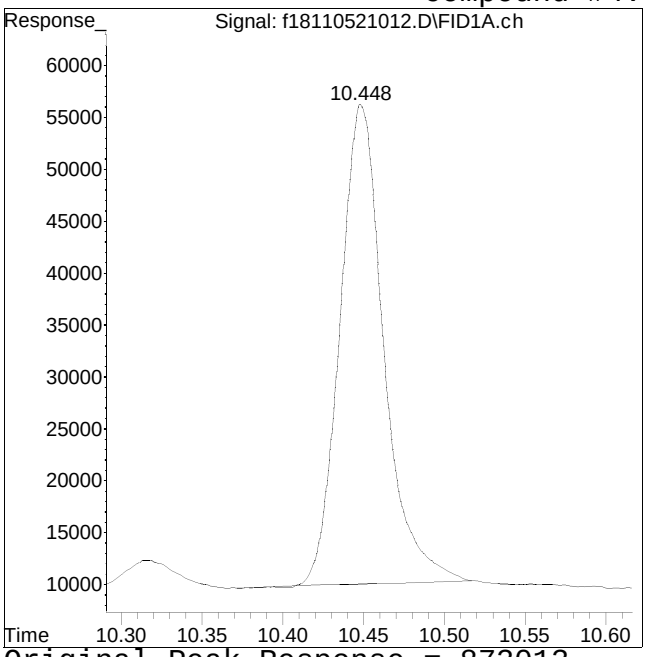
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

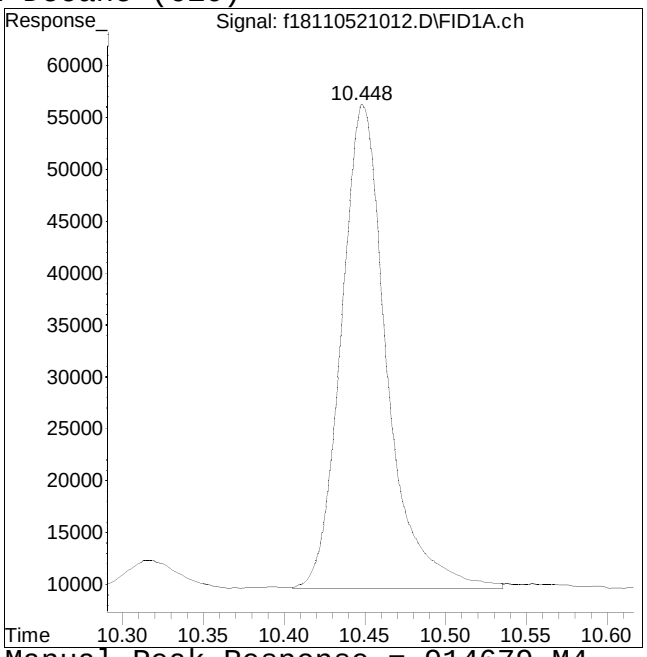
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #4: n-Decane (C10)



Original Peak Response = 873013



Manual Peak Response = 914679 M4

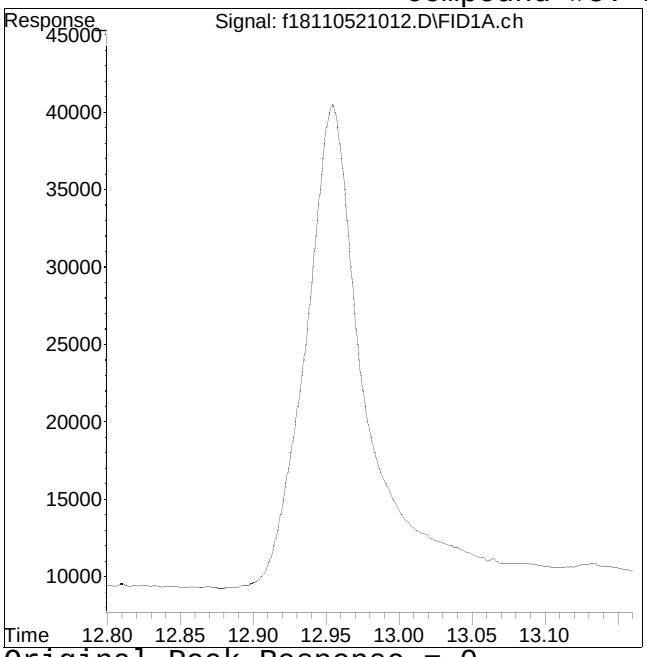
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

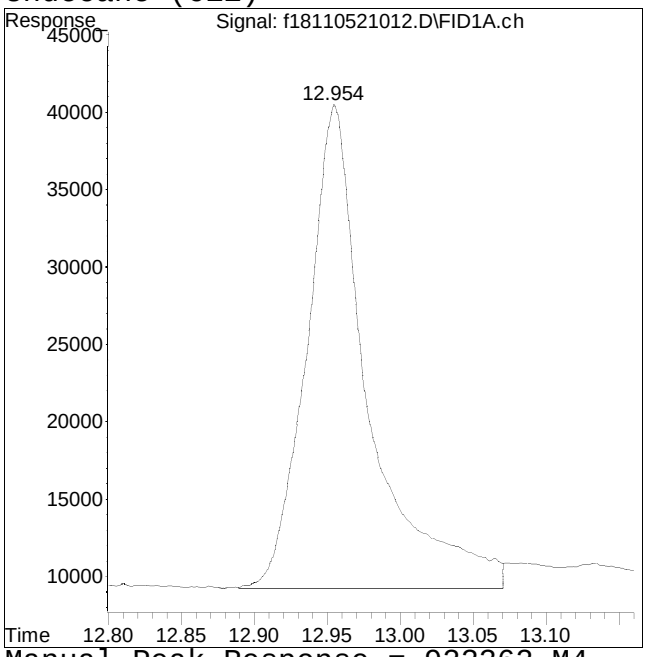
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #5: n-Undecane (C11)



Original Peak Response = 0



Manual Peak Response = 922362 M4

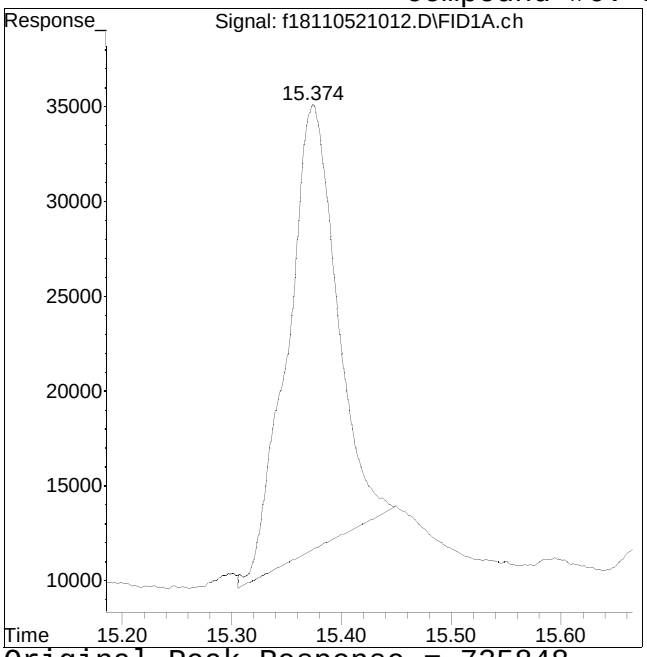
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

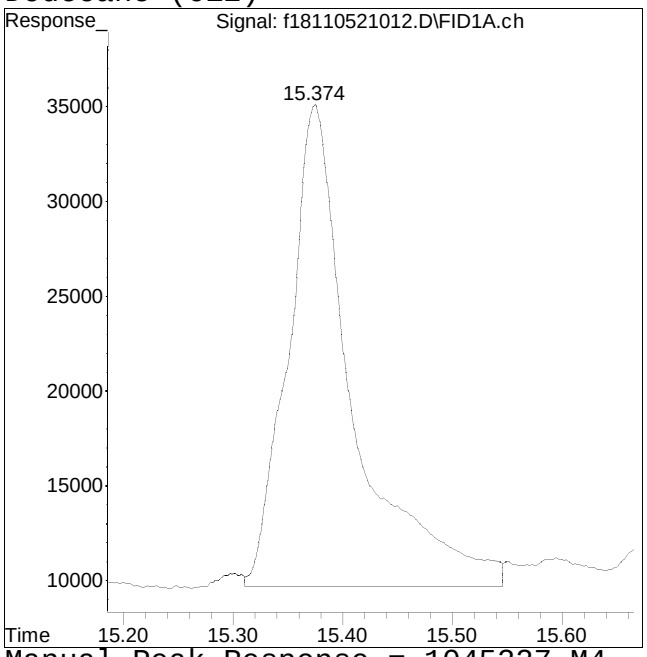
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 735848



Manual Peak Response = 1045227 M4

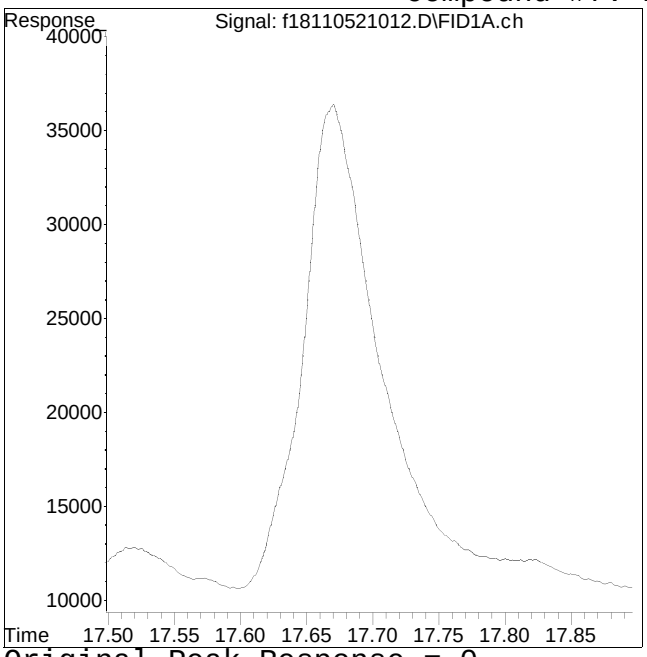
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

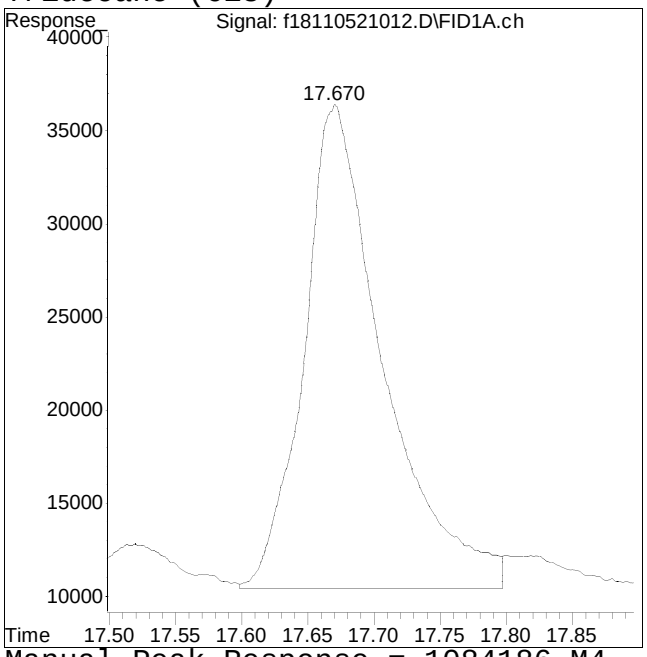
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 0



Manual Peak Response = 1084186 M4

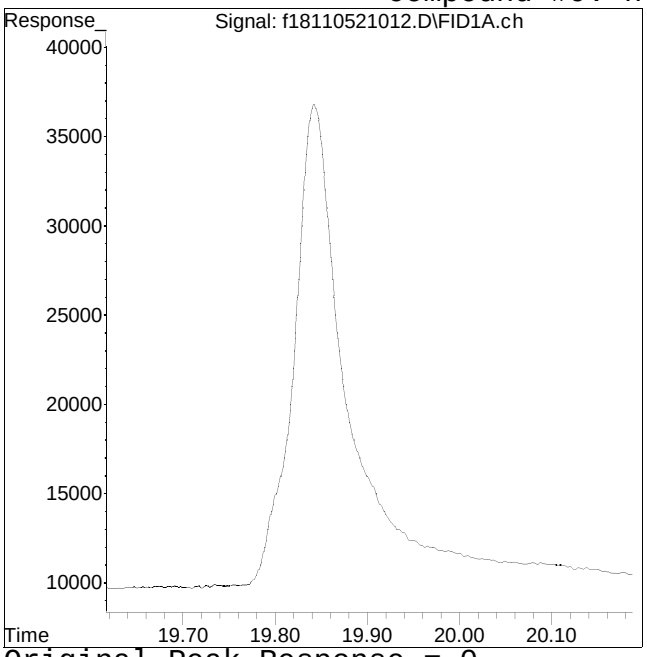
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

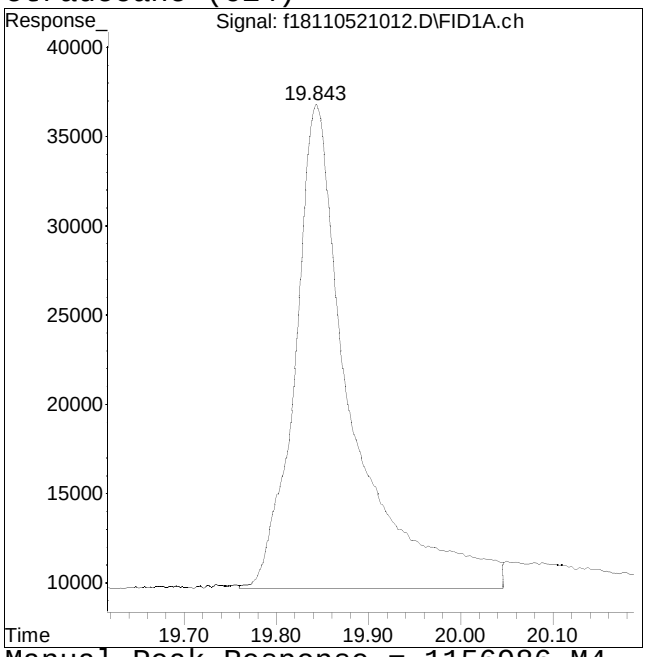
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 0



Manual Peak Response = 1156986 M4

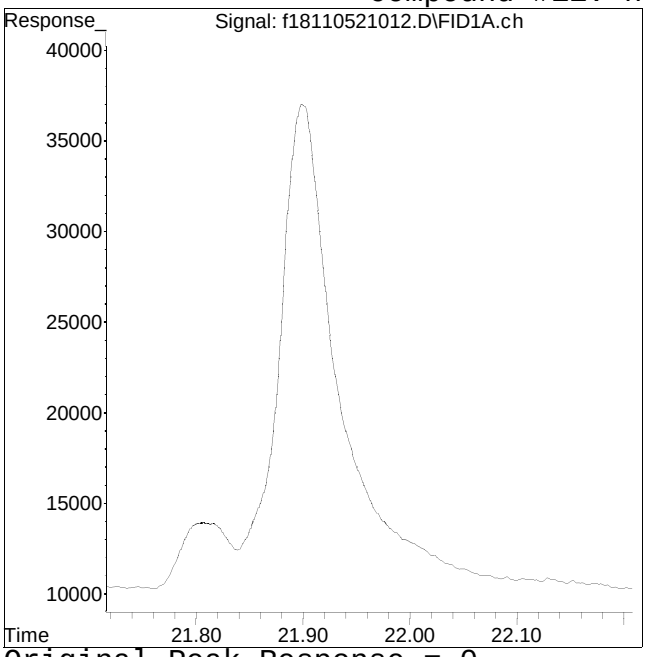
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

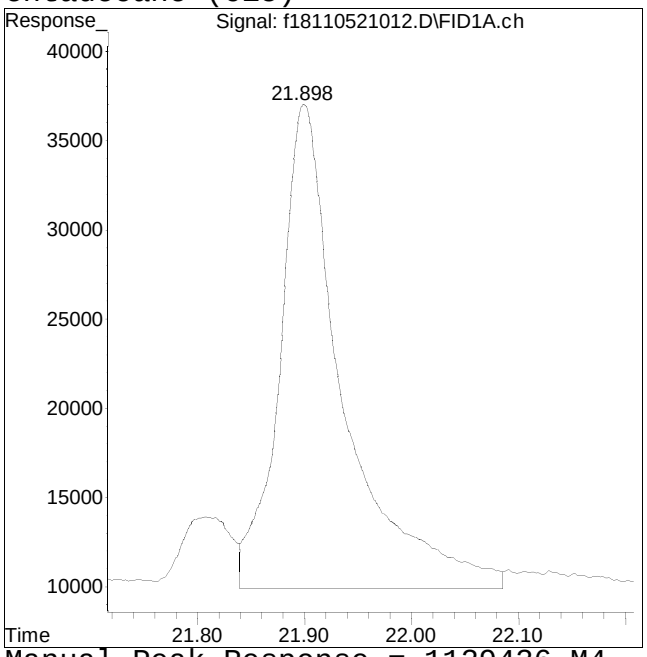
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 0



Manual Peak Response = 1129436 M4

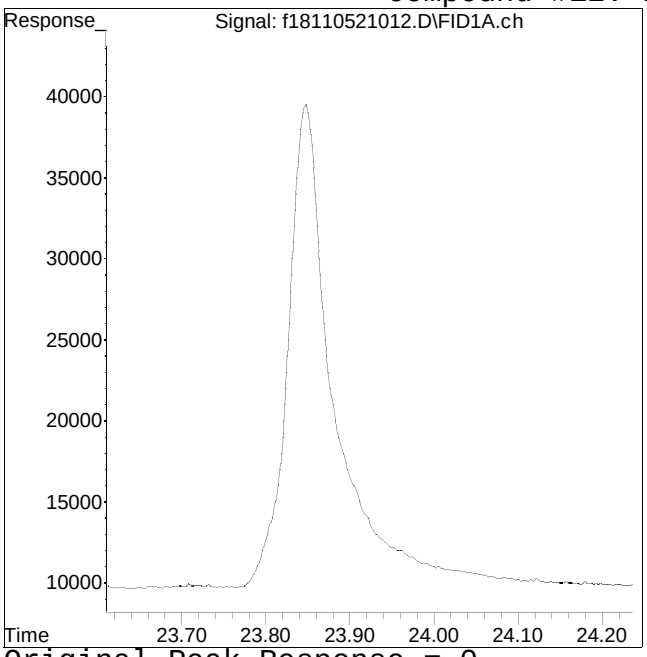
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

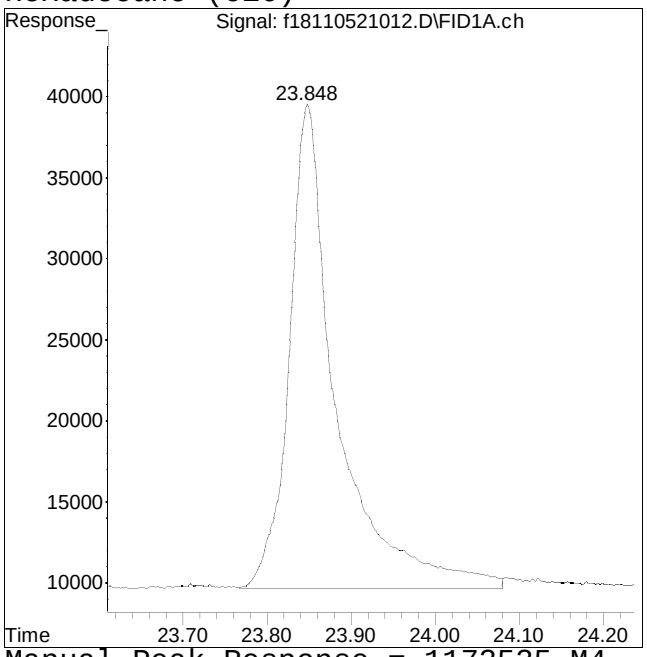
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 0



Manual Peak Response = 1173535 M4

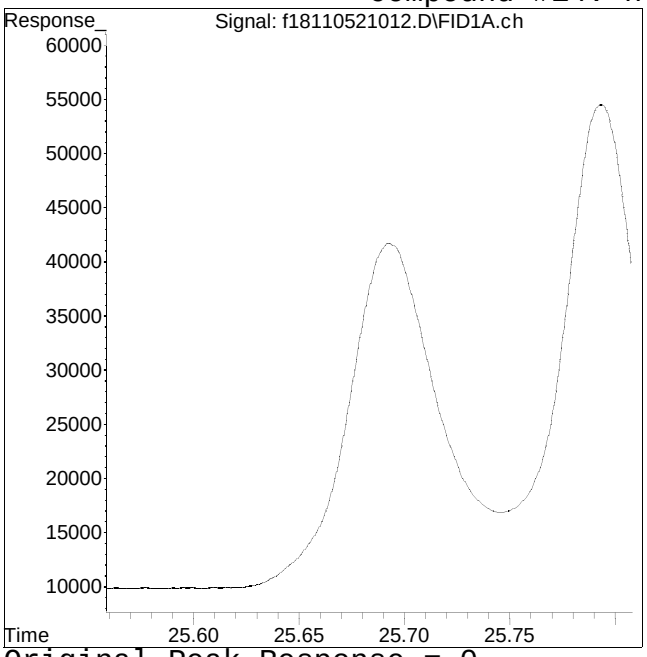
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

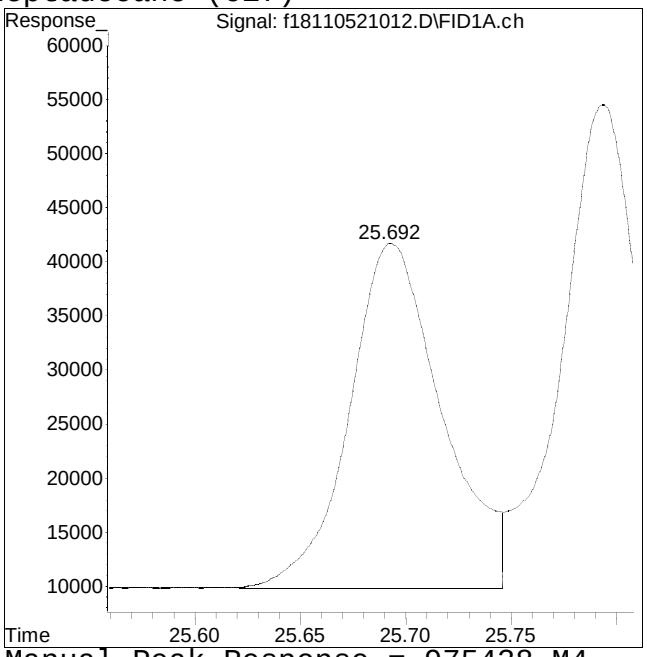
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 0



Manual Peak Response = 975438 M4

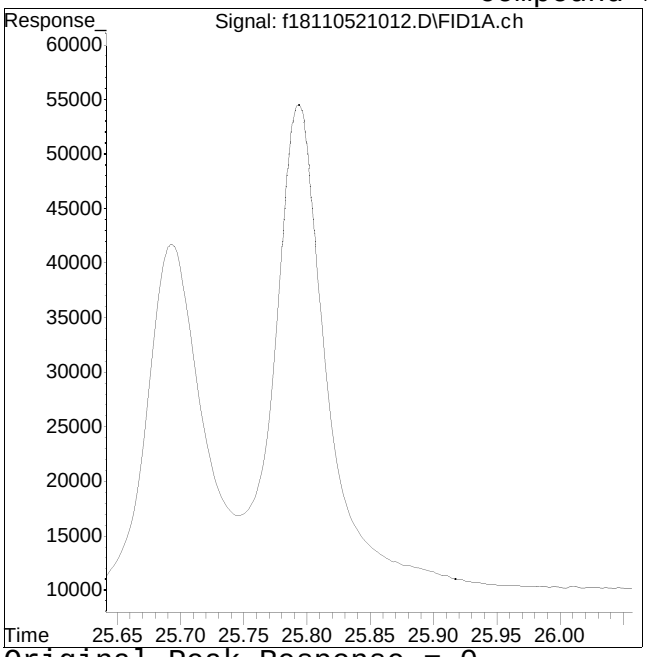
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

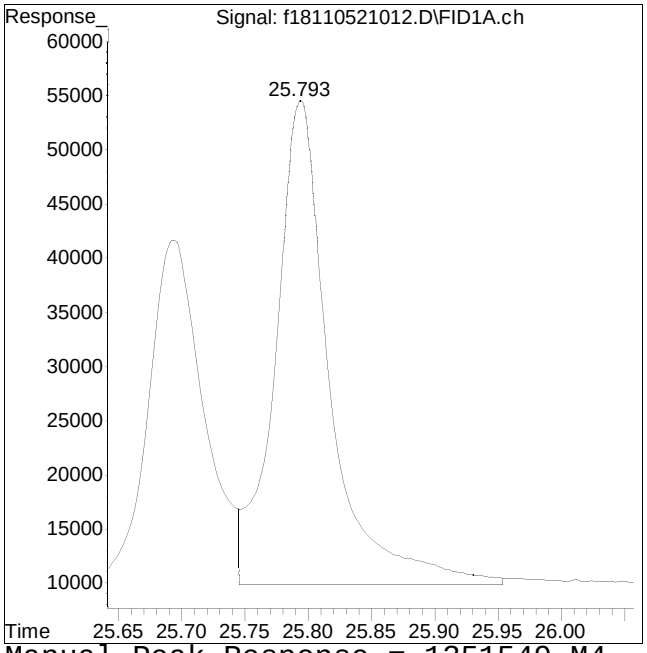
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #15: Pristane



Original Peak Response = 0



Manual Peak Response = 1351549 M4

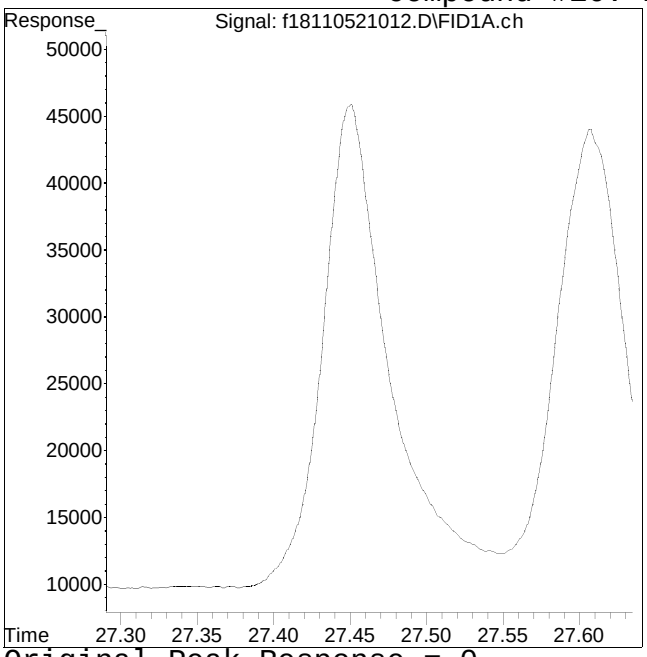
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

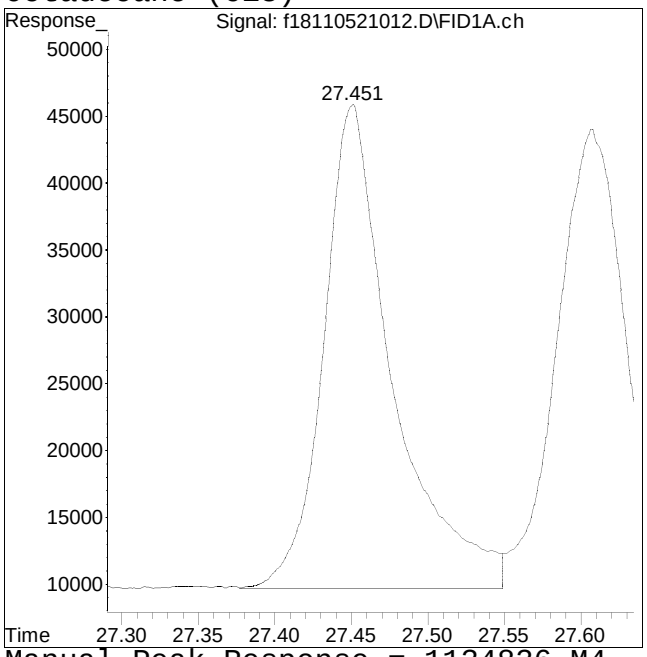
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 0



Manual Peak Response = 1134836 M4

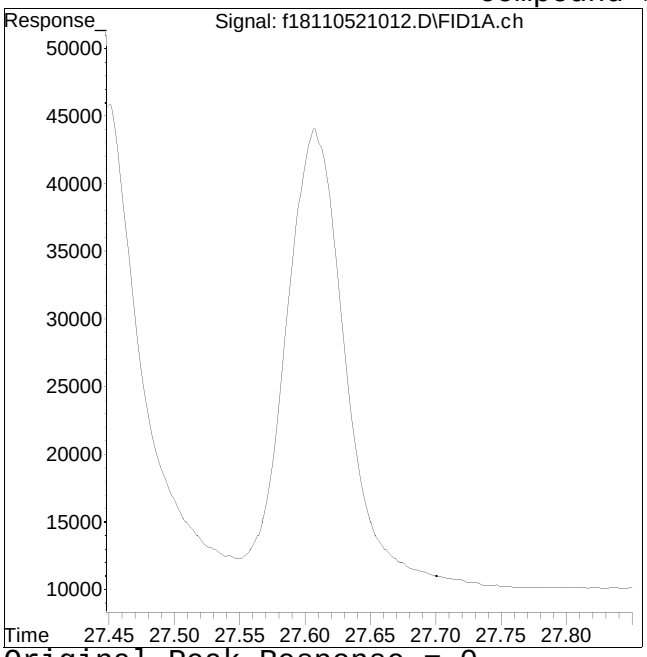
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

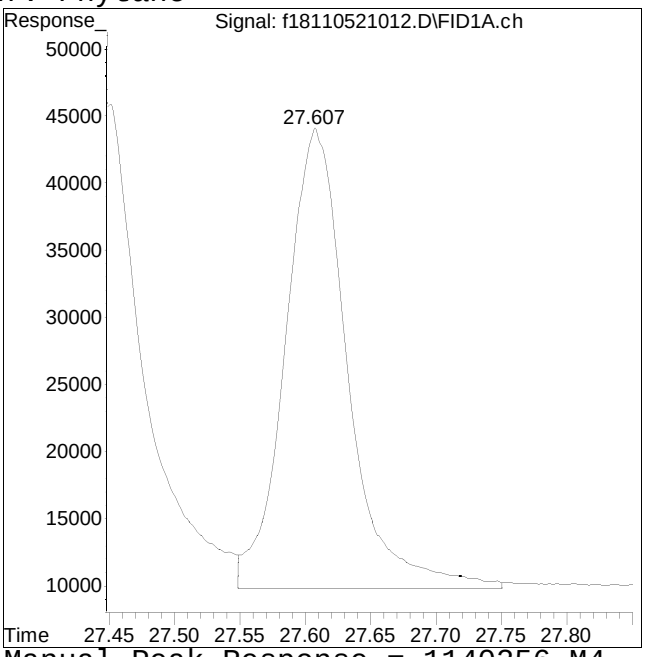
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #17: Phytane



Original Peak Response = 0



Manual Peak Response = 1140256 M4

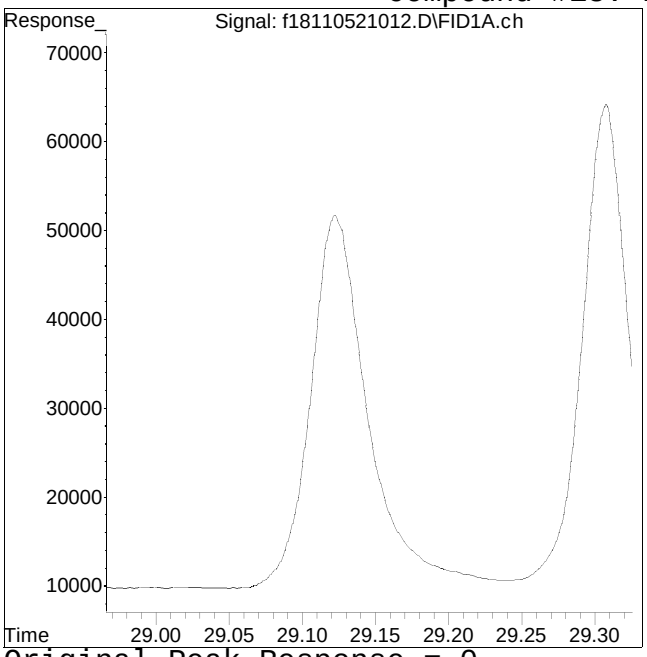
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

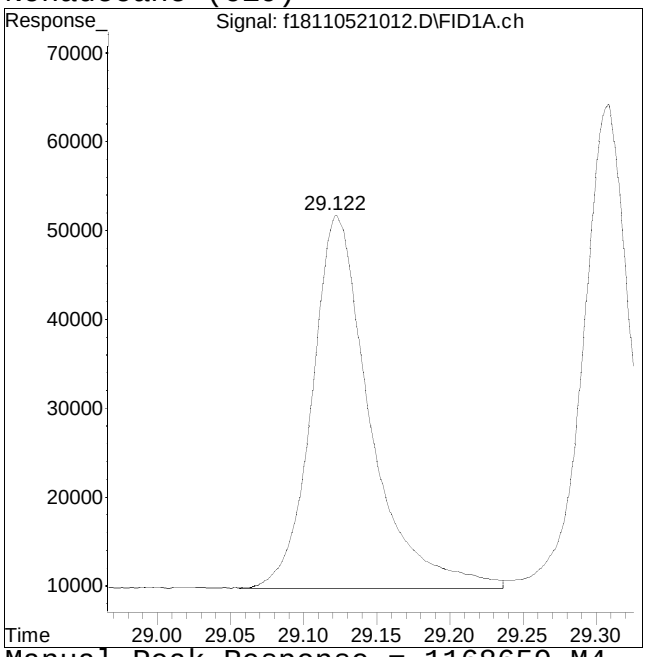
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 0



Manual Peak Response = 1168659 M4

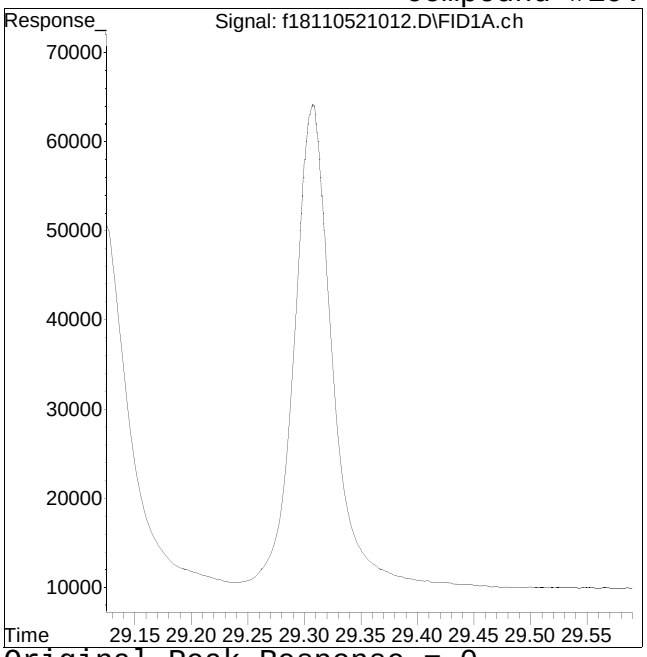
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

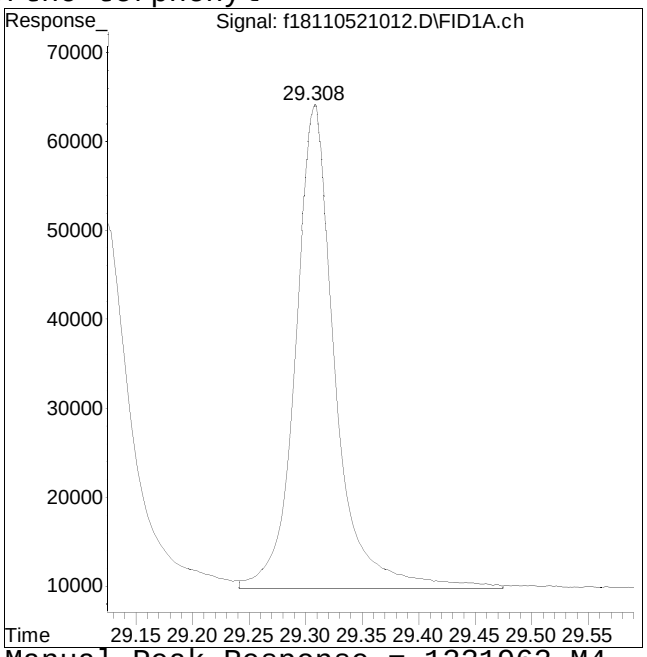
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #19: ortho-terphenyl



Original Peak Response = 0



Manual Peak Response = 1331963 M4

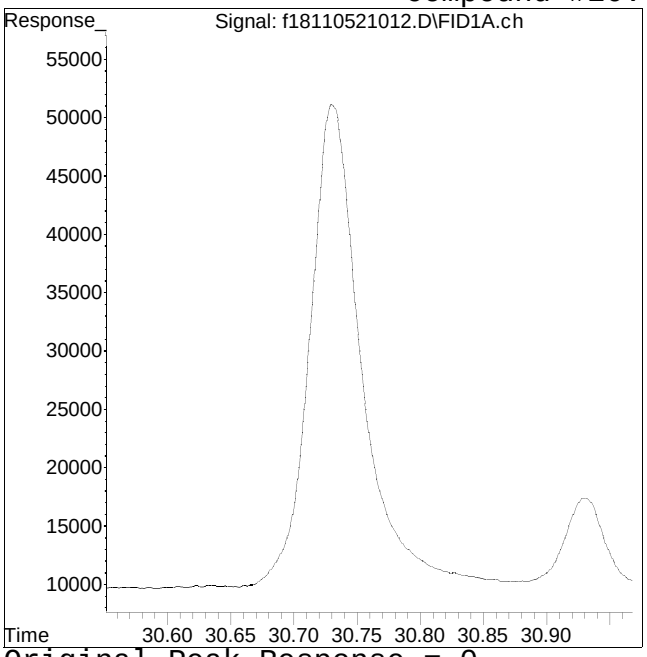
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

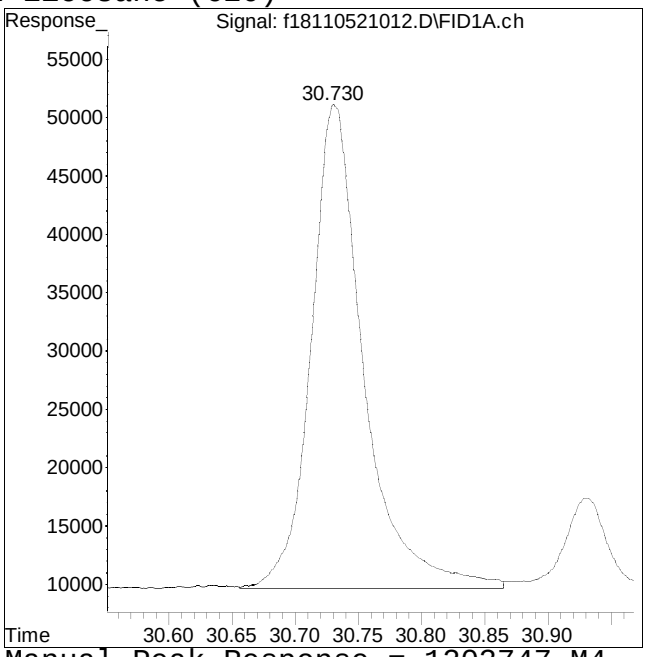
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 0



Manual Peak Response = 1203747 M4

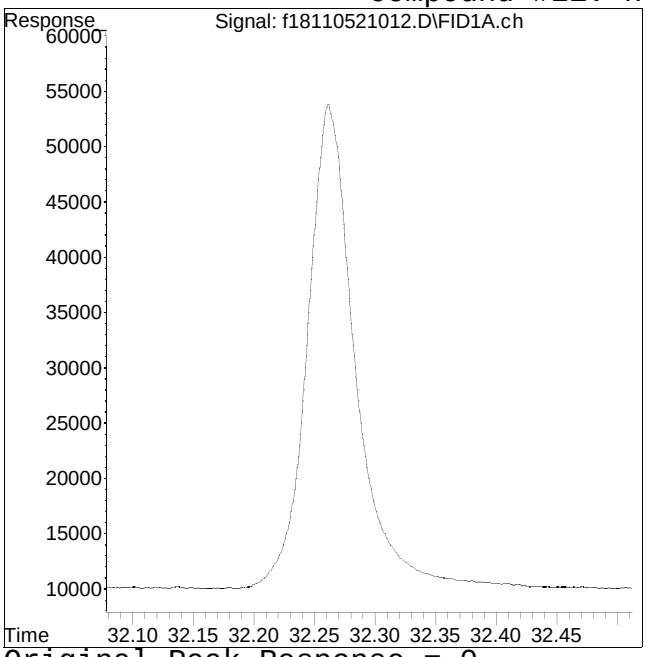
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

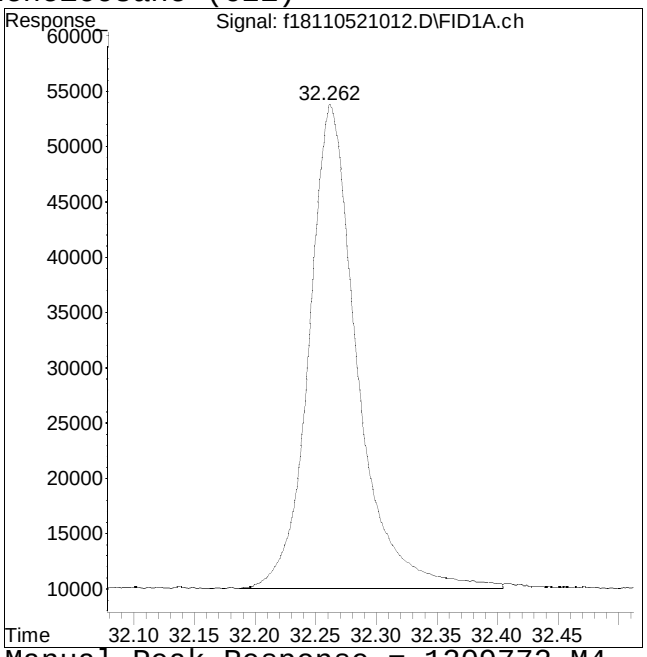
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 0



Manual Peak Response = 1209772 M4

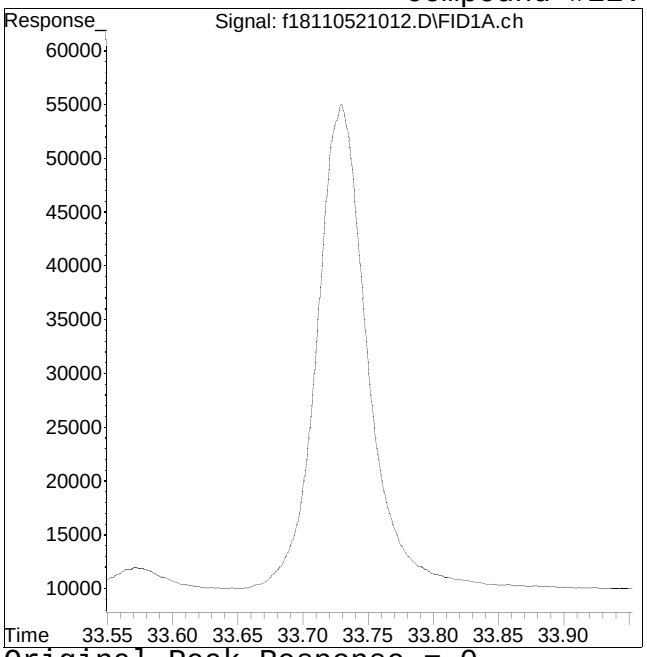
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

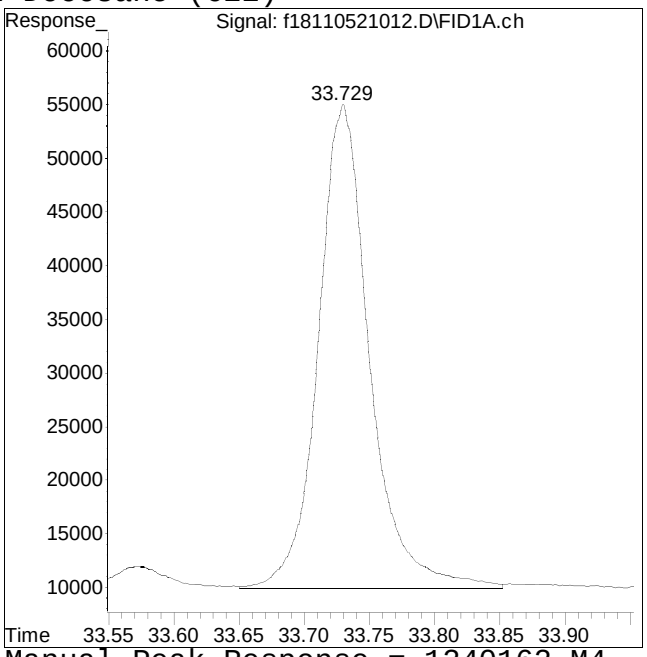
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #22: n-Docosane (C22)



Original Peak Response = 0



Manual Peak Response = 1240162 M4

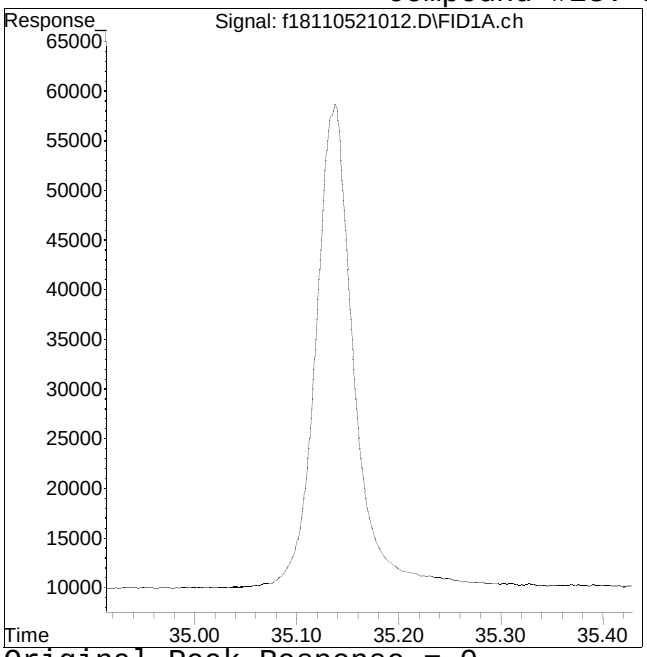
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

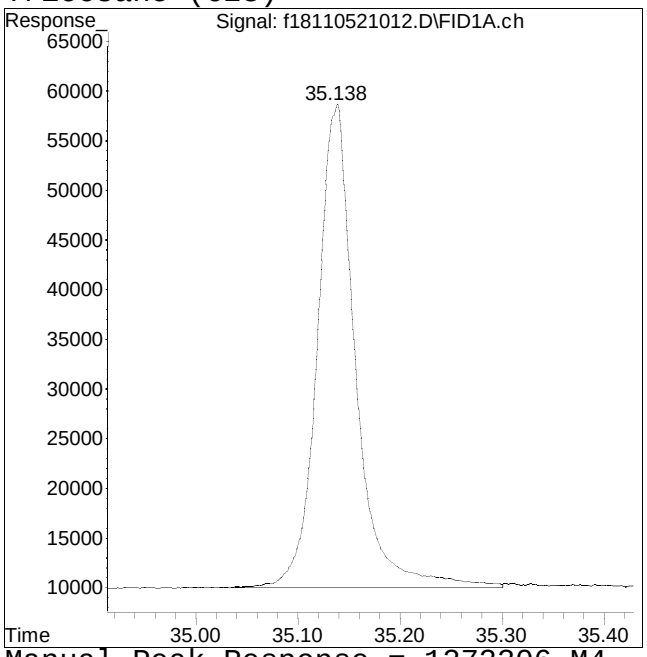
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 0



Manual Peak Response = 1273306 M4

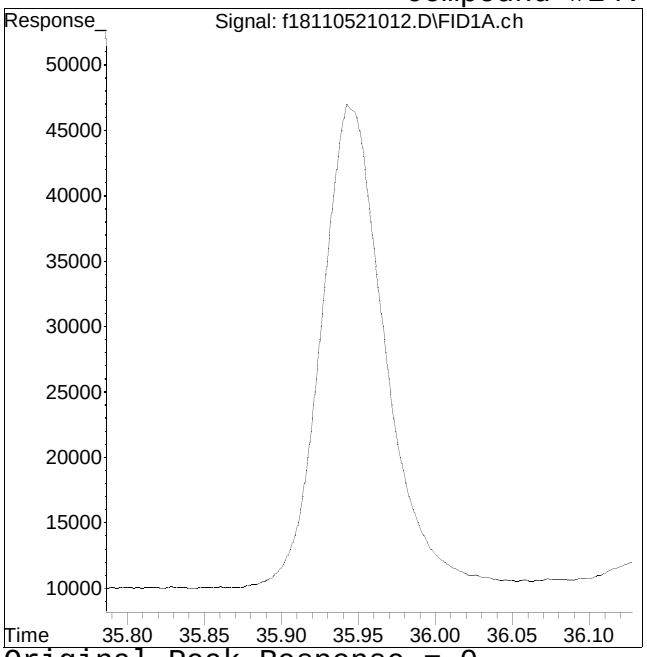
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

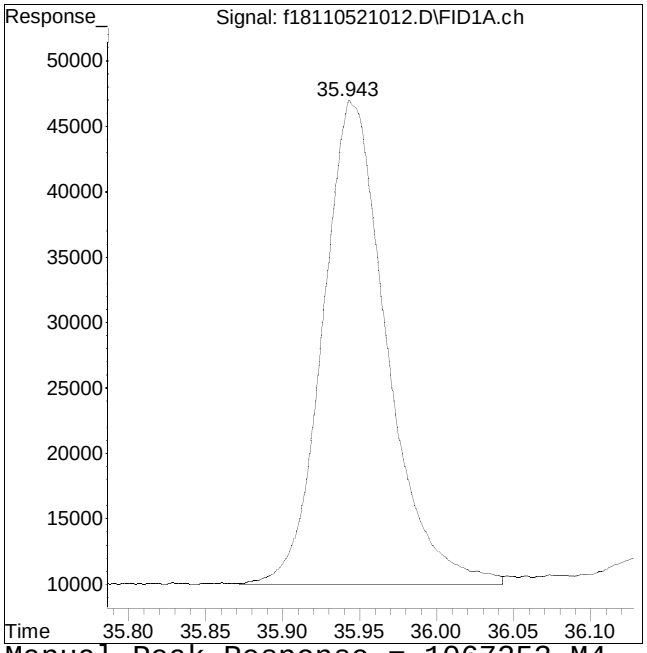
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #24: d50-Tetracosane



Original Peak Response = 0



Manual Peak Response = 1067253 M4

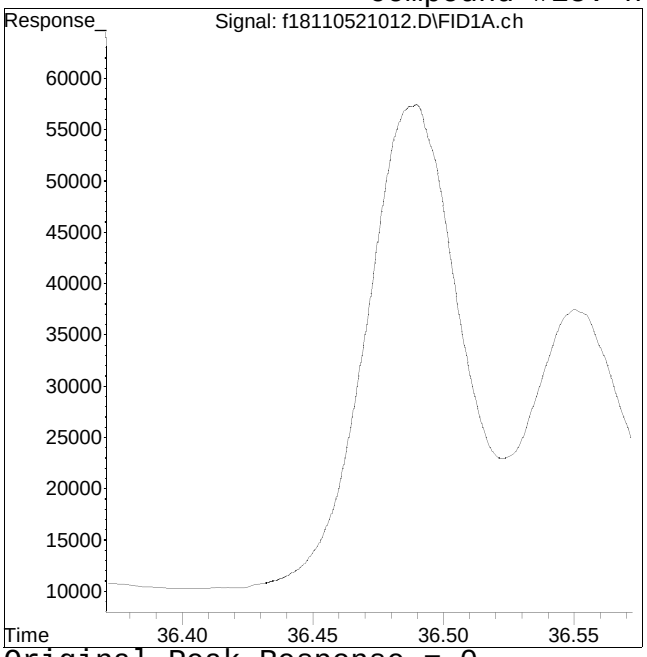
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

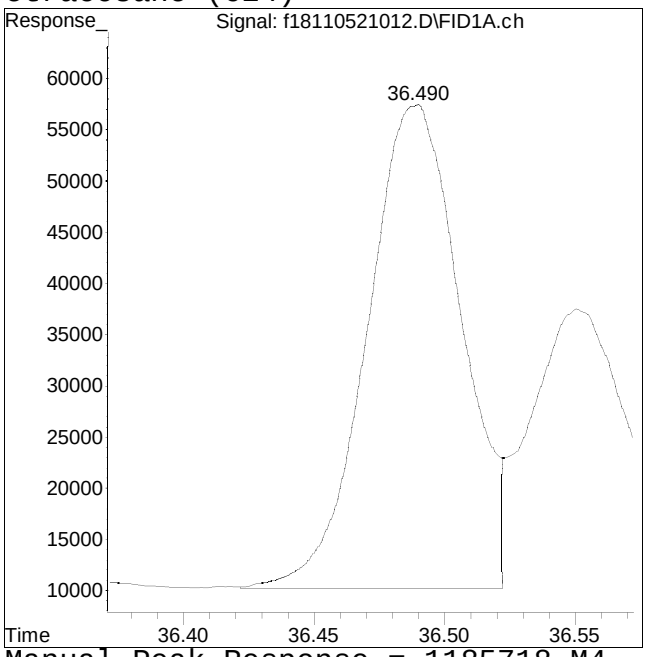
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 0



Manual Peak Response = 1185718 M4

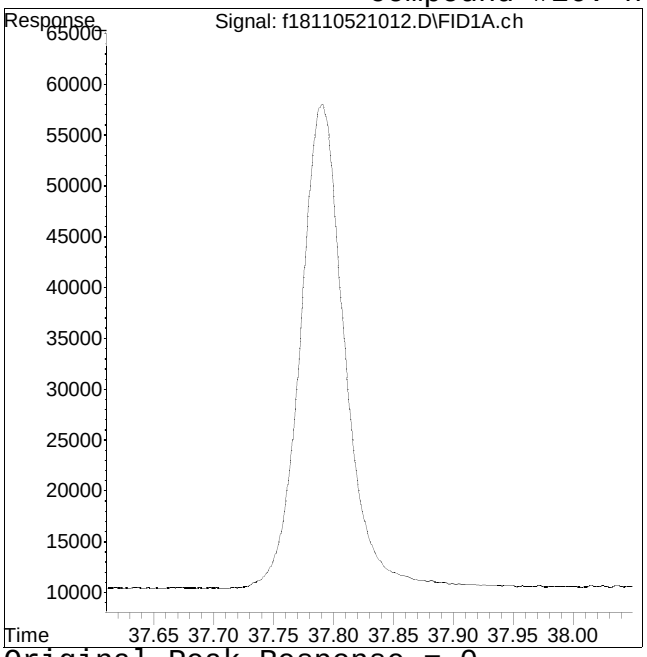
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

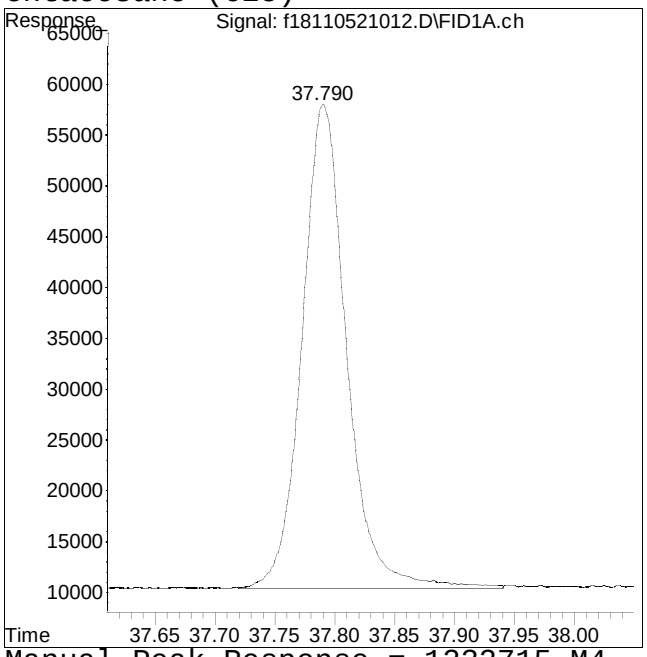
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 0



Manual Peak Response = 1232715 M4

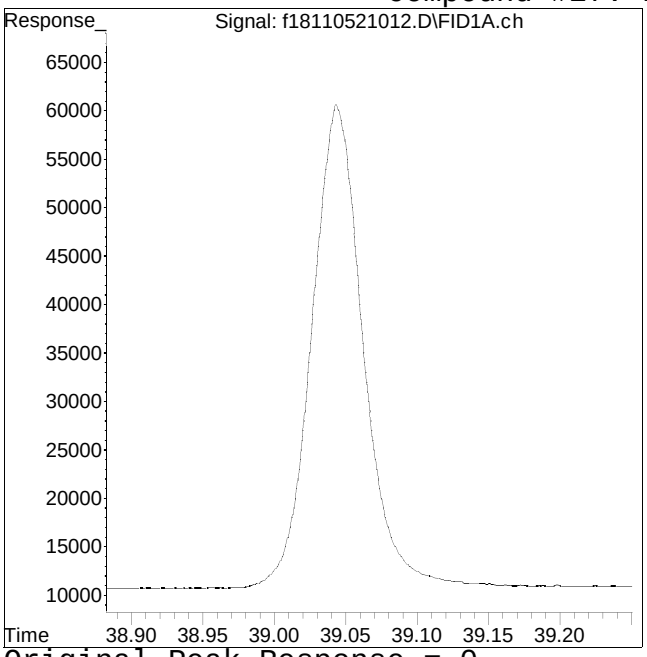
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

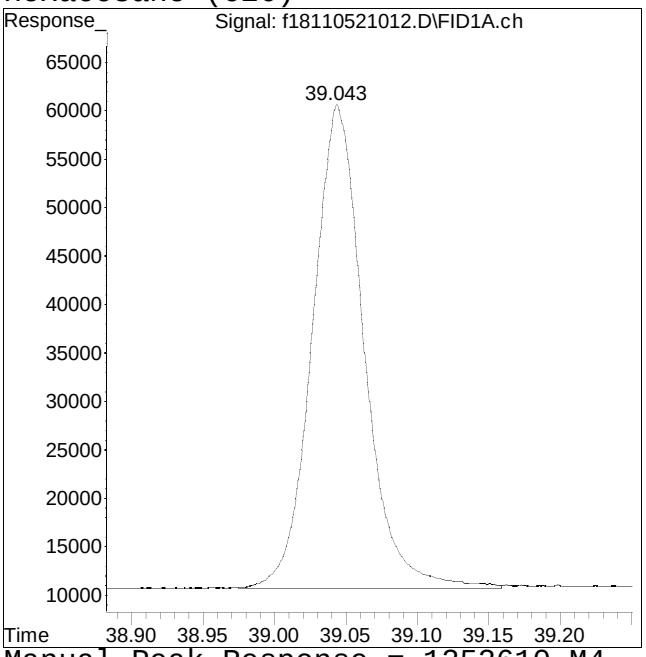
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 0



Manual Peak Response = 1252610 M4

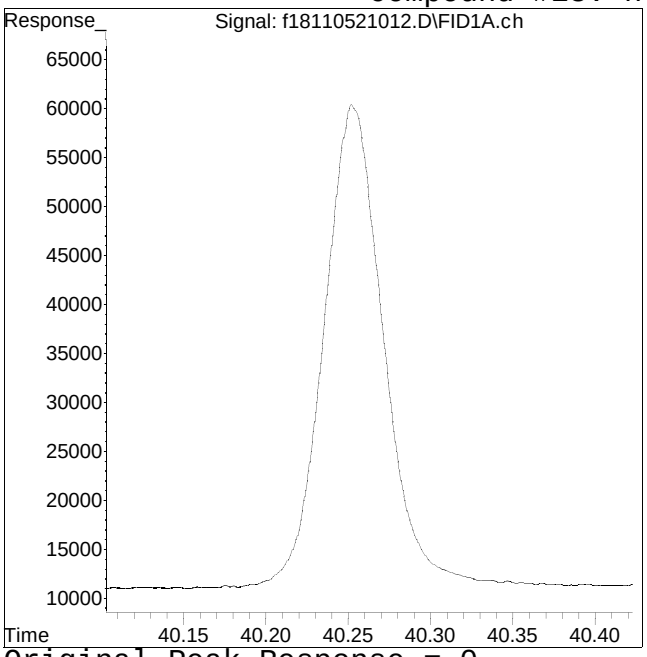
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

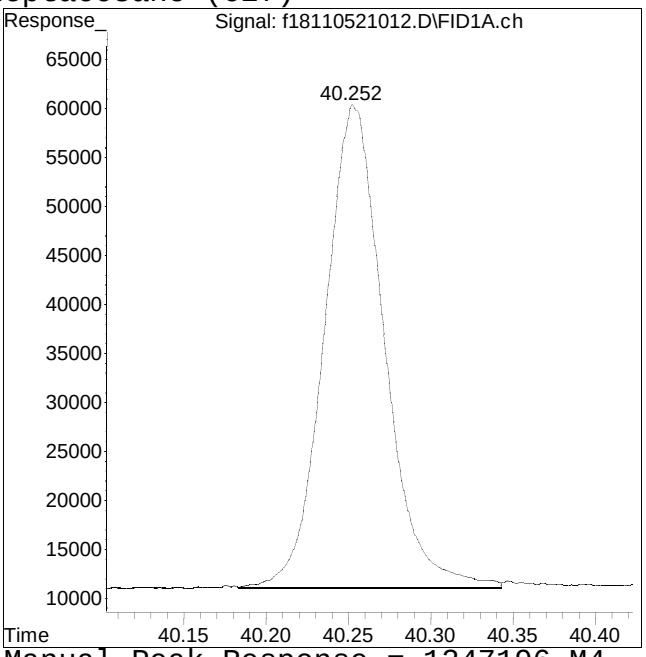
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 0



Manual Peak Response = 1247196 M4

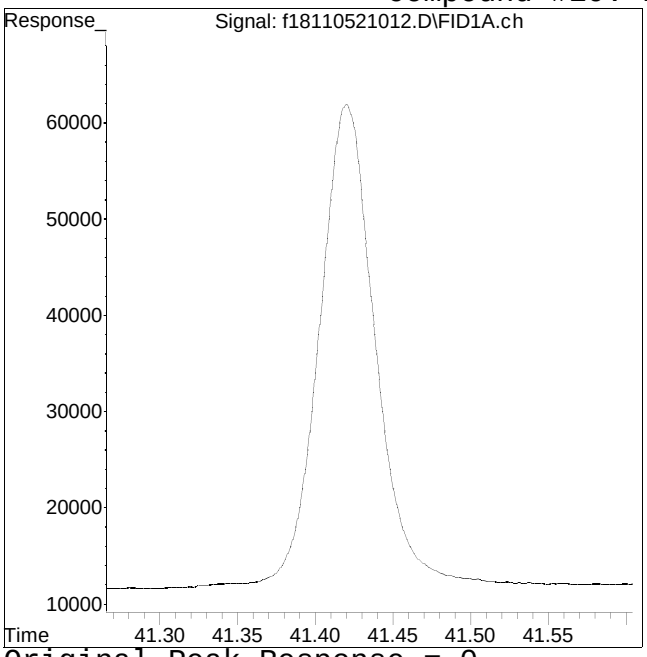
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

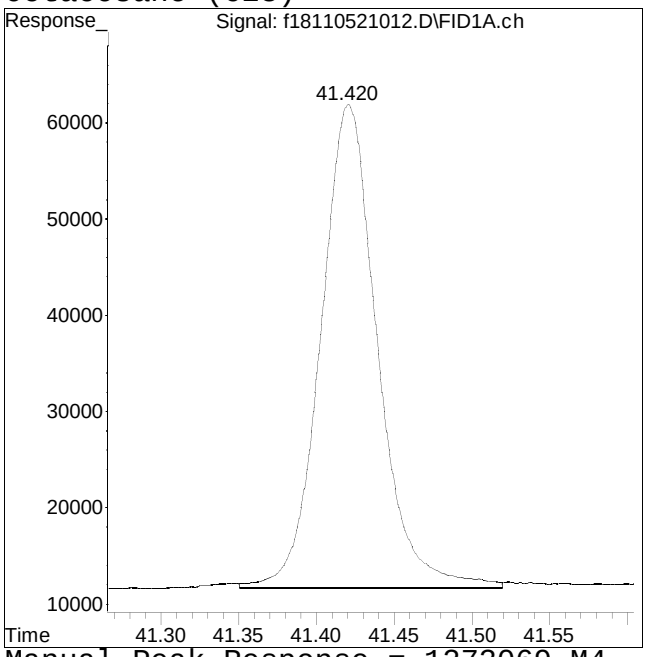
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 0



Manual Peak Response = 1273069 M4

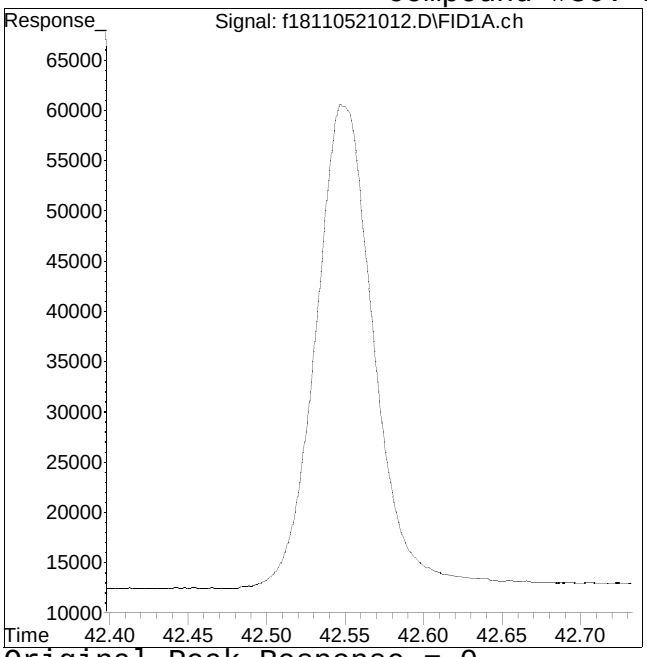
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

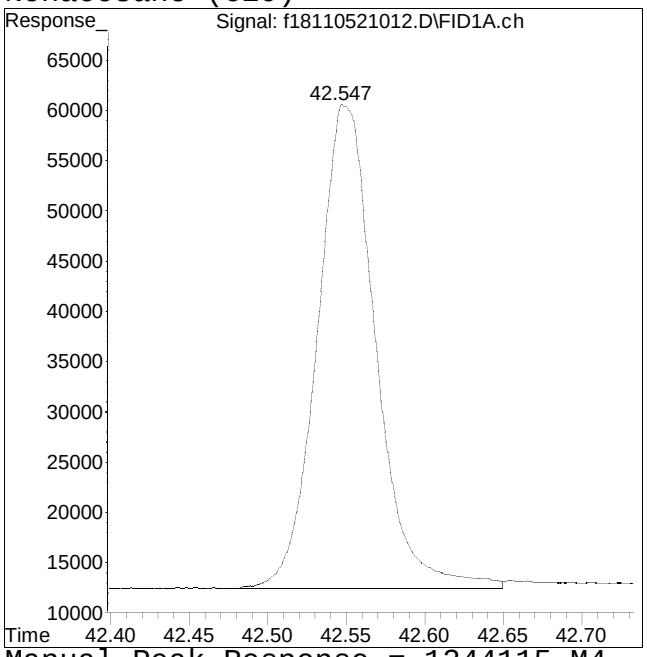
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 0



Manual Peak Response = 1244115 M4

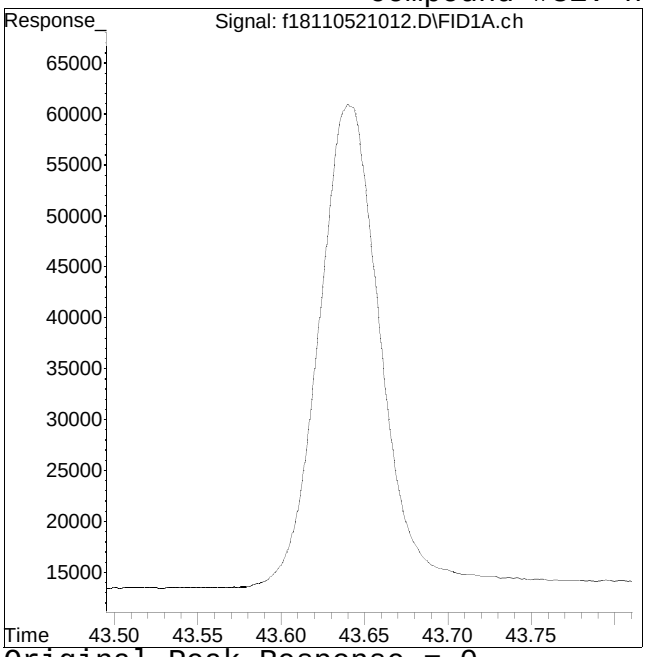
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

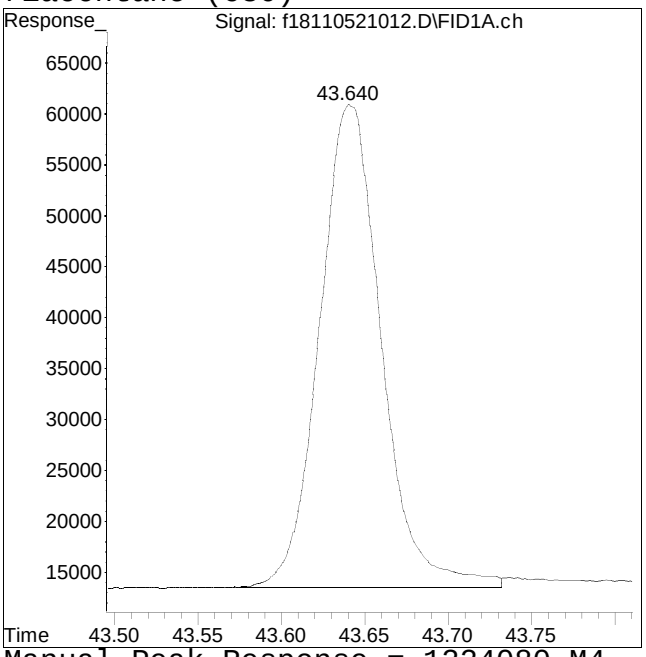
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 0



Manual Peak Response = 1224080 M4

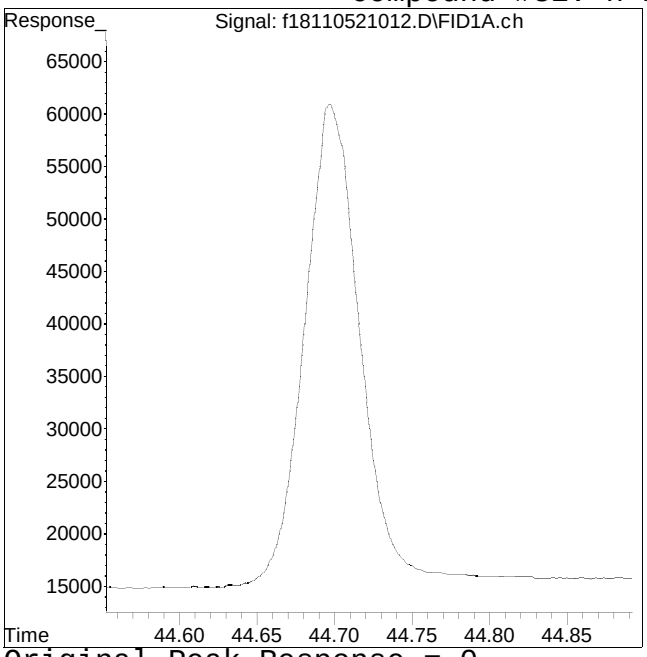
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

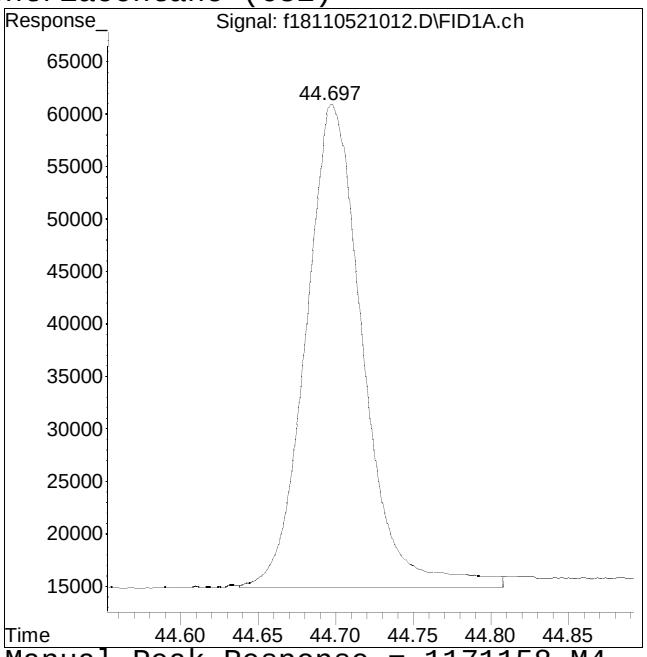
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 0



Manual Peak Response = 1171158 M4

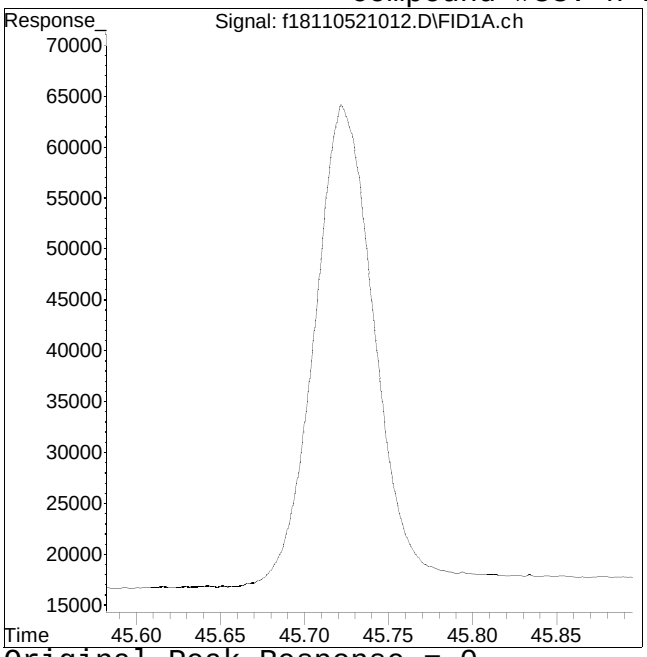
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

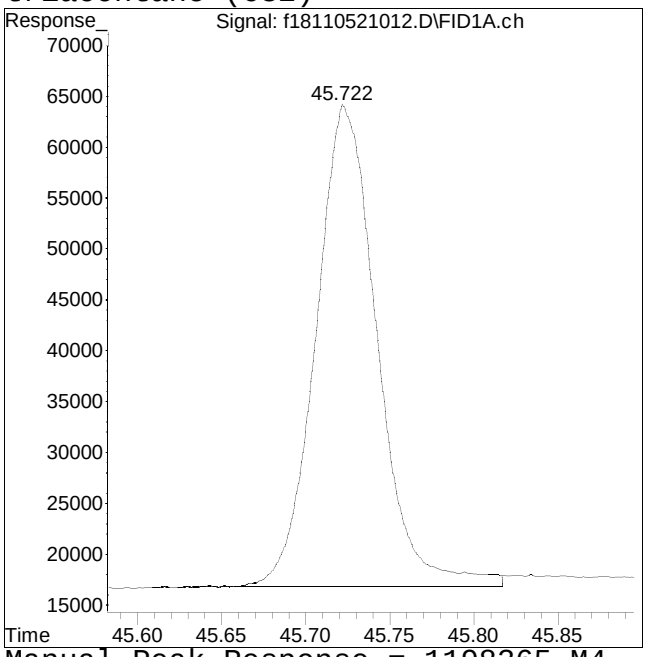
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 0



Manual Peak Response = 1198365 M4

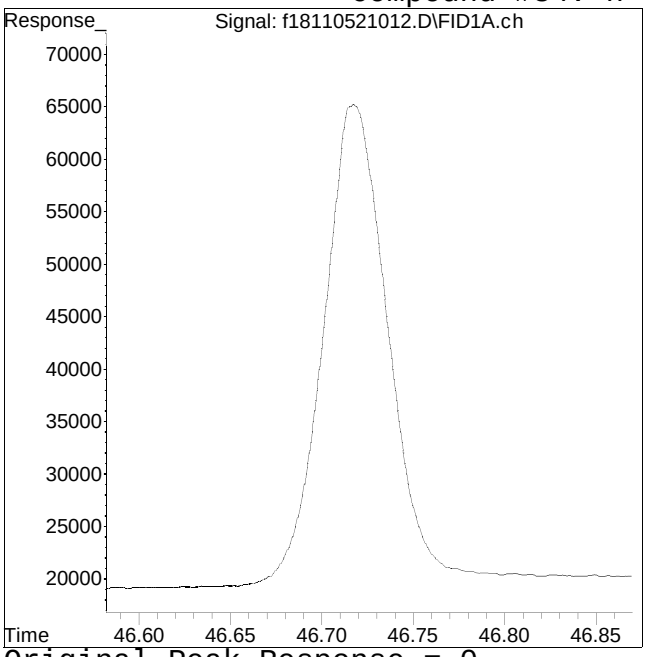
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

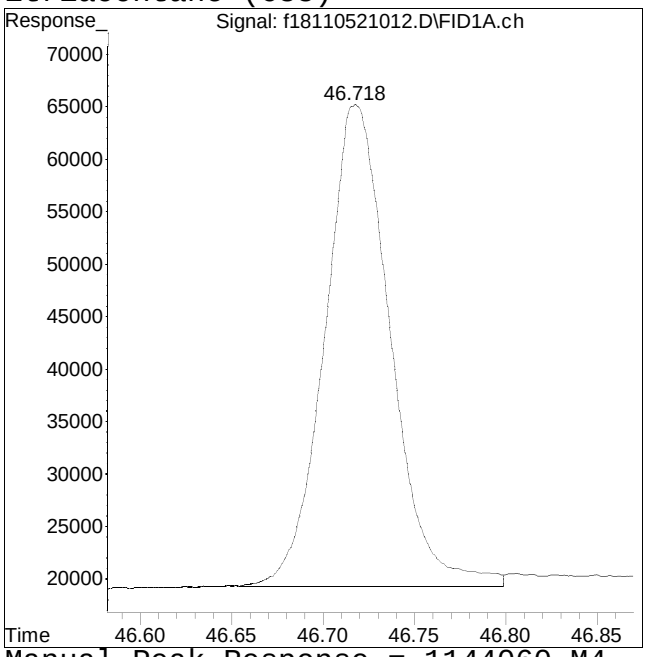
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 0



Manual Peak Response = 1144060 M4

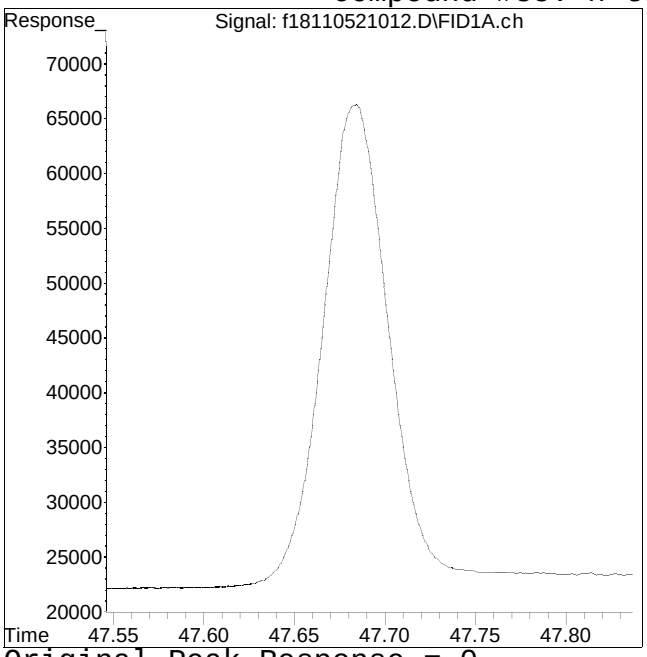
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

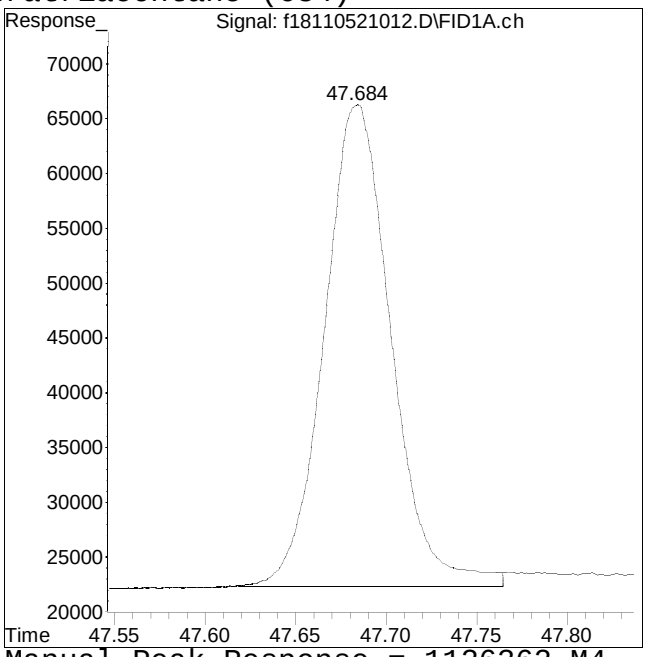
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 0



Manual Peak Response = 1126362 M4

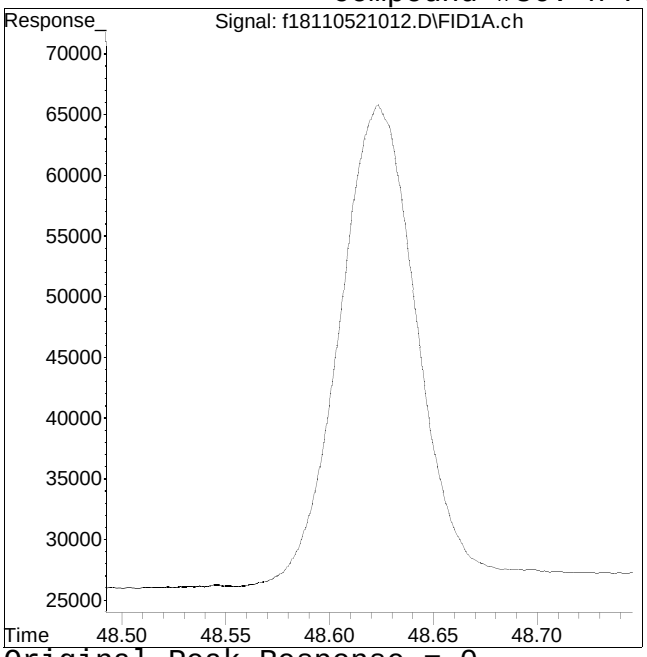
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

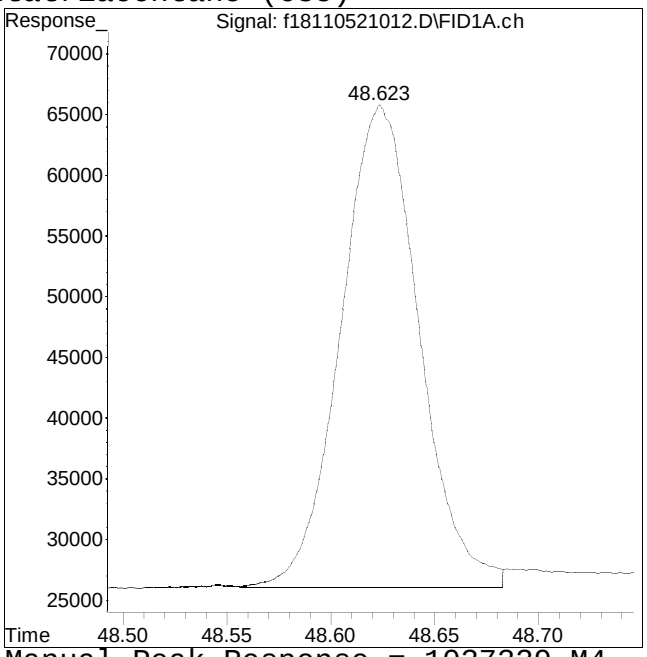
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 0



Manual Peak Response = 1037339 M4

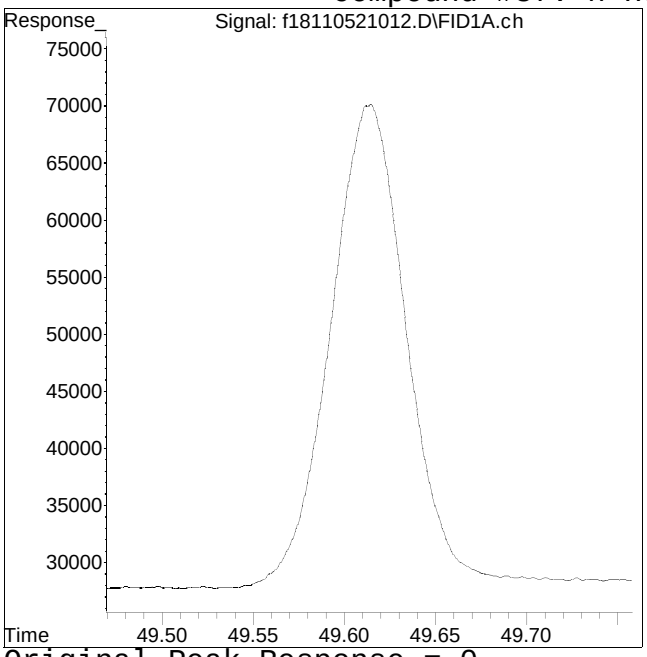
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

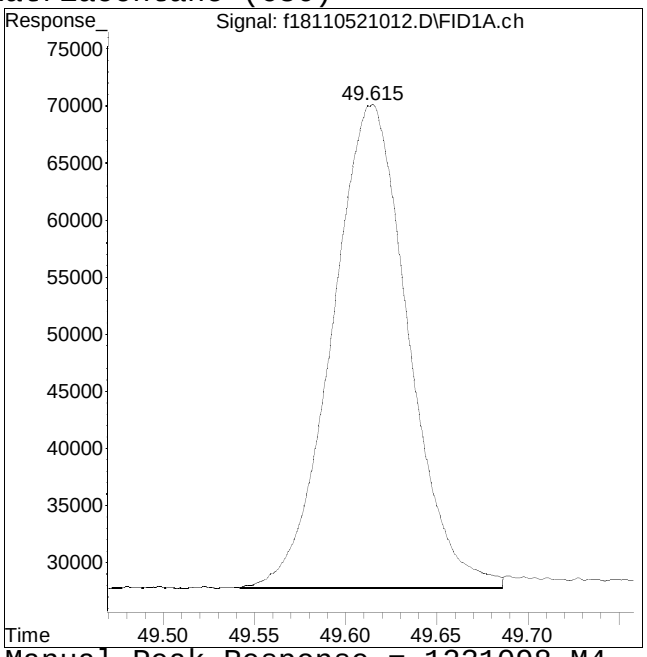
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 0



Manual Peak Response = 1231098 M4

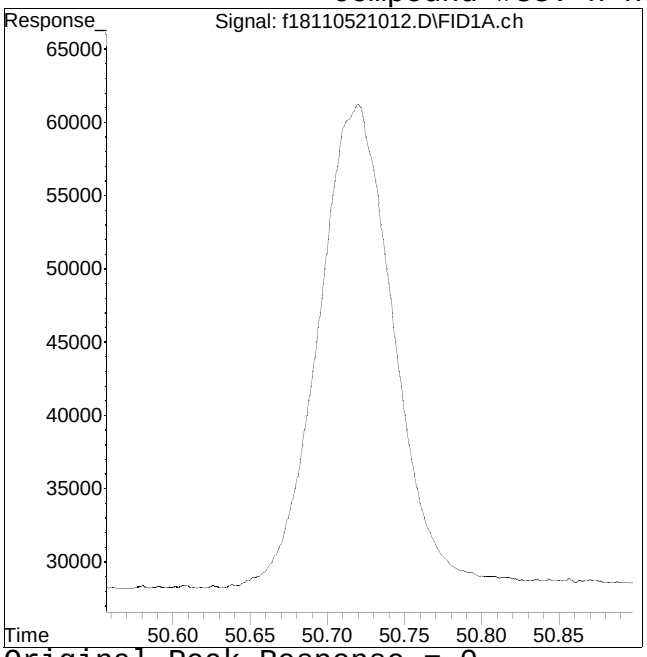
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

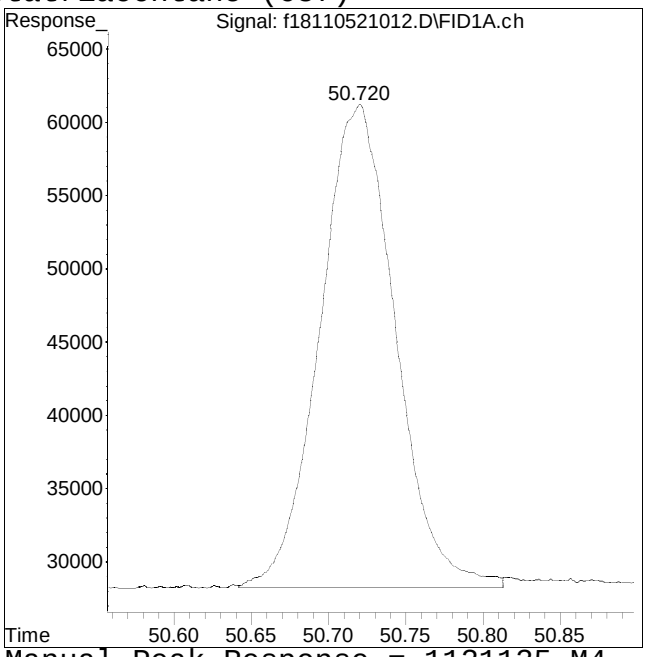
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 0



Manual Peak Response = 1121135 M4

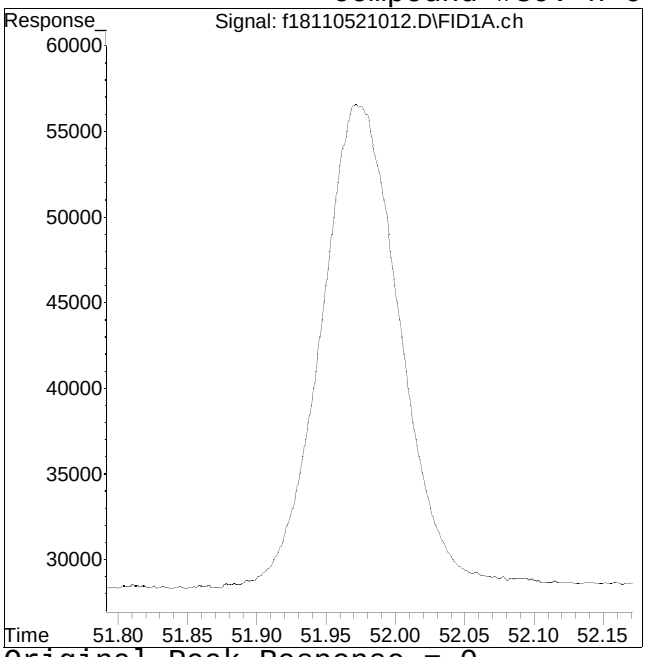
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

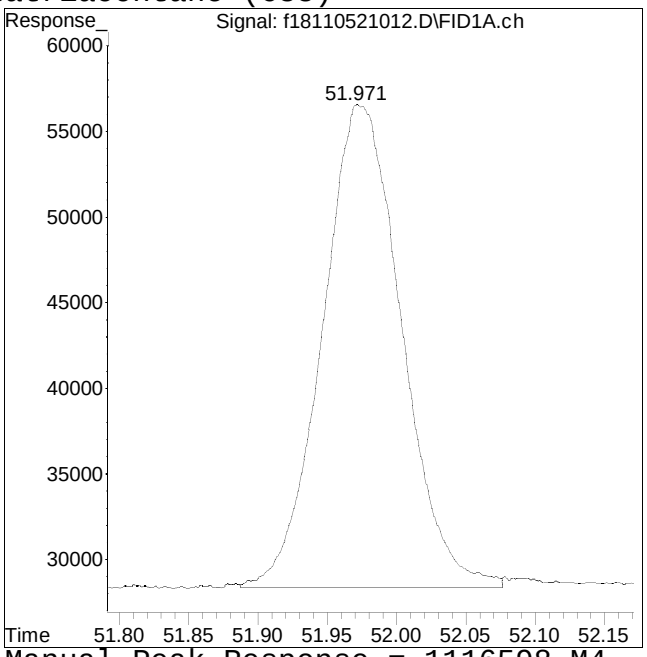
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 1116598 M4

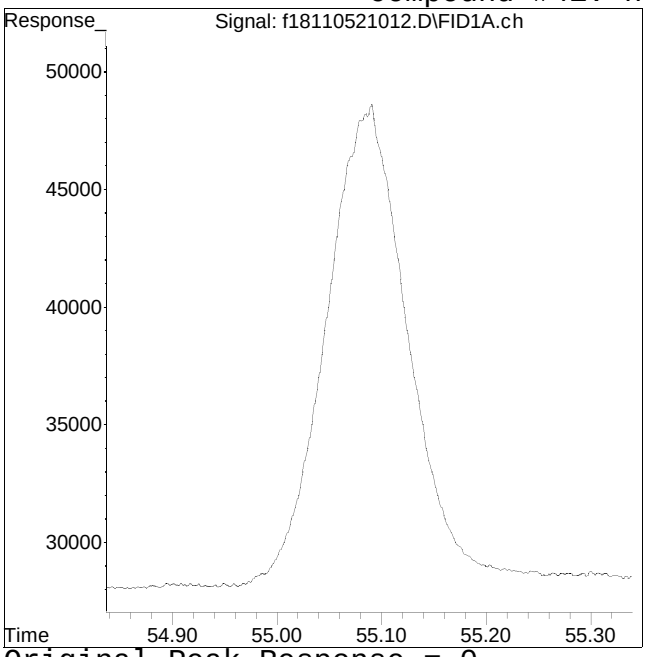
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

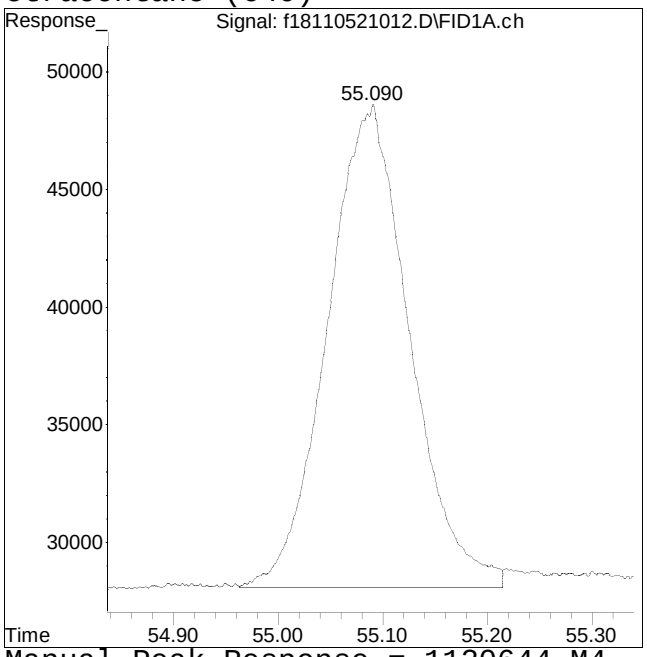
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521012.D
Date Inj'd : 11/5/2021 7:59 pm
Sample : I1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:31 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 1120644 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521014.D
Signal(s) : FID1A.ch
Acq On : 05 Nov 2021 09:25 pm
Operator : FID18:WR
Sample : I1811052102F
Misc : WG1581201,FRBD78,10ug/ml
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 09:47:14 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 09:41:12 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.340	59061060	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.309	12685252	9.247	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	18.49%#		
24) s	d50-Tetracosane	35.946	10464331	9.365	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	18.73%#		
	Target Compounds					
2) t	n-Octane (C8)	5.756	9568348	9.676	ug/mL	M4
3) t	n-Nonane (C9)	7.972	9575049	9.667	ug/mL	M4
4) t	n-Decane (C10)	10.452	9041438	9.542	ug/mL	M4
5) t	n-Undecane (C11)	12.952	9799659	9.891	ug/mL	M4
6) t	n-Dodecane (C12)	15.366	10047257	9.536	ug/mL	M4
7) t	n-Tridecane (C13)	17.661	10310737	9.539	ug/mL	M4
9) t	n-Tetradecane (C14)	19.832	10610937	9.402	ug/mL	M4
11) t	n-Pentadecane (C15)	21.890	11025545	9.896	ug/mL	M4
12) t	n-Hexadecane (C16)	23.838	11195315	9.727	ug/mL	M4
14) t	n-Heptadecane (C17)	25.687	10801583	10.211	ug/mL	M4
15) t	Pristane	25.794	12287589	9.771	ug/mL	M4
16) t	n-Octadecane (C18)	27.447	11508465	9.941	ug/mL	M4
17) t	Phytane	27.608	10992168	9.889	ug/mL	M4
18) t	n-Nonadecane (C19)	29.125	11606683	9.948	ug/mL	M4
20) t	n-Eicosane (C20)	30.730	11755182	9.860	ug/mL	M4
21) t	n-Heneicosane (C21)	32.260	11930541	9.988	ug/mL	M4
22) t	n-Docosane (C22)	33.728	11981969	9.816	ug/mL	M4
23) t	n-Tricosane (C23)	35.136	12054595	9.716	ug/mL	M4
25) t	n-Tetracosane (C24)	36.488	12601200	10.763	ug/mL	M4
26) t	n-Pentacosane (C25)	37.791	11859181	9.781	ug/mL	M4
27) t	n-Hexacosane (C26)	39.047	12200715	9.819	ug/mL	M4
28) t	n-Heptacosane (C27)	40.256	12247902	10.039	ug/mL	M4
29) t	n-Octacosane (C28)	41.423	12510571	9.934	ug/mL	M4
30) t	n-Nonacosane (C29)	42.553	12467884	10.023	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521014.D
Signal(s) : FID1A.ch
Acq On : 05 Nov 2021 09:25 pm
Operator : FID18:WR
Sample : I1811052102F
Misc : WG1581201,FRBD78,10ug/ml
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 09:47:14 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 09:41:12 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

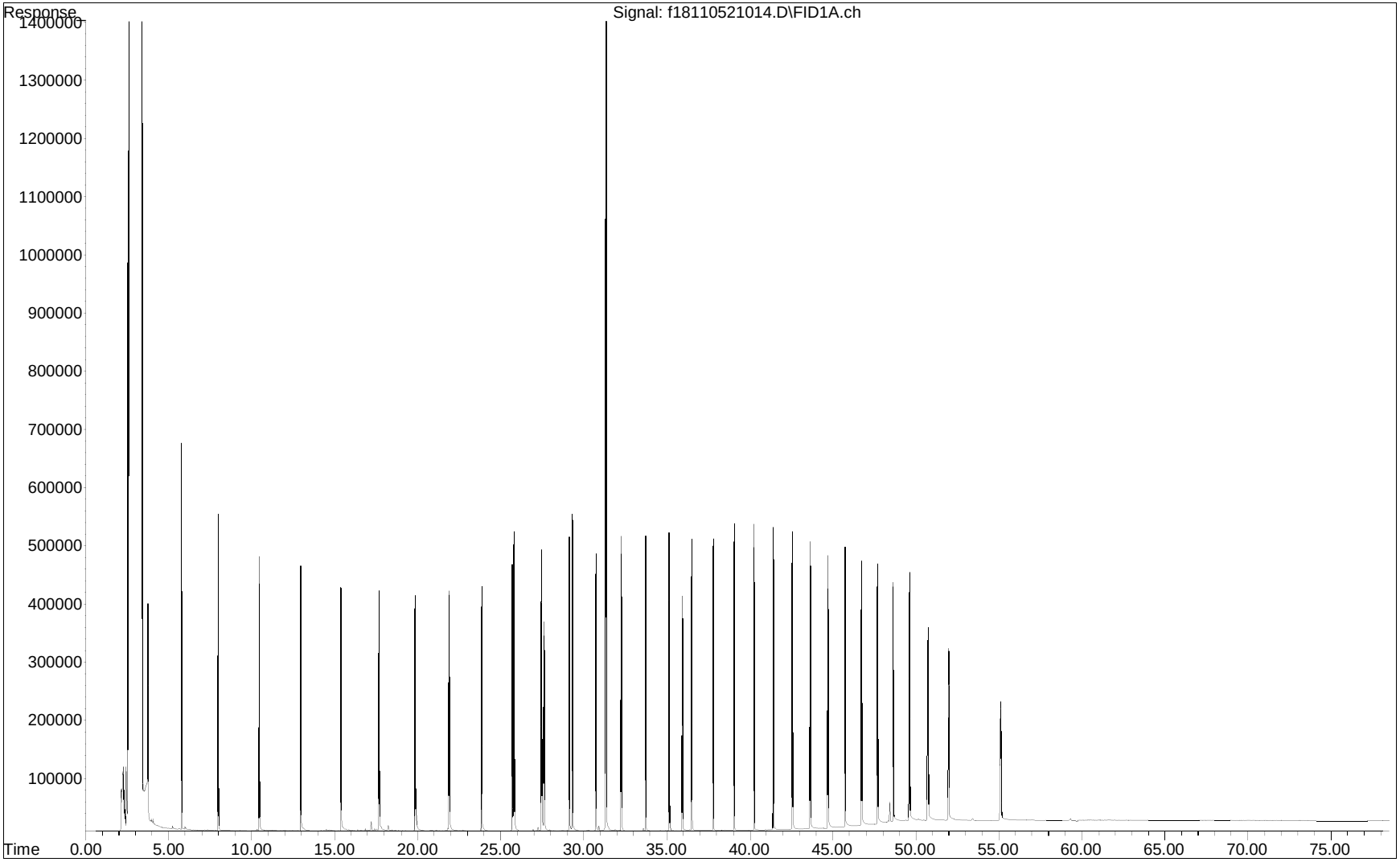
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.648	12558841	10.167 ug/mL M4
32) t	n-Hentriacontane (C31)	44.702	12109685	10.182 ug/mL M4
33) t	n-Dotriacontane (C32)	45.730	12630348	10.340 ug/mL M4
34) t	n-Tritriacontane (C33)	46.725	12235754	10.418 ug/mL M4
35) t	n-tetratriacontane (C34)	47.690	12008205	10.378 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.629	11253331	10.021 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.622	13281831	10.556 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.723	12016365	10.460 ug/mL M4
39) t	n-Octatriacontane (C38)	51.983	12167430	10.442 ug/mL M4
41) t	n-Tetracontane (C40)	55.095	12077894	10.347 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521014.D
Operator : FID18:WR
Acquired : 05 Nov 2021 09:25 pm using AcqMethod FID18.M
Sample Name: I1811052102F
Instrument: FID 18
Misc Info : WG1581201,FRBD78,10ug/ml
Vial Number: 7
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M

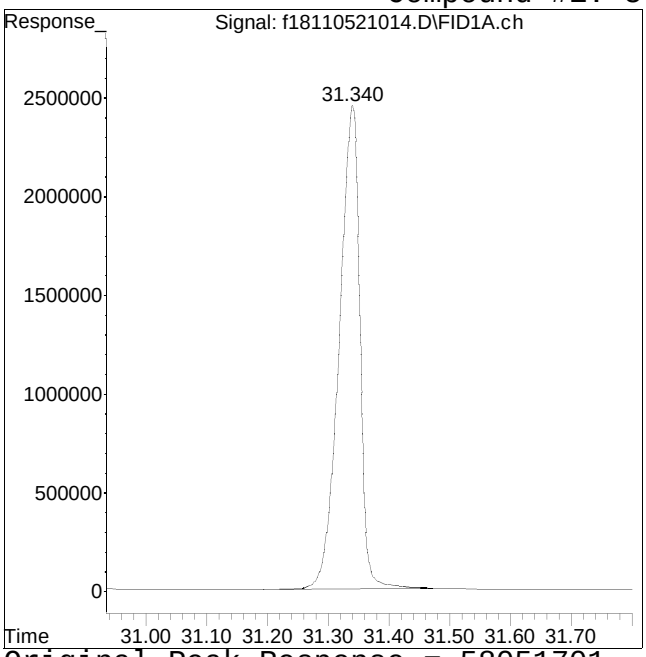


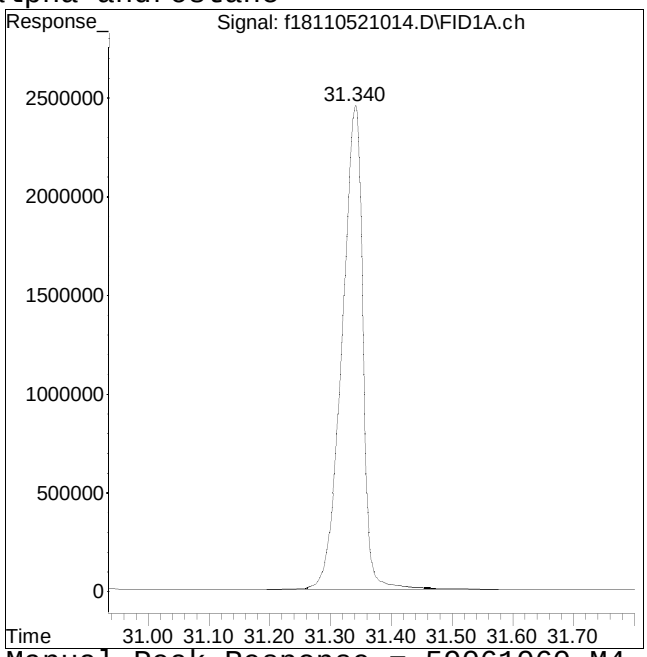
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #1: 5-alpha-androstane





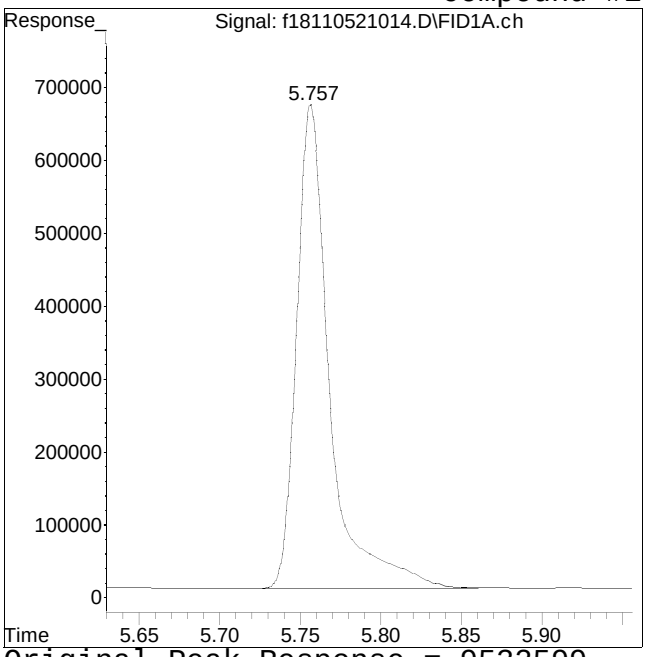
Original Peak Response = 58051701 Manual Peak Response = 59061060 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

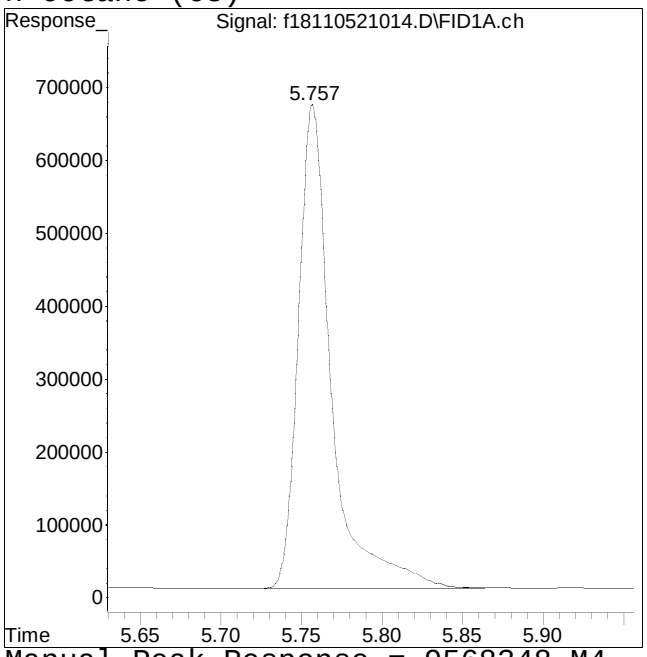
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #2: n-Octane (C8)



Original Peak Response = 9532599



Manual Peak Response = 9568348 M4

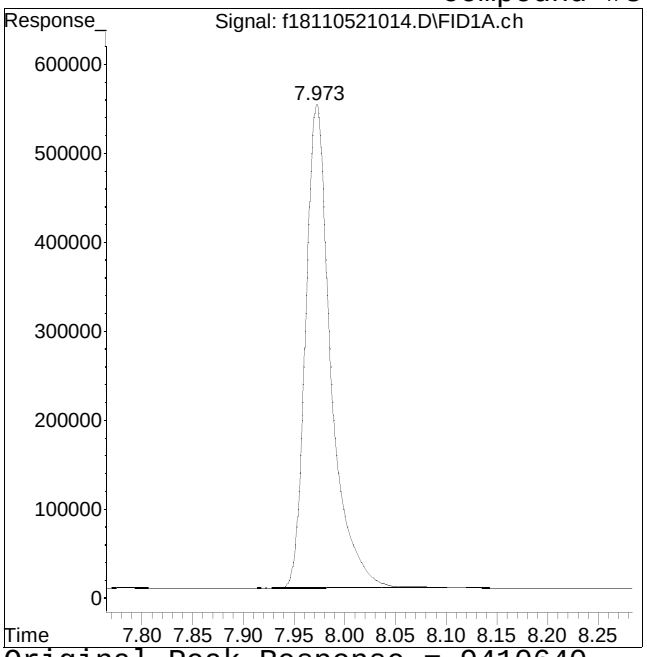
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

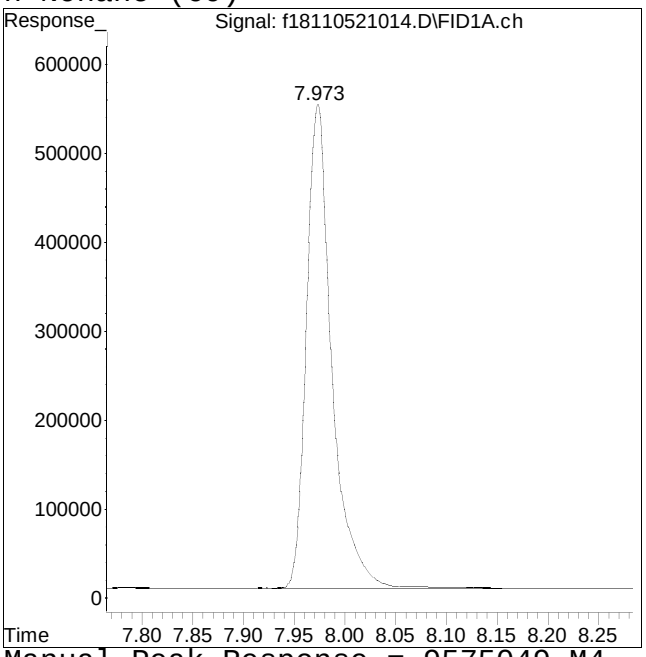
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #3: n-Nonane (C9)



Original Peak Response = 9410640



Manual Peak Response = 9575049 M4

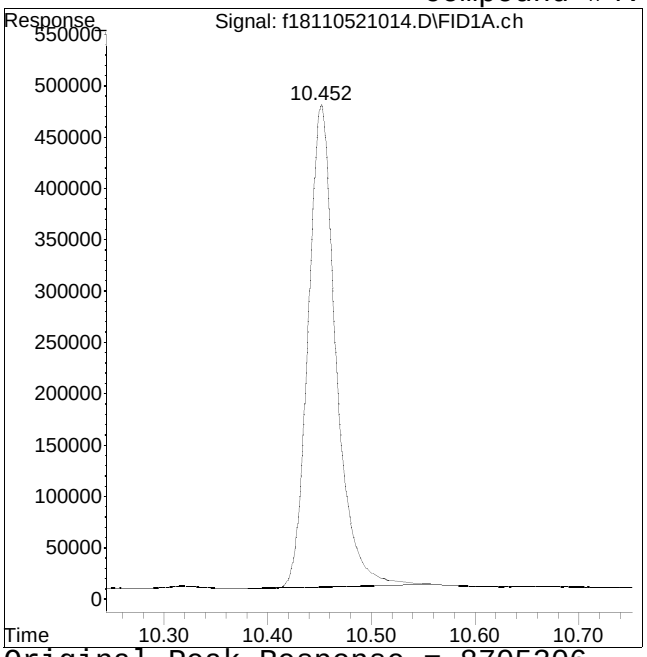
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

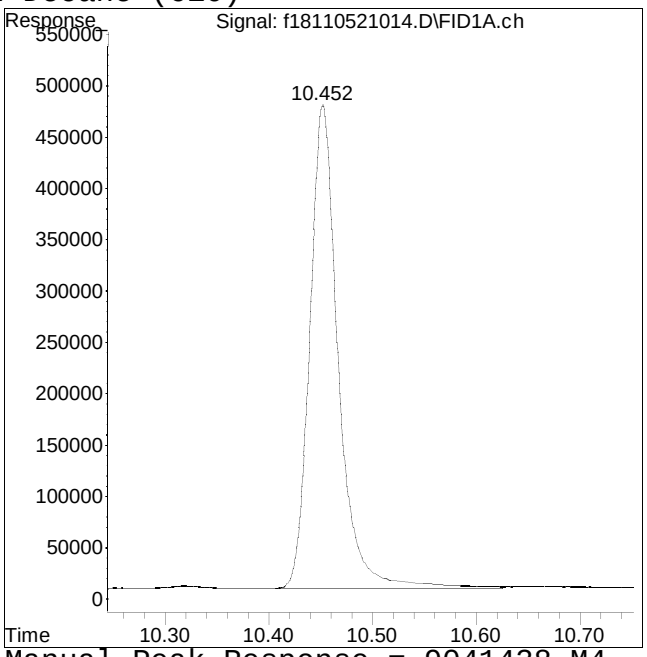
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #4: n-Decane (C10)



Original Peak Response = 8705306



Manual Peak Response = 9041438 M4

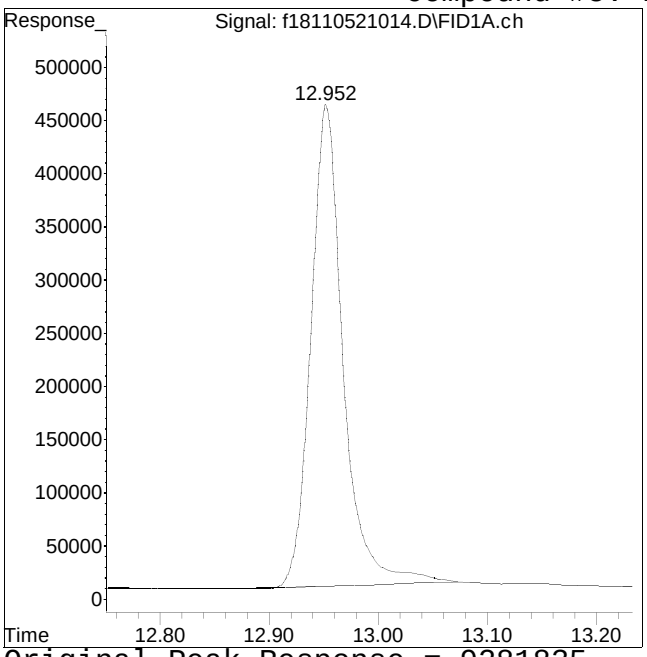
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

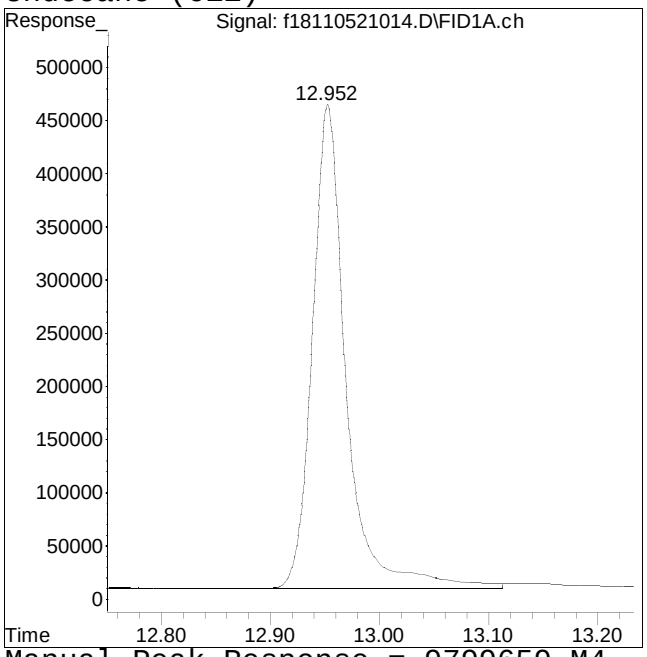
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #5: n-Undecane (C11)



Original Peak Response = 9281835



Manual Peak Response = 9799659 M4

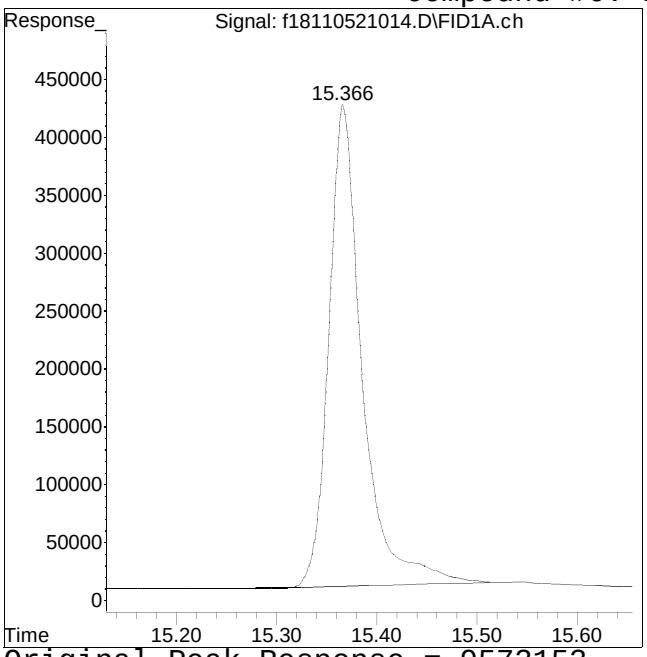
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

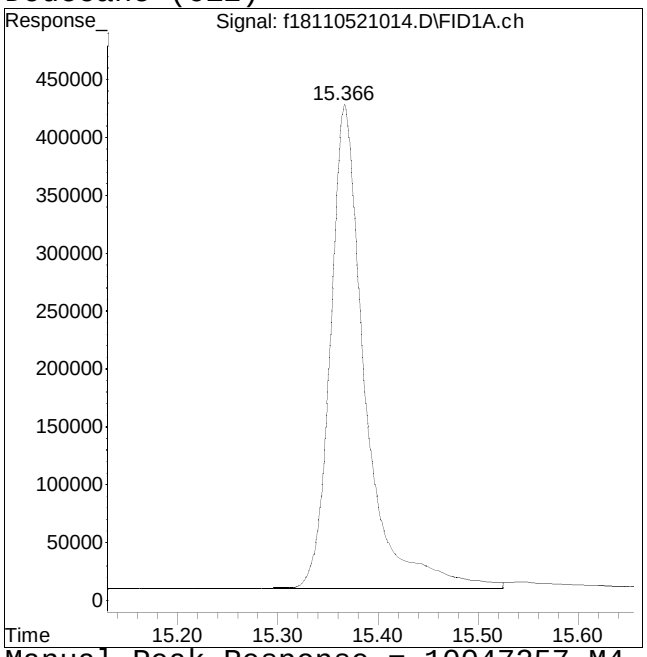
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 9573153



Manual Peak Response = 10047257 M4

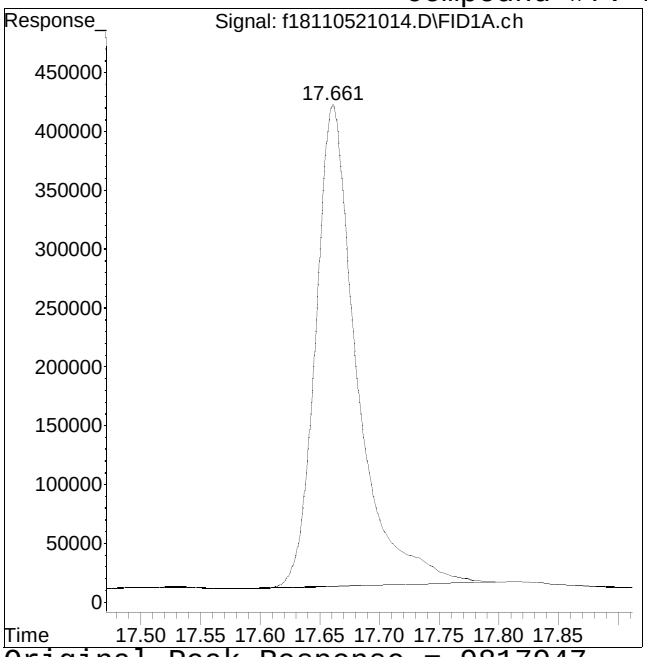
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

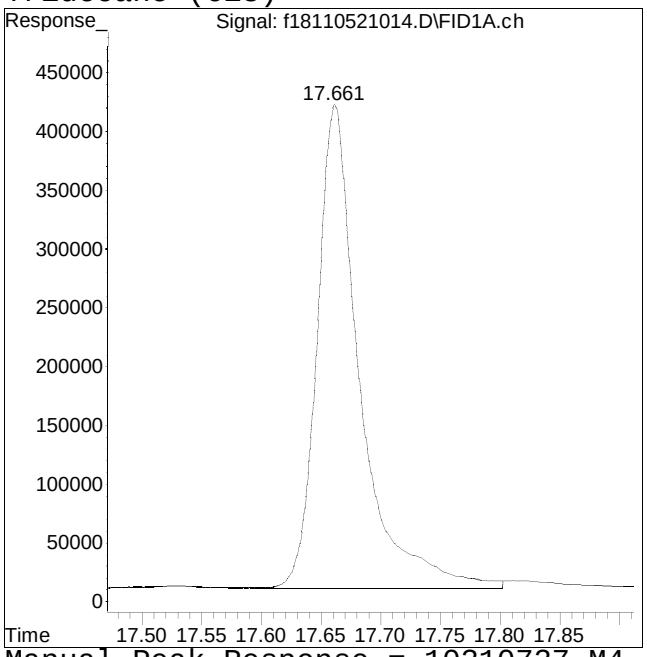
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 9817947



Manual Peak Response = 10310737 M4

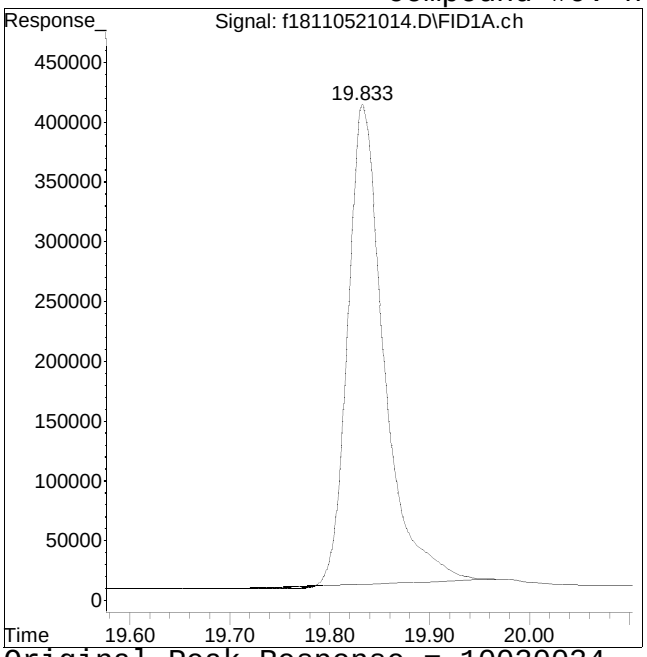
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

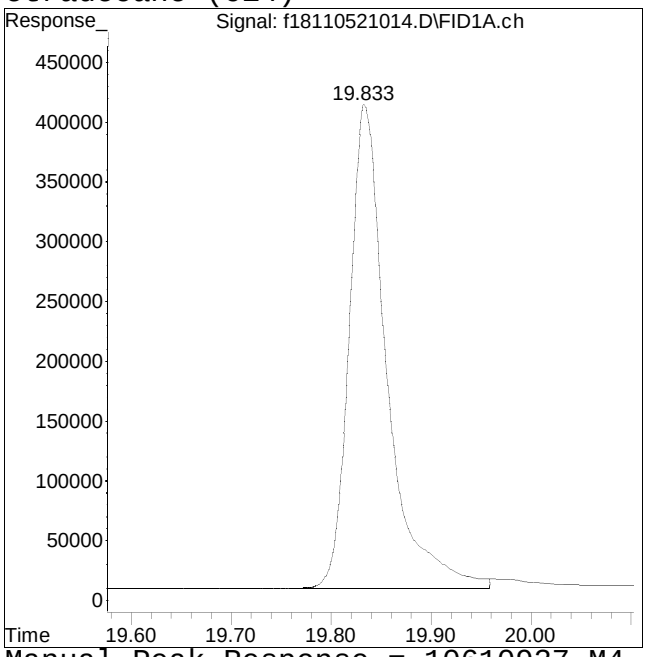
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 10030034



Manual Peak Response = 10610937 M4

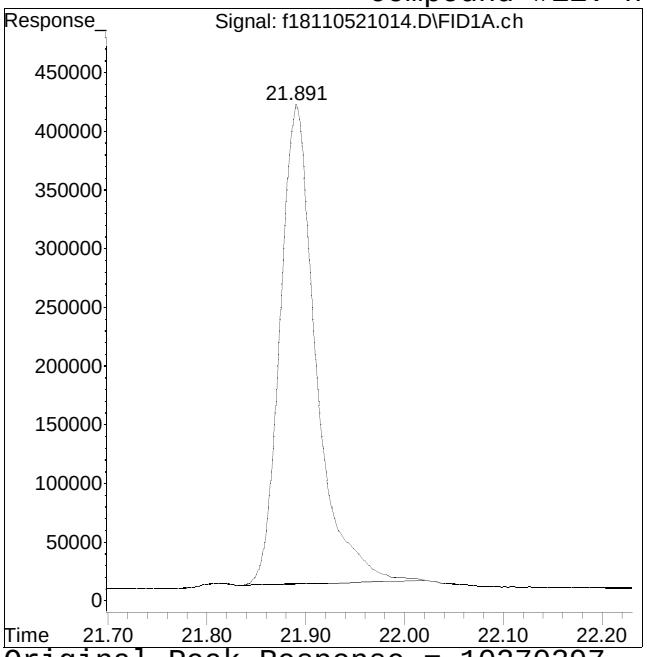
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

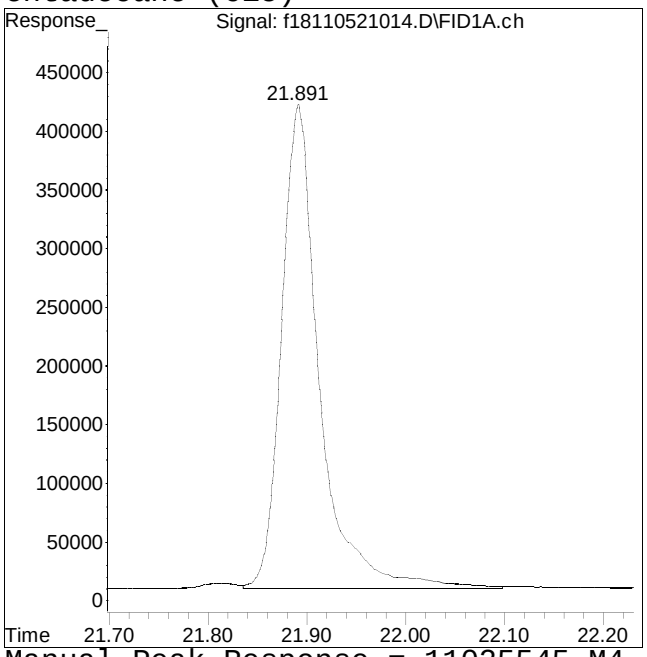
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 10270397



Manual Peak Response = 11025545 M4

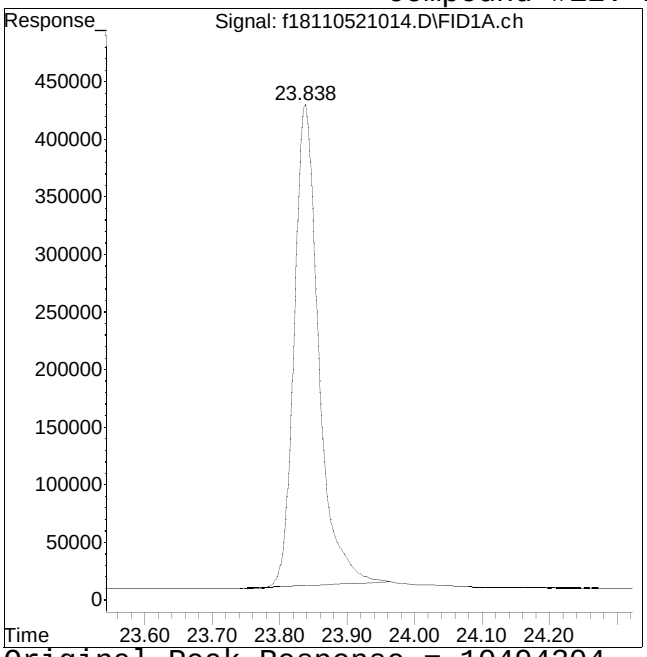
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

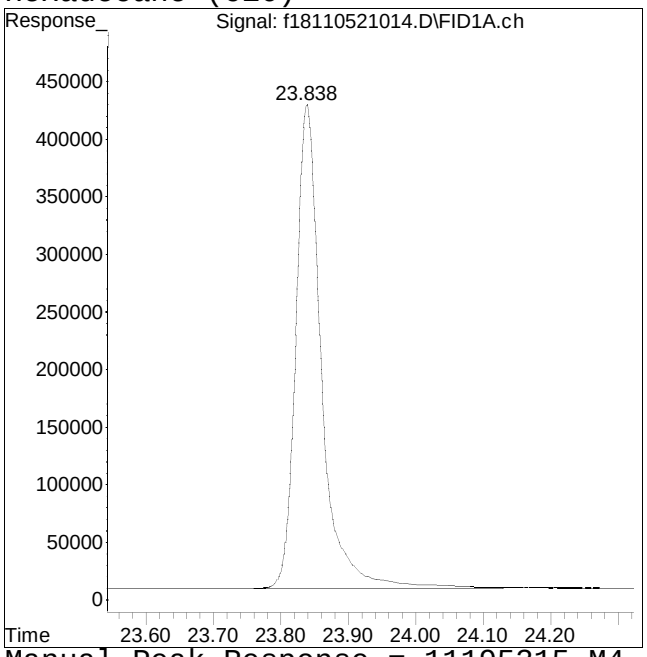
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 10494304



Manual Peak Response = 11195315 M4

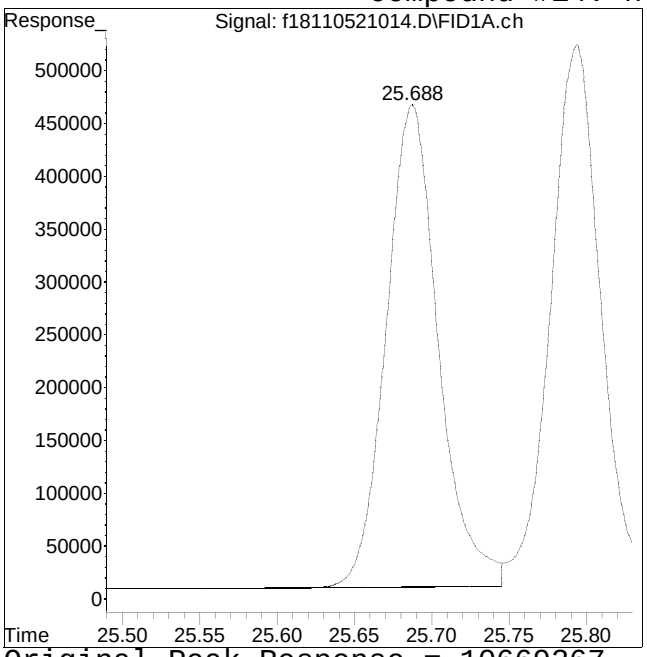
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

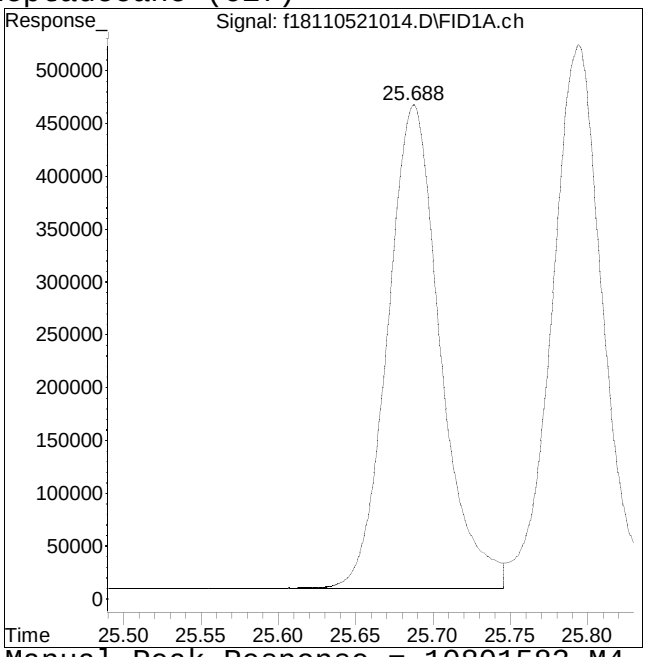
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 10669267



Manual Peak Response = 10801583 M4

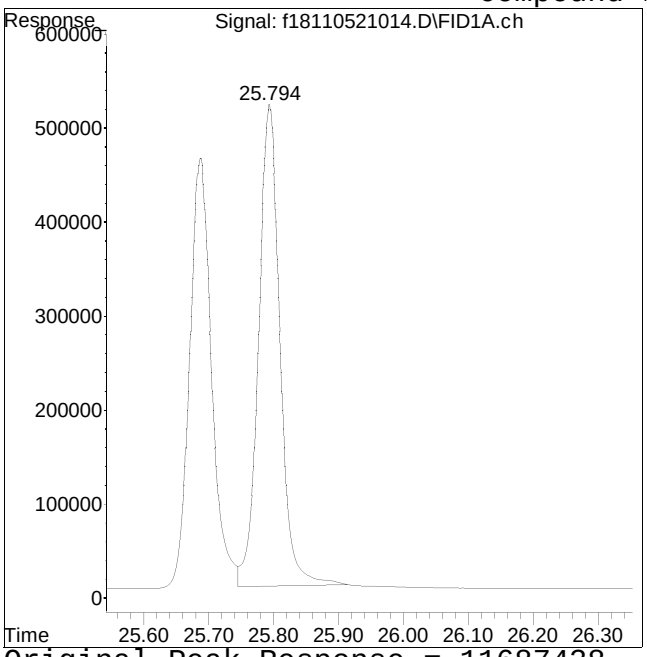
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

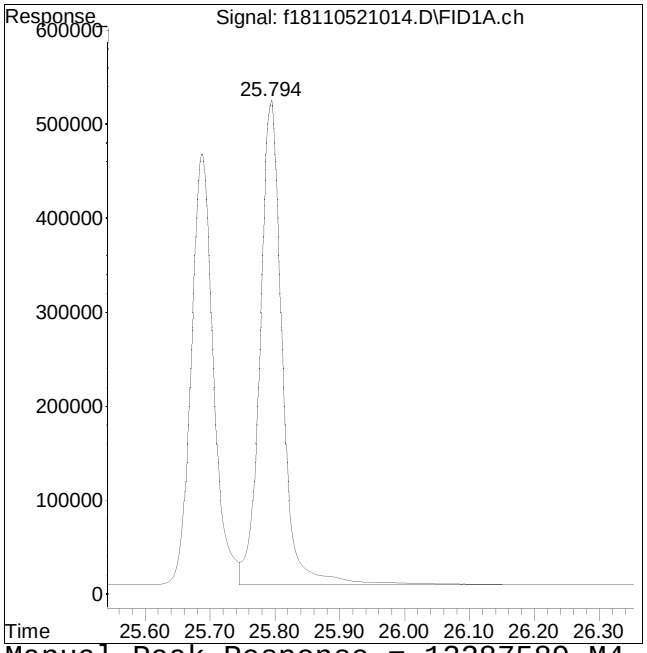
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #15: Pristane



Original Peak Response = 11687438



Manual Peak Response = 12287589 M4

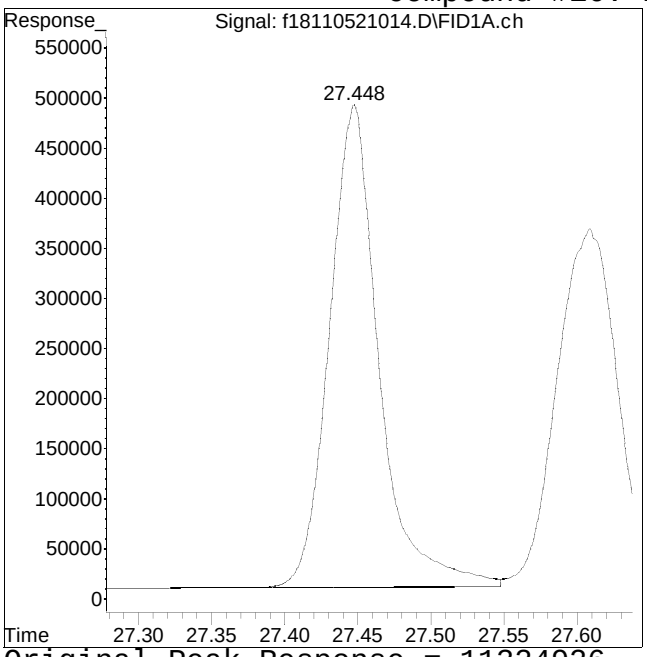
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

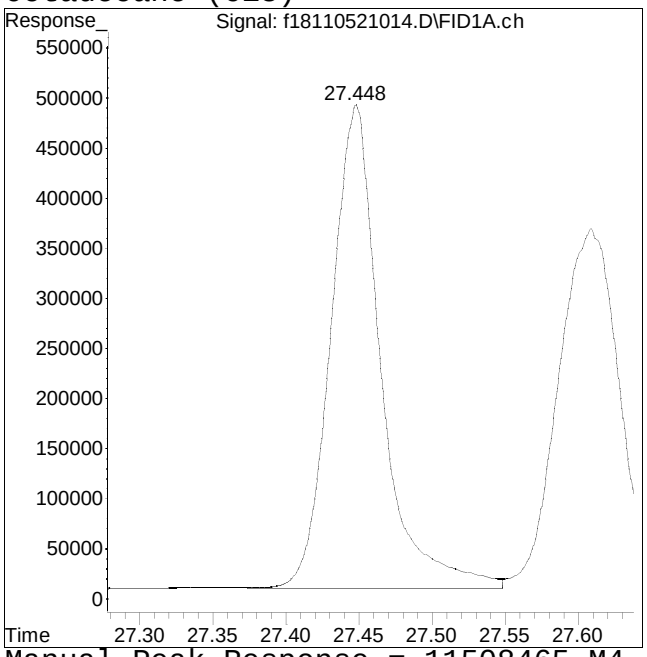
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 11324926



Manual Peak Response = 11508465 M4

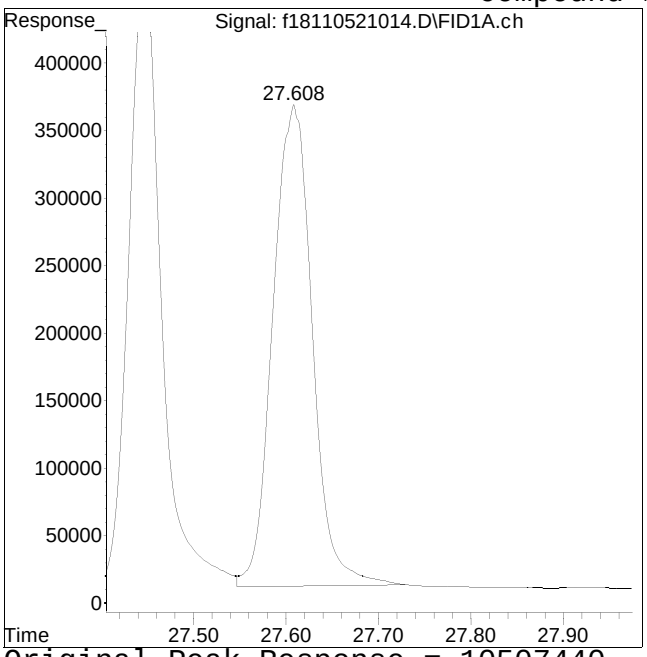
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

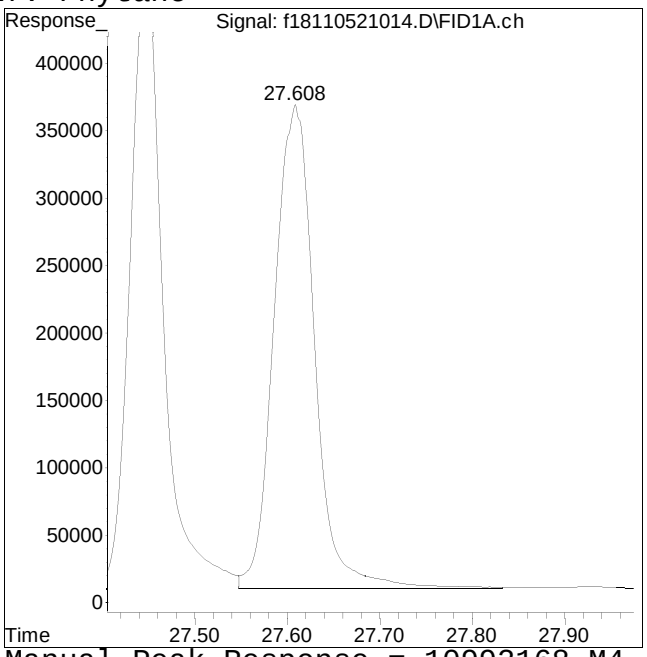
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #17: Phytane



Original Peak Response = 10507440



Manual Peak Response = 10992168 M4

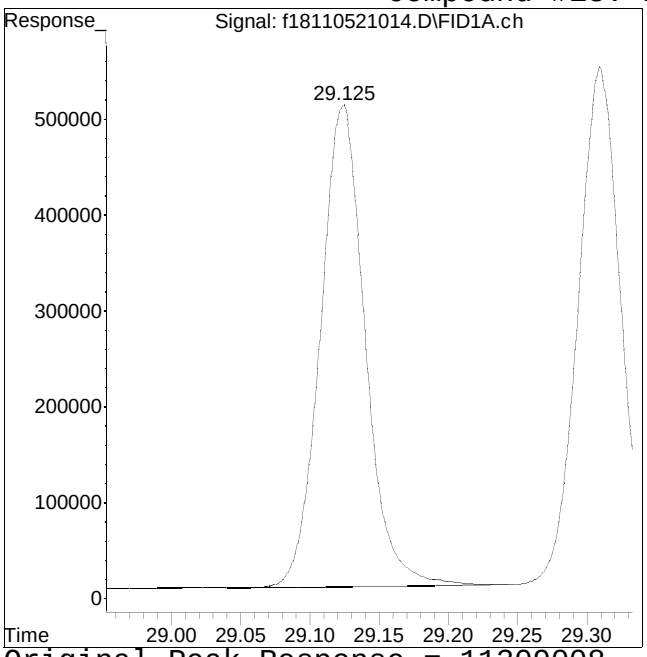
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

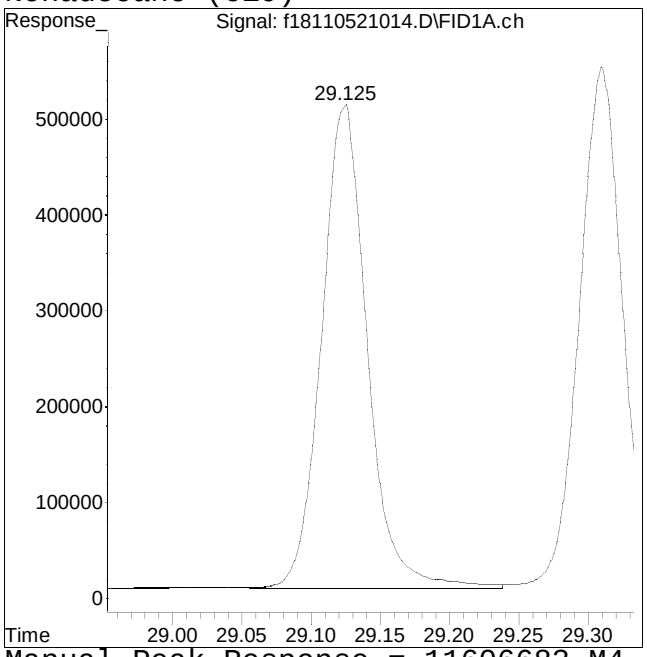
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 11309008



Manual Peak Response = 11606683 M4

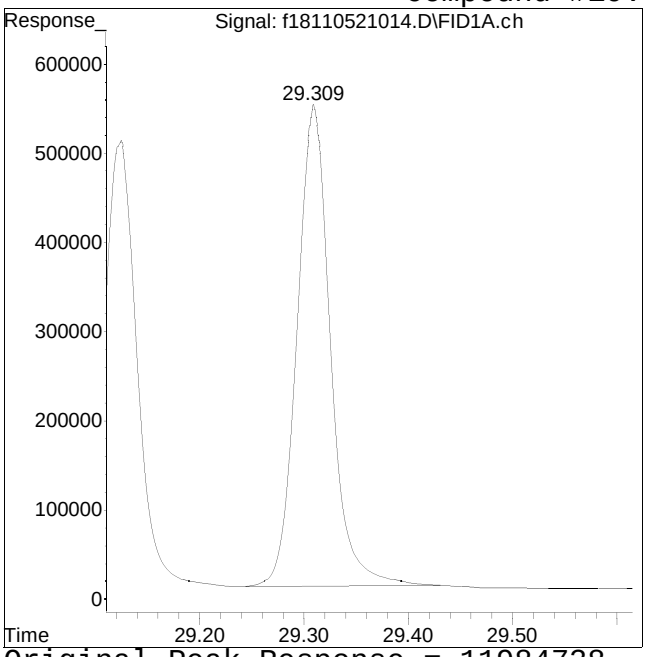
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

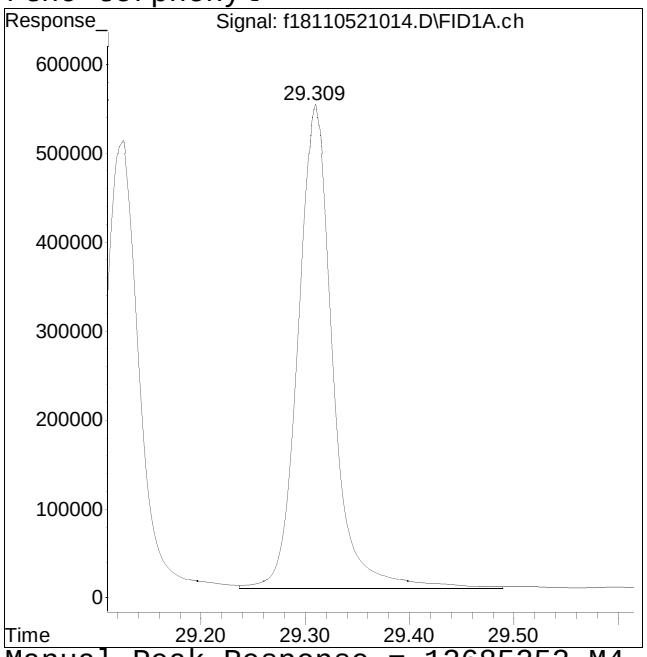
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #19: ortho-terphenyl



Original Peak Response = 11984738



Manual Peak Response = 12685252 M4

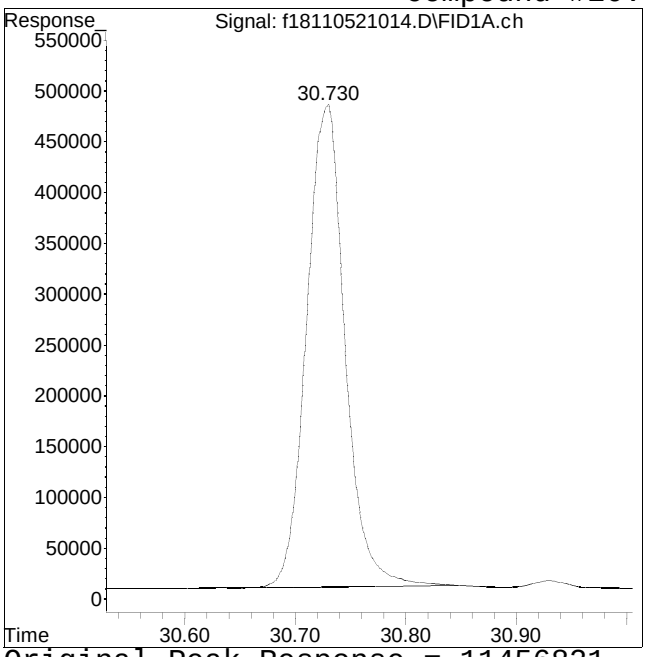
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

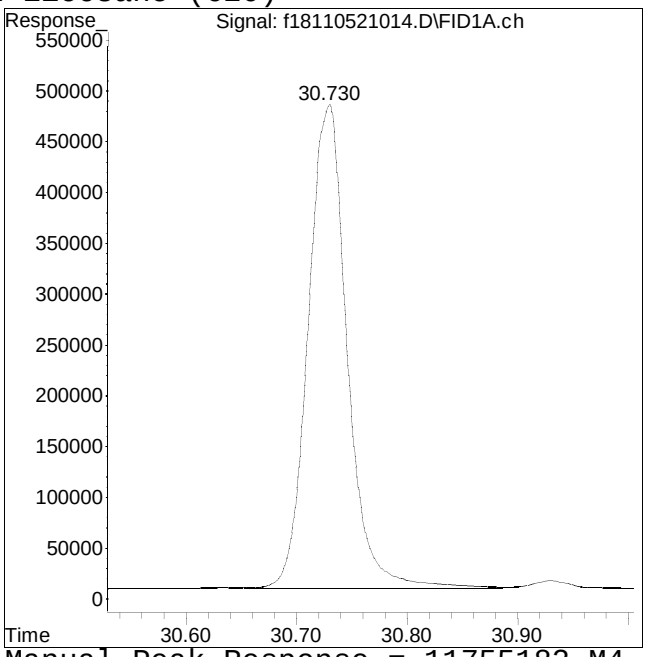
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 11456821



Manual Peak Response = 11755182 M4

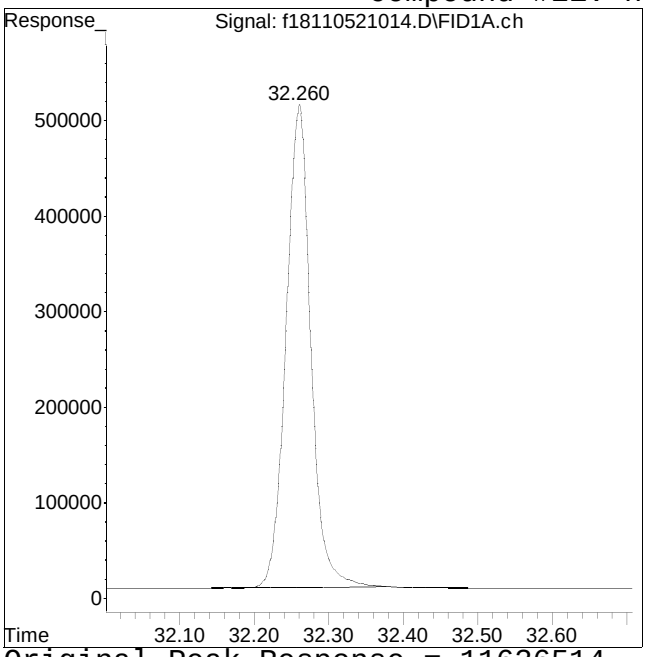
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

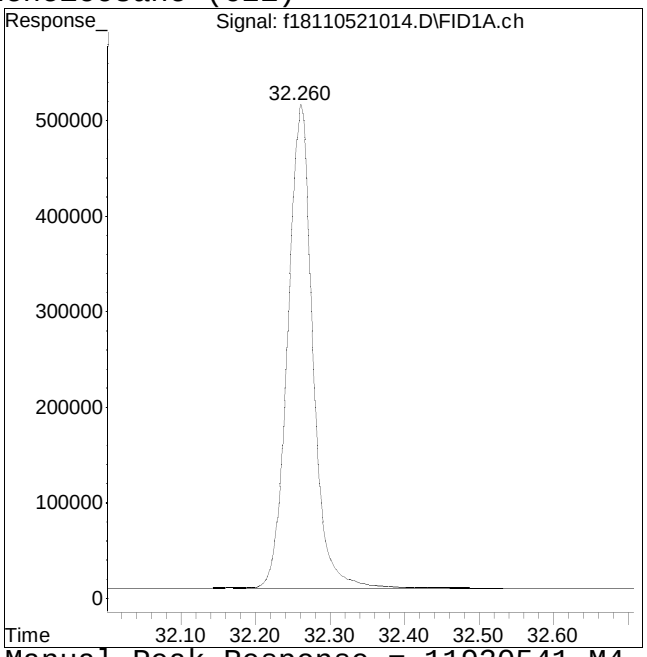
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 11636514



Manual Peak Response = 11930541 M4

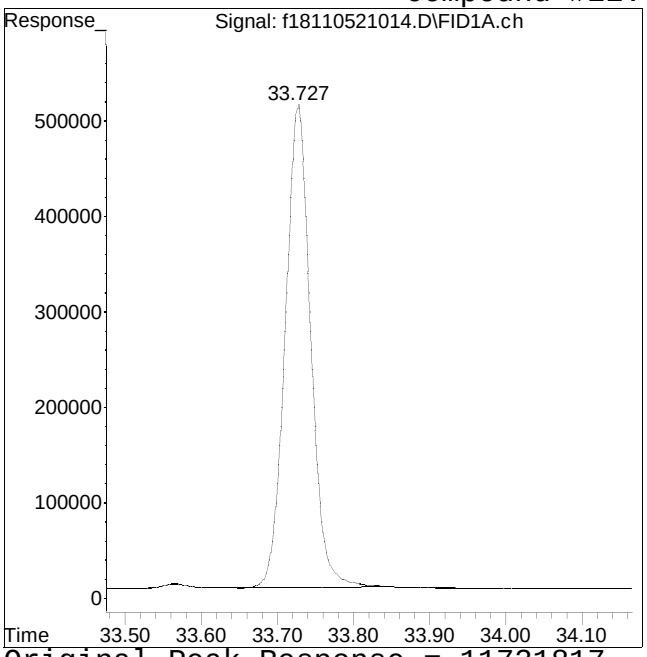
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

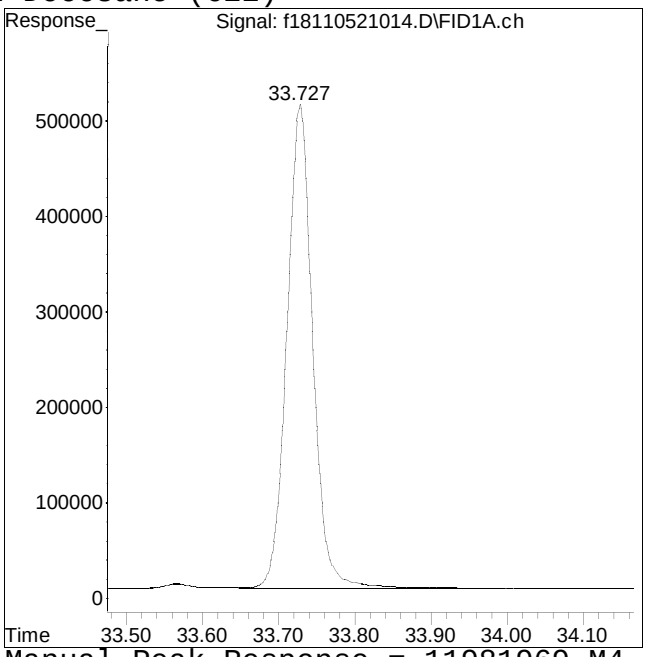
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #22: n-Docosane (C22)



Original Peak Response = 11731817



Manual Peak Response = 11981969 M4

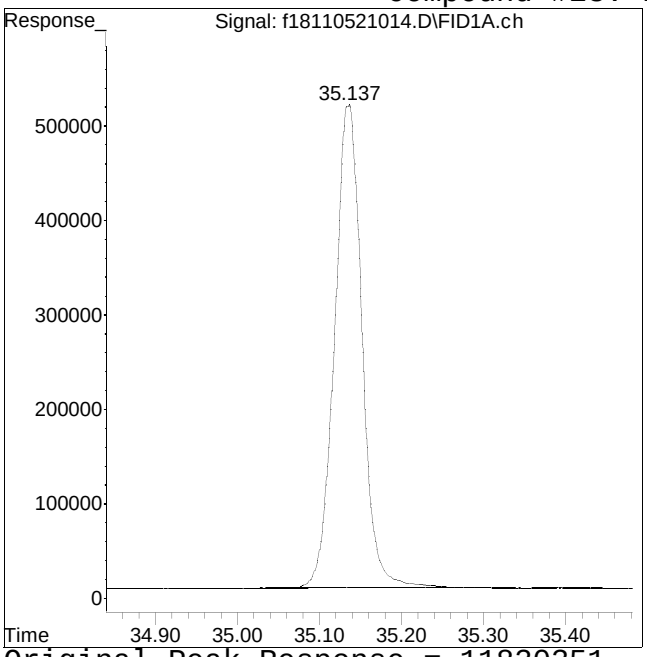
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

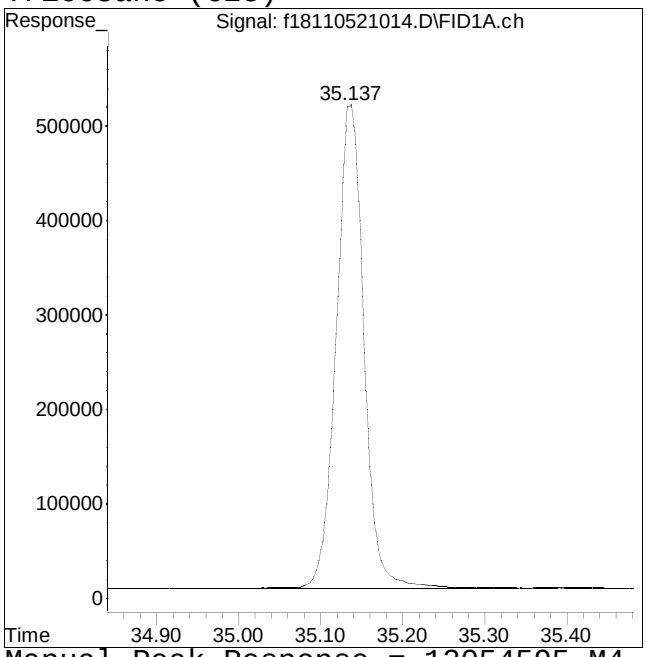
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 11830351



Manual Peak Response = 12054595 M4

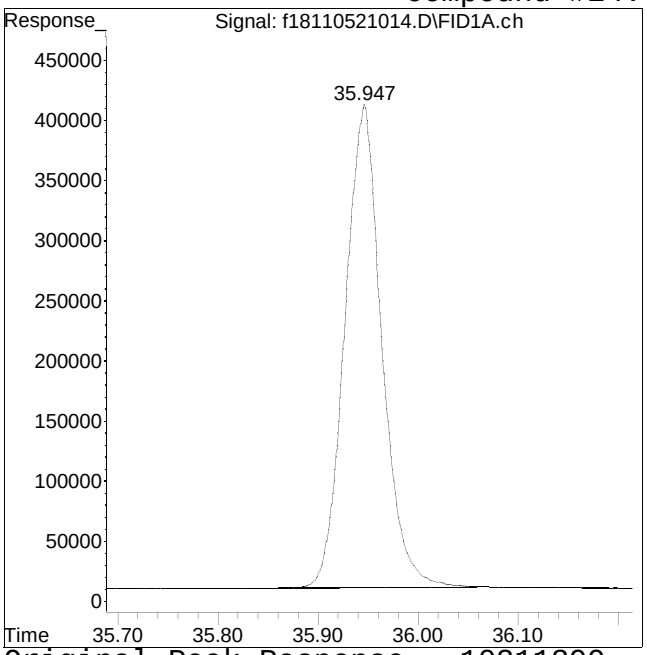
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

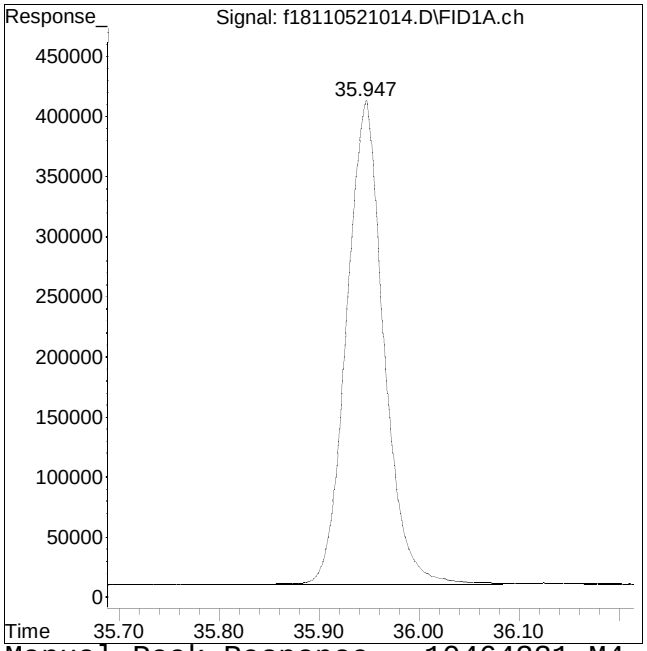
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #24: d50-Tetracosane



Original Peak Response = 10311399



Manual Peak Response = 10464331 M4

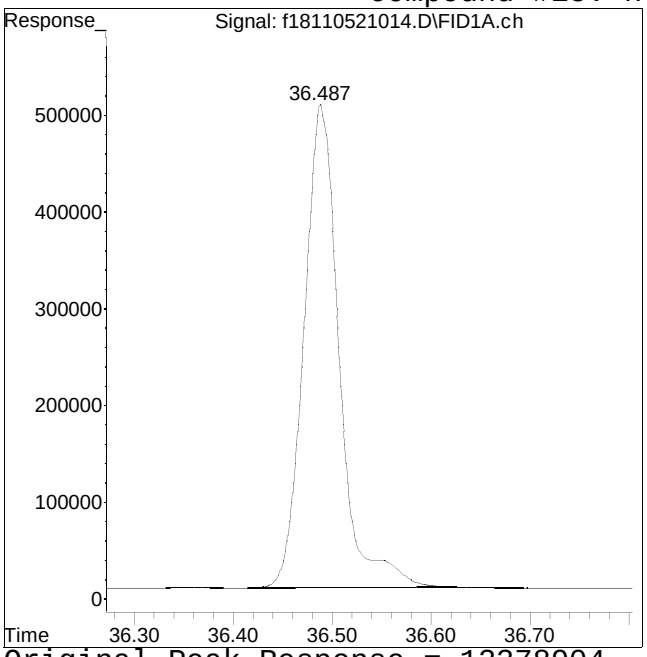
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

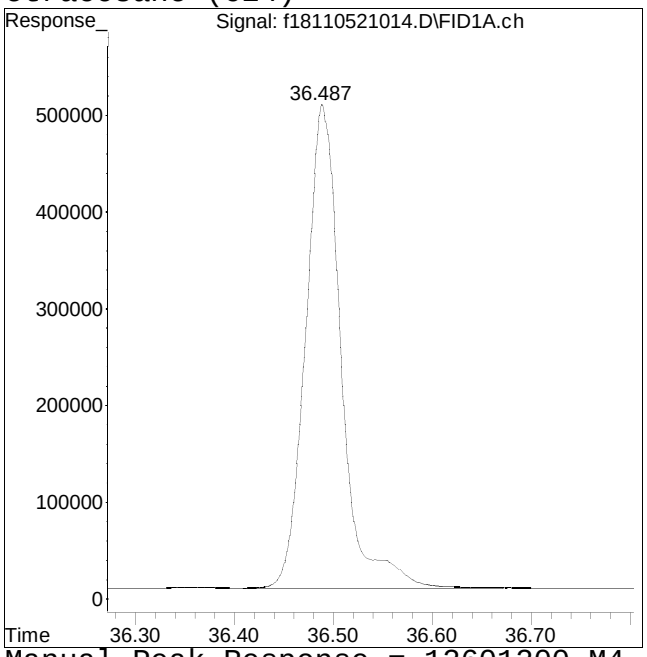
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 12378904



Manual Peak Response = 12601200 M4

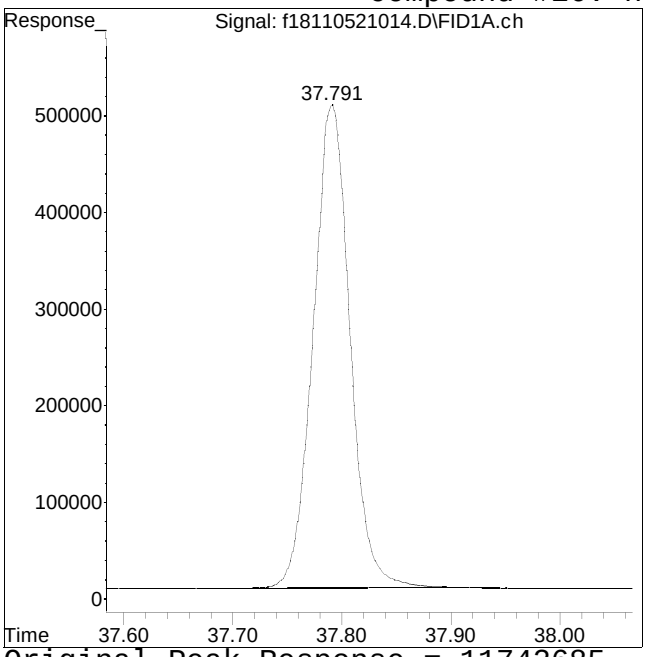
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

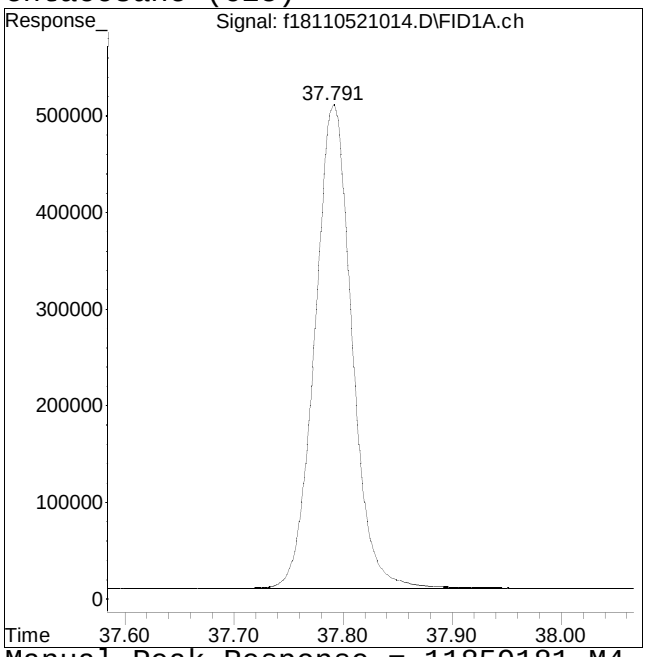
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 11742685



Manual Peak Response = 11859181 M4

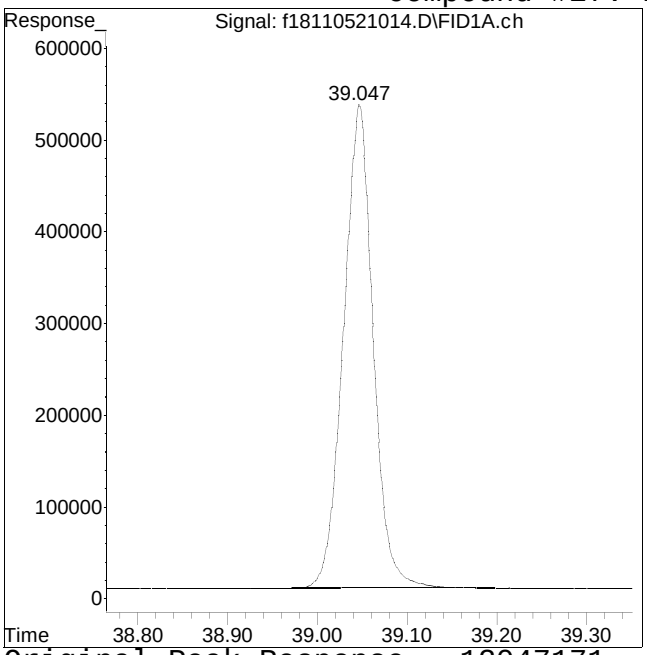
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

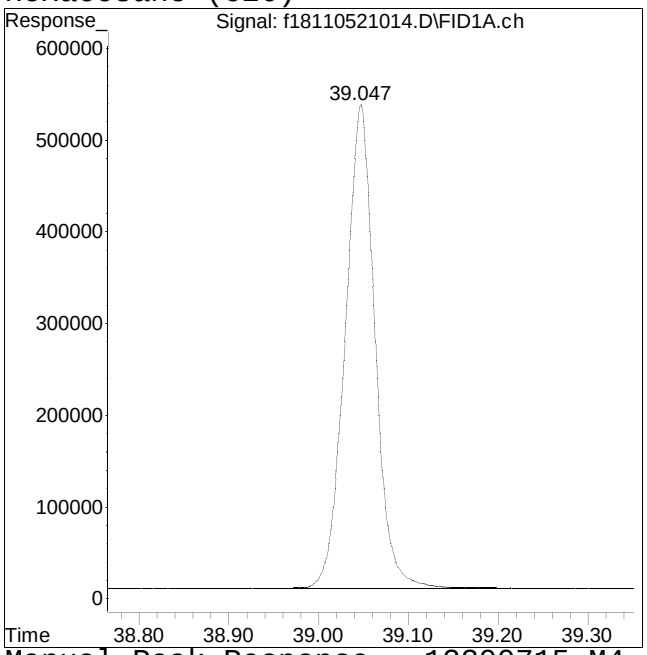
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 12047171



Manual Peak Response = 12200715 M4

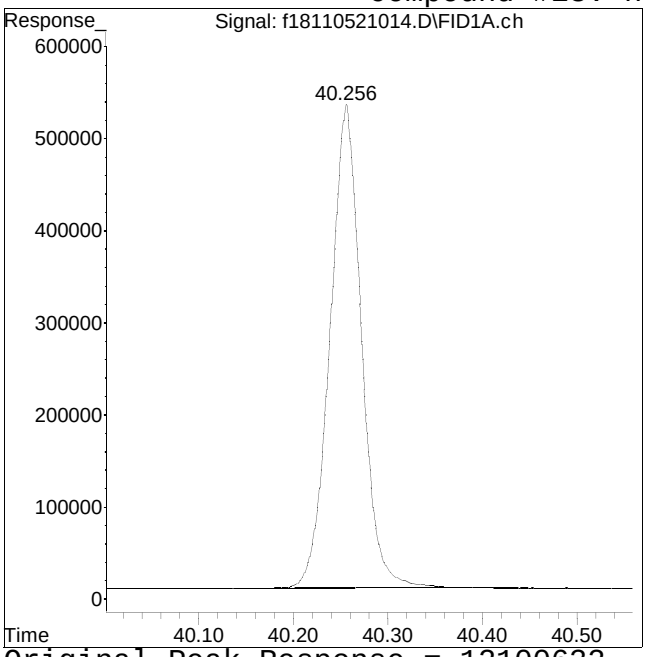
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

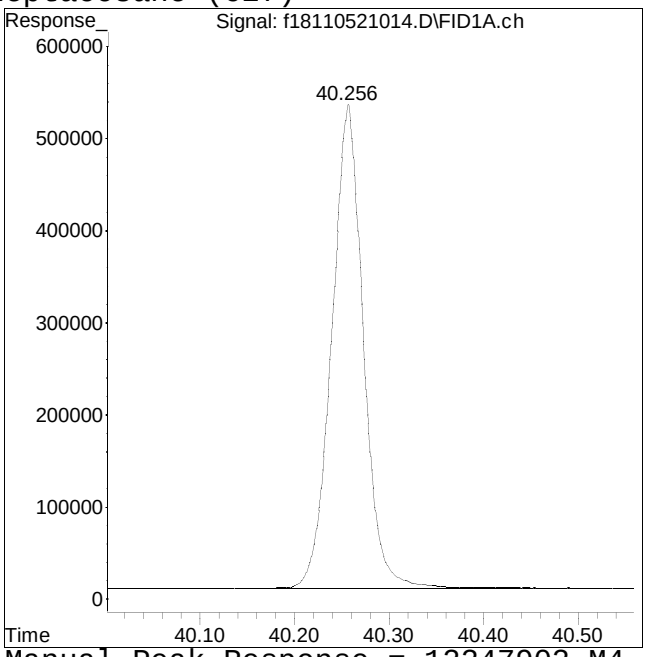
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 12100632



Manual Peak Response = 12247902 M4

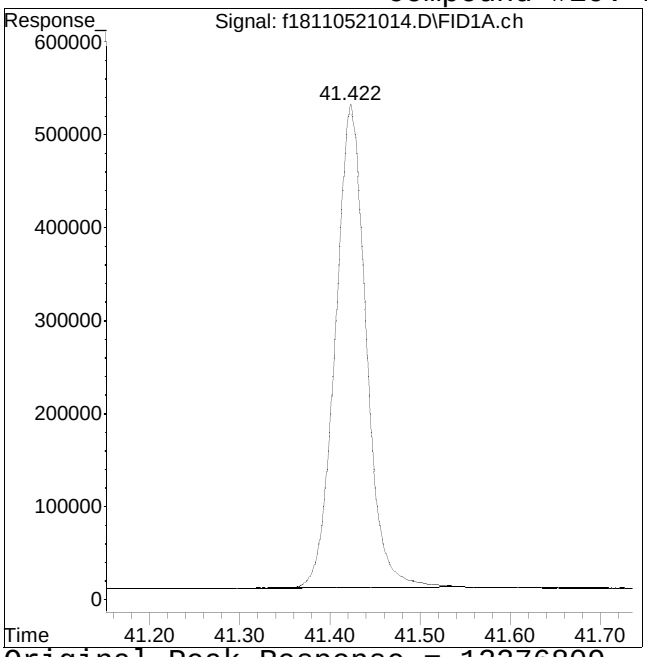
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

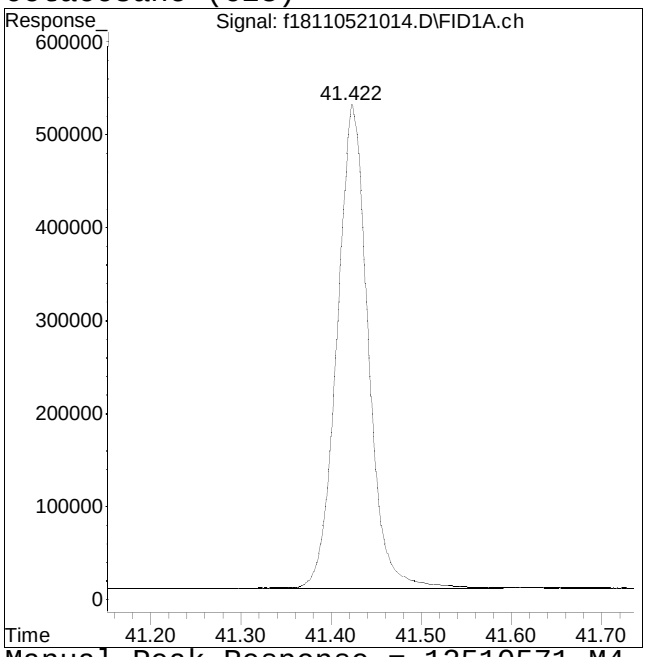
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 12276809



Manual Peak Response = 12510571 M4

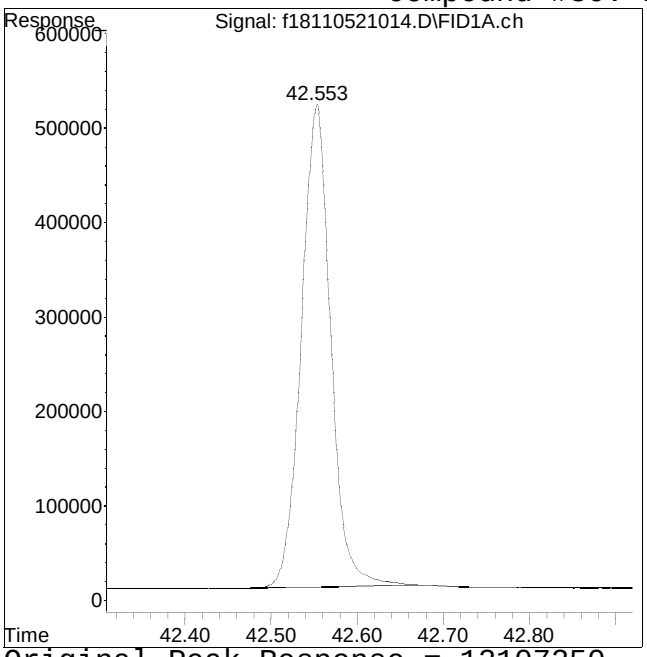
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

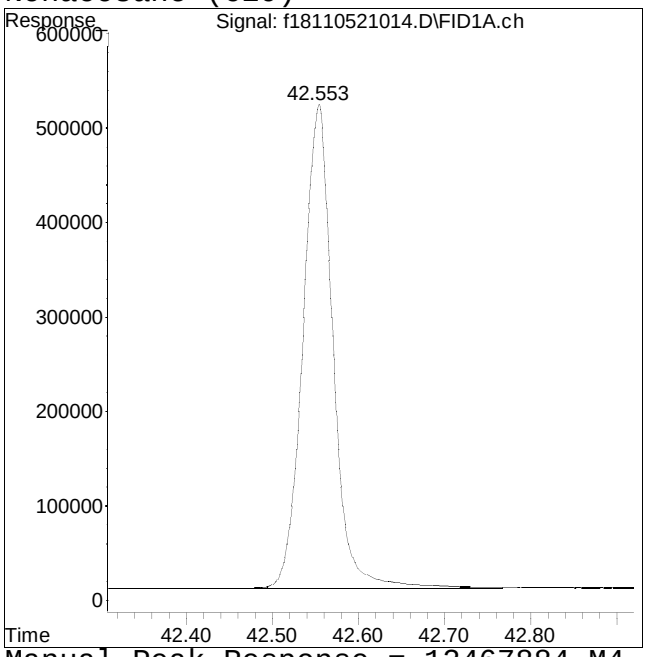
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 12107250



Manual Peak Response = 12467884 M4

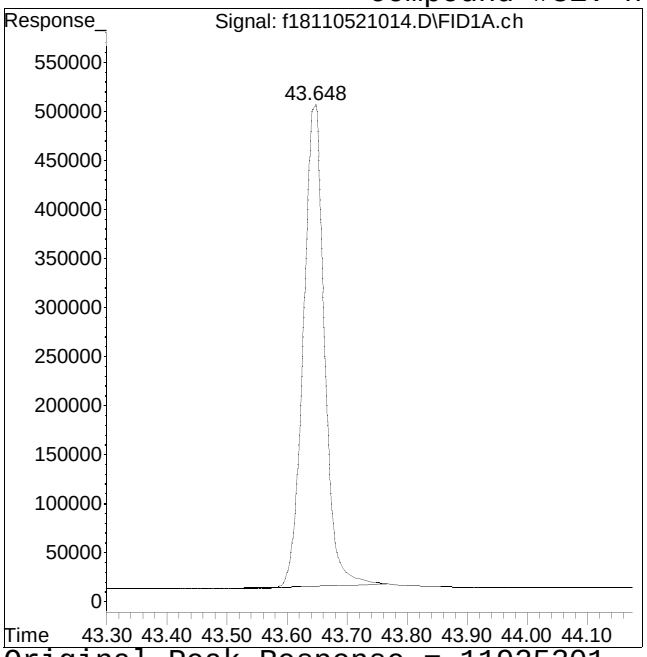
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

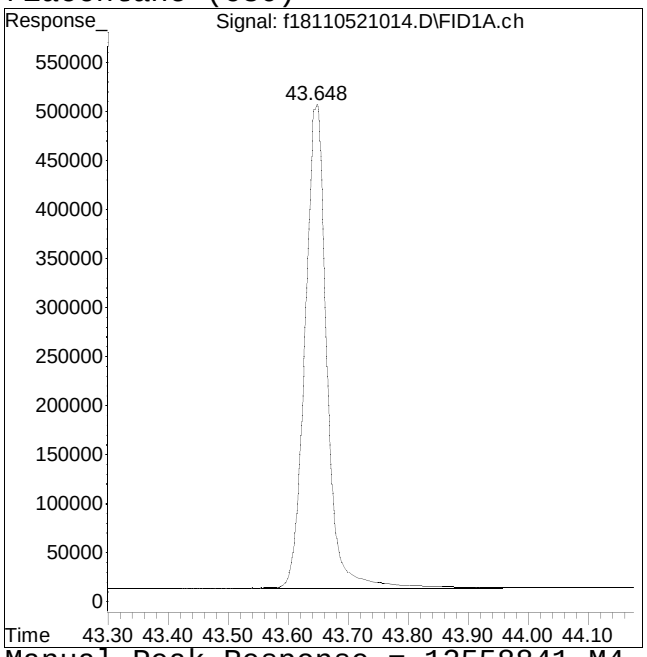
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 11925301



Manual Peak Response = 12558841 M4

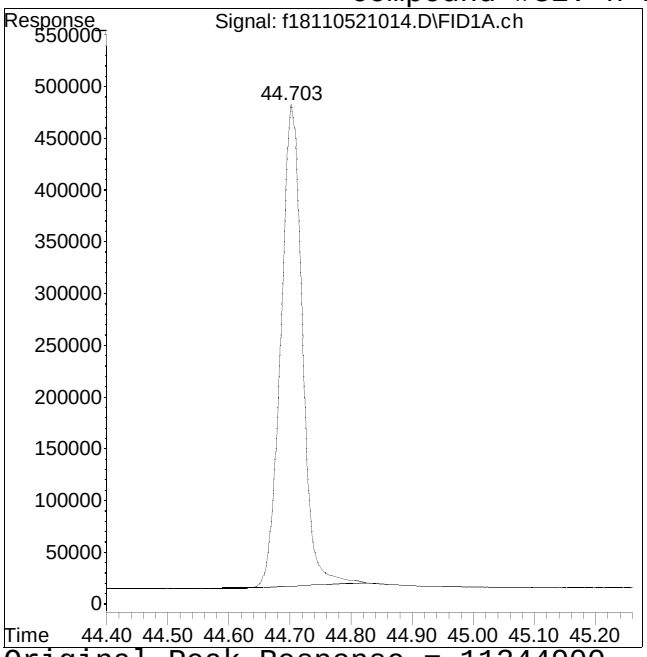
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

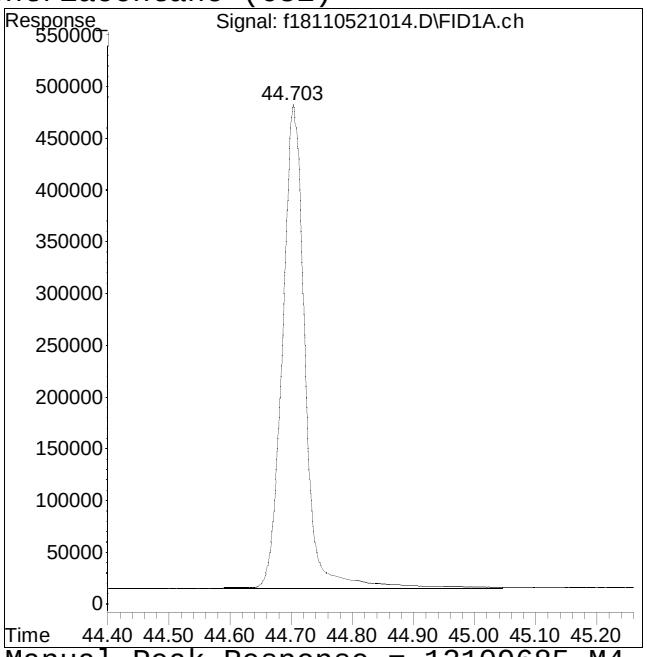
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 11344900



Manual Peak Response = 12109685 M4

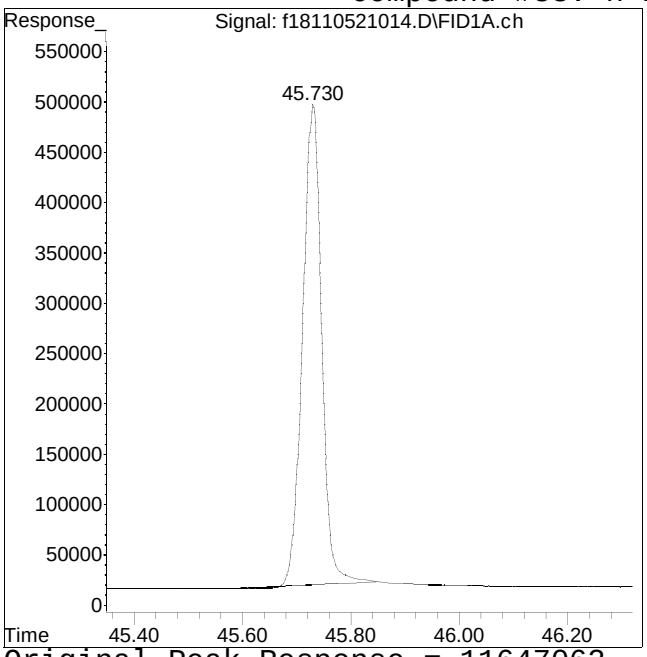
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

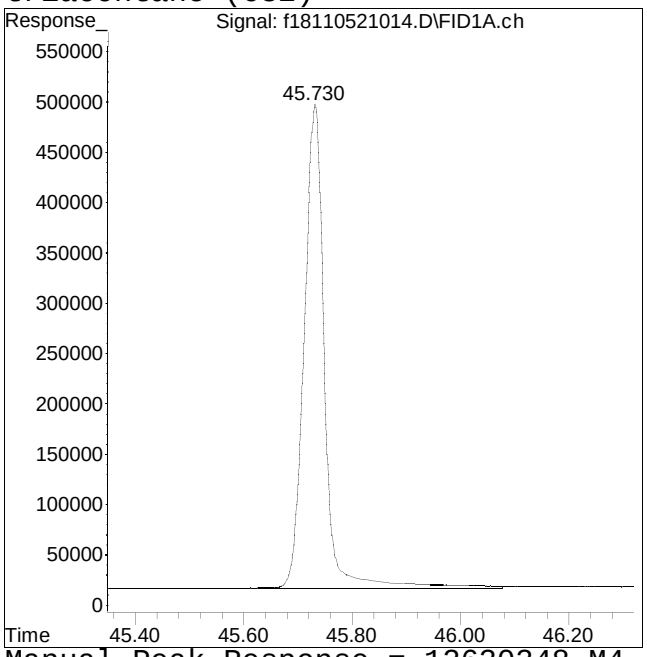
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 11647062



Manual Peak Response = 12630348 M4

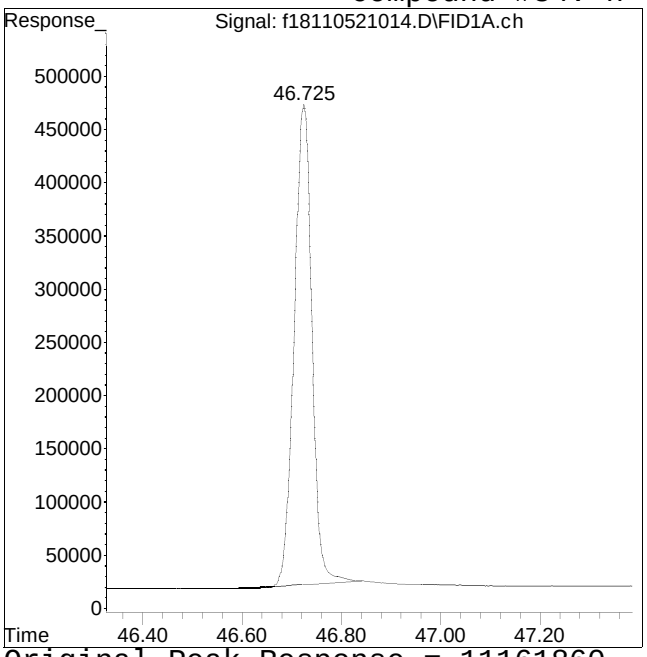
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

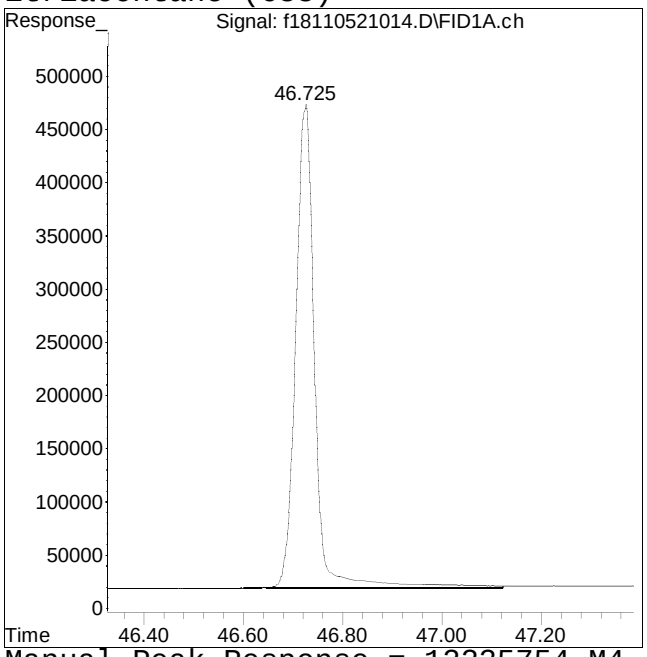
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 11161860



Manual Peak Response = 12235754 M4

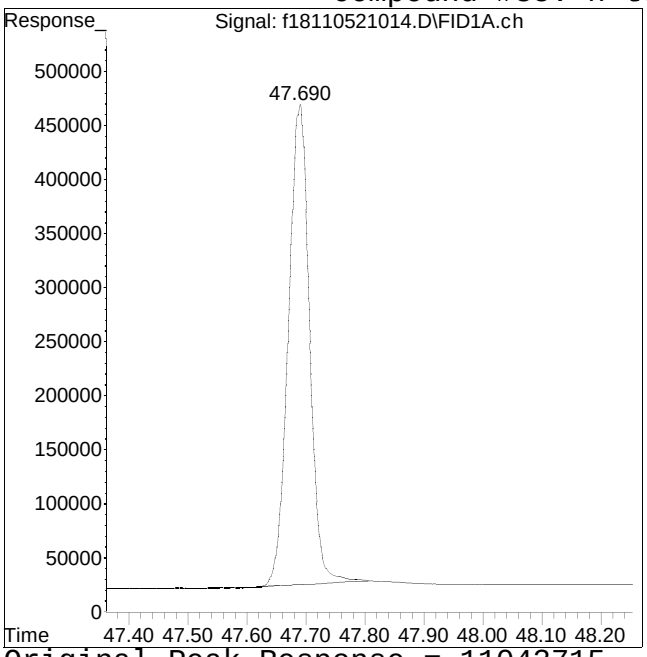
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

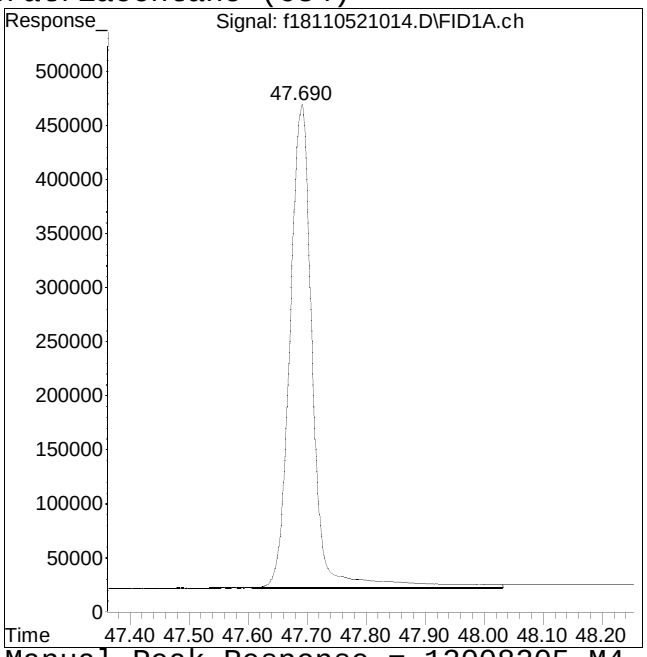
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 11043715



Manual Peak Response = 12008205 M4

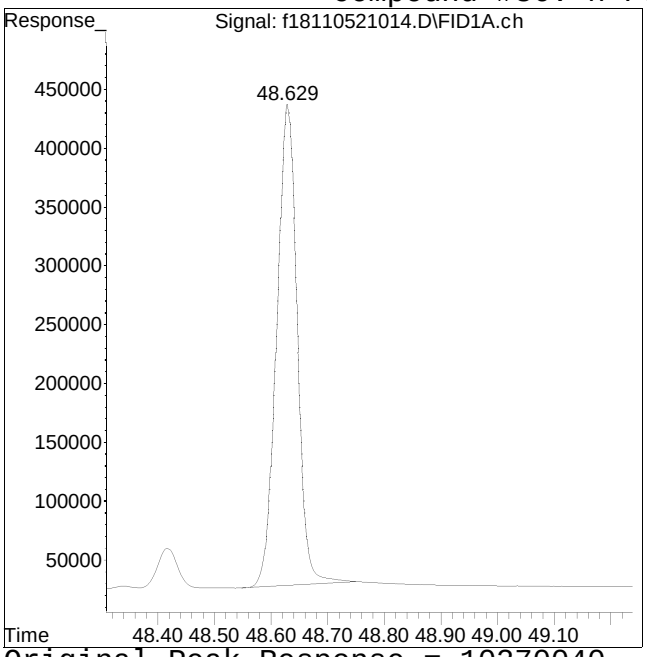
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

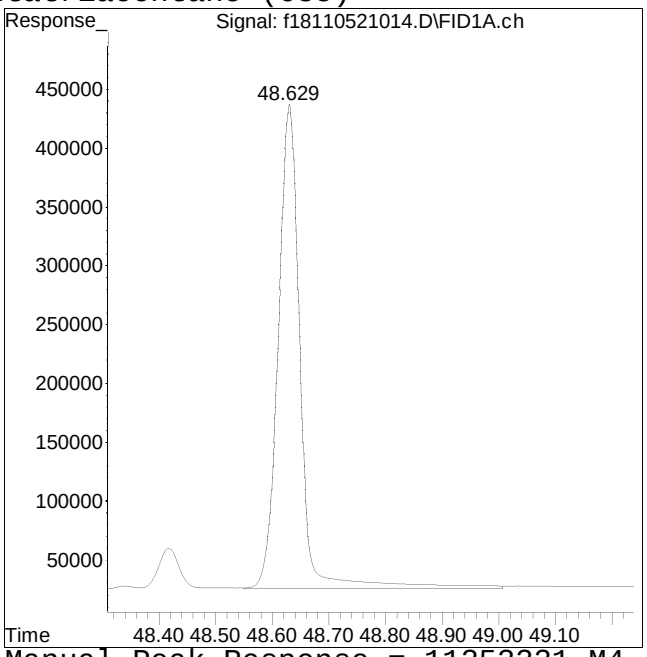
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 10270040



Manual Peak Response = 11253331 M4

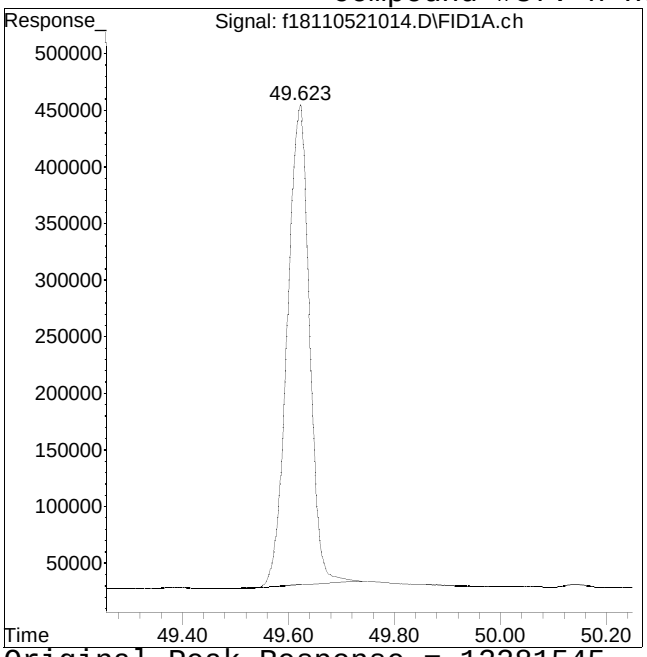
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

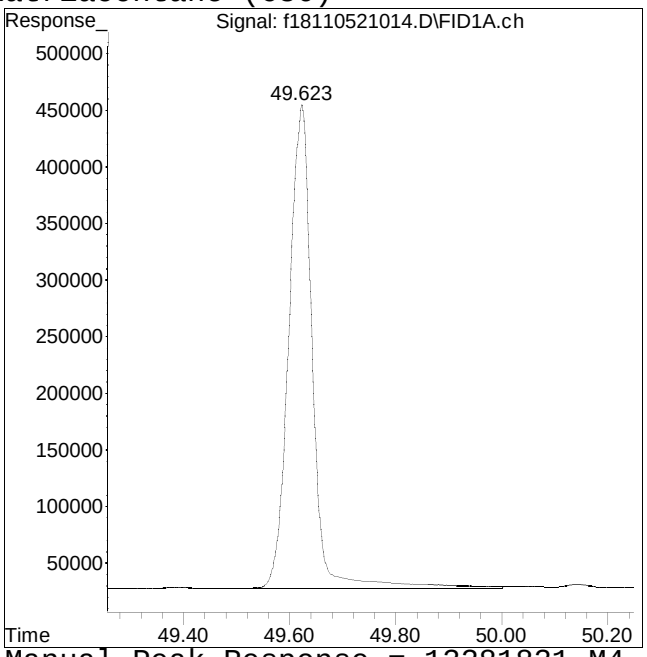
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 12281545



Manual Peak Response = 13281831 M4

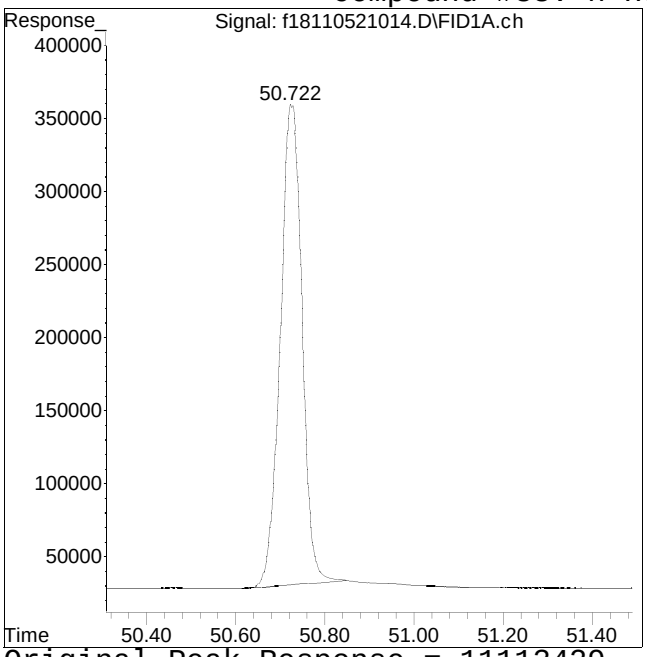
M4 = Poor automated baseline construction.

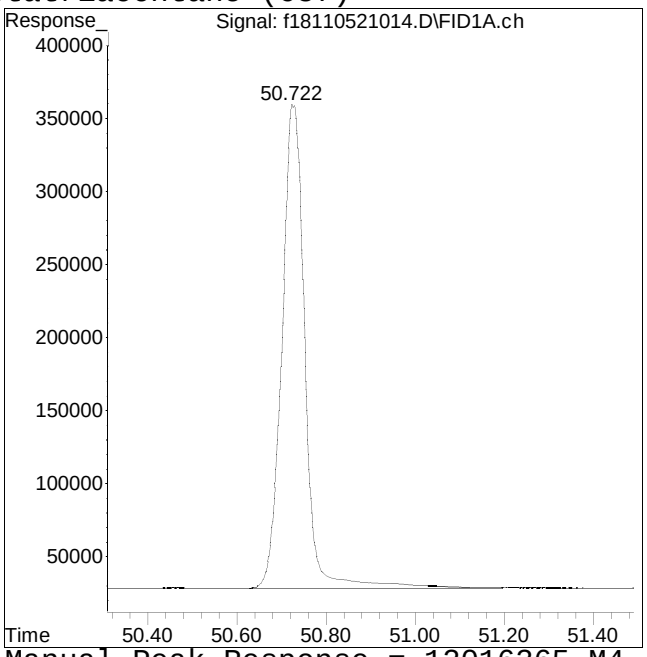
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #38: n-Heptatriacontane (C37)





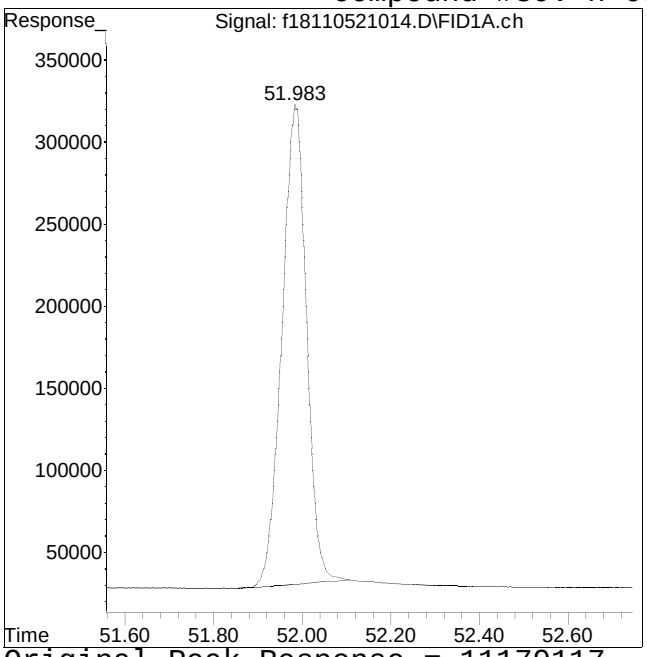
Original Peak Response = 11113429 Manual Peak Response = 12016365 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

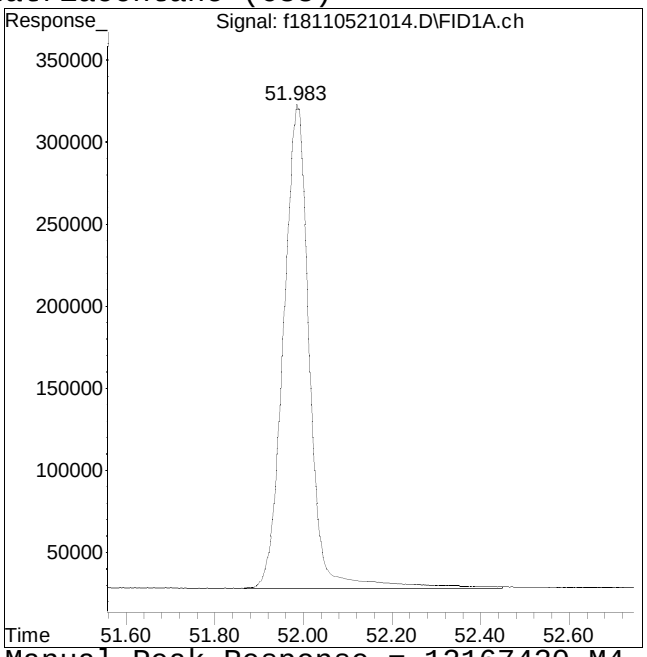
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 11179117



Manual Peak Response = 12167430 M4

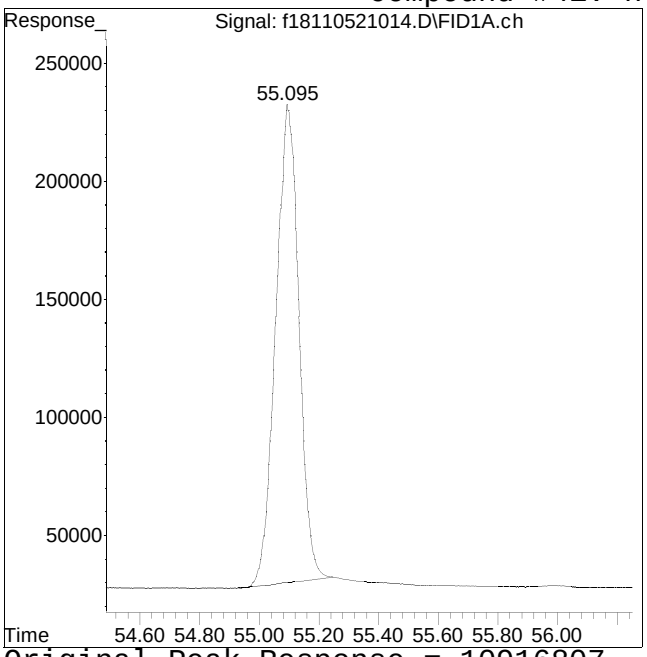
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

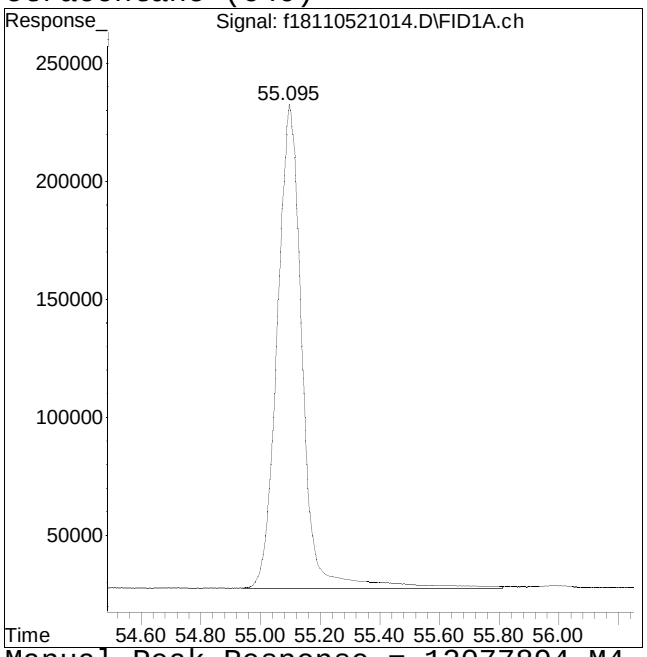
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521014.D
Date Inj'd : 11/5/2021 9:25 pm
Sample : I1811052102F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:41 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 10916807



Manual Peak Response = 12077894 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521016.D
Signal(s) : FID1A.ch
Acq On : 05 Nov 2021 10:50 pm
Operator : FID18:WR
Sample : I1811052103F
Misc : WG1581201,FRBE37,50ug/ml
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:04:09 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:03:27 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.343	60660528	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.333	74046018	54.748 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	109.50%
24) s	d50-Tetracosane	35.965	61194492	55.473 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	110.95%
	Target Compounds			
2) t	n-Octane (C8)	5.780	50433404	51.260 ug/mL M4
3) t	n-Nonane (C9)	7.990	52143415	52.122 ug/mL M4
4) t	n-Decane (C10)	10.464	51409989	52.051 ug/mL M4
5) t	n-Undecane (C11)	12.964	55461909	53.891 ug/mL M4
6) t	n-Dodecane (C12)	15.378	55749750	52.293 ug/mL M4
7) t	n-Tridecane (C13)	17.672	56602629	52.133 ug/mL M4
9) t	n-Tetradecane (C14)	19.846	57838851	51.462 ug/mL M4
11) t	n-Pentadecane (C15)	21.901	57744075	50.997 ug/mL M4
12) t	n-Hexadecane (C16)	23.851	59305435	51.660 ug/mL M4
14) t	n-Heptadecane (C17)	25.703	59687590	53.807 ug/mL M4
15) t	Pristane	25.813	61320165	49.897 ug/mL M4
16) t	n-Octadecane (C18)	27.463	61939025	52.897 ug/mL M4
17) t	Phytane	27.626	56930216	51.305 ug/mL M4
18) t	n-Nonadecane (C19)	29.141	61175013	51.893 ug/mL M4
20) t	n-Eicosane (C20)	30.744	62027756	51.900 ug/mL M4
21) t	n-Heneicosane (C21)	32.275	61959250	51.563 ug/mL M4
22) t	n-Docosane (C22)	33.745	63126900	52.058 ug/mL M4
23) t	n-Tricosane (C23)	35.155	63515782	51.952 ug/mL M4
25) t	n-Tetracosane (C24)	36.505	60737365	50.436 ug/mL M4
26) t	n-Pentacosane (C25)	37.810	62650973	52.323 ug/mL M4
27) t	n-Hexacosane (C26)	39.065	64754893	52.694 ug/mL M4
28) t	n-Heptacosane (C27)	40.278	62700602	51.350 ug/mL M4
29) t	n-Octacosane (C28)	41.446	65442746	52.249 ug/mL M4
30) t	n-Nonacosane (C29)	42.577	65314211	52.559 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521016.D
Signal(s) : FID1A.ch
Acq On : 05 Nov 2021 10:50 pm
Operator : FID18:WR
Sample : I1811052103F
Misc : WG1581201,FRBE37,50ug/ml
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:04:09 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:03:27 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

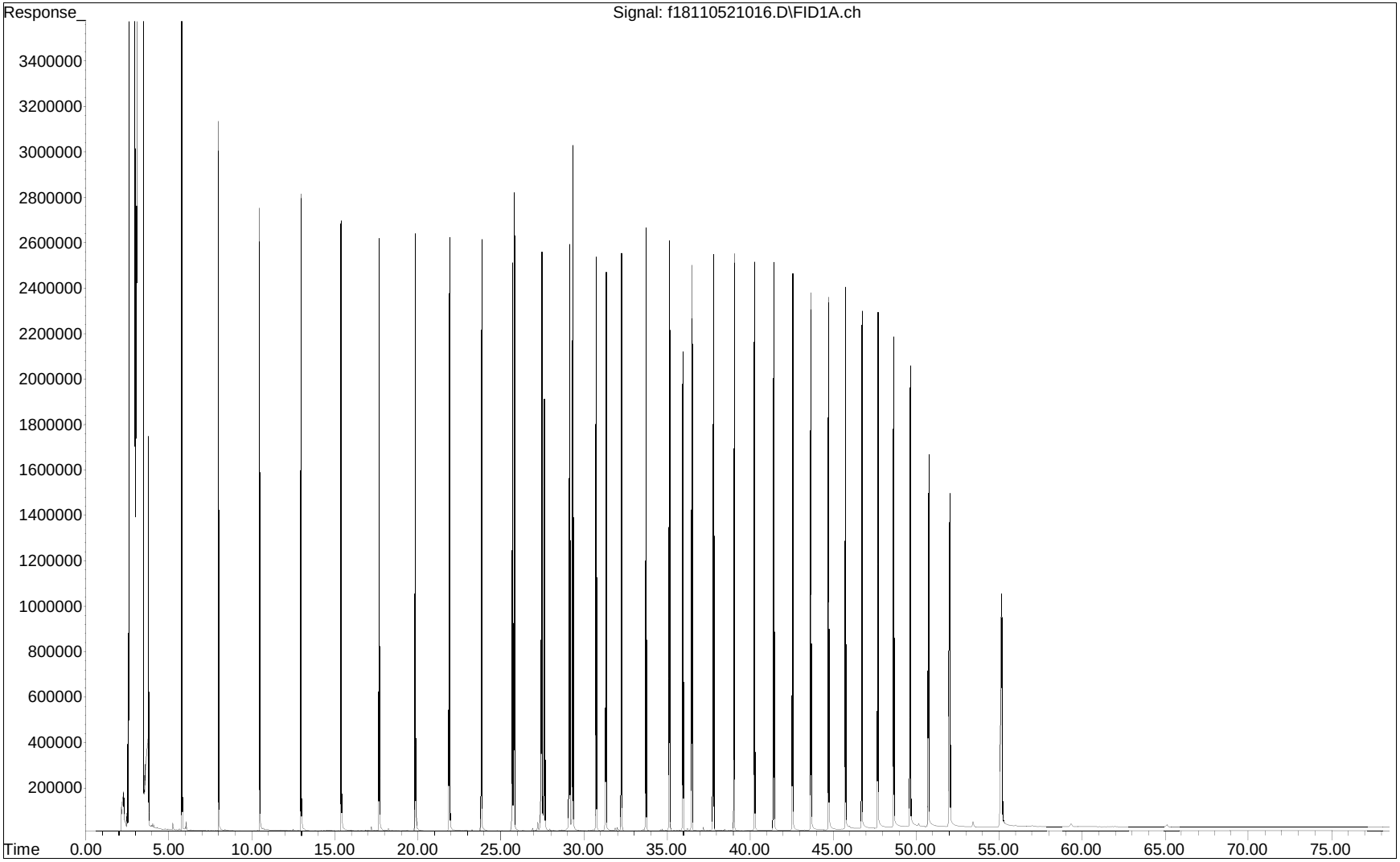
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.671	65436294	52.705 ug/mL M4
32) t	n-Hentriacontane (C31)	44.728	63369158	53.014 ug/mL M4
33) t	n-Dotriacontane (C32)	45.754	65313936	52.740 ug/mL M4
34) t	n-Tritriacontane (C33)	46.749	63209732	52.929 ug/mL M4
35) t	n-tetratriacontane (C34)	47.716	62305046	53.066 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.653	63275913	57.011 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.651	67441802	52.686 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.758	61719641	53.276 ug/mL M4
39) t	n-Octatriacontane (C38)	52.028	63635433	54.692 ug/mL M4
41) t	n-Tetracontane (C40)	55.153	63641416	55.786 ug/mL M4

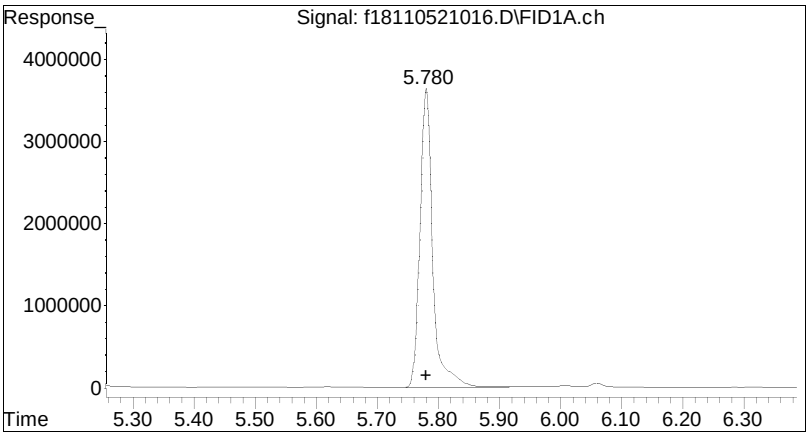
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

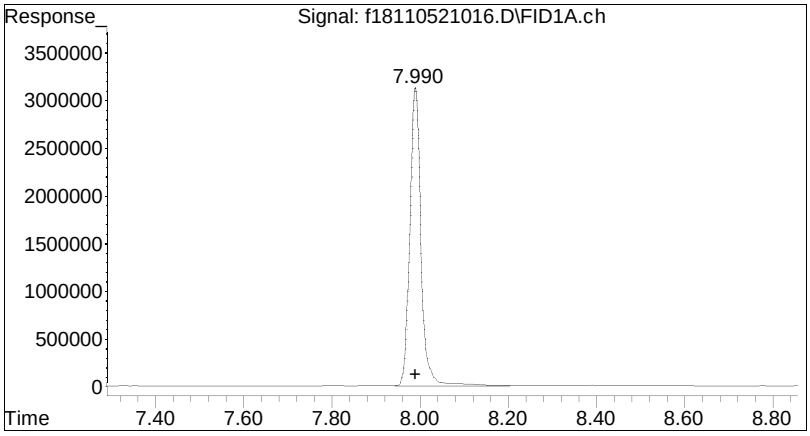
File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521016.D
Operator : FID18:WR
Acquired : 05 Nov 2021 10:50 pm using AcqMethod FID18.M
Sample Name: I1811052103F
Instrument: FID 18
Misc Info : WG1581201,FRBE37,50ug/ml
Vial Number: 8
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M





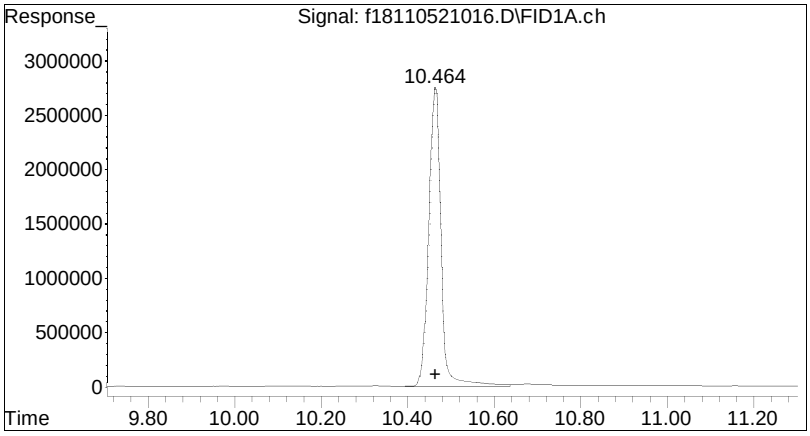
#2 n-Octane (C8)

R.T.:	5.780 min
Delta R.T.:	0.000 min
Response:	50433404
Conc:	51.26 ug/mL M4



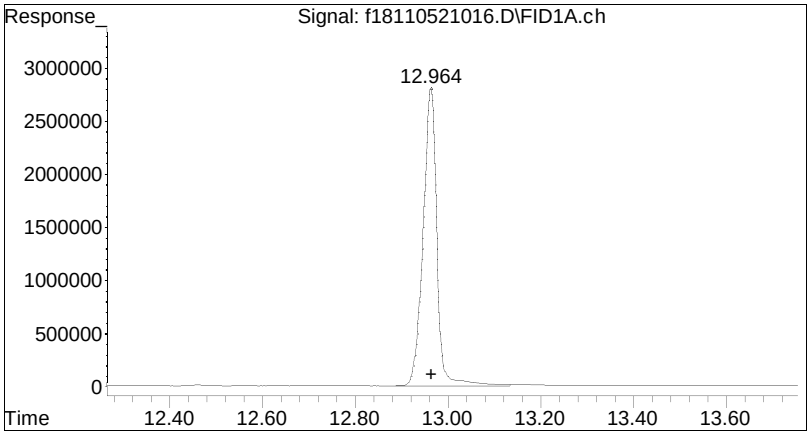
#3 n-Nonane (C9)

R.T.: 7.990 min
Delta R.T.: 0.000 min
Response: 52143415
Conc: 52.12 ug/mL M4



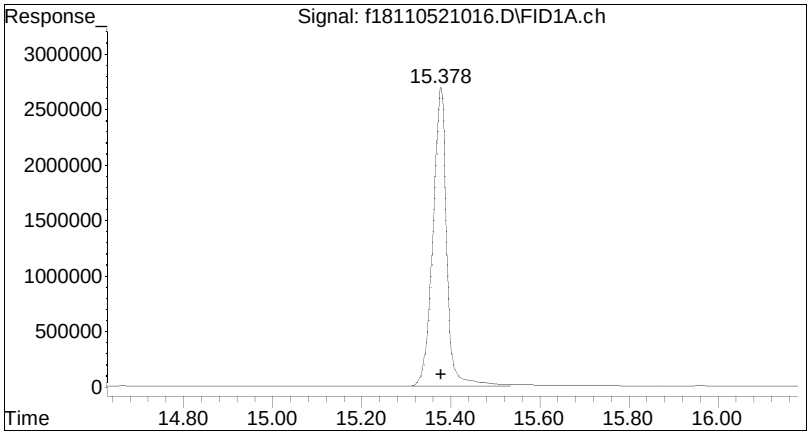
#4 n-Decane (C10)

R.T.:	10.464 min
Delta R.T.:	0.000 min
Response:	51409989
Conc:	52.05 ug/mL M4



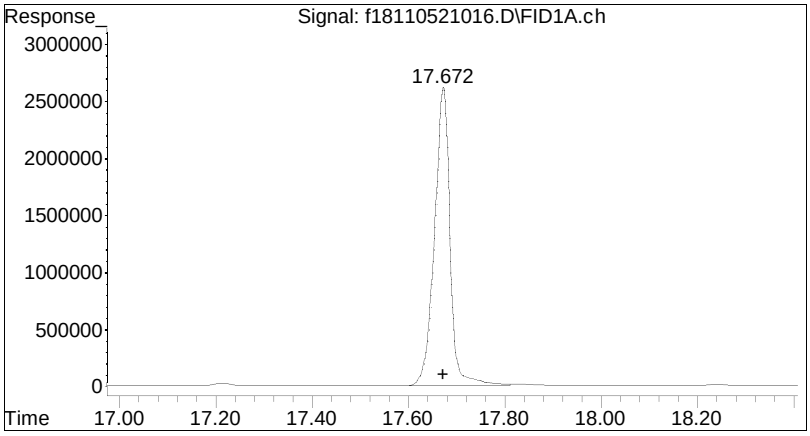
#5 n-Undecane (C11)

R.T.: 12.964 min
Delta R.T.: 0.000 min
Response: 55461909
Conc: 53.89 ug/mL M4



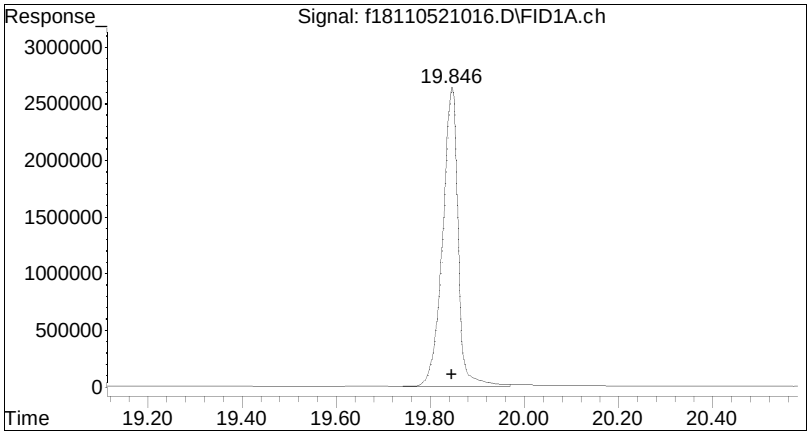
#6 n-Dodecane (C12)

R.T.: 15.378 min
Delta R.T.: 0.000 min
Response: 55749750
Conc: 52.29 ug/mL M4



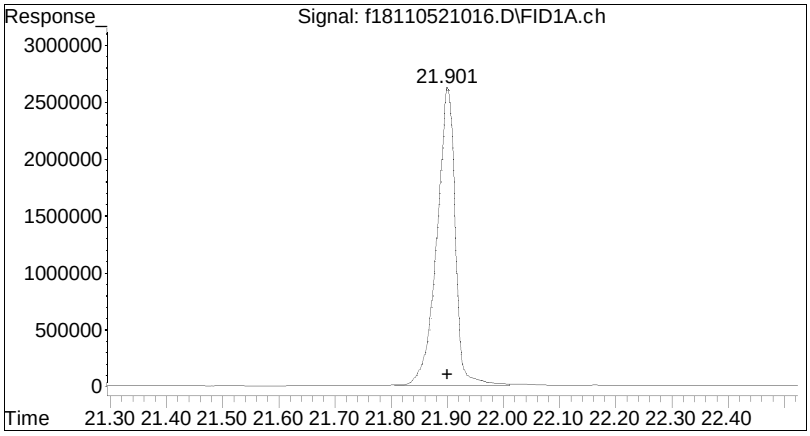
#7 n-Tridecane (C13)

R.T.: 17.672 min
Delta R.T.: 0.000 min
Response: 56602629
Conc: 52.13 ug/mL M4



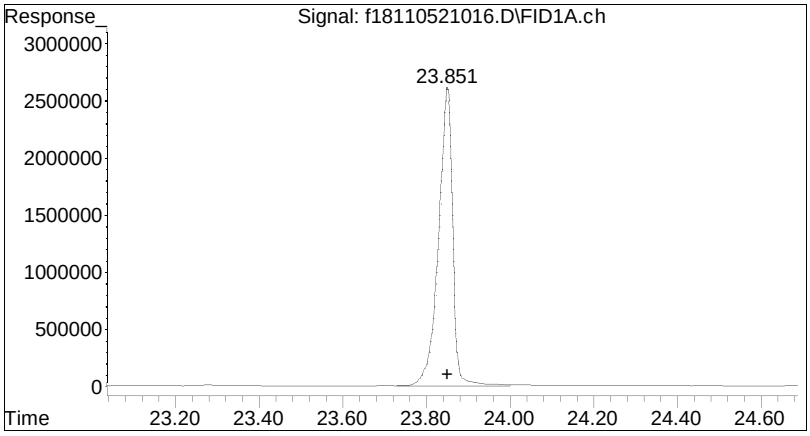
#9 n-Tetradecane (C14)

R.T.:	19.846 min
Delta R.T.:	0.000 min
Response:	57838851
Conc:	51.46 ug/mL M4



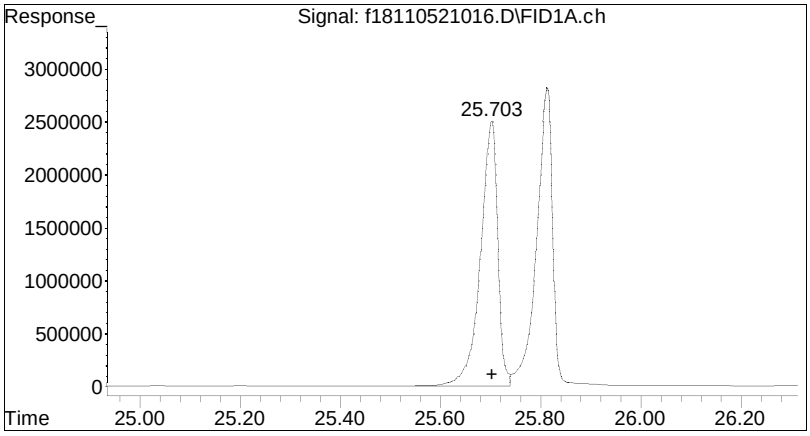
#11 n-Pentadecane (C15)

R.T.: 21.901 min
Delta R.T.: 0.000 min
Response: 57744075
Conc: 51.00 ug/mL M4



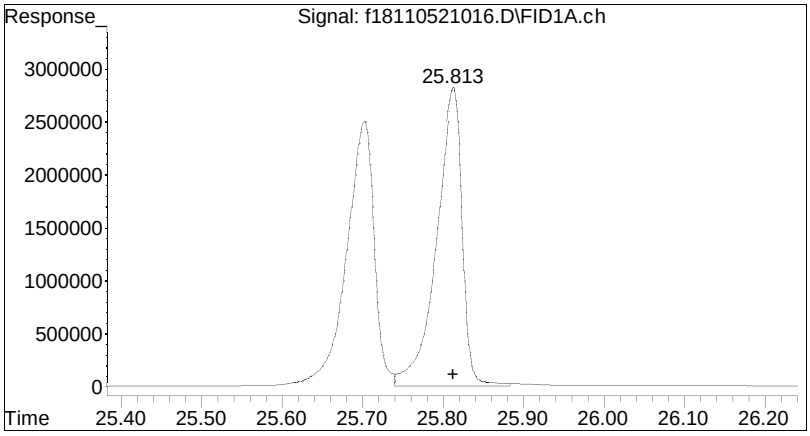
#12 n-Hexadecane (C16)

R.T.: 23.851 min
Delta R.T.: 0.000 min
Response: 59305435
Conc: 51.66 ug/mL M4



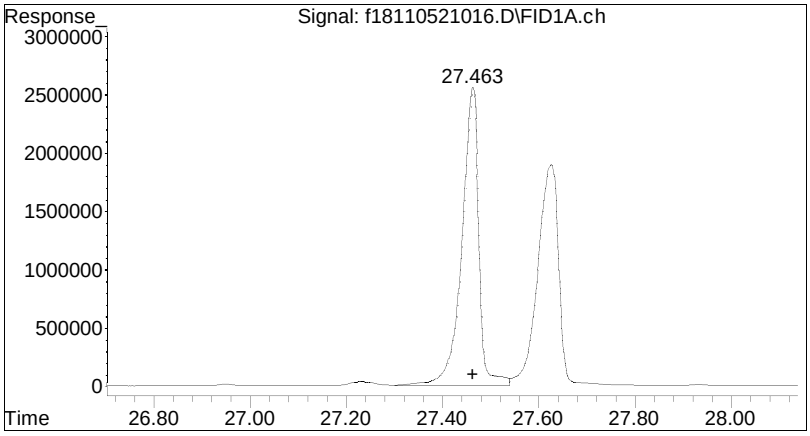
#14 n-Heptadecane (C17)

R.T.: 25.703 min
Delta R.T.: 0.000 min
Response: 59687590
Conc: 53.81 ug/mL M4



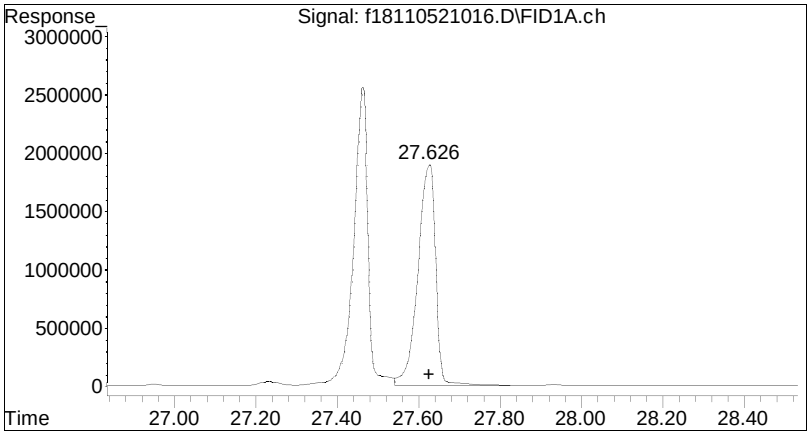
#15 Pristane

R.T.: 25.813 min
Delta R.T.: 0.000 min
Response: 61320165
Conc: 49.90 ug/mL M4



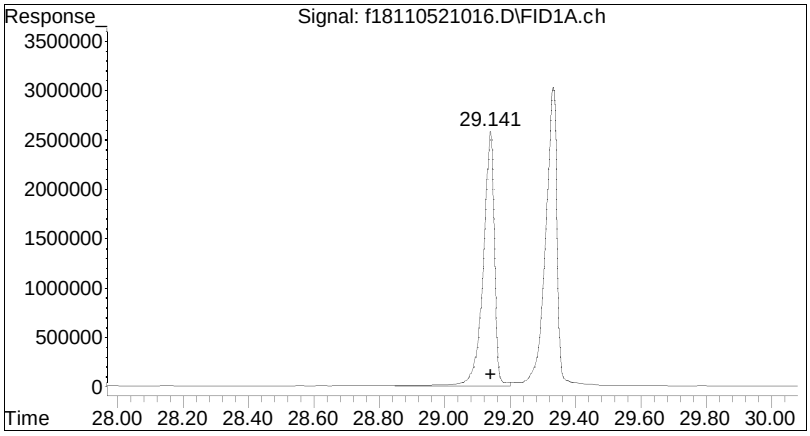
#16 n-Octadecane (C18)

R.T.:	27.463 min
Delta R.T.:	0.000 min
Response:	61939025
Conc:	52.90 ug/mL M4



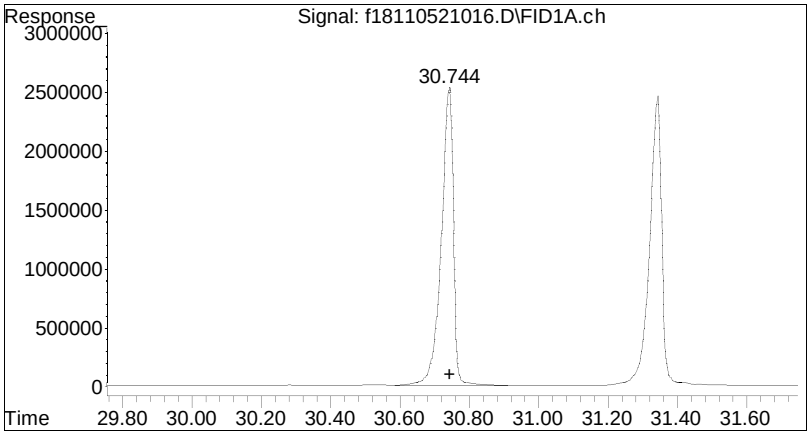
#17 Phytane

R.T.: 27.626 min
Delta R.T.: 0.000 min
Response: 56930216
Conc: 51.31 ug/mL M4



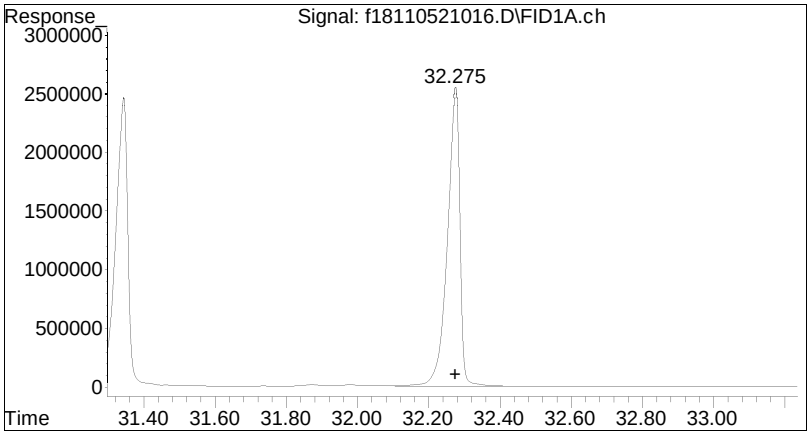
#18 n-Nonadecane (C19)

R.T.: 29.141 min
Delta R.T.: 0.000 min
Response: 61175013
Conc: 51.89 ug/mL M4



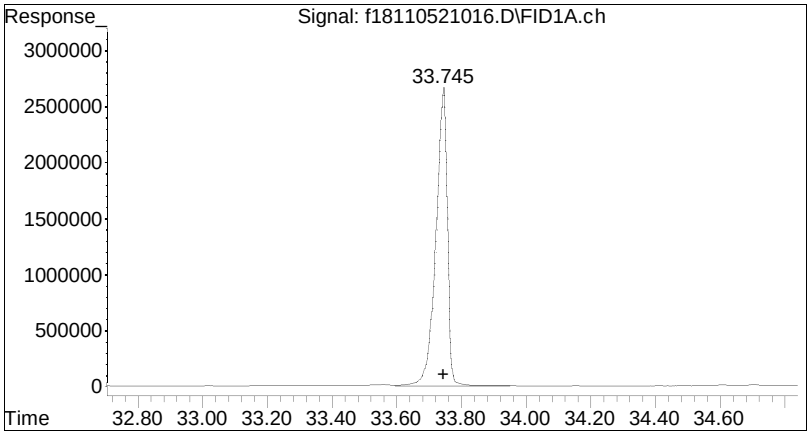
#20 n-Eicosane (C20)

R.T.: 30.744 min
Delta R.T.: 0.000 min
Response: 62027756
Conc: 51.90 ug/mL M4



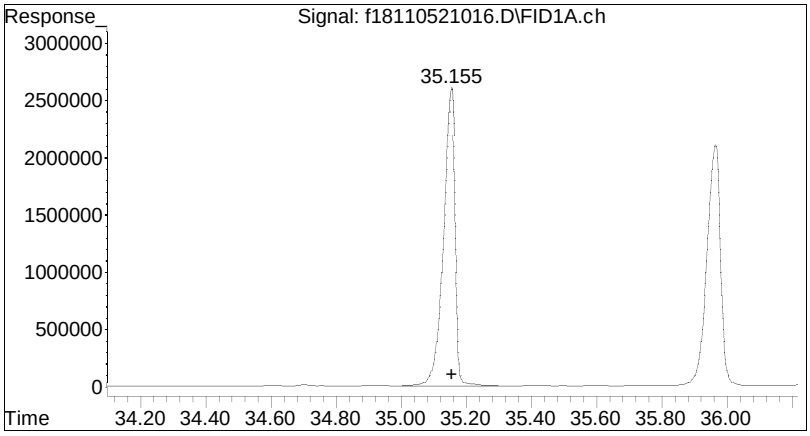
#21 n-Heneicosane (C21)

R.T.: 32.275 min
Delta R.T.: 0.000 min
Response: 61959250
Conc: 51.56 ug/mL M4



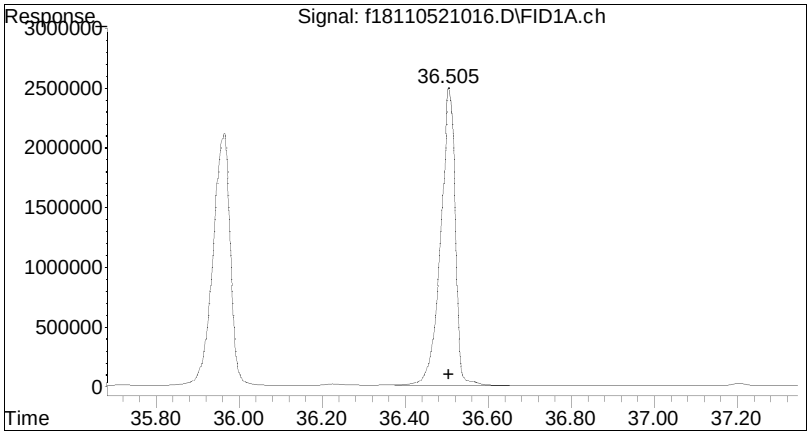
#22 n-Docosane (C22)

R.T.: 33.745 min
Delta R.T.: 0.000 min
Response: 63126900
Conc: 52.06 ug/mL M4



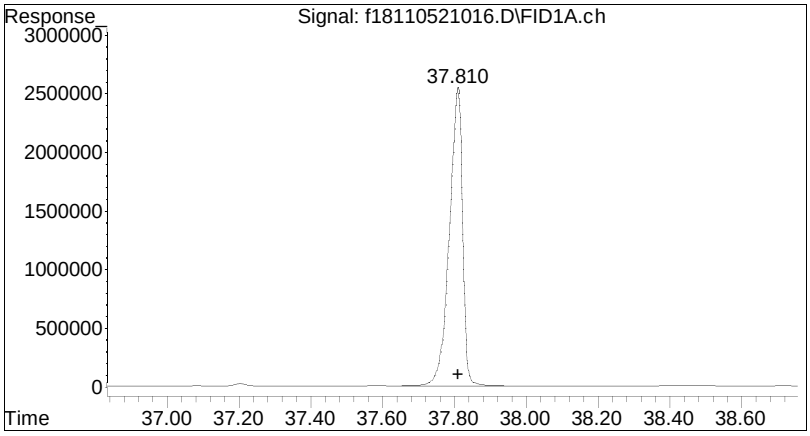
#23 n-Tricosane (C23)

R.T.: 35.155 min
Delta R.T.: 0.000 min
Response: 63515782
Conc: 51.95 ug/mL M4



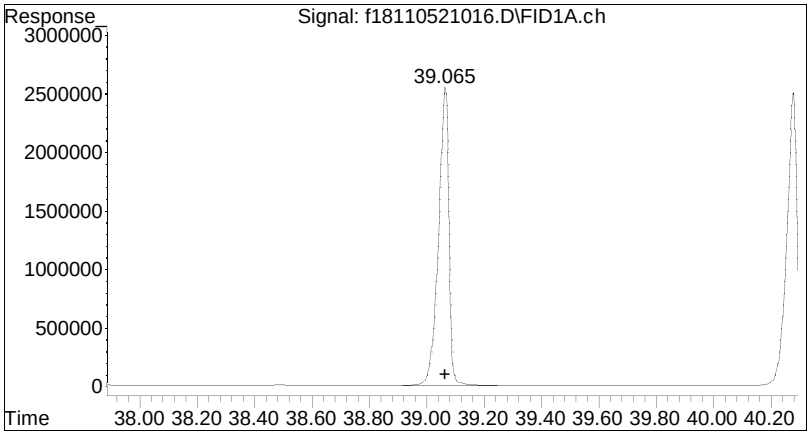
#25 n-Tetracosane (C24)

R.T.:	36.505 min
Delta R.T.:	0.000 min
Response:	60737365
Conc:	50.44 ug/mL M4



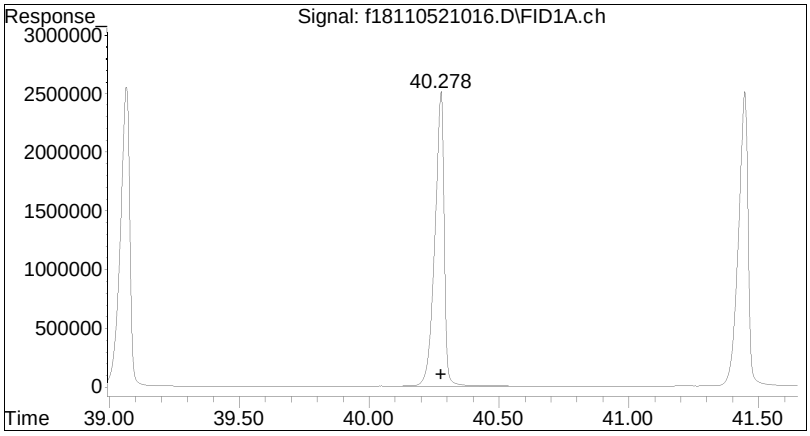
#26 n-Pentacosane (C25)

R.T.: 37.810 min
Delta R.T.: 0.000 min
Response: 62650973
Conc: 52.32 ug/mL M4



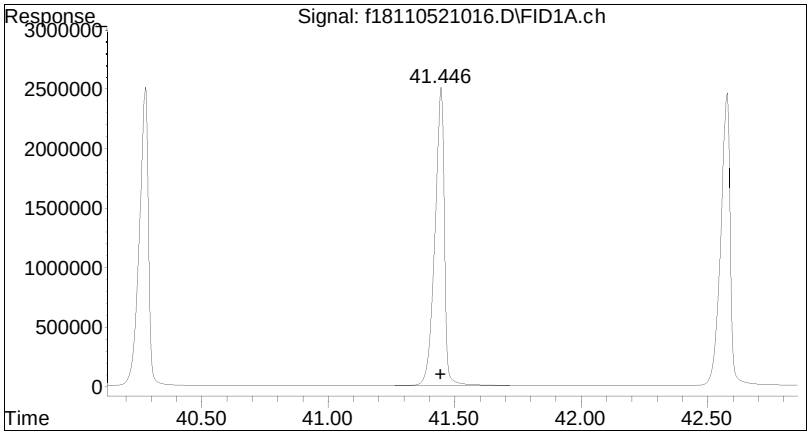
#27 n-Hexacosane (C26)

R.T.: 39.065 min
Delta R.T.: 0.000 min
Response: 64754893
Conc: 52.69 ug/mL M4



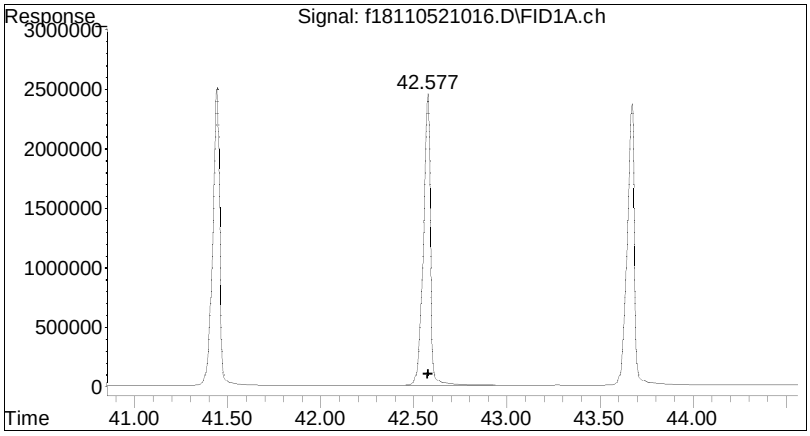
#28 n-Heptacosane (C27)

R.T.: 40.278 min
Delta R.T.: 0.000 min
Response: 62700602
Conc: 51.35 ug/mL M4



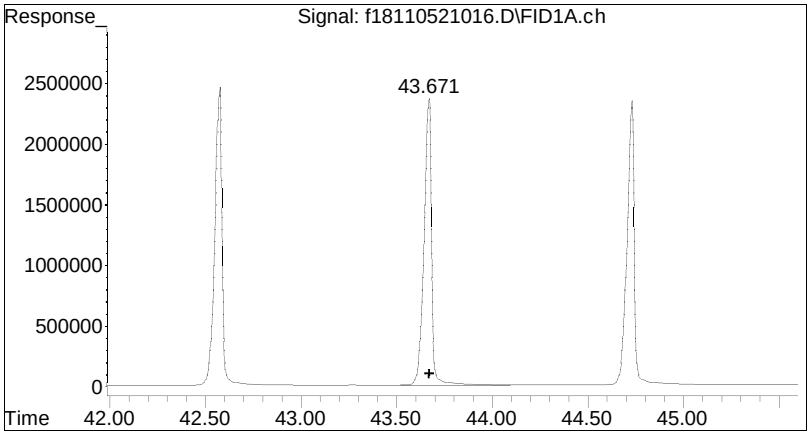
#29 n-Octacosane (C28)

R.T.: 41.446 min
Delta R.T.: 0.000 min
Response: 65442746
Conc: 52.25 ug/mL M4



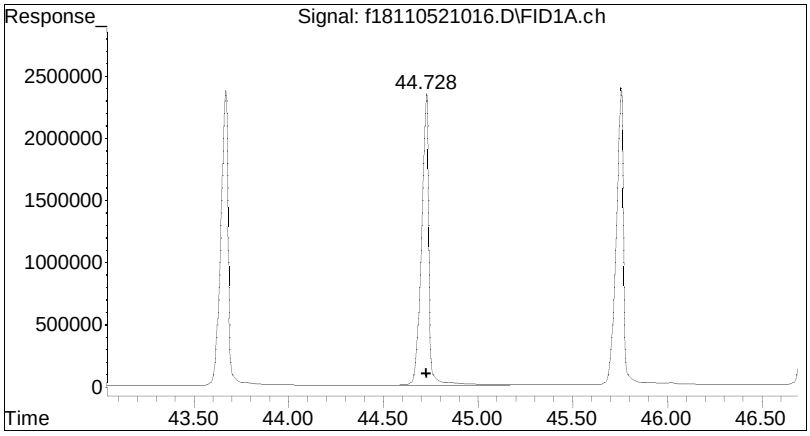
#30 n-Nonacosane (C29)

R.T.:	42.577 min
Delta R.T.:	0.000 min
Response:	65314211
Conc:	52.56 ug/mL M4



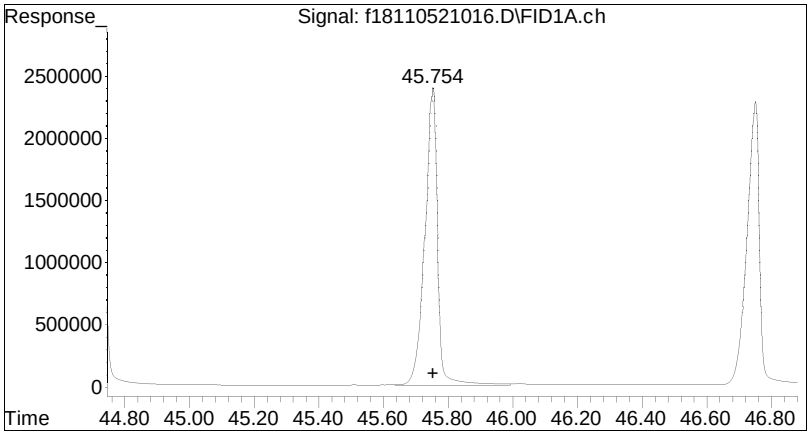
#31 n-Triacontane (C30)

R.T.: 43.671 min
Delta R.T.: 0.000 min
Response: 65436294
Conc: 52.70 ug/mL M4



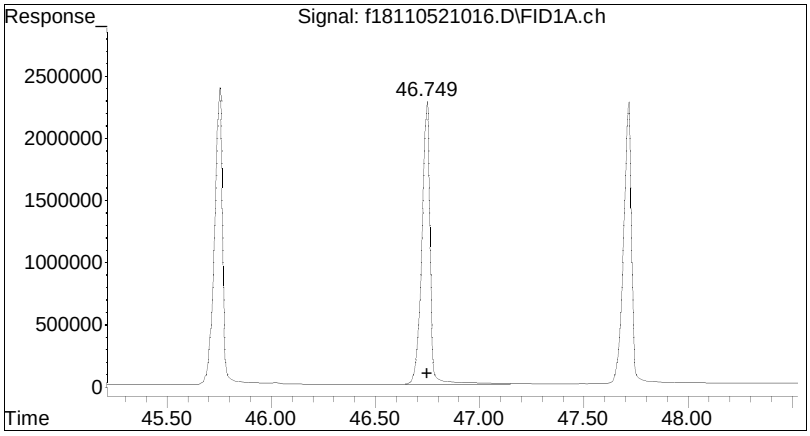
#32 n-Hentriacontane (C31)

R.T.: 44.728 min
Delta R.T.: 0.000 min
Response: 63369158
Conc: 53.01 ug/mL M4



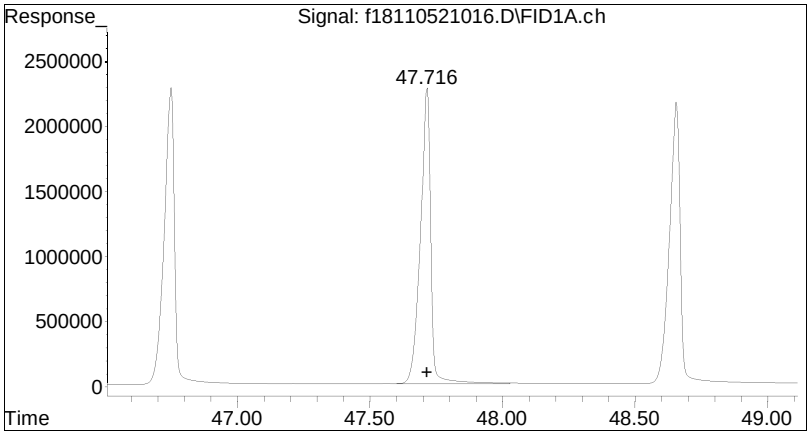
#33 n-Dotriacontane (C32)

R.T.:	45.754 min
Delta R.T.:	0.000 min
Response:	65313936
Conc:	52.74 ug/mL M4



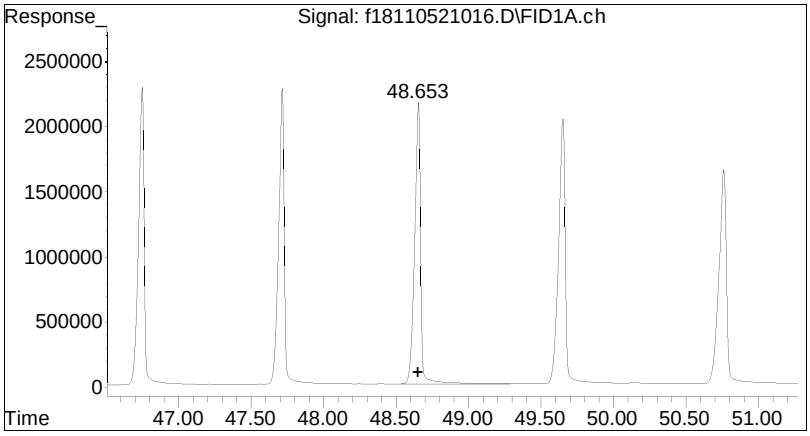
#34 n-Tritriacontane (C33)

R.T.: 46.749 min
Delta R.T.: 0.000 min
Response: 63209732
Conc: 52.93 ug/mL M4



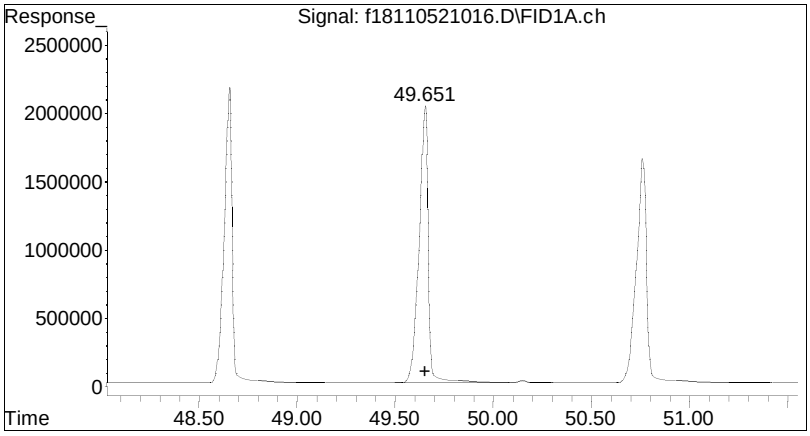
#35 n-tetratriacontane (C34)

R.T.: 47.716 min
Delta R.T.: 0.000 min
Response: 62305046
Conc: 53.07 ug/mL M4



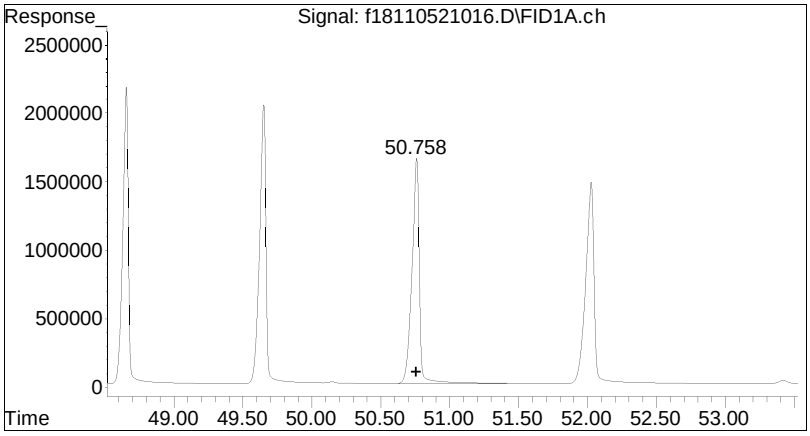
#36 n-Pentatriacontane (C35)

R.T.: 48.653 min
Delta R.T.: 0.000 min
Response: 63275913
Conc: 57.01 ug/mL M4



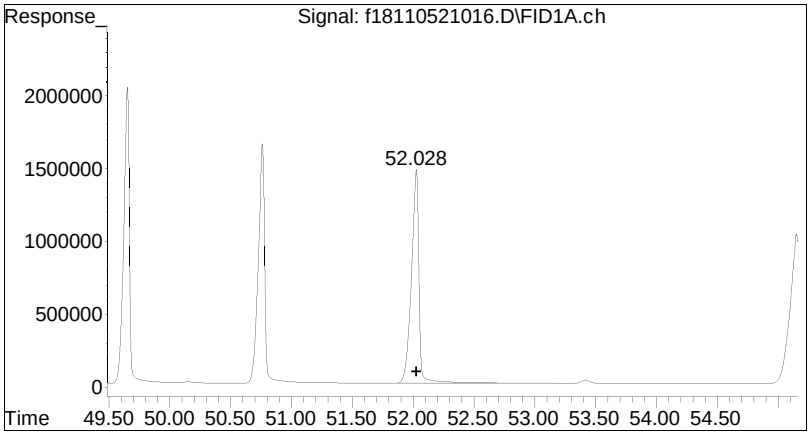
#37 n-Hexatriacontane (C36)

R.T.: 49.651 min
Delta R.T.: 0.000 min
Response: 67441802
Conc: 52.69 ug/mL M4



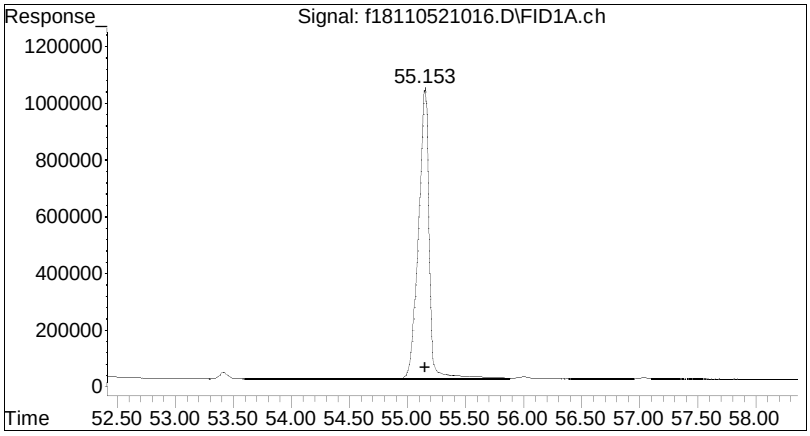
#38 n-Heptatriacontane (C37)

R.T.: 50.758 min
Delta R.T.: 0.000 min
Response: 61719641
Conc: 53.28 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.: 52.028 min
Delta R.T.: 0.000 min
Response: 63635433
Conc: 54.69 ug/mL M4



#41 n-Tetracontane (C40)

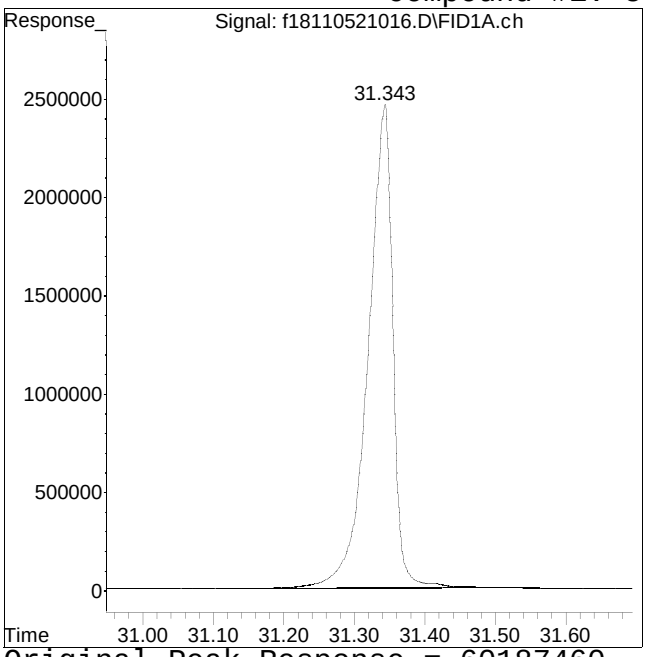
R.T.:	55.153 min
Delta R.T.:	0.000 min
Response:	63641416
Conc:	55.79 ug/mL M4

Manual Integration/Negative Proof Report

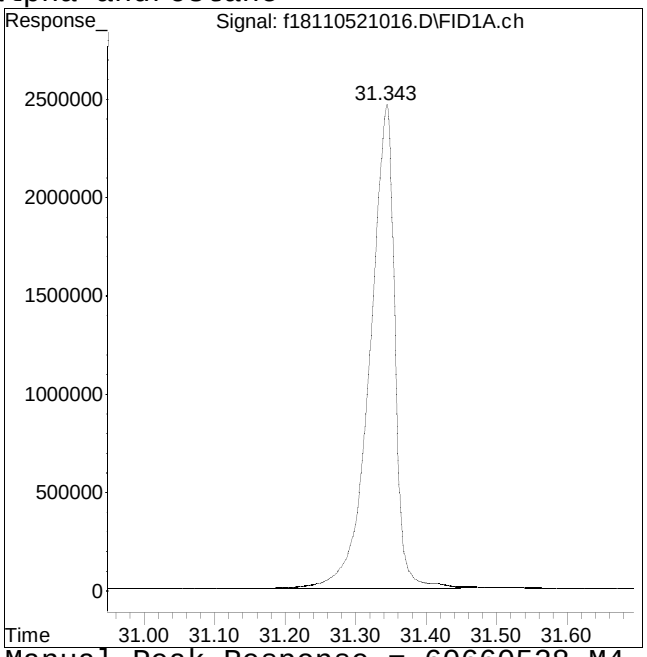
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #1: 5-alpha-androstane



Original Peak Response = 60187460



Manual Peak Response = 60660528 M4

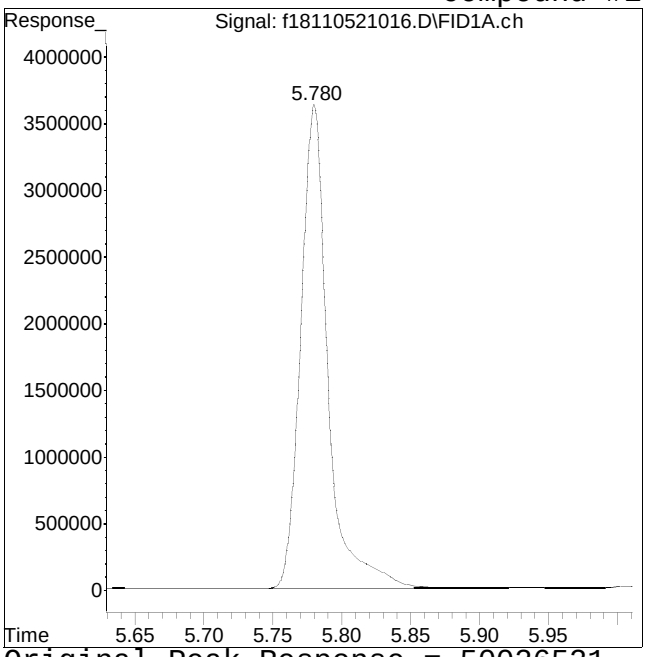
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

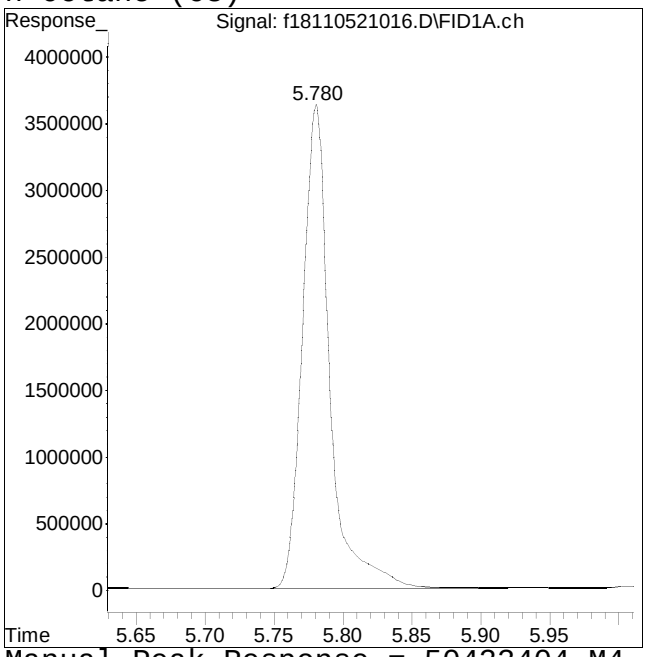
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #2: n-Octane (C8)



Original Peak Response = 50026521



Manual Peak Response = 50433404 M4

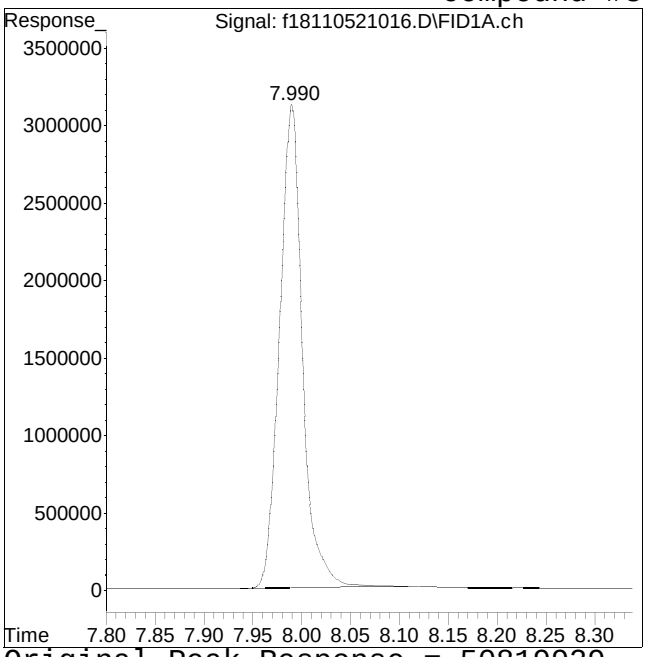
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

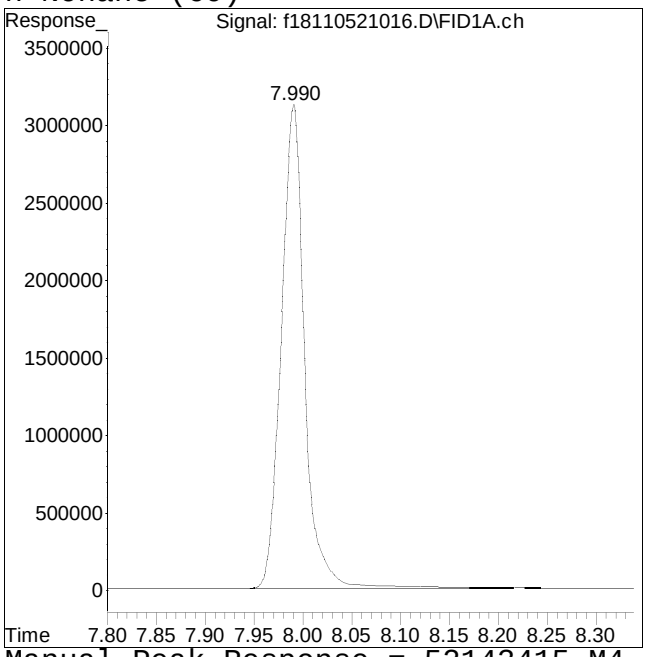
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #3: n-Nonane (C9)



Original Peak Response = 50819929



Manual Peak Response = 52143415 M4

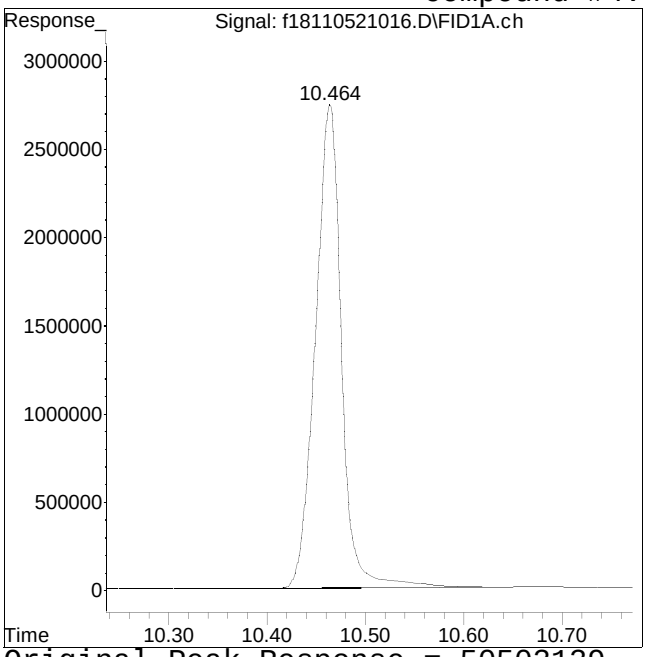
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

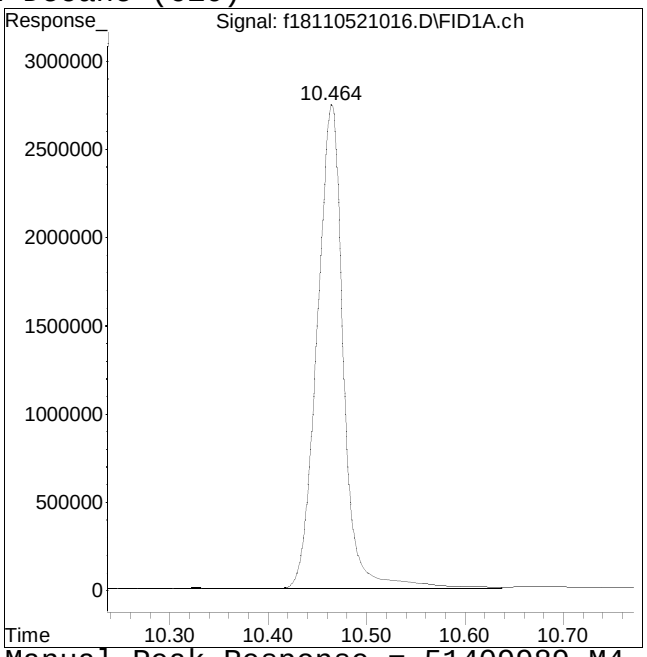
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #4: n-Decane (C10)



Original Peak Response = 50503139



Manual Peak Response = 51409989 M4

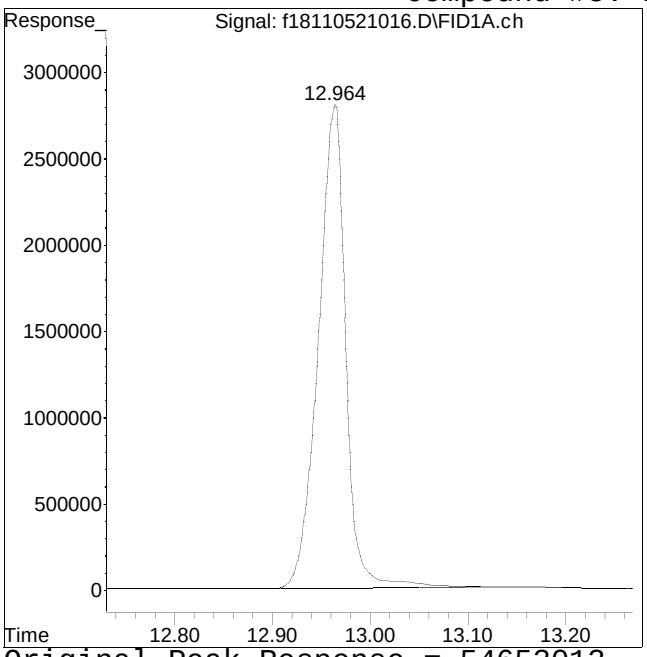
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

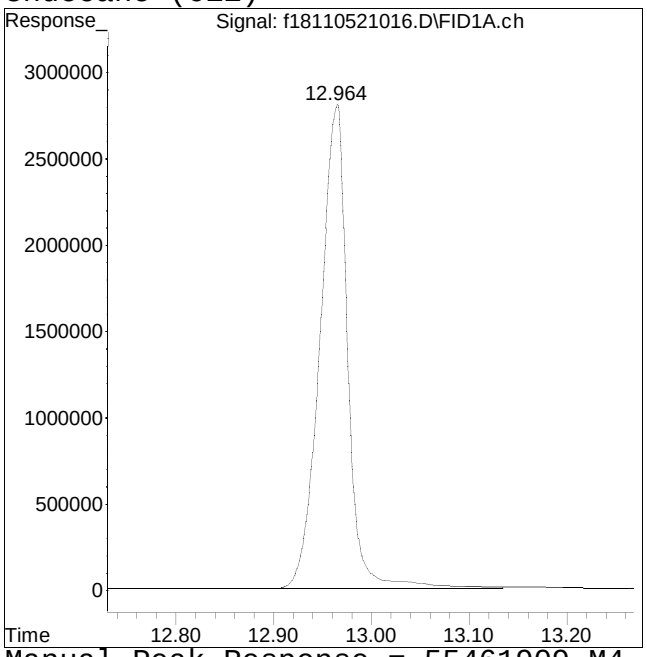
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #5: n-Undecane (C11)



Original Peak Response = 54653013



Manual Peak Response = 55461909 M4

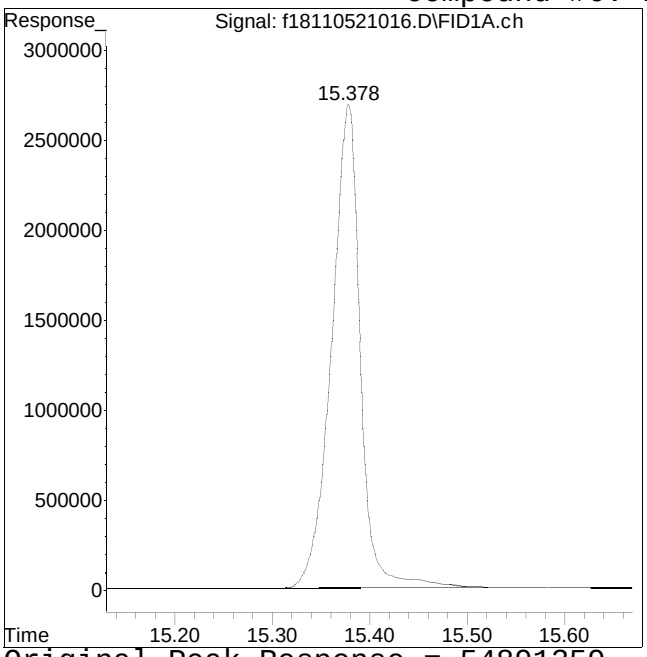
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

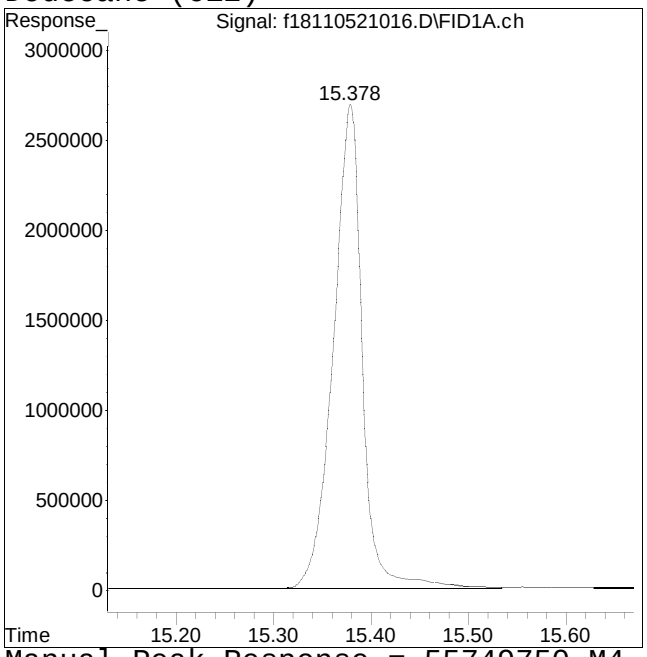
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 54891359



Manual Peak Response = 55749750 M4

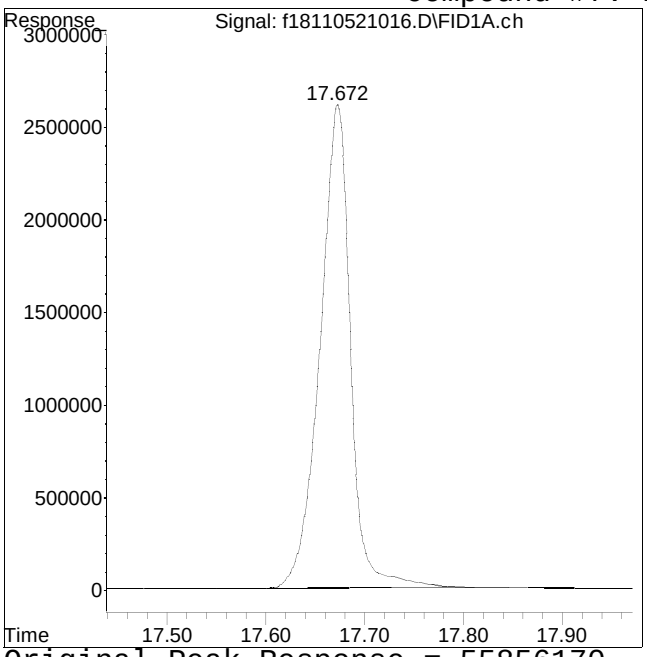
M4 = Poor automated baseline construction.

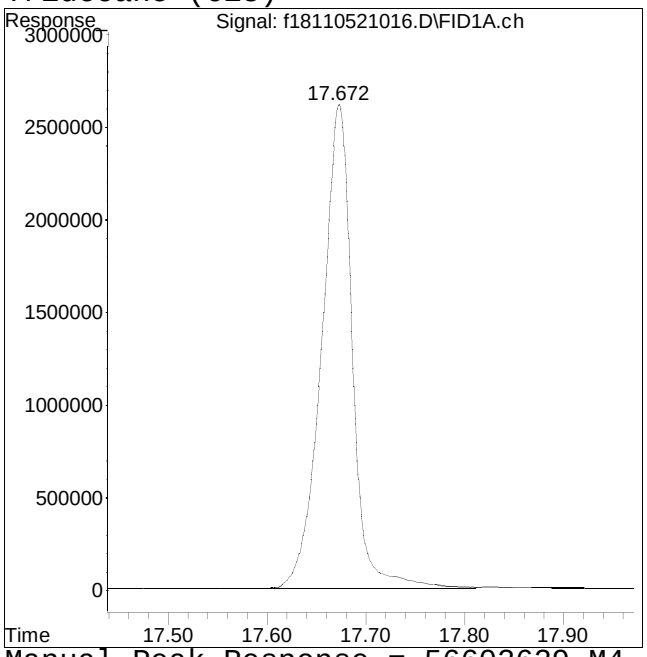
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #7: n-Tridecane (C13)





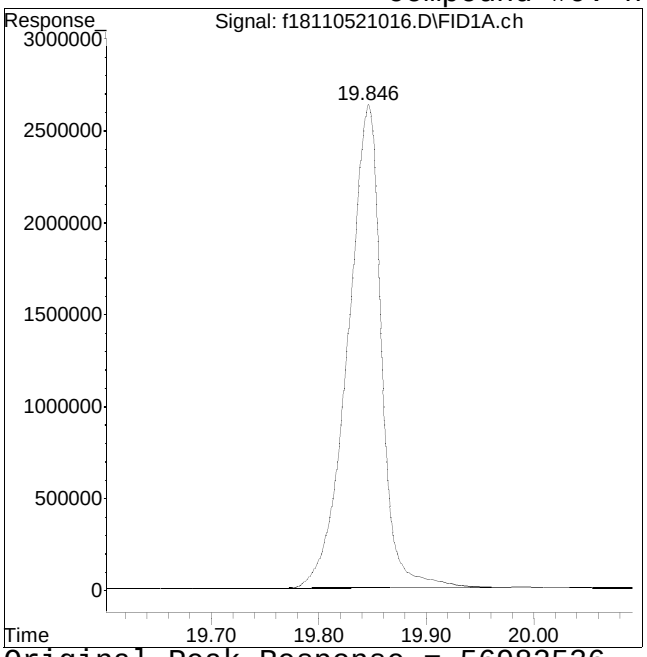
Original Peak Response = 55856170 Manual Peak Response = 56602629 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

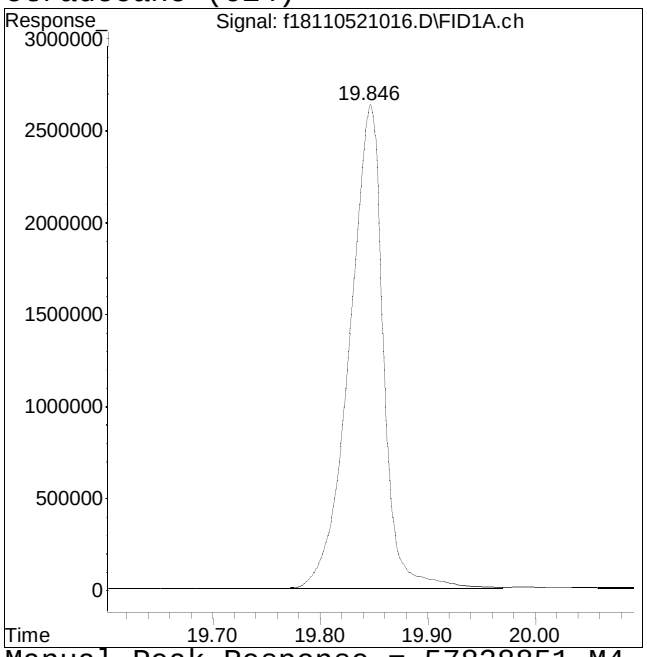
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 56982536



Manual Peak Response = 57838851 M4

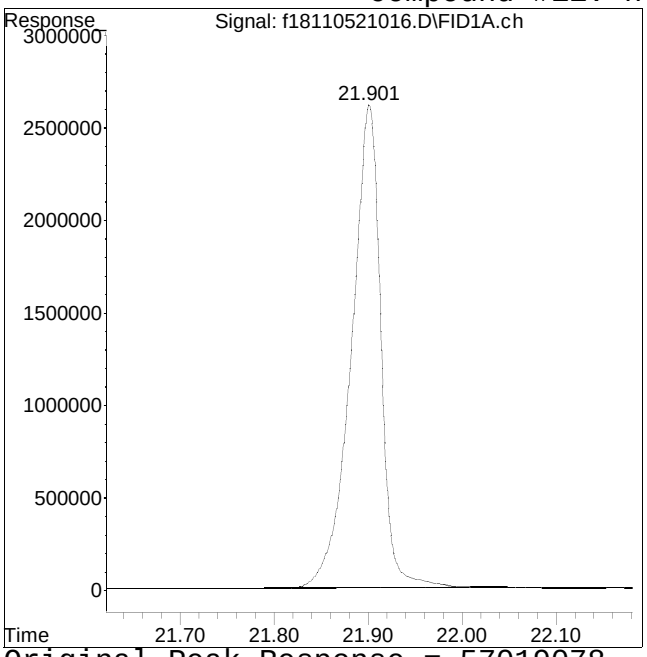
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

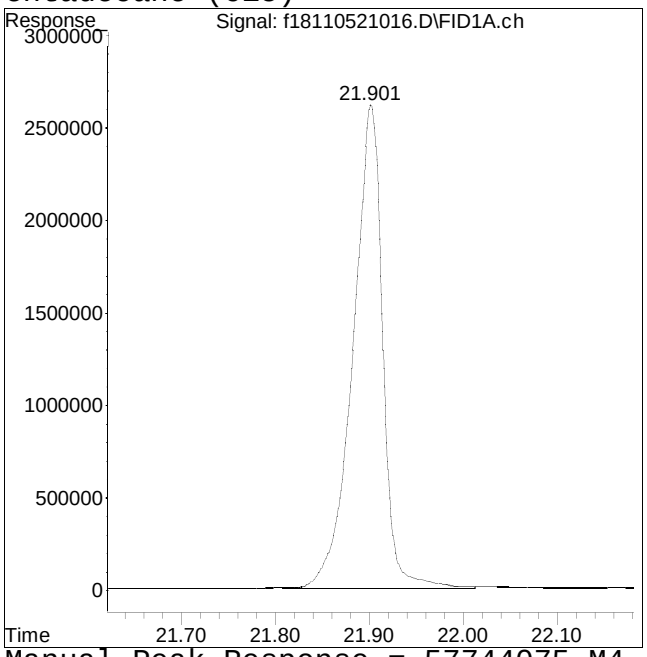
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 57019078



Manual Peak Response = 57744075 M4

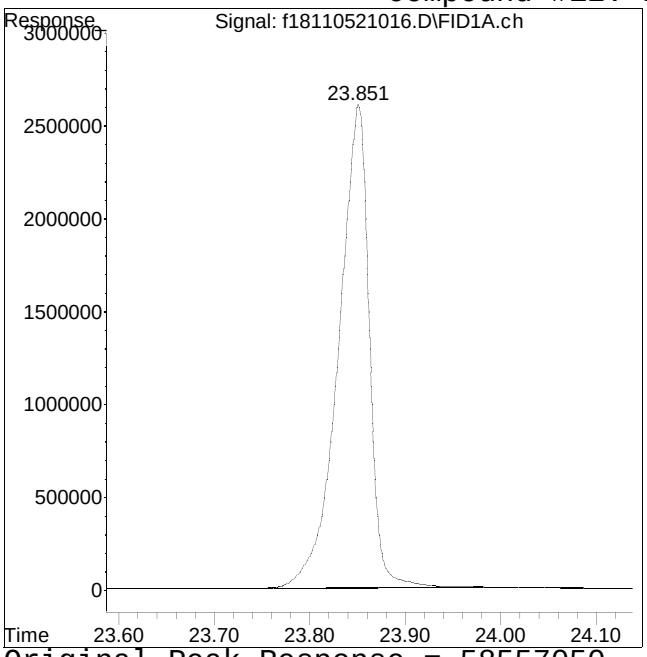
M4 = Poor automated baseline construction.

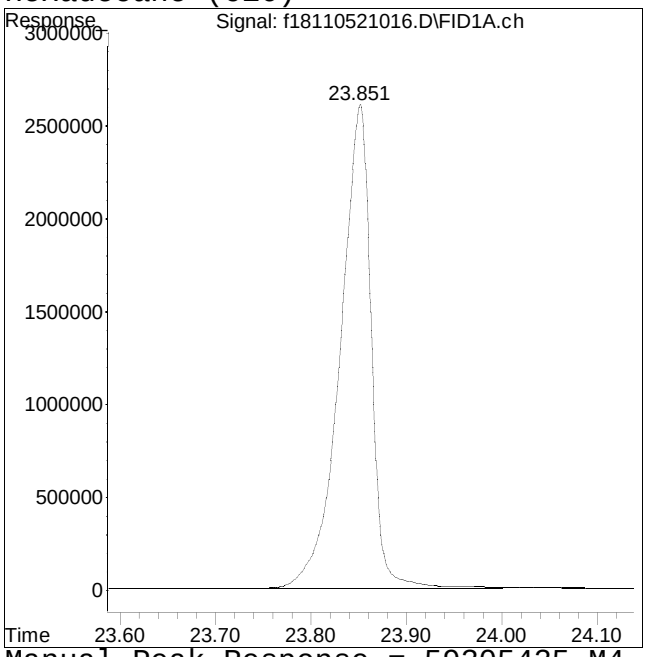
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #12: n-Hexadecane (C16)





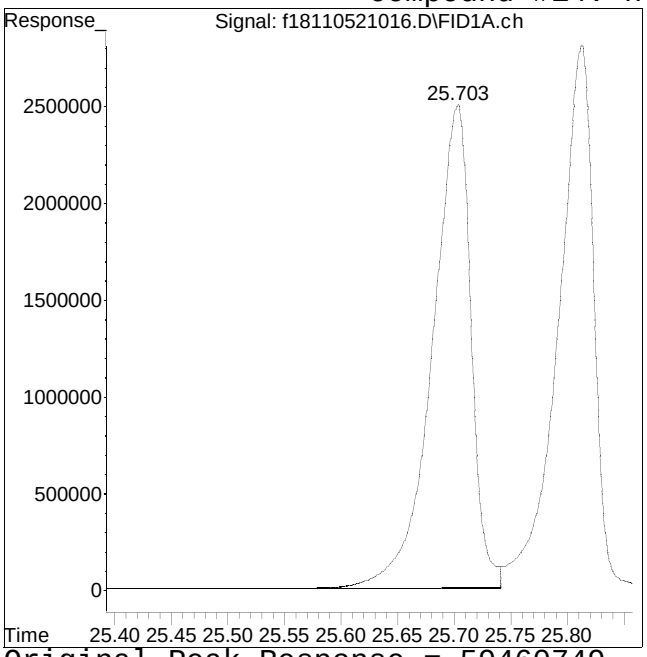
Original Peak Response = 58557050 Manual Peak Response = 59305435 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

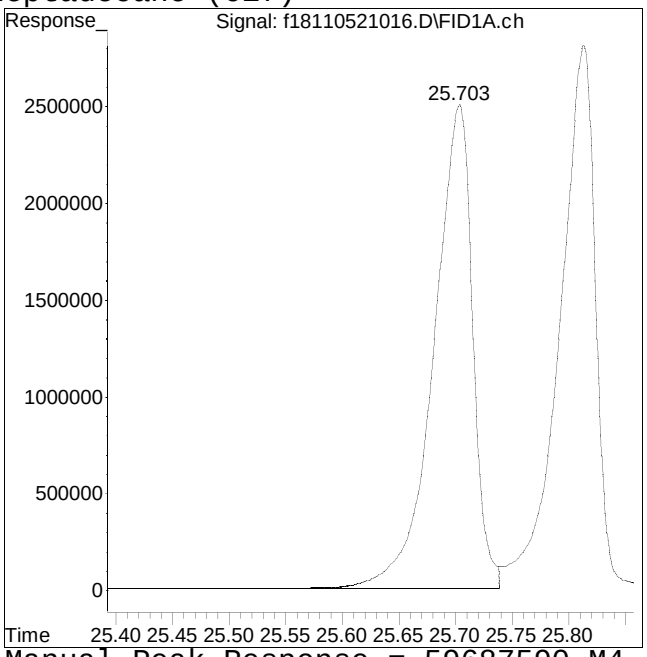
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 59460749



Manual Peak Response = 59687590 M4

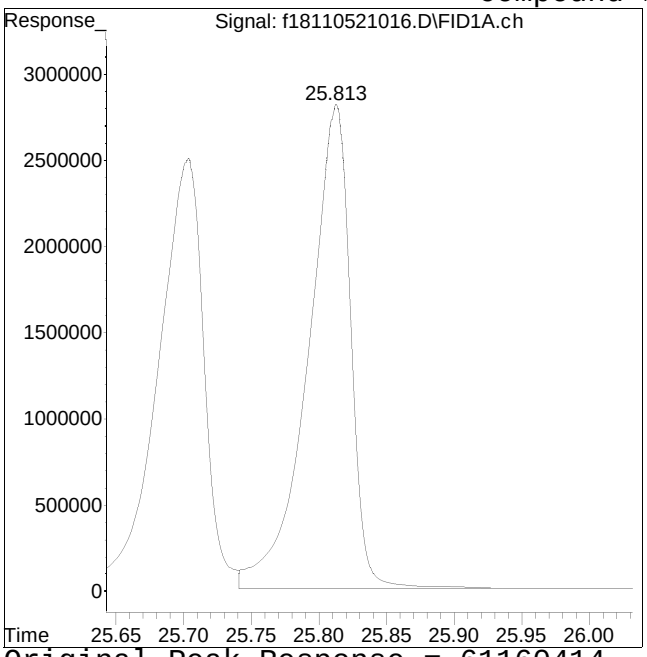
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

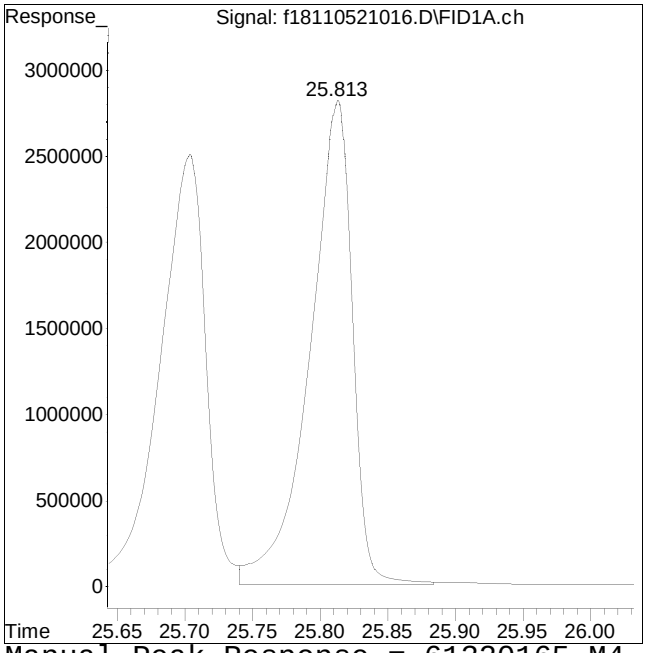
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #15: Pristane



Original Peak Response = 61160414



Manual Peak Response = 61320165 M4

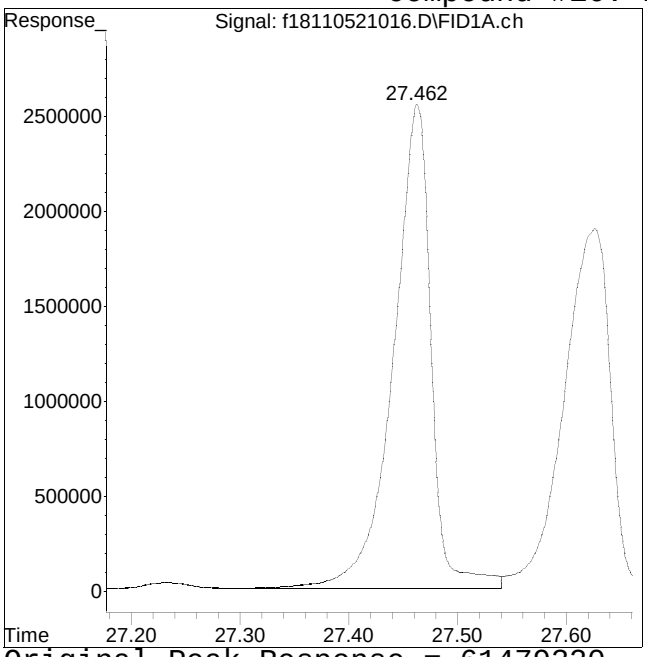
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

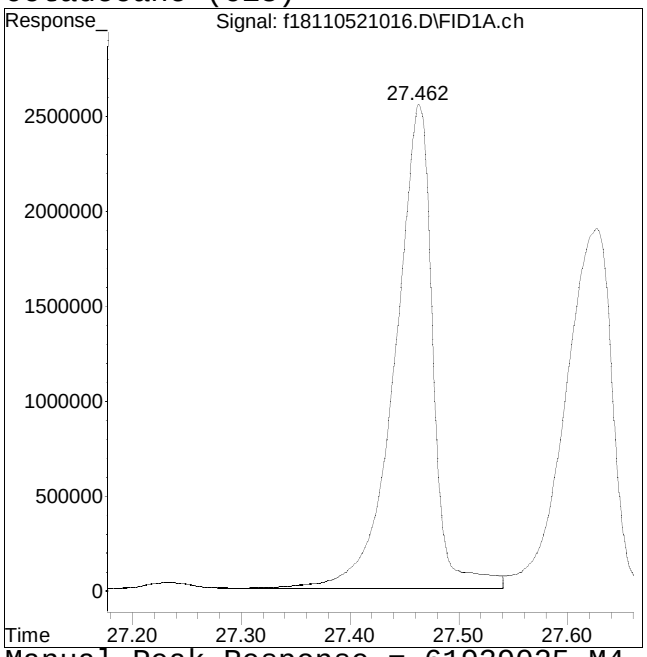
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 61479320



Manual Peak Response = 61939025 M4

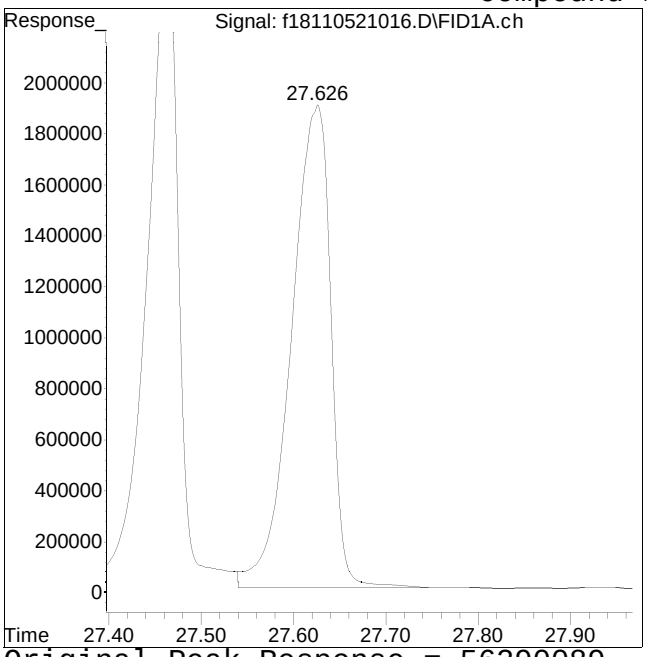
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

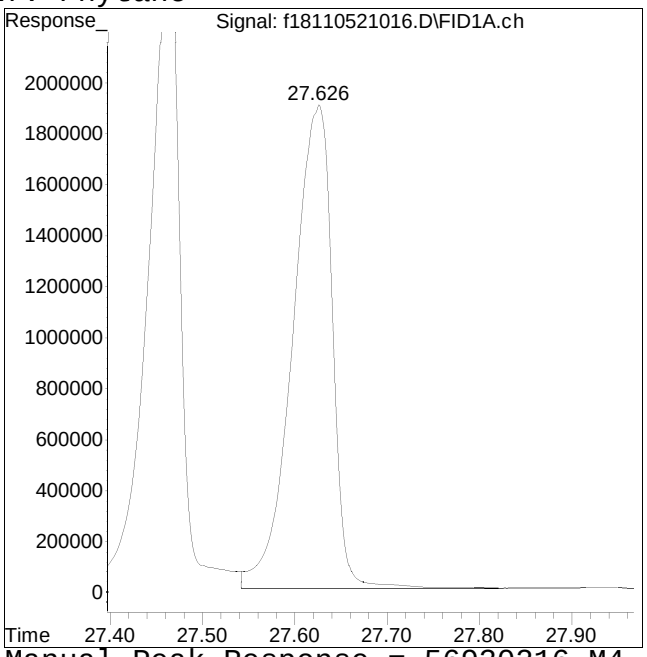
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #17: Phytane



Original Peak Response = 56290089



Manual Peak Response = 56930216 M4

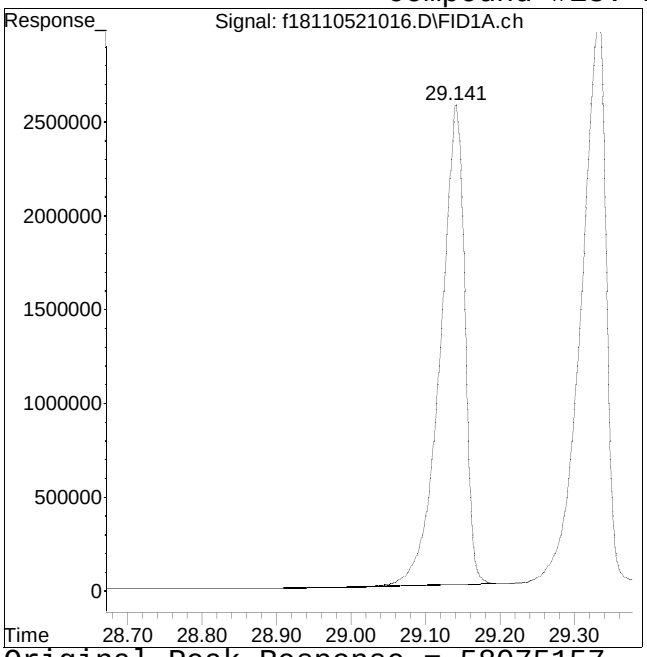
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

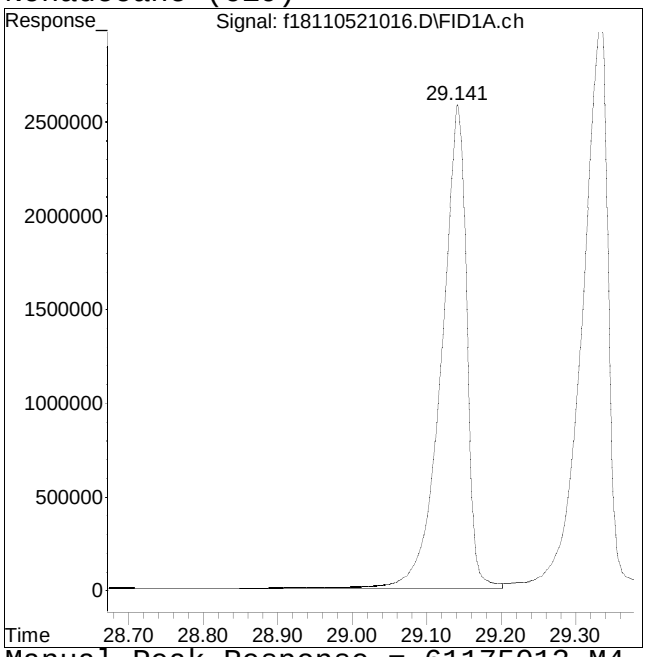
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 58075157



Manual Peak Response = 61175013 M4

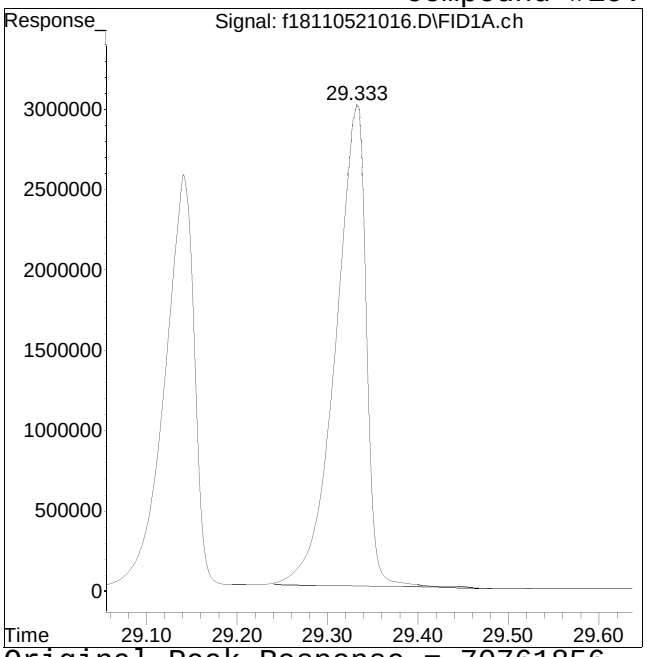
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

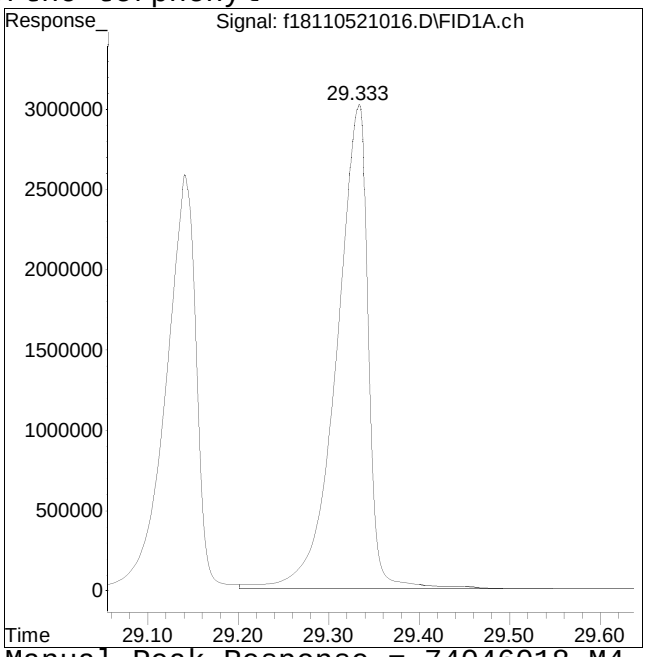
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #19: ortho-terphenyl



Original Peak Response = 70761856



Manual Peak Response = 74046018 M4

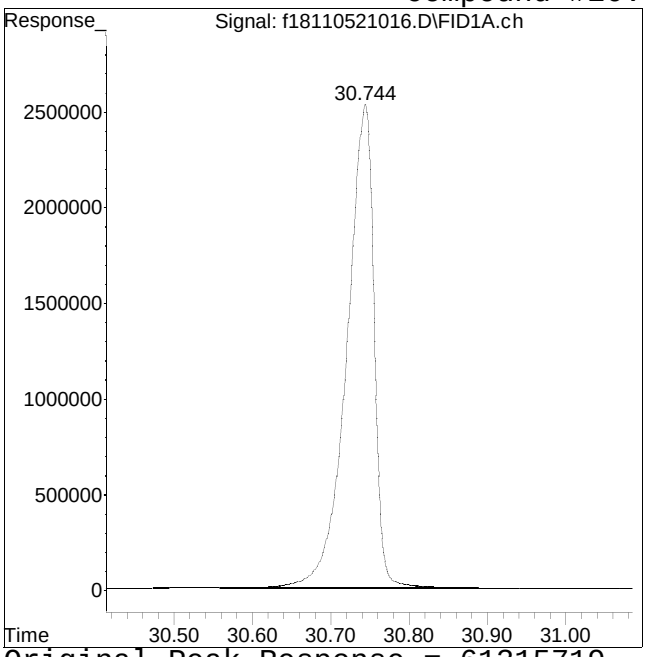
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

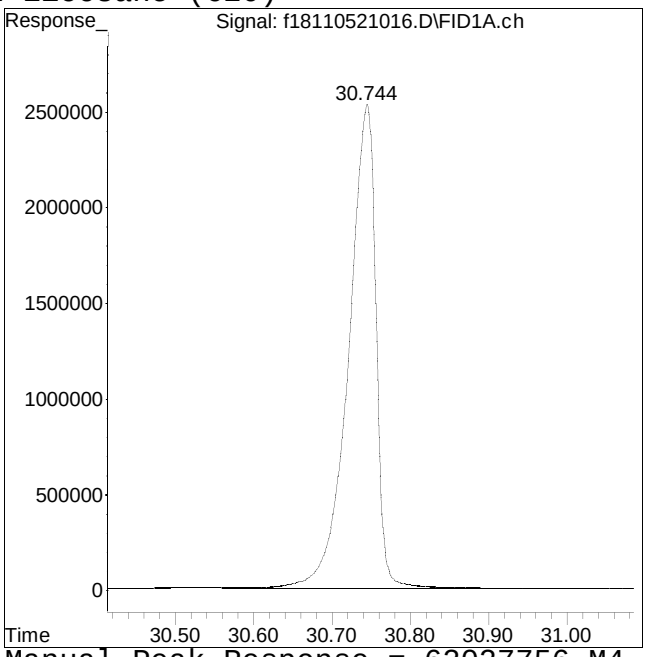
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 61315719



Manual Peak Response = 62027756 M4

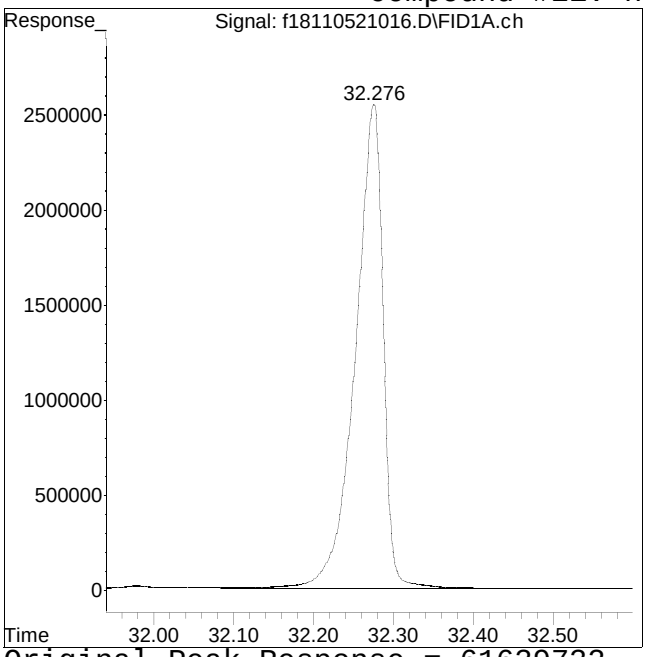
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

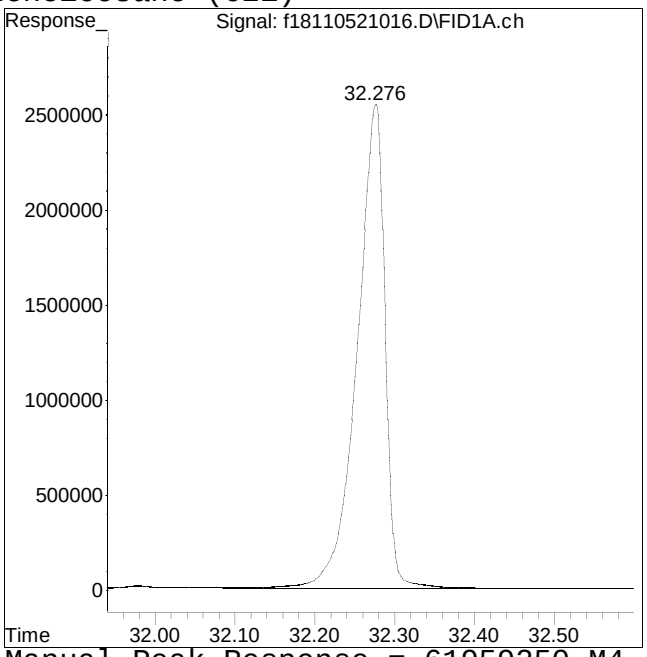
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 61639732



Manual Peak Response = 61959250 M4

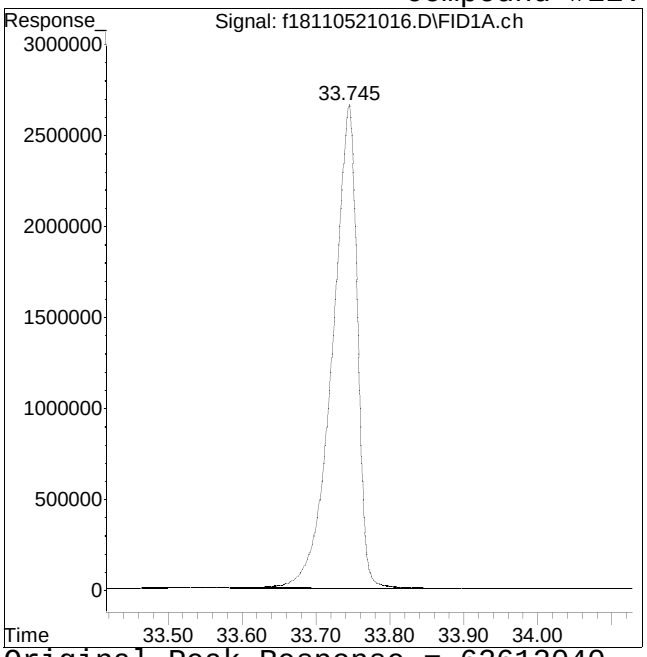
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

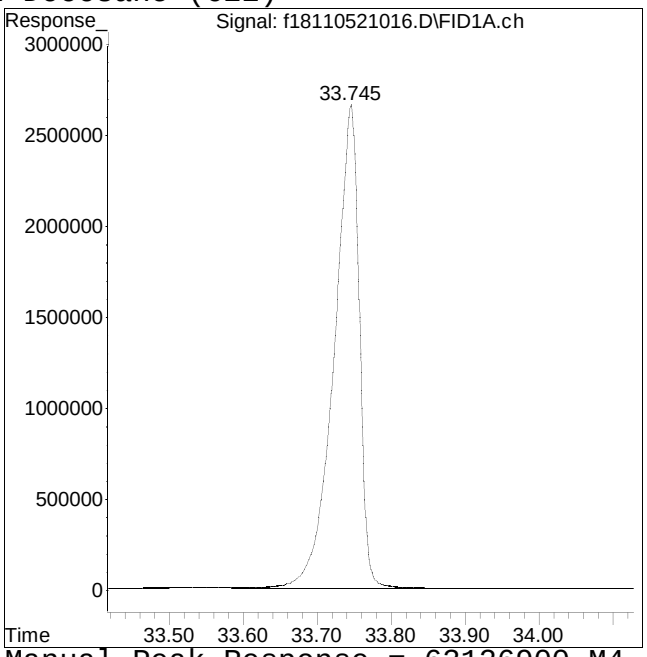
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #22: n-Docosane (C22)



Original Peak Response = 62612040



Manual Peak Response = 63126900 M4

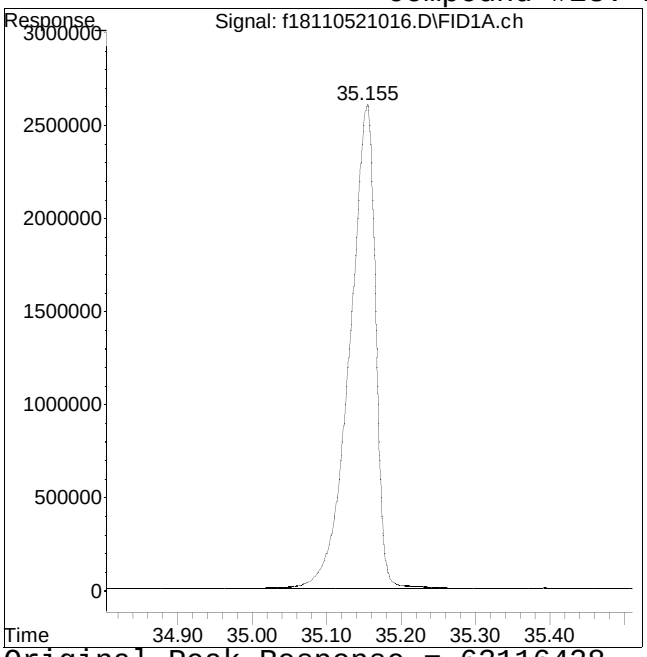
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

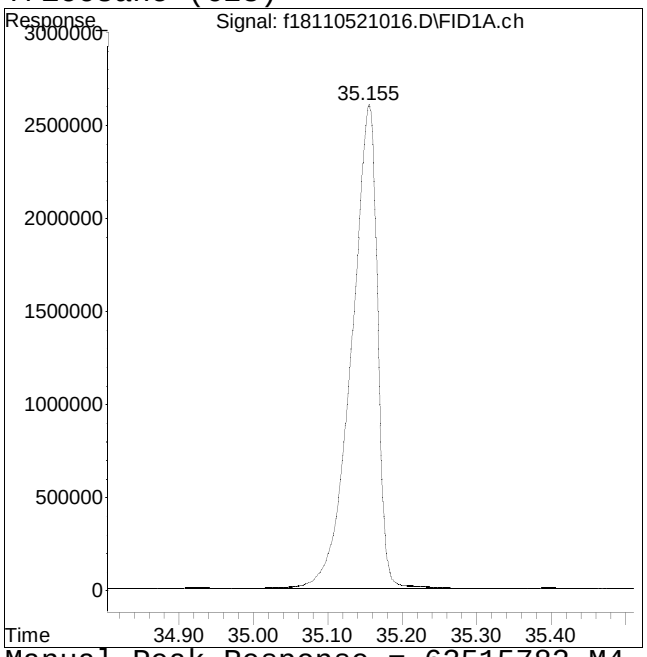
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 63116428



Manual Peak Response = 63515782 M4

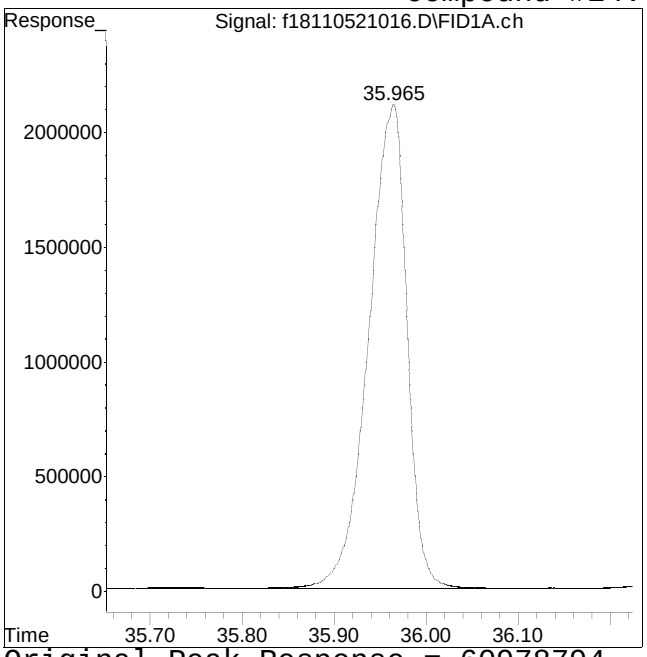
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

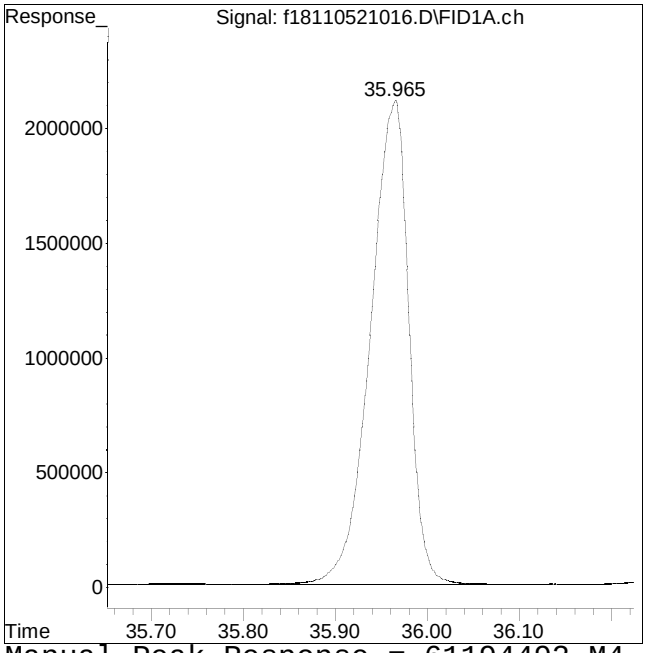
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #24: d50-Tetracosane



Original Peak Response = 60978794



Manual Peak Response = 61194492 M4

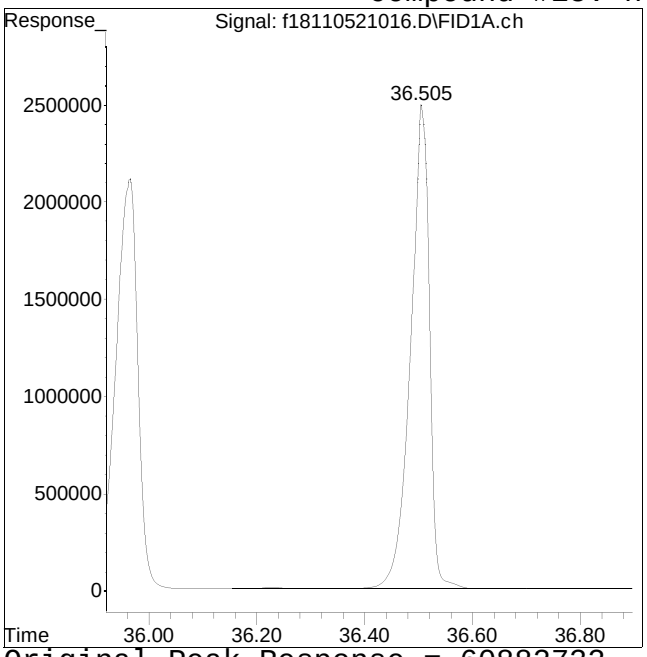
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

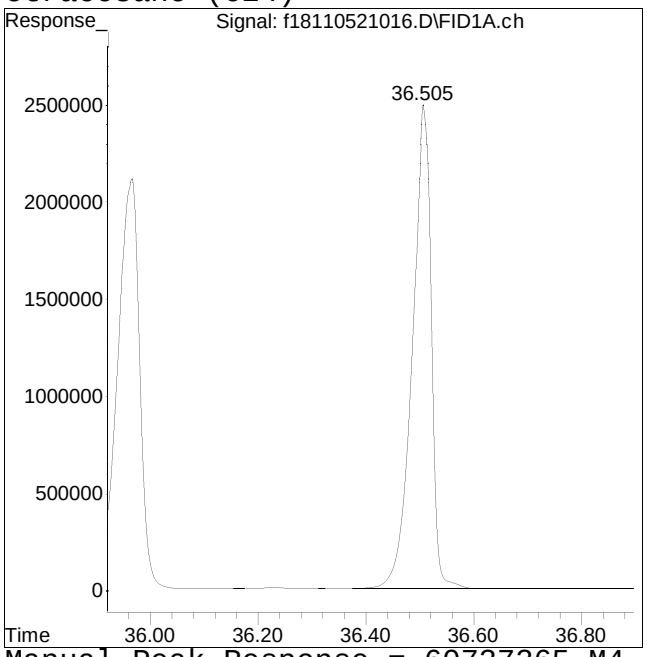
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 60882732



Manual Peak Response = 60737365 M4

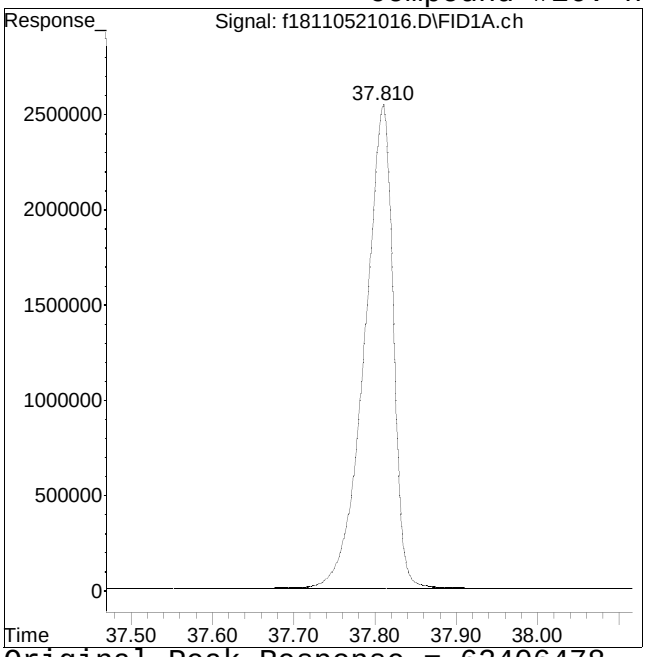
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

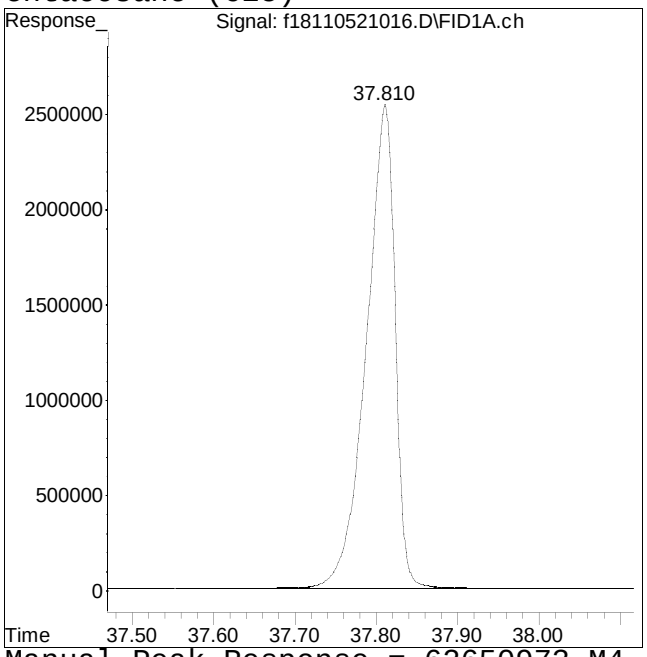
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 62406478



Manual Peak Response = 62650973 M4

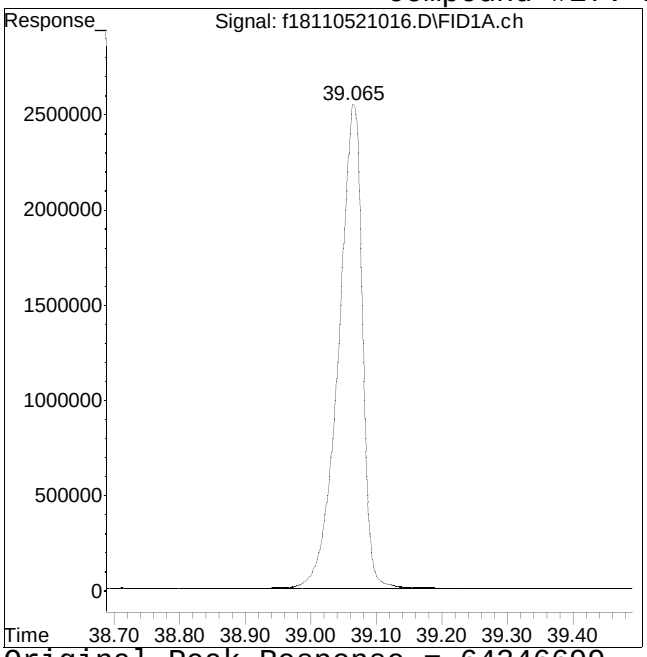
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

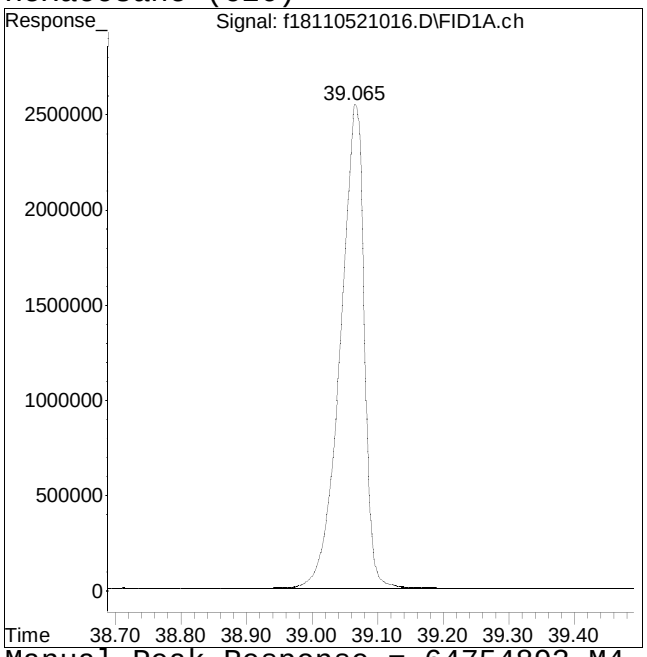
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 64346699



Manual Peak Response = 64754893 M4

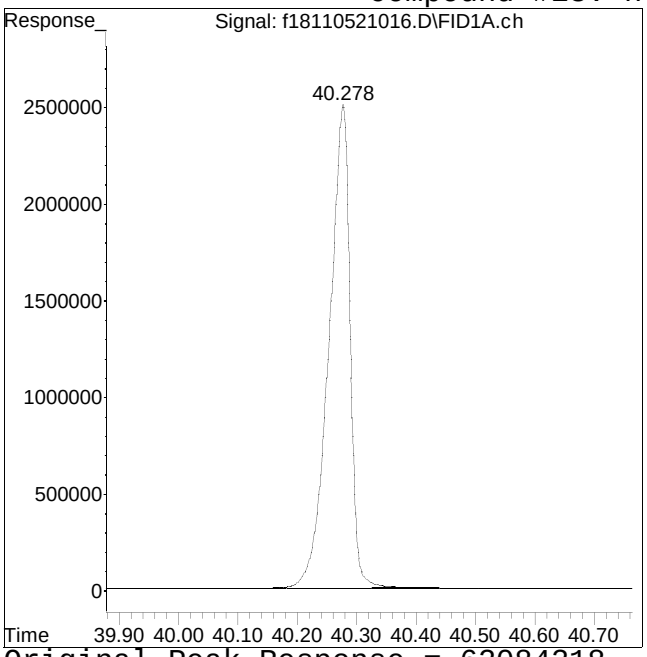
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

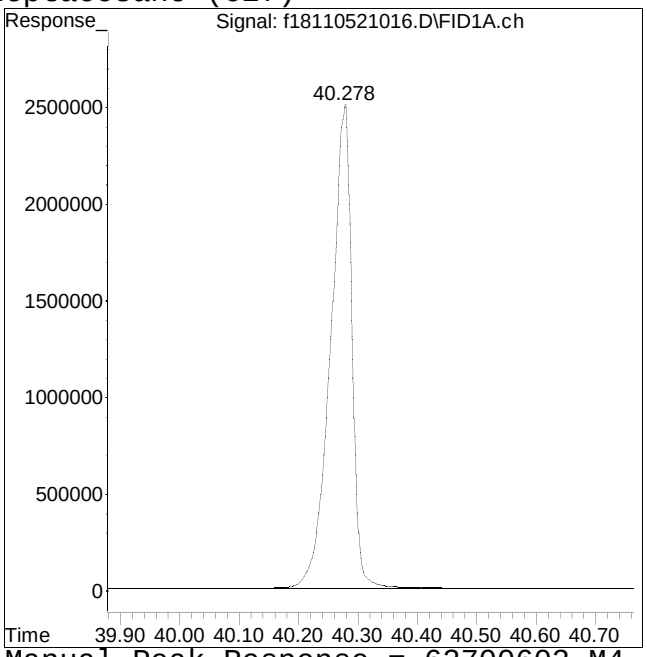
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 62084218



Manual Peak Response = 62700602 M4

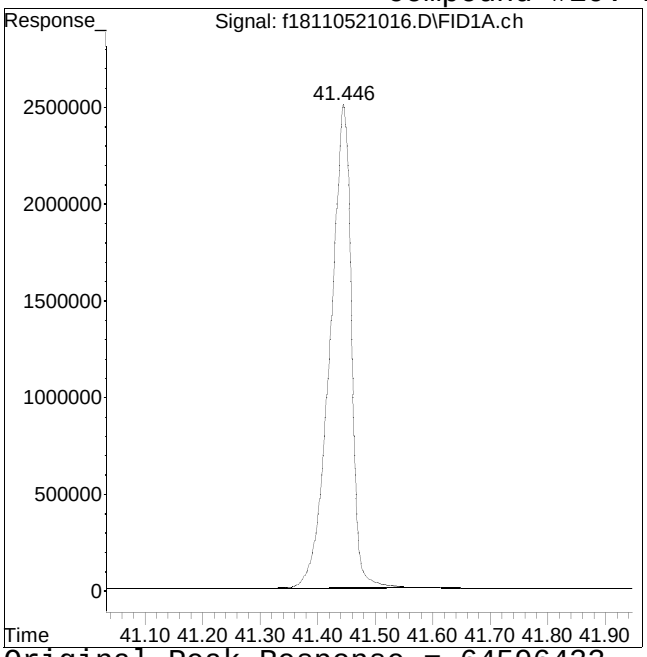
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

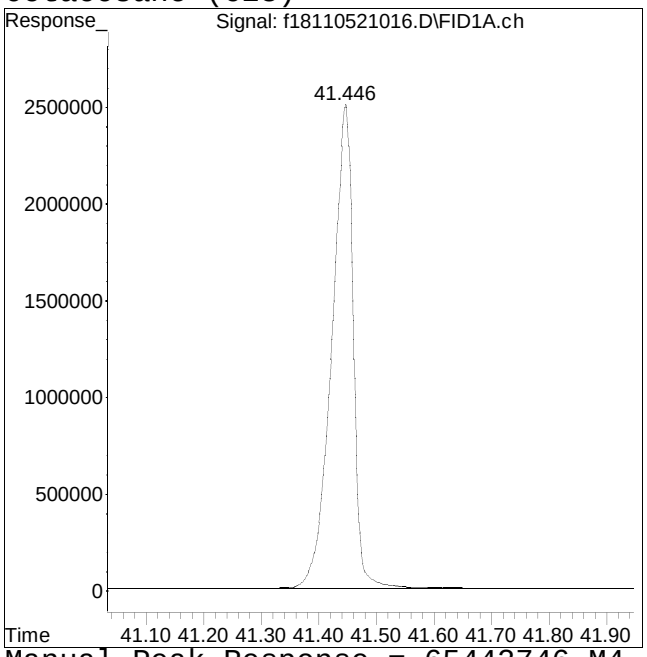
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 64596433



Manual Peak Response = 65442746 M4

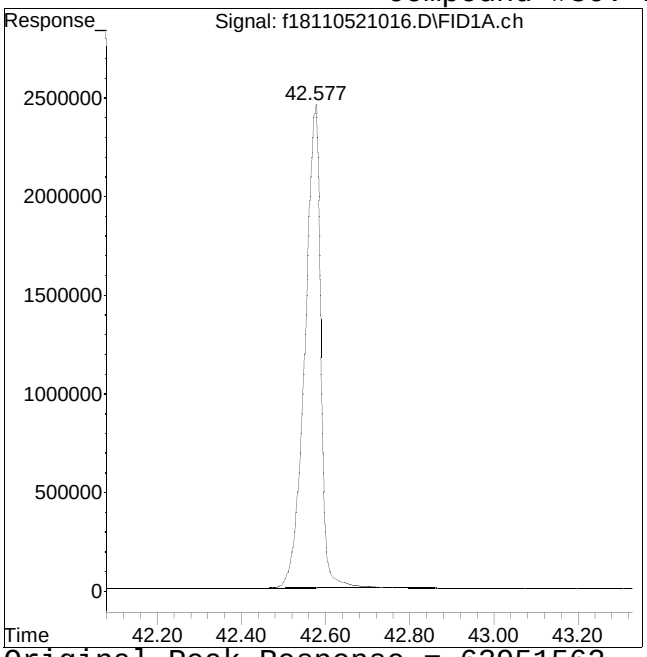
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

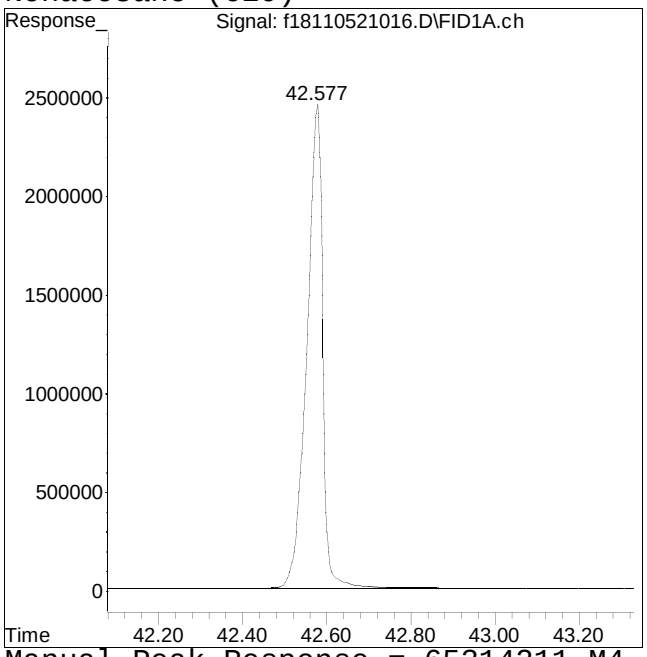
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 63951562



Manual Peak Response = 65314211 M4

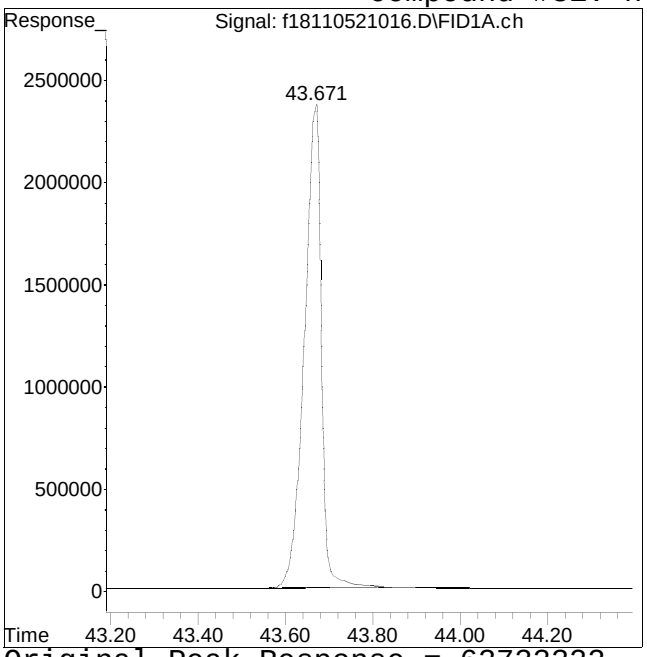
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

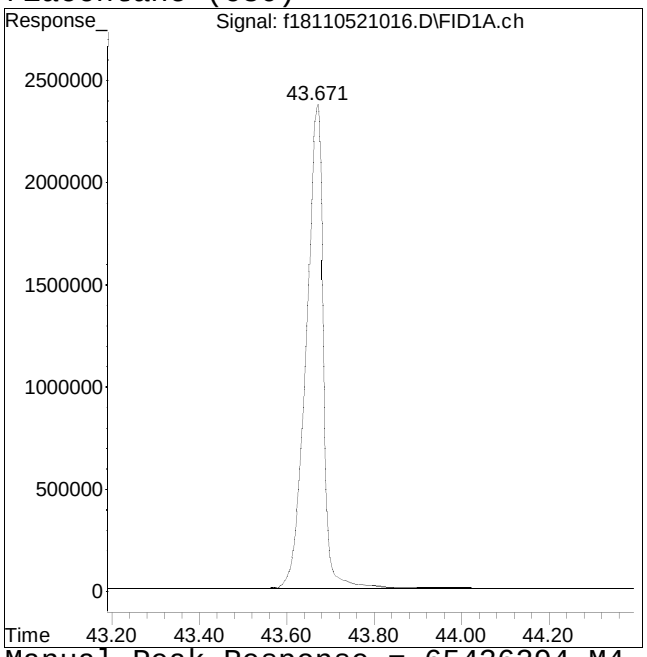
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 63733322



Manual Peak Response = 65436294 M4

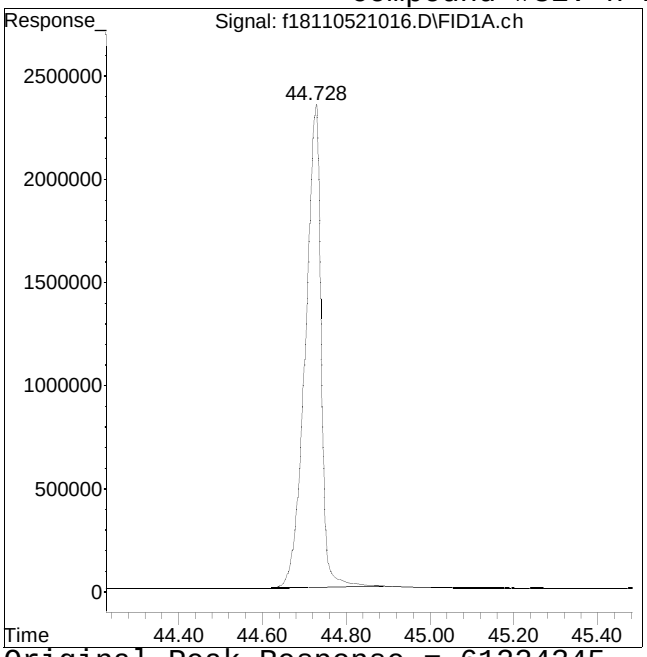
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

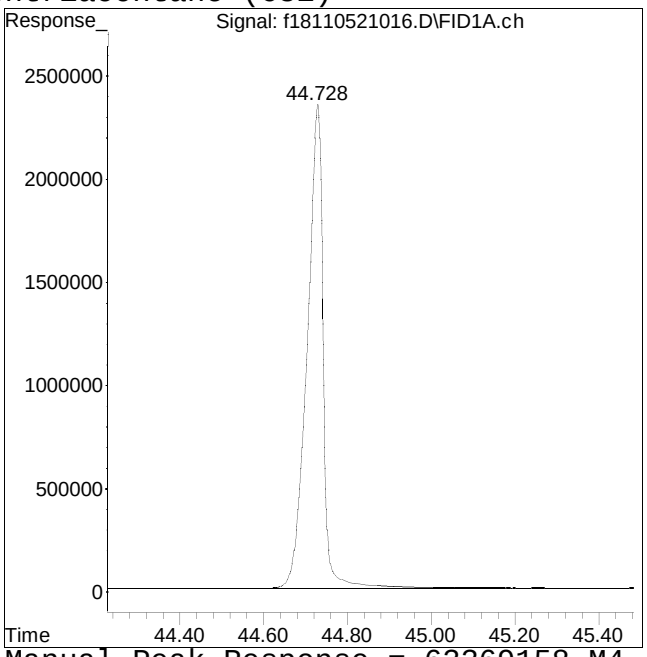
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 61224345



Manual Peak Response = 63369158 M4

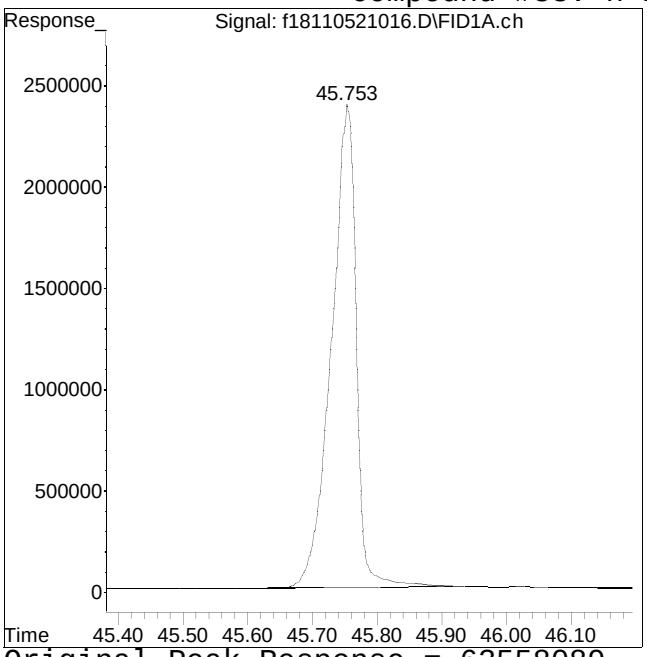
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

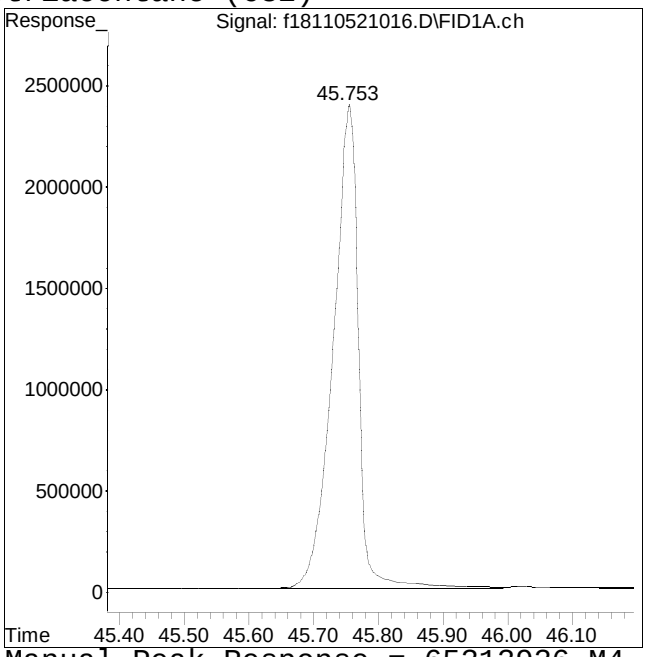
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 63558089



Manual Peak Response = 65313936 M4

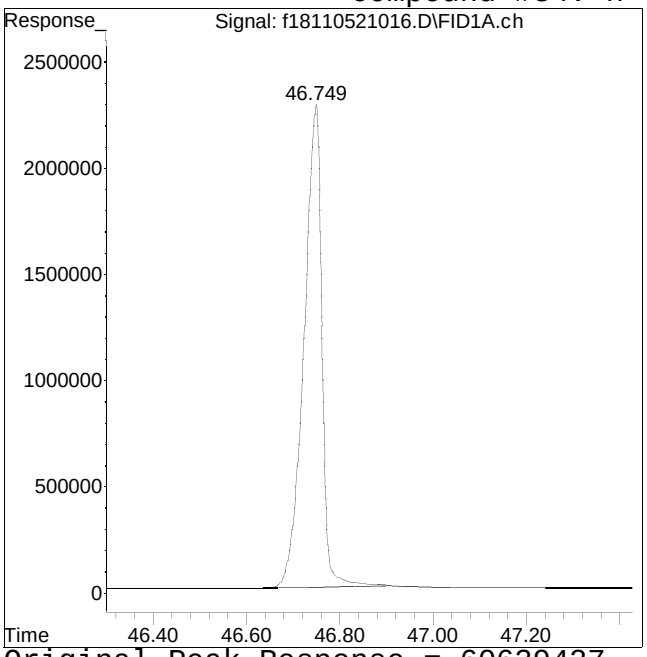
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

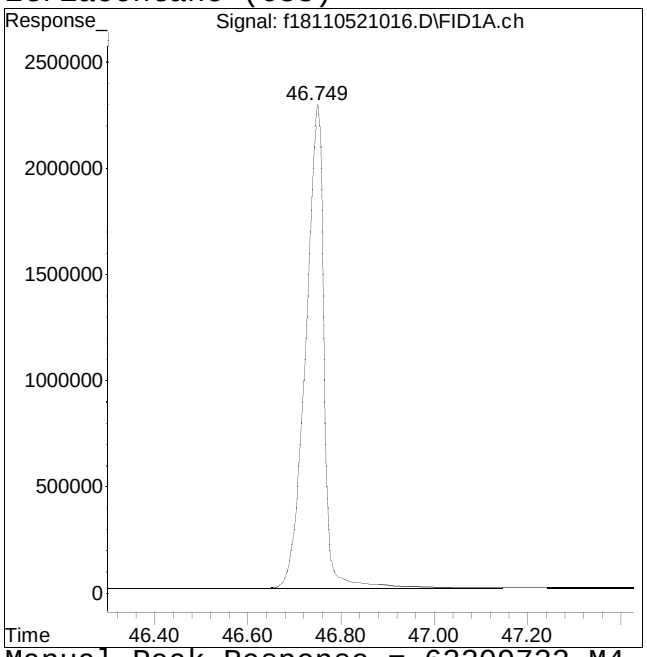
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 60639427



Manual Peak Response = 63209732 M4

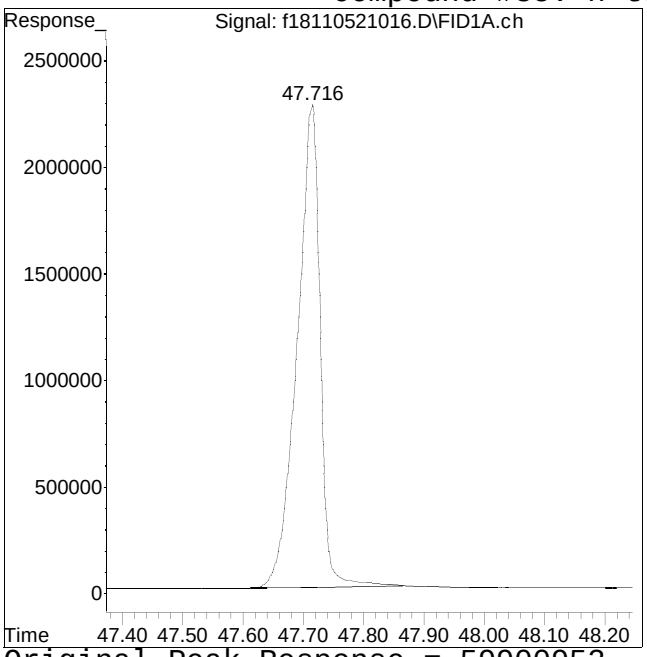
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

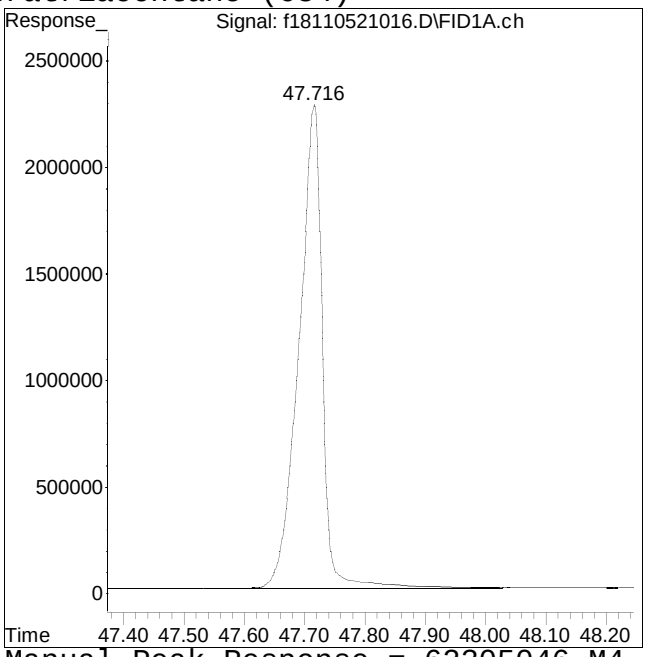
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 59900952



Manual Peak Response = 62305046 M4

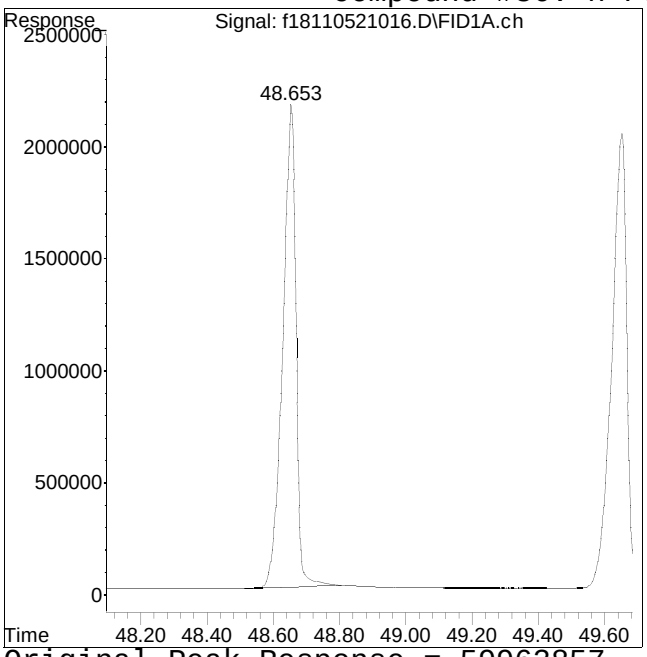
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

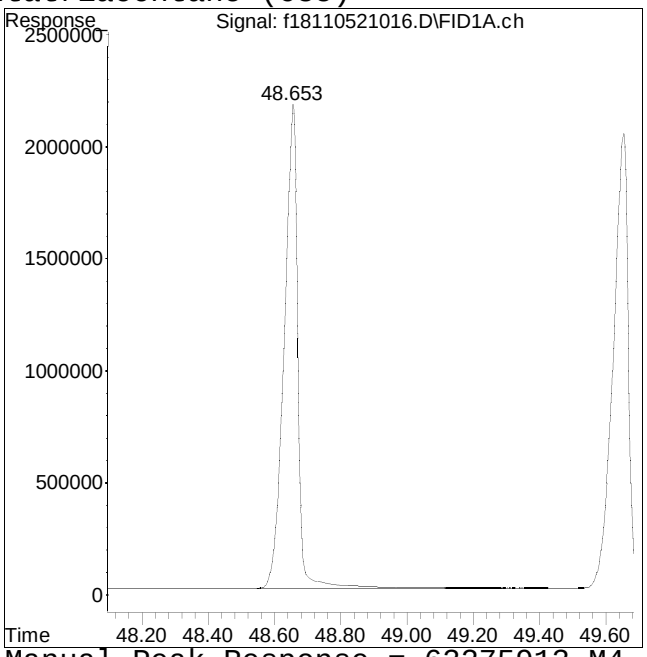
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 59963857



Manual Peak Response = 63275913 M4

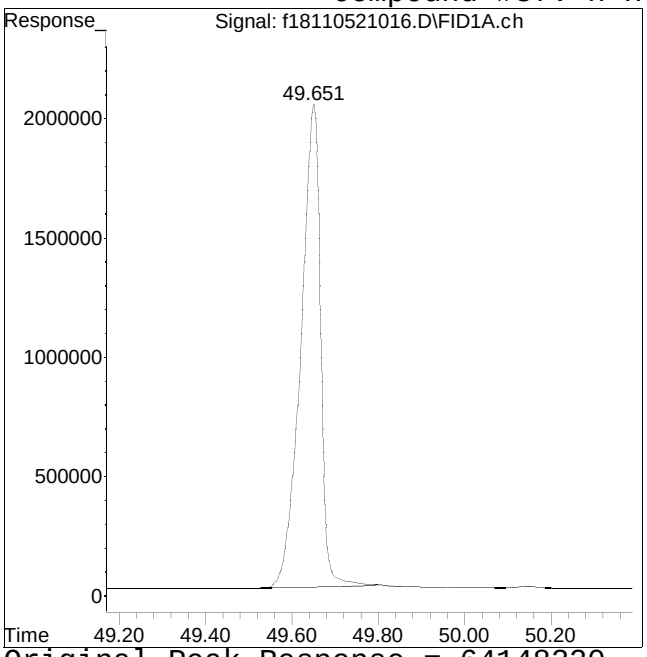
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

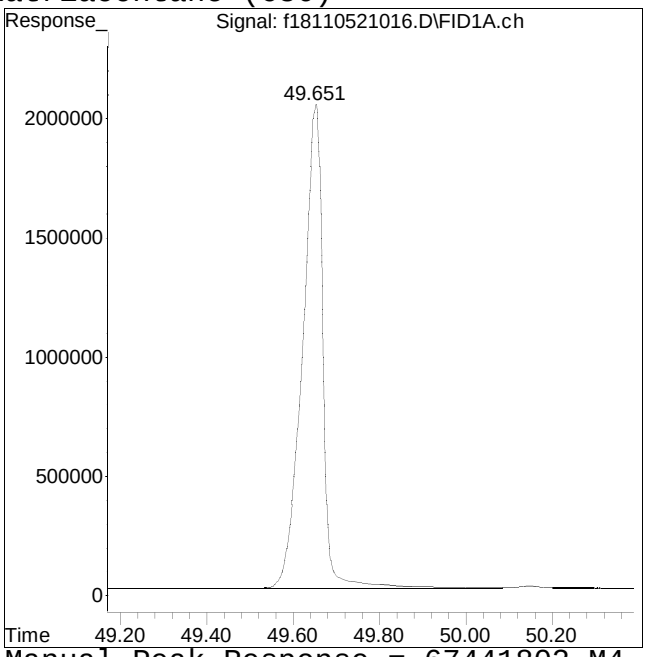
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 64148220



Manual Peak Response = 67441802 M4

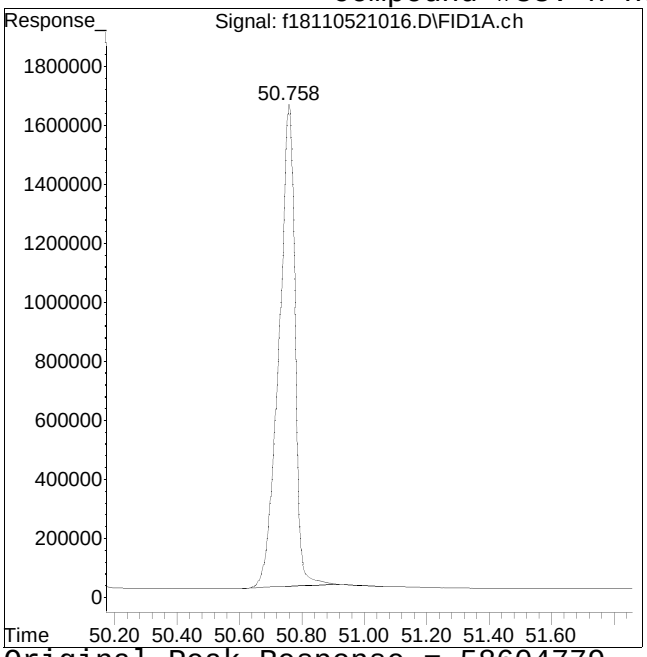
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

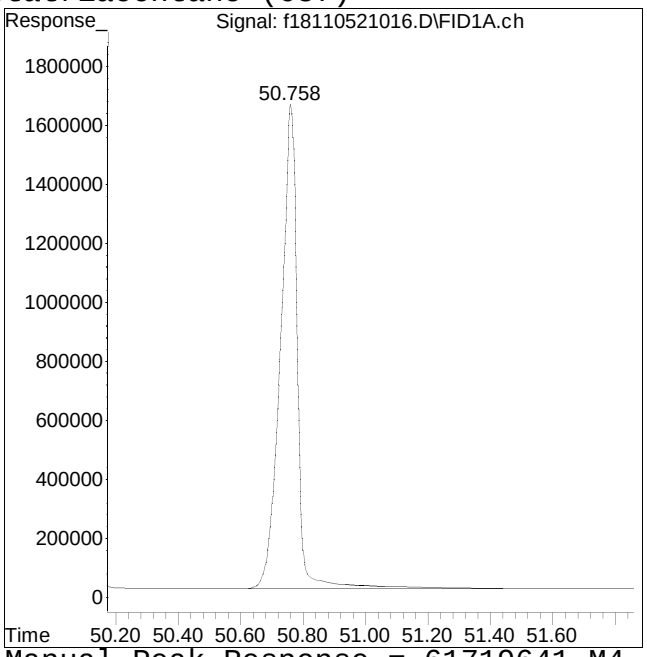
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 58604779



Manual Peak Response = 61719641 M4

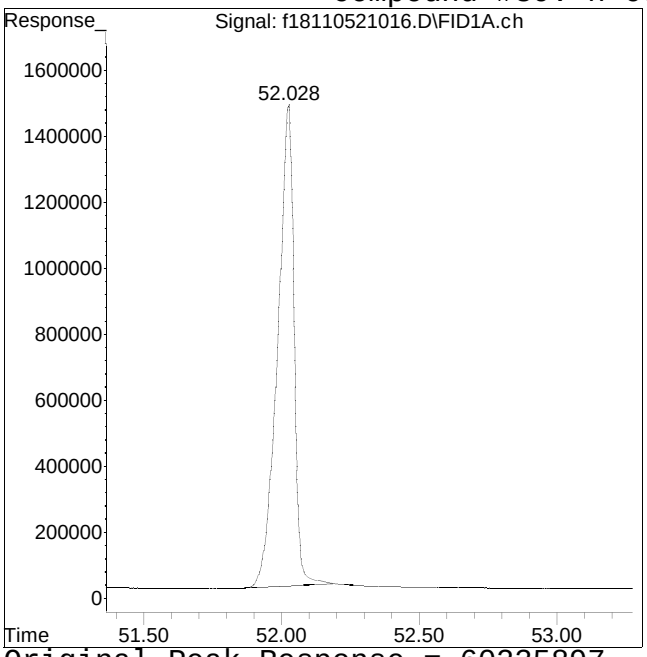
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

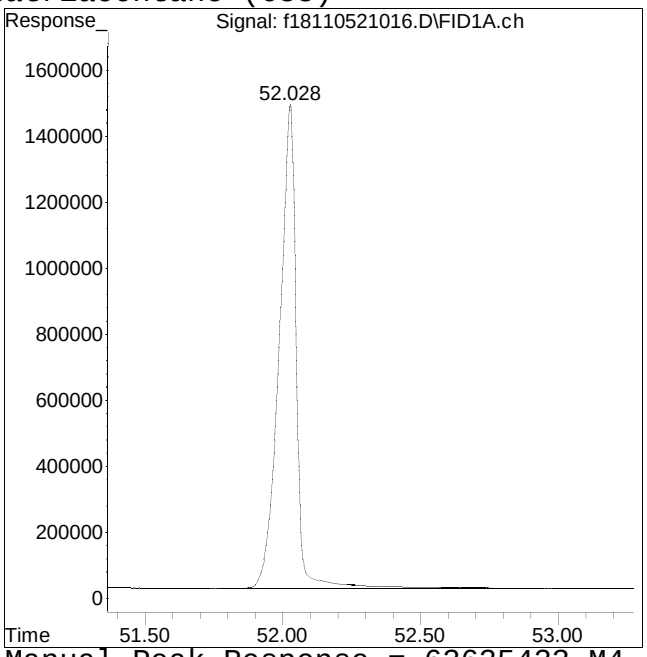
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 60235897



Manual Peak Response = 63635433 M4

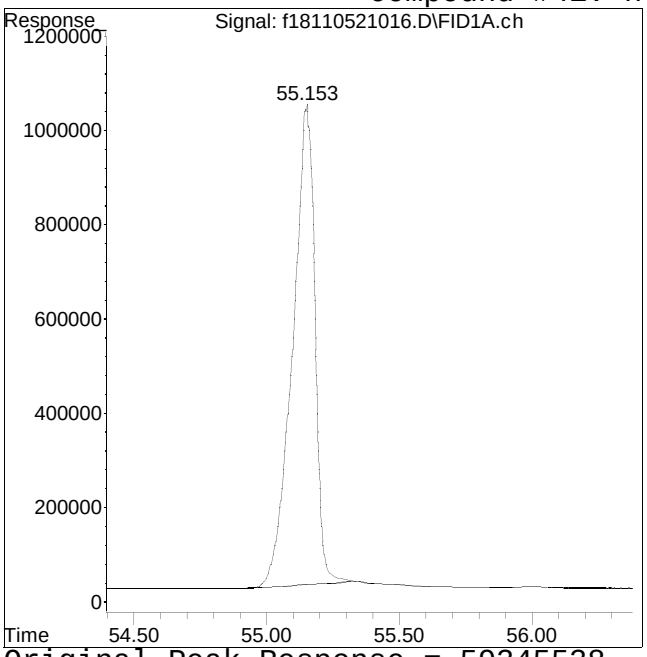
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

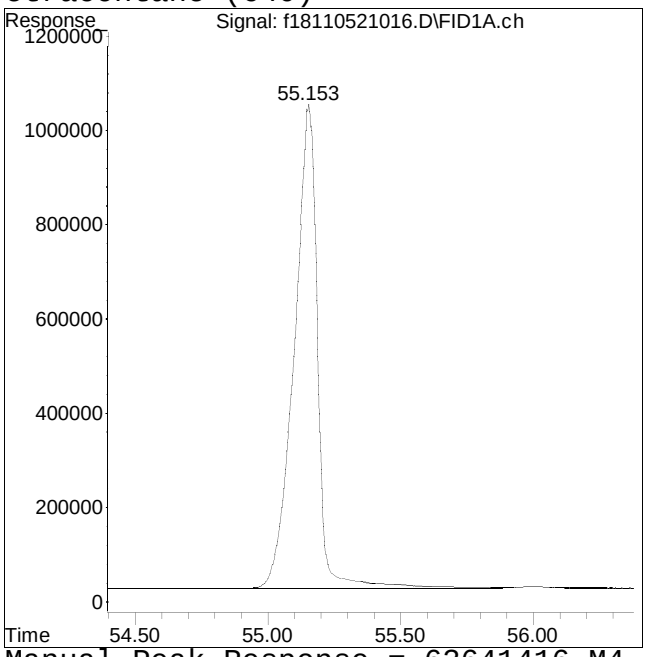
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521016.D
Date Inj'd : 11/5/2021 10:50 pm
Sample : I1811052103F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:03 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 59345538



Manual Peak Response = 63641416 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521018.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 12:16 am
Operator : FID18:WR
Sample : I1811052104F
Misc : WG1581201,FRBD79,100ug/ml
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 09:54:20 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 09:48:12 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.348	66031631	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.351	142458969	95.274	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 190.55%#			
24) s	d50-Tetracosane	35.979	113848299	93.104	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 186.21%#			
	Target Compounds					
2) t	n-Octane (C8)	5.816	107243679	98.063	ug/mL	M4
3) t	n-Nonane (C9)	8.014	111325506	101.658	ug/mL	M4
4) t	n-Decane (C10)	10.480	114791251	110.037	ug/mL	M4
5) t	n-Undecane (C11)	12.978	118511116	107.380	ug/mL	M4
6) t	n-Dodecane (C12)	15.393	119951332	103.430	ug/mL	M4
7) t	n-Tridecane (C13)	17.688	120664431	101.405	ug/mL	M4
9) t	n-Tetradecane (C14)	19.862	123997543	100.272	ug/mL	M4
11) t	n-Pentadecane (C15)	21.917	125824255	101.362	ug/mL	M4
12) t	n-Hexadecane (C16)	23.867	124774656	97.858	ug/mL	M4
14) t	n-Heptadecane (C17)	25.722	126059127	105.843	ug/mL	M4
15) t	Pristane	25.833	129447409	92.779	ug/mL	M4
16) t	n-Octadecane (C18)	27.482	127884241	99.001	ug/mL	M4
17) t	Phytane	27.646	119676633	96.659	ug/mL	M4
18) t	n-Nonadecane (C19)	29.162	129335574	99.322	ug/mL	M4
20) t	n-Eicosane (C20)	30.762	129793924	97.833	ug/mL	M4
21) t	n-Heneicosane (C21)	32.295	130220295	97.550	ug/mL	M4
22) t	n-Docosane (C22)	33.765	129811062	95.704	ug/mL	M4
23) t	n-Tricosane (C23)	35.175	129755264	94.438	ug/mL	M4
25) t	n-Tetracosane (C24)	36.531	129360474	96.374	ug/mL	M4
26) t	n-Pentacosane (C25)	37.831	126809835	94.238	ug/mL	M4
27) t	n-Hexacosane (C26)	39.086	130070383	94.194	ug/mL	M4
28) t	n-Heptacosane (C27)	40.298	130203305	95.334	ug/mL	M4
29) t	n-Octacosane (C28)	41.468	132963933	94.645	ug/mL	M4
30) t	n-Nonacosane (C29)	42.596	132215806	94.997	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521018.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 12:16 am
Operator : FID18:WR
Sample : I1811052104F
Misc : WG1581201,FRBD79,100ug/ml
ALS Vial : 9 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 09:54:20 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 09:48:12 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

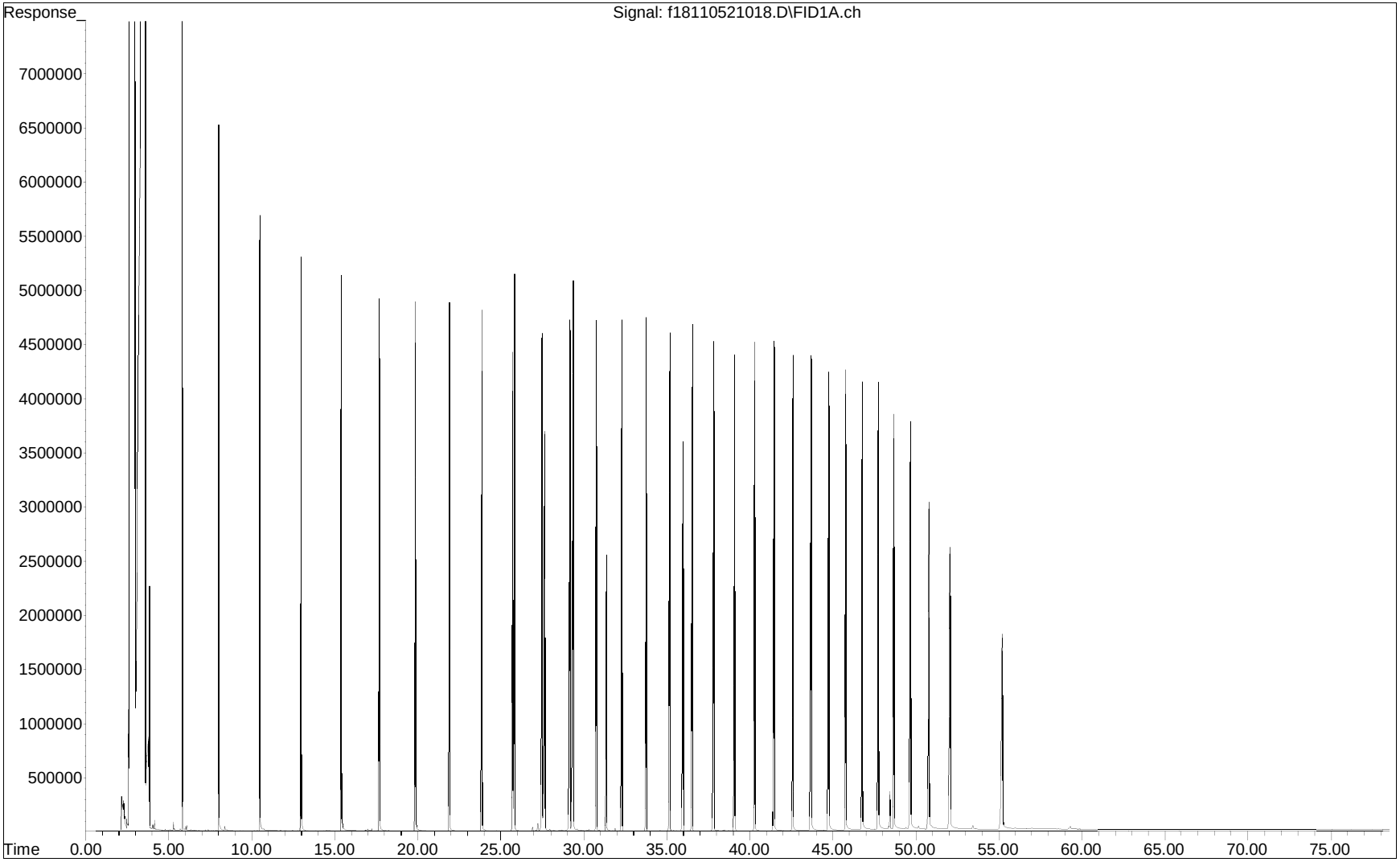
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.692	132395647	95.333 ug/mL M4
32) t	n-Hentriacontane (C31)	44.749	127341956	95.191 ug/mL M4
33) t	n-Dotriacontane (C32)	45.778	132897492	96.220 ug/mL M4
34) t	n-Tritriacontane (C33)	46.771	128440928	96.469 ug/mL M4
35) t	n-tetratriacontane (C34)	47.738	126957166	96.919 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.676	118359562	94.204 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.680	140814803	98.278 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.792	128018812	98.167 ug/mL M4
39) t	n-Octatriacontane (C38)	52.061	128468932	97.180 ug/mL M4
41) t	n-Tetracontane (C40)	55.197	124640070	94.414 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521018.D
Operator : FID18:WR
Acquired : 06 Nov 2021 12:16 am using AcqMethod FID18.M
Sample Name: I1811052104F
Instrument: FID 18
Misc Info : WG1581201,FRBD79,100ug/ml
Vial Number: 9
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M

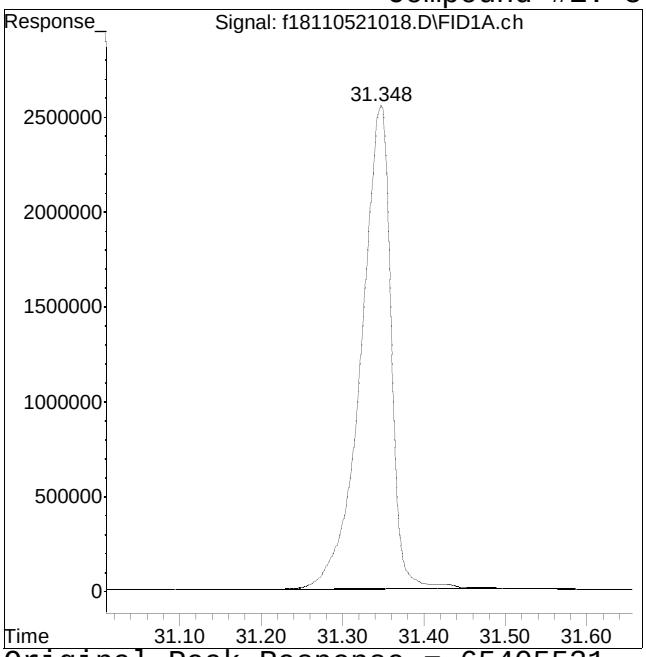


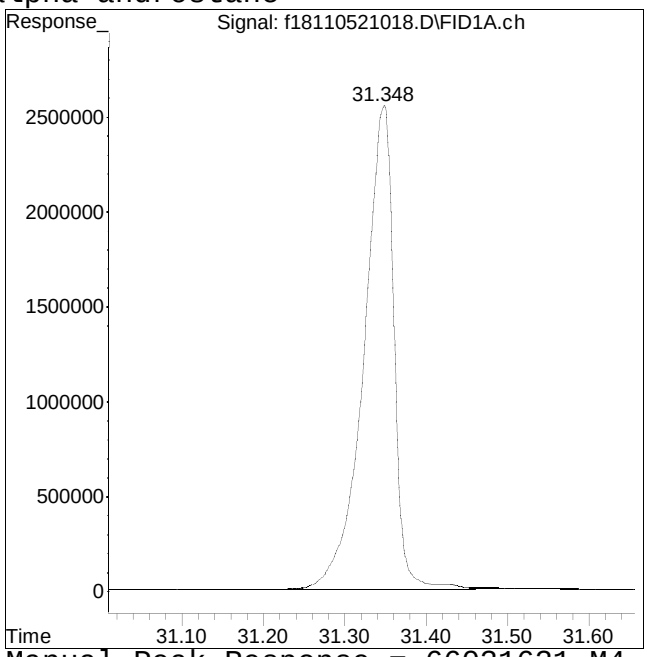
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #1: 5-alpha-androstane





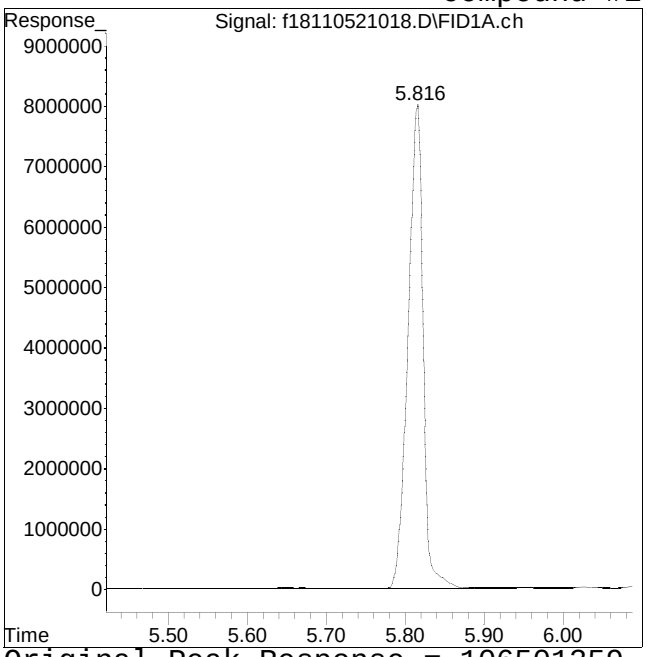
Original Peak Response = 65405531 Manual Peak Response = 66031631 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

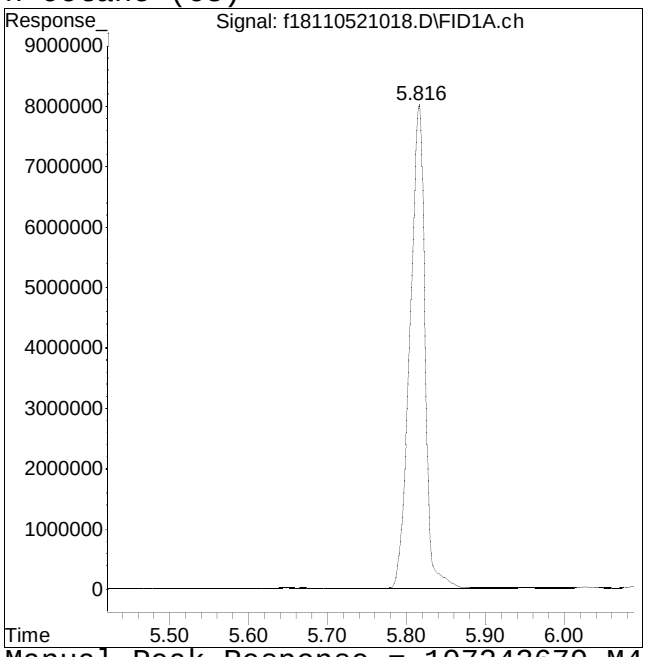
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #2: n-Octane (C8)



Original Peak Response = 106501359



Manual Peak Response = 107243679 M4

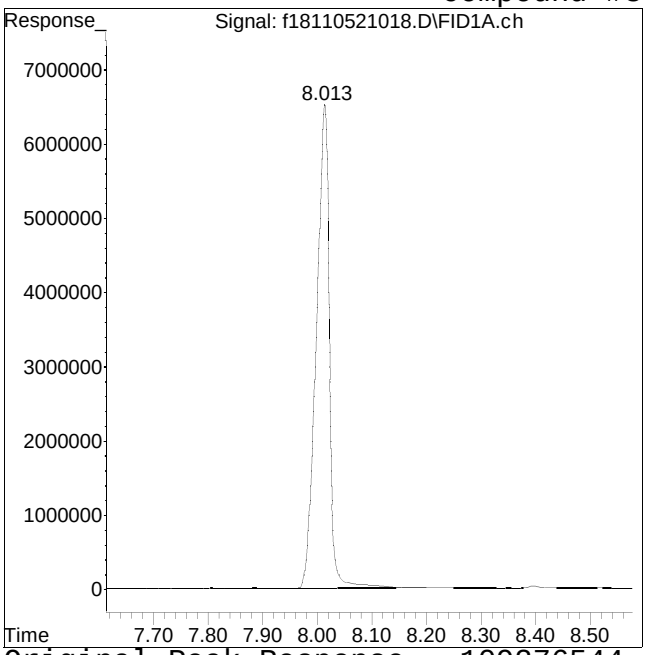
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

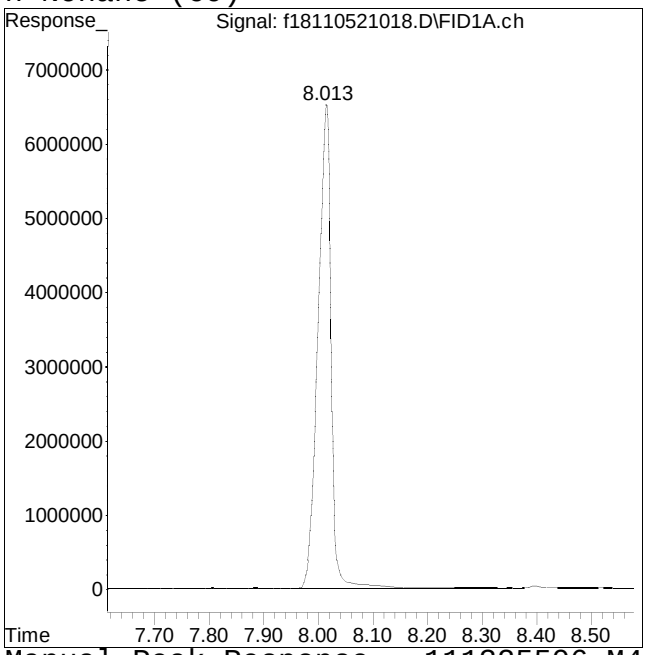
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #3: n-Nonane (C9)



Original Peak Response = 109276544



Manual Peak Response = 111325506 M4

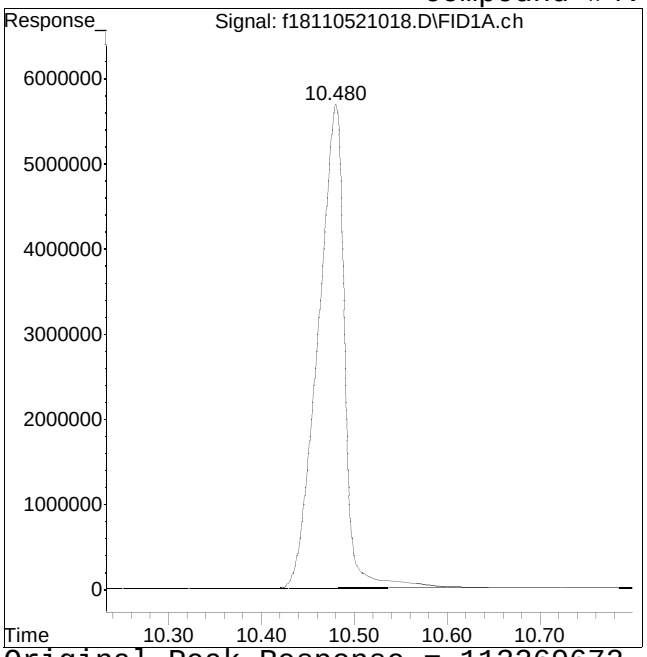
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

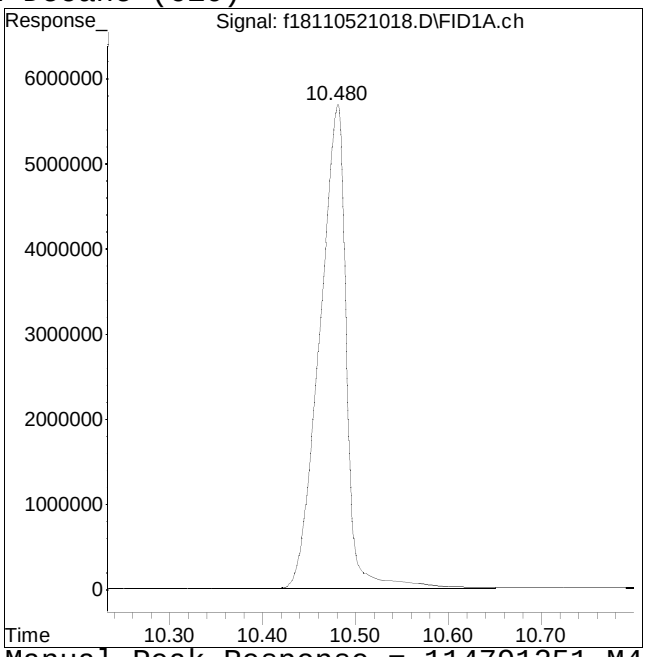
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #4: n-Decane (C10)



Original Peak Response = 113269672



Manual Peak Response = 114791251 M4

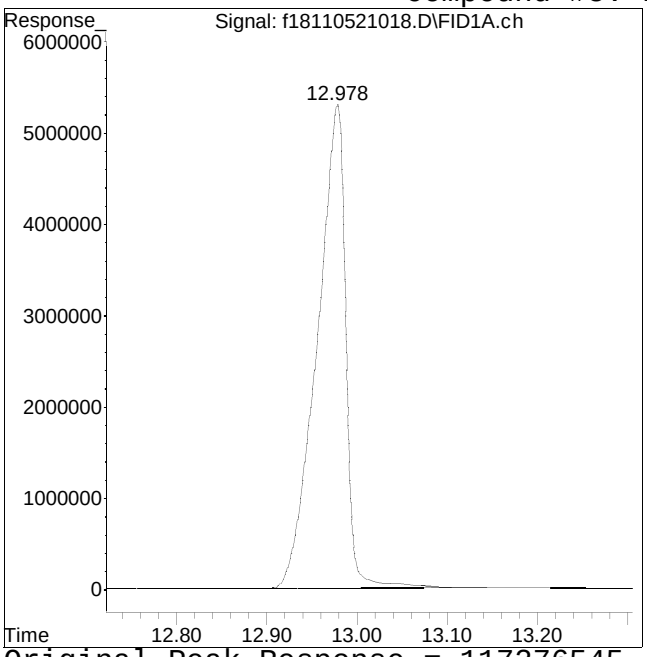
M4 = Poor automated baseline construction.

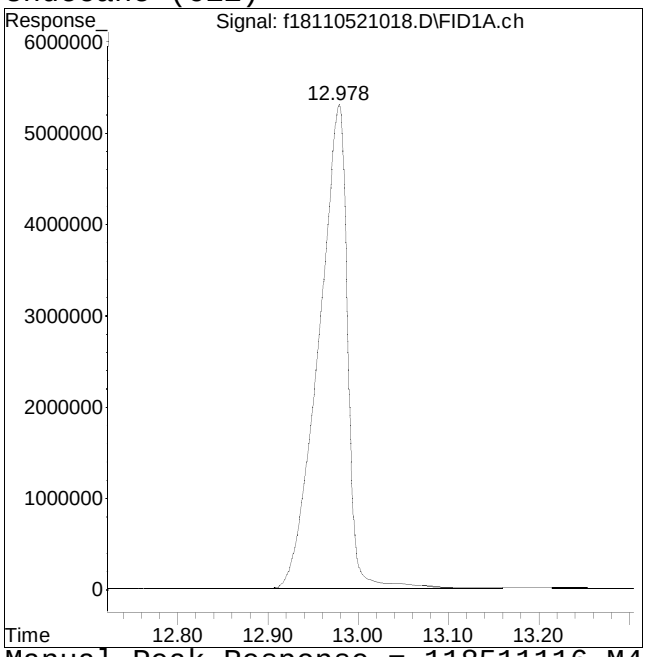
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #5: n-Undecane (C11)





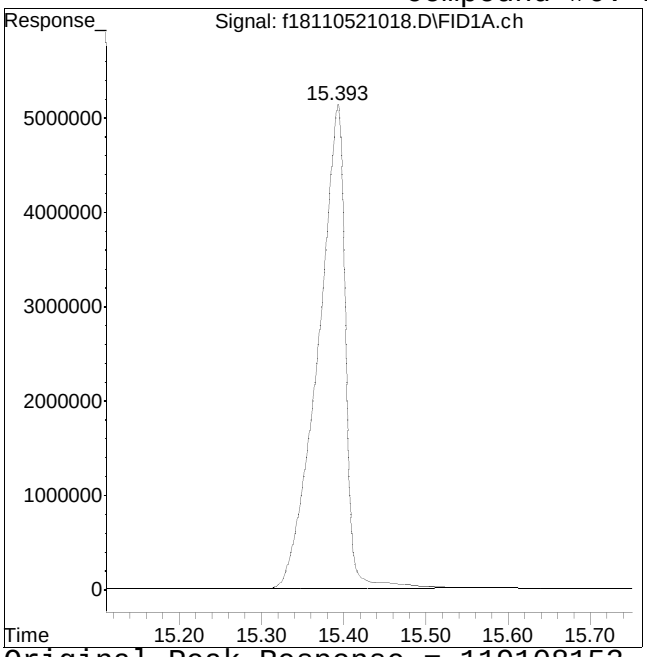
Original Peak Response = 117276545 Manual Peak Response = 118511116 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

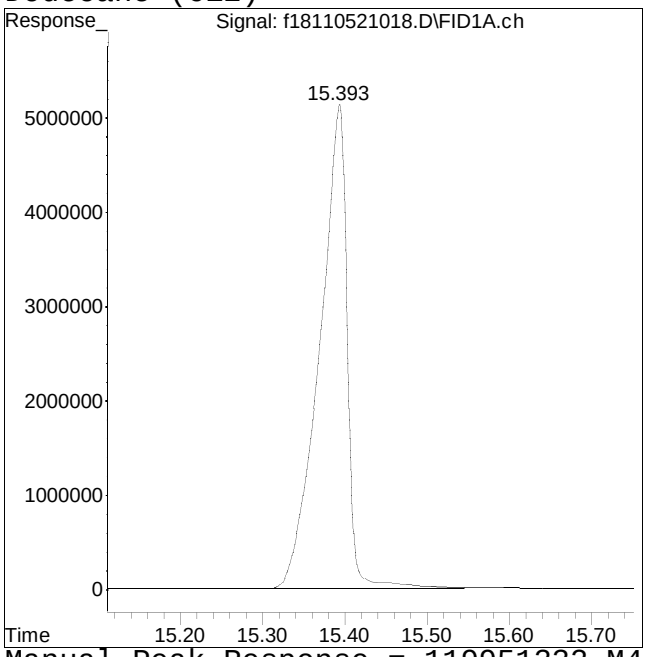
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 119108153



Manual Peak Response = 119951332 M4

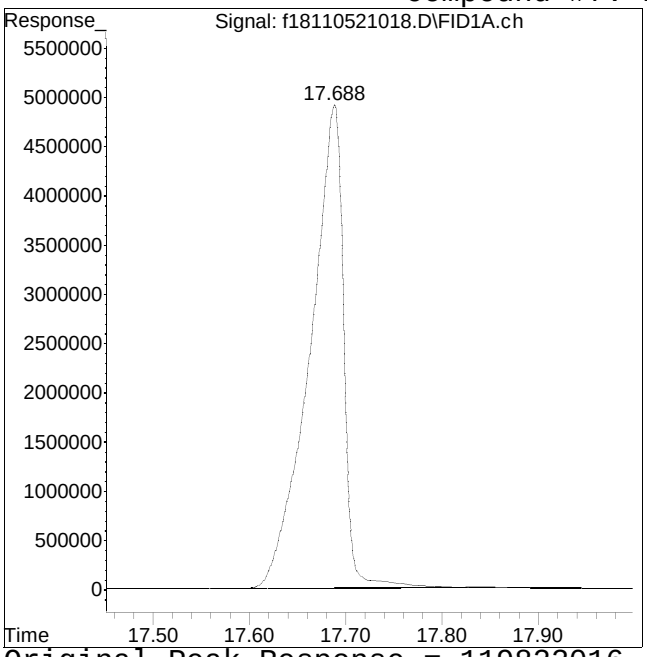
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

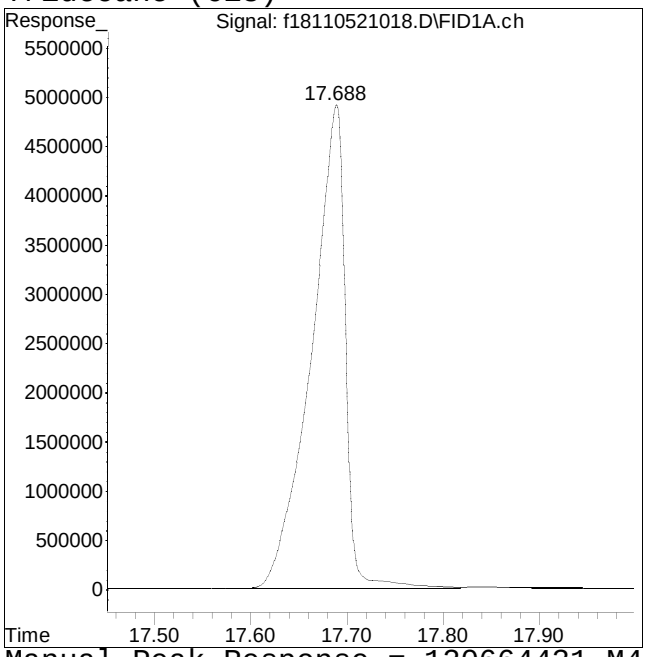
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 119822016



Manual Peak Response = 120664431 M4

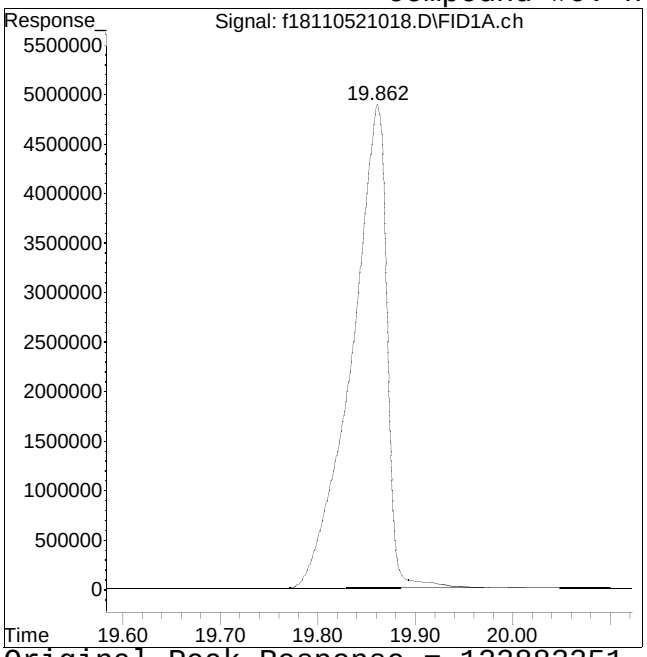
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

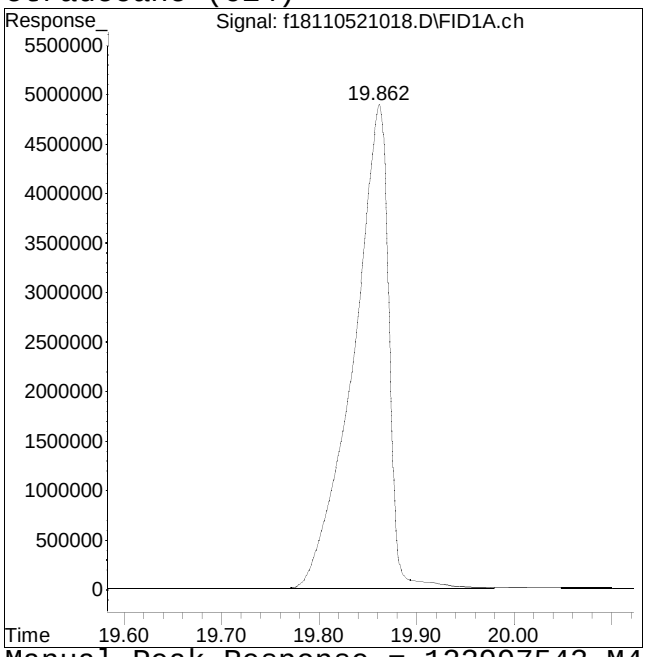
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 122883251



Manual Peak Response = 123997543 M4

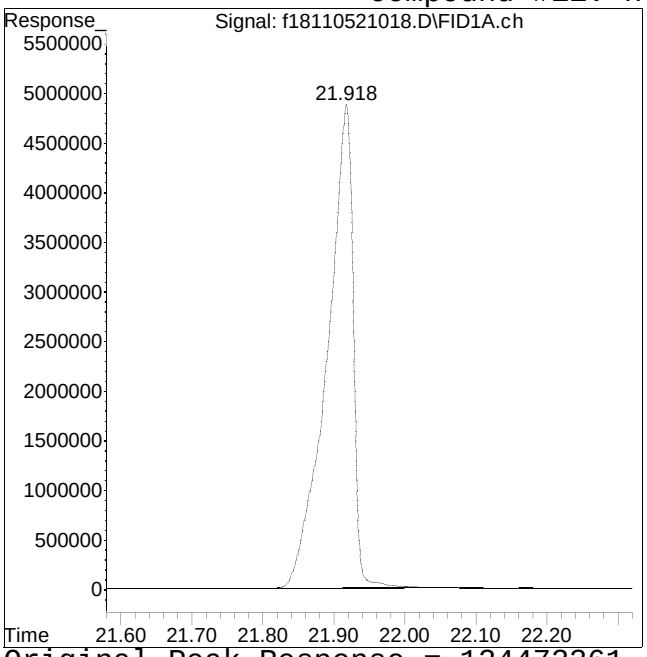
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

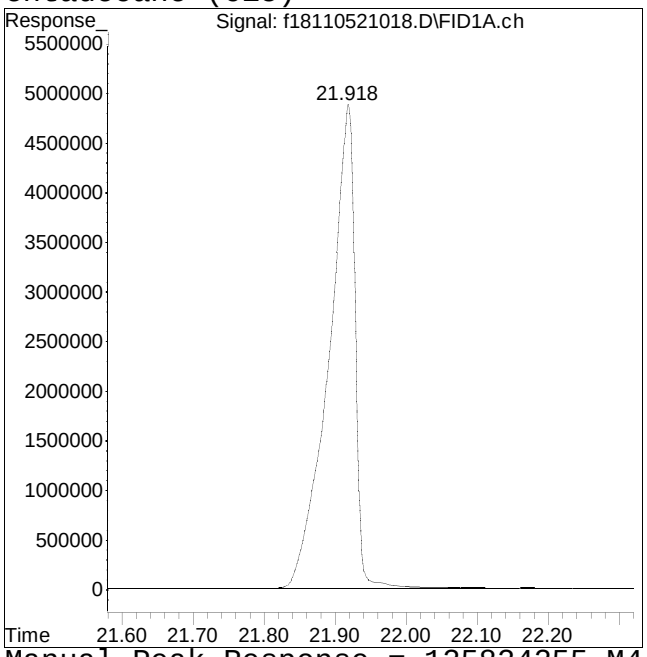
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 124472361



Manual Peak Response = 125824255 M4

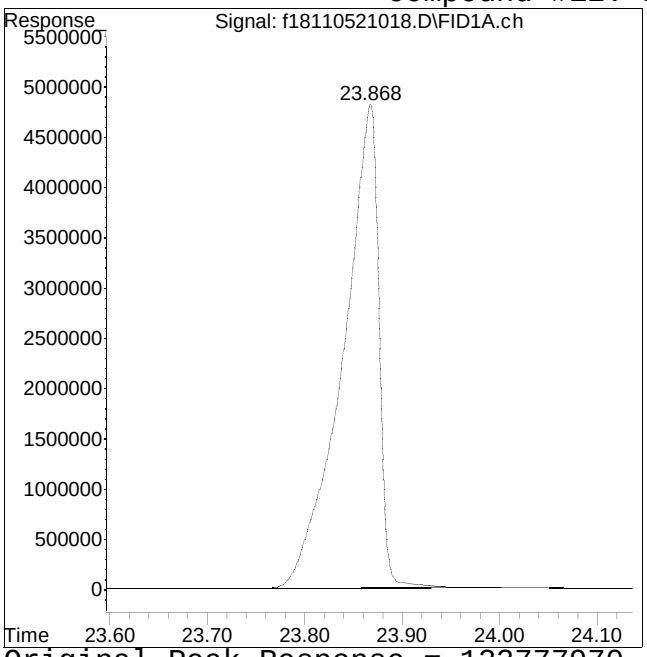
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

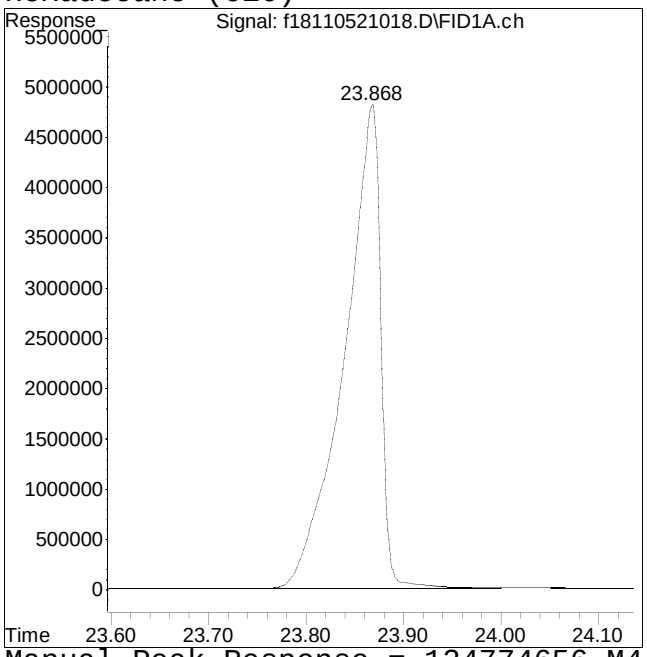
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 123777970



Manual Peak Response = 124774656 M4

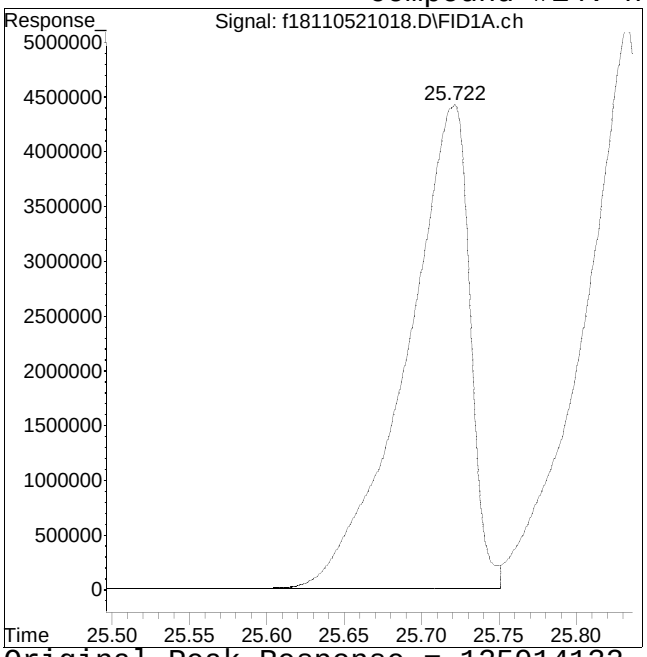
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

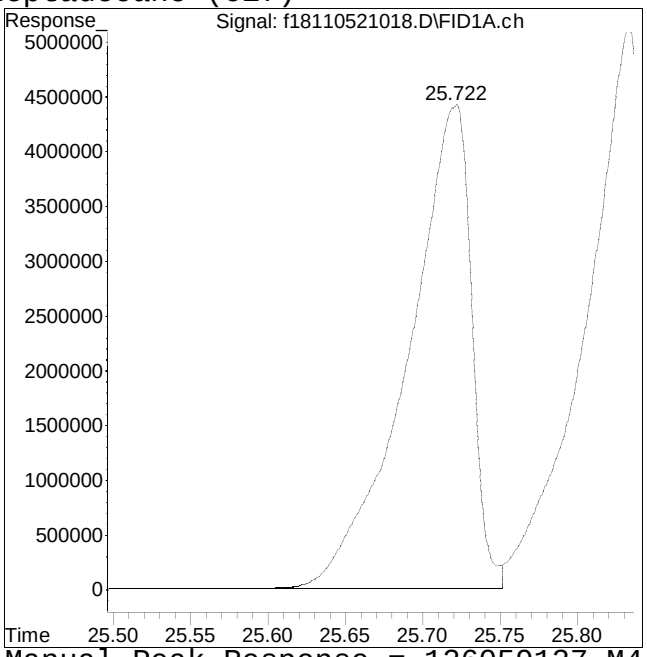
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 125914132



Manual Peak Response = 126059127 M4

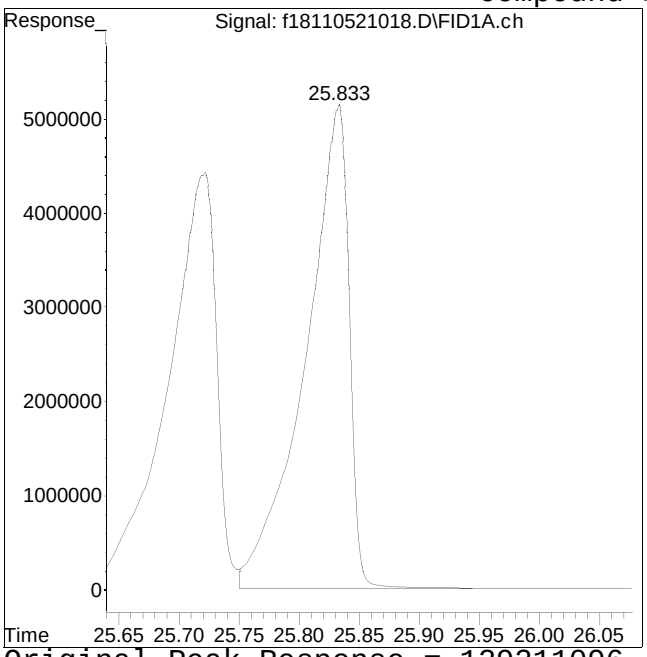
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

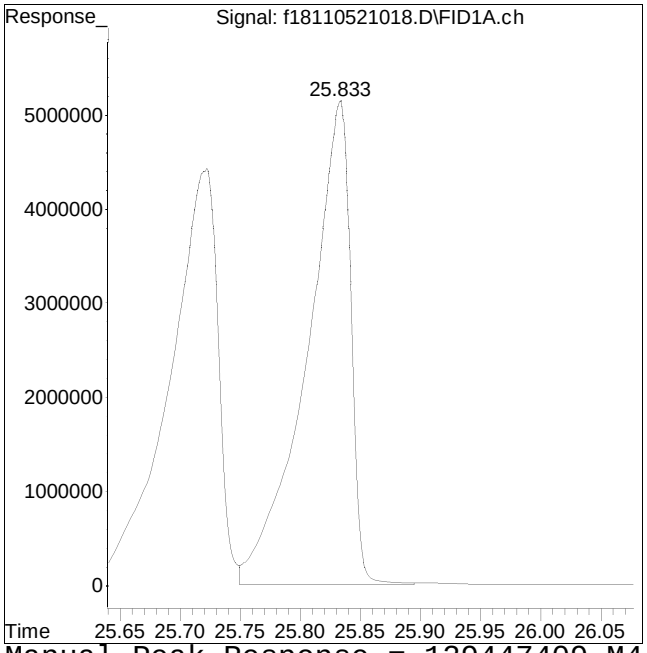
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #15: Pristane



Original Peak Response = 129211096



Manual Peak Response = 129447409 M4

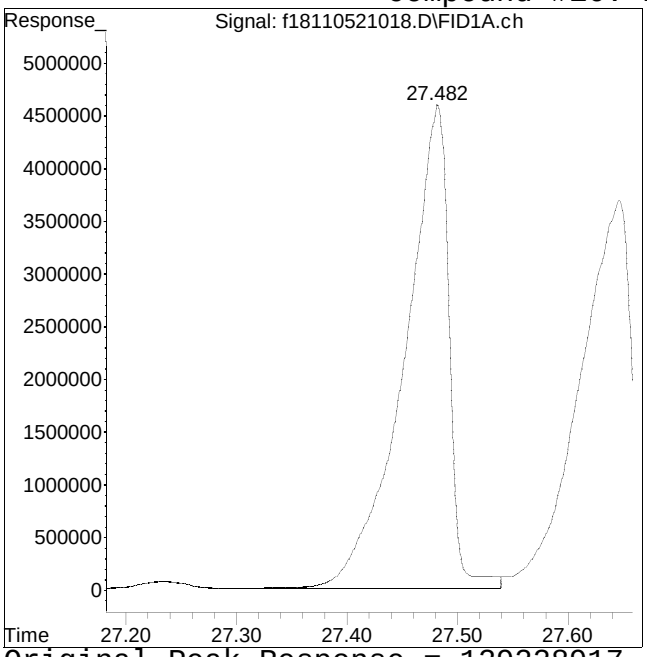
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

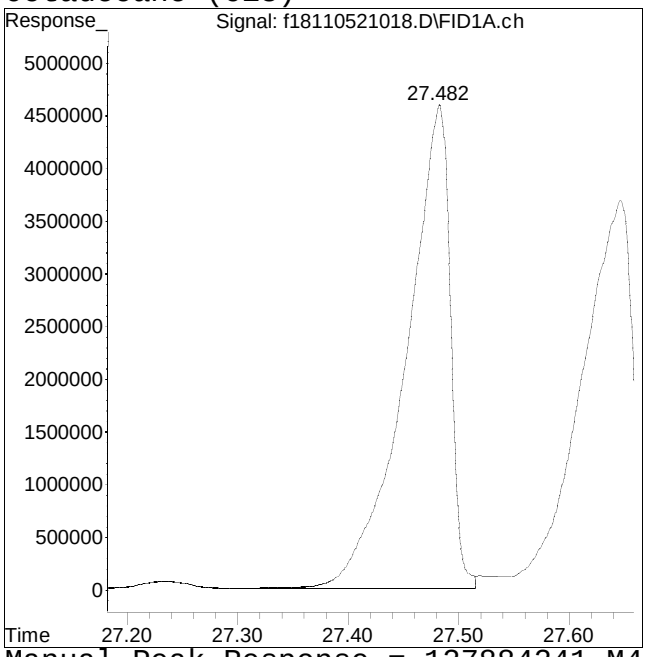
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 129228917



Manual Peak Response = 127884241 M4

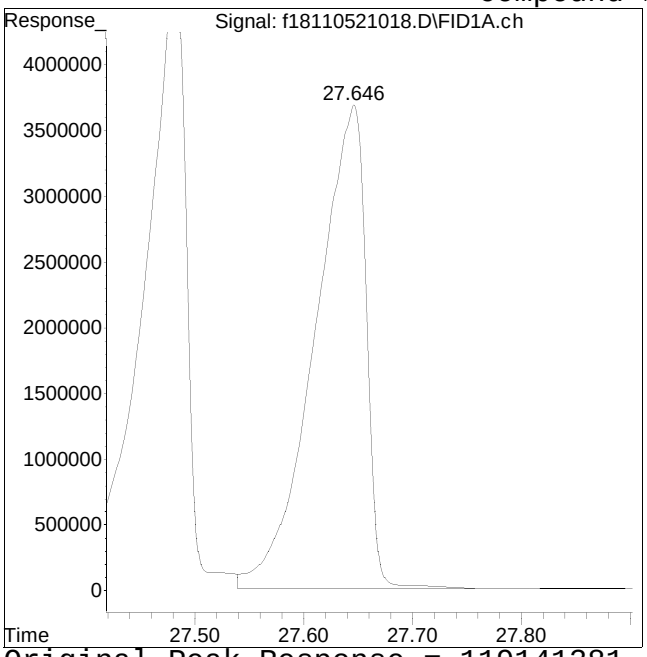
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

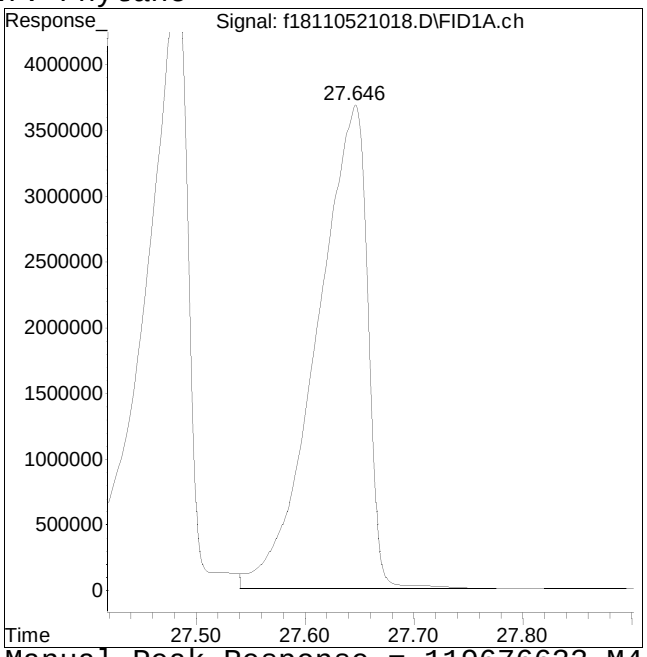
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #17: Phytane



Original Peak Response = 119141381



Manual Peak Response = 119676633 M4

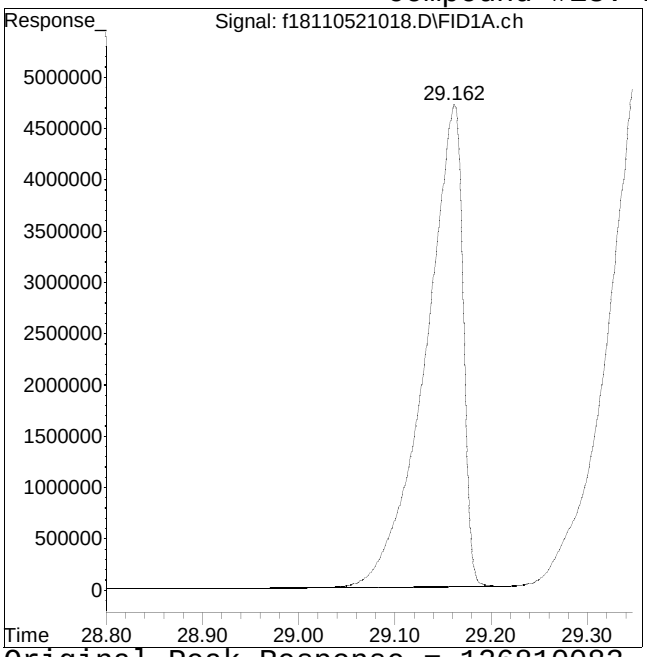
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

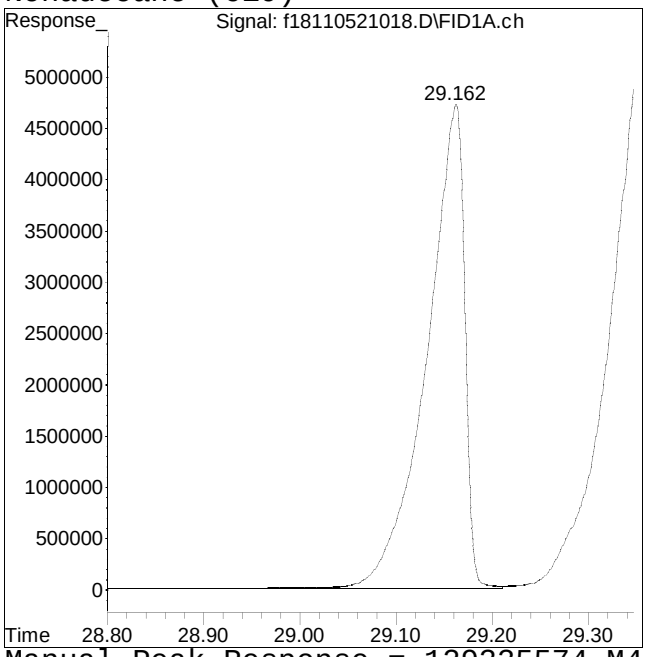
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 126810083



Manual Peak Response = 129335574 M4

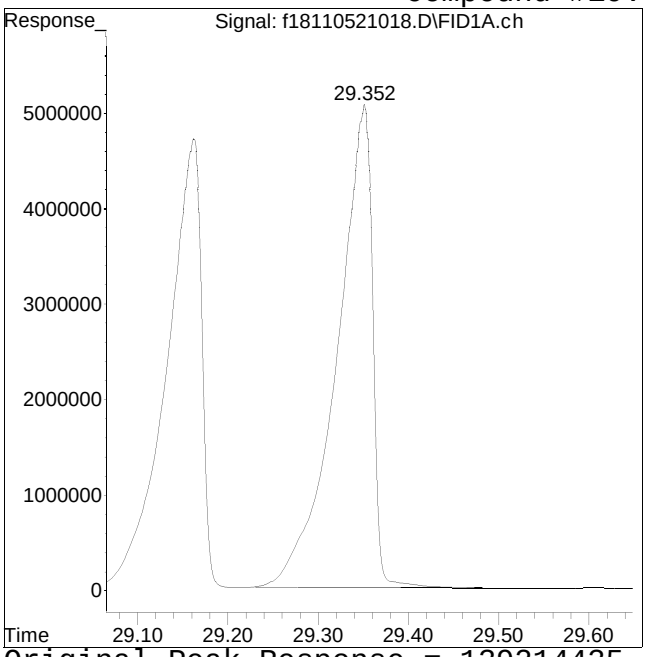
M4 = Poor automated baseline construction.

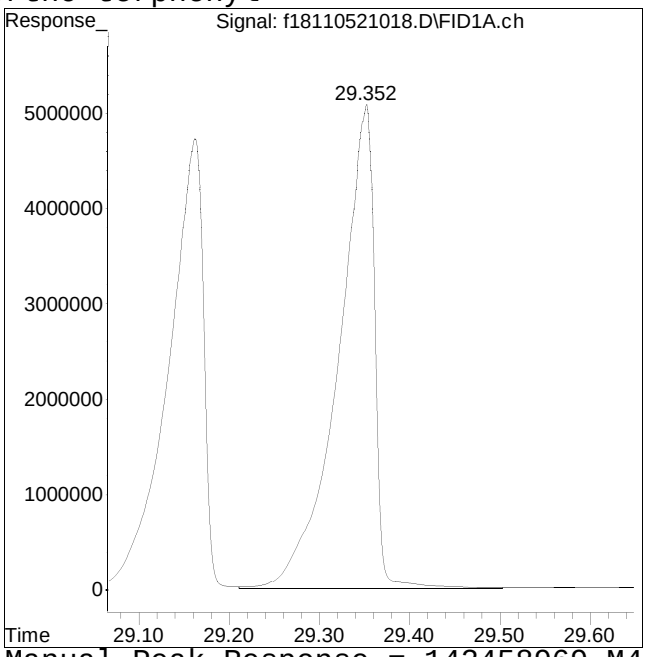
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #19: ortho-terphenyl





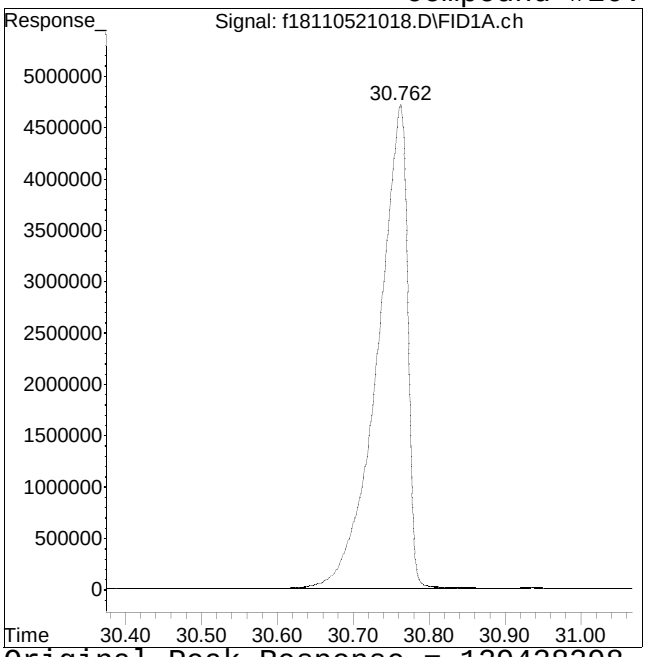
Original Peak Response = 139214435 Manual Peak Response = 142458969 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

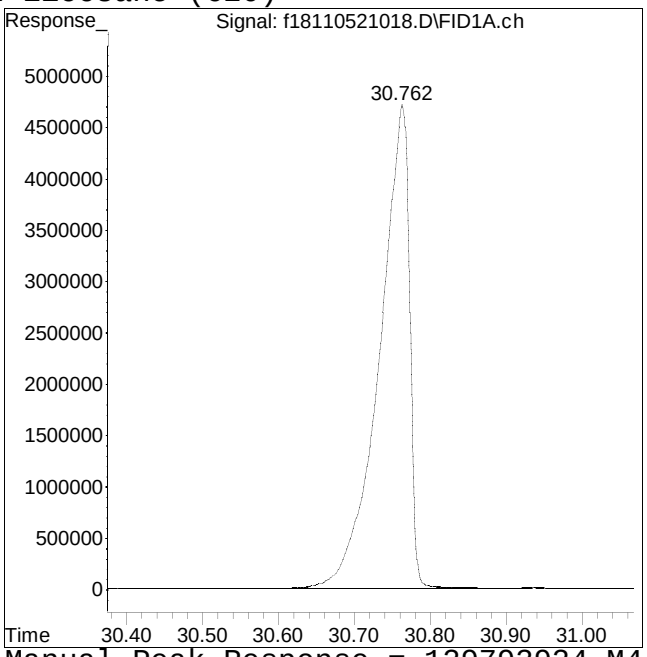
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 129438298



Manual Peak Response = 129793924 M4

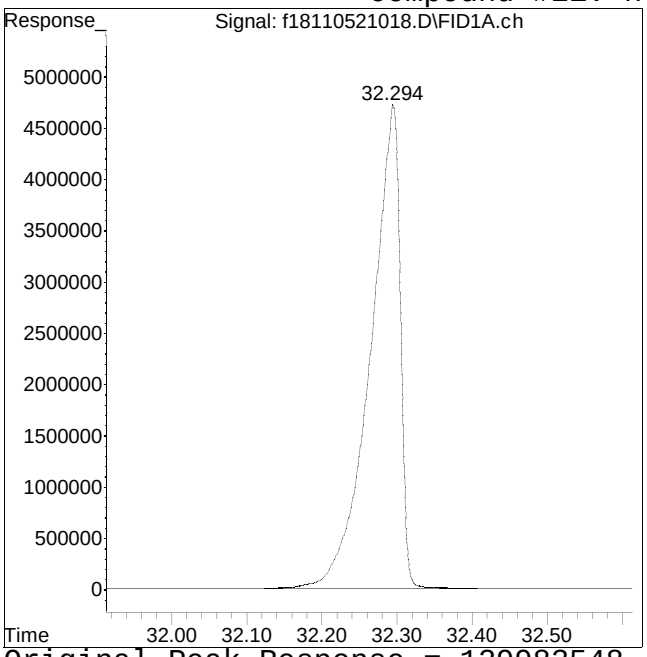
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

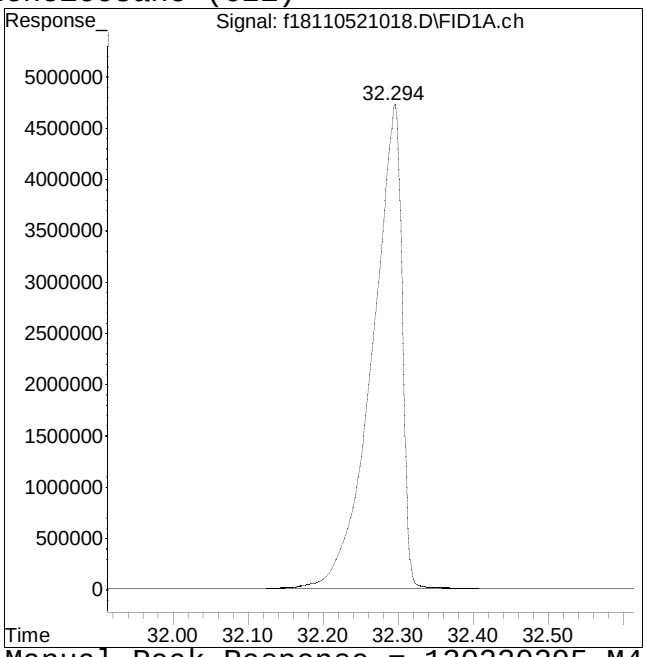
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 129983548



Manual Peak Response = 130220295 M4

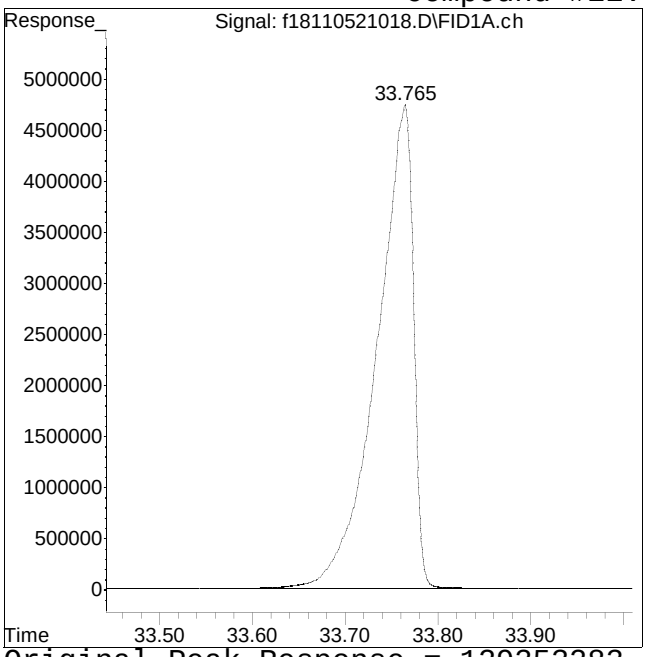
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

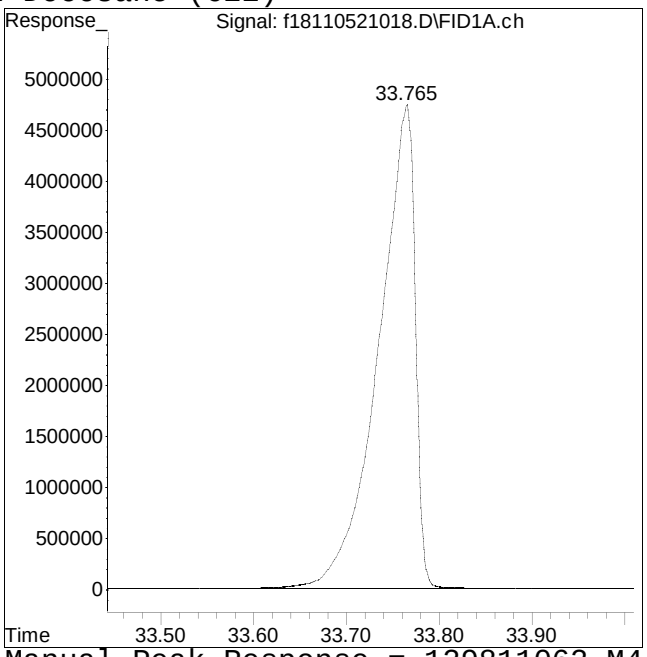
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #22: n-Docosane (C22)



Original Peak Response = 129353283



Manual Peak Response = 129811062 M4

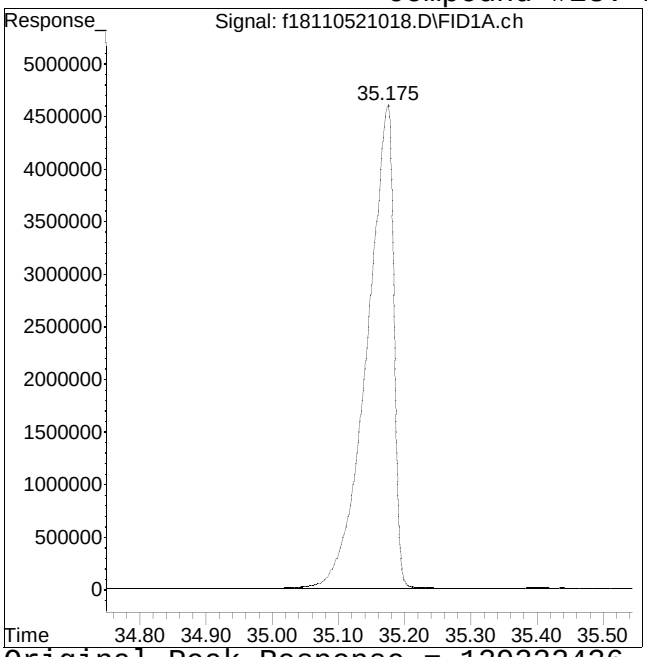
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

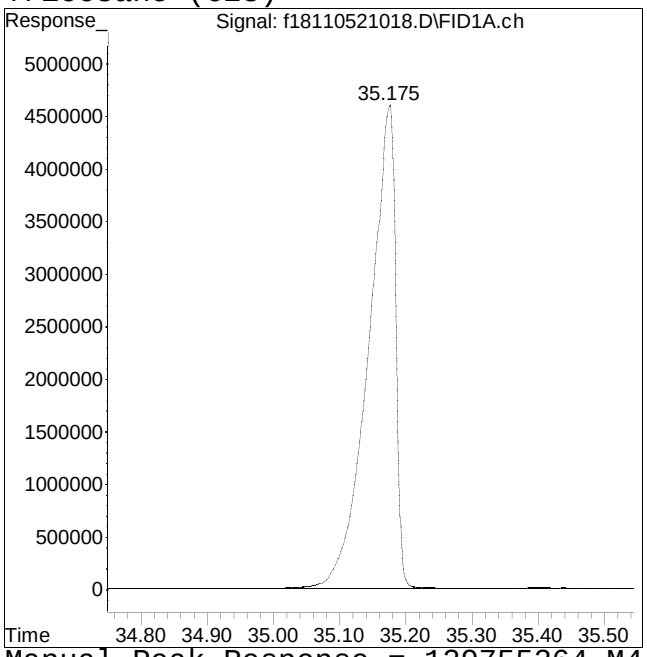
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 129332436



Manual Peak Response = 129755264 M4

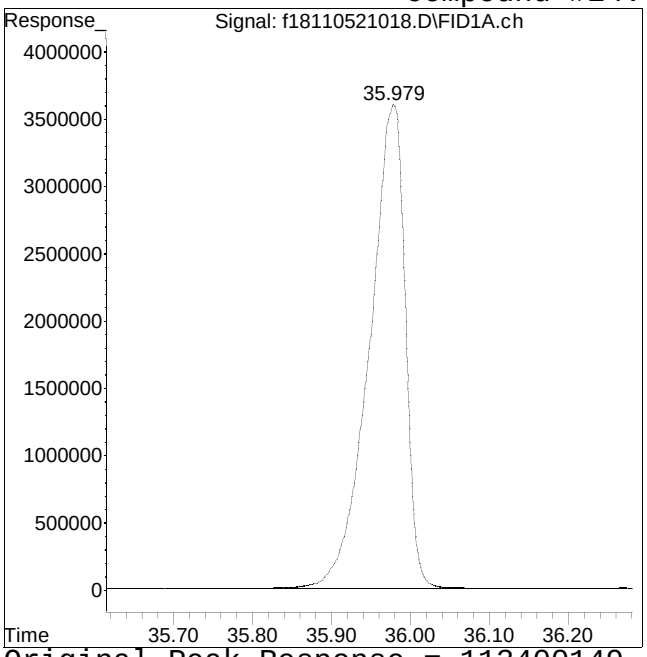
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

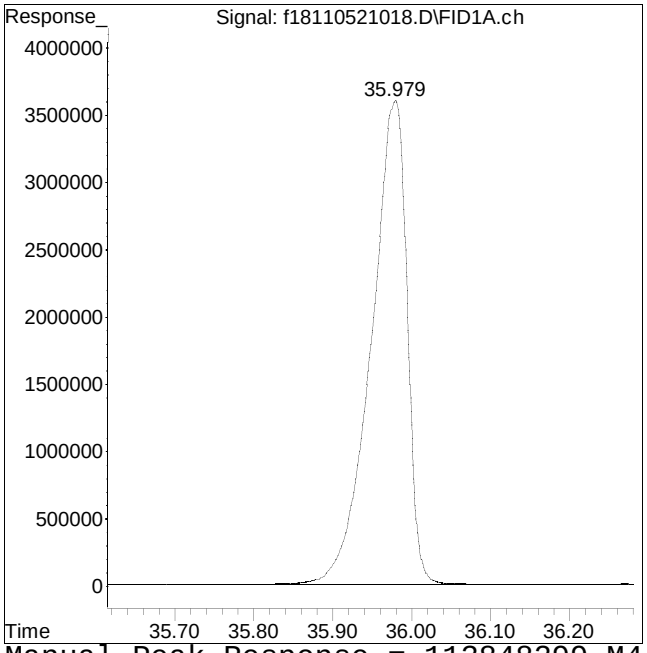
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #24: d50-Tetracosane



Original Peak Response = 113400149



Manual Peak Response = 113848299 M4

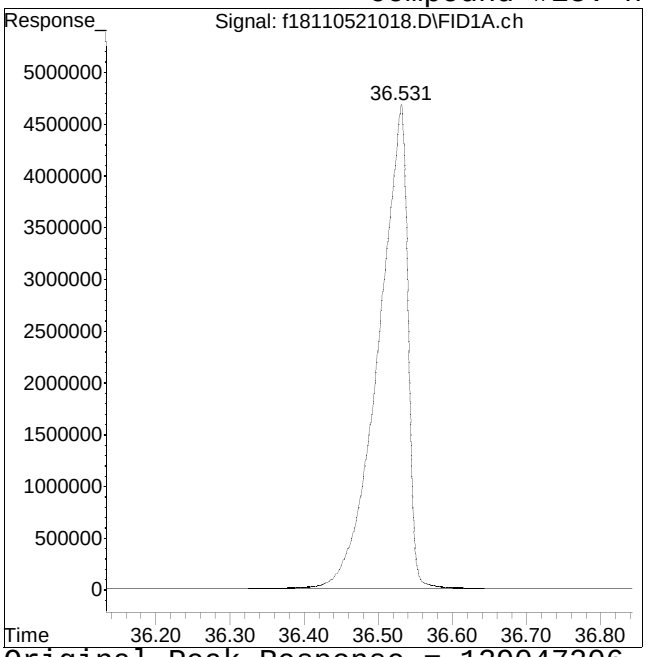
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

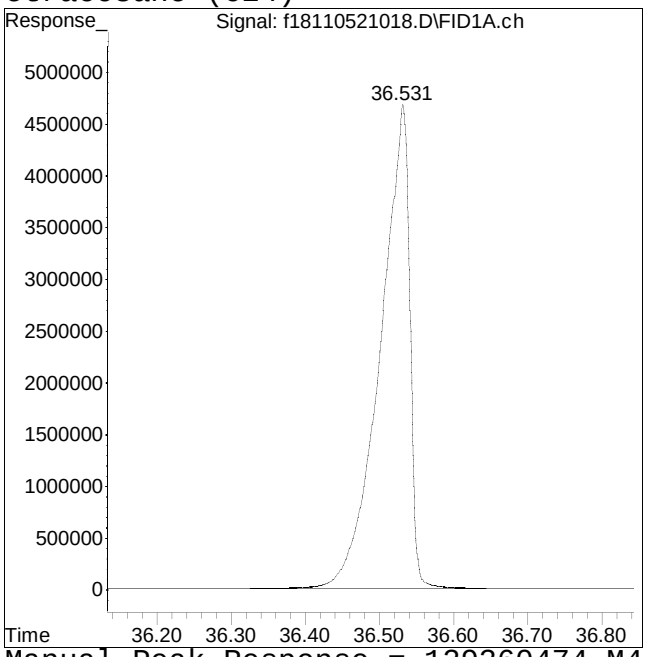
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 129047206



Manual Peak Response = 129360474 M4

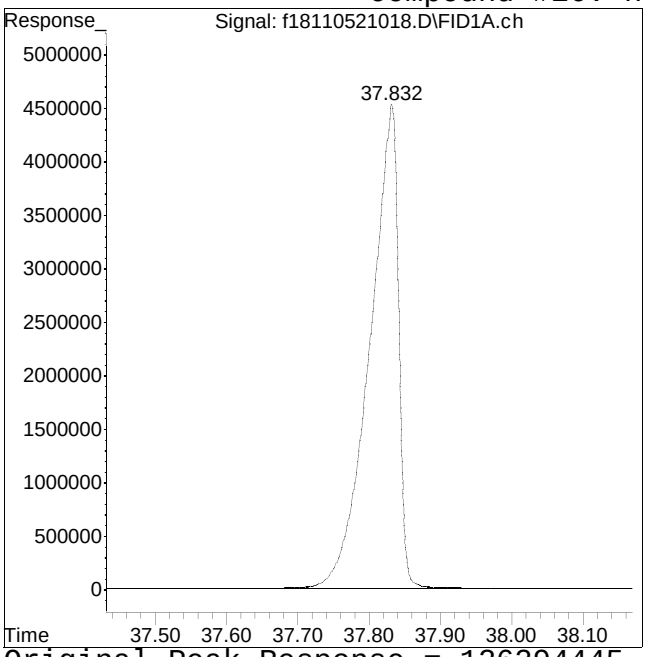
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

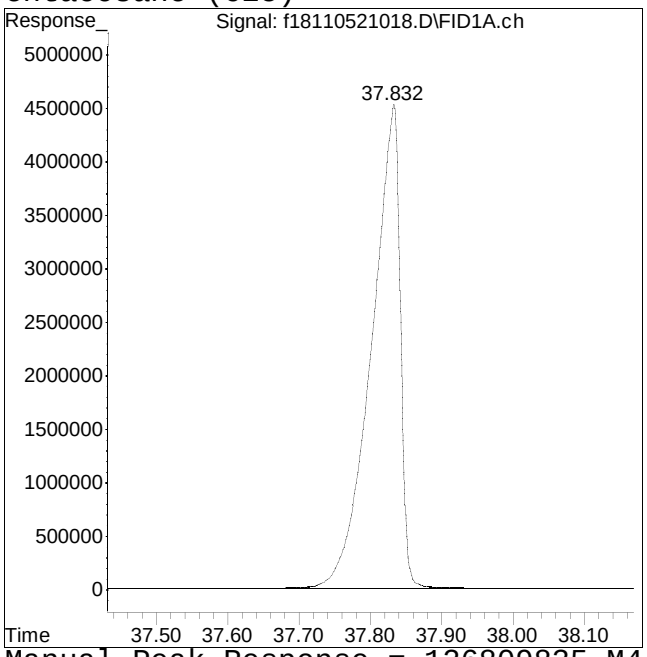
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 126294445



Manual Peak Response = 126809835 M4

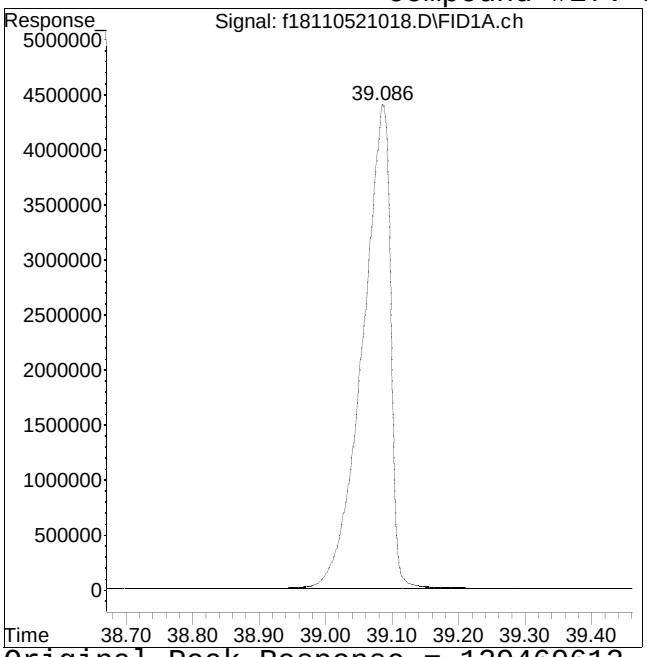
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

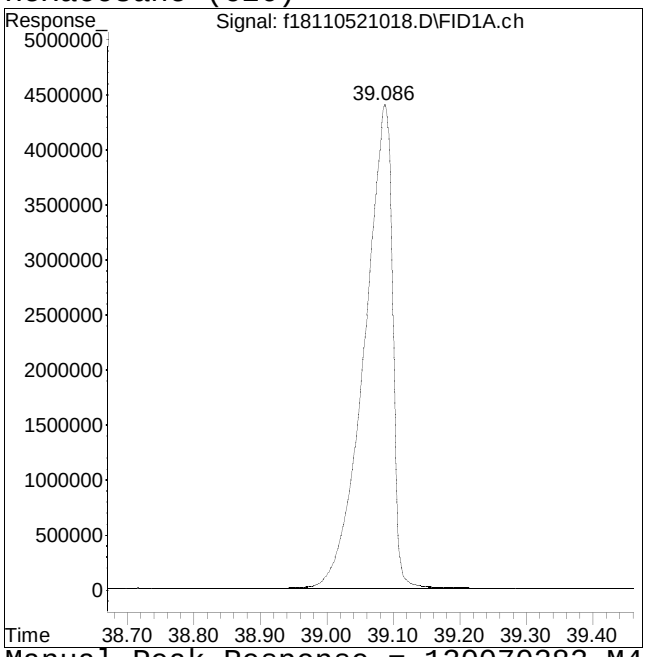
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 129469612



Manual Peak Response = 130070383 M4

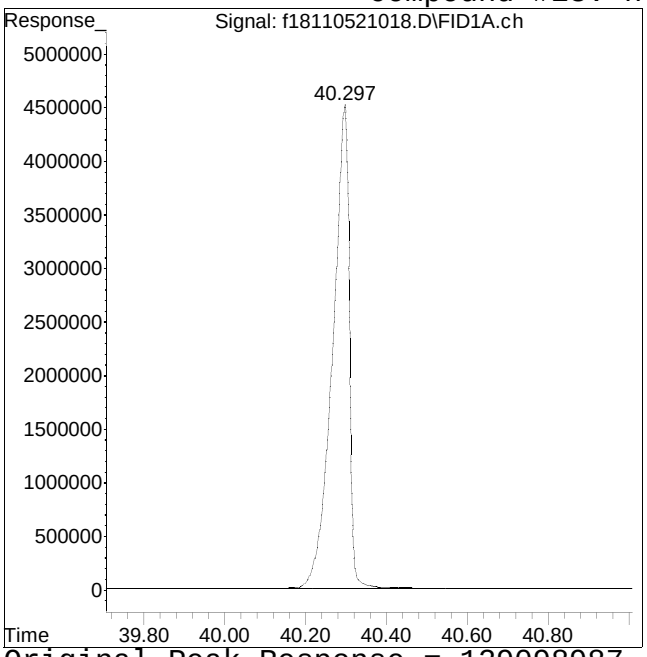
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

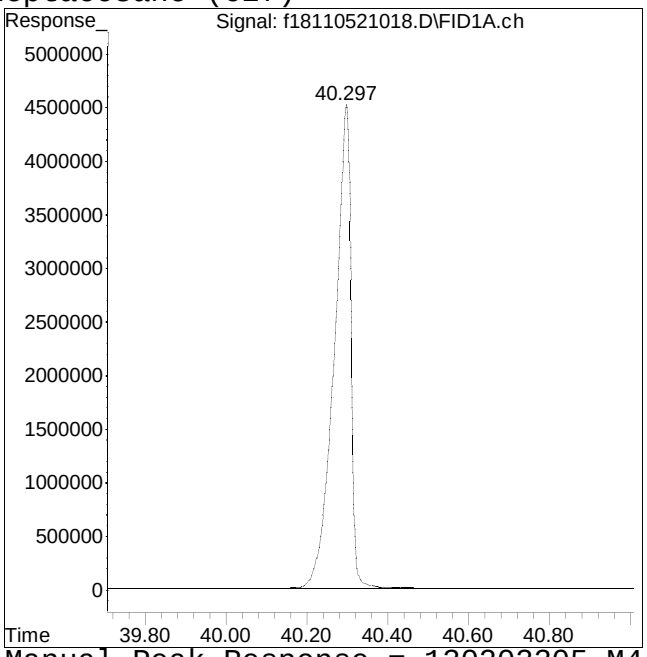
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 129098987



Manual Peak Response = 130203305 M4

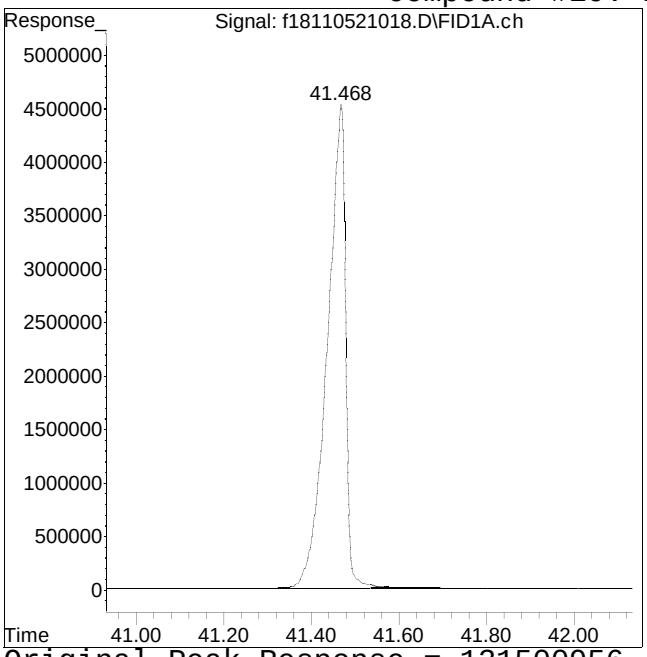
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

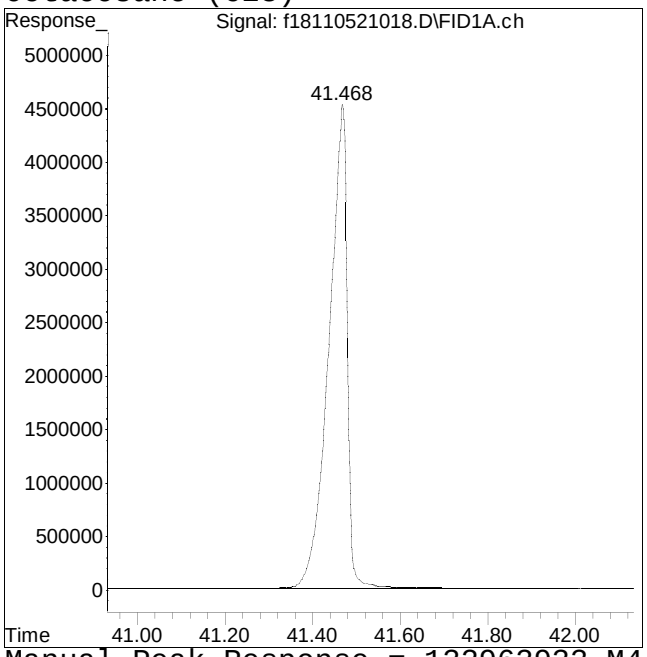
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 131500956



Manual Peak Response = 132963933 M4

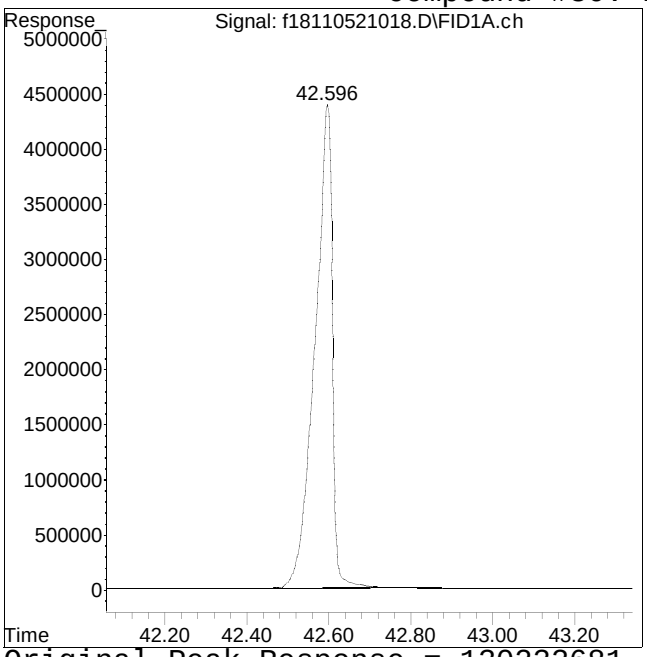
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

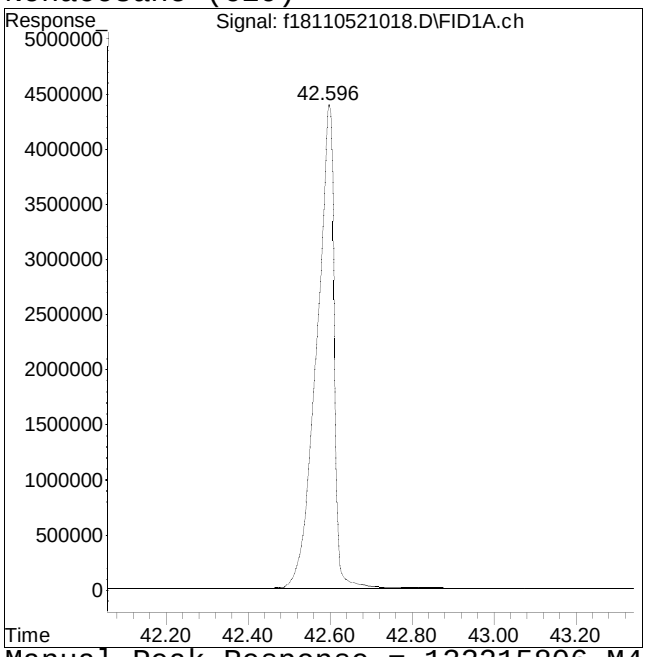
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 130232681



Manual Peak Response = 132215806 M4

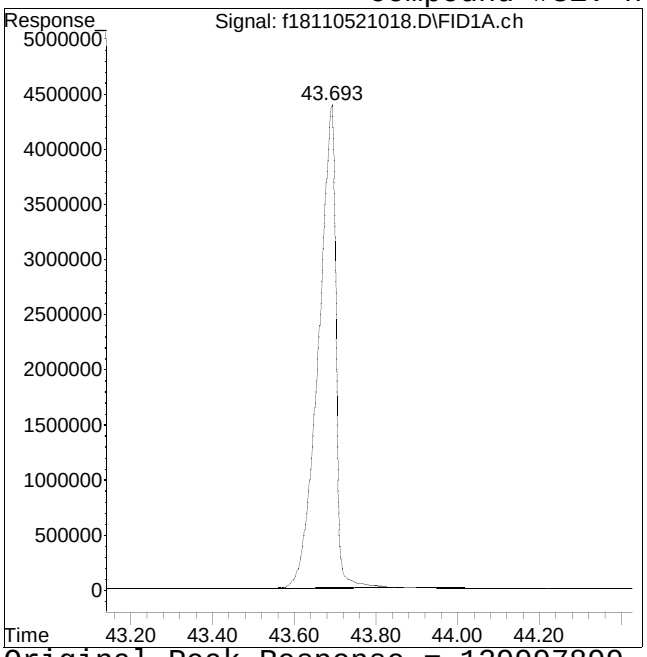
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

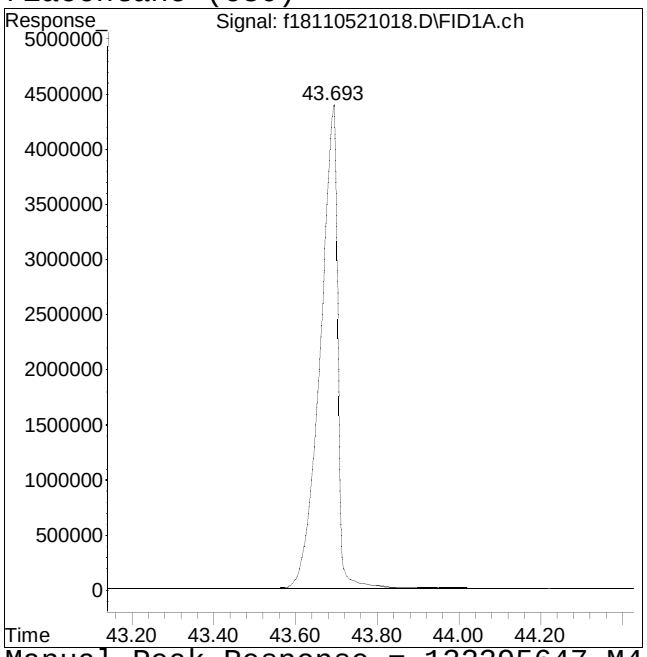
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 129997899



Manual Peak Response = 132395647 M4

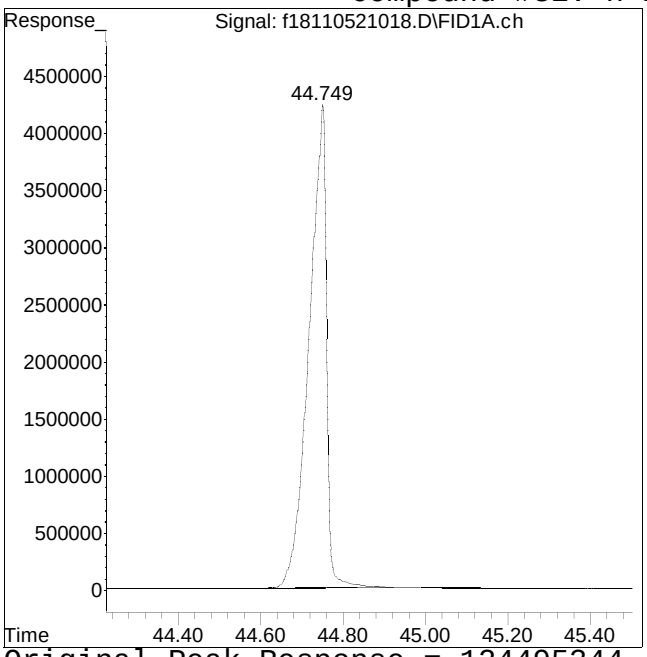
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

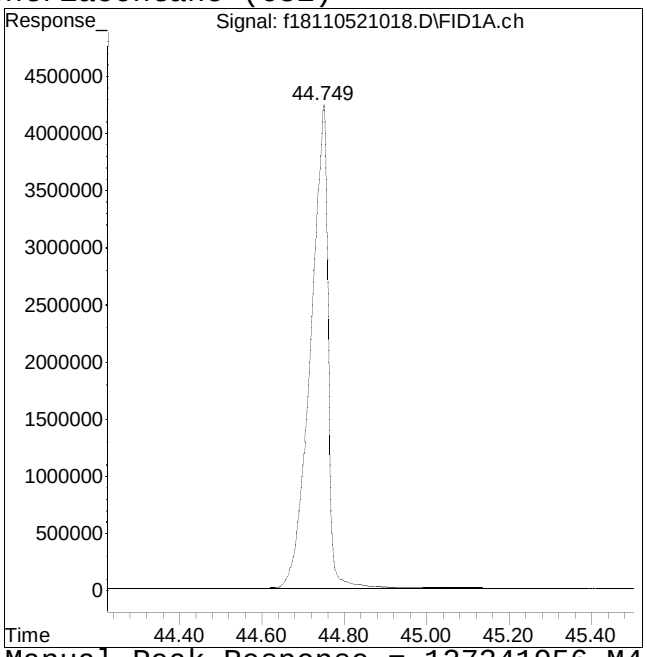
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 124495344



Manual Peak Response = 127341956 M4

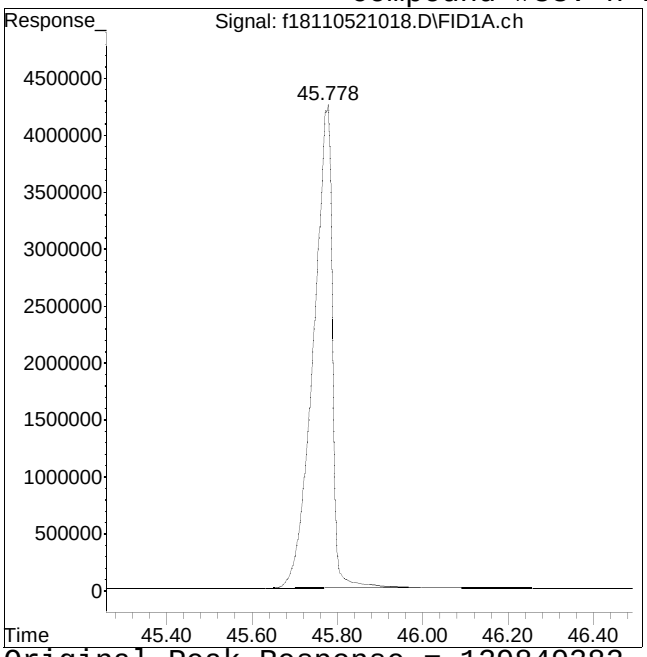
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

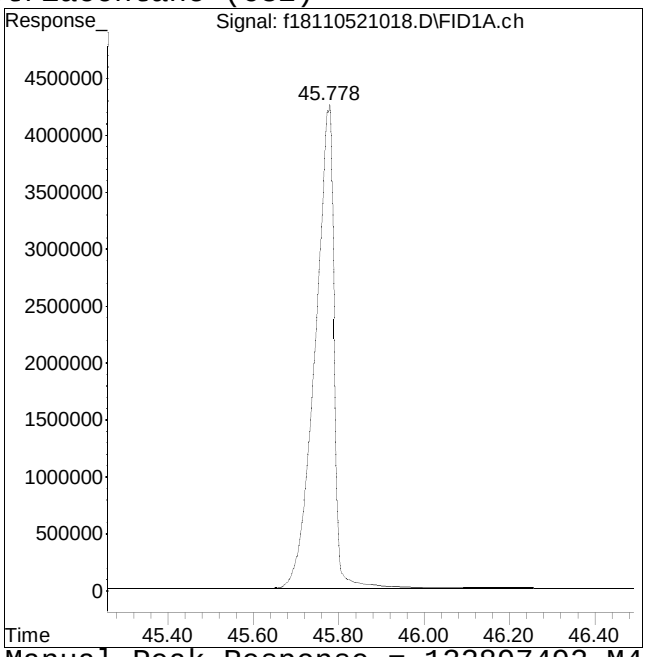
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 129849382



Manual Peak Response = 132897492 M4

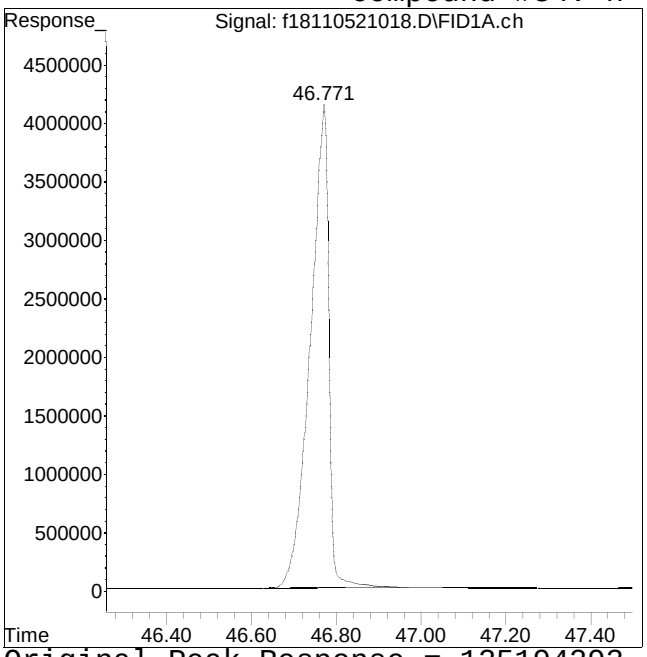
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

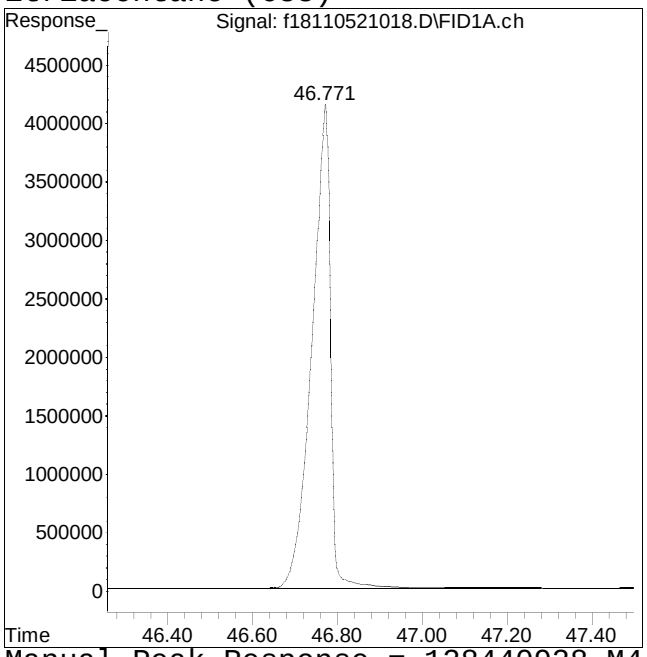
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 125194293



Manual Peak Response = 128440928 M4

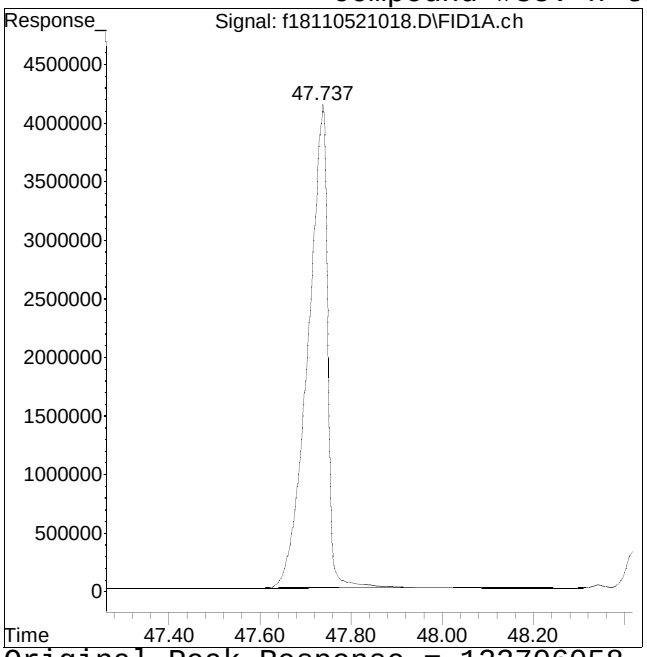
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

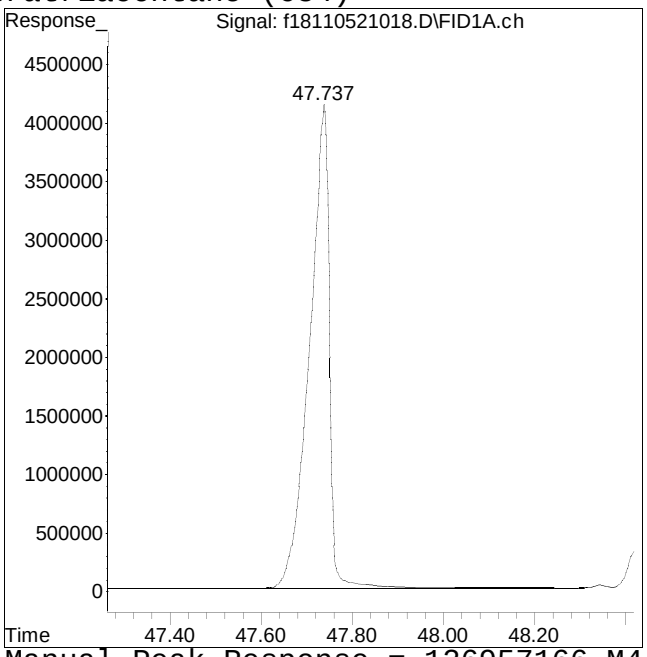
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 123706058



Manual Peak Response = 126957166 M4

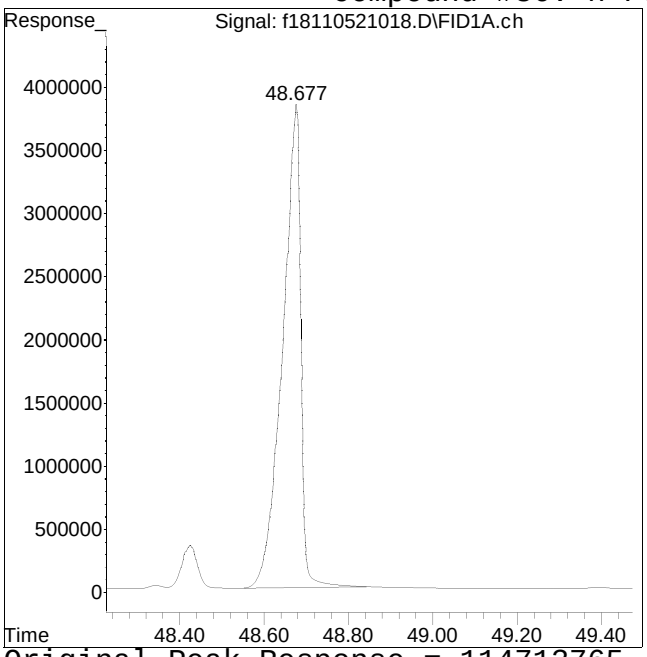
M4 = Poor automated baseline construction.

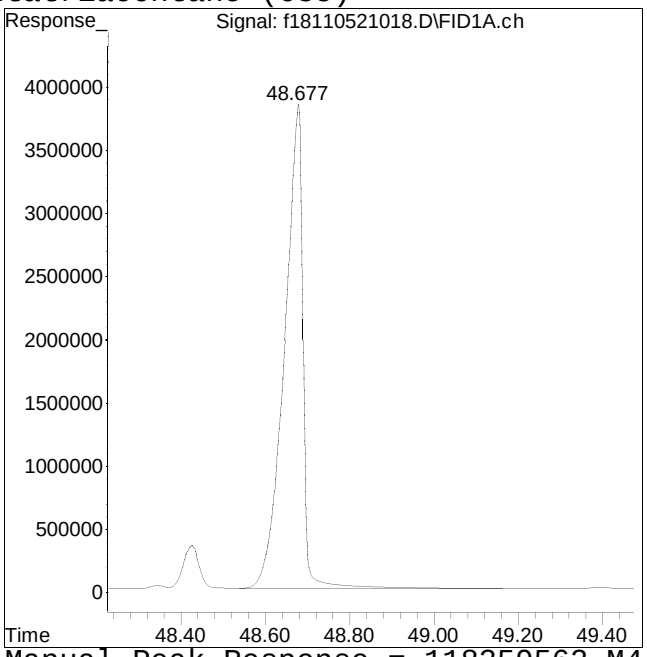
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #36: n-Pentatriacontane (C35)





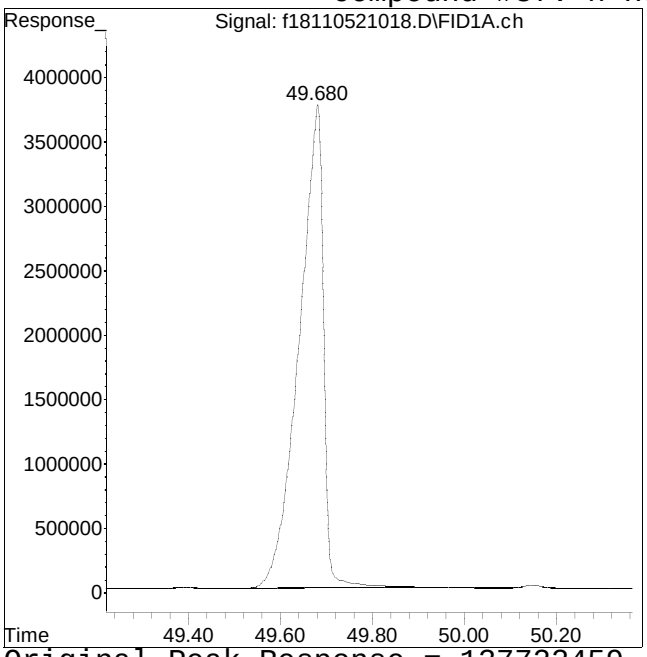
Original Peak Response = 114713765 Manual Peak Response = 118359562 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

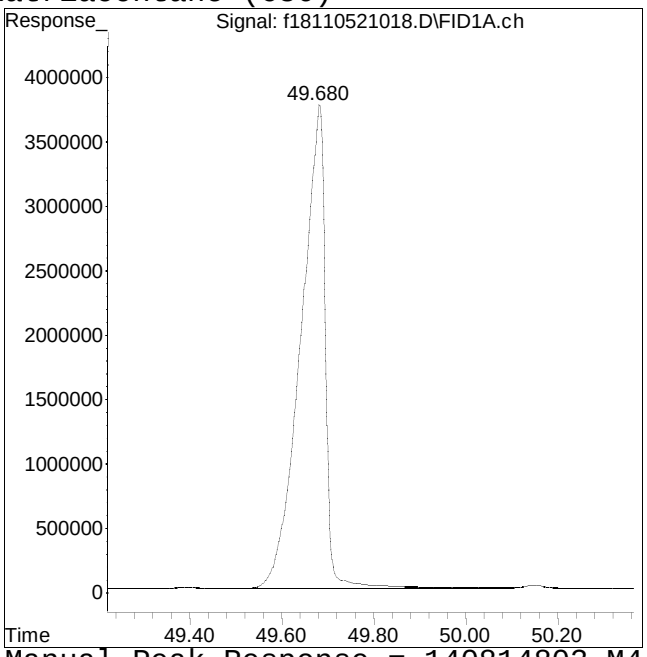
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 137722459



Manual Peak Response = 140814803 M4

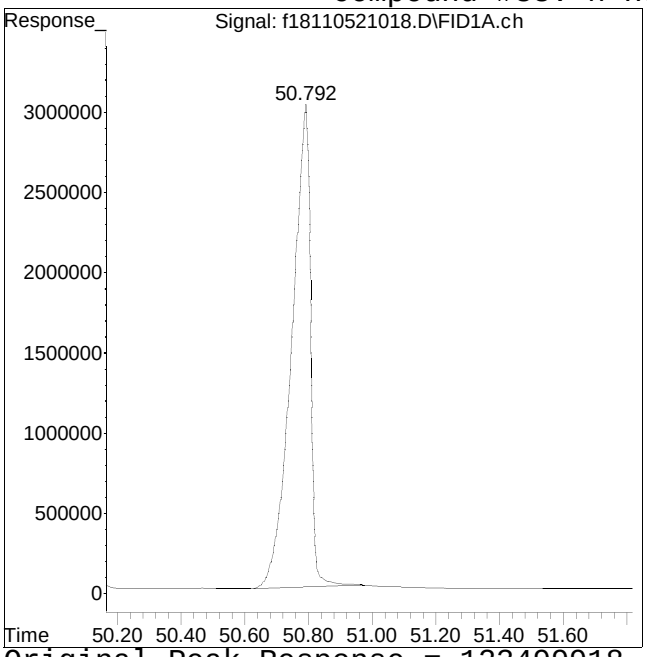
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

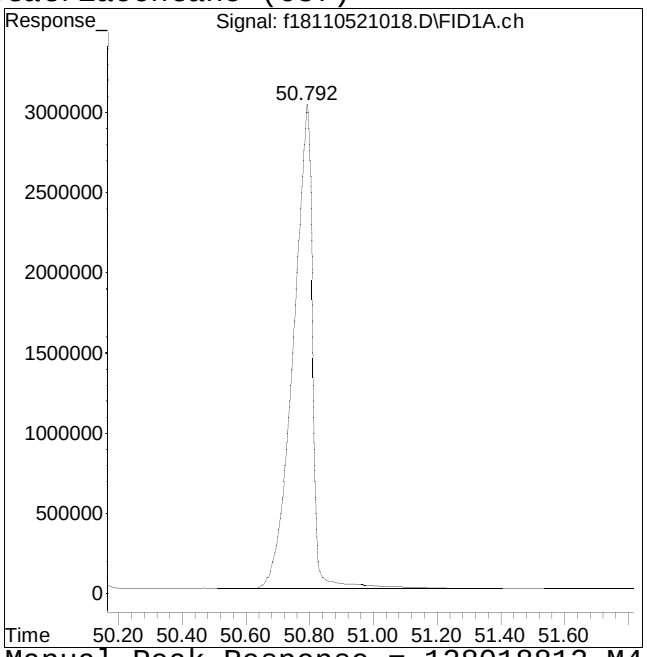
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 123499918



Manual Peak Response = 128018812 M4

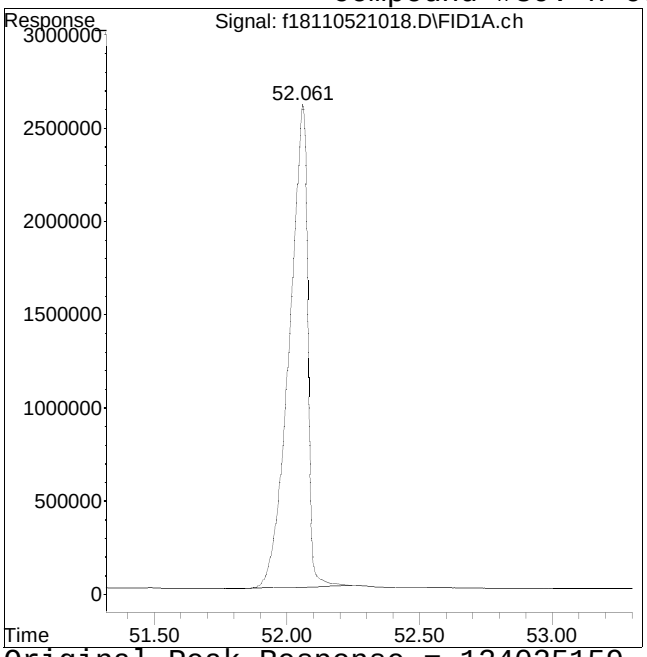
M4 = Poor automated baseline construction.

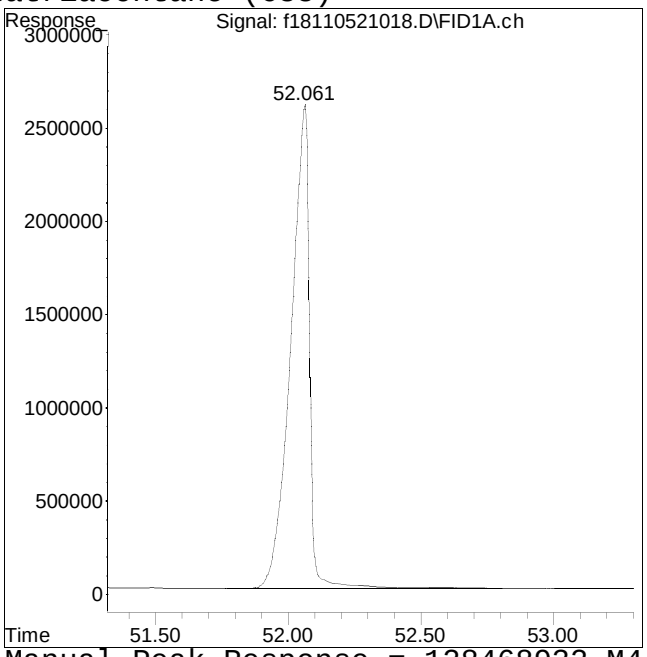
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #39: n-Octatriacontane (C38)





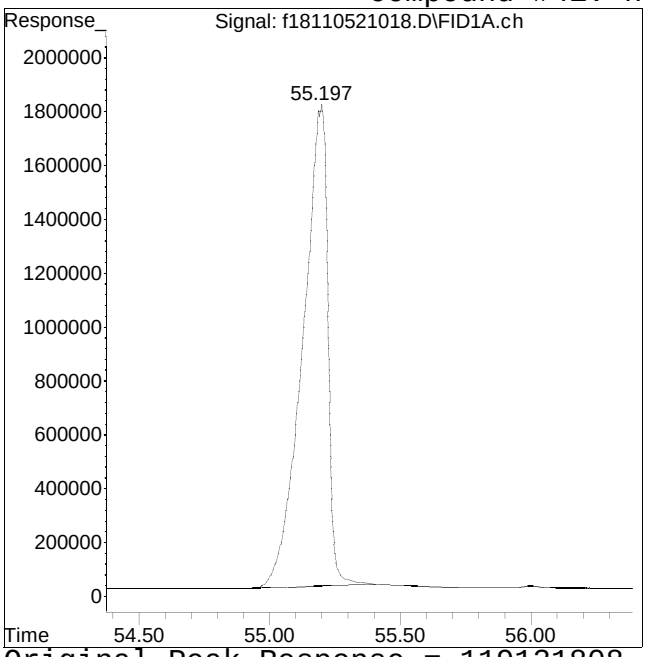
Original Peak Response = 124025159 Manual Peak Response = 128468932 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

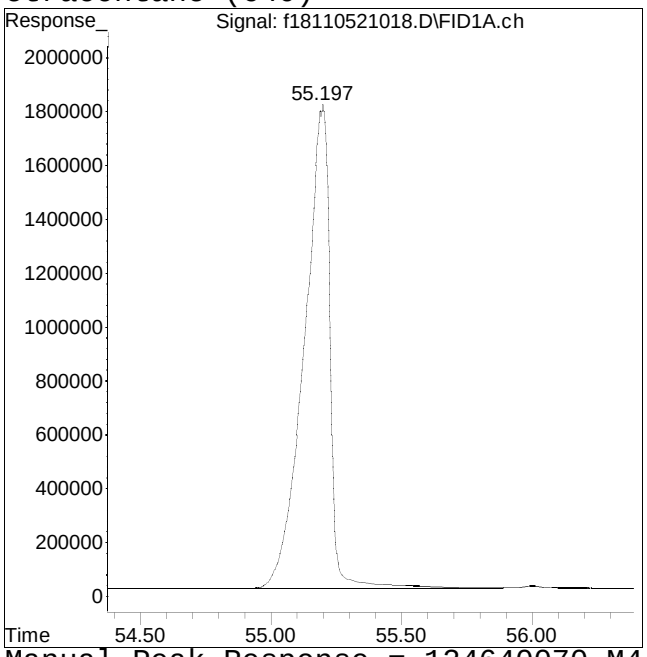
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521018.D
Date Inj'd : 11/6/2021 12:16 am
Sample : I1811052104F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:48 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 119131808



Manual Peak Response = 124640070 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521020.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 01:41 am
Operator : FID18:WR
Sample : I1811052105F
Misc : WG1581201,FRBD80,200ug/ml
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:02:04 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 09:54:36 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.350	68989972	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.372	283932748	183.919	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 367.84%#			
24) s	d50-Tetracosane	36.001	229258091	182.593	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 365.19%#			
	Target Compounds					
2) t	n-Octane (C8)	5.879	209310450	184.077	ug/mL	M4
3) t	n-Nonane (C9)	8.057	218651859	190.313	ug/mL	M4
4) t	n-Decane (C10)	10.511	229469571	205.381	ug/mL	M4
5) t	n-Undecane (C11)	12.999	230963382	196.668	ug/mL	M4
6) t	n-Dodecane (C12)	15.411	234830243	192.156	ug/mL	M4
7) t	n-Tridecane (C13)	17.704	236729544	189.747	ug/mL	M4
9) t	n-Tetradecane (C14)	19.875	243918415	188.661	ug/mL	M4
11) t	n-Pentadecane (C15)	21.932	246681082	189.555	ug/mL	M4
12) t	n-Hexadecane (C16)	23.882	245595240	185.348	ug/mL	M4
14) t	n-Heptadecane (C17)	25.743	251581798	199.267	ug/mL	M4
15) t	Pristane	25.851	252561323	176.441	ug/mL	M4
16) t	n-Octadecane (C18)	27.504	254729916	189.215	ug/mL	M4
17) t	Phytane	27.663	235765989	183.791	ug/mL	M4
18) t	n-Nonadecane (C19)	29.182	254162502	187.130	ug/mL	M4
20) t	n-Eicosane (C20)	30.780	256349324	185.947	ug/mL	M4
21) t	n-Heneicosane (C21)	32.316	257670446	185.886	ug/mL	M4
22) t	n-Docosane (C22)	33.786	257587713	183.739	ug/mL	M4
23) t	n-Tricosane (C23)	35.197	257992744	182.254	ug/mL	M4
25) t	n-Tetracosane (C24)	36.554	257843688	185.539	ug/mL	M4
26) t	n-Pentacosane (C25)	37.857	253272927	182.781	ug/mL	M4
27) t	n-Hexacosane (C26)	39.114	260177967	182.992	ug/mL	M4
28) t	n-Heptacosane (C27)	40.324	260460853	184.685	ug/mL	M4
29) t	n-Octacosane (C28)	41.497	265974986	183.664	ug/mL	M4
30) t	n-Nonacosane (C29)	42.627	264558930	184.238	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521020.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 01:41 am
Operator : FID18:WR
Sample : I1811052105F
Misc : WG1581201,FRBD80,200ug/ml
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:02:04 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 09:54:36 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

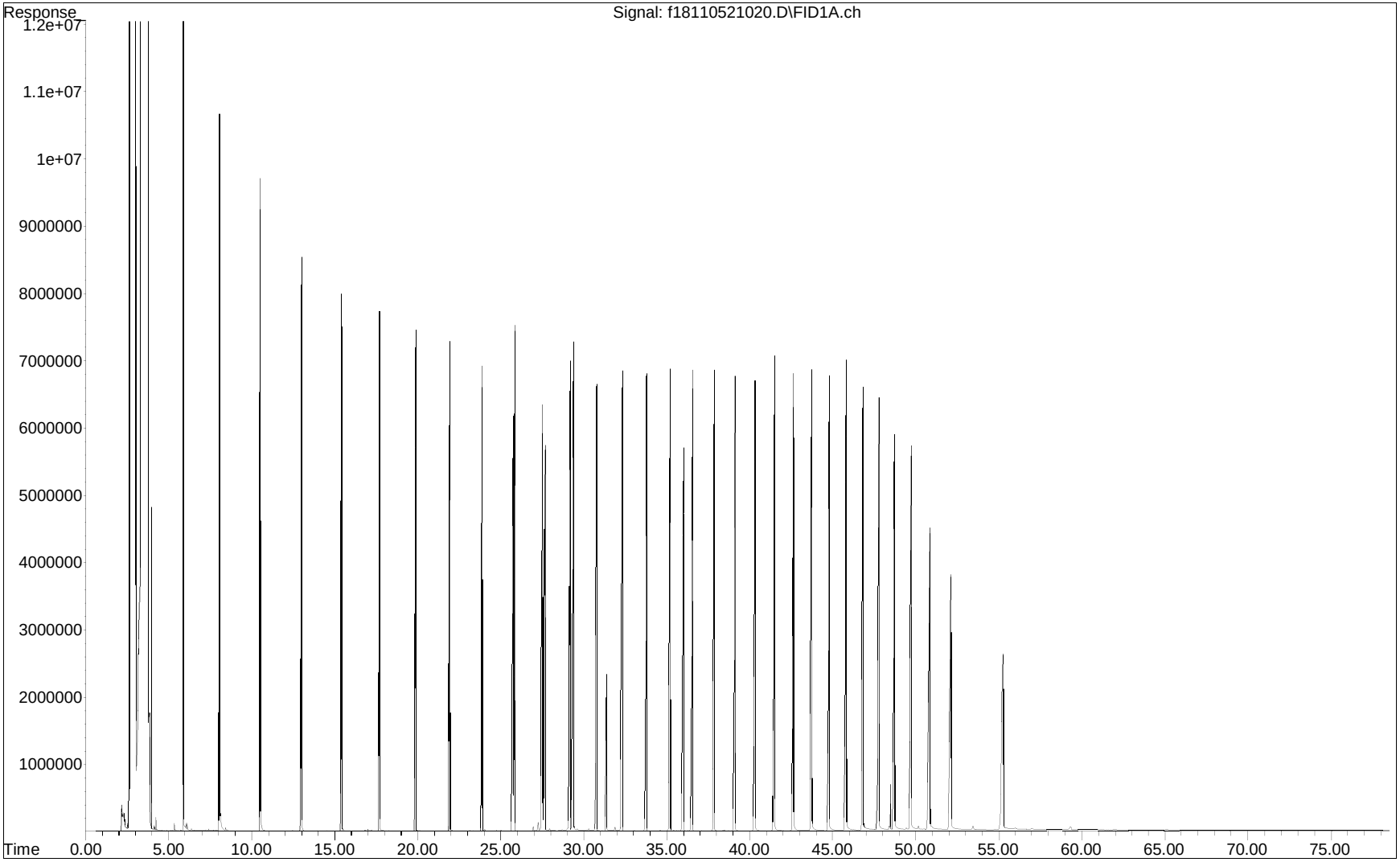
	Compound	R.T.	Response	Conc	Units	
31) t	n-Triacontane (C30)	43.723	264798287	184.649	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.779	254750177	184.483	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.809	264916946	185.331	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.804	255169961	185.067	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.770	248862259	183.246	ug/mL	M4
36) t	n-Pentatriacontane (C35)	48.709	227339068	175.729	ug/mL	M4
37) t	n-Hexatriacontane (C36)	49.722	263390947	176.704	ug/mL	M4
38) t	n-Heptatriacontane (C37)	50.830	232551792	171.464	ug/mL	M4
39) t	n-Octatriacontane (C38)	52.104	226128026	164.882	ug/mL	M4
41) t	n-Tetracontane (C40)	55.255	209448147	154.003	ug/mL	M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521020.D
Operator : FID18:WR
Acquired : 06 Nov 2021 01:41 am using AcqMethod FID18.M
Sample Name: I1811052105F
Instrument: FID 18
Misc Info : WG1581201,FRBD80,200ug/ml
Vial Number: 10
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M

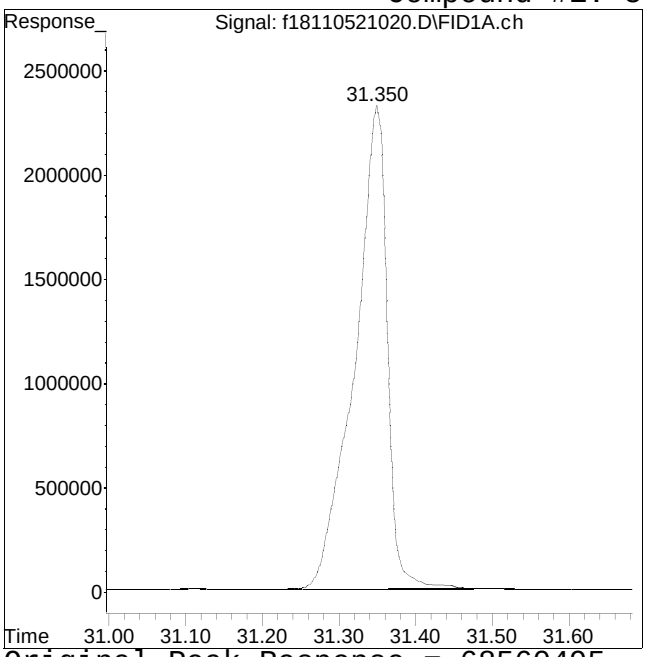


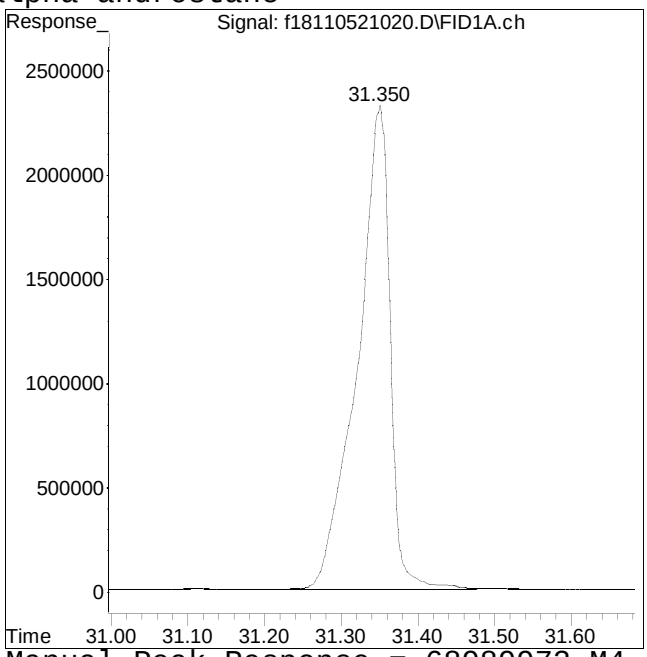
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #1: 5-alpha-androstane





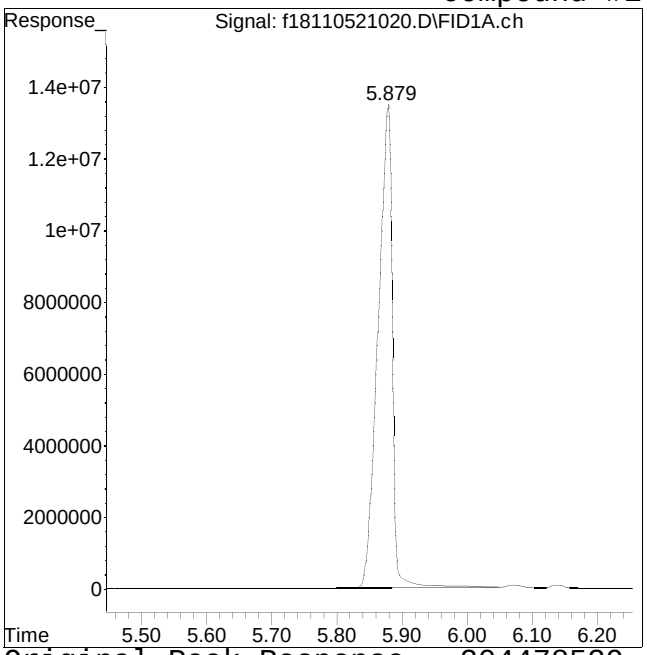
Original Peak Response = 68560495 Manual Peak Response = 68989972 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

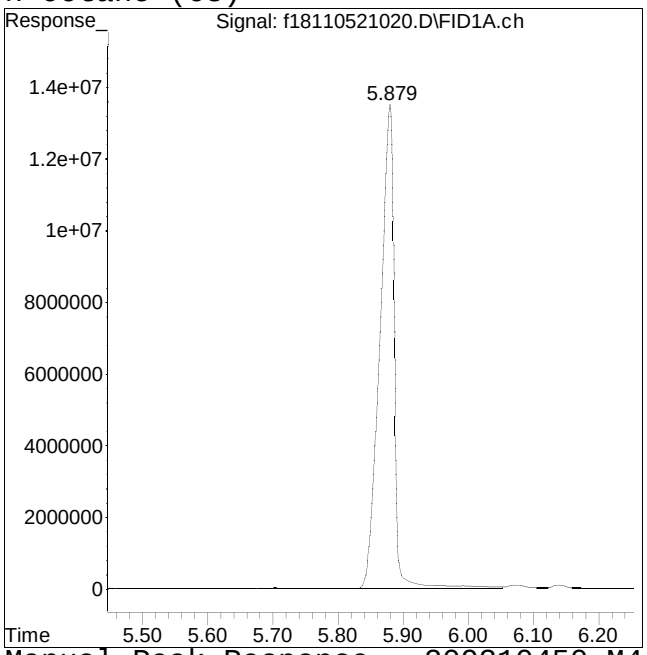
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #2: n-Octane (C8)



Original Peak Response = 204478539



Manual Peak Response = 209310450 M4

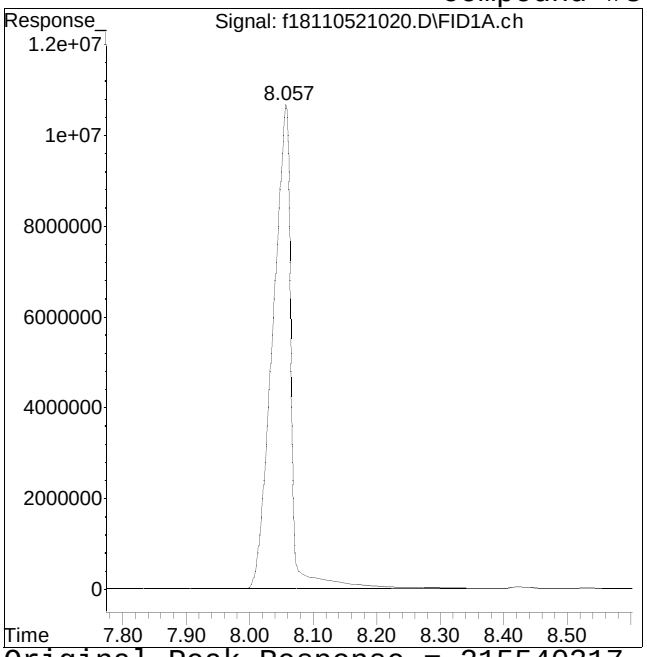
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

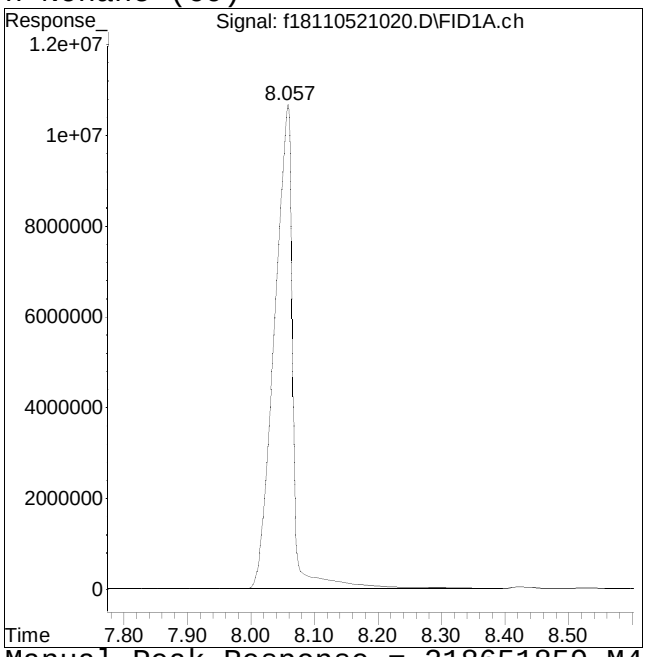
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #3: n-Nonane (C9)



Original Peak Response = 215540317



Manual Peak Response = 218651859 M4

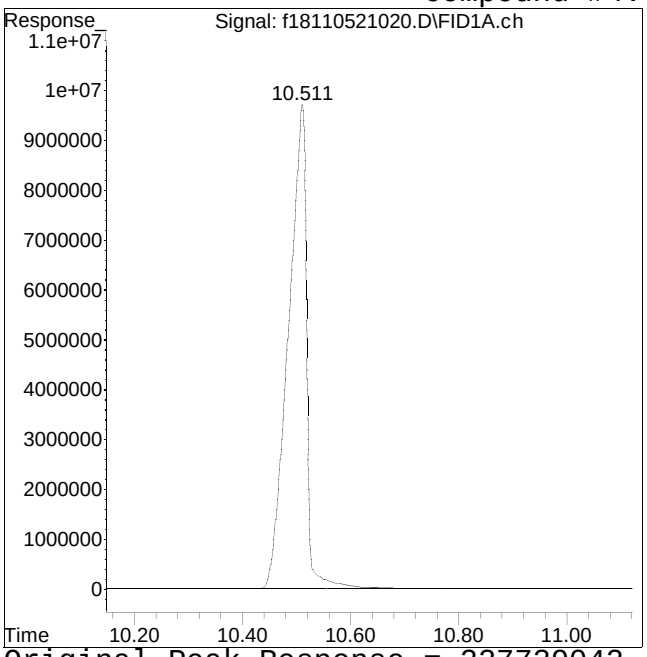
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

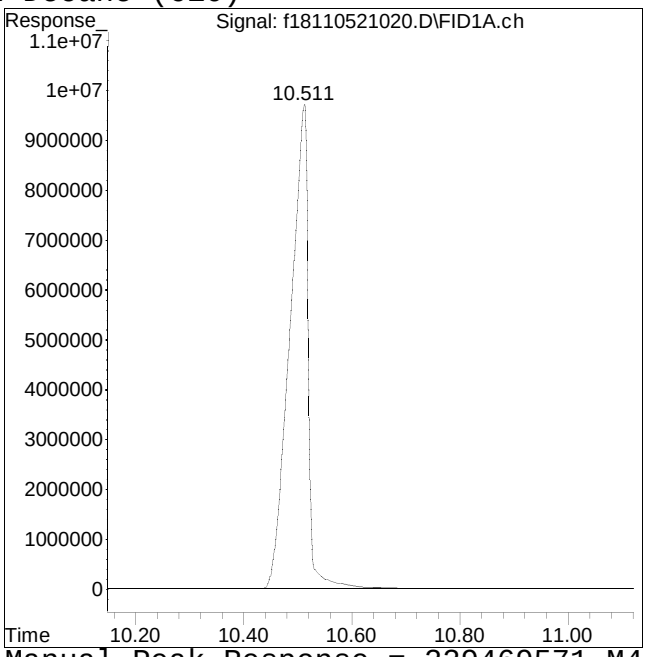
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #4: n-Decane (C10)



Original Peak Response = 227739042



Manual Peak Response = 229469571 M4

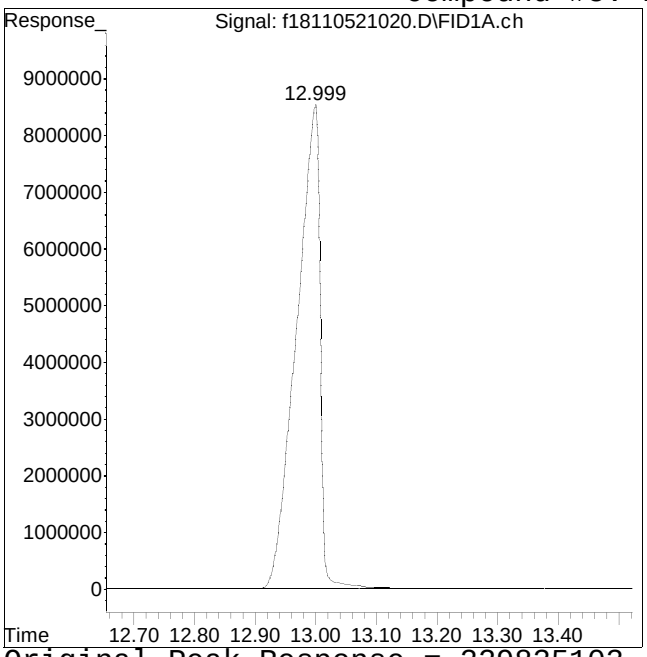
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

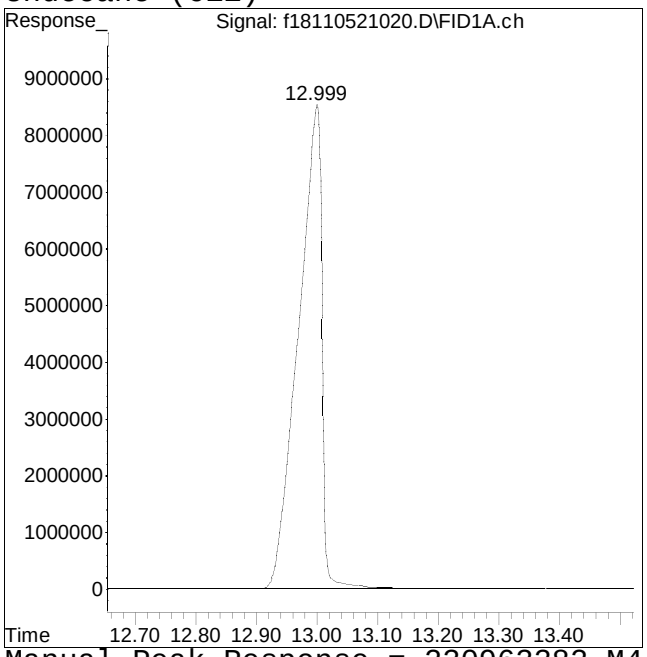
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #5: n-Undecane (C11)



Original Peak Response = 229835103



Manual Peak Response = 230963382 M4

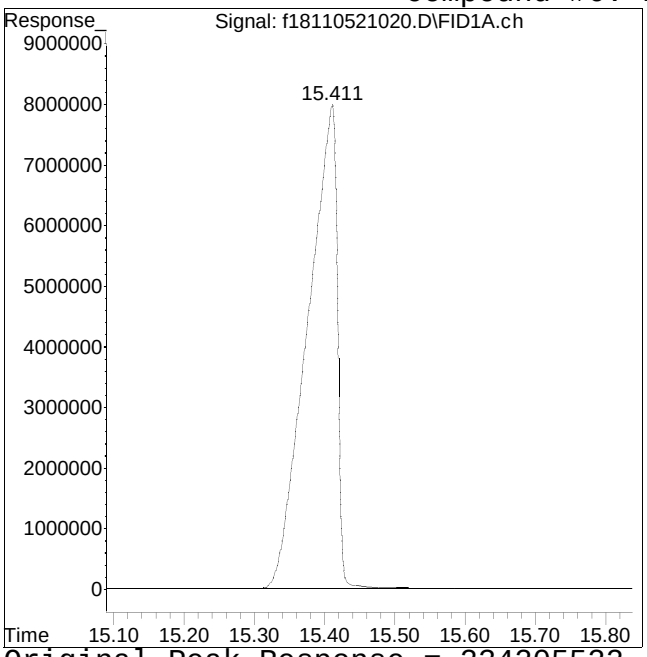
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

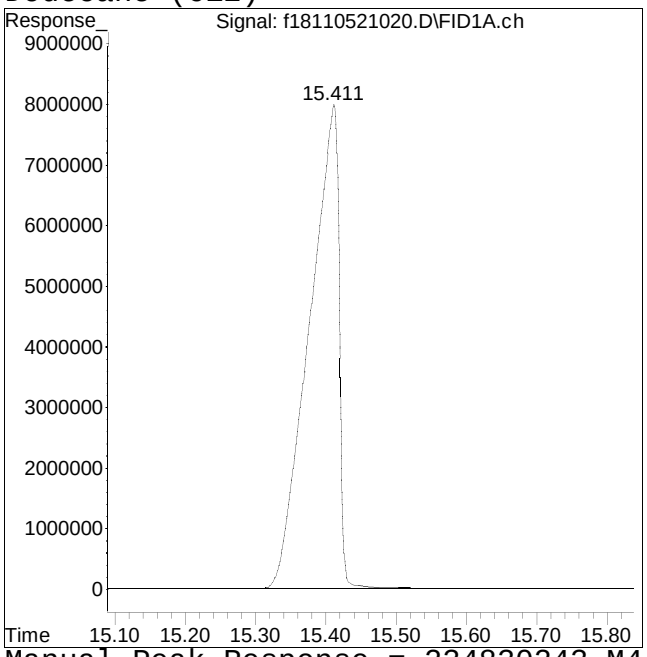
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 234205522



Manual Peak Response = 234830243 M4

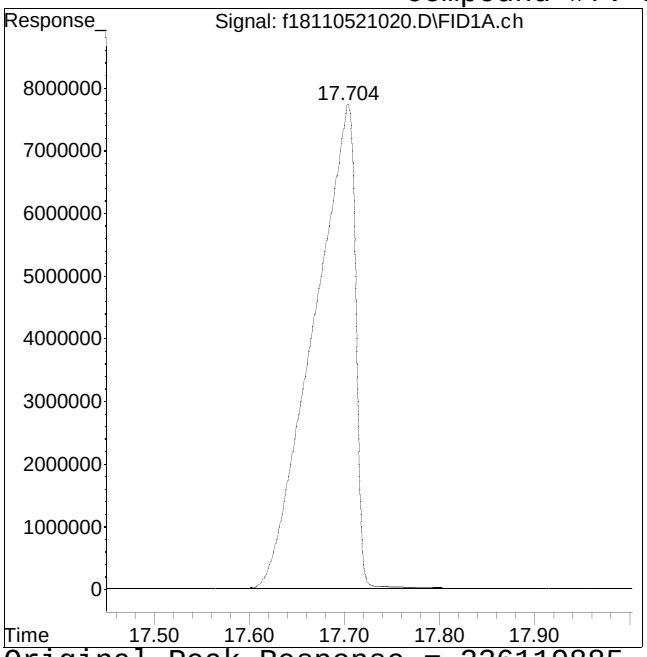
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

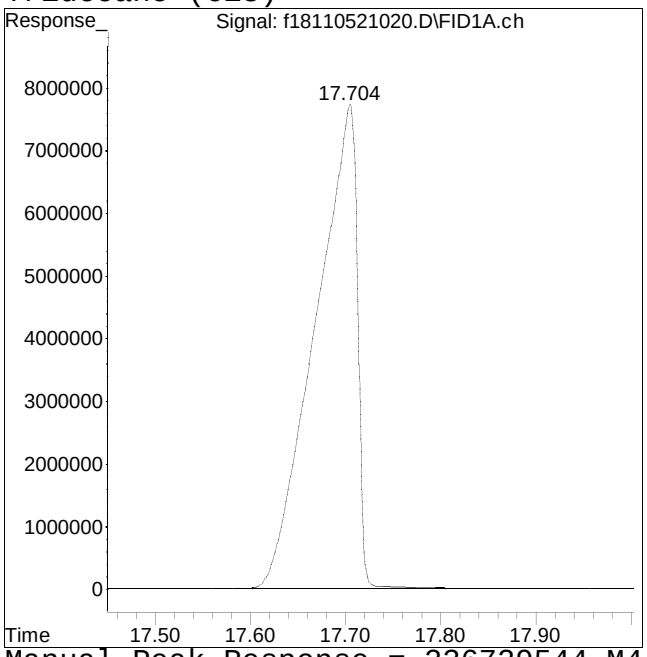
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 236119885



Manual Peak Response = 236729544 M4

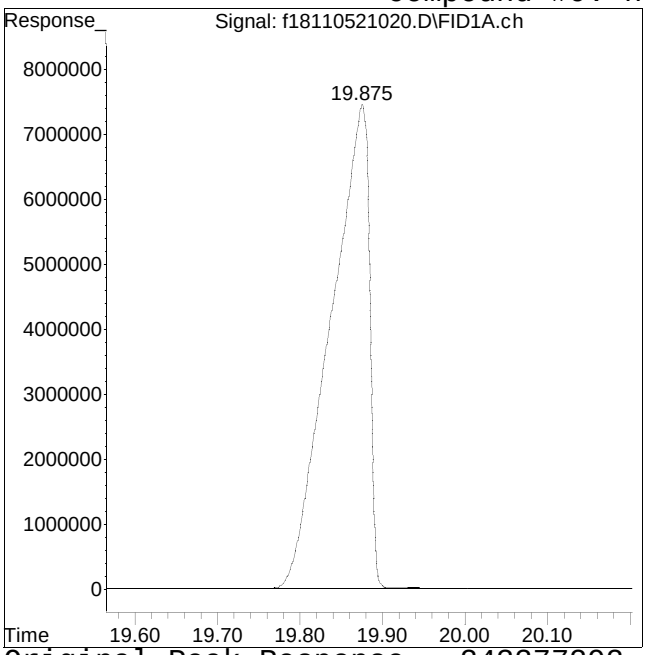
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

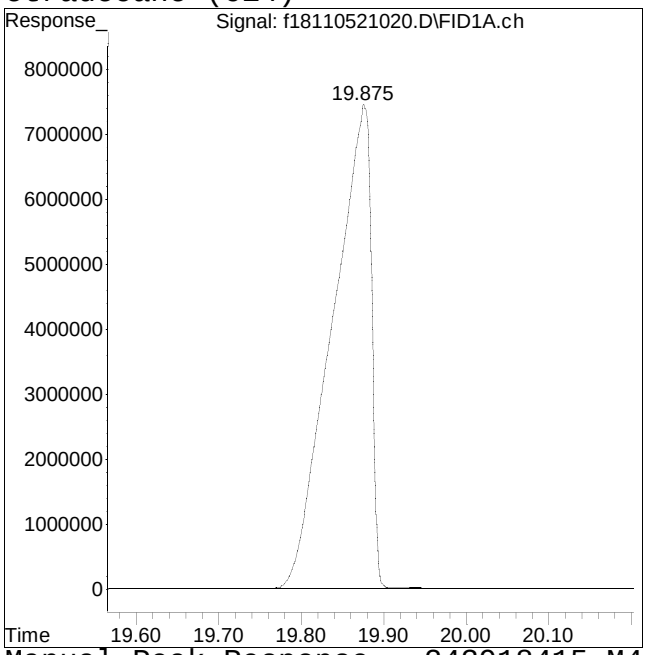
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 243377292



Manual Peak Response = 243918415 M4

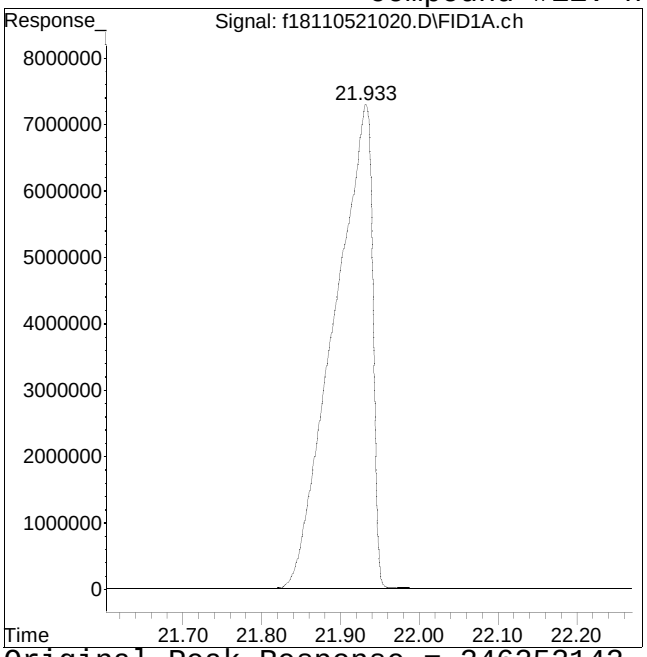
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

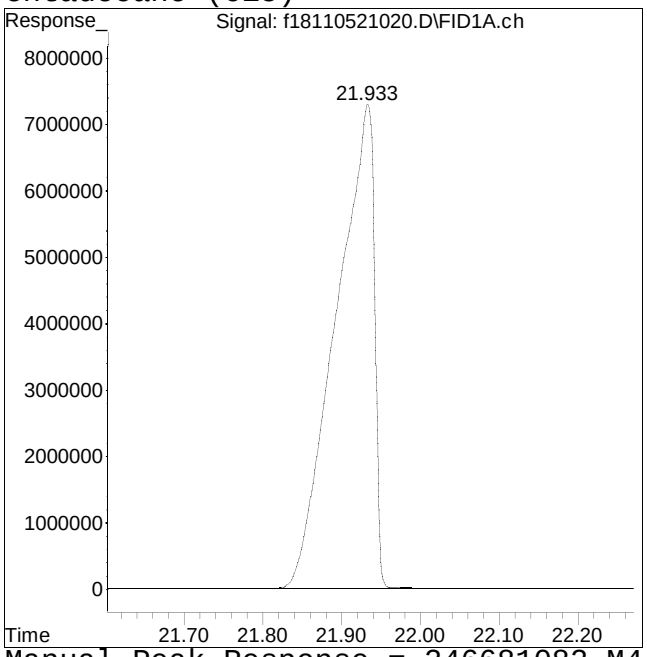
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 246252142



Manual Peak Response = 246681082 M4

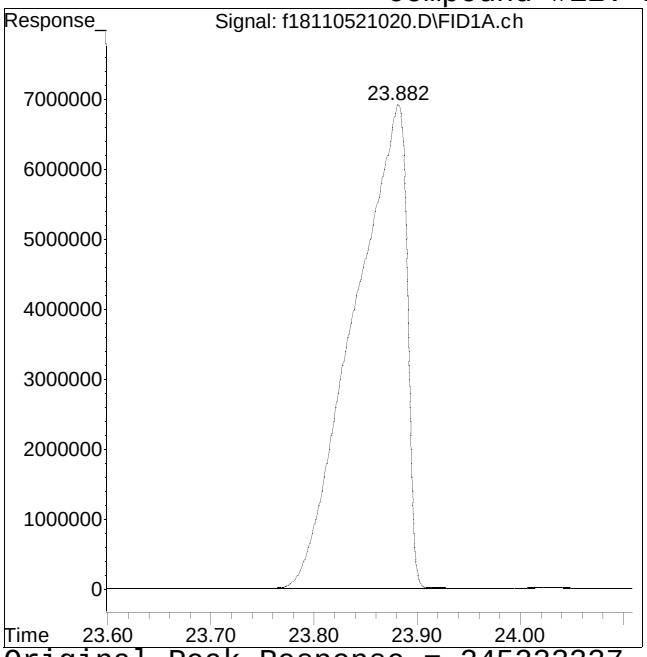
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

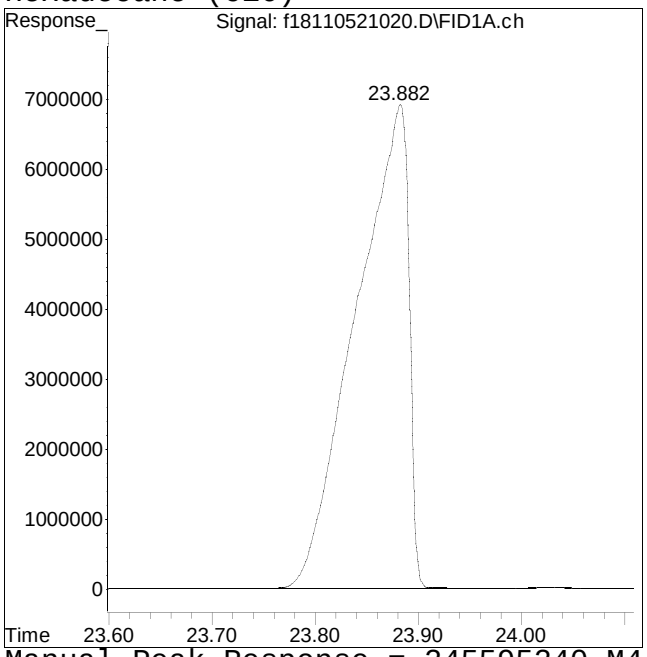
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 245233337



Manual Peak Response = 245595240 M4

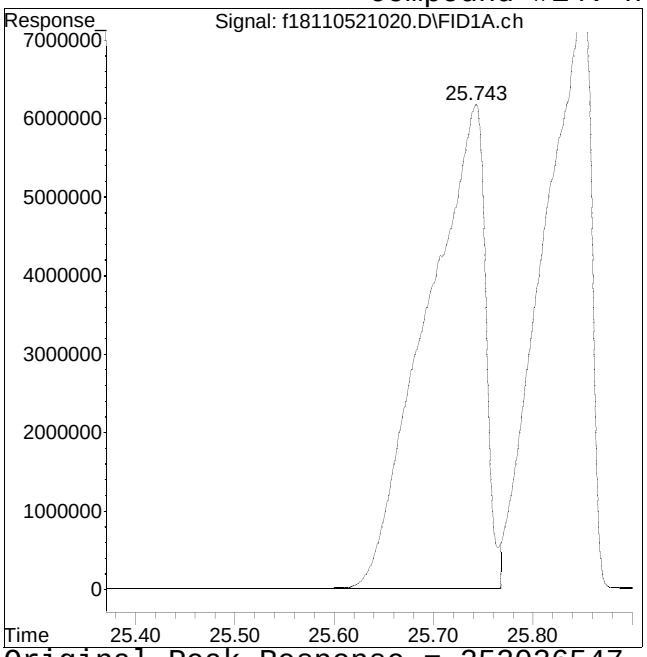
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

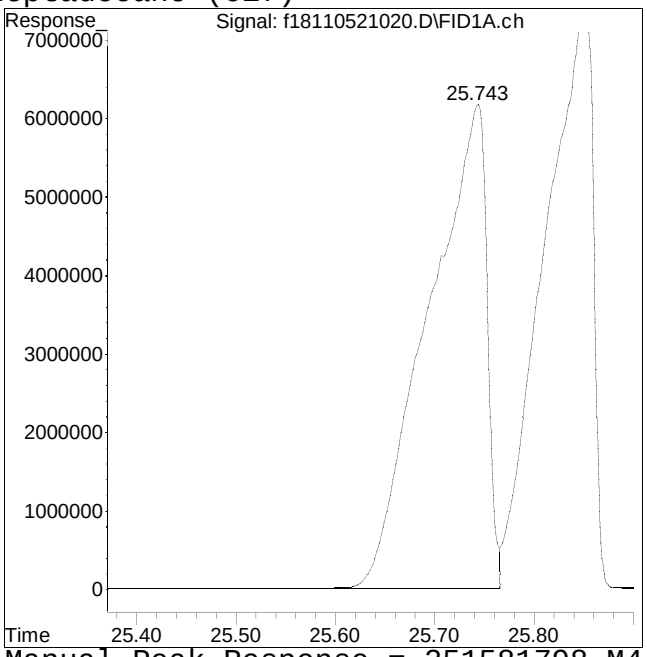
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 252036547



Manual Peak Response = 251581798 M4

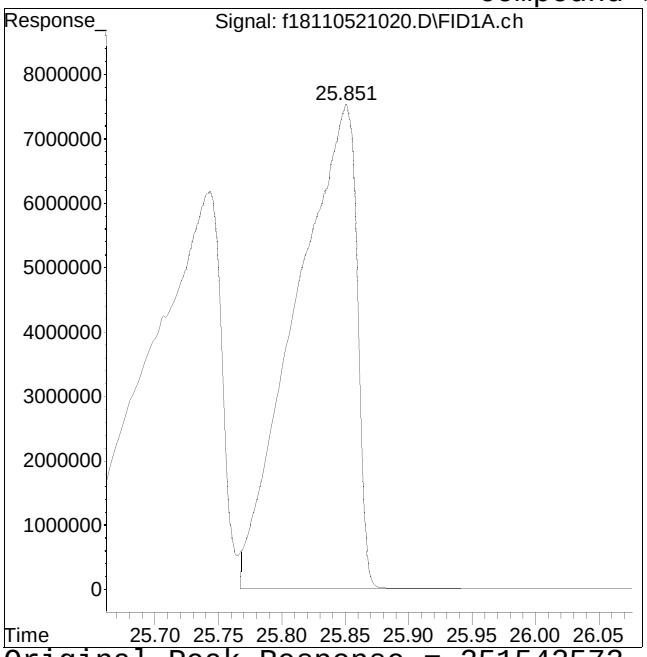
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

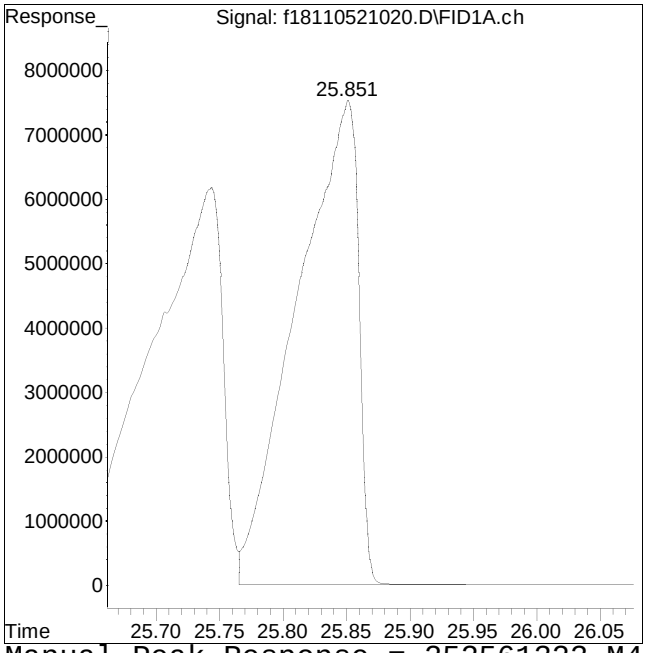
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #15: Pristane



Original Peak Response = 251542573



Manual Peak Response = 252561323 M4

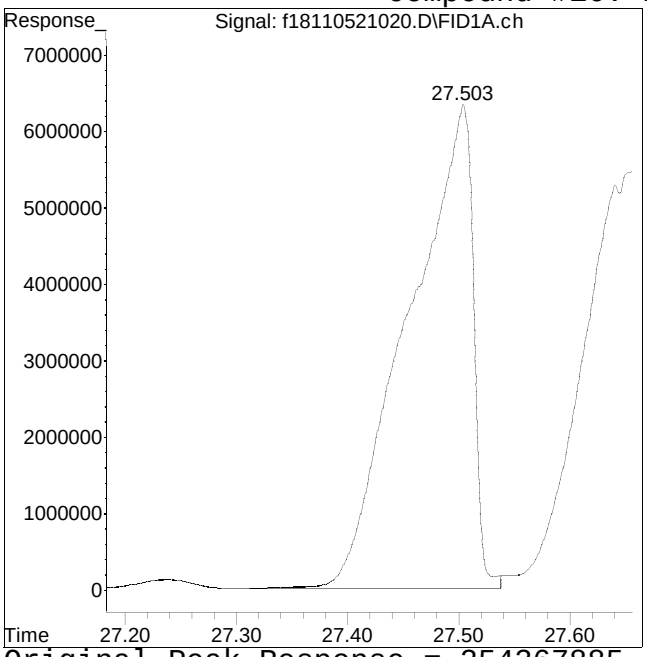
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

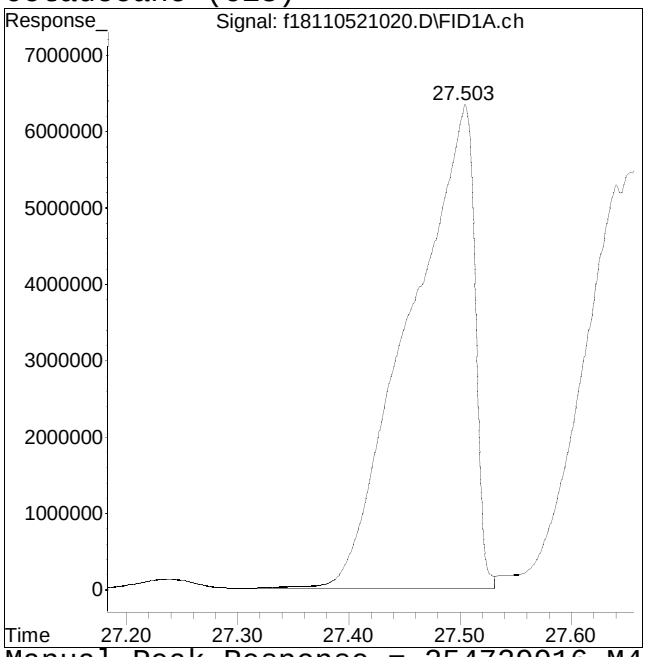
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 254367885



Manual Peak Response = 254729916 M4

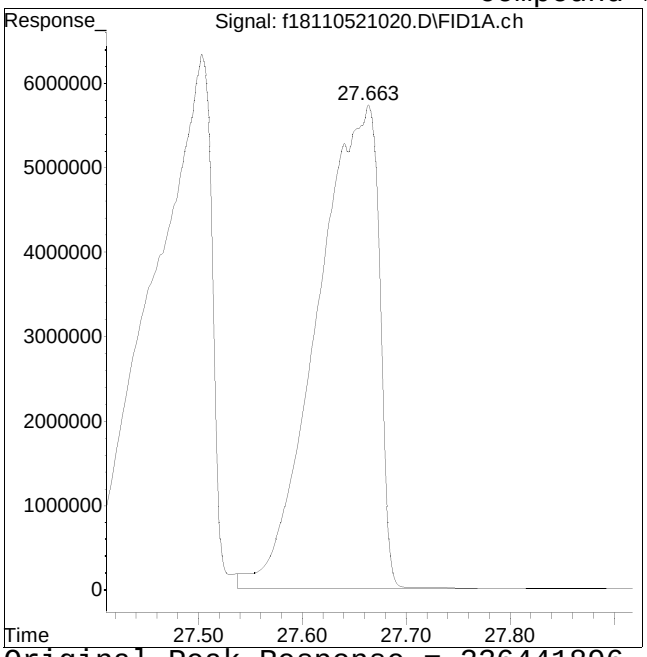
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

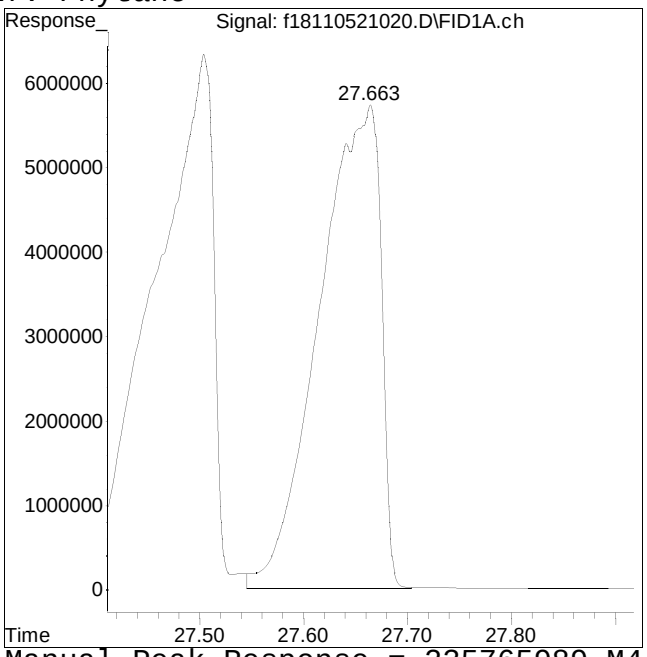
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #17: Phytane



Original Peak Response = 236441896



Manual Peak Response = 235765989 M4

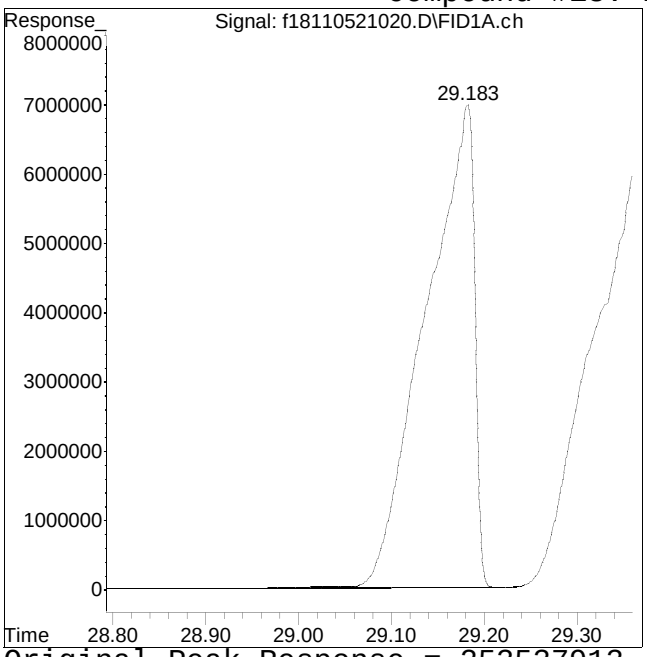
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

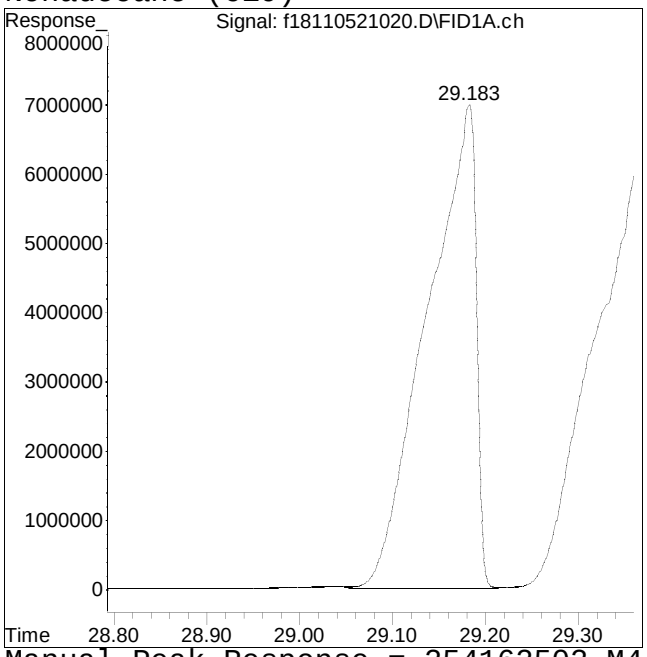
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 253537913



Manual Peak Response = 254162502 M4

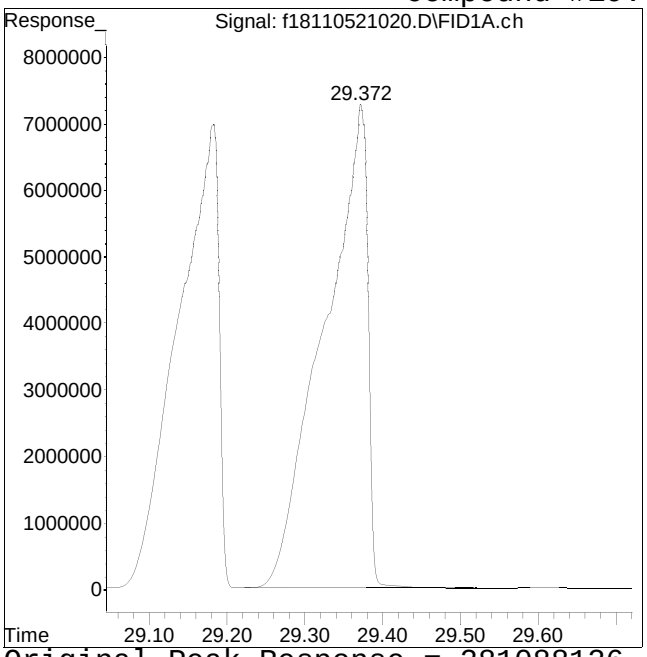
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

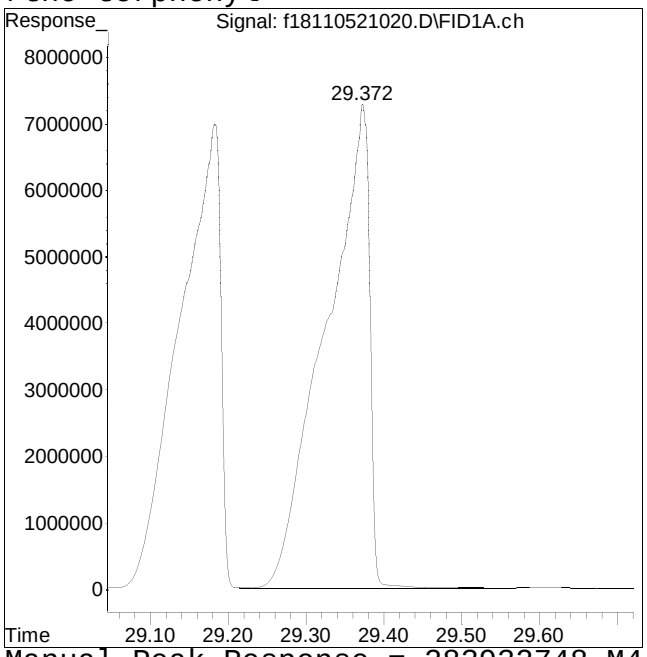
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #19: ortho-terphenyl



Original Peak Response = 281088126



Manual Peak Response = 283932748 M4

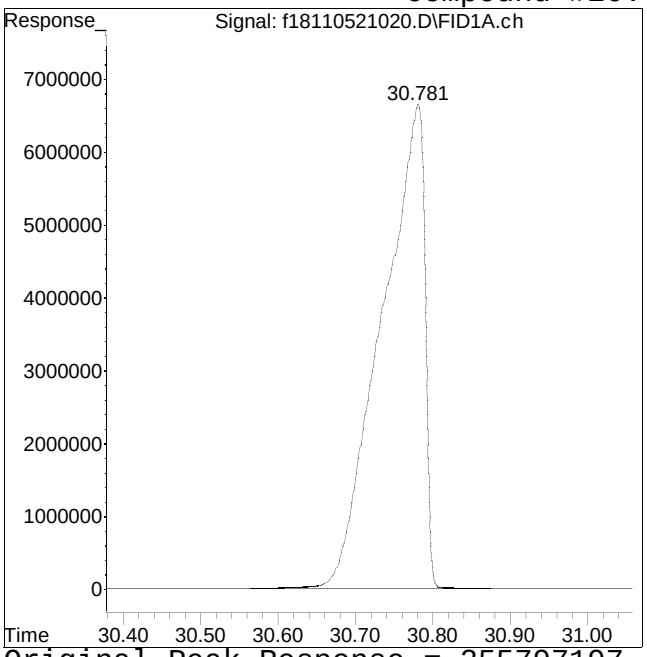
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

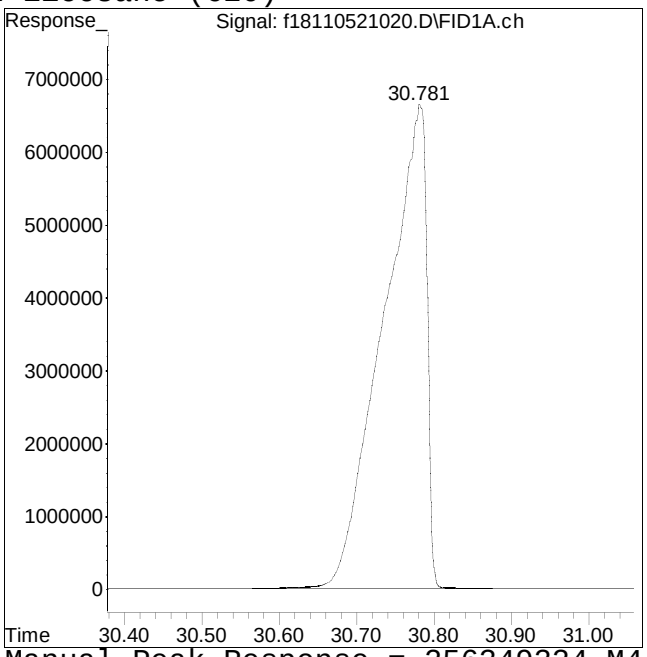
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 255797197



Manual Peak Response = 256349324 M4

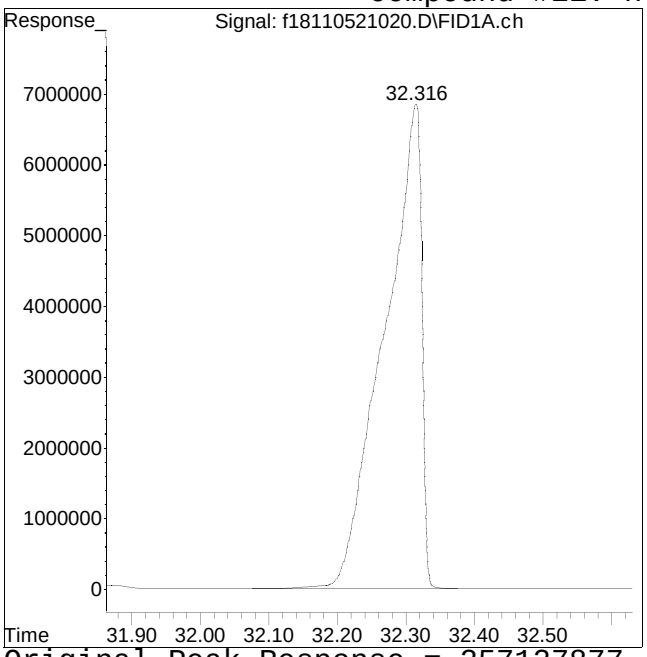
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

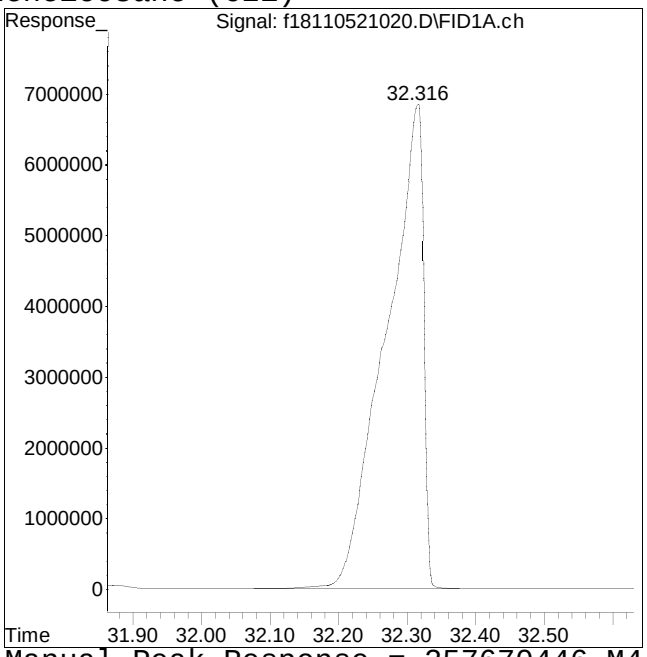
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 257127877



Manual Peak Response = 257670446 M4

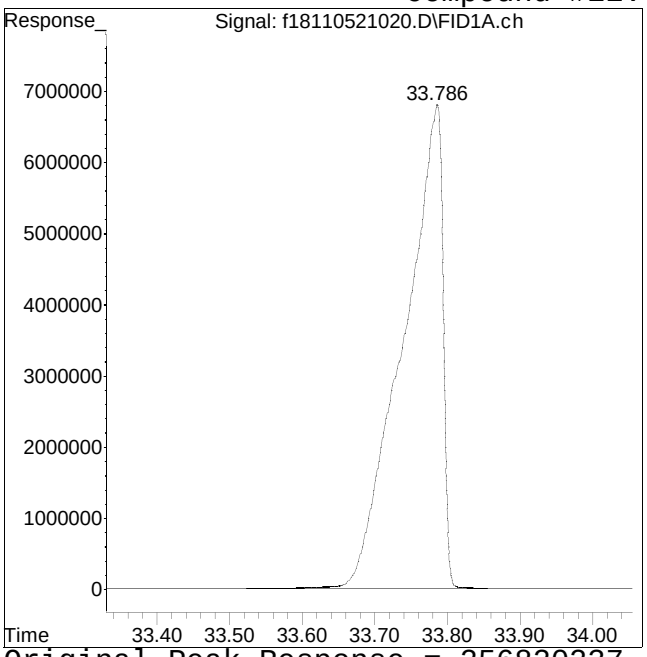
M4 = Poor automated baseline construction.

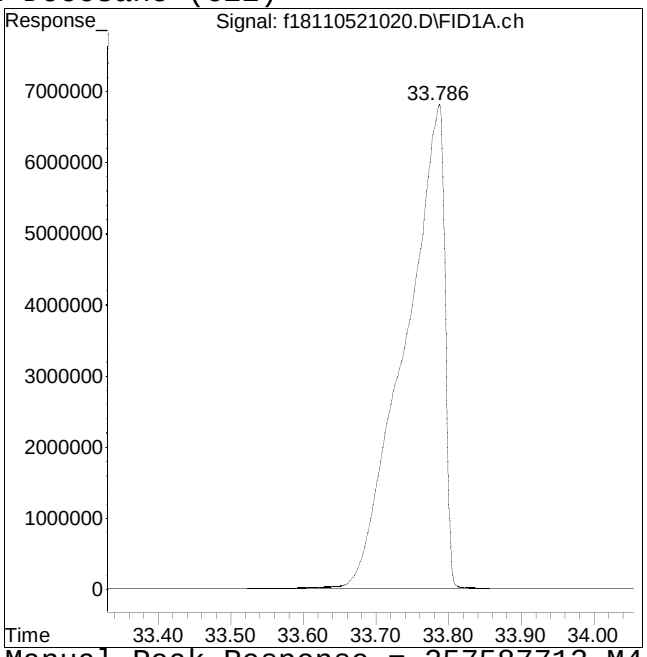
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #22: n-Docosane (C22)





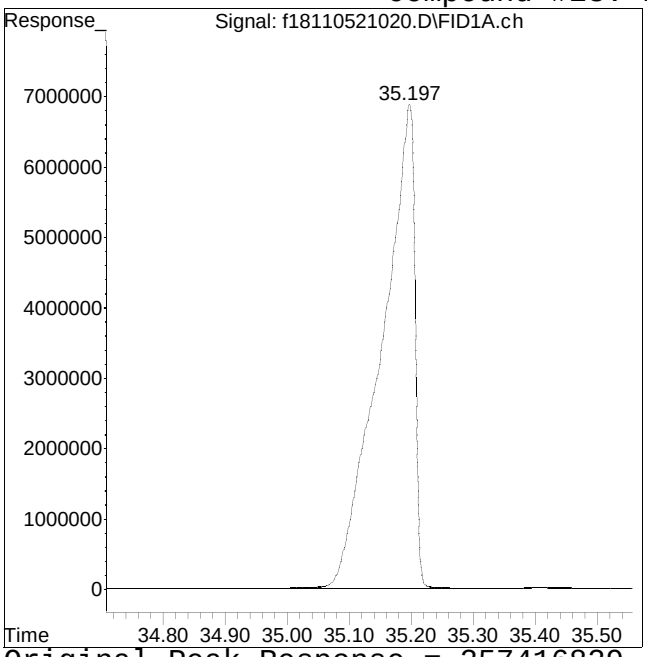
Original Peak Response = 256820237 Manual Peak Response = 257587713 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

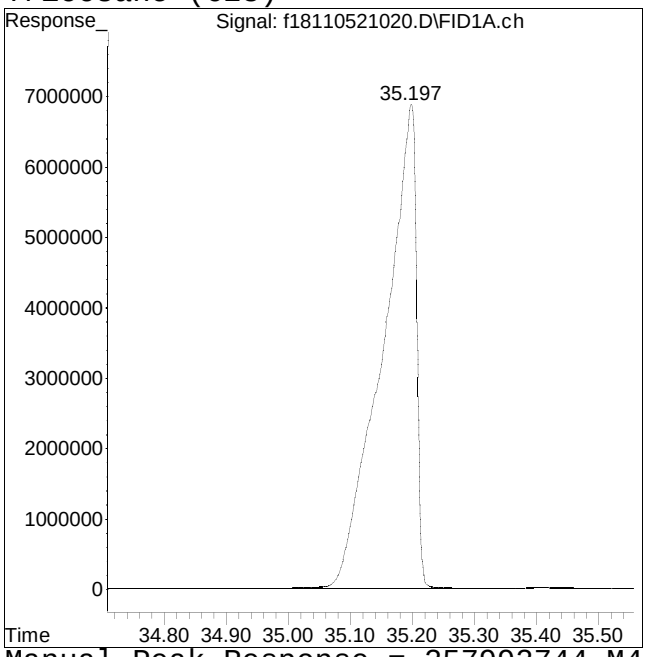
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 257416829



Manual Peak Response = 257992744 M4

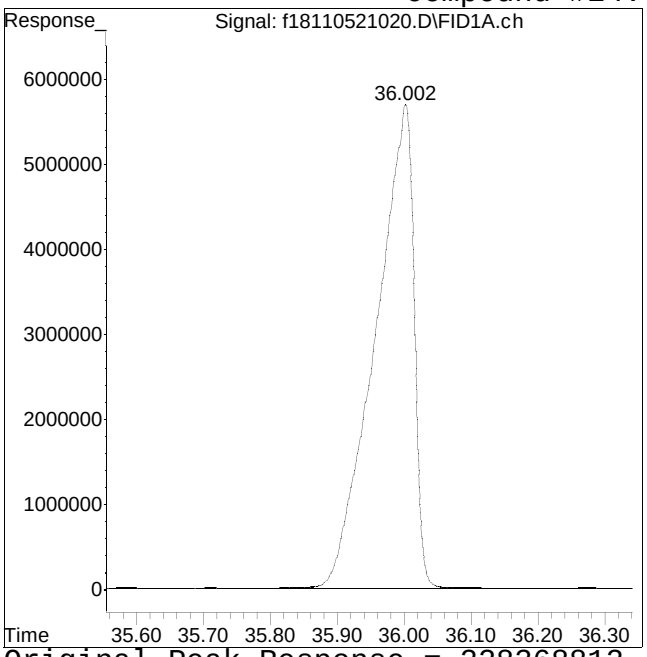
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

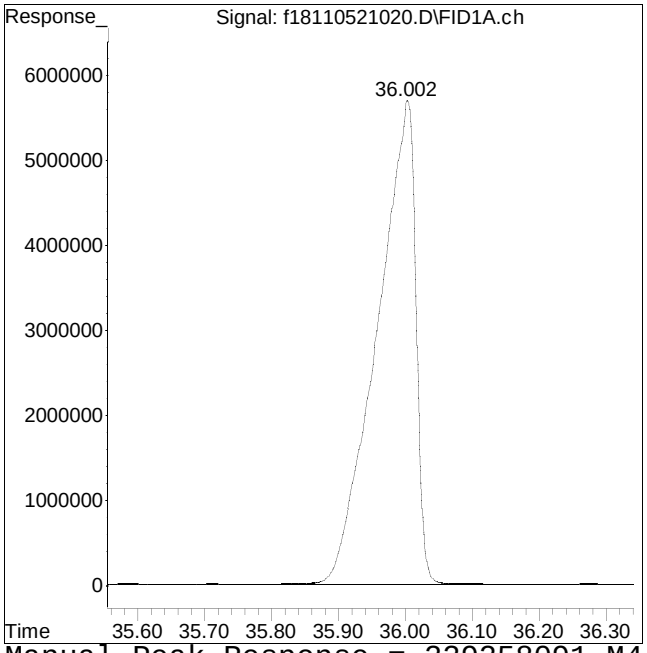
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #24: d50-Tetracosane



Original Peak Response = 228368812



Manual Peak Response = 229258091 M4

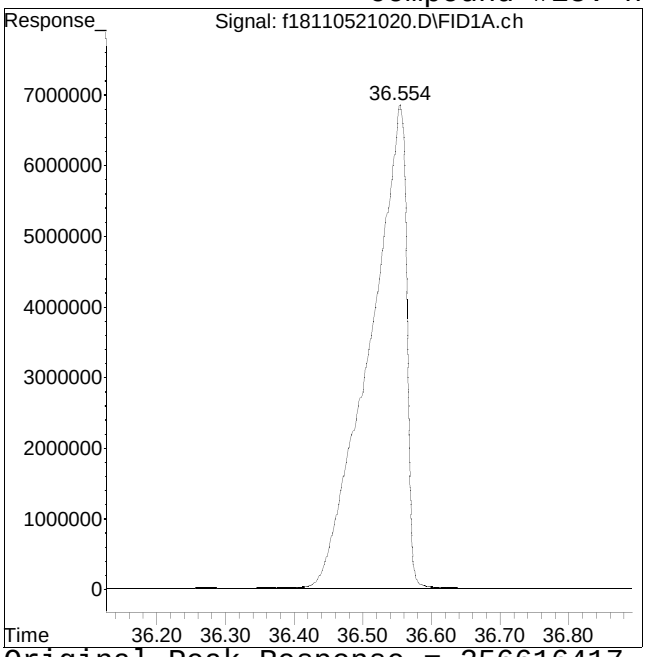
M4 = Poor automated baseline construction.

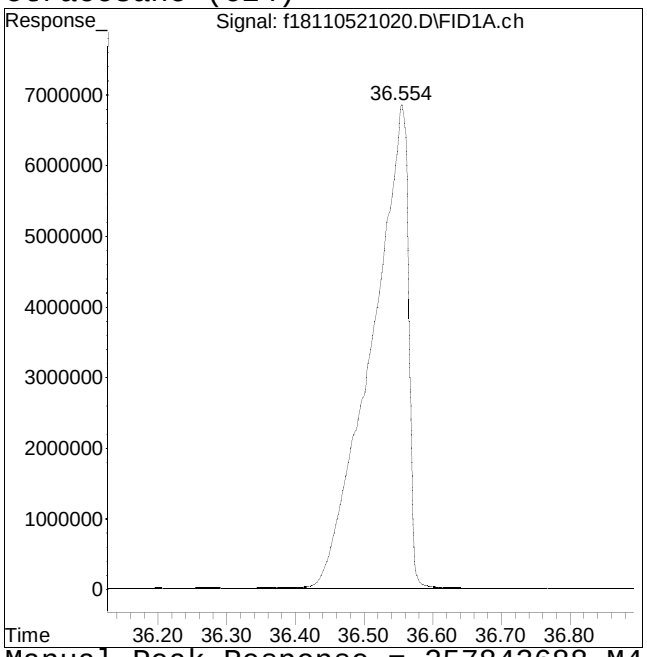
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #25: n-Tetracosane (C24)





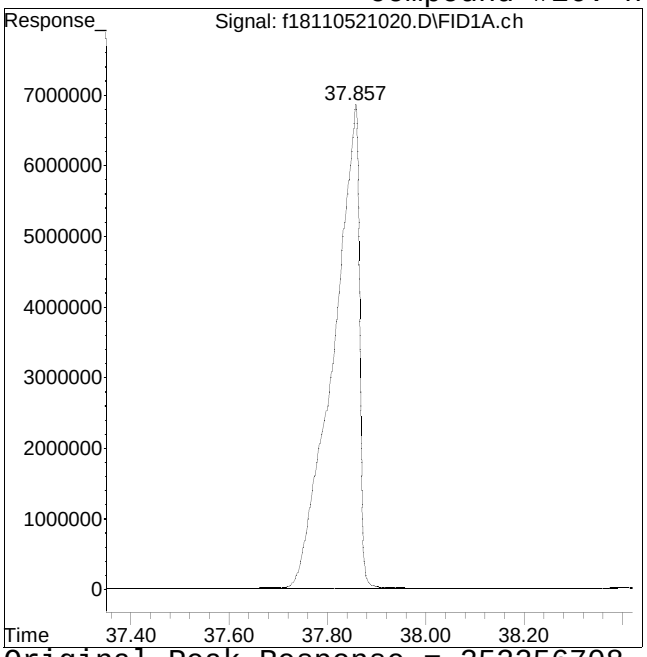
Original Peak Response = 256616417 Manual Peak Response = 257843688 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

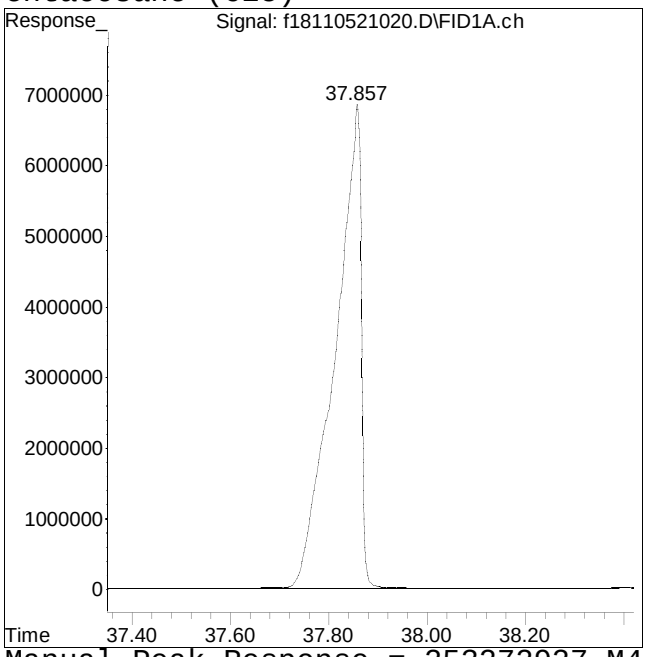
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 252256708



Manual Peak Response = 253272927 M4

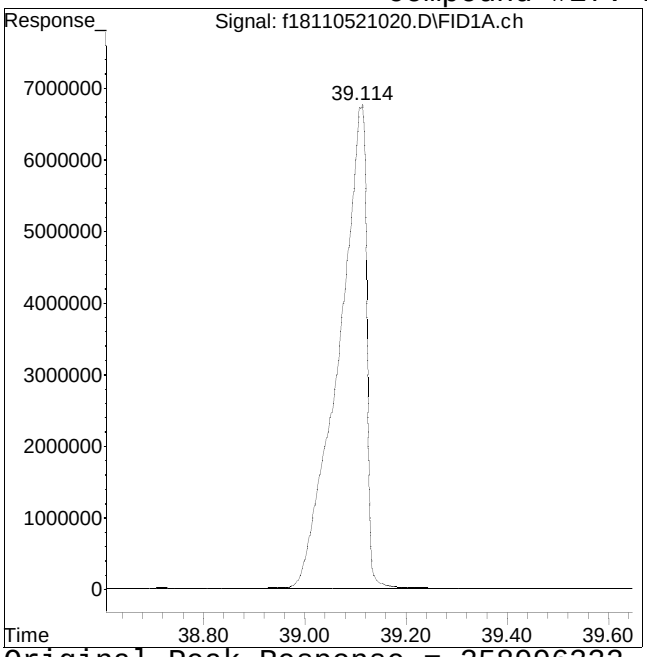
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

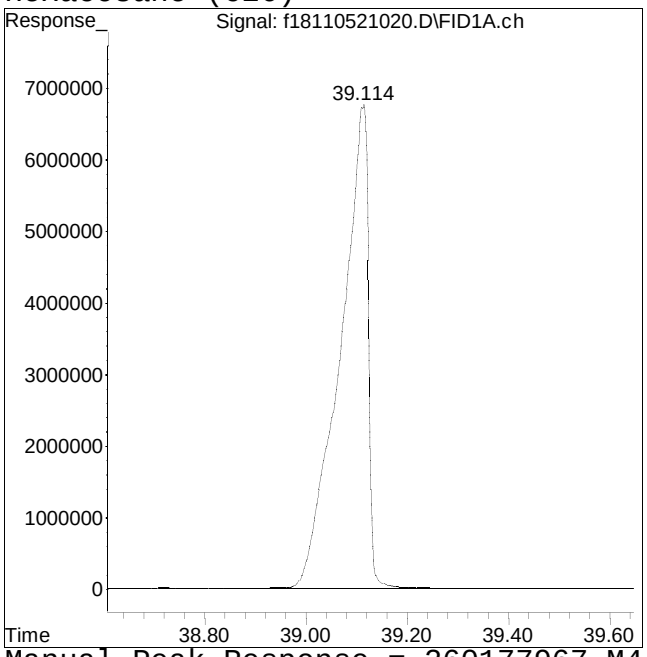
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 258996332



Manual Peak Response = 260177967 M4

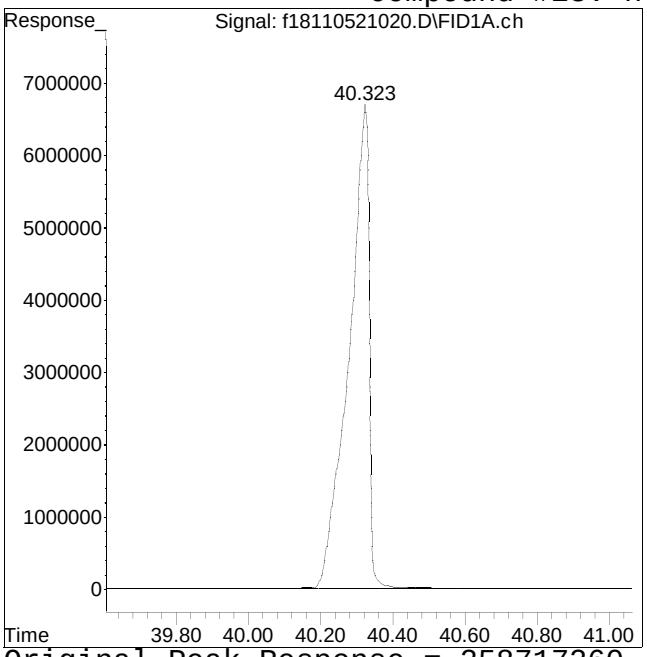
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

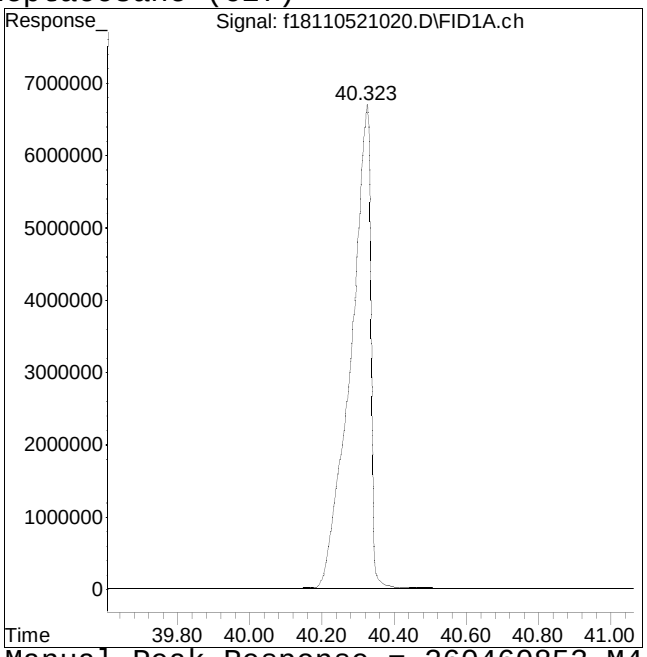
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 258717260



Manual Peak Response = 260460853 M4

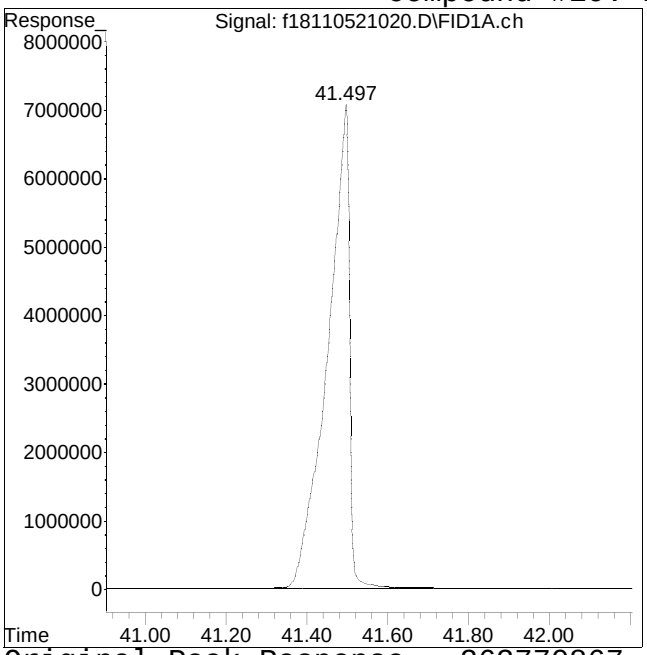
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

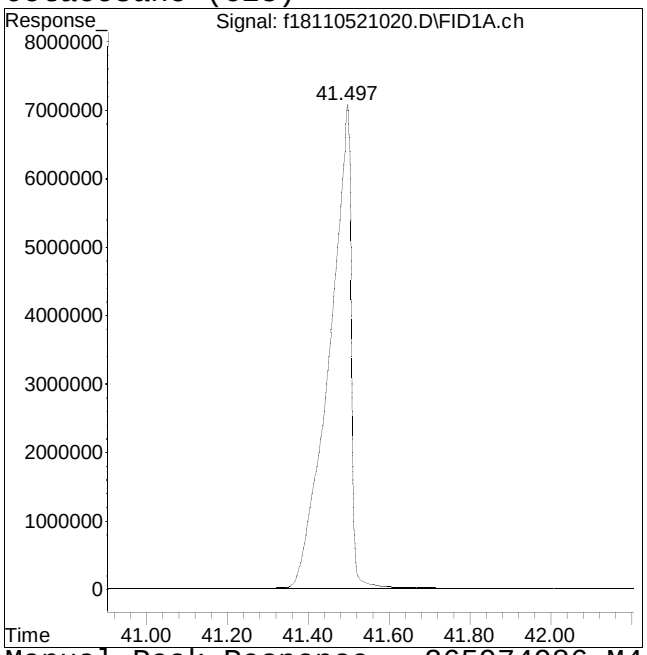
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 263770867



Manual Peak Response = 265974986 M4

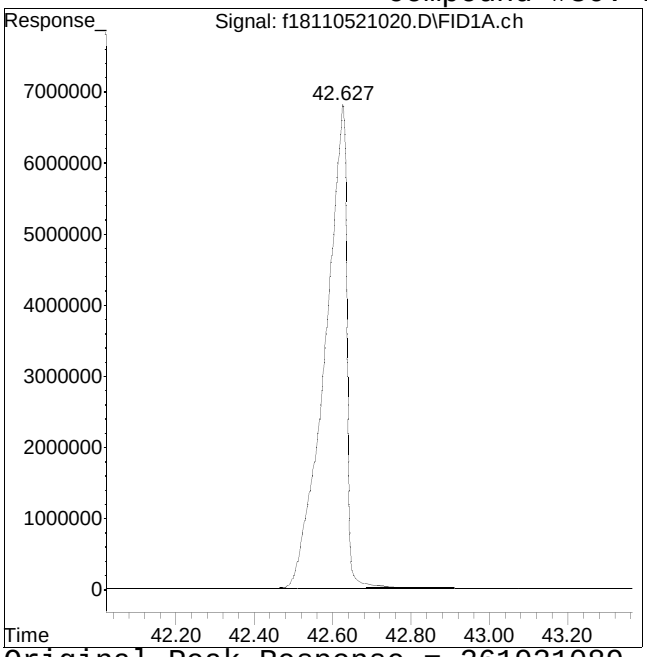
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

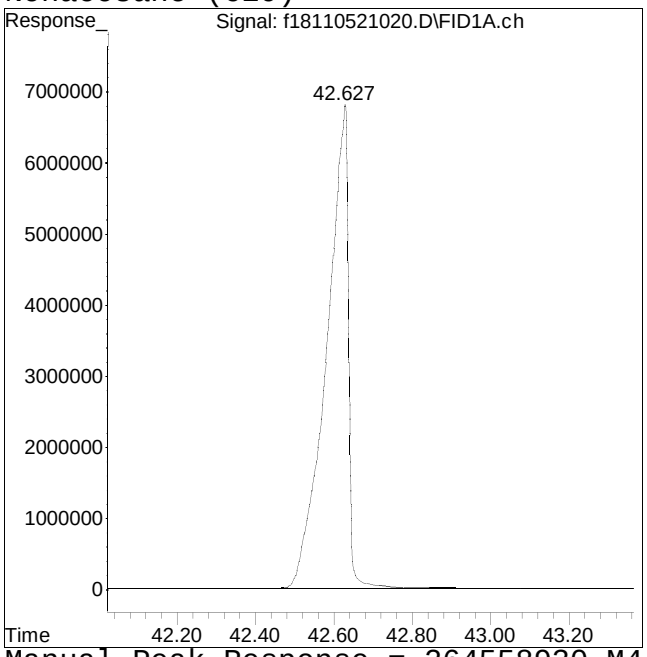
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 261931089



Manual Peak Response = 264558930 M4

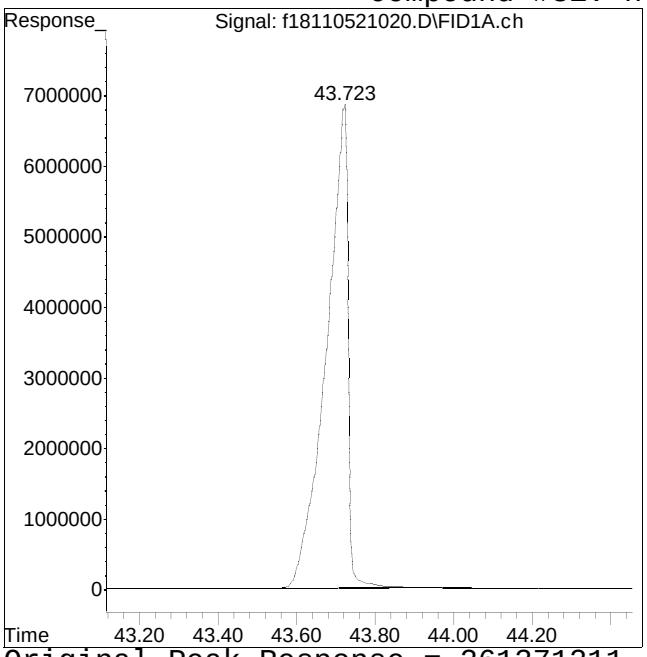
M4 = Poor automated baseline construction.

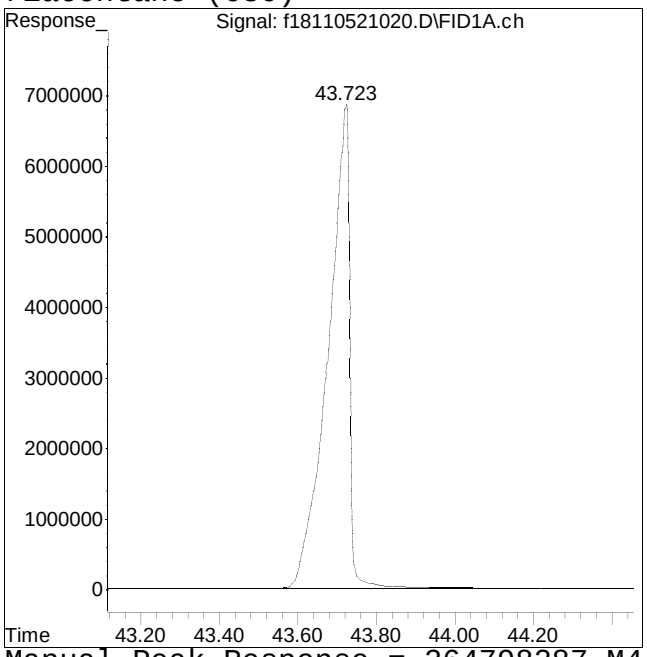
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #31: n-Triacontane (C30)





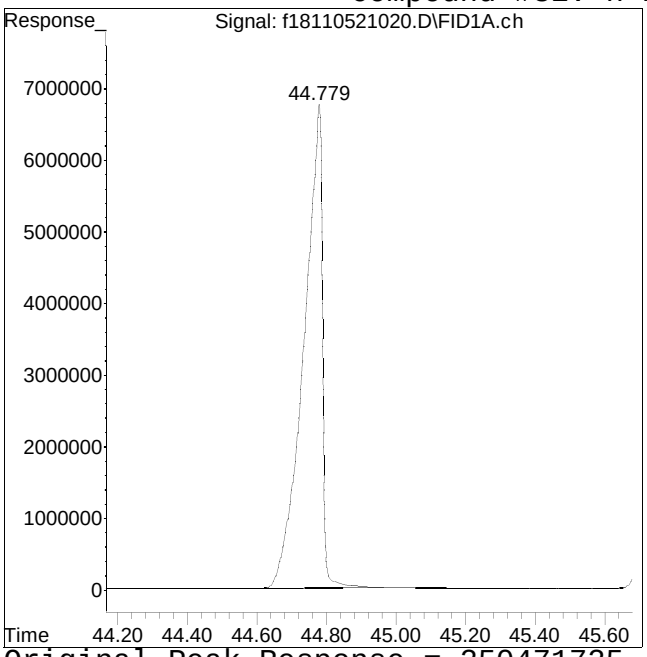
Original Peak Response = 261371211 Manual Peak Response = 264798287 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

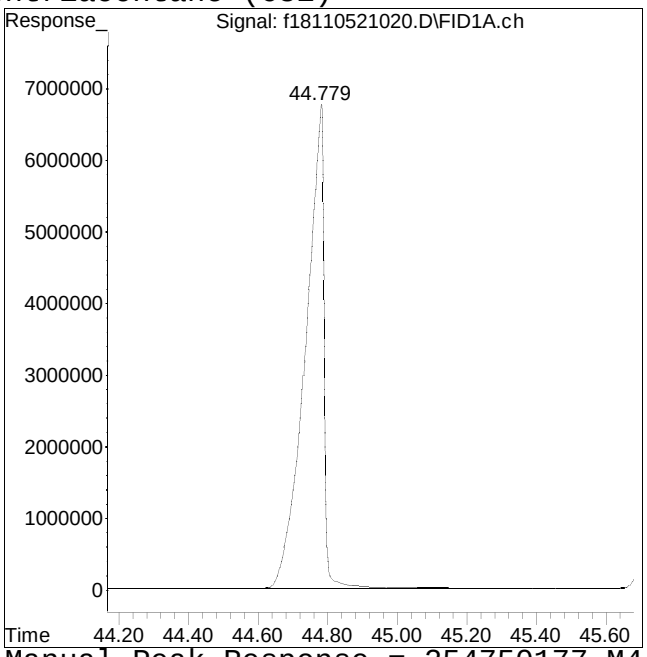
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 250471725



Manual Peak Response = 254750177 M4

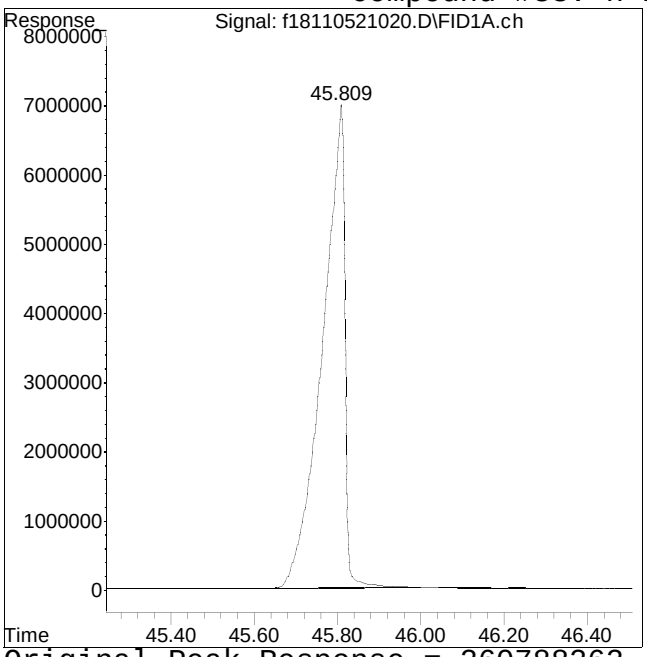
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

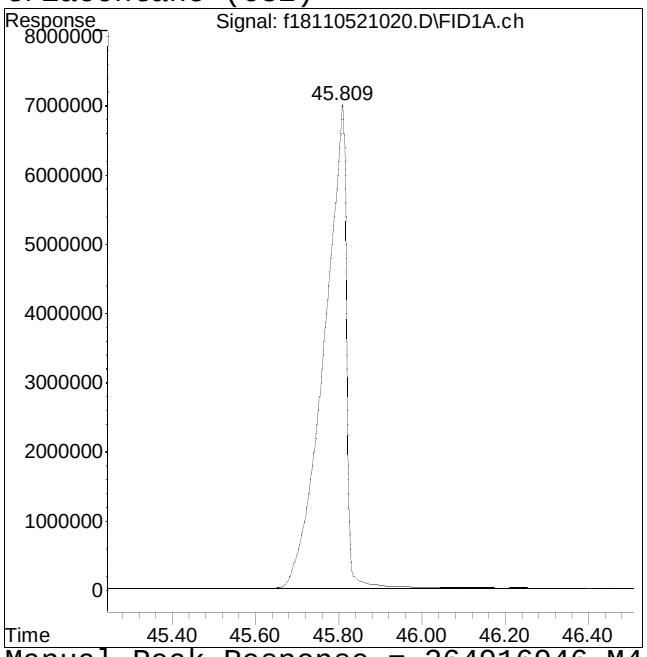
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 260788262



Manual Peak Response = 264916946 M4

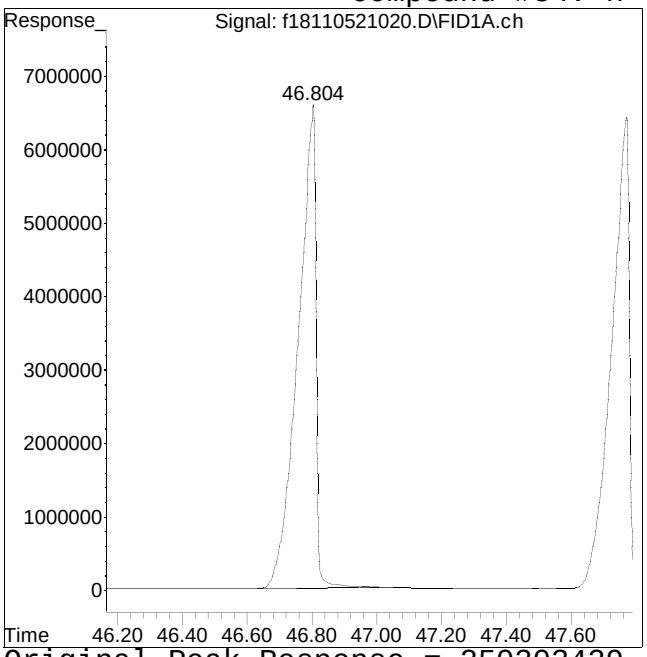
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

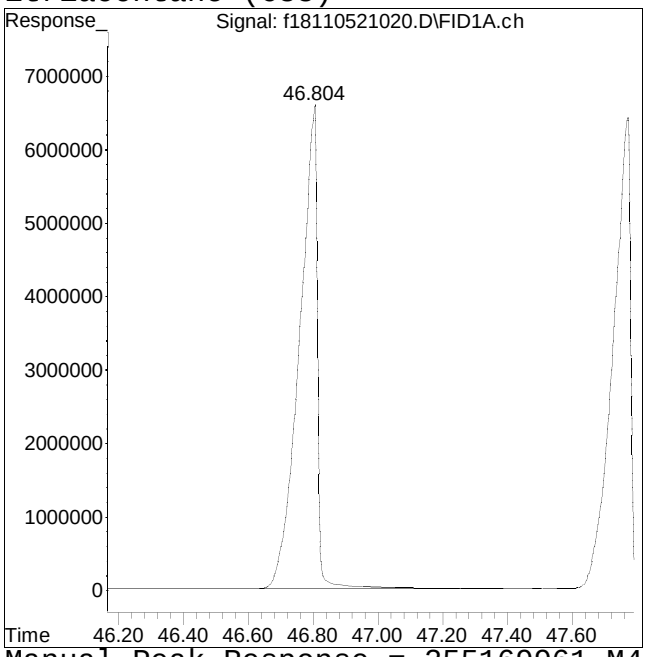
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 250303429



Manual Peak Response = 255169961 M4

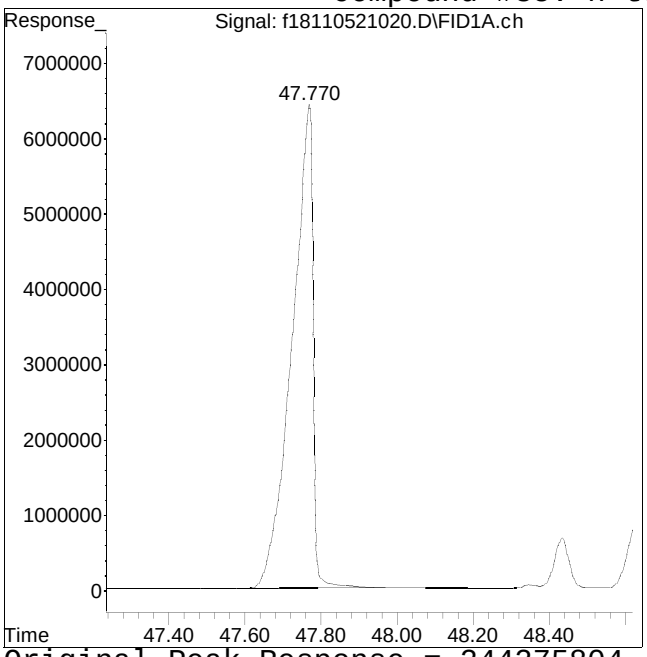
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

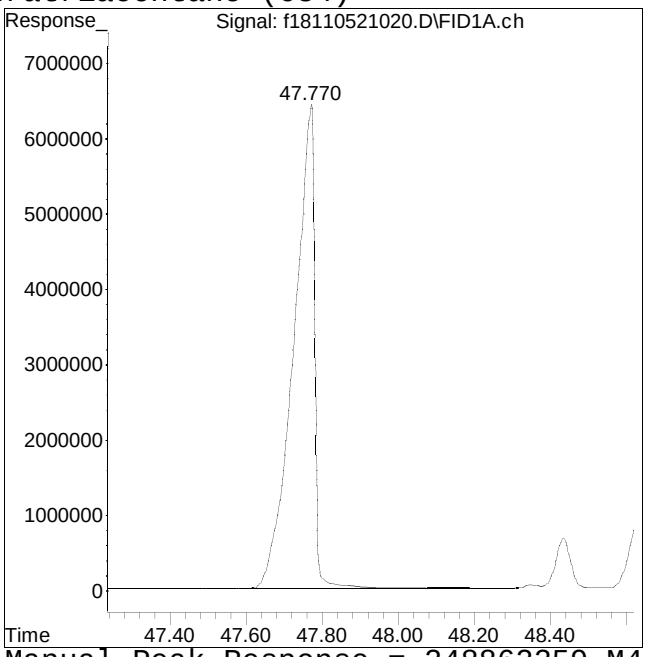
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 244275804



Manual Peak Response = 248862259 M4

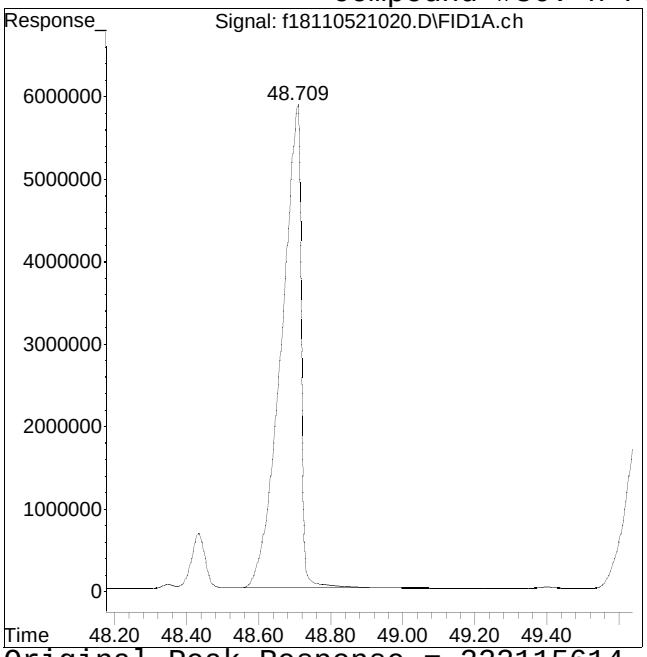
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

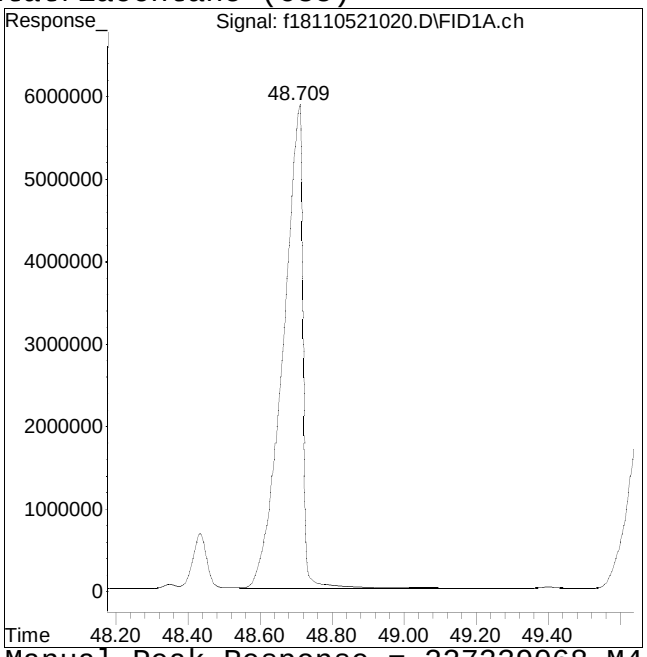
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 222115614



Manual Peak Response = 227339068 M4

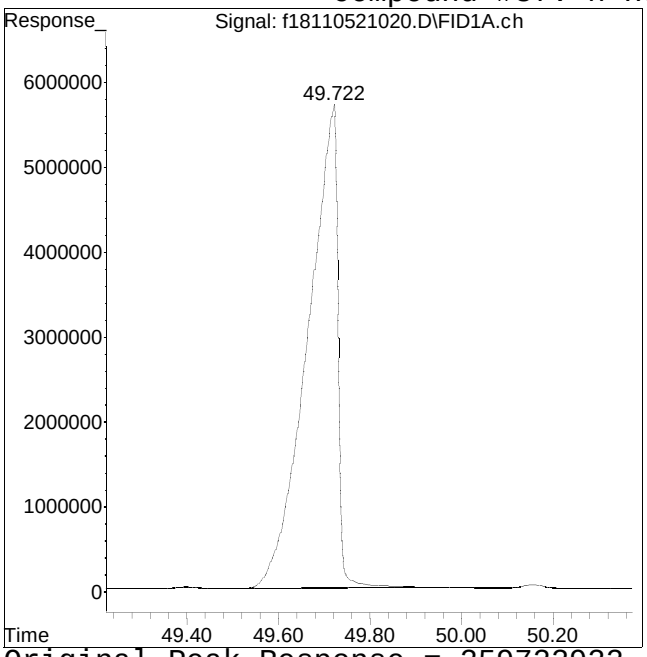
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

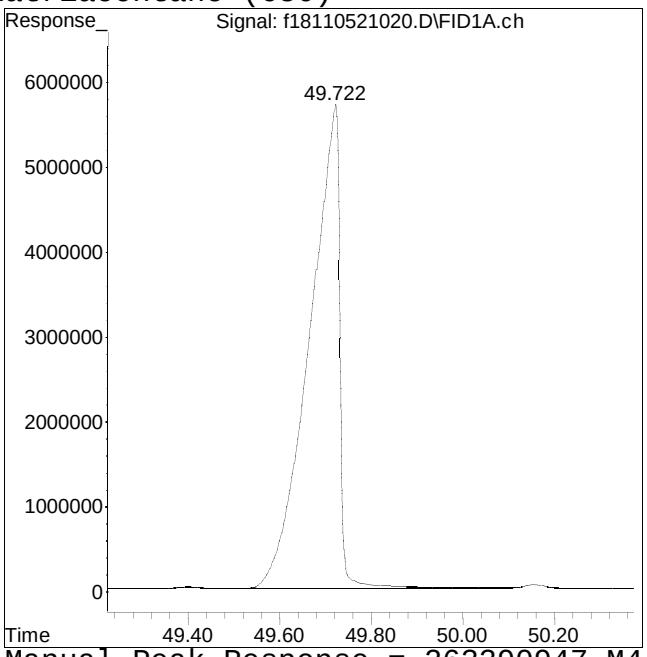
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 259722922



Manual Peak Response = 263390947 M4

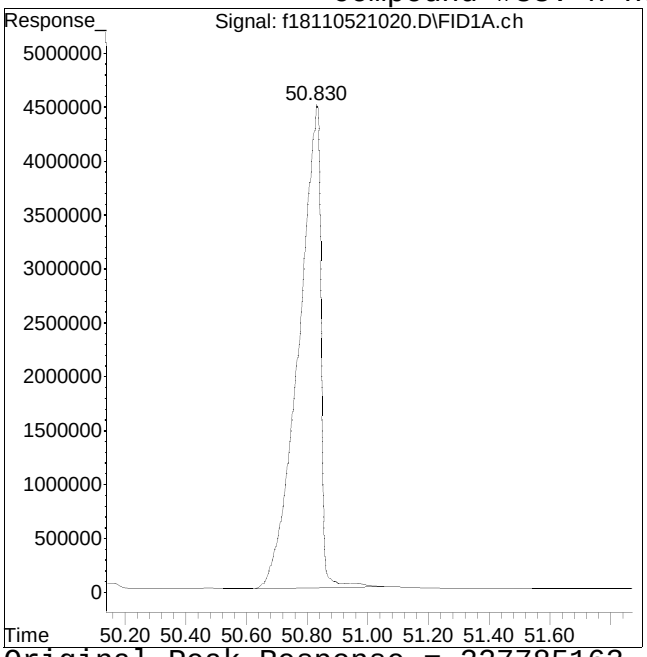
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

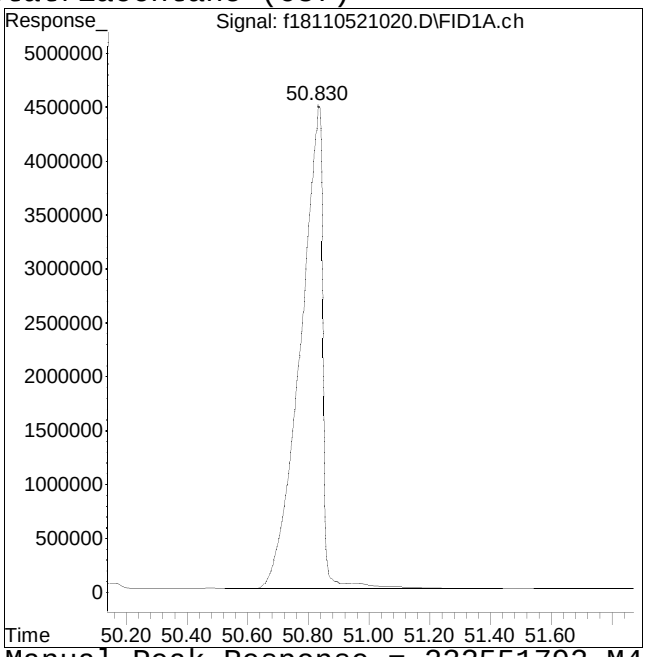
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 227785163



Manual Peak Response = 232551792 M4

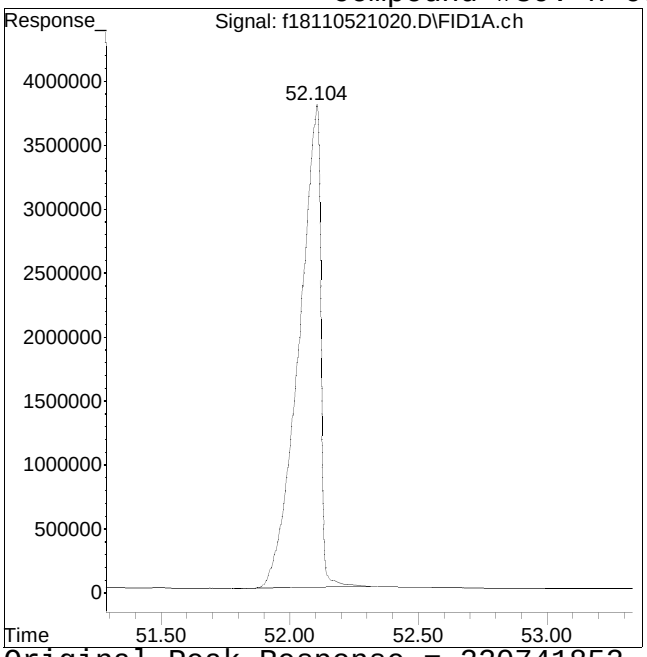
M4 = Poor automated baseline construction.

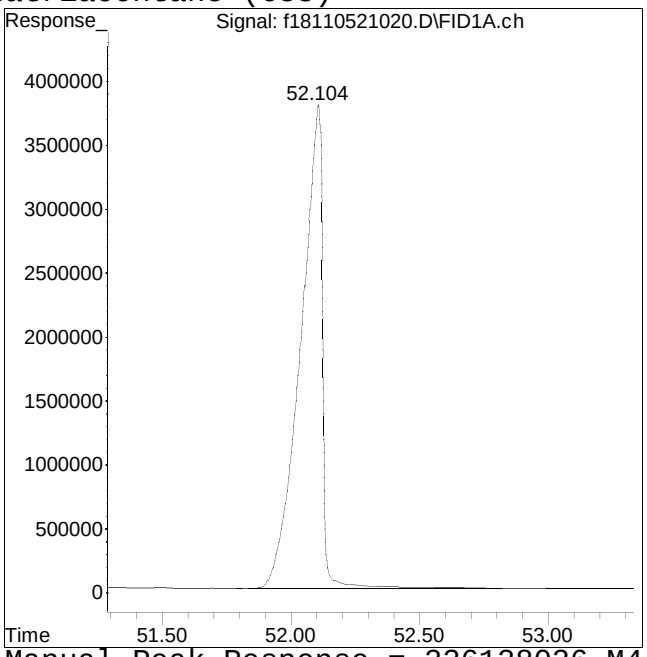
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #39: n-Octatriacontane (C38)





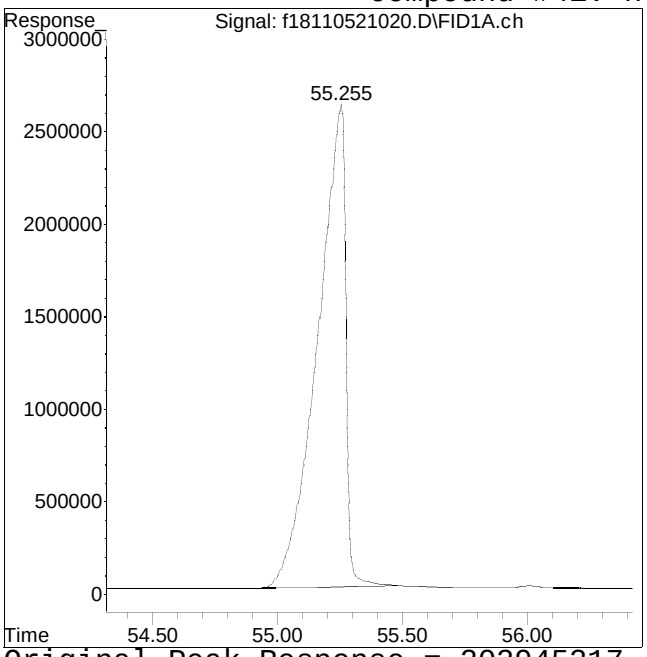
Original Peak Response = 220741852 Manual Peak Response = 226128026 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

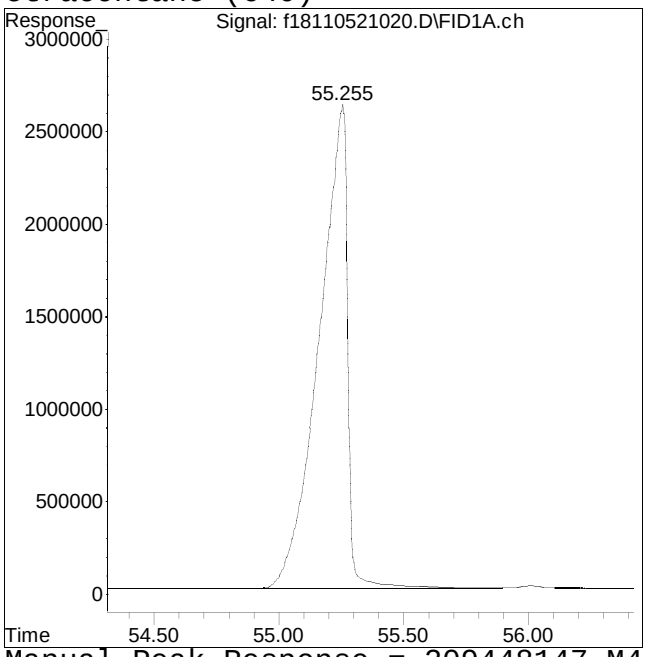
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521020.D
Date Inj'd : 11/6/2021 1:41 am
Sample : I1811052105F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 9:54 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 202945217



Manual Peak Response = 209448147 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521022.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 03:06 am
Operator : FID18:WR
Sample : I1811052106F
Misc : WG1581201,FRBD81,500ug/ml
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:03:13 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:02:14 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.340	57444419	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.428	680416523	537.978	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 1075.96%#			
24) s	d50-Tetracosane	36.052	565827938	550.818	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 1101.64%#			
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521022.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 03:06 am
Operator : FID18:WR
Sample : I1811052106F
Misc : WG1581201,FRBD81,500ug/ml
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:03:13 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:02:14 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

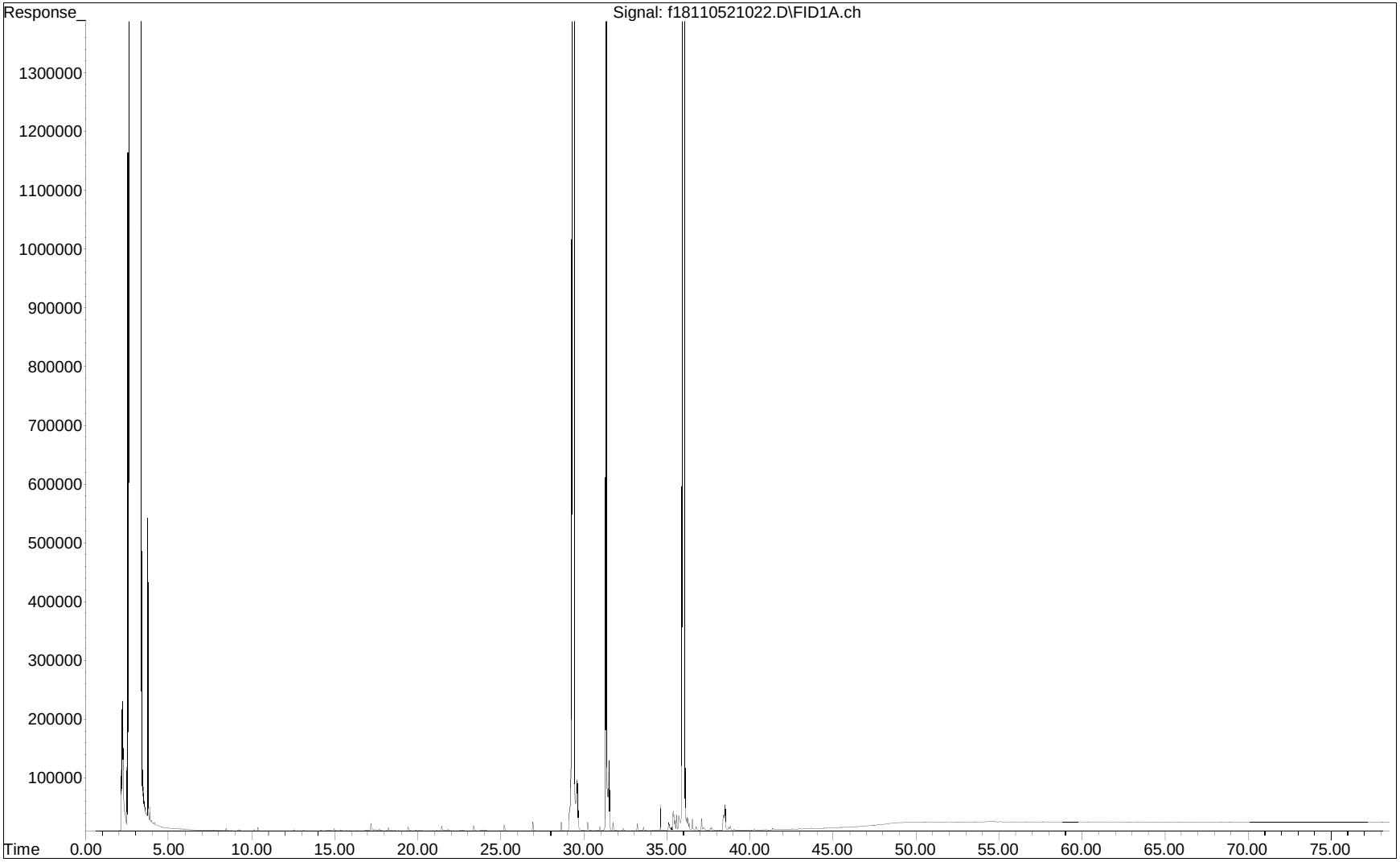
	Compound	R.T.	Response	Conc	Units
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

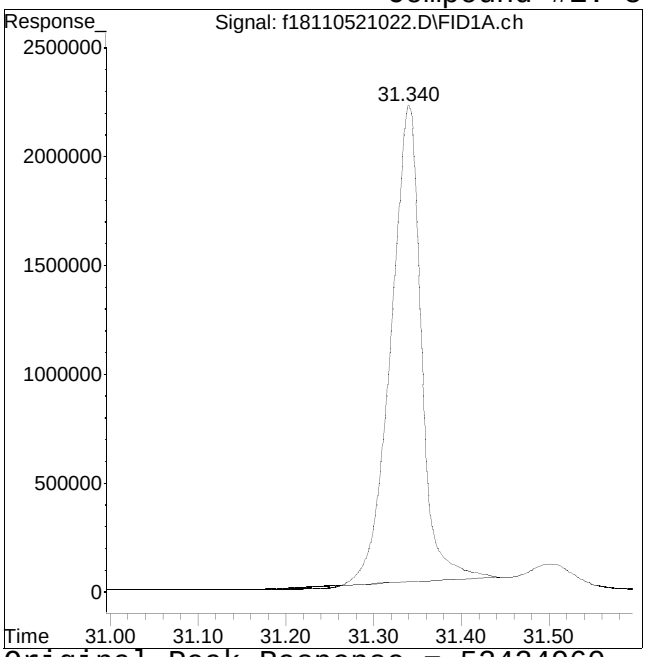
File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521022.D
Operator : FID18:WR
Acquired : 06 Nov 2021 03:06 am using AcqMethod FID18.M
Sample Name: I1811052106F
Instrument: FID 18
Misc Info : WG1581201,FRBD81,500ug/ml
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M

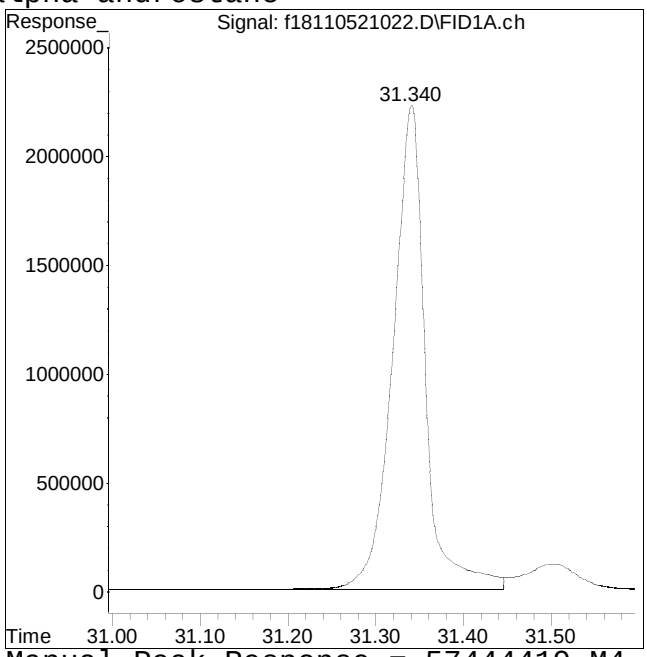


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202QMethod : HC18110521F_DRO.M
Data File : f18110521022.D Operator : FID18:WR
Date Inj'd : 11/6/2021 3:06 am Instrument : FID 18
Sample : I1811052106F Quant Date : 11/17/2021 10:02 am

Compound #1: 5-alpha-androstane





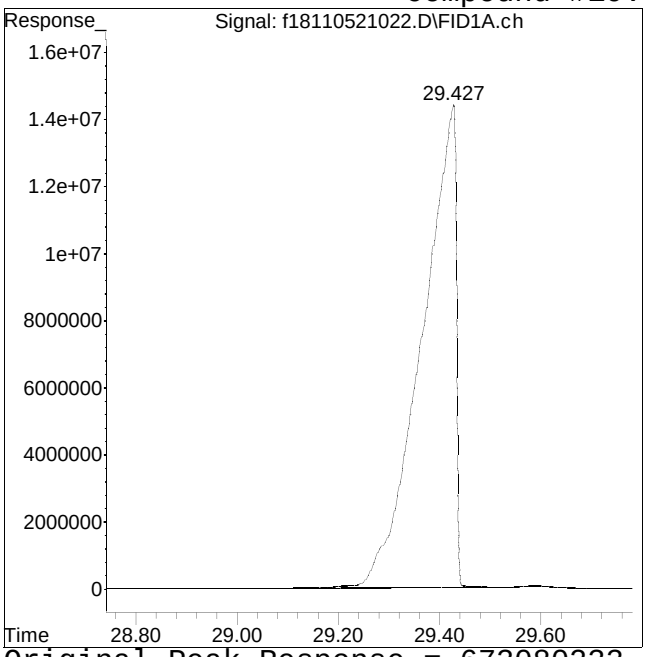
Original Peak Response = 52424960 Manual Peak Response = 57444419 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

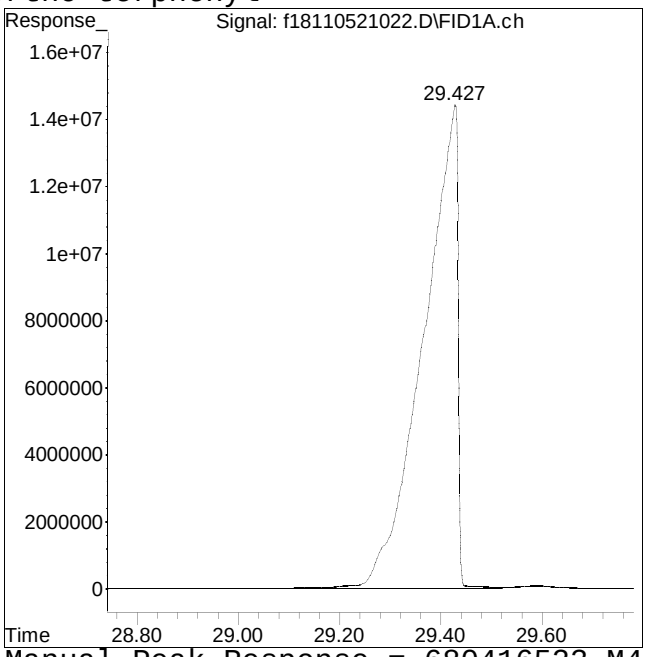
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521022.D
Date Inj'd : 11/6/2021 3:06 am
Sample : I1811052106F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:02 am

Compound #19: ortho-terphenyl



Original Peak Response = 673080233



Manual Peak Response = 680416523 M4

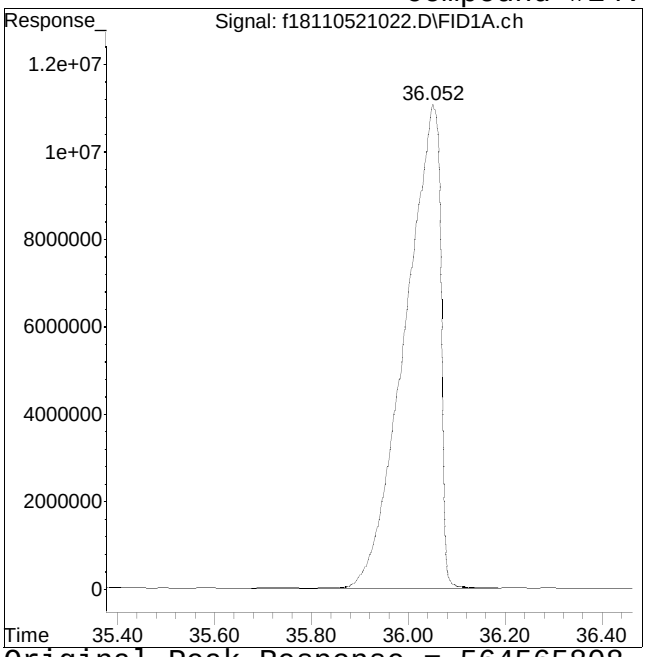
M4 = Poor automated baseline construction.

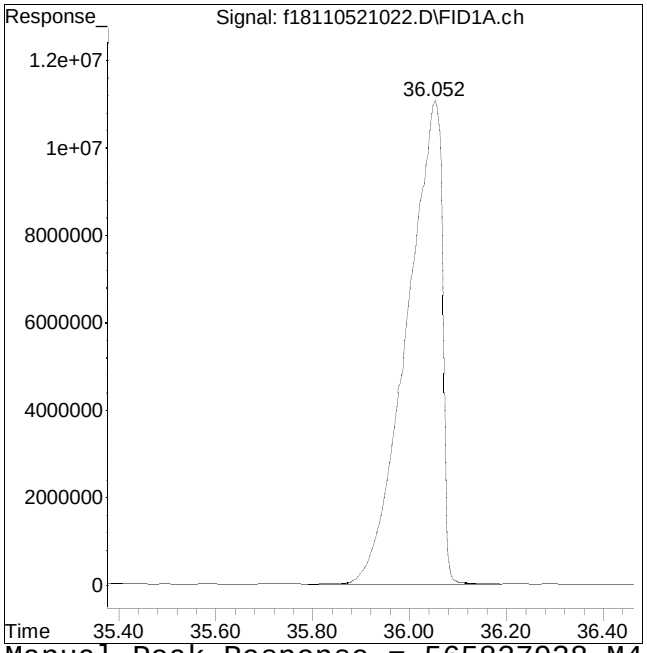
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521022.D
Date Inj'd : 11/6/2021 3:06 am
Sample : I1811052106F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:02 am

Compound #24: d50-Tetracosane





Original Peak Response = 564565808 Manual Peak Response = 565827938 M4
M4 = Poor automated baseline construction.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521026.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 05:57 am
Operator : FID18:WR
Sample : CQ1811052101F
Misc : WG1581201,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:14:24 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:07:08 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	111	0.00
2	t	n-Octane (C8)	0.811	0.785	3.2	105	0.00
3	t	n-Nonane (C9)	0.825	0.812	1.6	105	0.00
4	t	n-Decane (C10)	0.814	0.821	-0.9	107	0.00
5	t	n-Undecane (C11)	0.848	0.878	-3.5	106	0.00
6	t	n-Dodecane (C12)	0.879	0.902	-2.6	109	0.00
7	t	n-Tridecane (C13)	0.895	0.905	-1.1	107	0.00
9	t	n-Tetradecane (C14)	0.926	0.918	0.9	107	0.00
11	t	n-Pentadecane (C15)	0.933	0.933	0.0	109	0.00
12	t	n-Hexadecane (C16)	0.946	0.949	-0.3	107	0.00
14	t	n-Heptadecane (C17)	0.914	0.908	0.7	102	0.00
15	t	Pristane	1.013	0.966	4.6	106	0.00
16	t	n-Octadecane (C18)	0.965	0.956	0.9	104	0.00
17	t	Phytane	0.915	0.859	6.1	101	0.00
18	t	n-Nonadecane (C19)	0.972	0.958	1.4	105	0.00
19	s	ortho-terphenyl	1.115	1.081	3.0	98	0.00
20	t	n-Eicosane (C20)	0.985	0.972	1.3	105	0.00
21	t	n-Heneicosane (C21)	0.990	0.976	1.4	106	0.00
22	t	n-Docosane (C22)	1.000	1.005	-0.5	107	0.00
23	t	n-Tricosane (C23)	1.008	0.956	5.2	101	0.00
24	s	d50-Tetracosane	0.909	0.886	2.5	97	0.00
25	t	n-Tetracosane (C24)	0.993	0.982	1.1	109	0.00
26	t	n-Pentacosane (C25)	0.987	0.970	1.7	104	0.00
27	t	n-Hexacosane (C26)	1.013	0.995	1.8	103	0.00
28	t	n-Heptacosane (C27)	1.006	0.961	4.5	103	0.00
29	t	n-Octacosane (C28)	1.032	0.993	3.8	102	0.00
30	t	n-Nonacosane (C29)	1.024	0.983	4.0	101	0.00
31	t	n-Triacontane (C30)	1.023	0.985	3.7	101	0.00
32	t	n-Hentriacontane (C31)	0.985	0.965	2.0	102	0.00
33	t	n-Dotriacontane (C32)	1.021	0.960	6.0	99	0.00
34	t	n-Tritriacontane (C33)	0.984	0.954	3.0	101	0.00
35	t	n-tetratriacontane (C34)	0.968	0.968	0.0	104	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521026.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 05:57 am
Operator : FID18:WR
Sample : CQ1811052101F
Misc : WG1581201,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:14:24 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:07:08 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.915	0.934	-2.1	99	0.00
37 t	n-Hexatriacontane (C36)	1.055	0.986	6.5	98	0.00
38 t	n-Heptatriacontane (C37)	0.955	0.940	1.6	102	0.00
39 t	n-Octatriacontane (C38)	0.959	0.972	-1.4	103	0.00
41 t	n-Tetracontane (C40)	0.940	0.880	6.4	93	-0.01

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.02	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521026.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 05:57 am
Operator : FID18:WR
Sample : CQ1811052101F
Misc : WG1581201,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:14:24 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:07:08 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.341	67161569	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.329	72632534	48.505 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	97.01%
24) s	d50-Tetracosane	35.957	59489659	48.708 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	97.42%
	Target Compounds			
2) t	n-Octane (C8)	5.786	52711408	48.389 ug/mL M4
3) t	n-Nonane (C9)	7.991	54513328	49.217 ug/mL M4
4) t	n-Decane (C10)	10.463	55130413	50.415 ug/mL M4
5) t	n-Undecane (C11)	12.962	58947894	51.734 ug/mL M4
6) t	n-Dodecane (C12)	15.377	60564226	51.310 ug/mL M4
7) t	n-Tridecane (C13)	17.672	60808749	50.586 ug/mL M4
9) t	n-Tetradecane (C14)	19.845	61644575	49.539 ug/mL M4
11) t	n-Pentadecane (C15)	21.901	62663416	49.985 ug/mL M4
12) t	n-Hexadecane (C16)	23.849	63724512	50.136 ug/mL M4
14) t	n-Heptadecane (C17)	25.701	60949992	49.626 ug/mL M4
15) t	Pristane	25.811	64895517	47.694 ug/mL M4
16) t	n-Octadecane (C18)	27.462	64174270	49.501 ug/mL M4
17) t	Phytane	27.624	57673535	46.944 ug/mL M4
18) t	n-Nonadecane (C19)	29.141	64327681	49.286 ug/mL M4
20) t	n-Eicosane (C20)	30.742	65259113	49.319 ug/mL M4
21) t	n-Heneicosane (C21)	32.274	65526865	49.254 ug/mL M4
22) t	n-Docosane (C22)	33.743	67481951	50.263 ug/mL M4
23) t	n-Tricosane (C23)	35.150	64229789	47.451 ug/mL M4
25) t	n-Tetracosane (C24)	36.507	65927467	49.447 ug/mL M4
26) t	n-Pentacosane (C25)	37.810	65172082	49.160 ug/mL M4
27) t	n-Hexacosane (C26)	39.065	66855452	49.138 ug/mL M4
28) t	n-Heptacosane (C27)	40.275	64511709	47.719 ug/mL M4
29) t	n-Octacosane (C28)	41.441	66676167	48.081 ug/mL M4
30) t	n-Nonacosane (C29)	42.572	66034478	47.995 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521026.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 05:57 am
Operator : FID18:WR
Sample : CQ1811052101F
Misc : WG1581201,FRBD82,50ug/ml
ALS Vial : 13 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:14:24 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:07:08 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

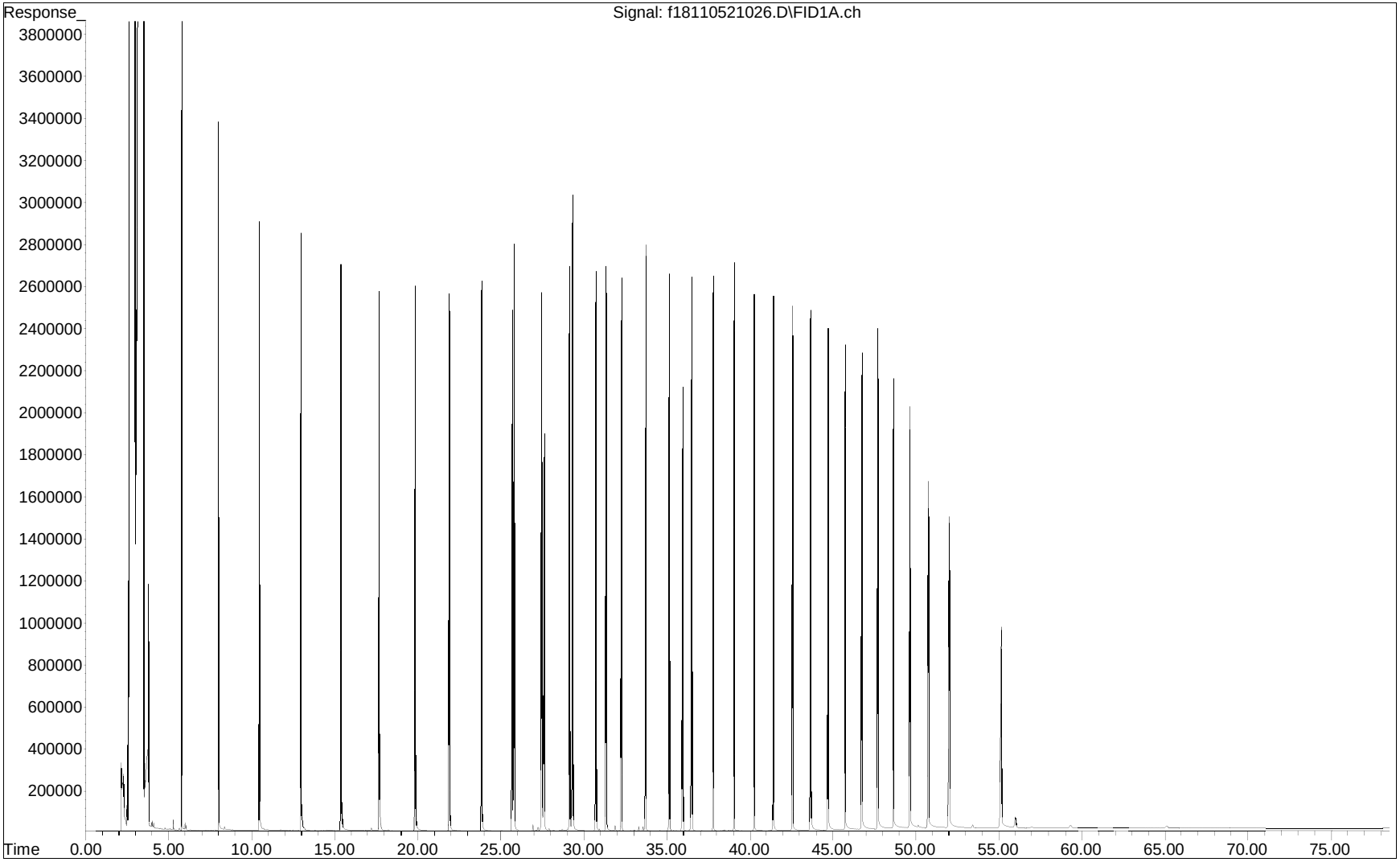
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.666	66153768	48.125 ug/mL M4
32) t	n-Hentriacontane (C31)	44.723	64802804	48.966 ug/mL M4
33) t	n-Dotriacontane (C32)	45.749	64446031	47.002 ug/mL M4
34) t	n-Tritriacontane (C33)	46.746	64079409	48.464 ug/mL M4
35) t	n-tetratriacontane (C34)	47.712	64992227	49.996 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.652	62755501	51.069 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.647	66240375	46.738 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.759	63129443	49.218 ug/mL M4
39) t	n-Octatriacontane (C38)	52.019	65282636	50.676 ug/mL M4
41) t	n-Tetracontane (C40)	55.142	59125734	46.811 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521026.D
Operator : FID18:WR
Acquired : 06 Nov 2021 05:57 am using AcqMethod FID18.M
Sample Name: CQ1811052101F
Instrument: FID 18
Misc Info : WG1581201,FRBD82,50ug/ml
Vial Number: 13
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M

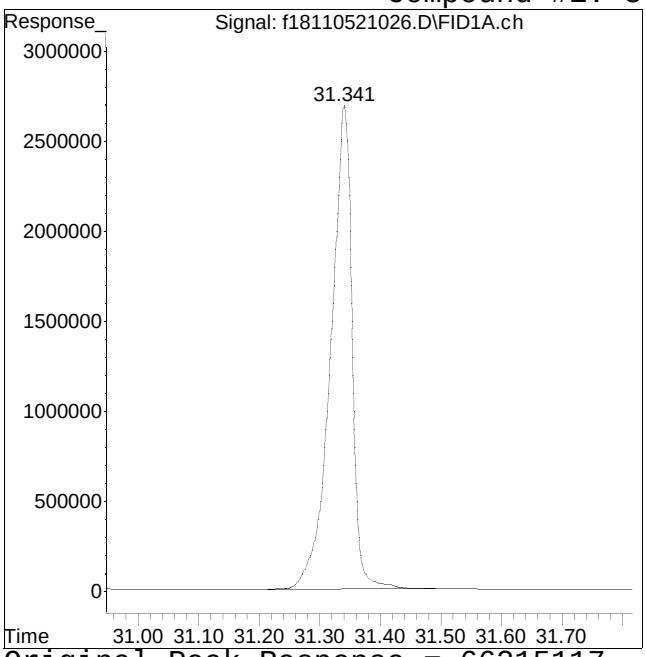


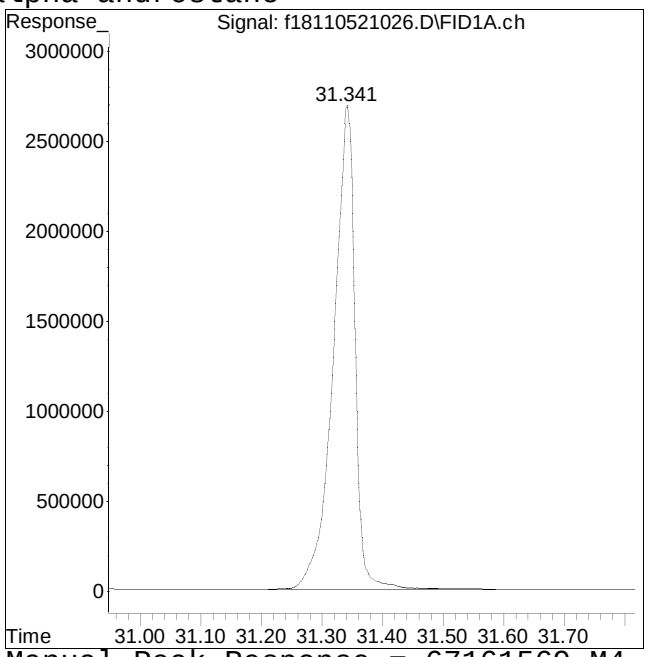
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #1: 5-alpha-androstane





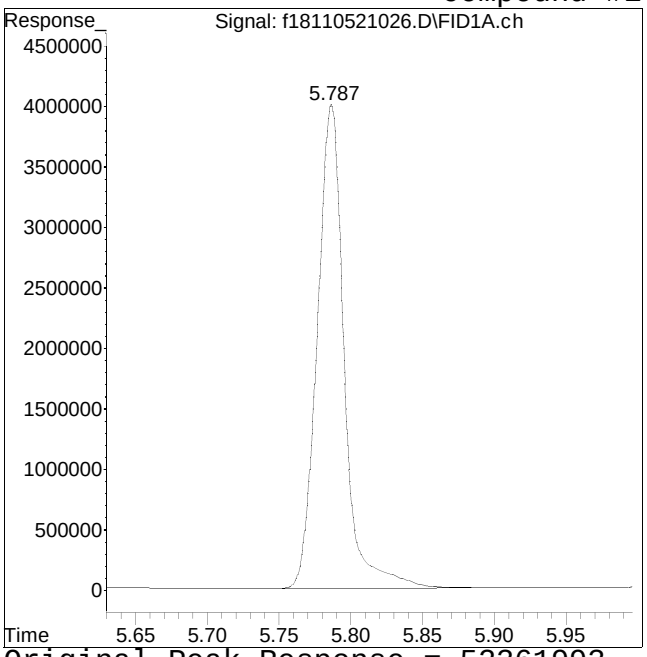
Original Peak Response = 66215117 Manual Peak Response = 67161569 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

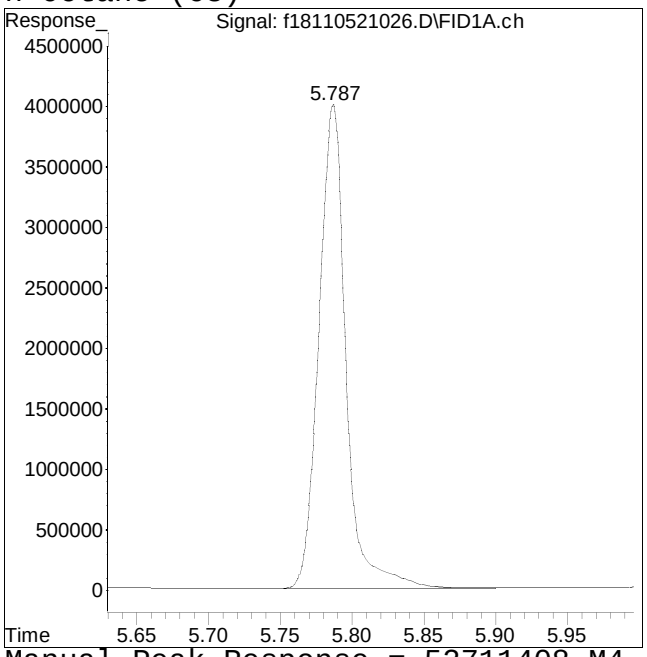
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #2: n-Octane (C8)



Original Peak Response = 52361993



Manual Peak Response = 52711408 M4

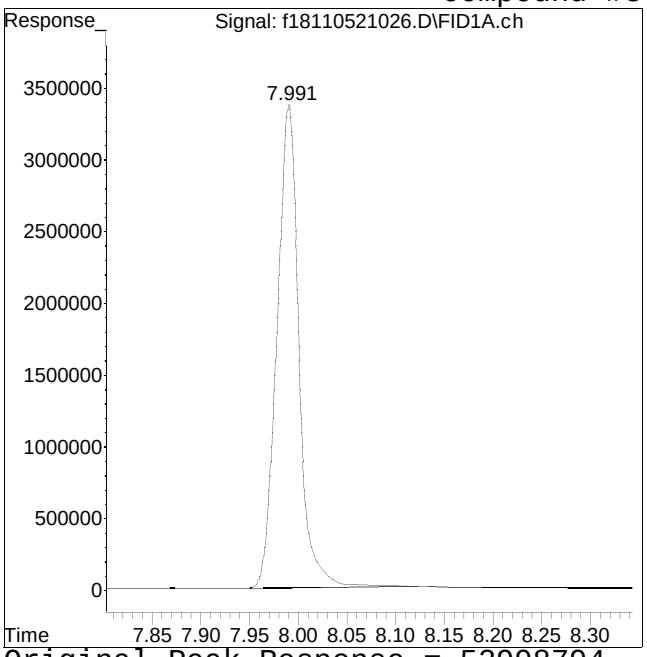
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

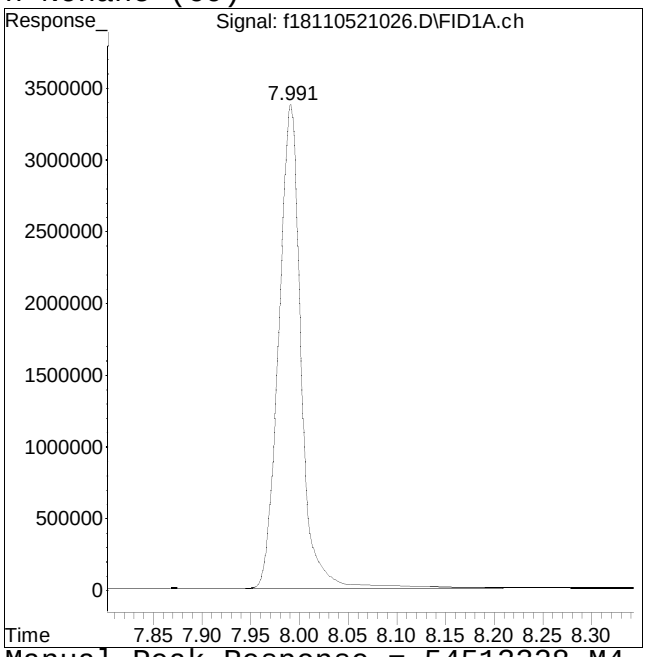
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #3: n-Nonane (C9)



Original Peak Response = 52998794



Manual Peak Response = 54513328 M4

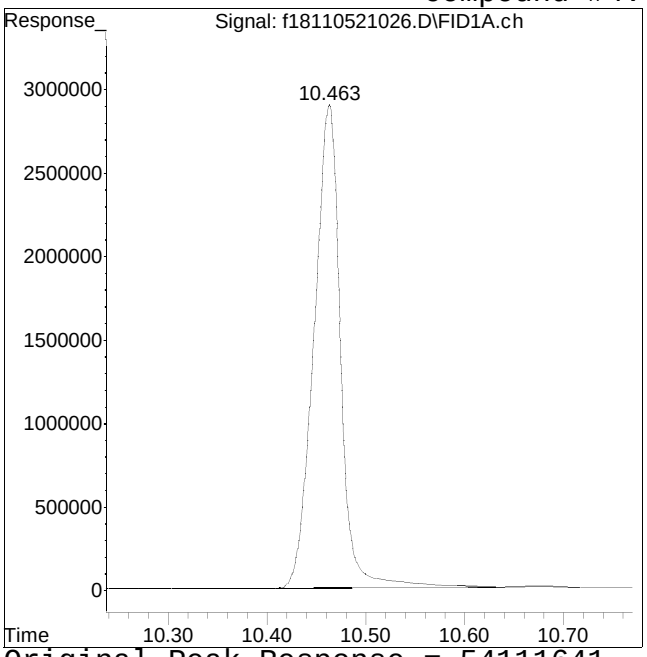
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

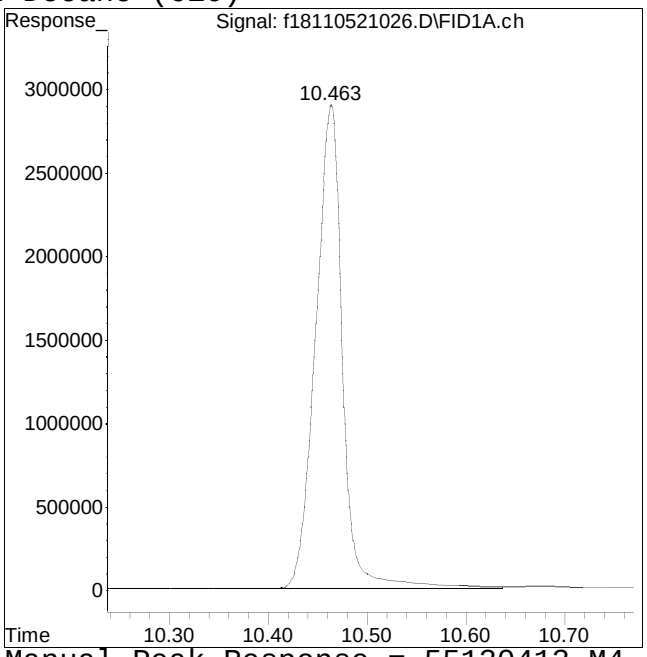
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #4: n-Decane (C10)



Original Peak Response = 54111641



Manual Peak Response = 55130413 M4

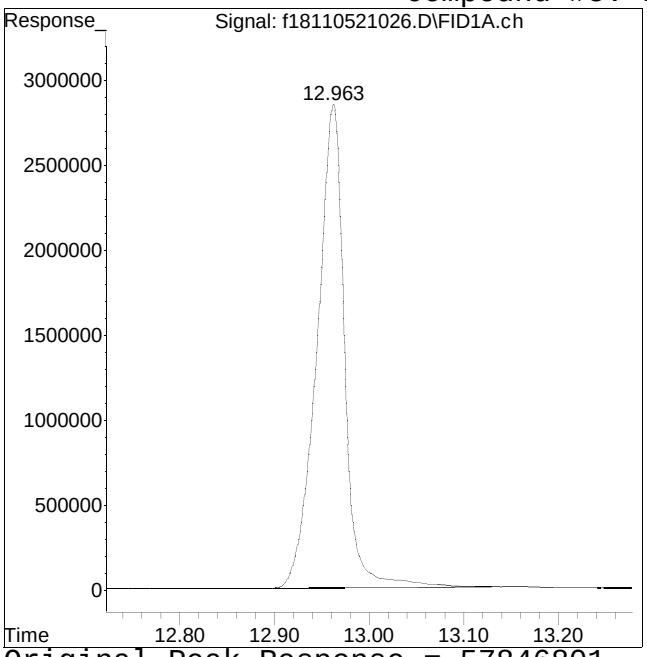
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

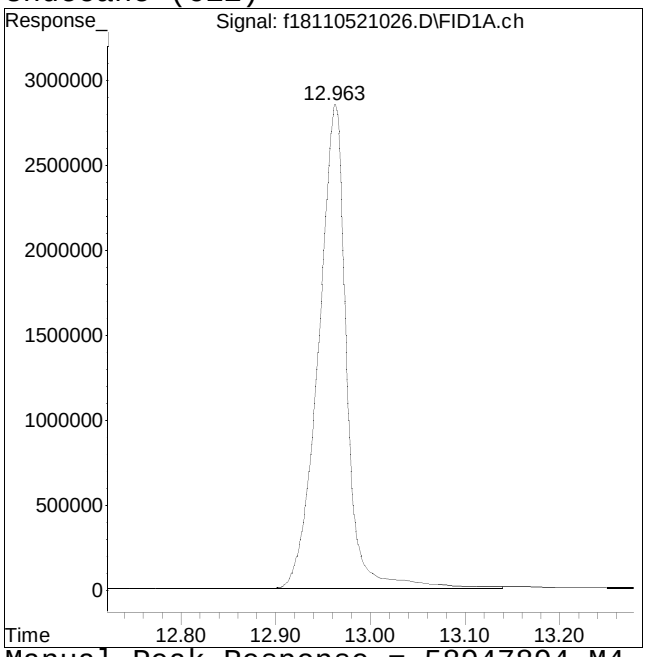
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #5: n-Undecane (C11)



Original Peak Response = 57846801



Manual Peak Response = 58947894 M4

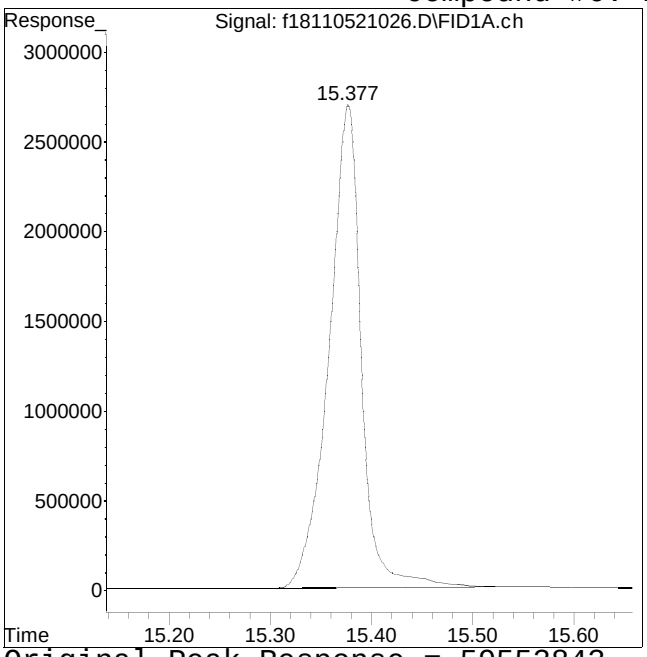
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

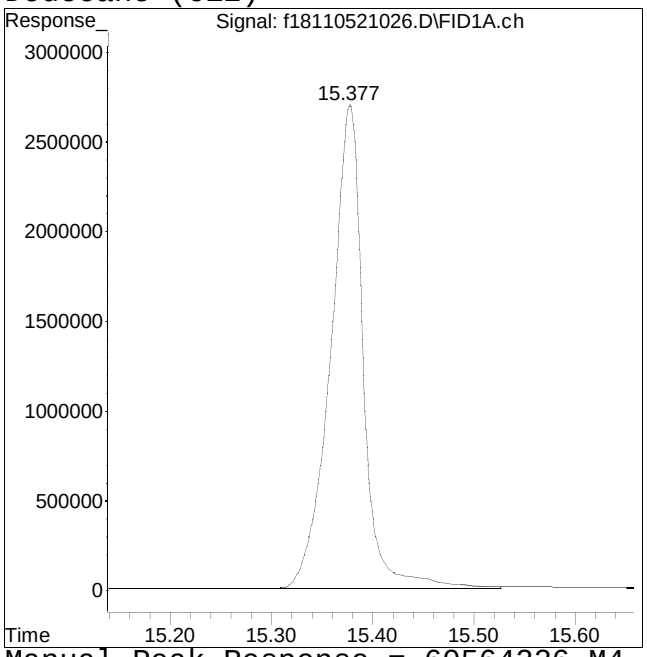
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 59553843



Manual Peak Response = 60564226 M4

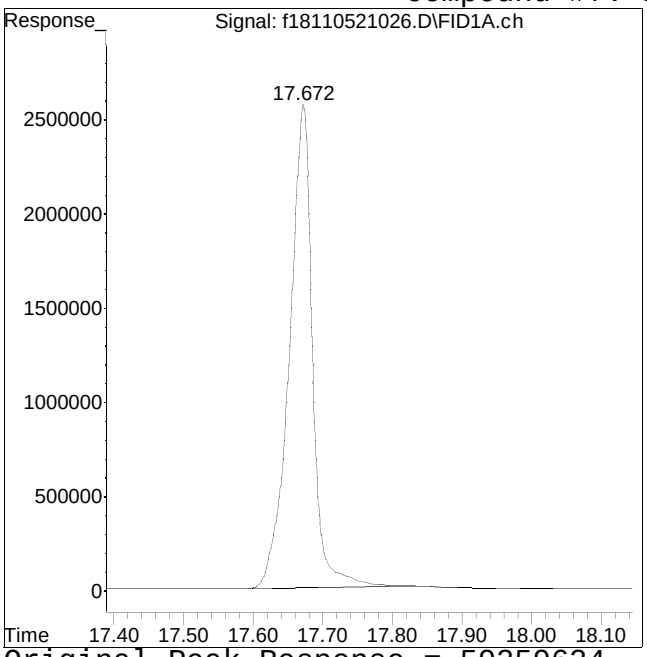
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

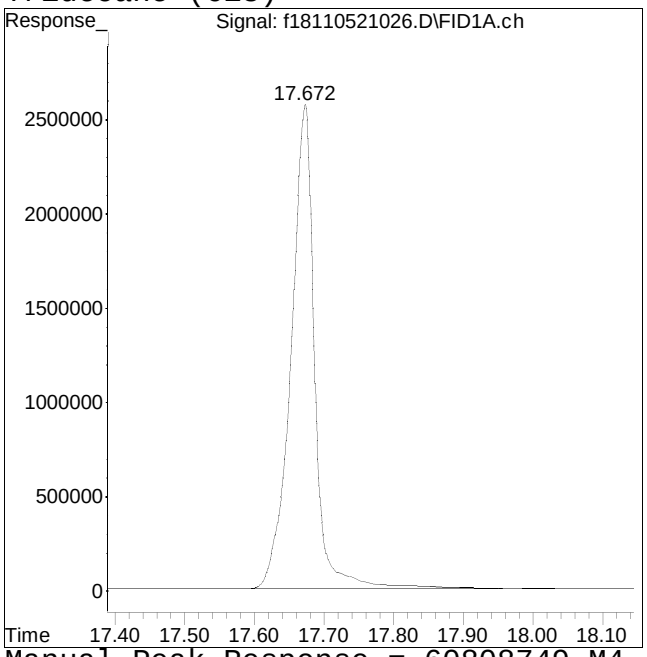
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 59259624



Manual Peak Response = 60808749 M4

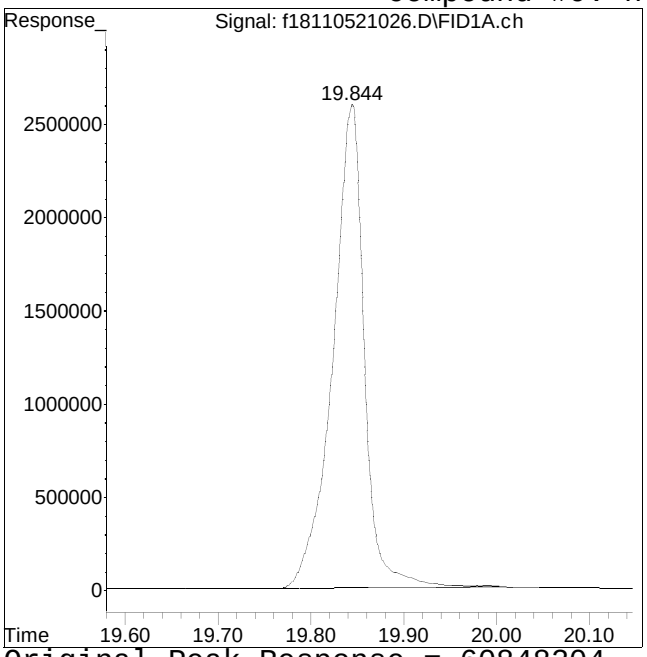
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

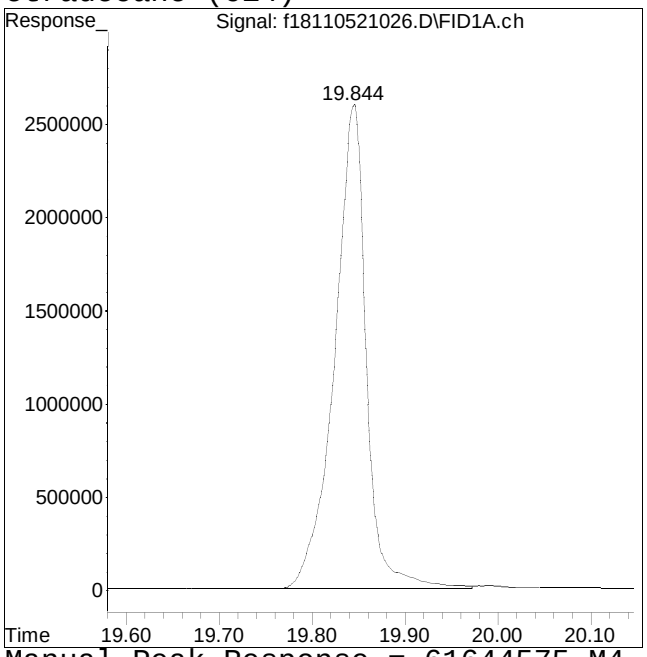
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 60848204



Manual Peak Response = 61644575 M4

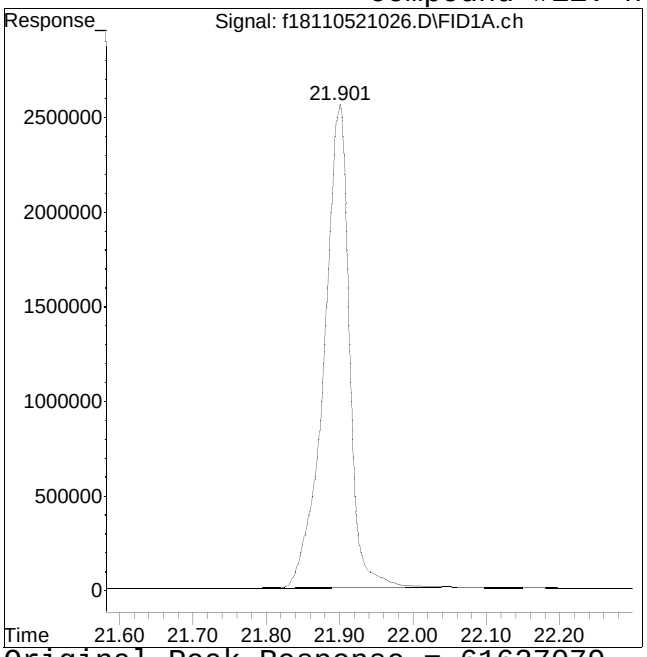
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

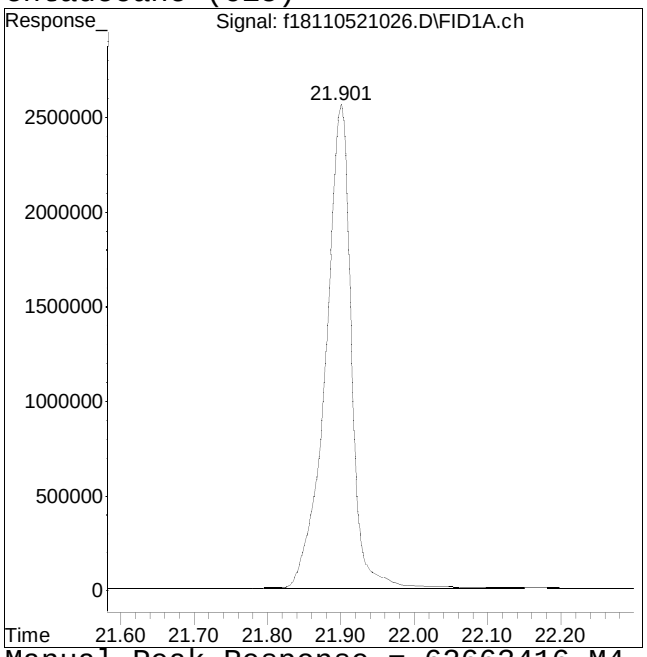
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 61627079



Manual Peak Response = 62663416 M4

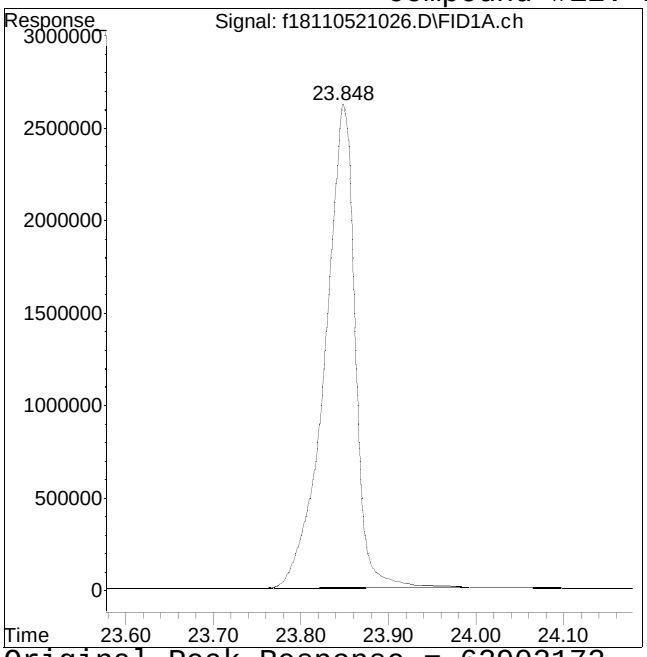
M4 = Poor automated baseline construction.

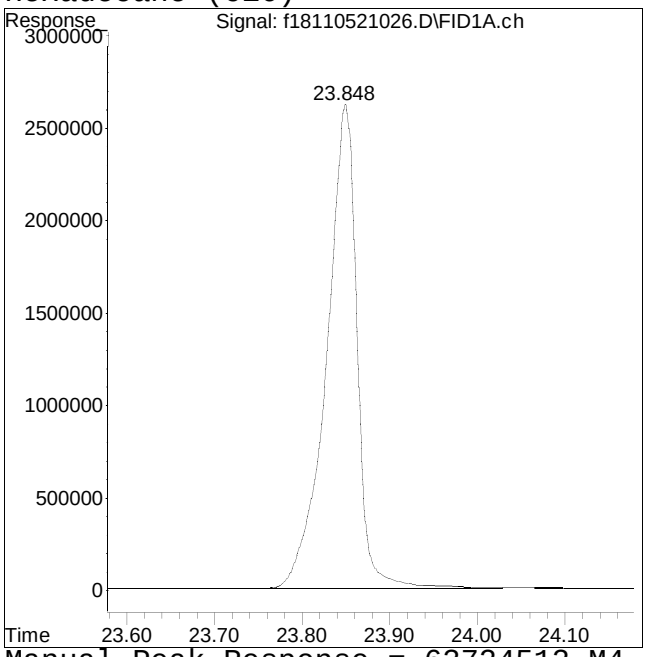
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #12: n-Hexadecane (C16)





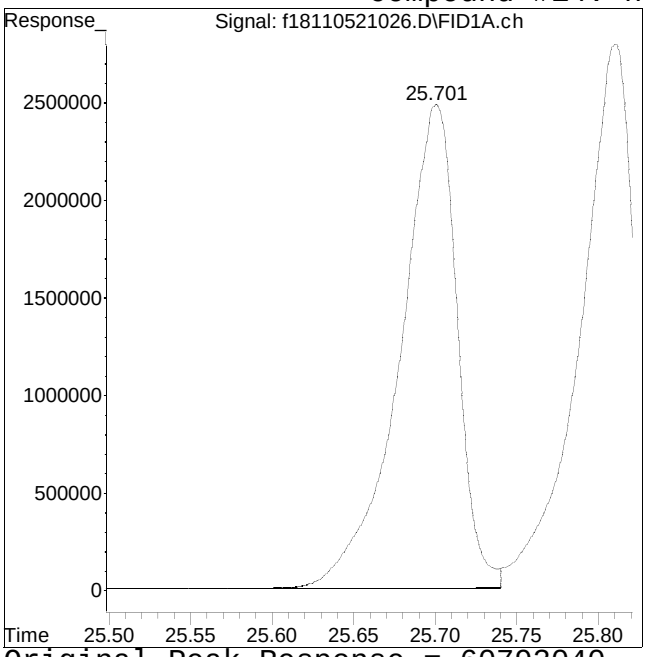
Original Peak Response = 62902172 Manual Peak Response = 63724512 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

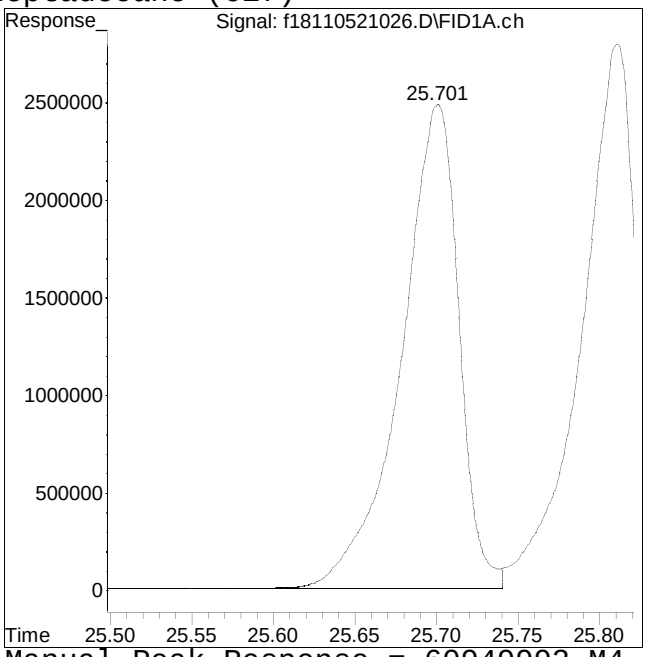
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 60793040



Manual Peak Response = 60949992 M4

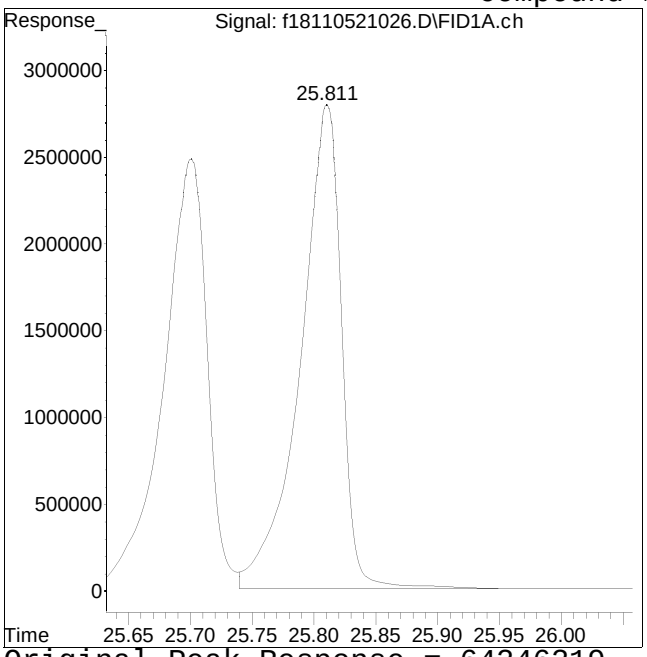
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

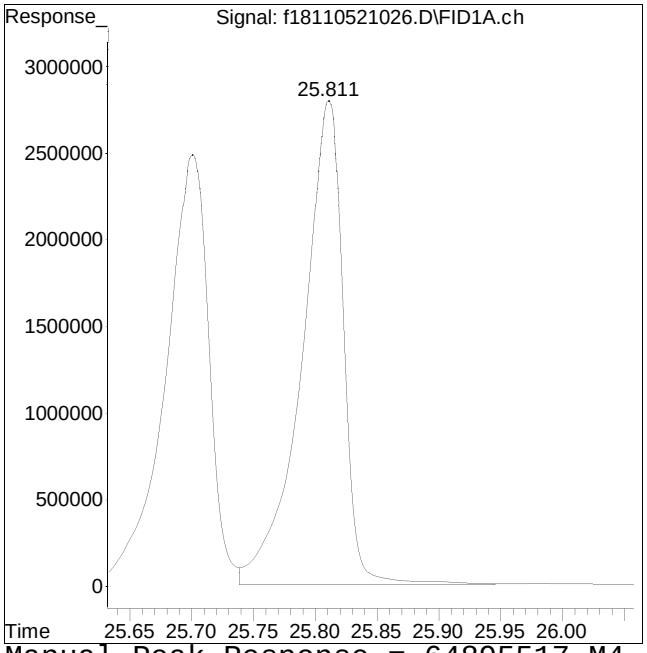
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #15: Pristane



Original Peak Response = 64246219



Manual Peak Response = 64895517 M4

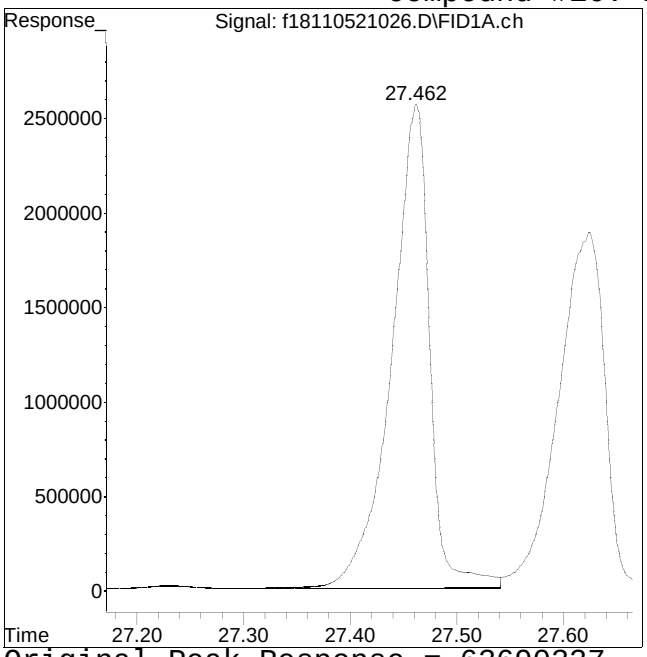
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

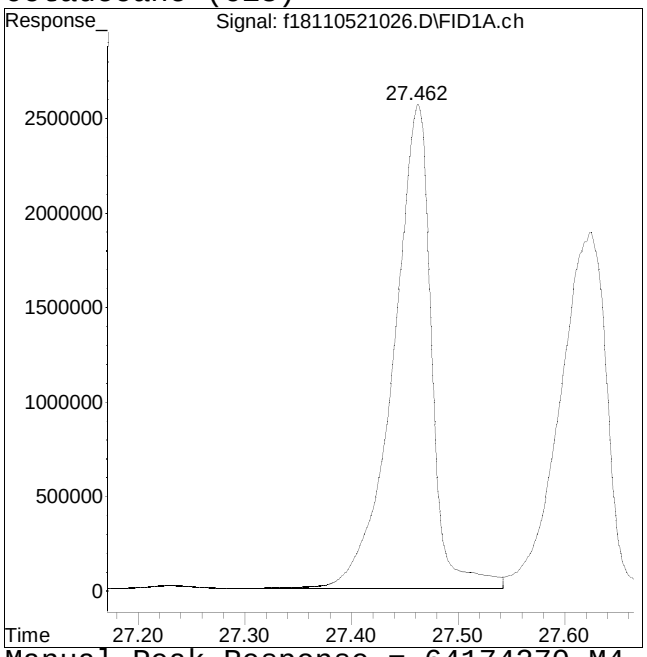
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 63690337



Manual Peak Response = 64174270 M4

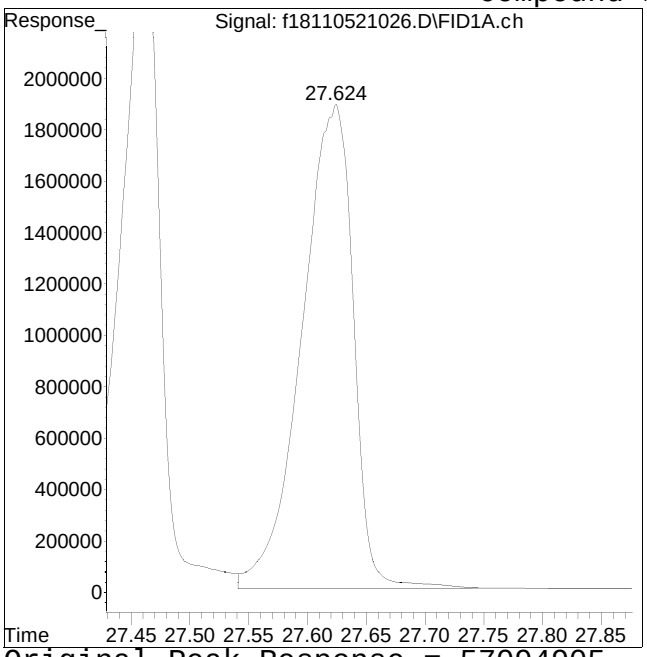
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

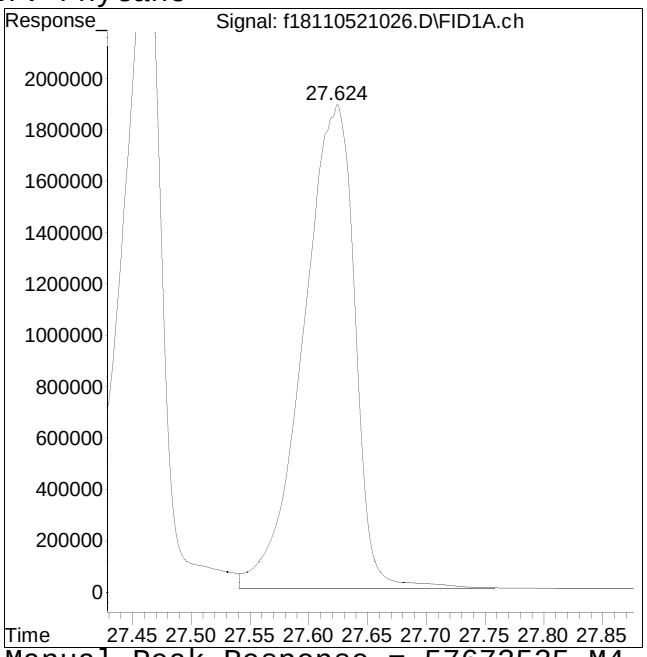
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #17: Phytane



Original Peak Response = 57094905



Manual Peak Response = 57673535 M4

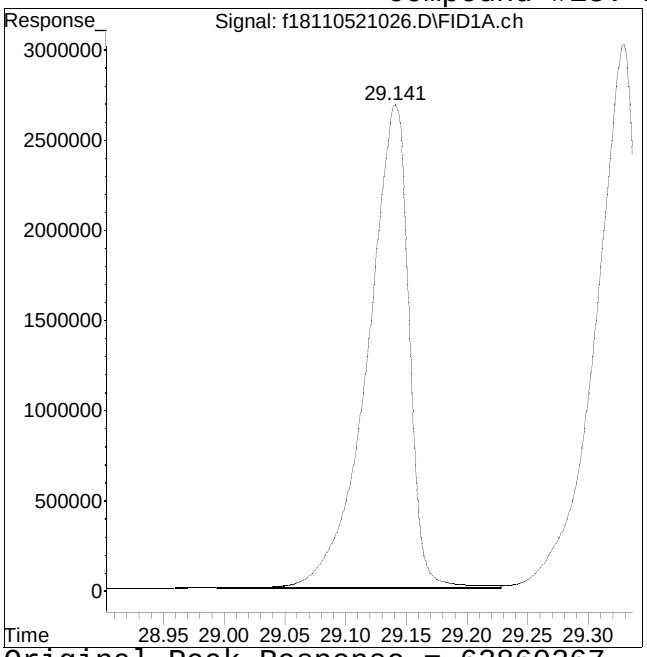
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

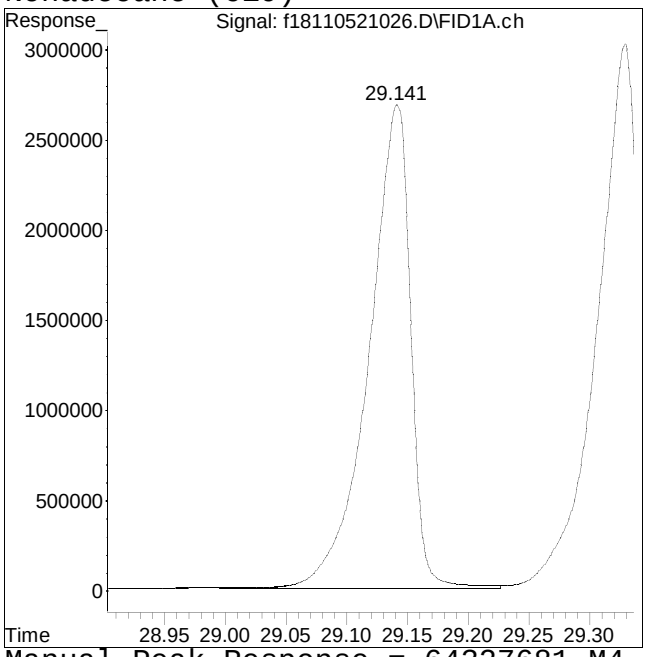
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 63860267



Manual Peak Response = 64327681 M4

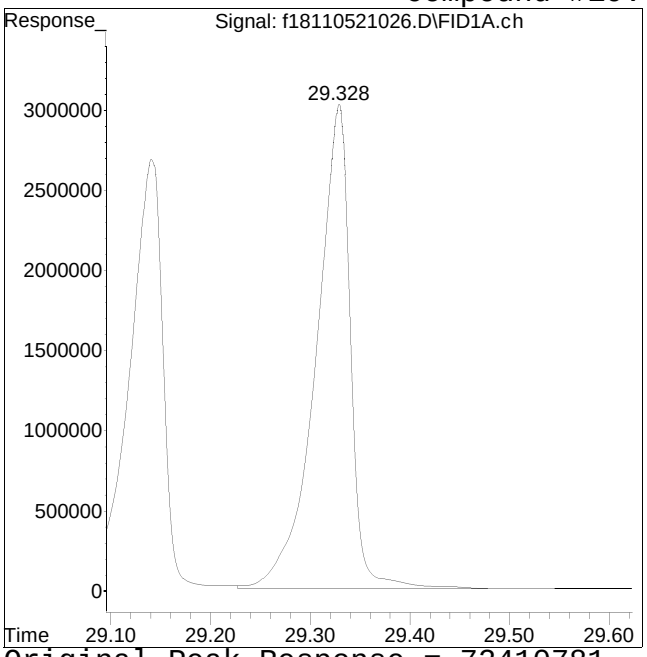
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

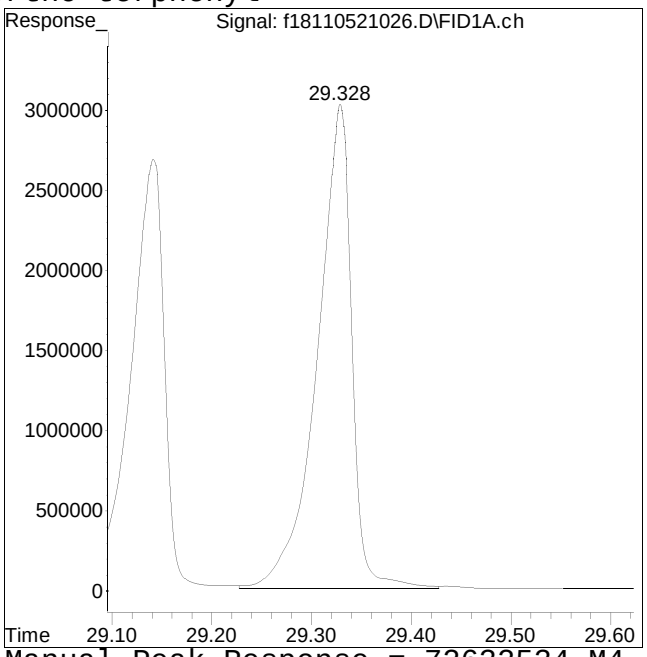
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #19: ortho-terphenyl



Original Peak Response = 72410781



Manual Peak Response = 72632534 M4

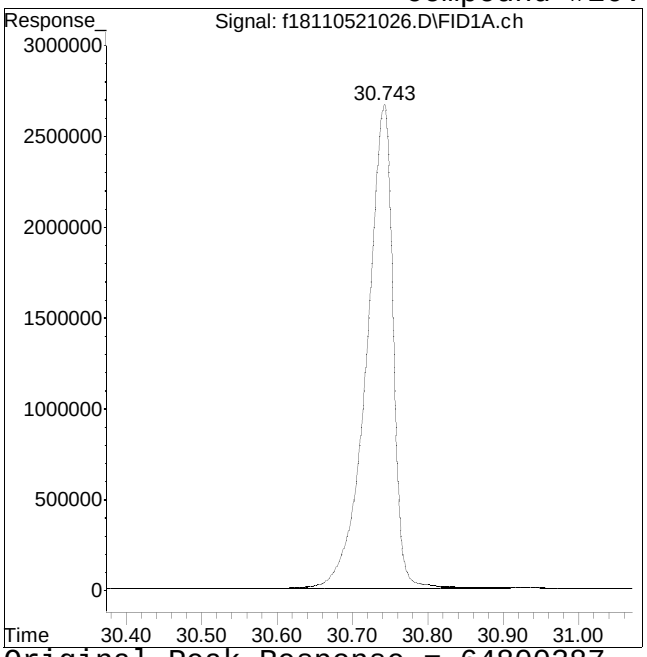
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

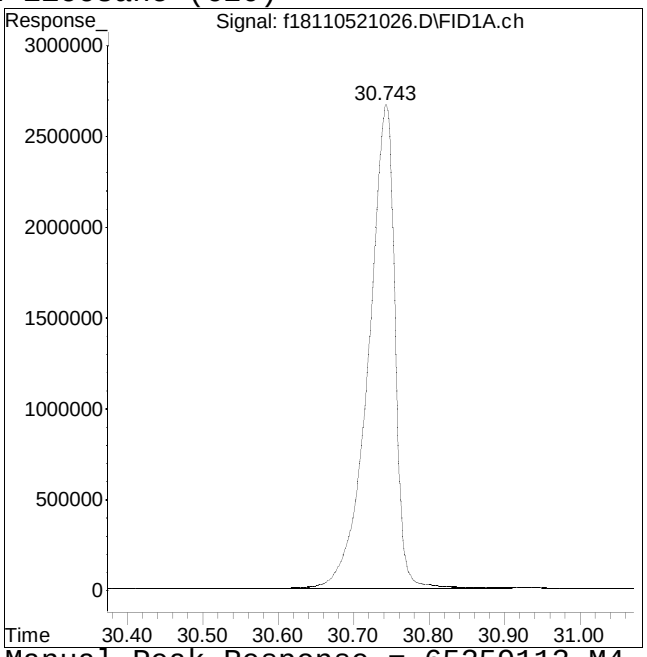
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 64800387



Manual Peak Response = 65259113 M4

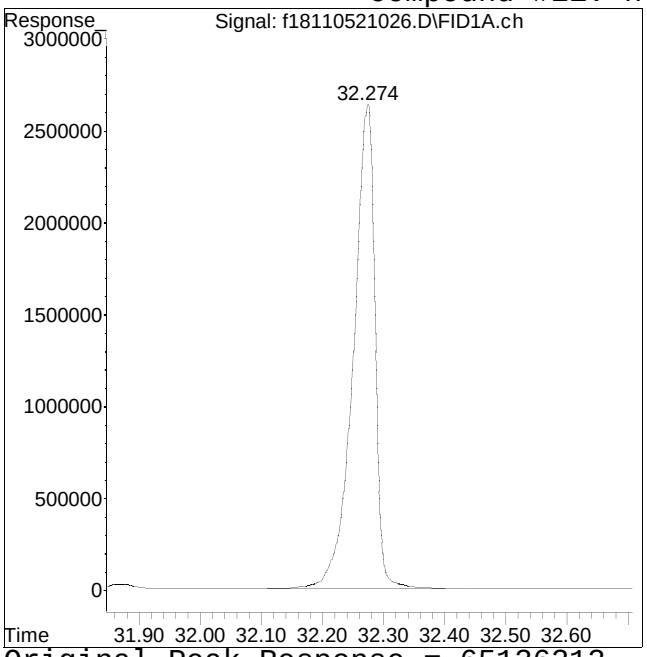
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

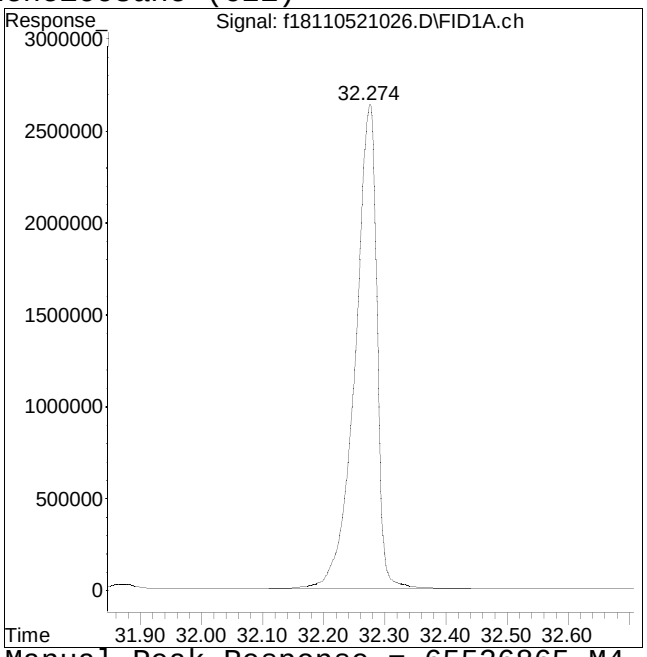
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 65136212



Manual Peak Response = 65526865 M4

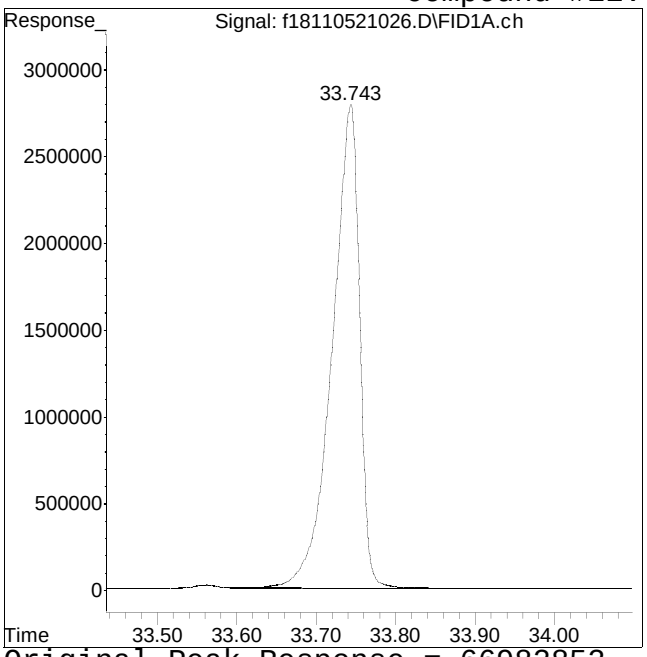
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

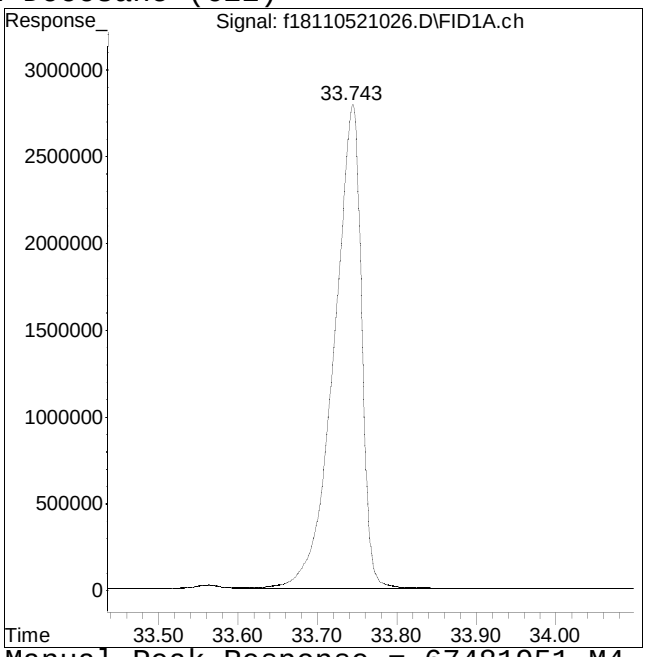
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #22: n-Docosane (C22)



Original Peak Response = 66982852



Manual Peak Response = 67481951 M4

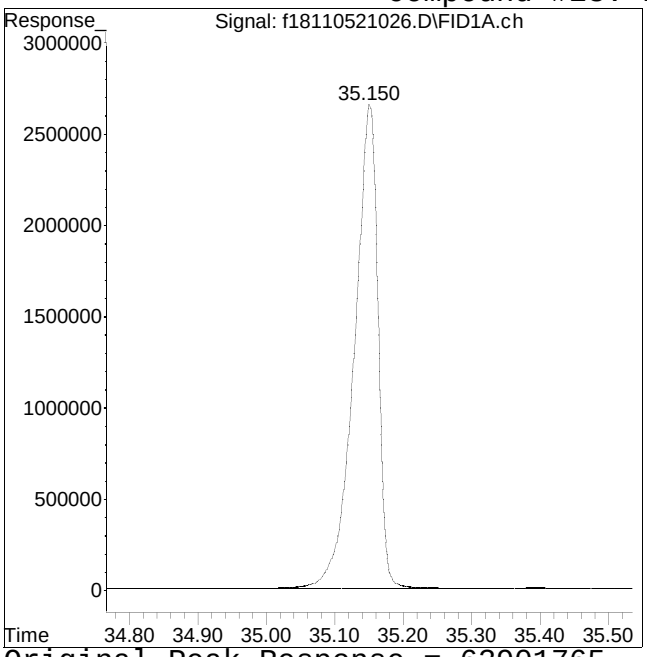
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

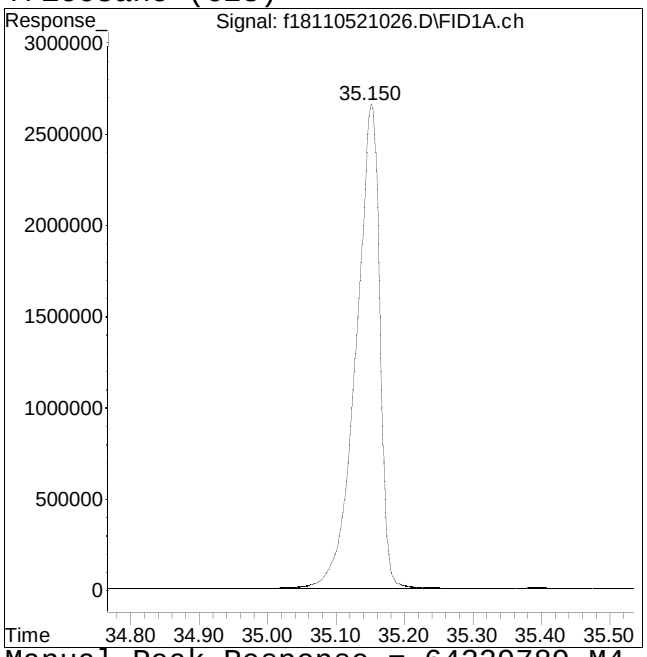
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 63901765



Manual Peak Response = 64229789 M4

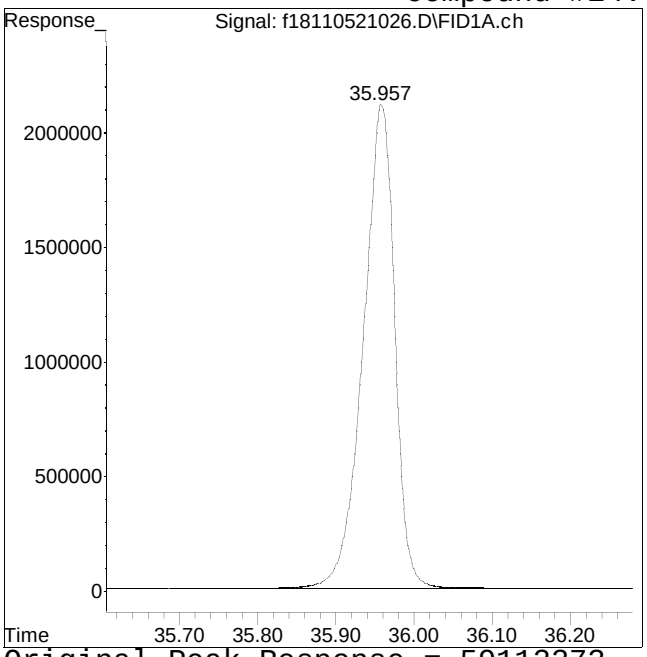
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

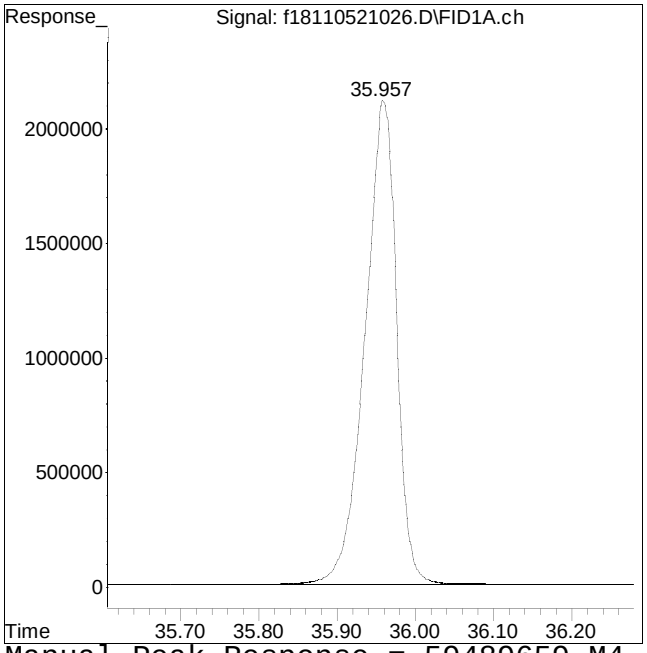
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #24: d50-Tetracosane



Original Peak Response = 59112273



Manual Peak Response = 59489659 M4

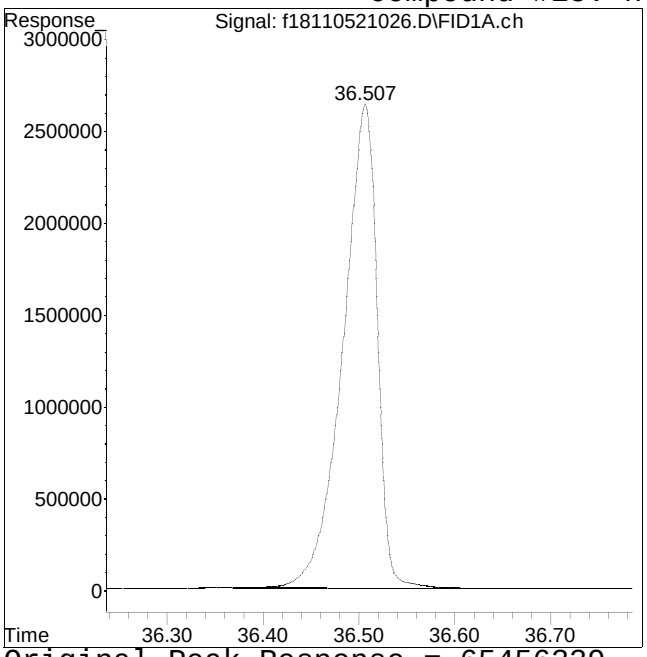
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

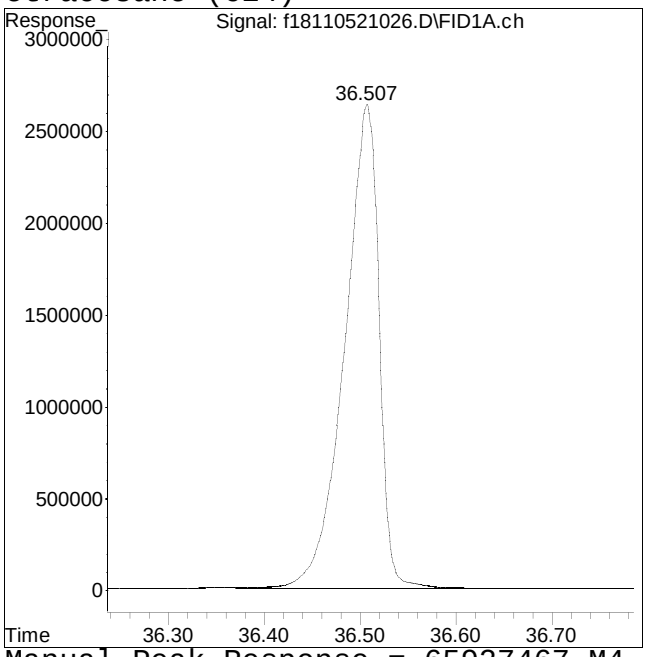
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 65456339



Manual Peak Response = 65927467 M4

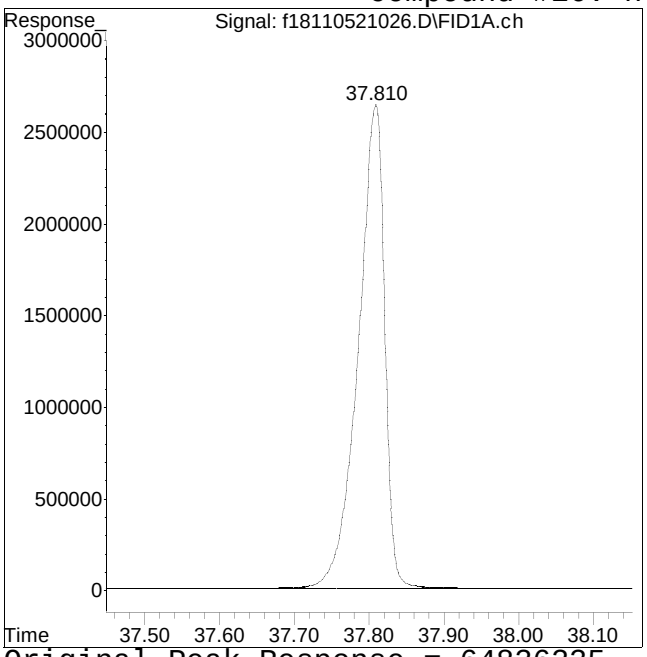
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

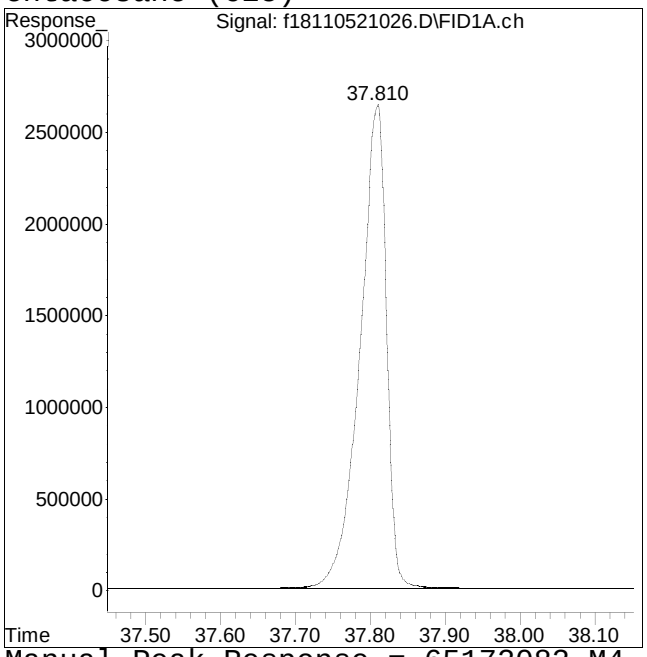
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 64836235



Manual Peak Response = 65172082 M4

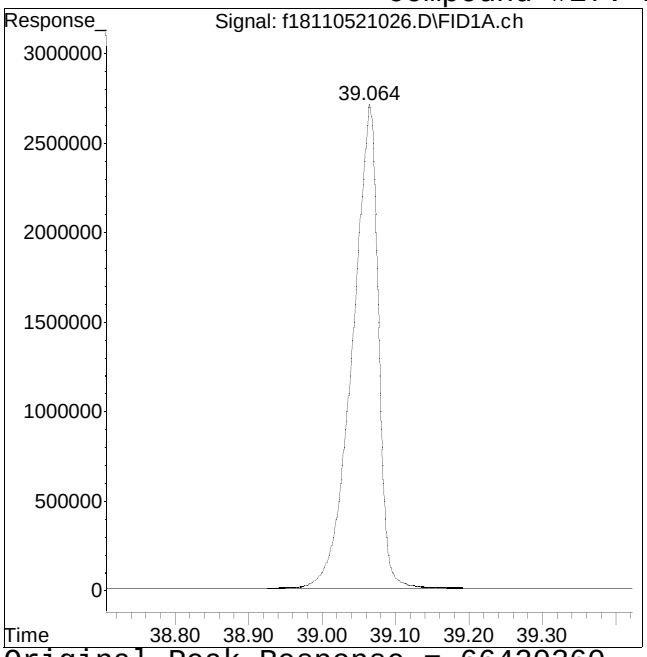
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

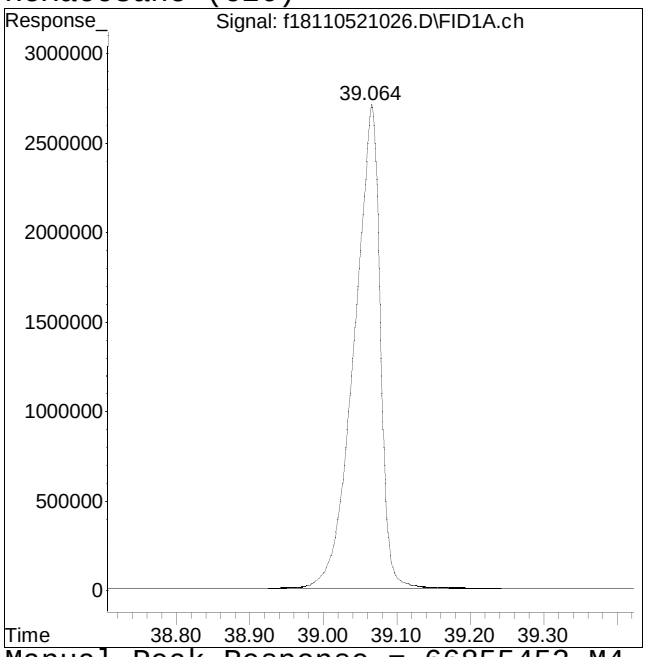
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 66420360



Manual Peak Response = 66855452 M4

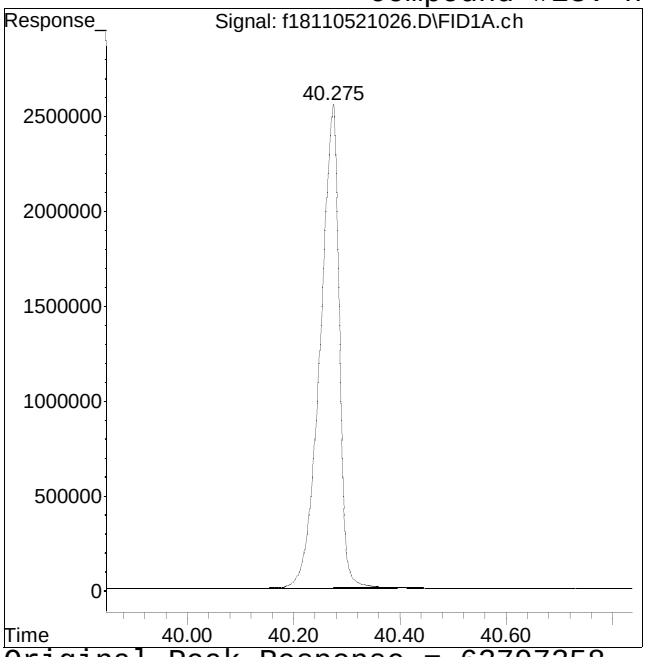
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

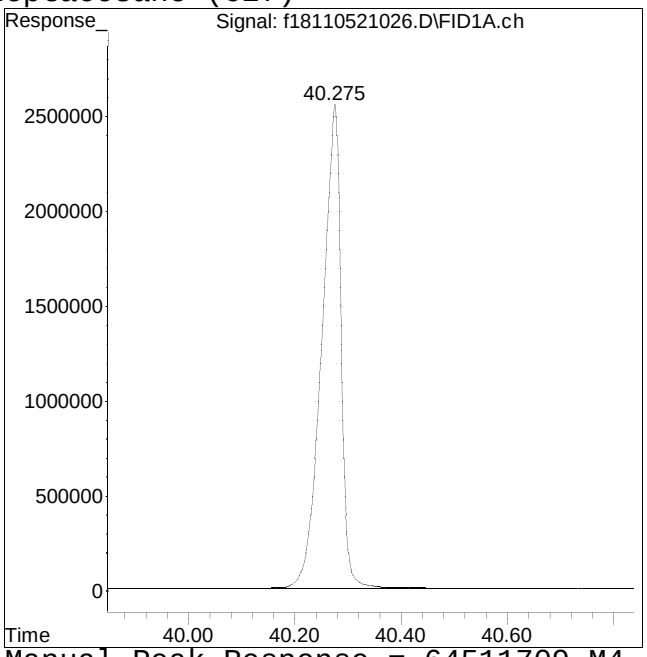
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 63797358



Manual Peak Response = 64511709 M4

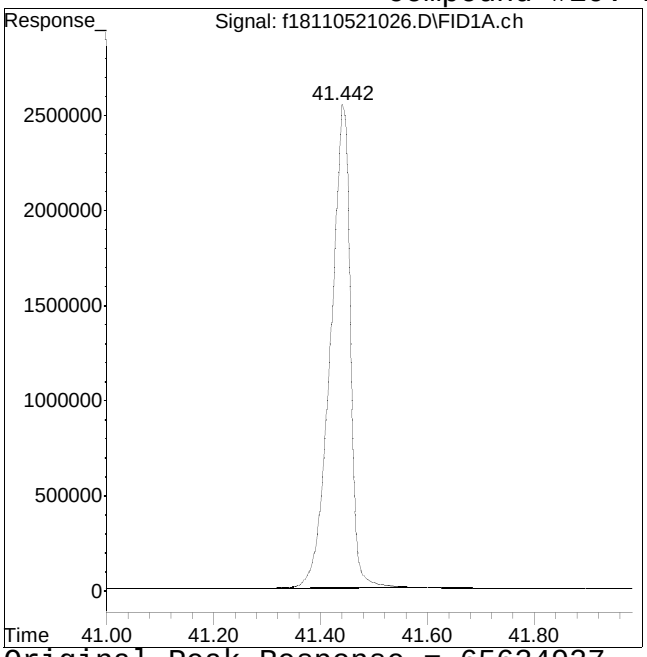
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

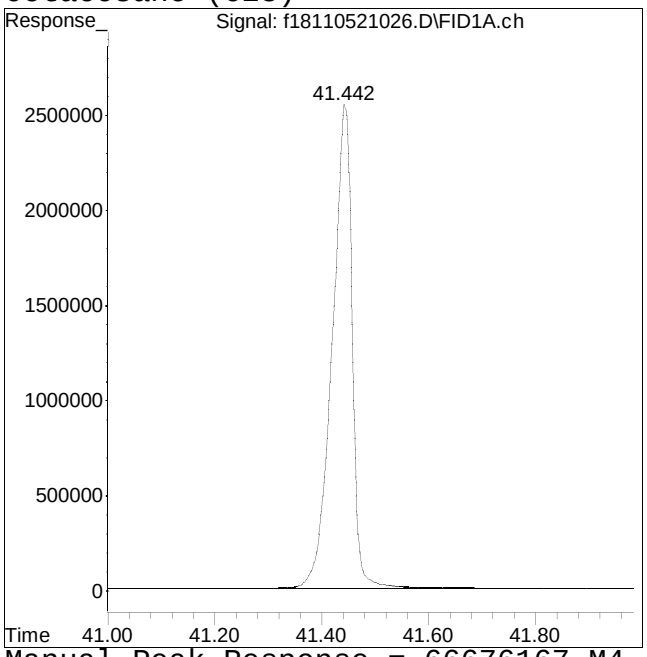
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 65634927



Manual Peak Response = 66676167 M4

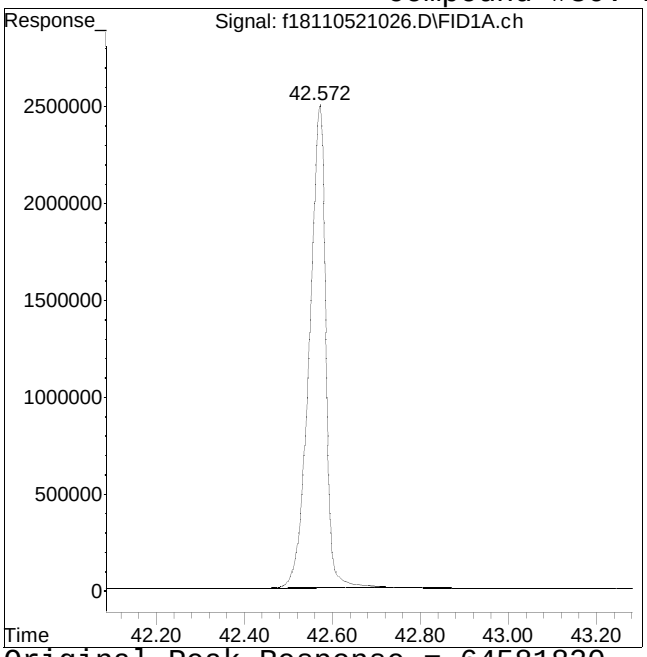
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

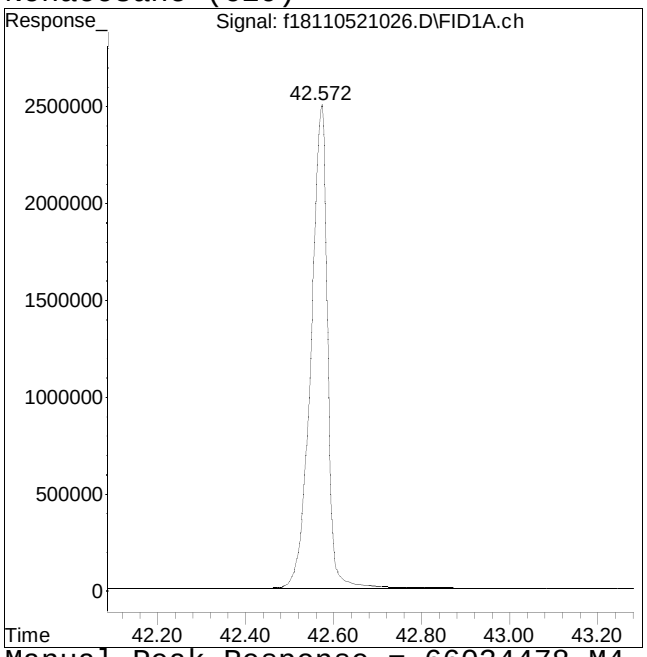
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 64581820



Manual Peak Response = 66034478 M4

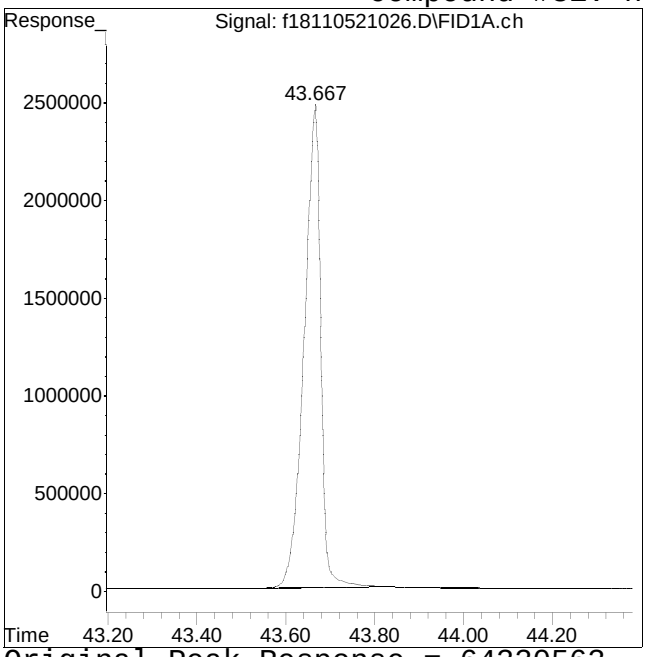
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

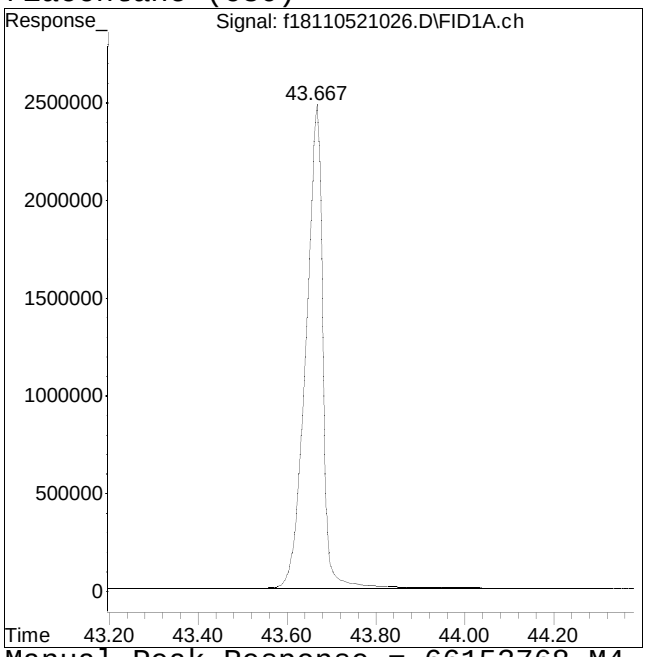
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 64330563



Manual Peak Response = 66153768 M4

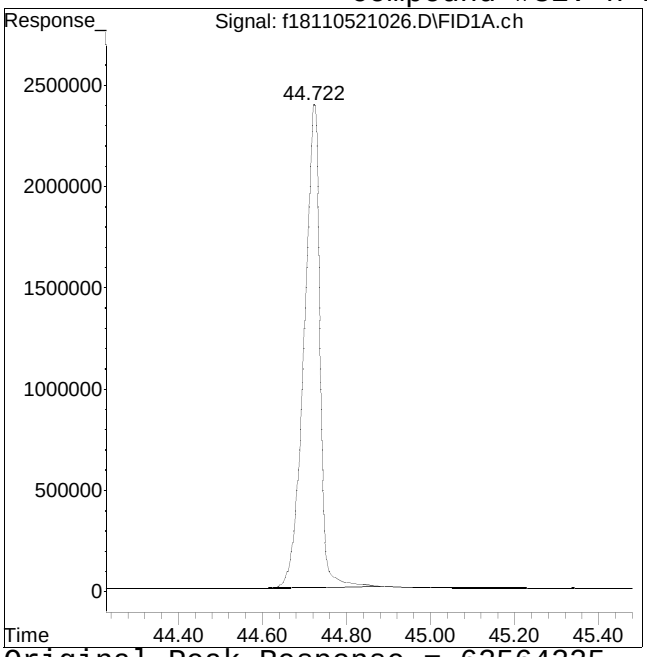
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

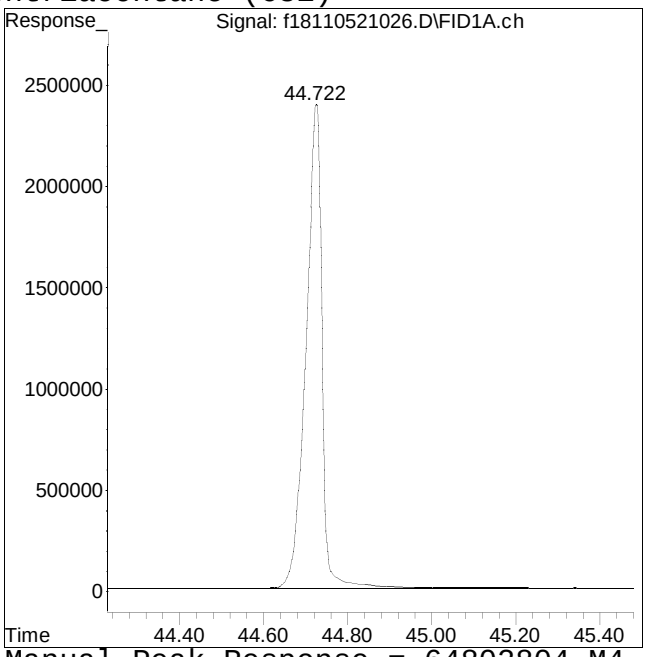
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 62564225



Manual Peak Response = 64802804 M4

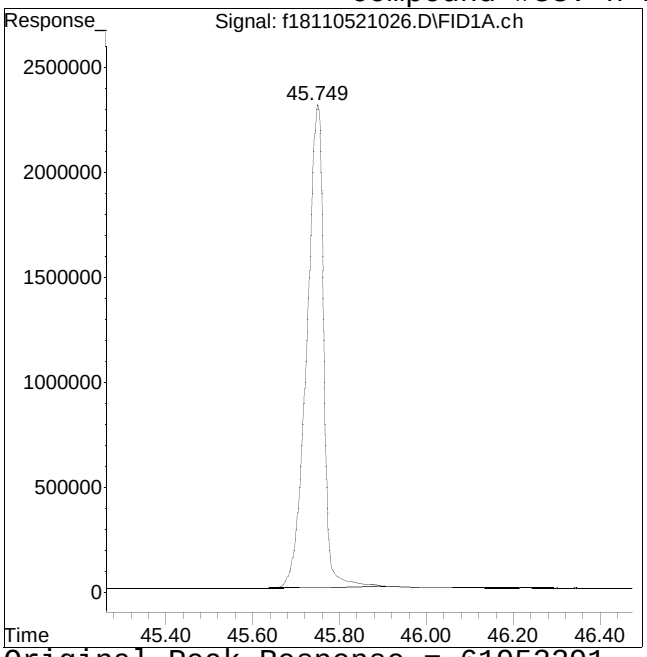
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

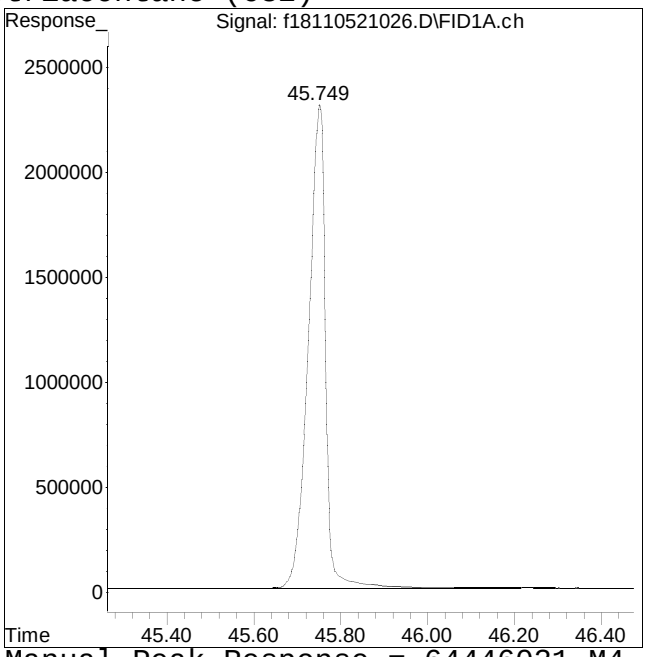
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 61952291



Manual Peak Response = 64446031 M4

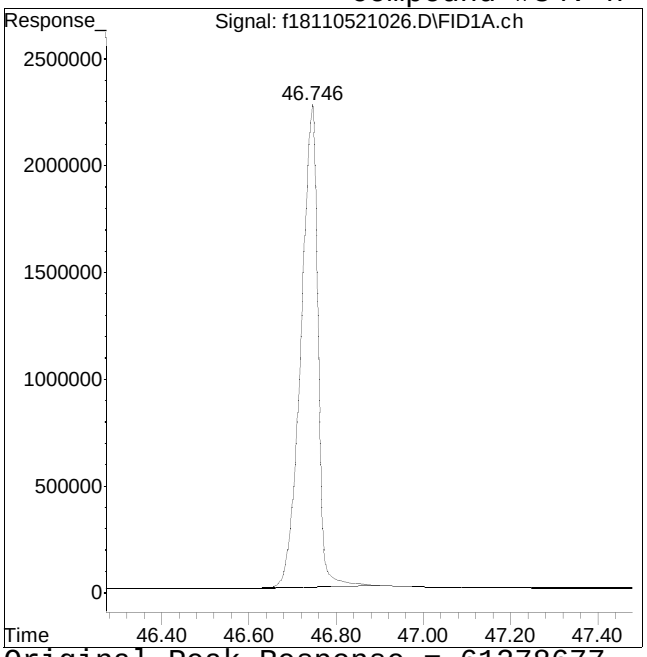
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

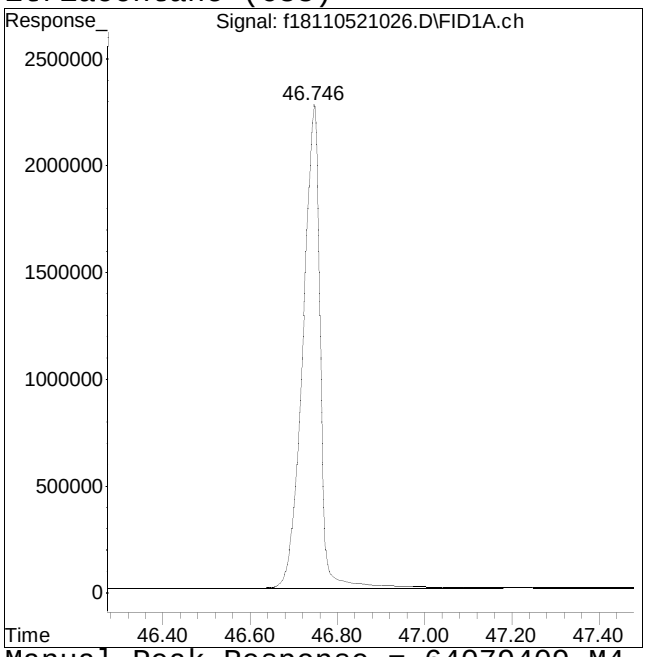
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 61278677



Manual Peak Response = 64079409 M4

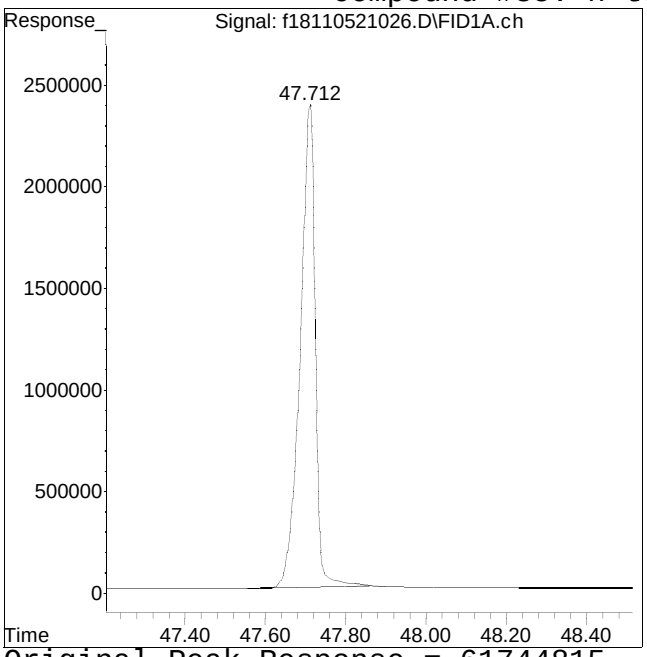
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

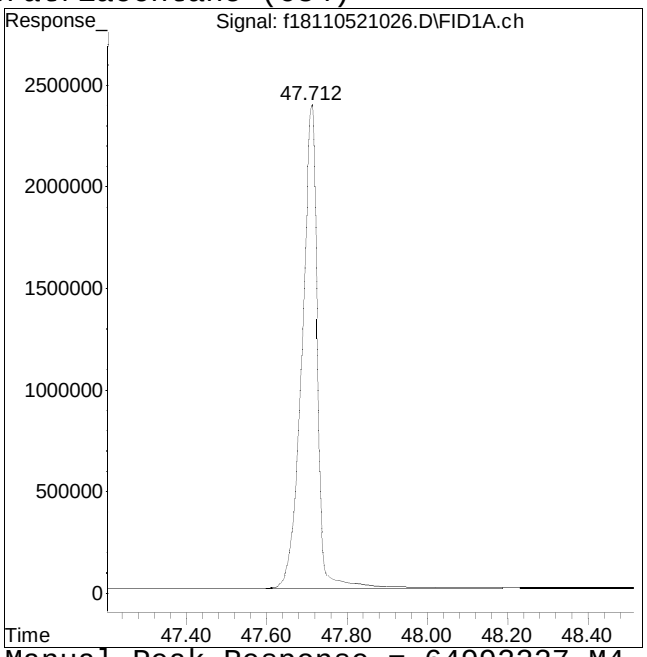
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 61744815



Manual Peak Response = 64992227 M4

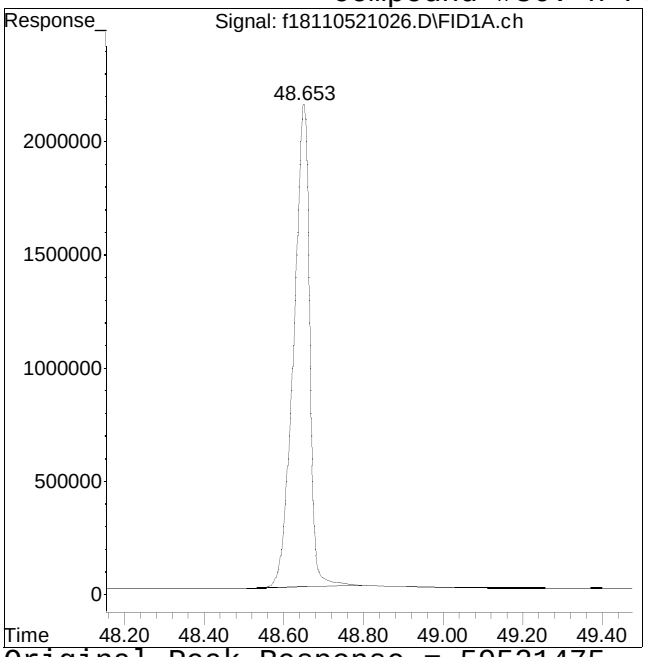
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

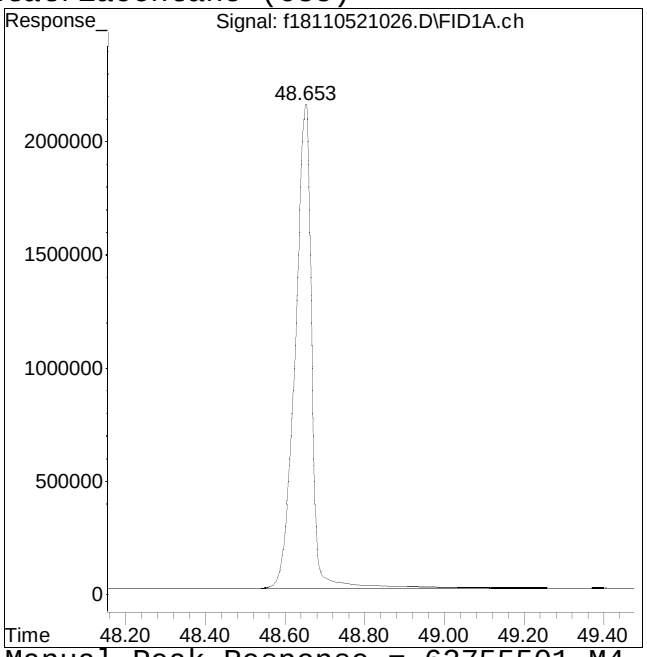
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 59521475



Manual Peak Response = 62755501 M4

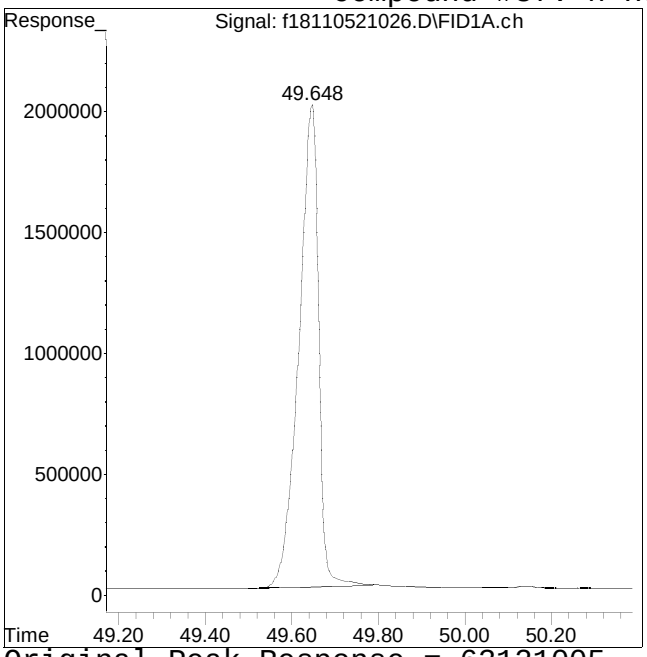
M4 = Poor automated baseline construction.

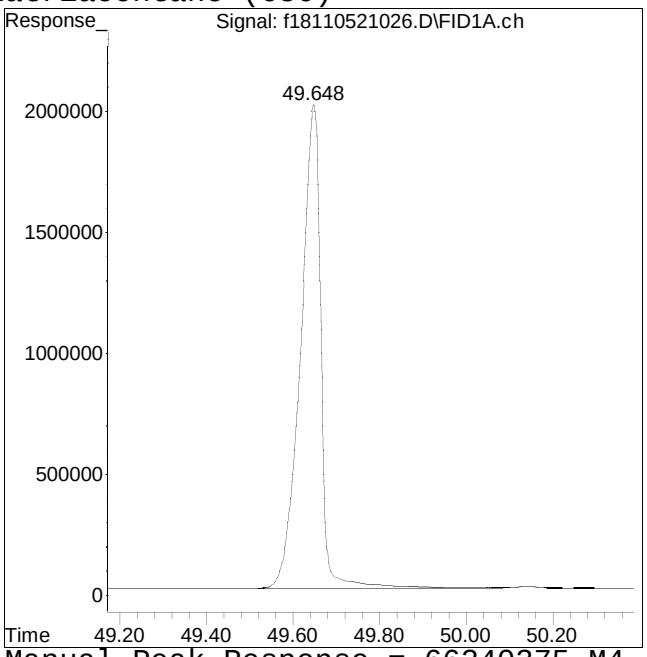
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #37: n-Hexatriacontane (C36)





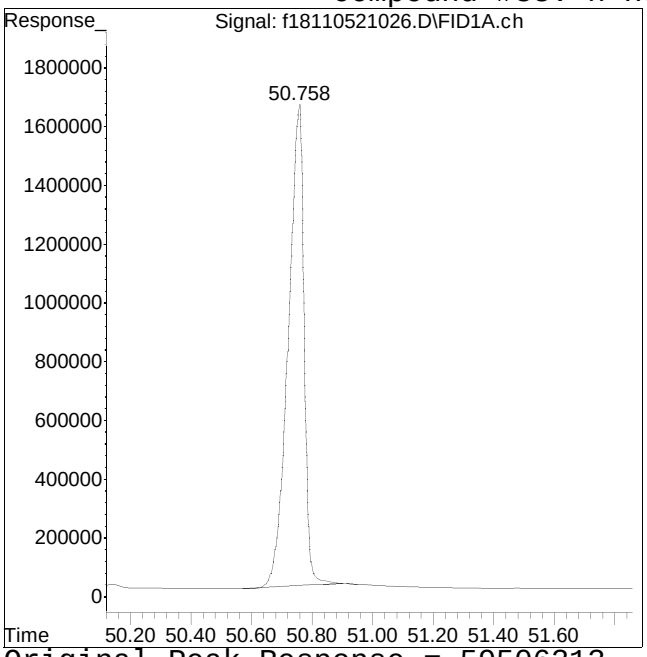
Original Peak Response = 63121005 Manual Peak Response = 66240375 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

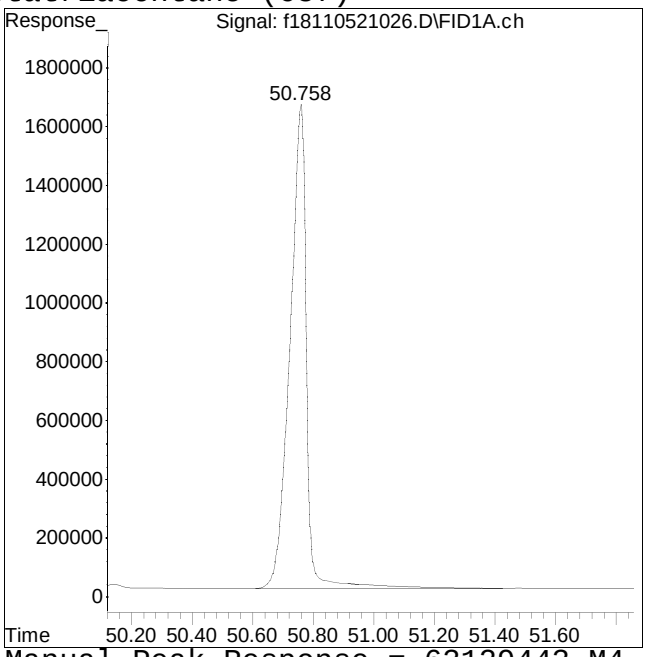
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 59506313



Manual Peak Response = 63129443 M4

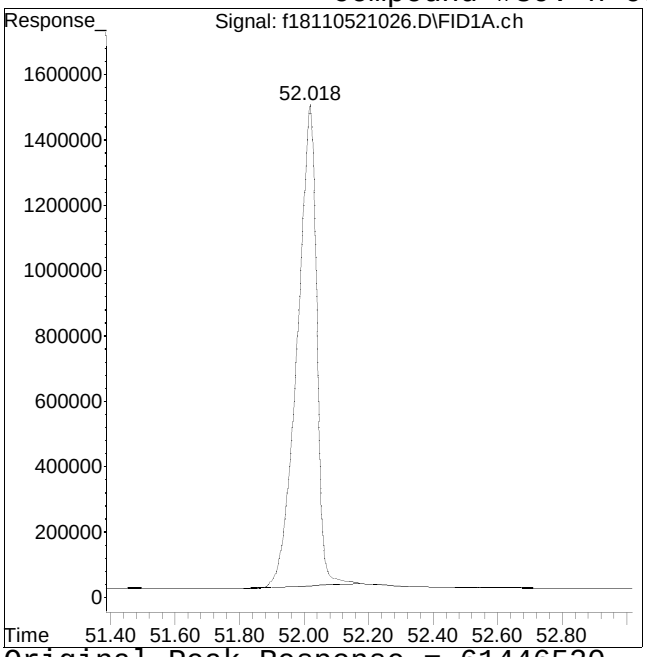
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

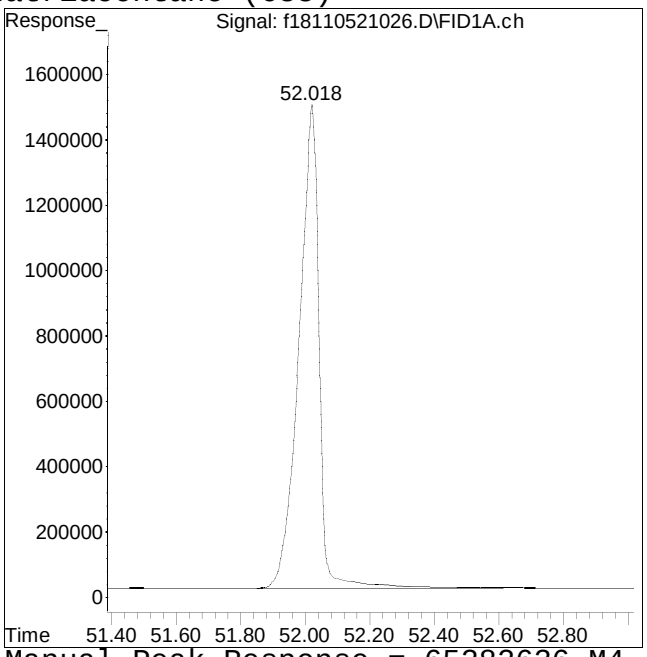
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 61446520



Manual Peak Response = 65282636 M4

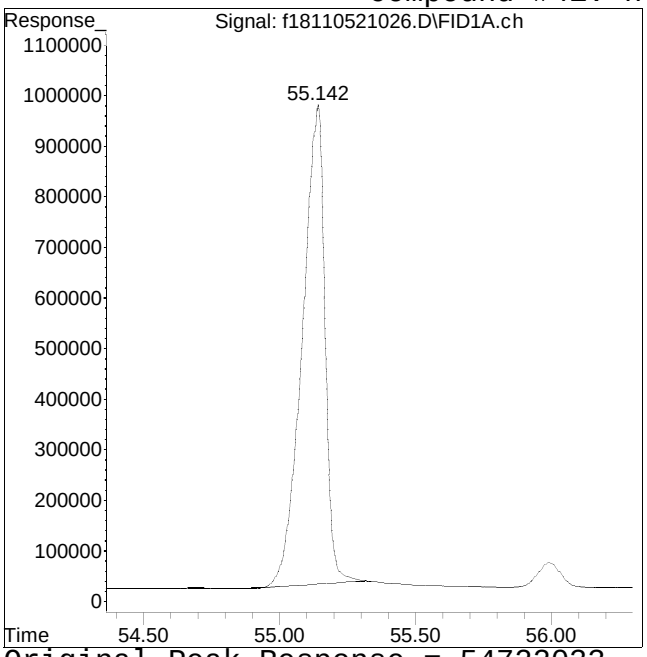
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

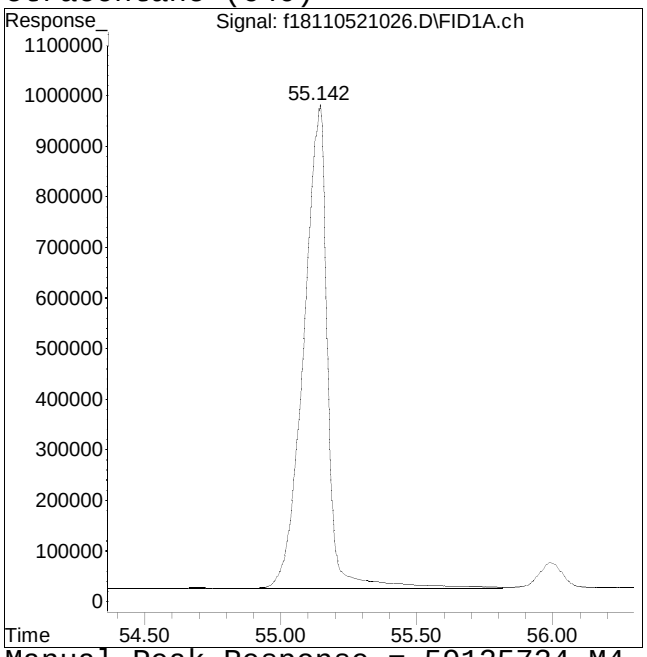
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521026.D
Date Inj'd : 11/6/2021 5:57 am
Sample : CQ1811052101F

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:08 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 54722033



Manual Peak Response = 59125734 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521030.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 08:48 am
Operator : FID18:WR
Sample : WG1581201-1,0.1008
Misc : WG1581201,FRBD96
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:52:15 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:07:08 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1811052101F
Blank File : f18110521028.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.351	77387732	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.336	80484383	46.646 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	93.29%
24) s	d50-Tetracosane	35.969	66350041	47.146 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	94.29%
	Target Compounds			
2) t	n-Octane (C8)	5.767	109943319	87.591 ug/mL M4
3) t	n-Nonane (C9)	7.982	84450742	66.170 ug/mL M4
4) t	n-Decane (C10)	10.462	68594765	54.439 ug/mL M4
5) t	n-Undecane (C11)	12.964	64416873	49.063 ug/mL M4
6) t	n-Dodecane (C12)	15.379	59421348	43.689 ug/mL M4
7) t	n-Tridecane (C13)	17.675	54147982	39.093 ug/mL M4
8) t	1380	19.339	12481197	8.705 ug/mL M4
9) t	n-Tetradecane (C14)	19.847	51445413	35.880 ug/mL M4
10) t	1470	21.123	19728661	13.658 ug/mL M4
11) t	n-Pentadecane (C15)	21.902	58855974	40.744 ug/mL M4
12) t	n-Hexadecane (C16)	23.850	46278000	31.599 ug/mL M4
13) t	1650	24.748	16081953	11.364 ug/mL M4
14) t	n-Heptadecane (C17)	25.701	40250441	28.442 ug/mL M4
15) t	Pristane	25.792	32700984	20.857 ug/mL M4
16) t	n-Octadecane (C18)	27.460	36356073	24.337 ug/mL M4
17) t	Phytane	27.619	18009960	12.722 ug/mL M4
18) t	n-Nonadecane (C19)	29.138	35128392	23.358 ug/mL M4
20) t	n-Eicosane (C20)	30.740	35757625	23.452 ug/mL M4
21) t	n-Heneicosane (C21)	32.273	30929621	20.176 ug/mL M4
22) t	n-Docosane (C22)	33.739	29533116	19.091 ug/mL M4
23) t	n-Tricosane (C23)	35.147	26317919	16.874 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521030.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 08:48 am
Operator : FID18:WR
Sample : WG1581201-1,0.1008
Misc : WG1581201,FRBD96
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:52:15 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:07:08 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1811052101F
Blank File : f18110521028.D

Sub List : SHC - SHC

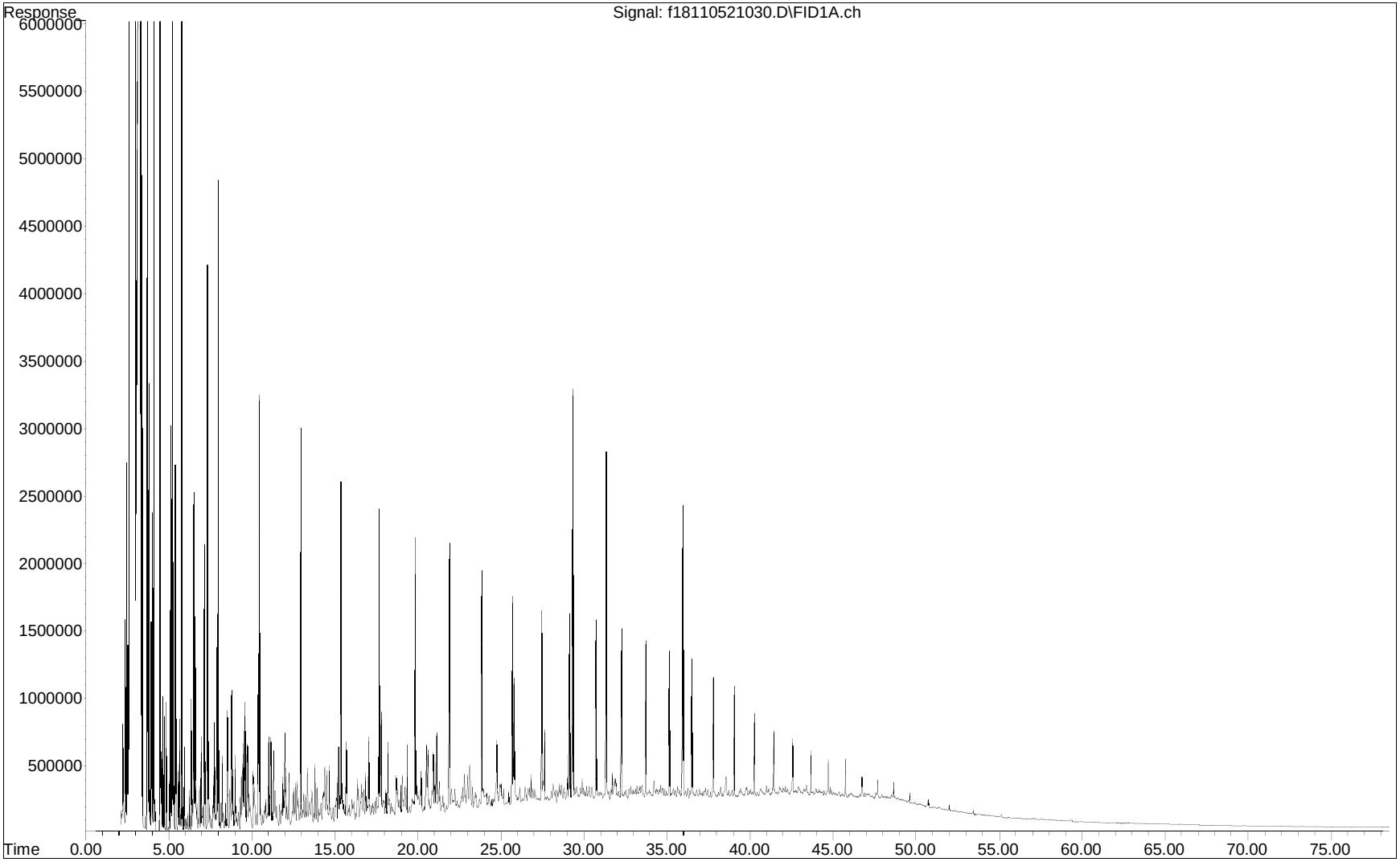
		Compound	R.T.	Response	Conc	Units	
25)	t	n-Tetracosane (C24)	36.502	25161036	16.377	ug/mL	M4
26)	t	n-Pentacosane (C25)	37.803	25504541	16.696	ug/mL	M4
27)	t	n-Hexacosane (C26)	39.054	21527067	13.731	ug/mL	M4
28)	t	n-Heptacosane (C27)	40.264	16087261	10.327	ug/mL	M4
29)	t	n-Octacosane (C28)	41.433	11622931	7.274	ug/mL	M4
30)	t	n-Nonacosane (C29)	42.560	11433057	7.212	ug/mL	M4
31)	t	n-Triacontane (C30)	43.652	8820027	5.568	ug/mL	M4
32)	t	n-Hentriacontane (C31)	44.713	6862089	4.500	ug/mL	M4
33)	t	n-Dotriacontane (C32)	45.733	7901312	5.001	ug/mL	M4
34)	t	n-Tritriacontane (C33)	46.729	4292651	2.818	ug/mL	M4
35)	t	n-tetratriacontane (C34)	47.697	4200747	2.804	ug/mL	M4
36)	t	n-Pentatriacontane (C35)	48.632	3830113	2.705	ug/mL	M4
37)	t	n-Hexatriacontane (C36)	49.627	2268318	1.389	ug/mL	M4
38)	t	n-Heptatriacontane (C37)	50.730	2747563	1.859	ug/mL	M4
39)	t	n-Octatriacontane (C38)	51.992	1679583	1.132	ug/mL	M4
40)	t	n-Nonatriacontane (C39)	53.434	1346165	0.925	ug/mL	M4
41)	t	n-Tetracontane (C40)	55.100	904981	0.622	ug/mL	M4
42)	h	C9-C44 Total Petroleu...	36.572	8416642290	5662.844	ug/mL	m
42)	h	C9-C44 Total Petroleu BS	36.572	8213506142	5526.171	ug/mLm	
46)	h	Total Resolved Hydroc...	38.937	2762229924	1858.470	ug/mL	m

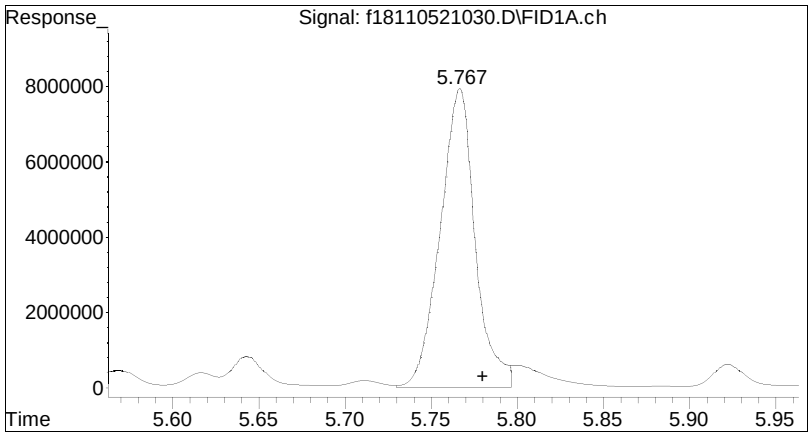
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

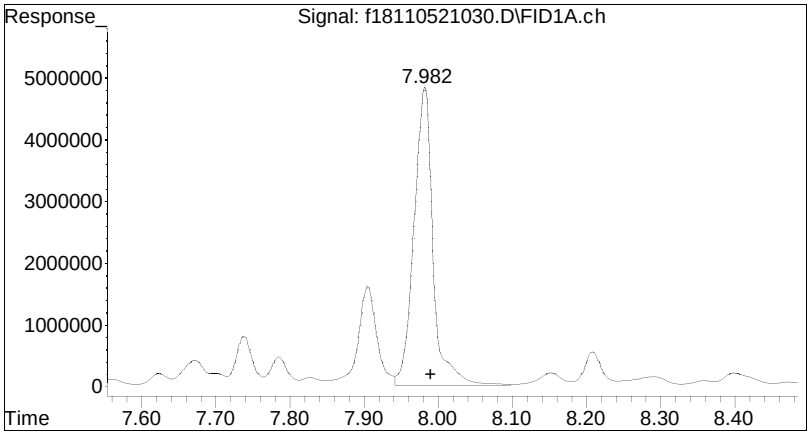
File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521030.D
Operator : FID18:WR
Acquired : 06 Nov 2021 08:48 am using AcqMethod FID18.M
Sample Name: WG1581201-1,0.1008
Instrument: FID 18
Misc Info : WG1581201,FRBD96
Vial Number: 15
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M





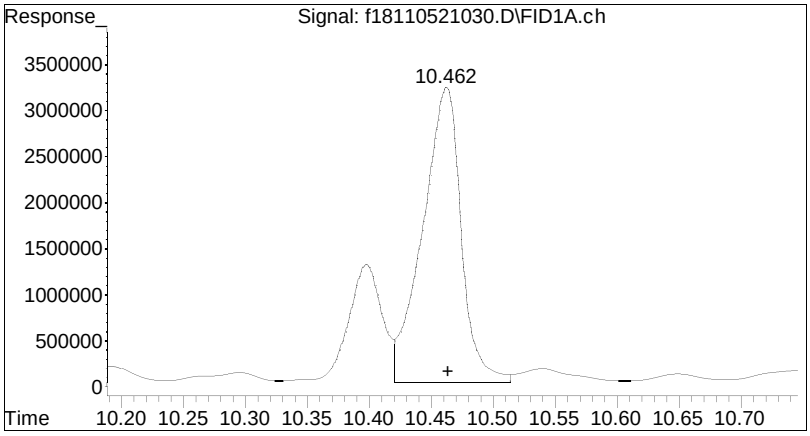
#2 n-Octane (C8)

R.T.: 5.767 min
Delta R.T.: -0.013 min
Response: 109943319
Conc: 87.59 ug/mL M4



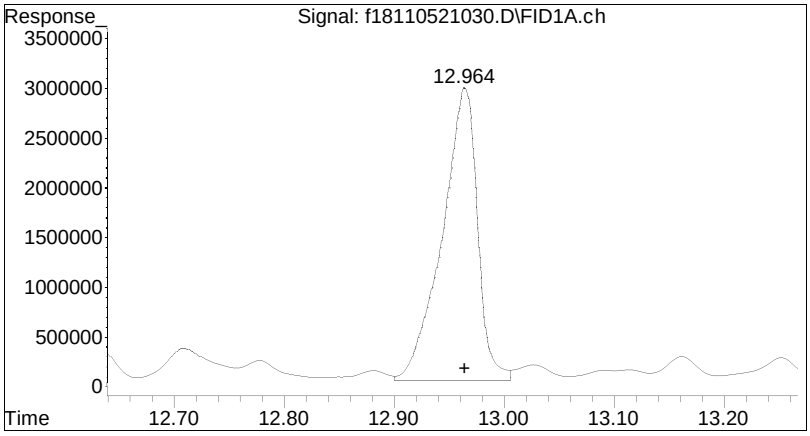
#3 n-Nonane (C9)

R.T.: 7.982 min
Delta R.T.: -0.008 min
Response: 84450742
Conc: 66.17 ug/mL M4



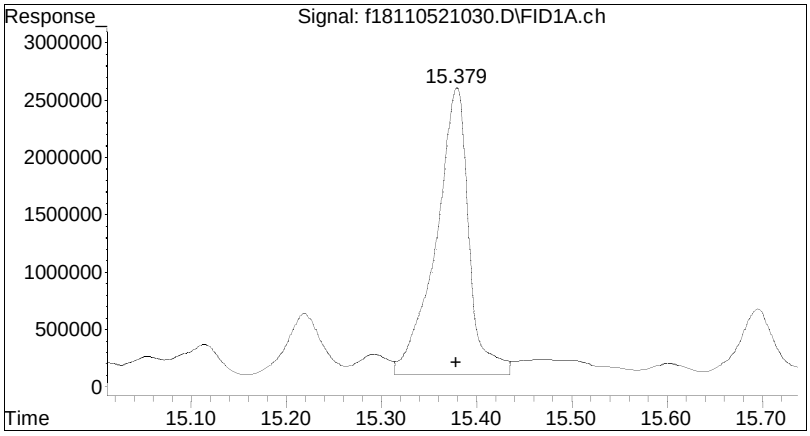
#4 n-Decane (C10)

R.T.:	10.462 min
Delta R.T.:	-0.002 min
Response:	68594765
Conc:	54.44 ug/mL M4



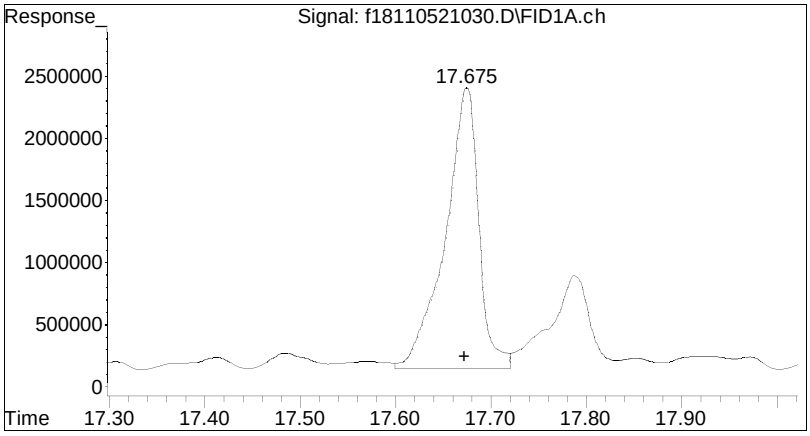
#5 n-Undecane (C11)

R.T.: 12.964 min
Delta R.T.: 0.000 min
Response: 64416873
Conc: 49.06 ug/mL M4



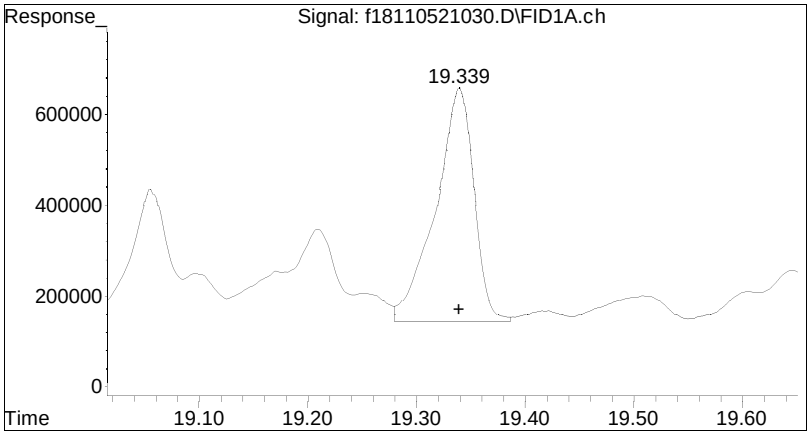
#6 n-Dodecane (C12)

R.T.: 15.379 min
Delta R.T.: 0.000 min
Response: 59421348
Conc: 43.69 ug/mL M4



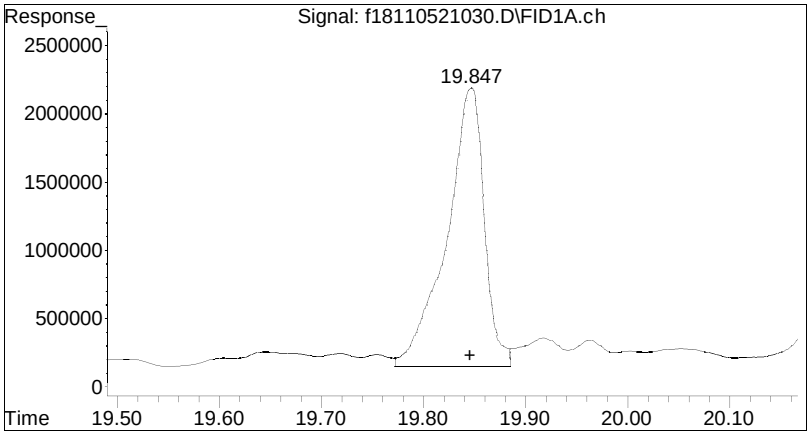
#7 n-Tridecane (C13)

R.T.:	17.675 min
Delta R.T.:	0.002 min
Response:	54147982
Conc:	39.09 ug/mL M4



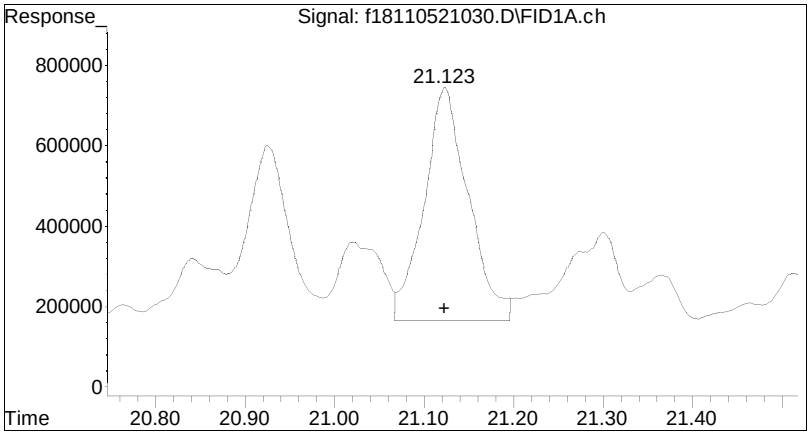
#8 1380

R.T.: 19.339 min
Delta R.T.: 0.000 min
Response: 12481197
Conc: 8.70 ug/mL M4



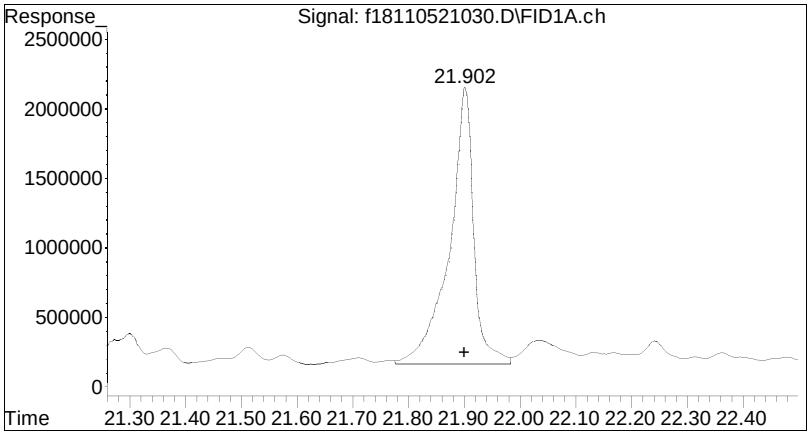
#9 n-Tetradecane (C14)

R.T.:	19.847 min
Delta R.T.:	0.002 min
Response:	51445413
Conc:	35.88 ug/mL M4



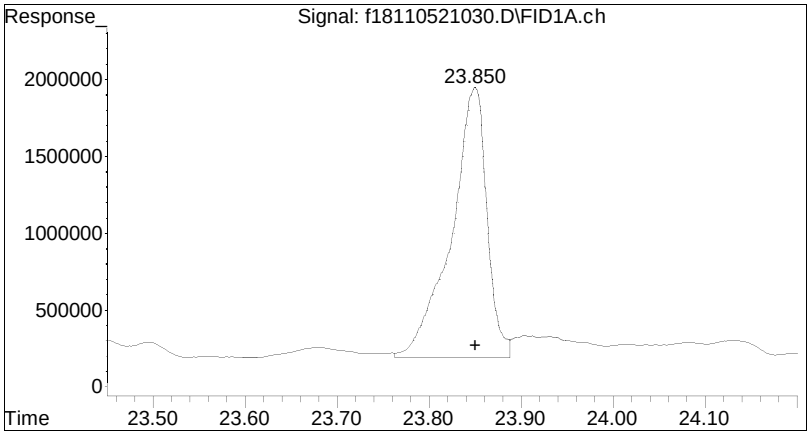
#10 1470

R.T.: 21.123 min
Delta R.T.: 0.000 min
Response: 19728661
Conc: 13.66 ug/mL M4



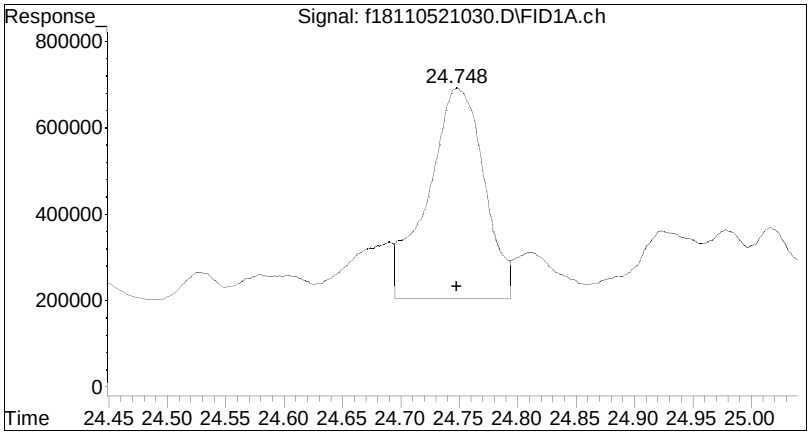
#11 n-Pentadecane (C15)

R.T.: 21.902 min
Delta R.T.: 0.002 min
Response: 58855974
Conc: 40.74 ug/mL M4



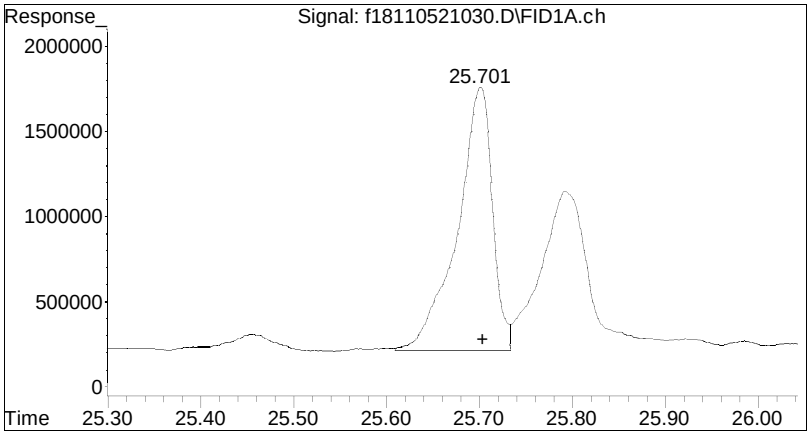
#12 n-Hexadecane (C16)

R.T.: 23.850 min
Delta R.T.: 0.000 min
Response: 46278000
Conc: 31.60 ug/mL M4



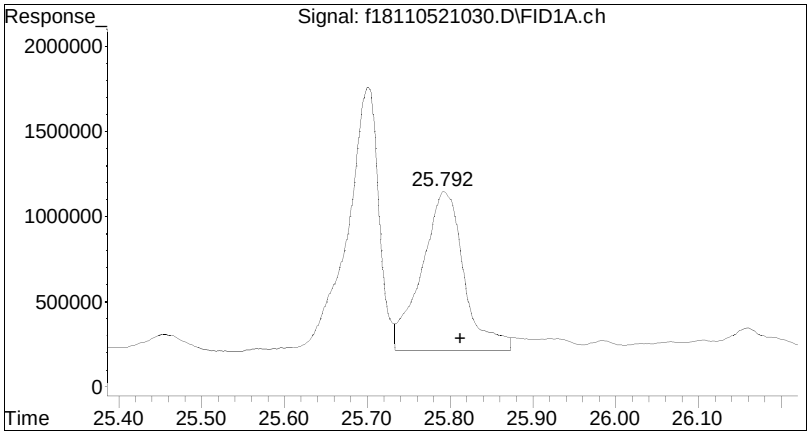
#13 1650

R.T.: 24.748 min
Delta R.T.: 0.000 min
Response: 16081953
Conc: 11.36 ug/mL M4



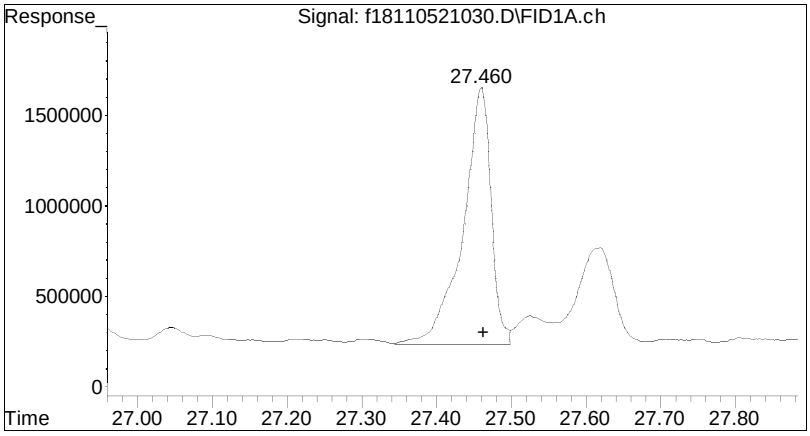
#14 n-Heptadecane (C17)

R.T.: 25.701 min
Delta R.T.: -0.002 min
Response: 40250441
Conc: 28.44 ug/mL M4



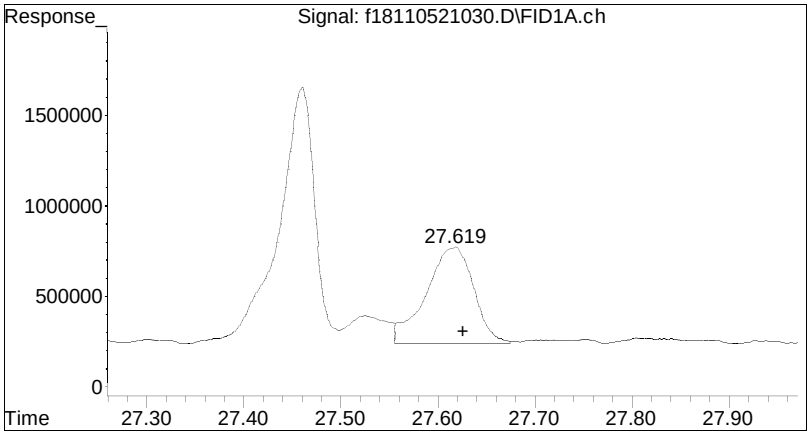
#15 Pristane

R.T.: 25.792 min
Delta R.T.: -0.021 min
Response: 32700984
Conc: 20.86 ug/mL M4



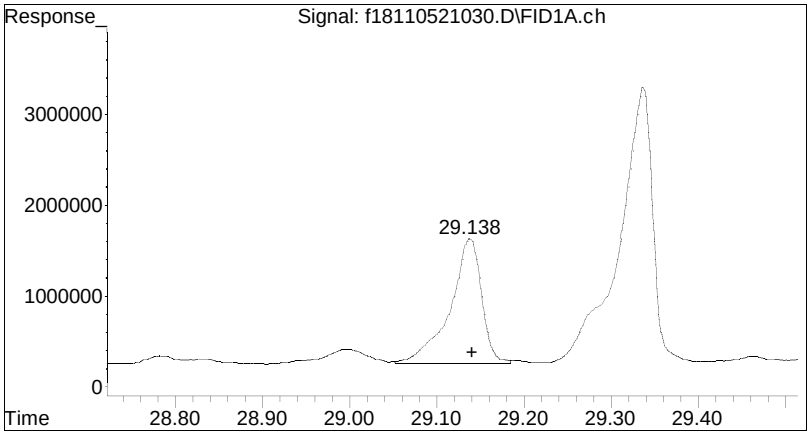
#16 n-Octadecane (C18)

R.T.: 27.460 min
Delta R.T.: -0.002 min
Response: 36356073
Conc: 24.34 ug/mL M4



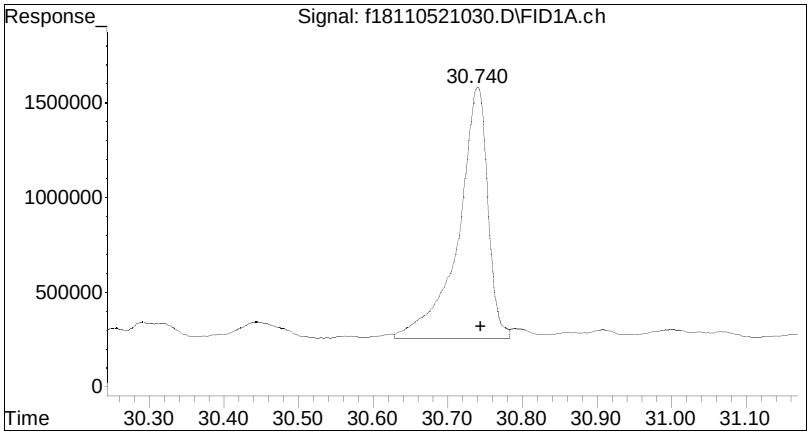
#17 Phytane

R.T.: 27.619 min
Delta R.T.: -0.007 min
Response: 18009960
Conc: 12.72 ug/mL M4



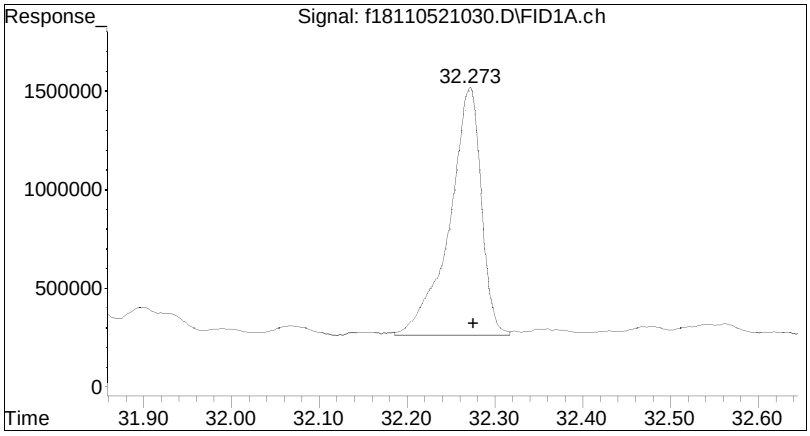
#18 n-Nonadecane (C19)

R.T.: 29.138 min
Delta R.T.: -0.003 min
Response: 35128392
Conc: 23.36 ug/mL M4



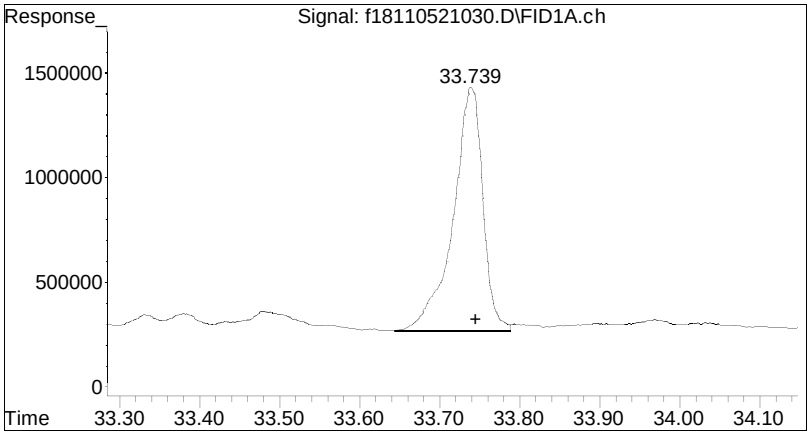
#20 n-Eicosane (C20)

R.T.:	30.740 min
Delta R.T.:	-0.005 min
Response:	35757625
Conc:	23.45 ug/mL M4



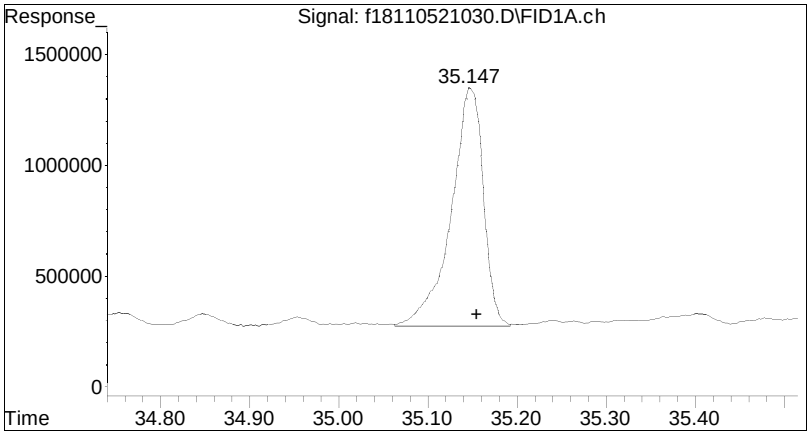
#21 n-Heneicosane (C21)

R.T.: 32.273 min
Delta R.T.: -0.003 min
Response: 30929621
Conc: 20.18 ug/mL M4



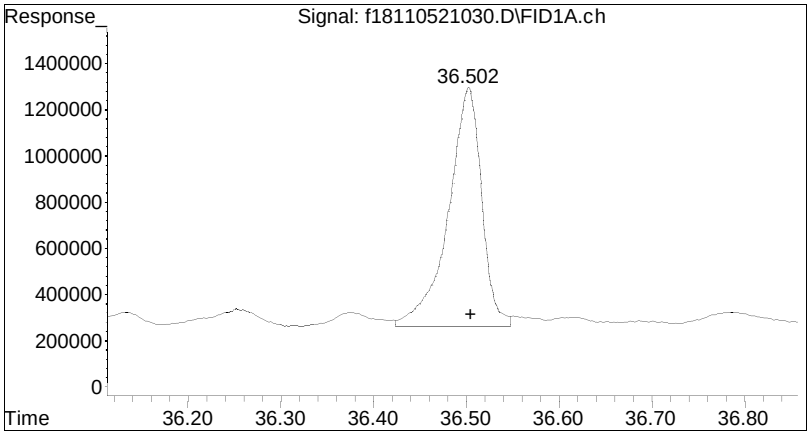
#22 n-Docosane (C22)

R.T.:	33.739 min
Delta R.T.:	-0.006 min
Response:	29533116
Conc:	19.09 ug/mL M4



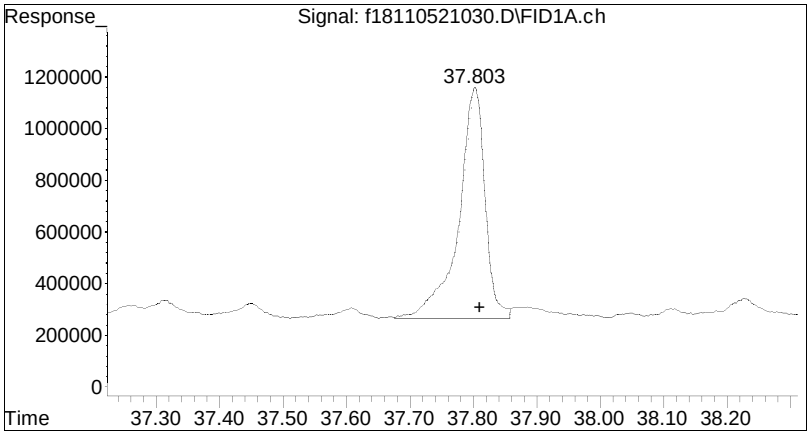
#23 n-Tricosane (C23)

R.T.:	35.147 min
Delta R.T.:	-0.008 min
Response:	26317919
Conc:	16.87 ug/mL M4



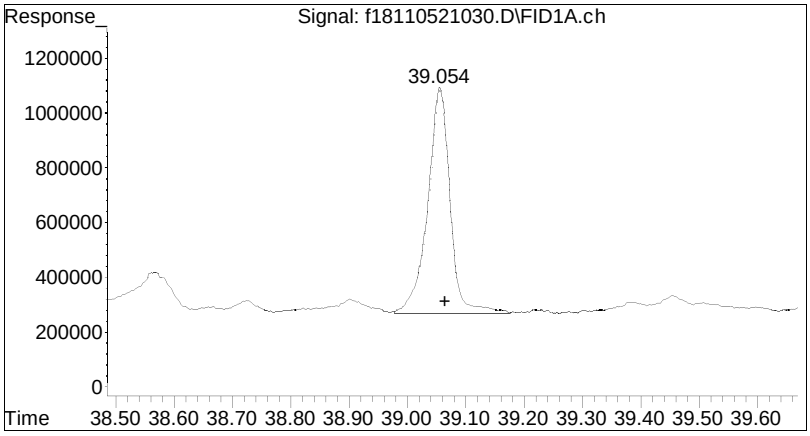
#25 n-Tetracosane (C24)

R.T.:	36.502 min
Delta R.T.:	-0.003 min
Response:	25161036
Conc:	16.38 ug/mL M4



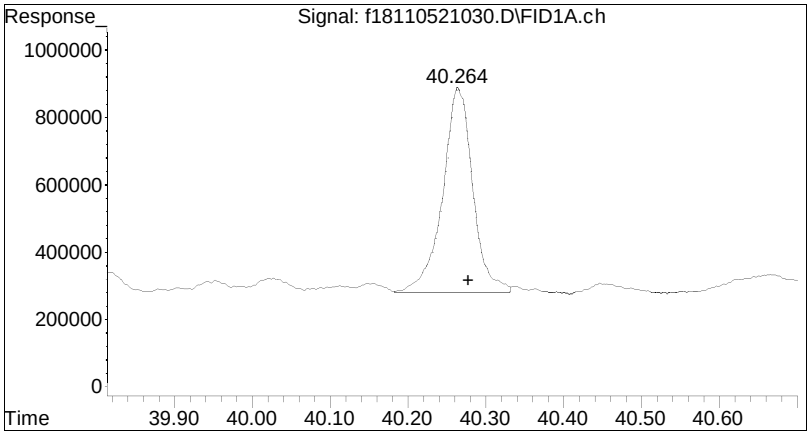
#26 n-Pentacosane (C25)

R.T.: 37.803 min
Delta R.T.: -0.008 min
Response: 25504541
Conc: 16.70 ug/mL M4



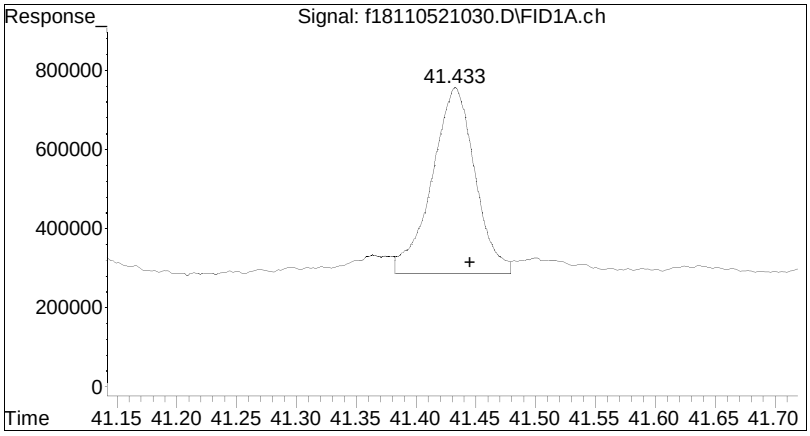
#27 n-Hexacosane (C26)

R.T.: 39.054 min
Delta R.T.: -0.010 min
Response: 21527067
Conc: 13.73 ug/mL M4



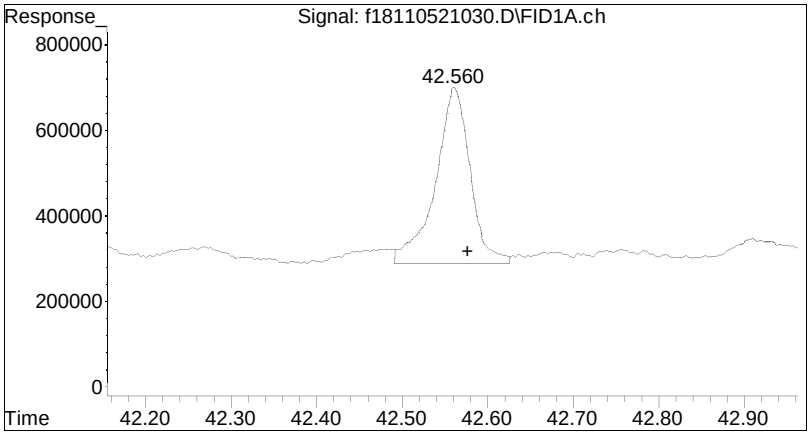
#28 n-Heptacosane (C27)

R.T.: 40.264 min
Delta R.T.: -0.014 min
Response: 16087261
Conc: 10.33 ug/mL M4



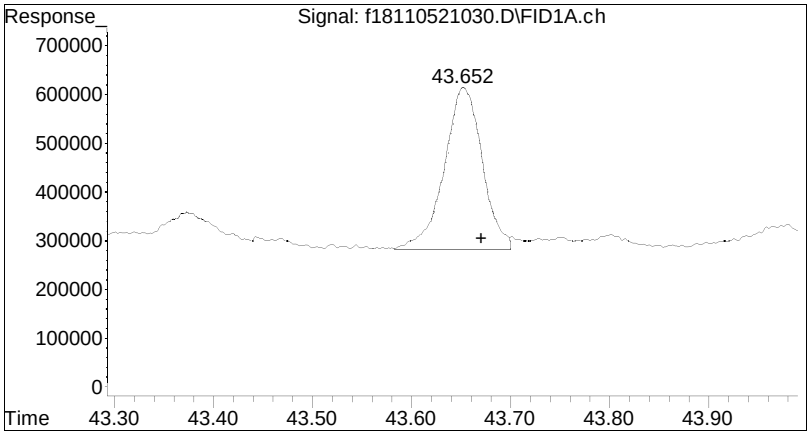
#29 n-Octacosane (C28)

R.T.: 41.433 min
Delta R.T.: -0.013 min
Response: 11622931
Conc: 7.27 ug/mL M4



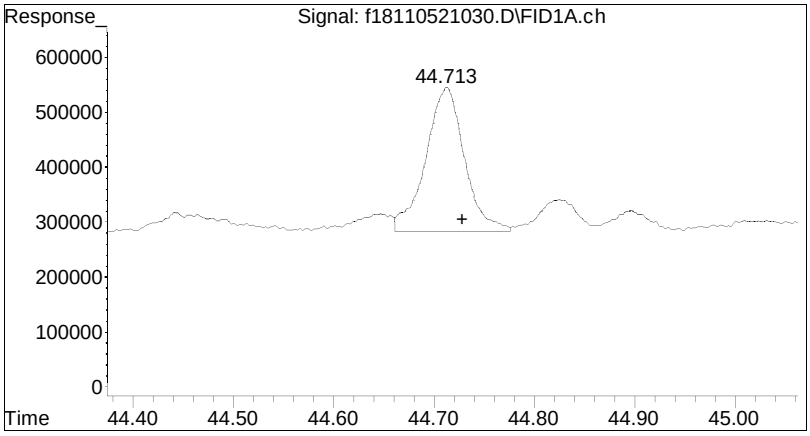
#30 n-Nonacosane (C29)

R.T.: 42.560 min
Delta R.T.: -0.017 min
Response: 11433057
Conc: 7.21 ug/mL M4



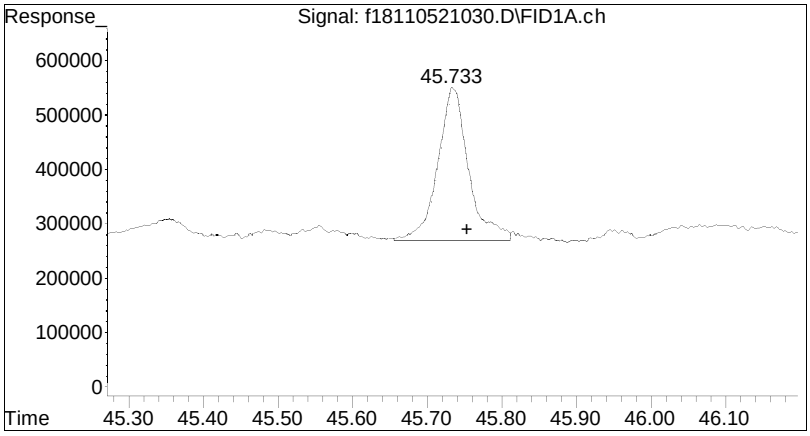
#31 n-Triacontane (C30)

R.T.:	43.652 min
Delta R.T.:	-0.019 min
Response:	8820027
Conc:	5.57 ug/mL M4



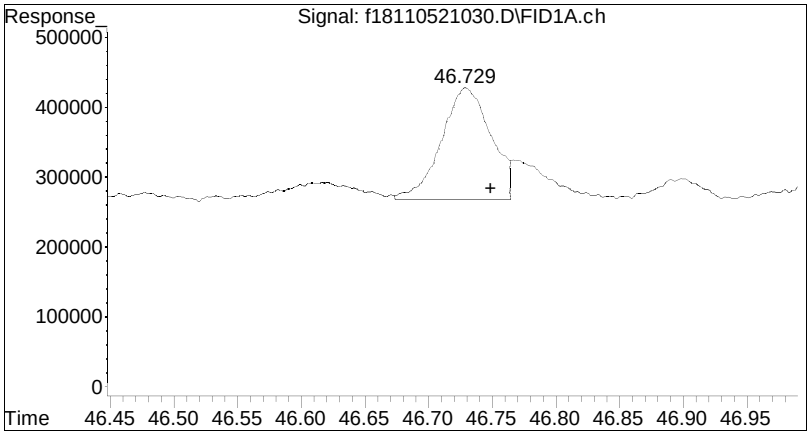
#32 n-Hentriacontane (C31)

R.T.:	44.713 min
Delta R.T.:	-0.016 min
Response:	6862089
Conc:	4.50 ug/mL M4



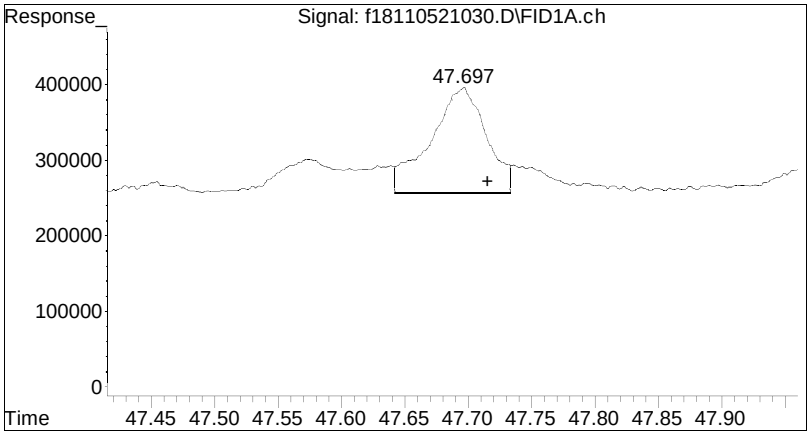
#33 n-Dotriacontane (C32)

R.T.:	45.733 min
Delta R.T.:	-0.021 min
Response:	7901312
Conc:	5.00 ug/mL M4



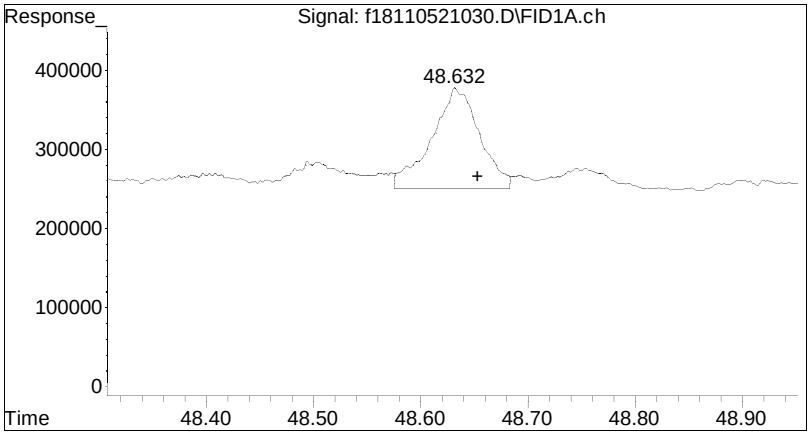
#34 n-Tritriacontane (C33)

R.T.:	46.729 min
Delta R.T.:	-0.020 min
Response:	4292651
Conc:	2.82 ug/mL M4



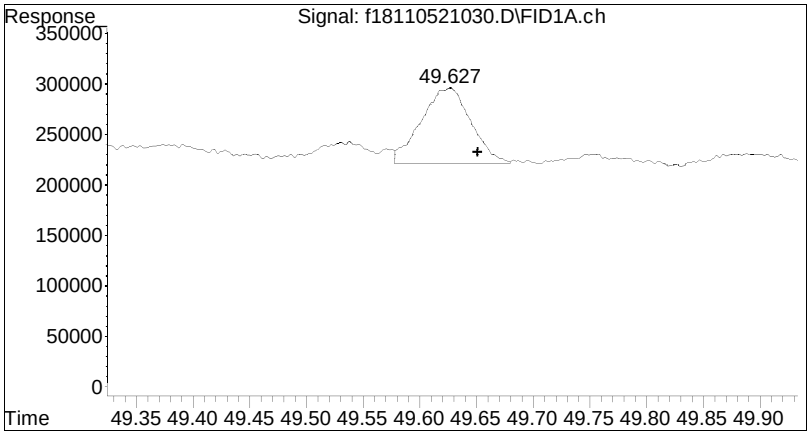
#35 n-tetratriacontane (C34)

R.T.:	47.697 min
Delta R.T.:	-0.019 min
Response:	4200747
Conc:	2.80 ug/mL M4



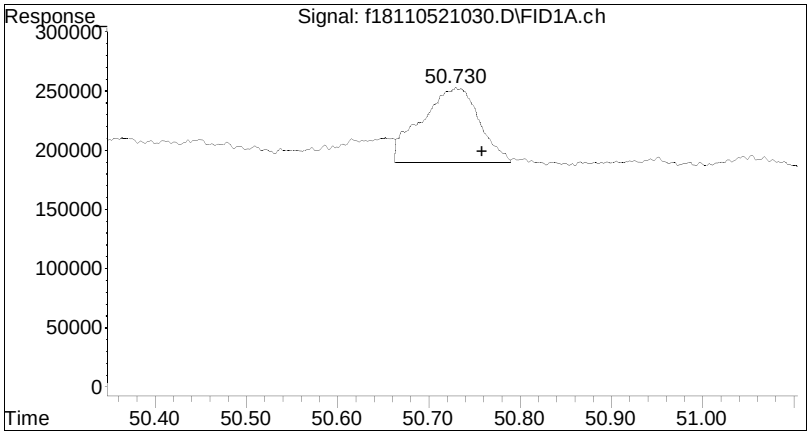
#36 n-Pentatriacontane (C35)

R.T.:	48.632 min
Delta R.T.:	-0.021 min
Response:	3830113
Conc:	2.70 ug/mL M4



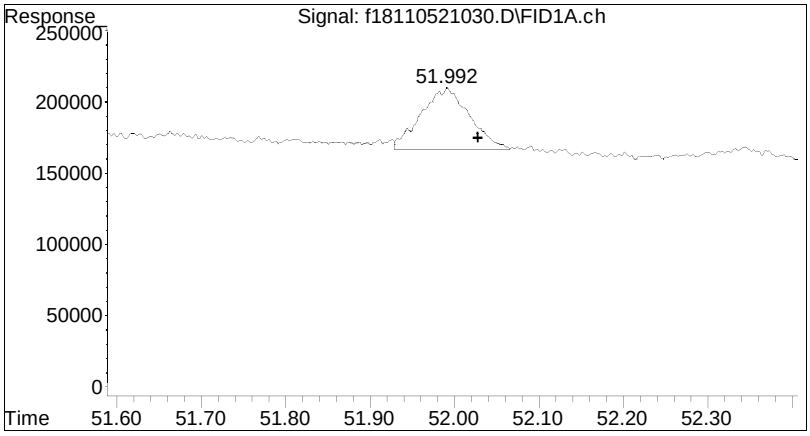
#37 n-Hexatriacontane (C36)

R.T.:	49.627 min
Delta R.T.:	-0.024 min
Response:	2268318
Conc:	1.39 ug/mL M4



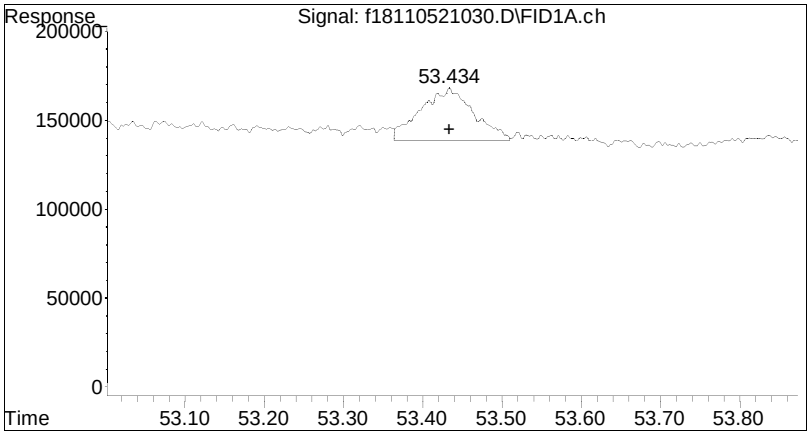
#38 n-Heptatriacontane (C37)

R.T.:	50.730 min
Delta R.T.:	-0.029 min
Response:	2747563
Conc:	1.86 ug/mL M4



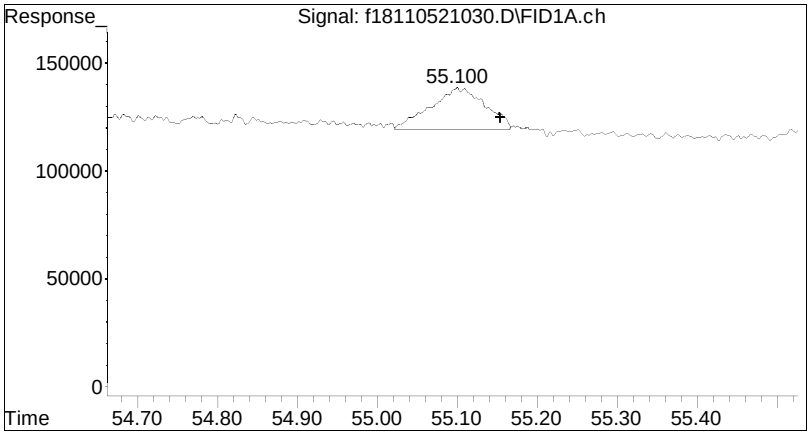
#39 n-Octatriacontane (C38)

R.T.:	51.992 min
Delta R.T.:	-0.036 min
Response:	1679583
Conc:	1.13 ug/mL M4



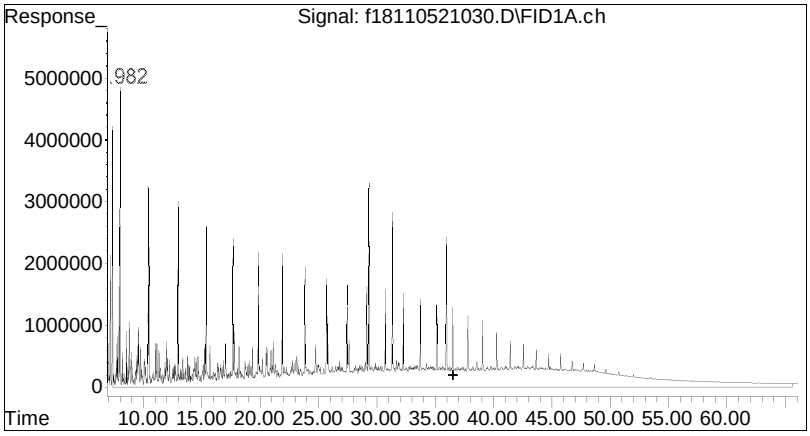
#40 n-Nonatriacontane (C39)

R.T.:	53.434 min
Delta R.T.:	0.000 min
Response:	1346165
Conc:	0.92 ug/mL M4



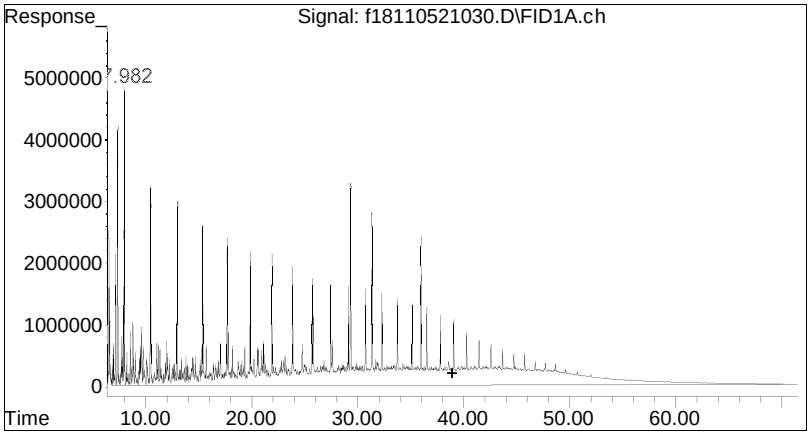
#41 n-Tetracontane (C40)

R.T.:	55.100 min
Delta R.T.:	-0.053 min
Response:	904981
Conc:	0.62 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.572 min
Delta R.T.: 0.000 min
Response: 8416642290
Conc: 5662.84 ug/mL m



#46 Total Resolved Hydrocarbo

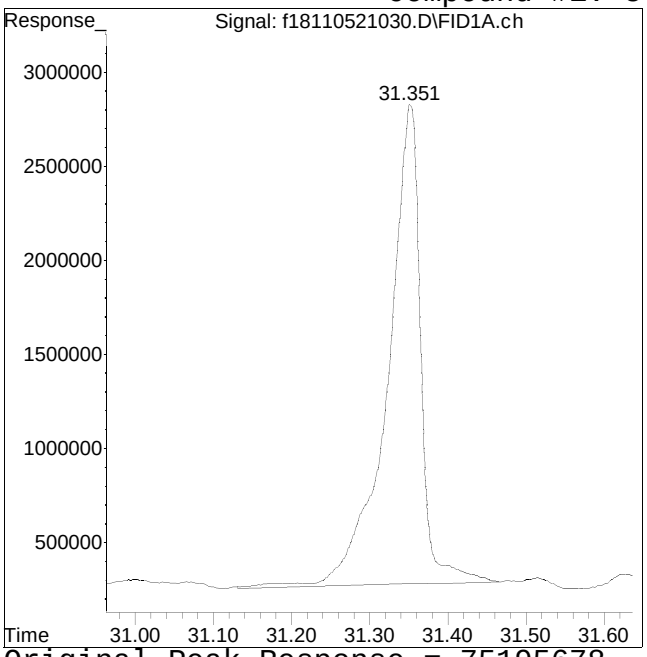
R.T.: 38.937 min
Delta R.T.: 0.000 min
Response: 2762229924
Conc: 1858.47 ug/mL m

Manual Integration/Negative Proof Report

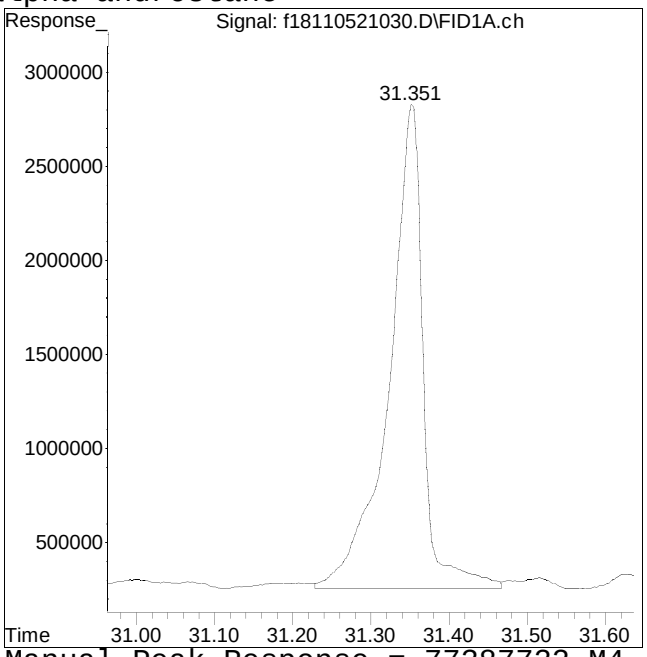
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #1: 5-alpha-androstane



Original Peak Response = 75195678



Manual Peak Response = 77387732 M4

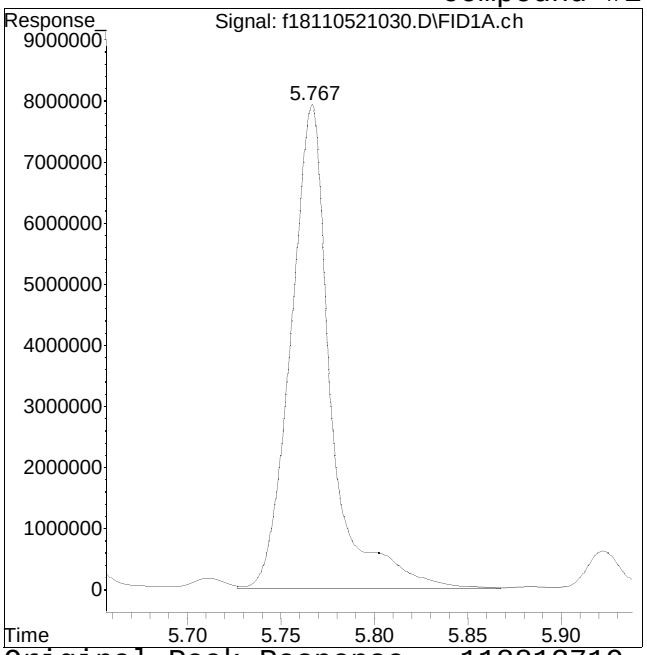
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

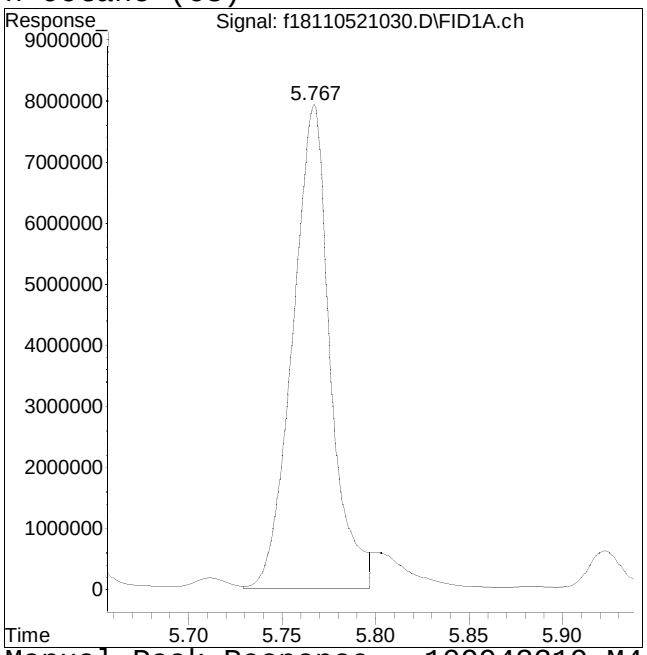
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #2: n-Octane (C8)



Original Peak Response = 118813719



Manual Peak Response = 109943319 M4

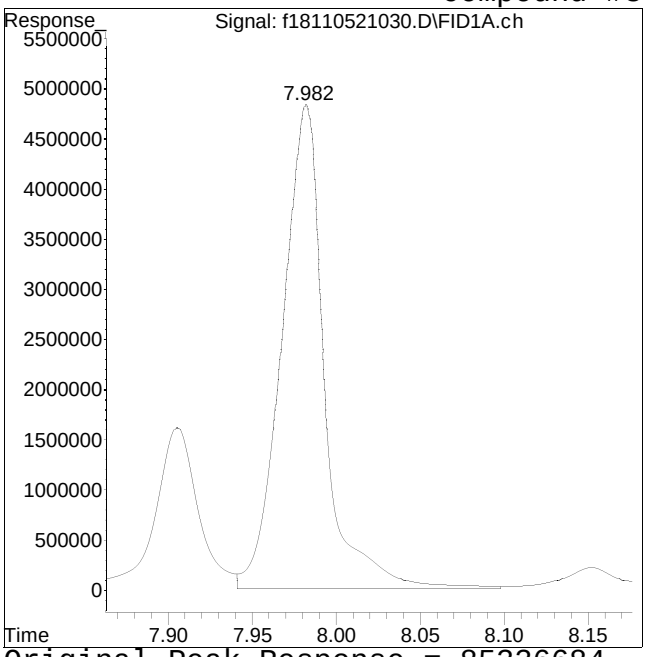
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

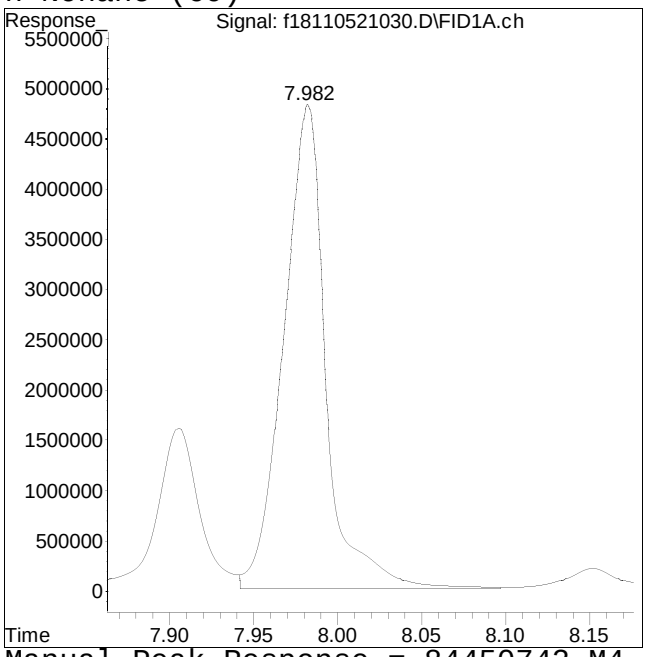
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #3: n-Nonane (C9)



Original Peak Response = 85336684



Manual Peak Response = 84450742 M4

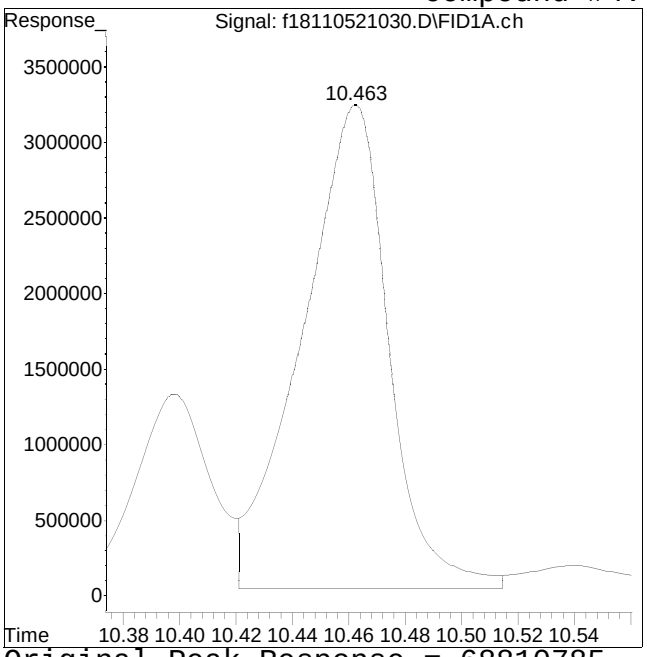
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

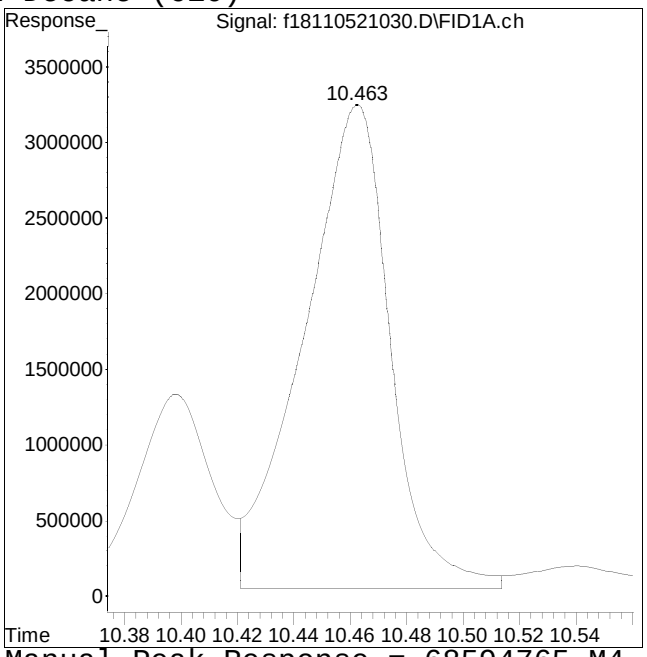
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #4: n-Decane (C10)



Original Peak Response = 68810785



Manual Peak Response = 68594765 M4

M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
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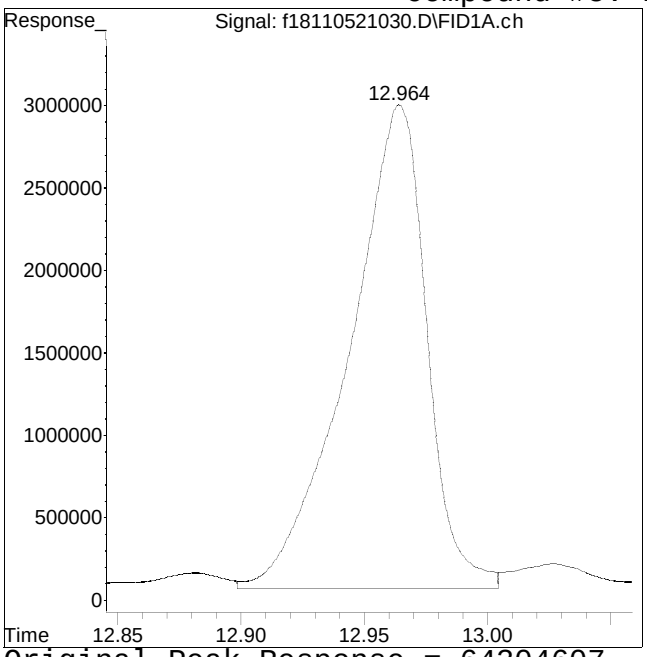
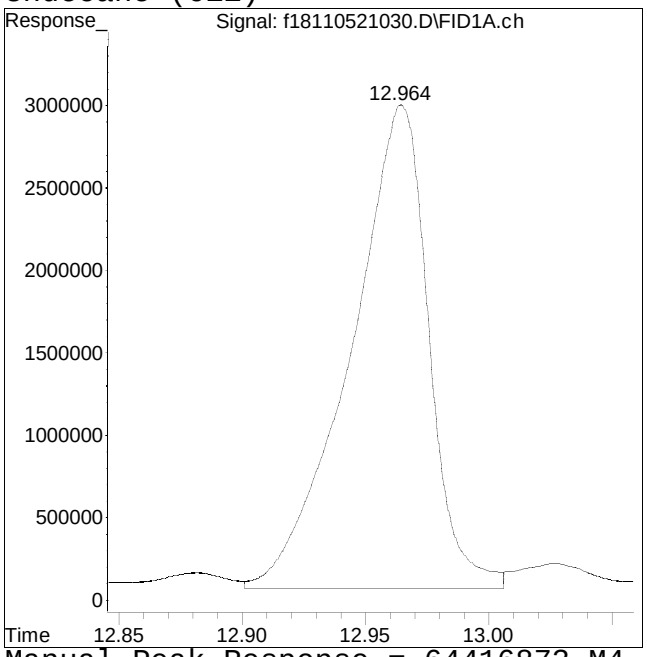
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #5: n-Undecane (C11)



Original Peak Response = 64304607



Manual Peak Response = 64416873 M4

M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
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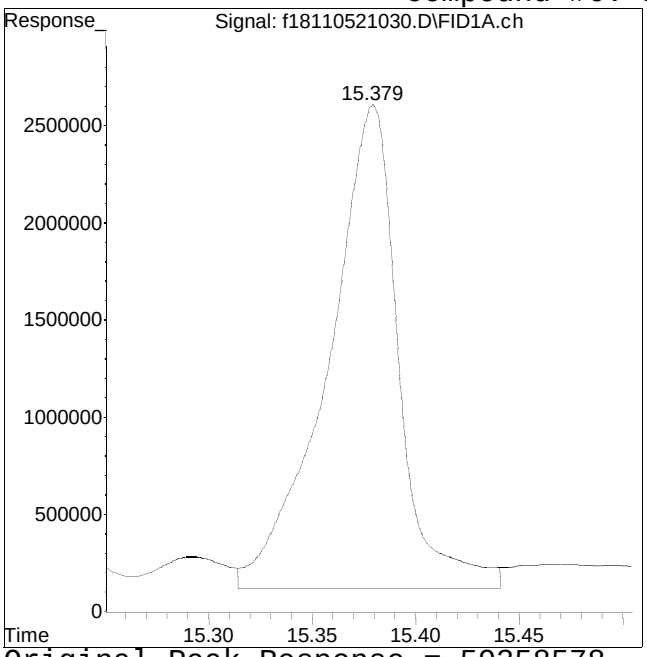
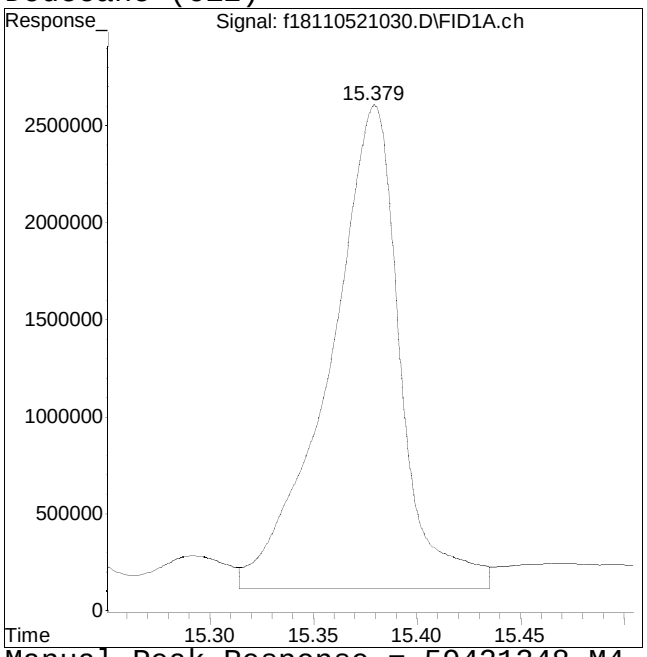
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #6: n-Dodecane (C12)



Original Peak Response = 59358578



Manual Peak Response = 59421348 M4

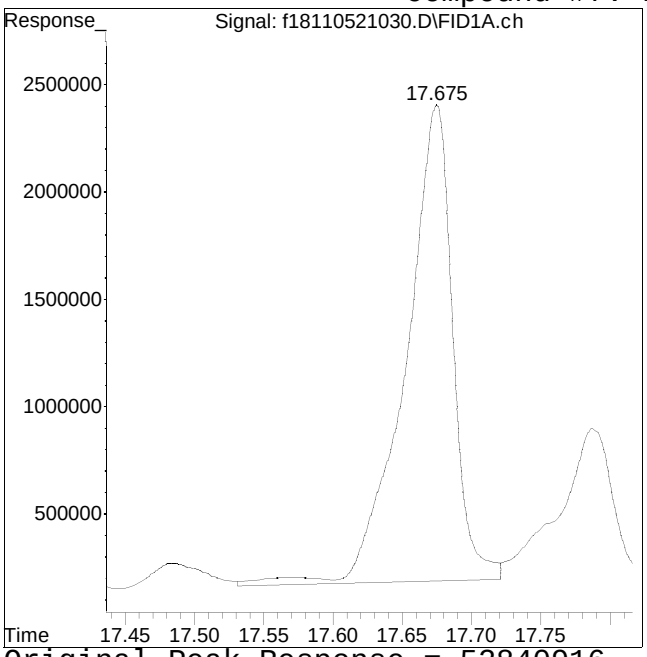
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

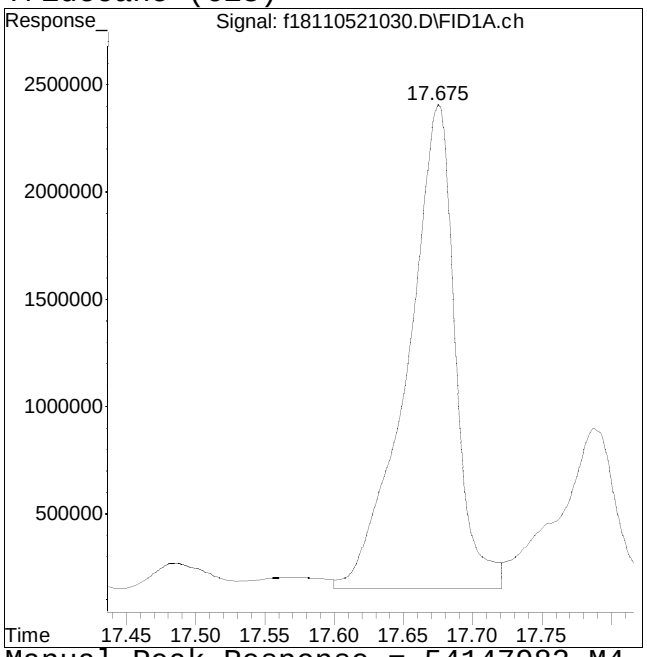
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #7: n-Tridecane (C13)



Original Peak Response = 52840916



Manual Peak Response = 54147982 M4

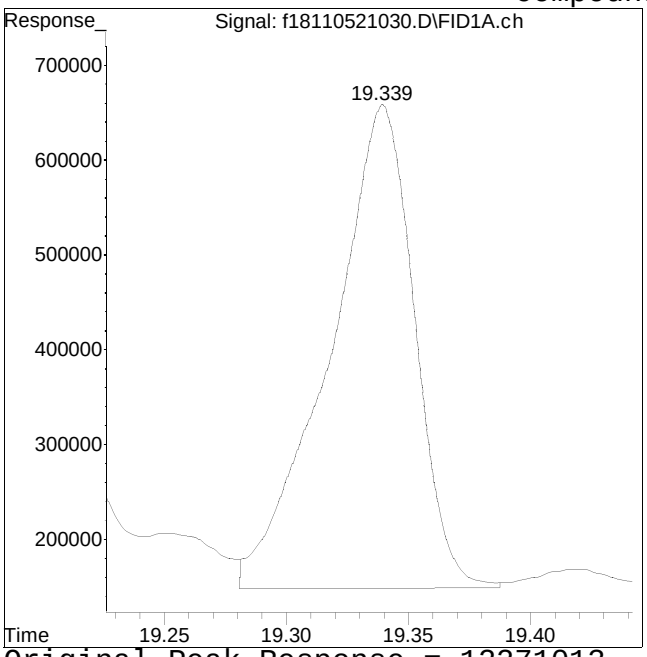
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

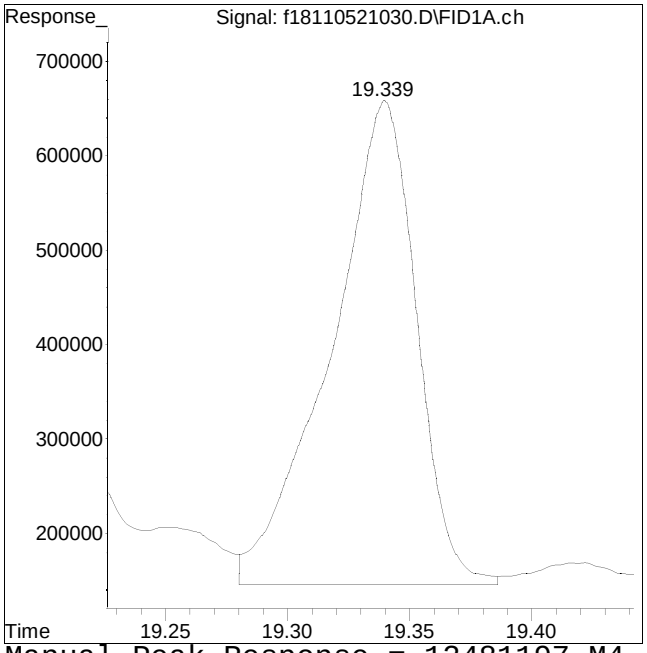
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #8: 1380



Original Peak Response = 12271013



Manual Peak Response = 12481197 M4

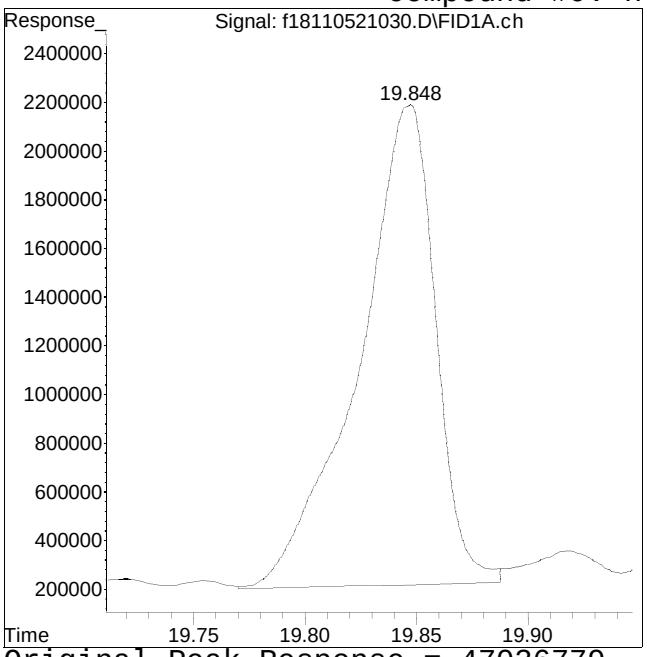
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

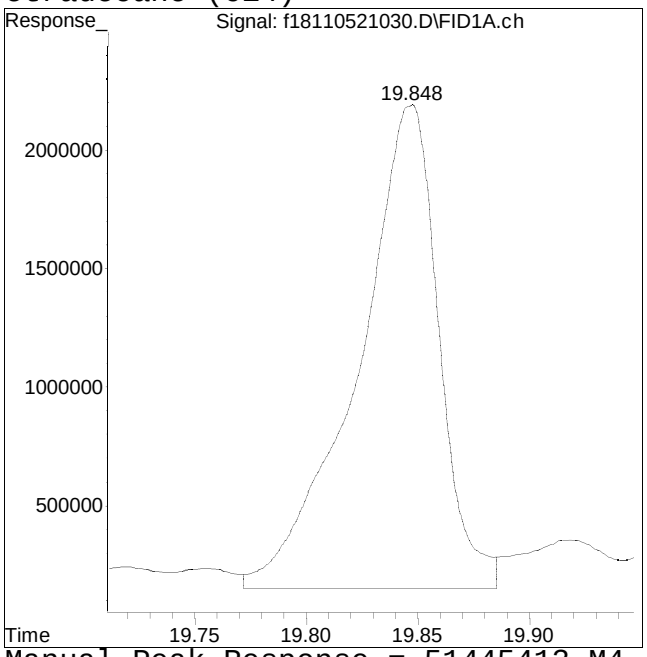
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #9: n-Tetradecane (C14)



Original Peak Response = 47036779



Manual Peak Response = 51445413 M4

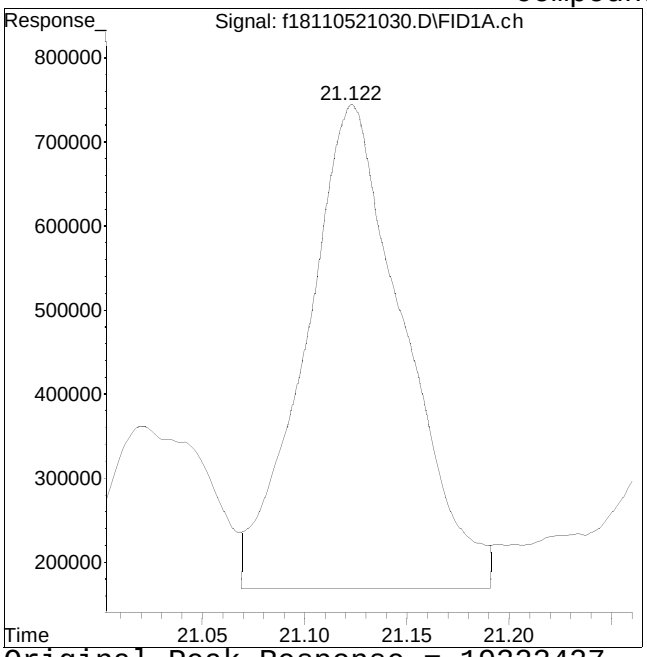
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

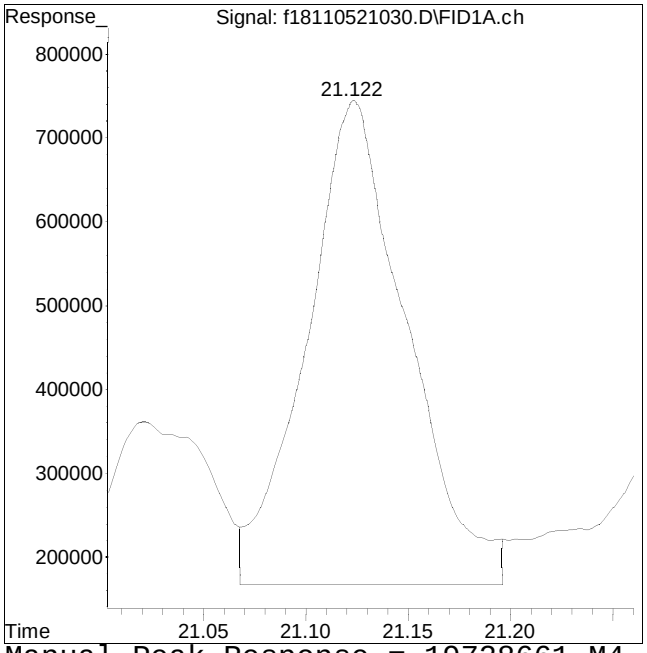
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #10: 1470



Original Peak Response = 19323427



Manual Peak Response = 19728661 M4

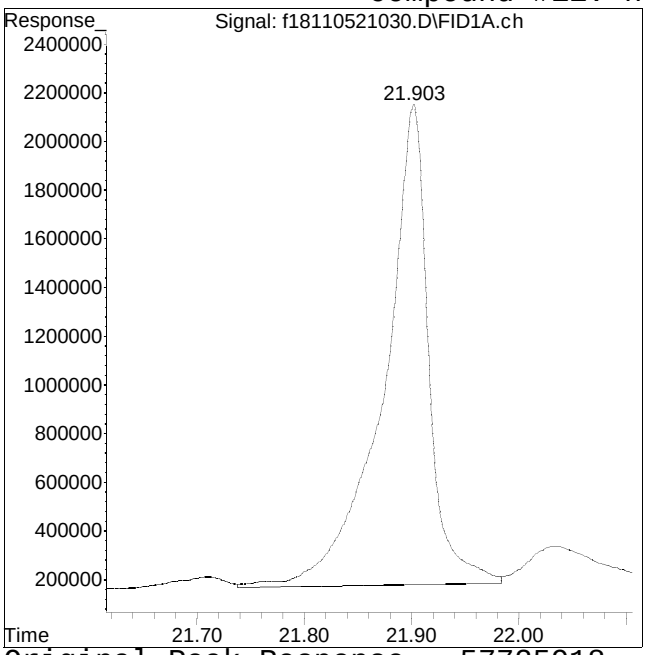
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

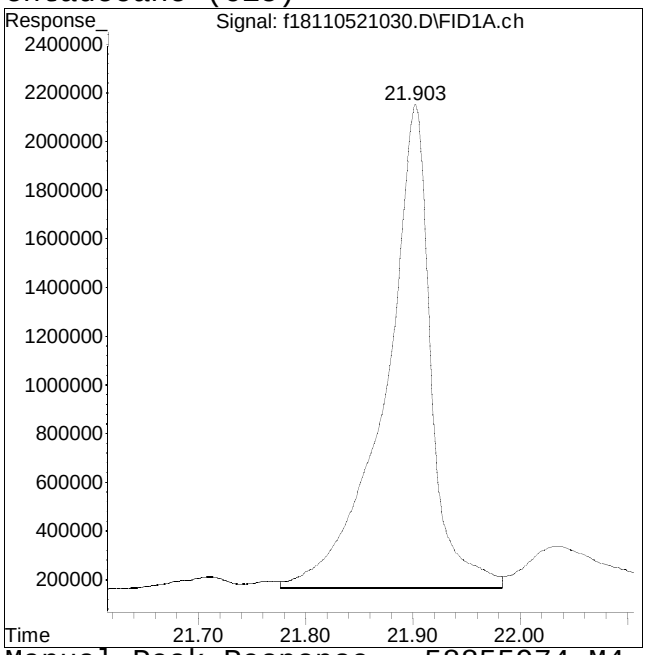
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #11: n-Pentadecane (C15)



Original Peak Response = 57725918



Manual Peak Response = 58855974 M4

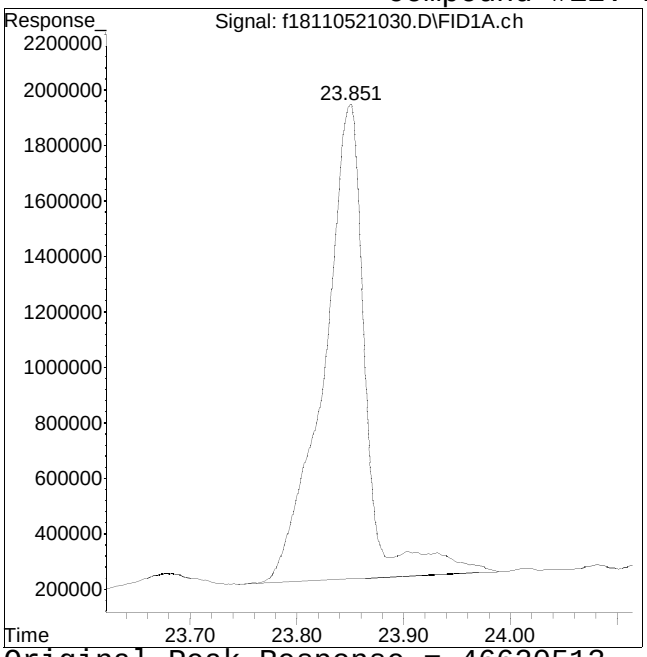
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

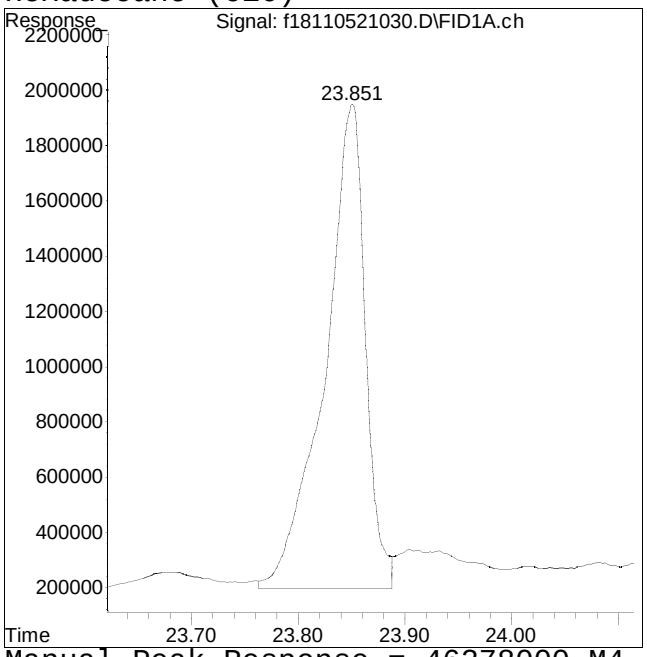
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #12: n-Hexadecane (C16)



Original Peak Response = 46620513



Manual Peak Response = 46278000 M4

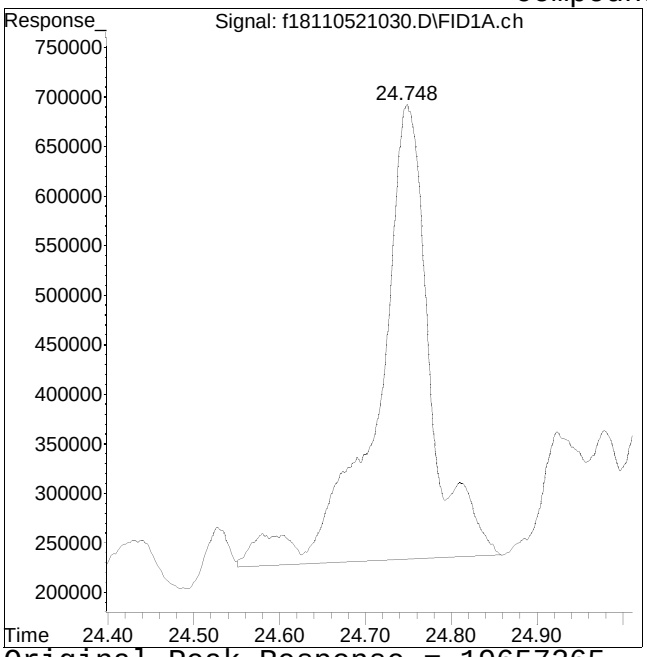
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

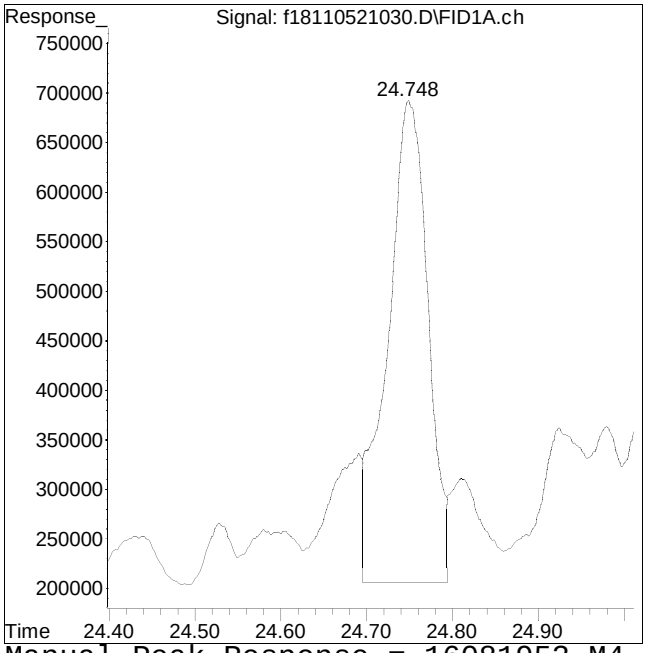
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #13: 1650



Original Peak Response = 19657265



Manual Peak Response = 16081953 M4

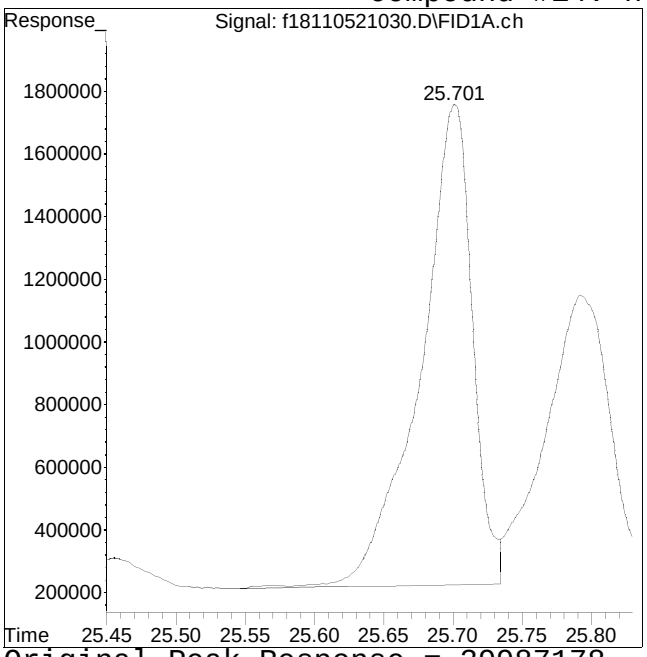
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

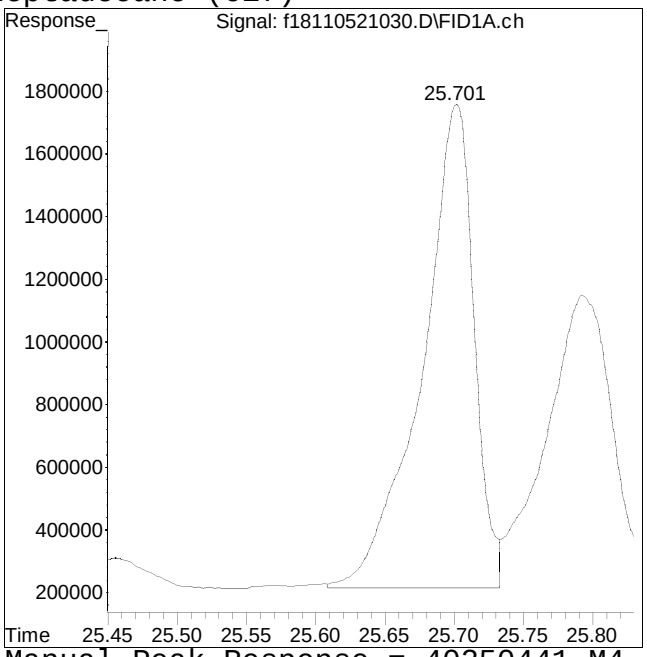
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #14: n-Heptadecane (C17)



Original Peak Response = 39987178



Manual Peak Response = 40250441 M4

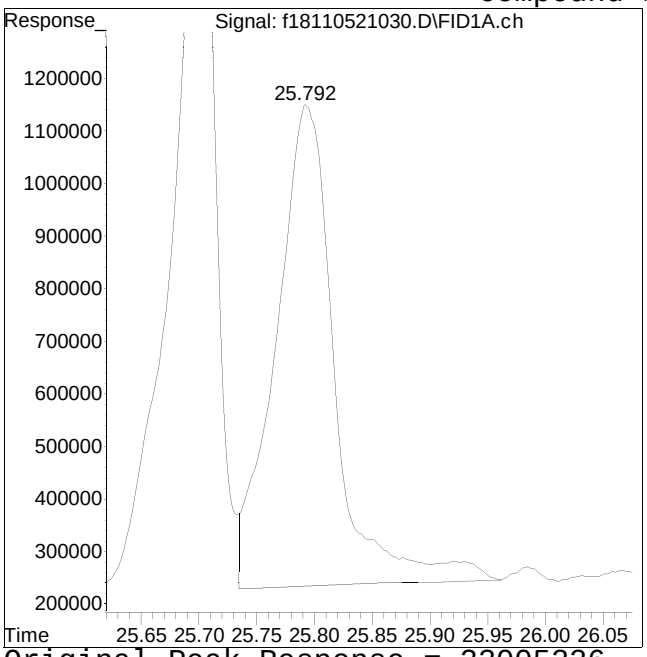
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

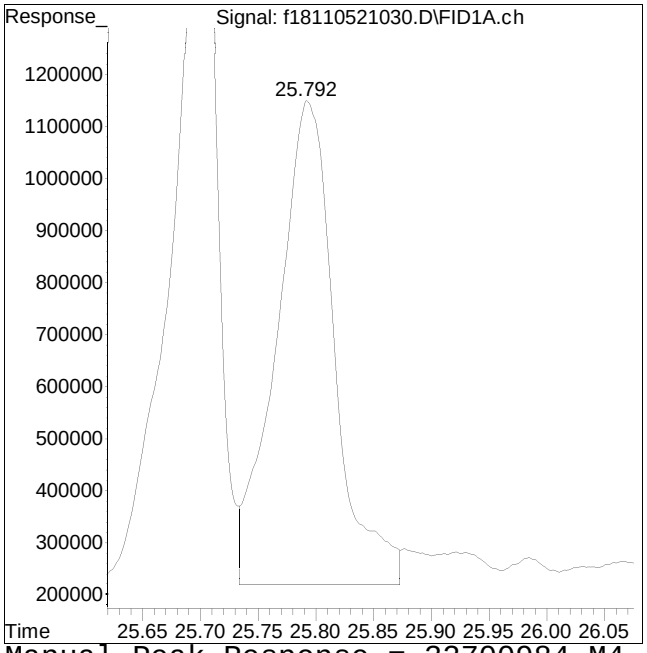
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #15: Pristane



Original Peak Response = 33005226



Manual Peak Response = 32700984 M4

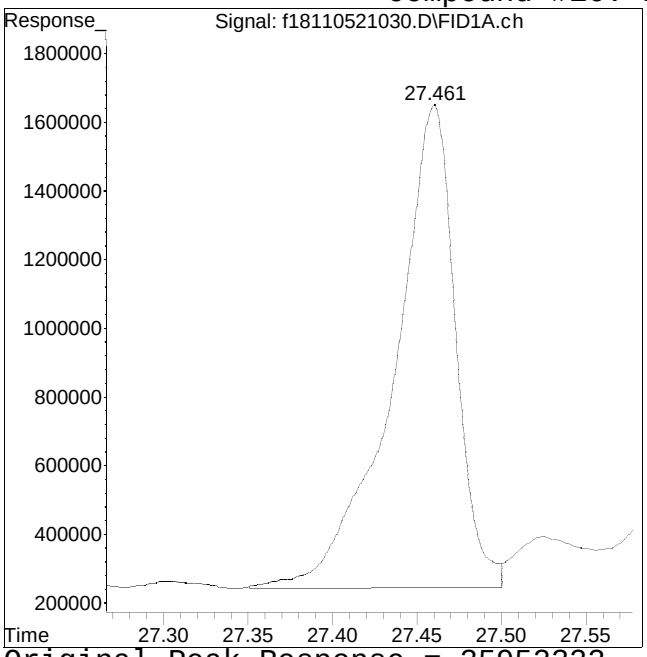
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

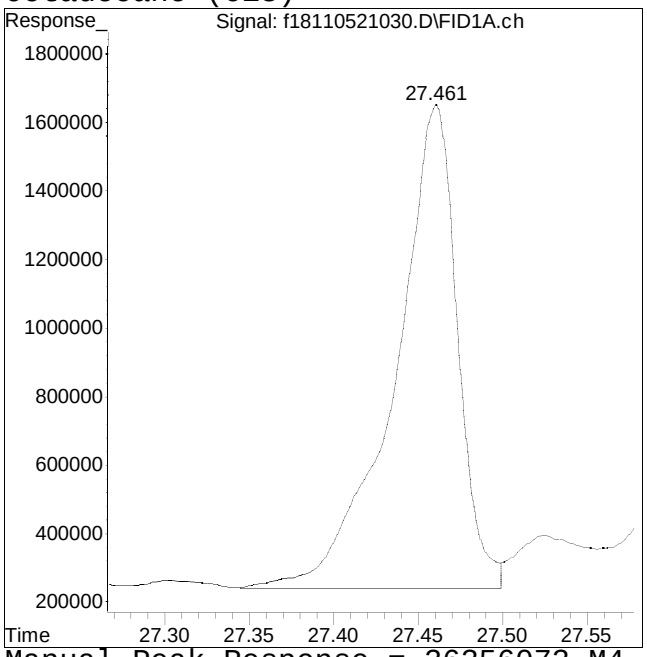
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #16: n-Octadecane (C18)



Original Peak Response = 35952322



Manual Peak Response = 36356073 M4

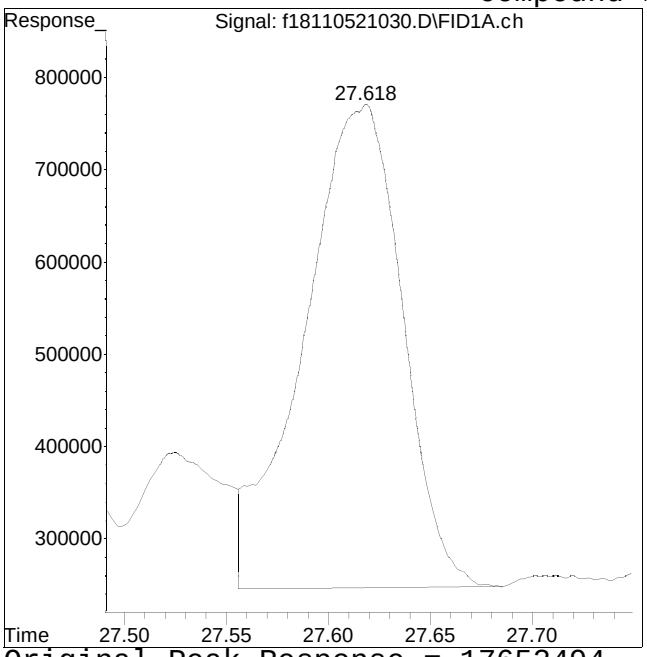
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

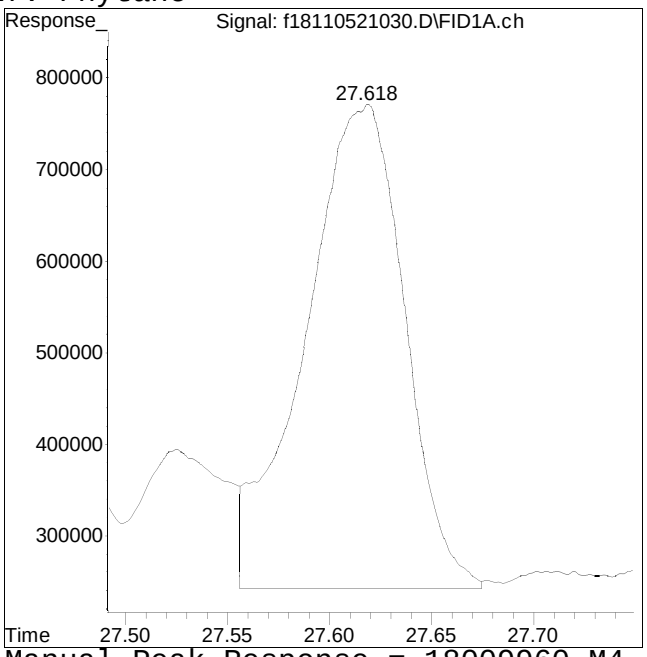
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #17: Phytane



Original Peak Response = 17652494



Manual Peak Response = 18009960 M4

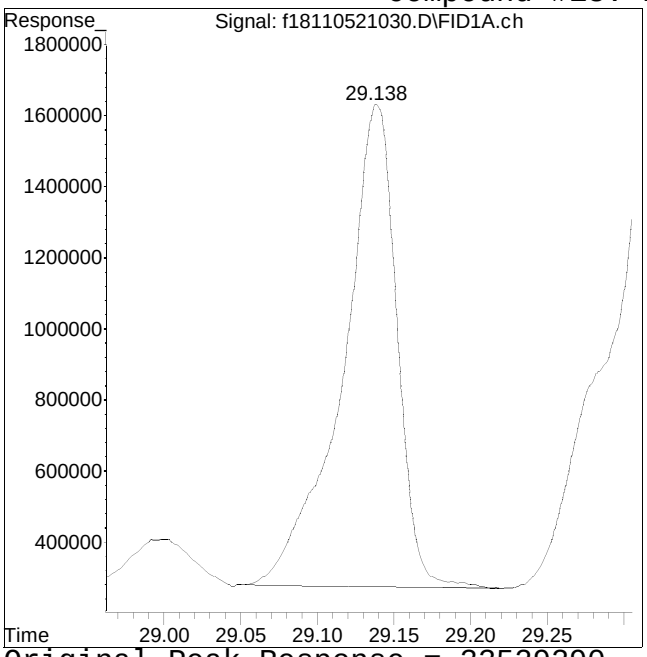
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

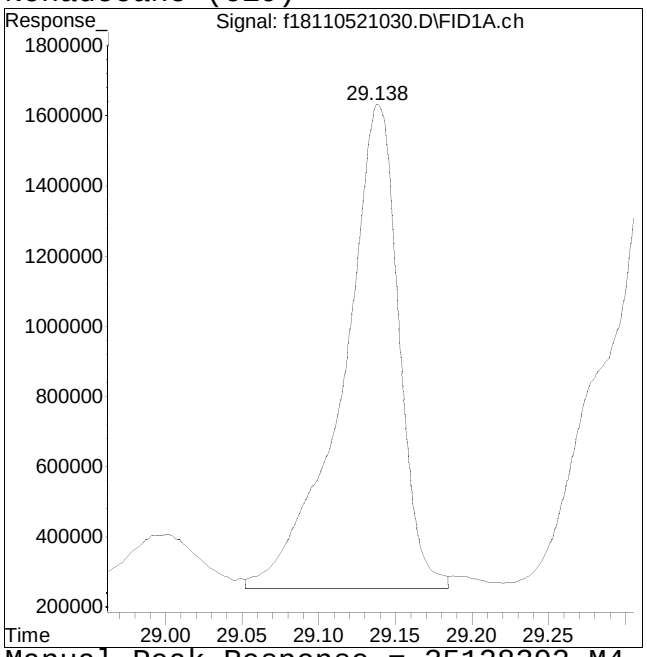
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #18: n-Nonadecane (C19)



Original Peak Response = 33529290



Manual Peak Response = 35128392 M4

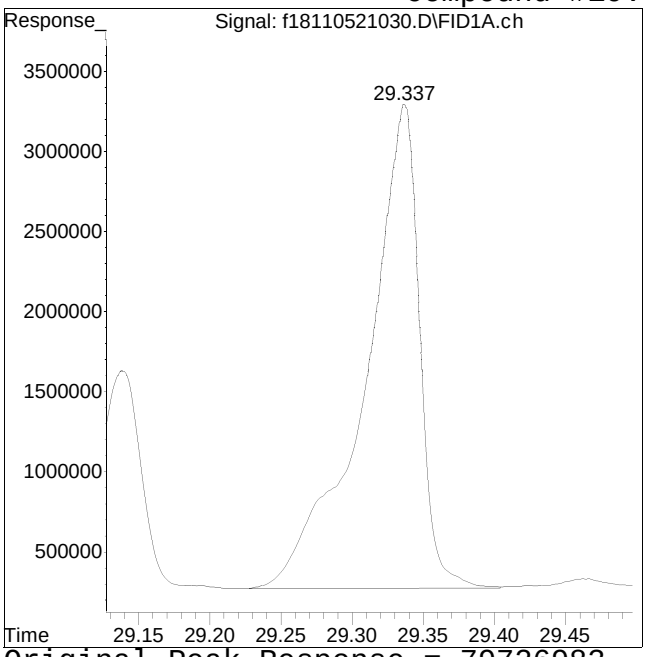
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

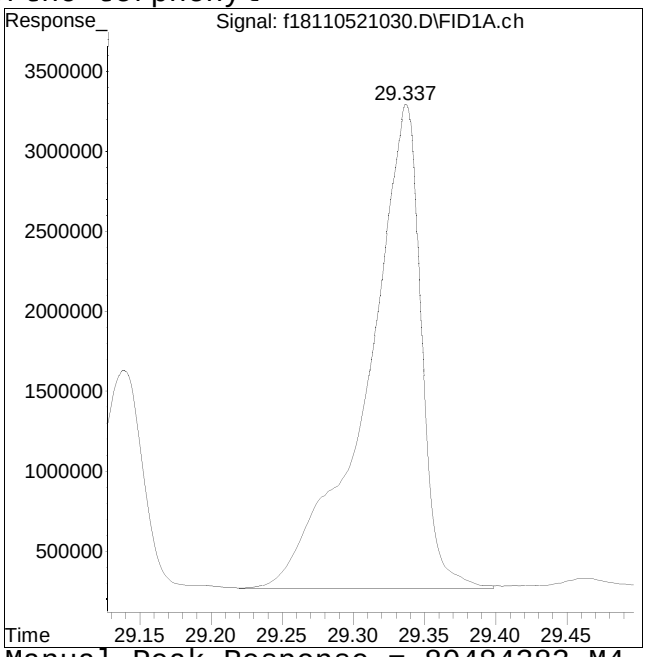
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #19: ortho-terphenyl



Original Peak Response = 79726983



Manual Peak Response = 80484383 M4

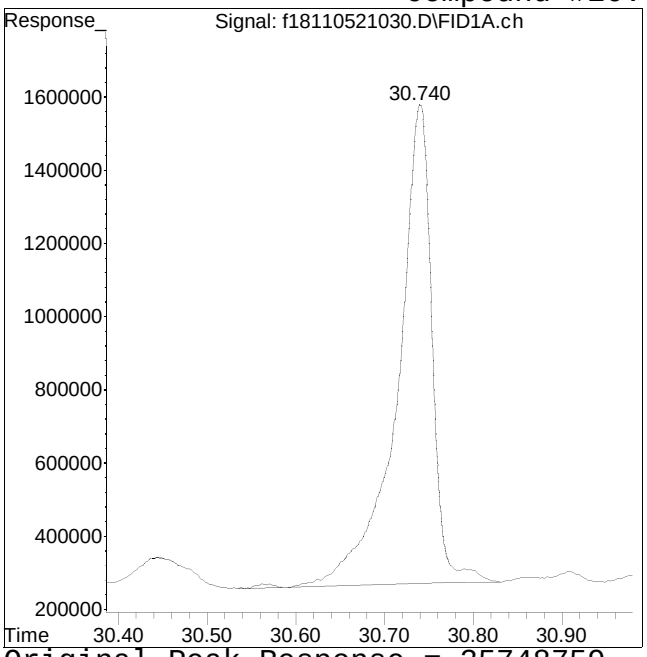
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

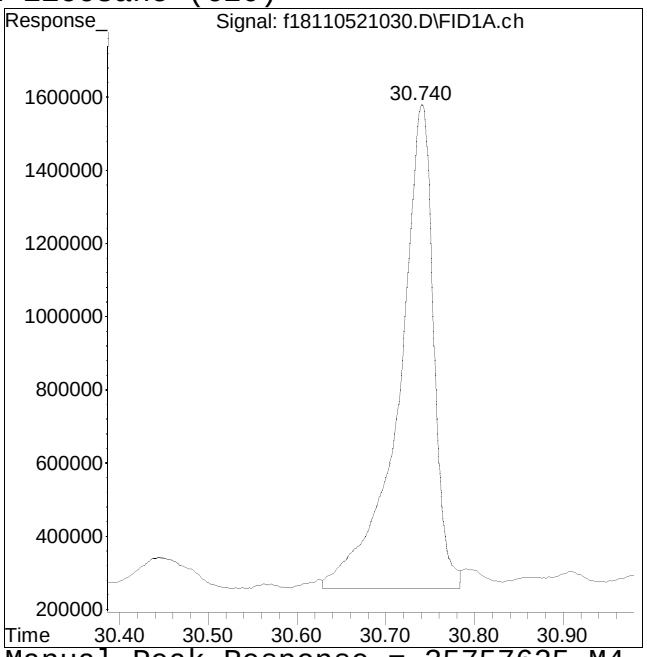
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #20: n-Eicosane (C20)



Original Peak Response = 35748759



Manual Peak Response = 35757625 M4

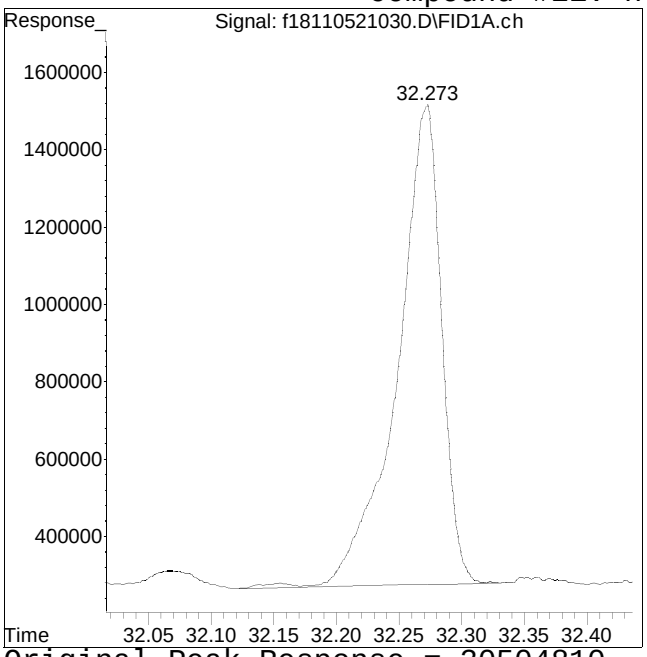
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

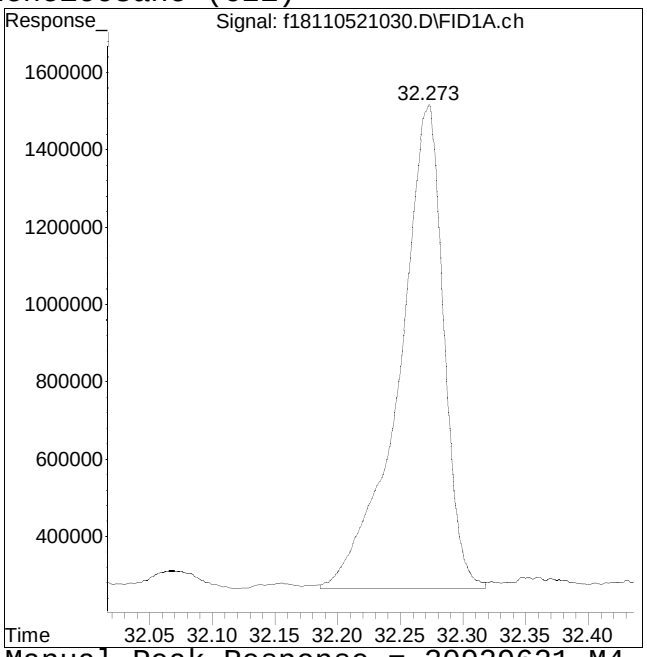
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #21: n-Heneicosane (C21)



Original Peak Response = 30504810



Manual Peak Response = 30929621 M4

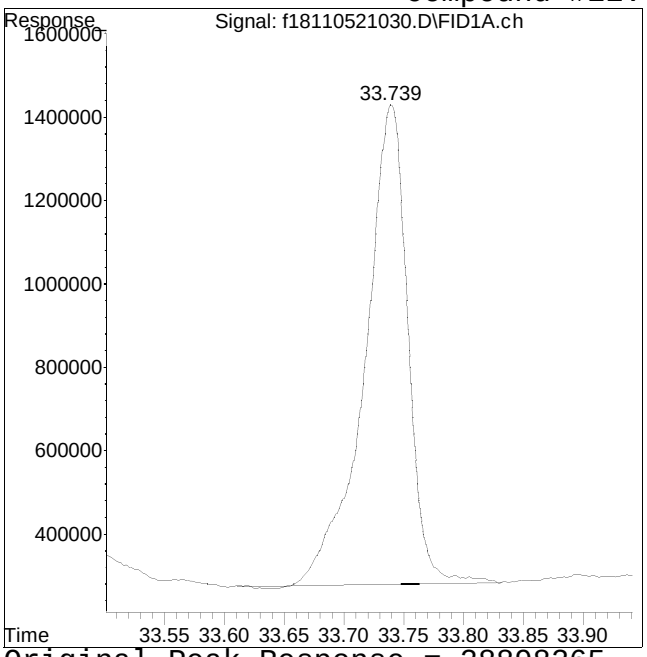
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

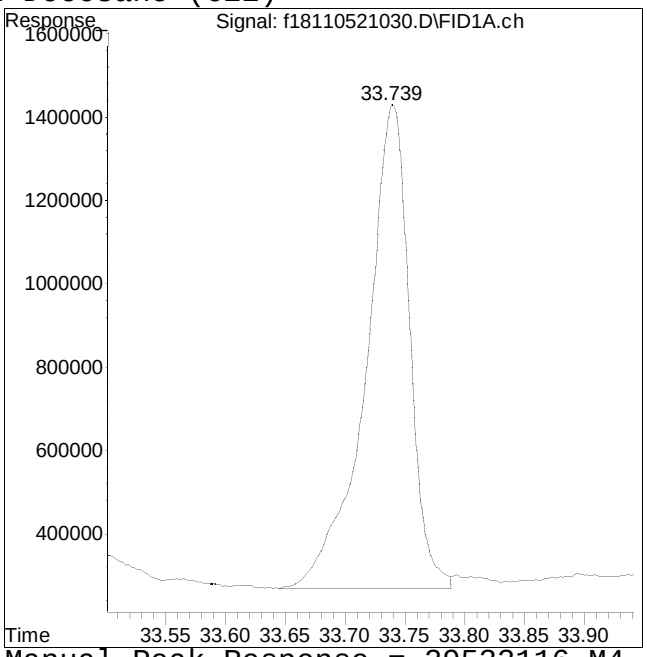
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #22: n-Docosane (C22)



Original Peak Response = 28898265



Manual Peak Response = 29533116 M4

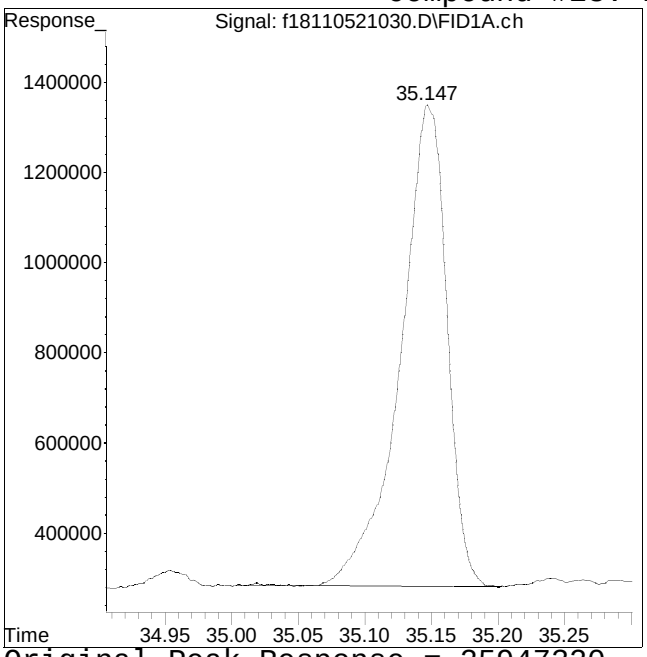
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

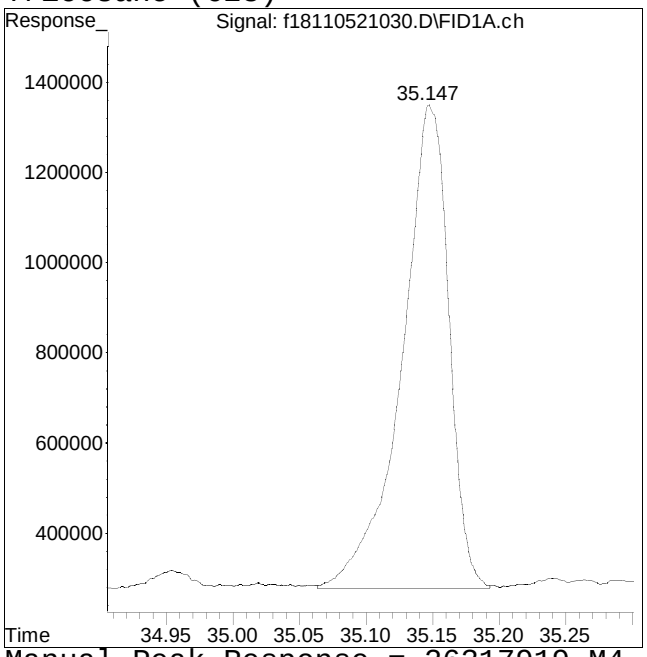
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #23: n-Tricosane (C23)



Original Peak Response = 25947320



Manual Peak Response = 26317919 M4

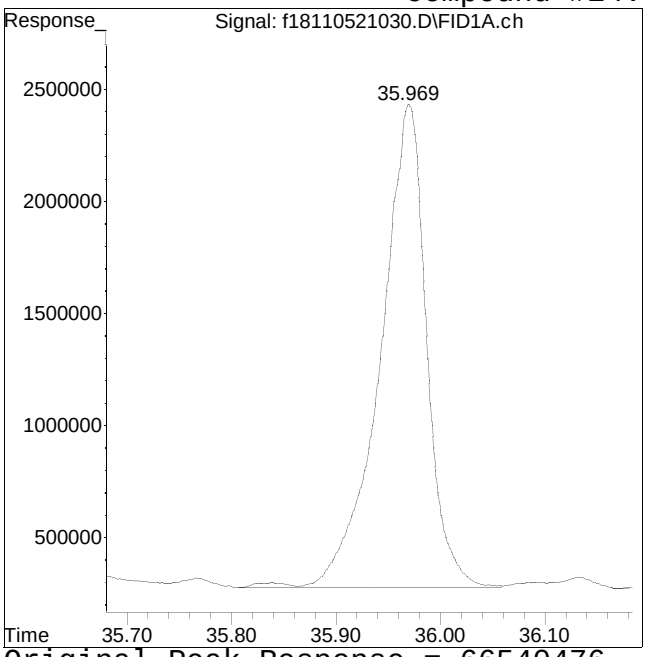
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

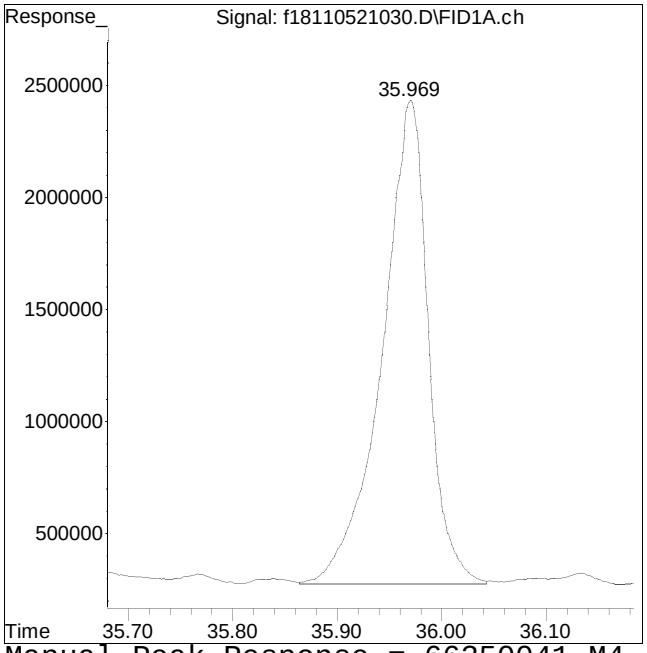
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #24: d50-Tetracosane



Original Peak Response = 66540476



Manual Peak Response = 66350041 M4

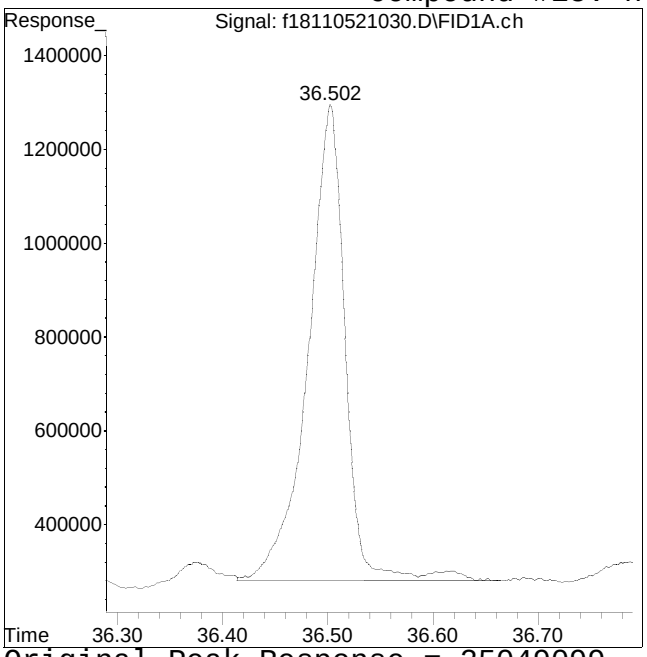
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

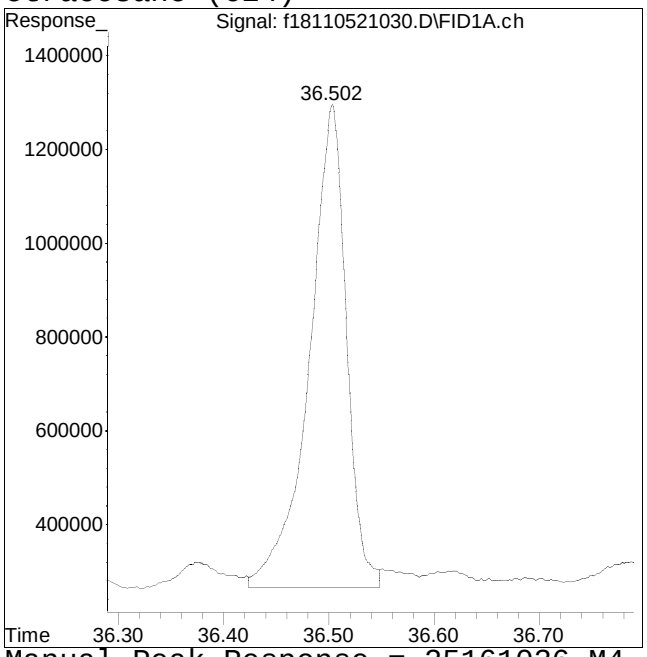
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #25: n-Tetracosane (C24)



Original Peak Response = 25049099



Manual Peak Response = 25161036 M4

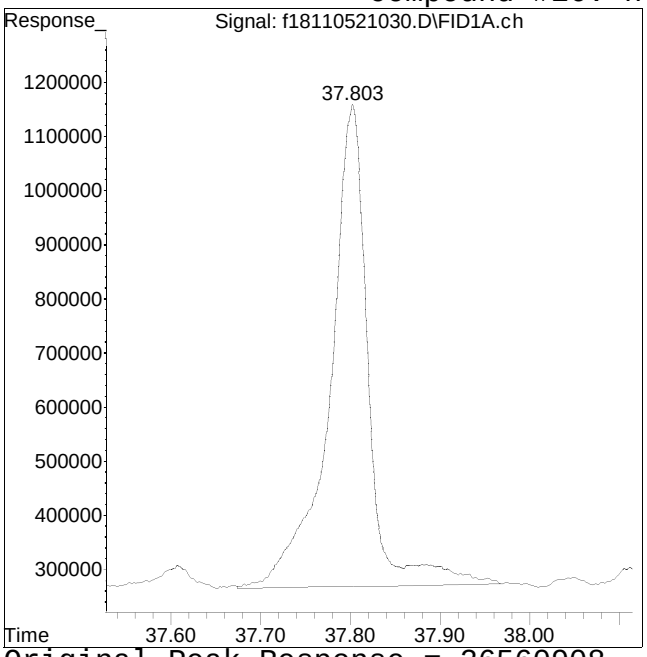
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

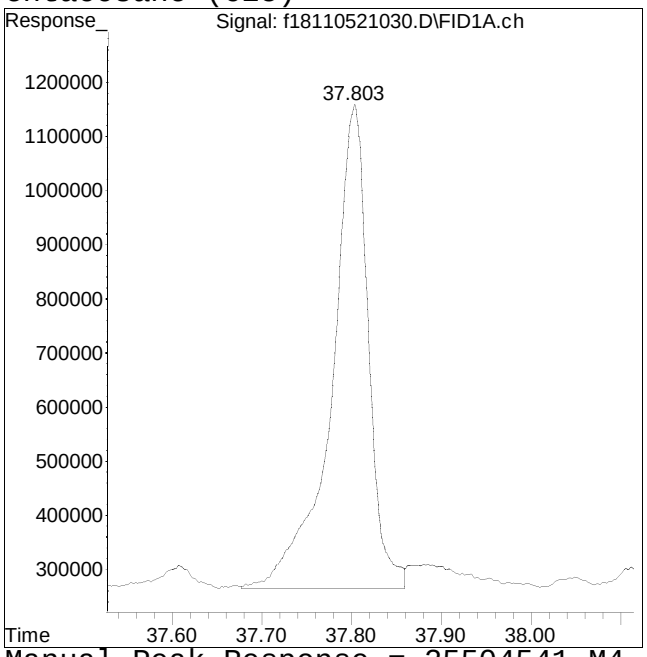
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #26: n-Pentacosane (C25)



Original Peak Response = 26560908



Manual Peak Response = 25504541 M4

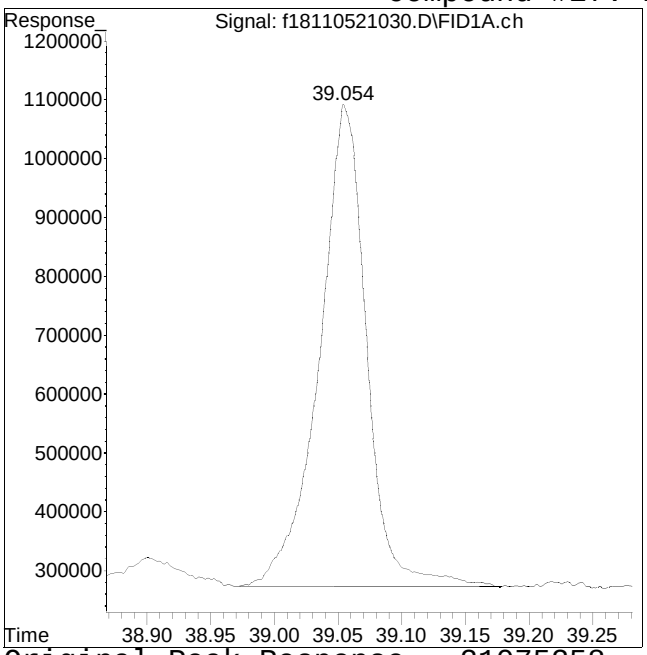
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

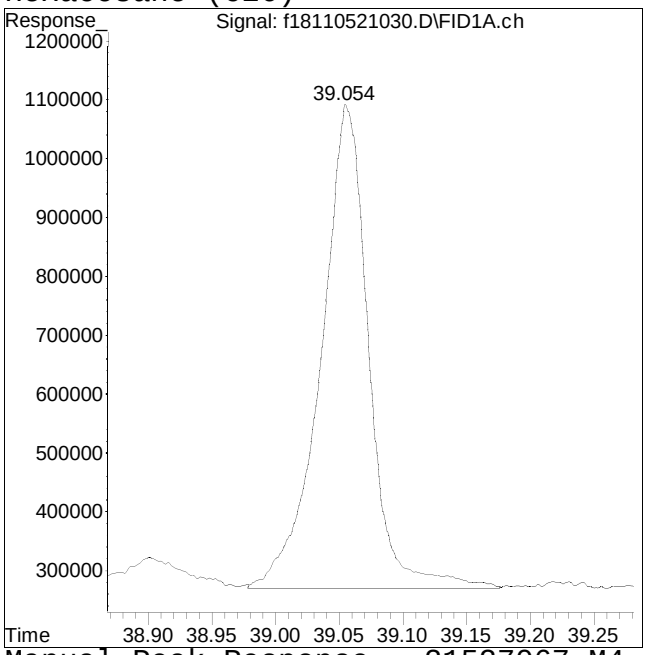
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #27: n-Hexacosane (C26)



Original Peak Response = 21075258



Manual Peak Response = 21527067 M4

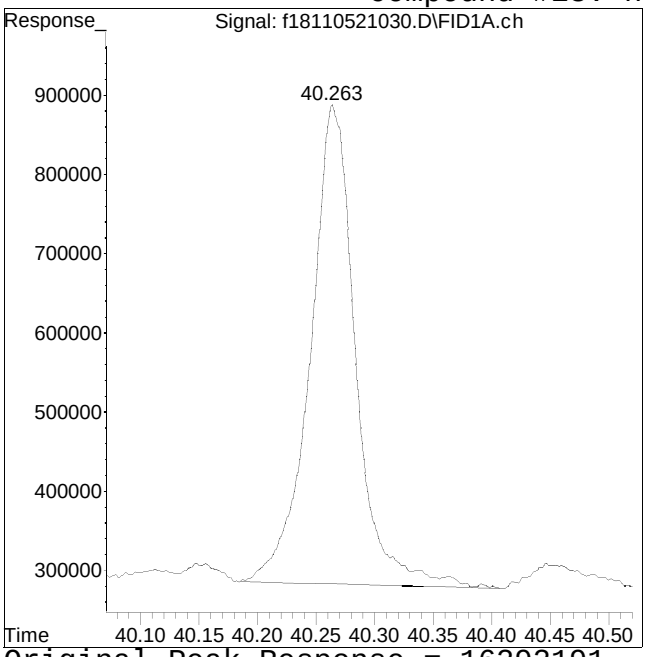
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

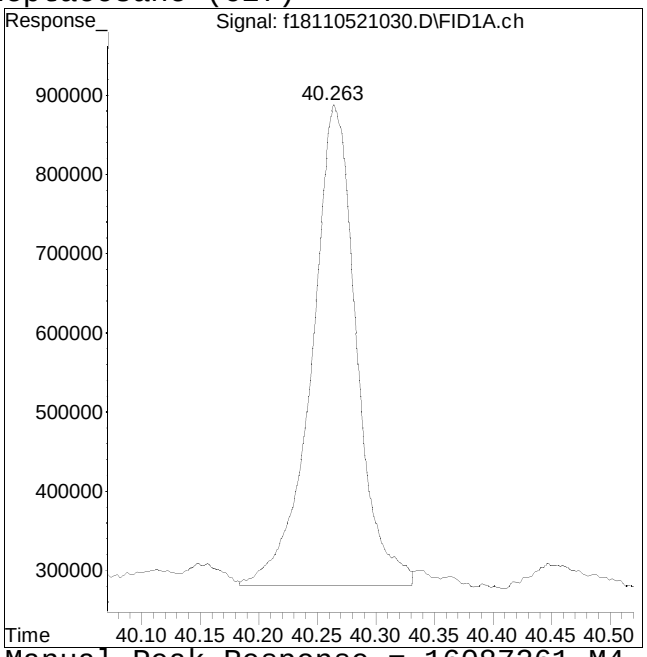
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #28: n-Heptacosane (C27)



Original Peak Response = 16292191



Manual Peak Response = 16087261 M4

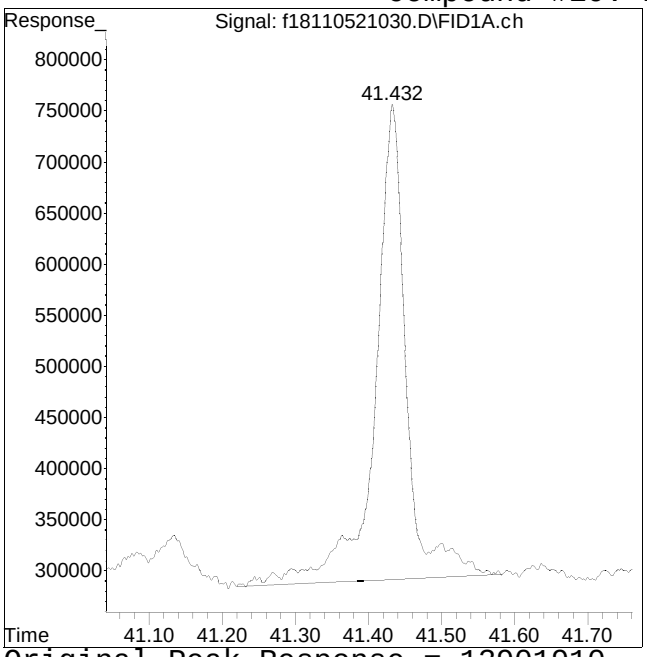
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

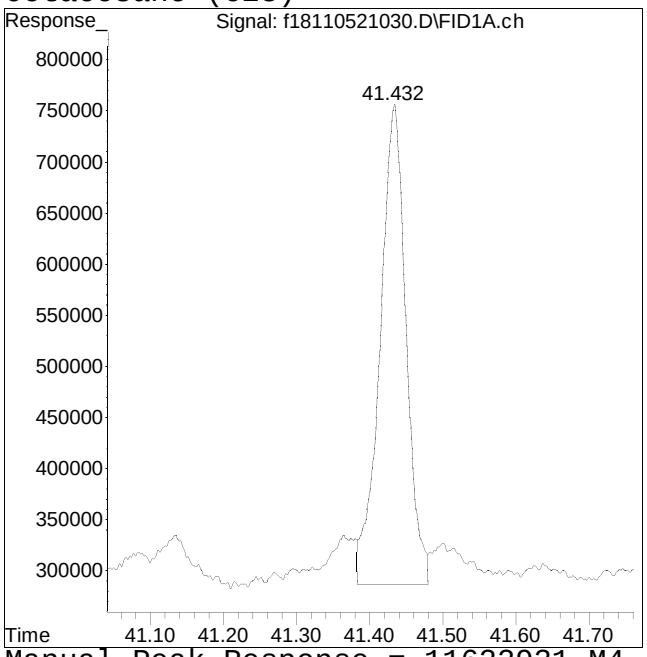
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #29: n-Octacosane (C28)



Original Peak Response = 13901910



Manual Peak Response = 11622931 M4

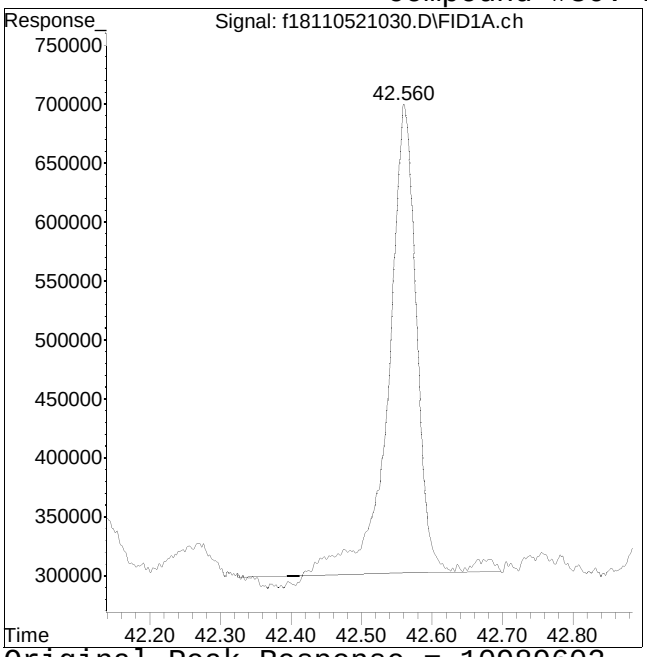
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

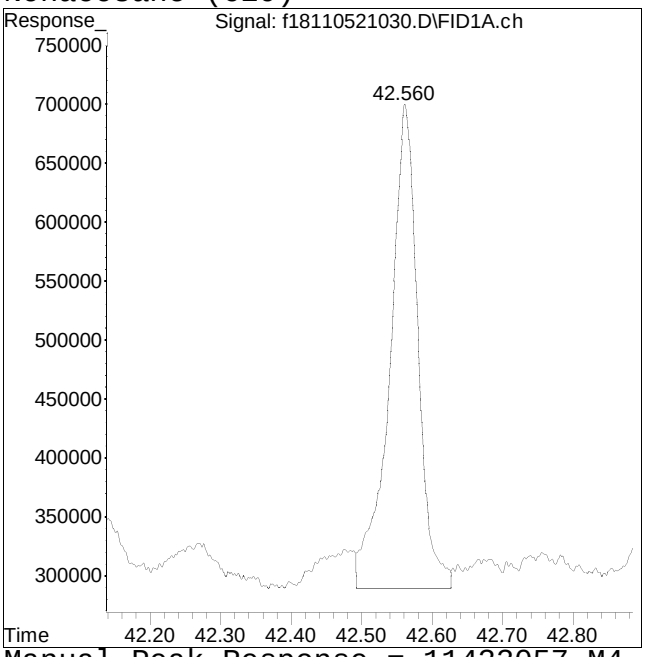
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #30: n-Nonacosane (C29)



Original Peak Response = 10989602



Manual Peak Response = 11433057 M4

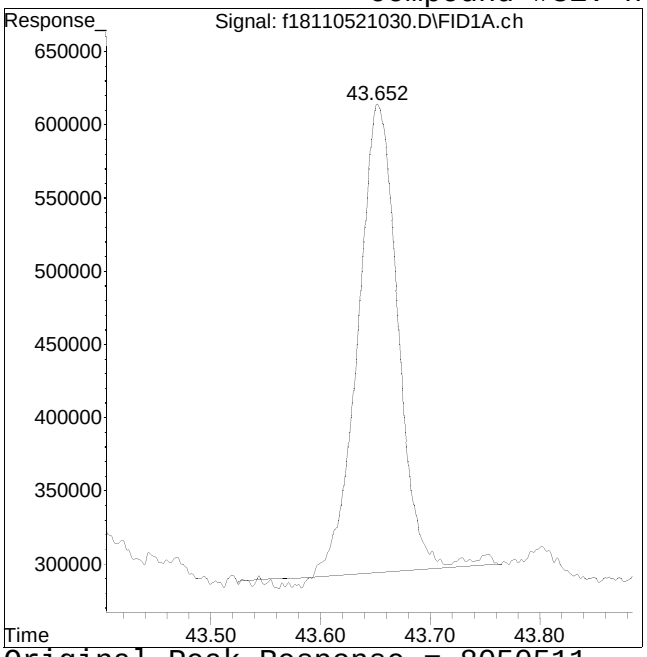
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

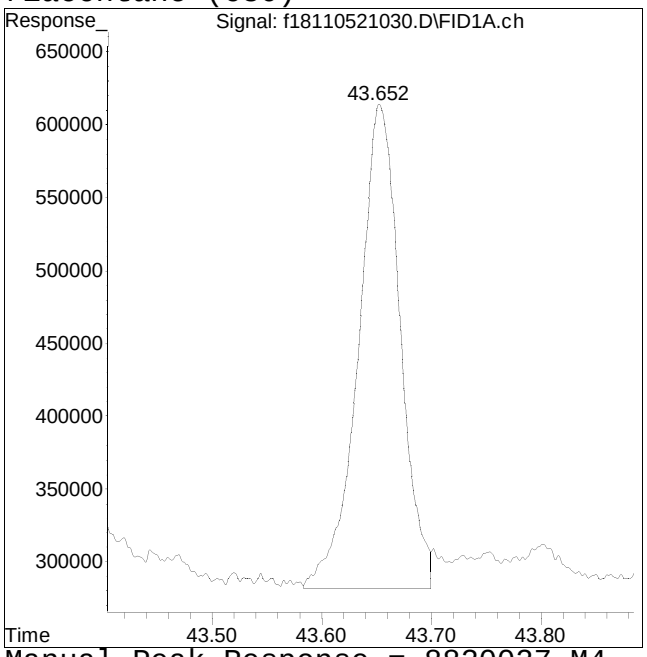
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #31: n-Triacontane (C30)



Original Peak Response = 8050511



Manual Peak Response = 8820027 M4

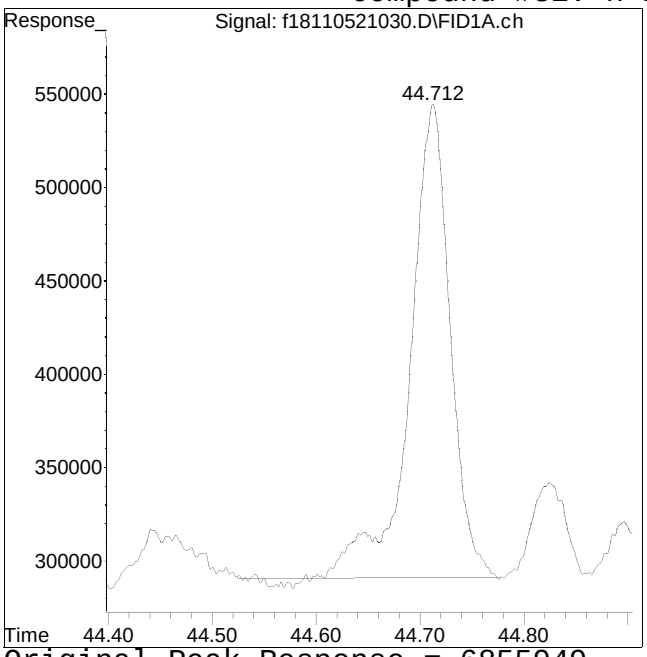
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

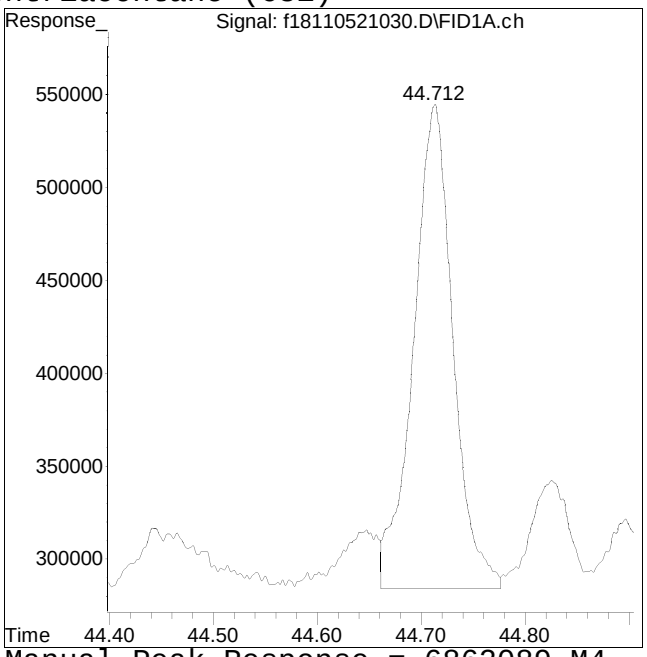
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 6855949



Manual Peak Response = 6862089 M4

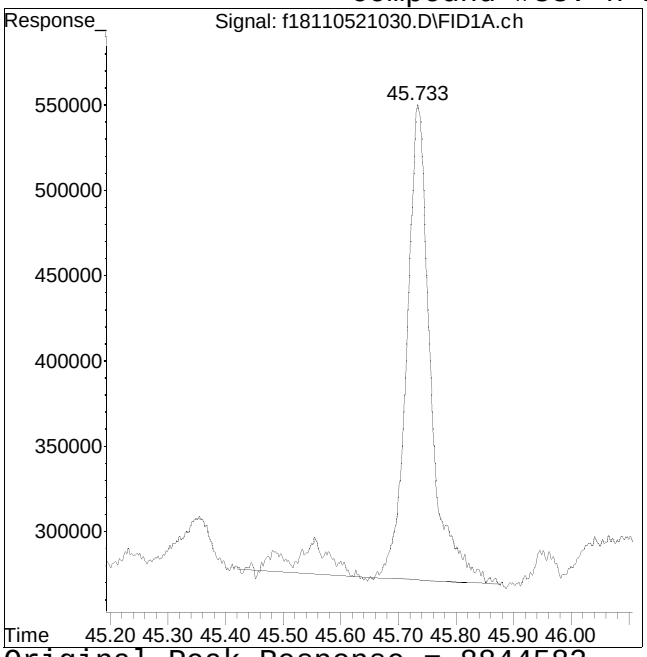
M4 = Poor automated baseline construction.

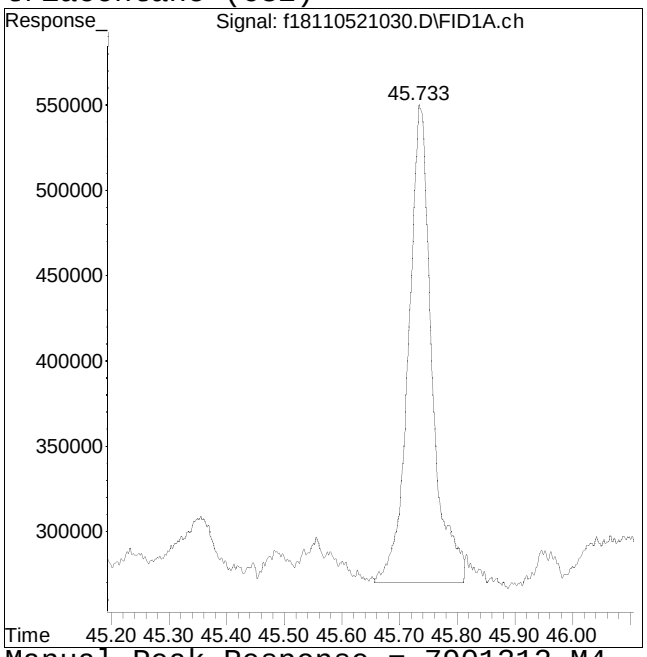
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #33: n-Dotriacontane (C32)





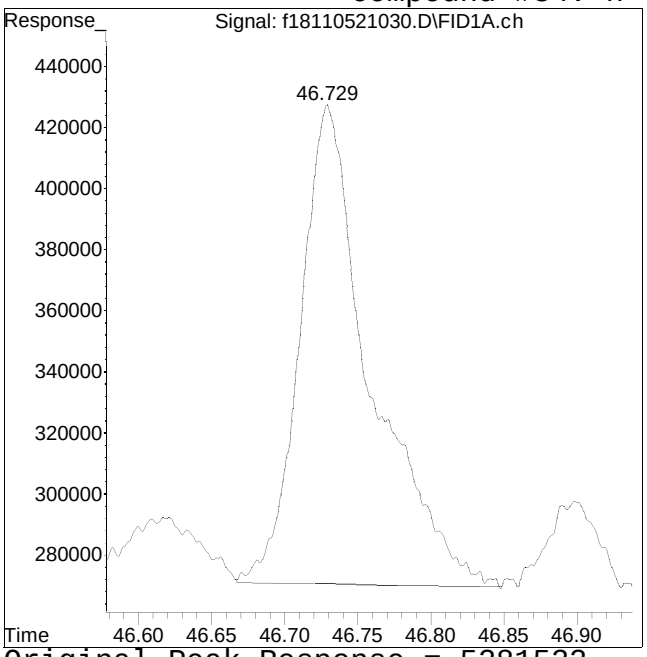
Original Peak Response = 8844582 Manual Peak Response = 7901312 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

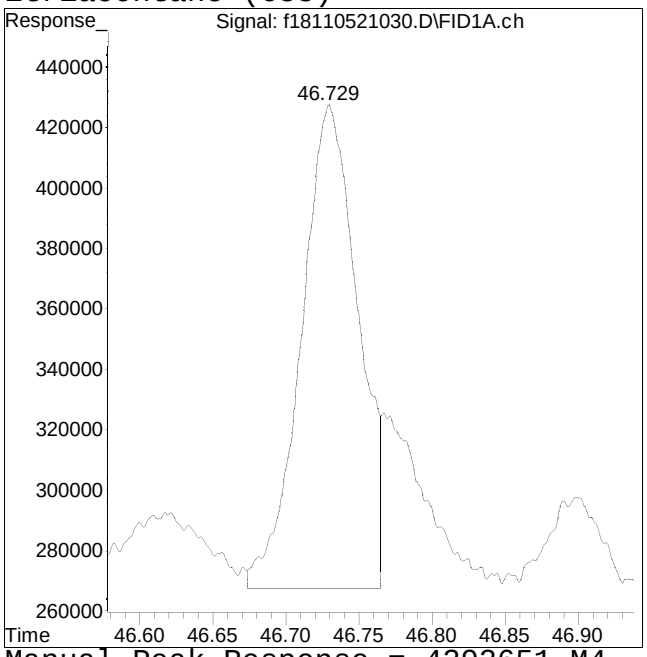
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 5281522



Manual Peak Response = 4292651 M4

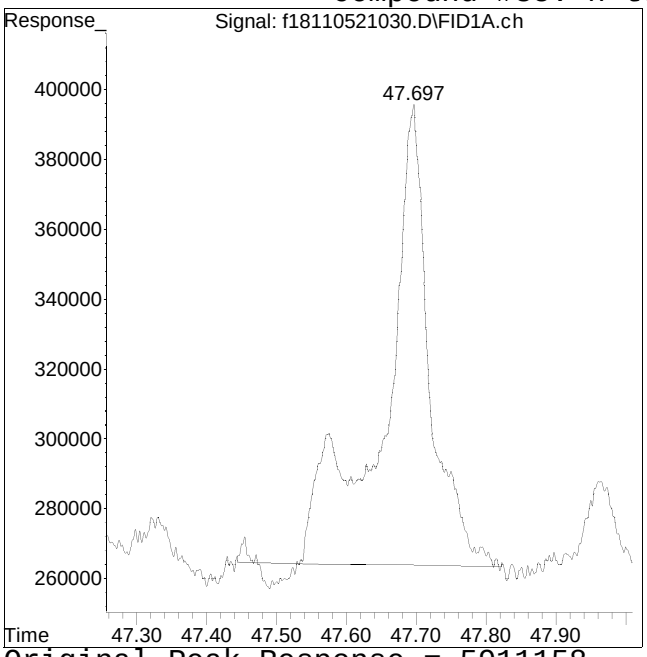
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

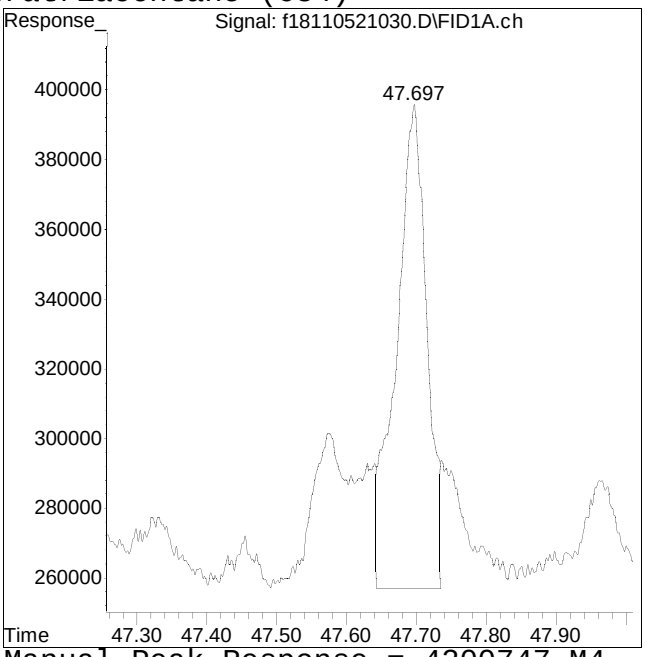
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 5911158



Manual Peak Response = 4200747 M4

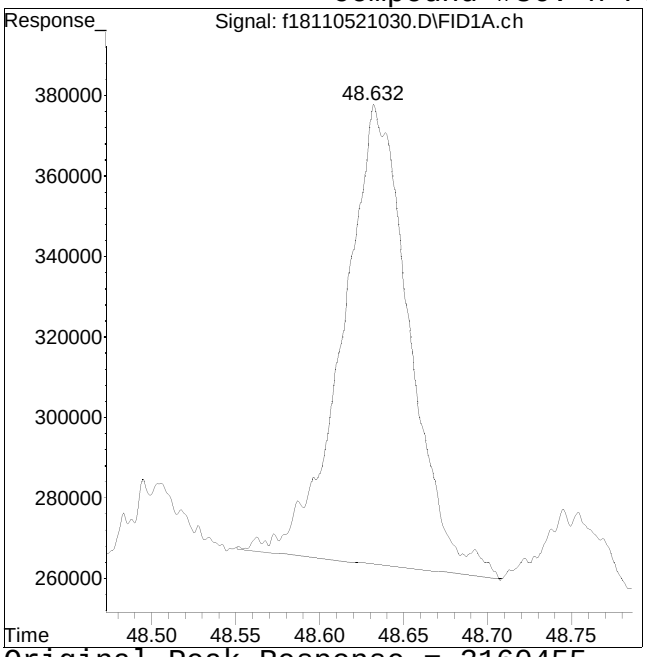
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

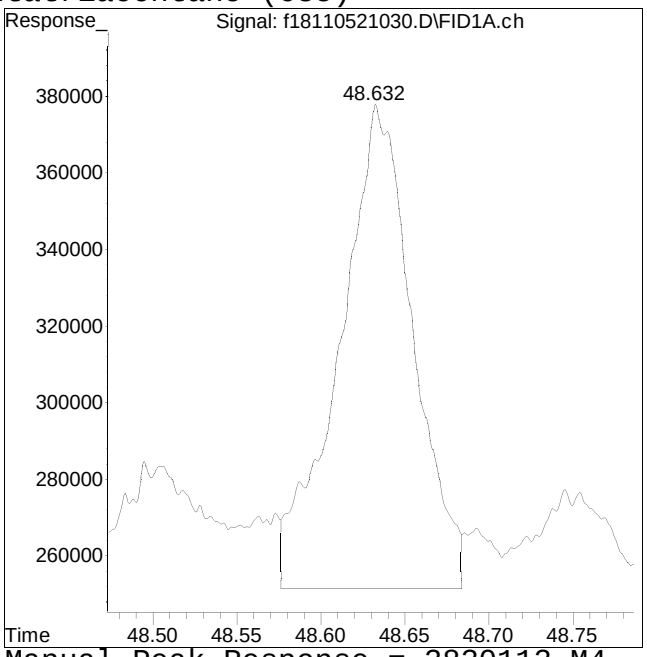
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 3160455



Manual Peak Response = 3830113 M4

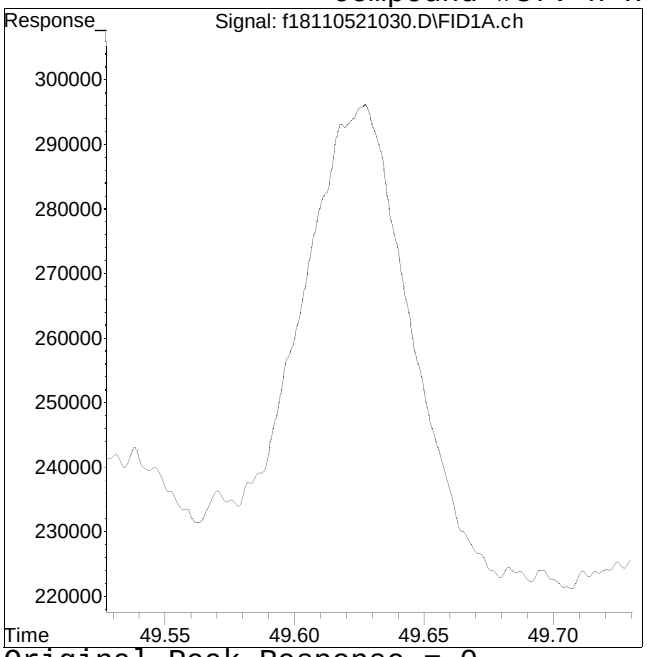
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

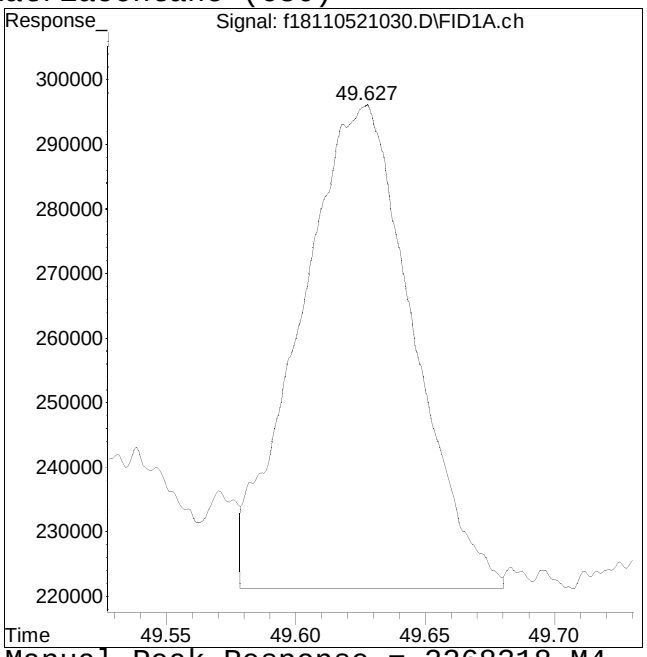
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 0



Manual Peak Response = 2268318 M4

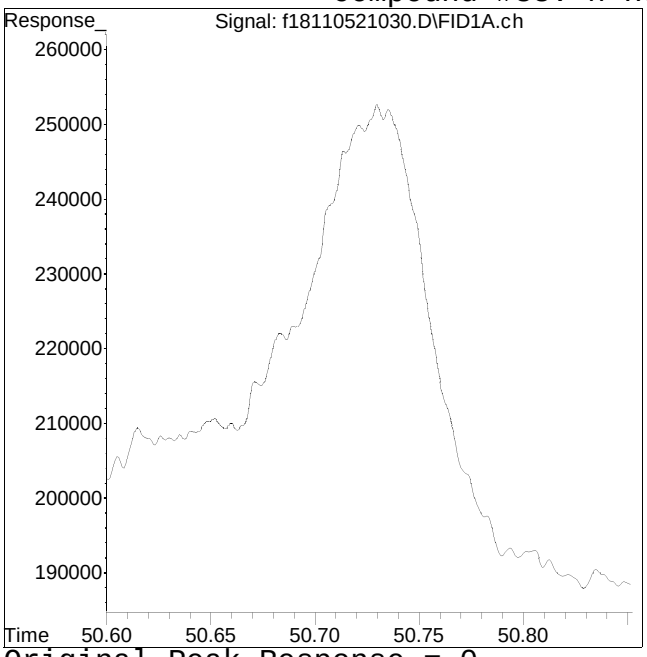
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

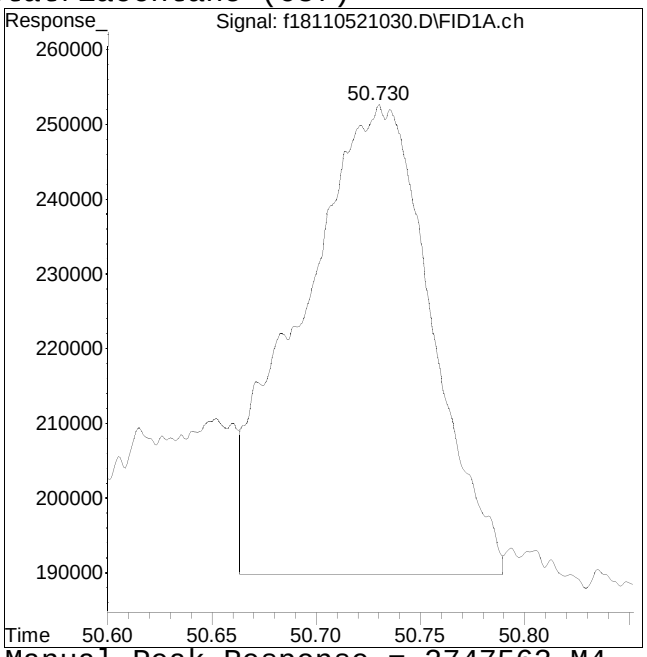
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 0



Manual Peak Response = 2747563 M4

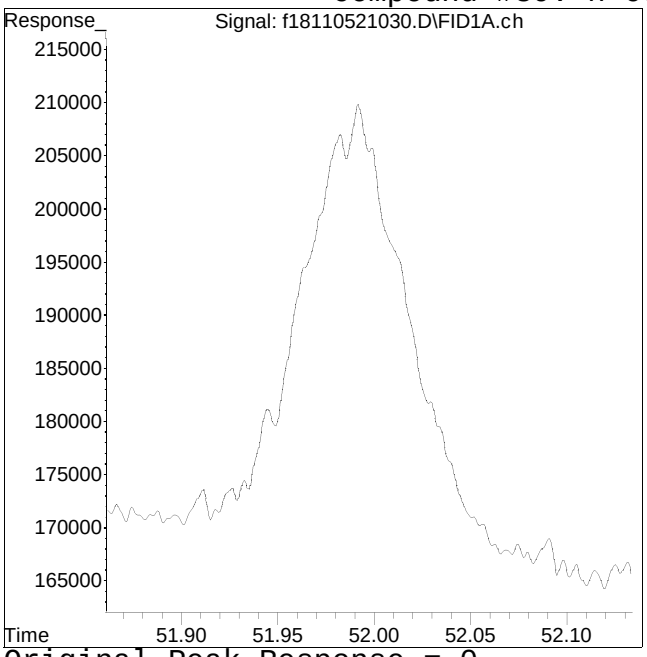
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

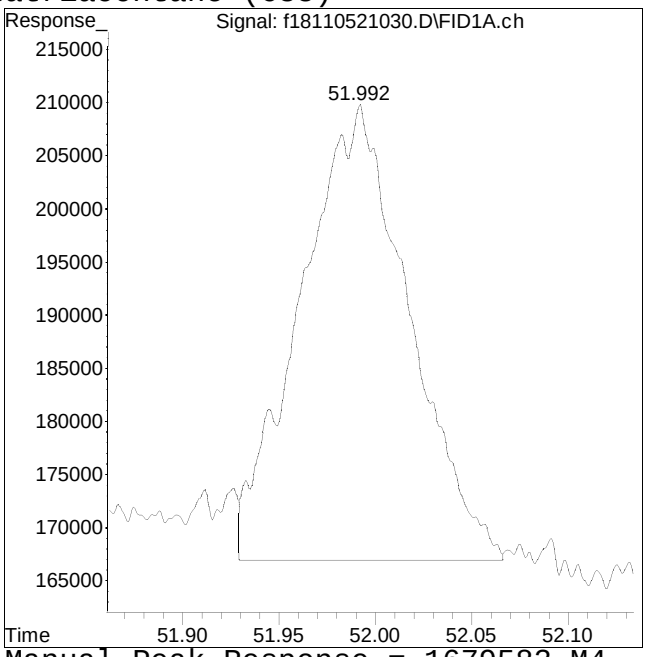
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 1679583 M4

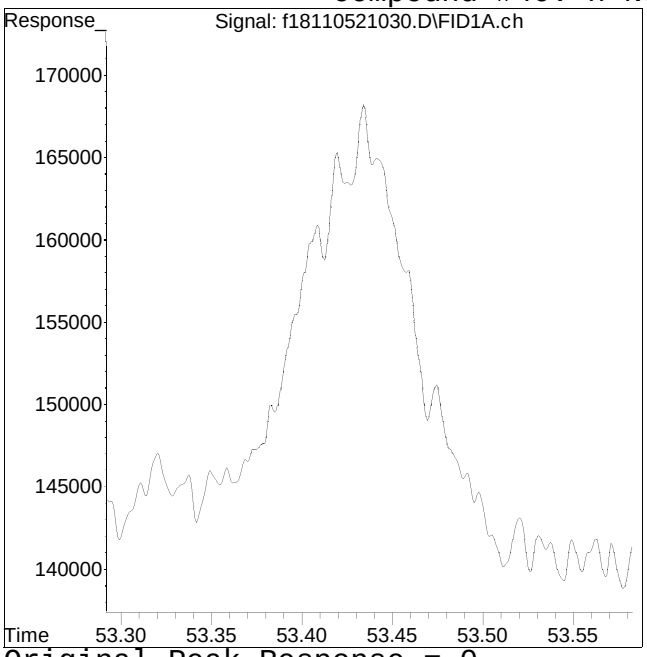
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

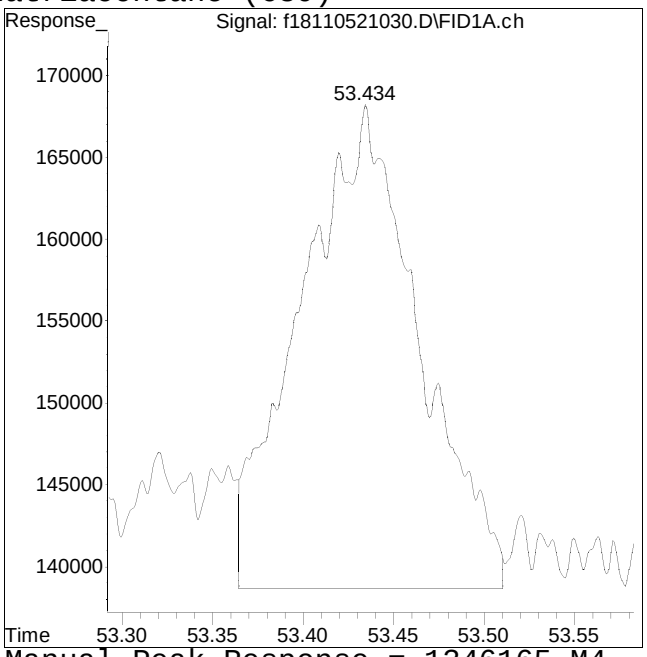
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #40: n-Nonatriacontane (C39)



Original Peak Response = 0



Manual Peak Response = 1346165 M4

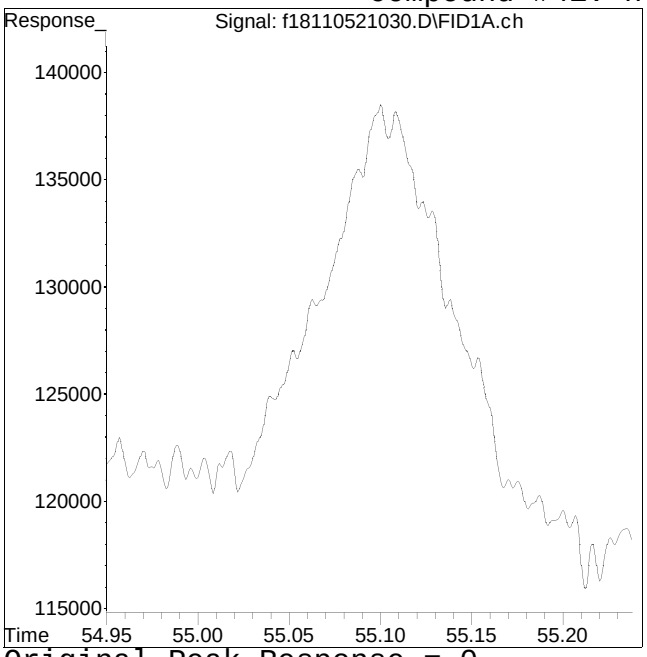
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

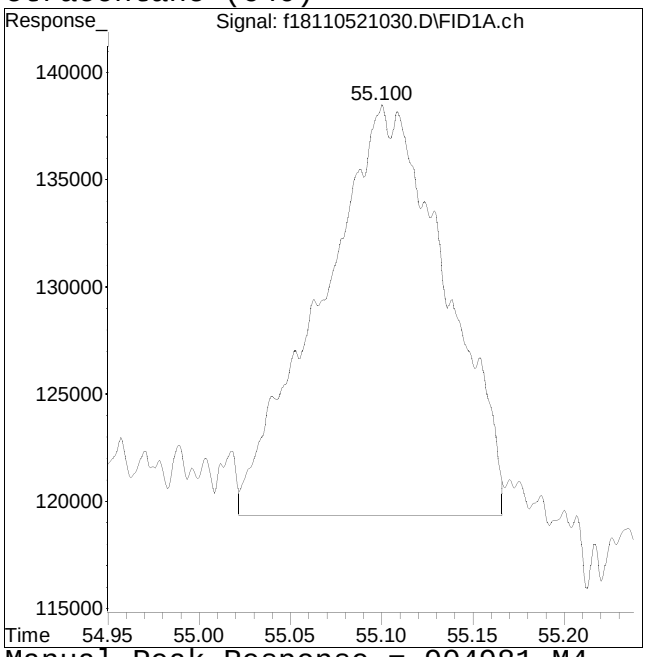
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 904981 M4

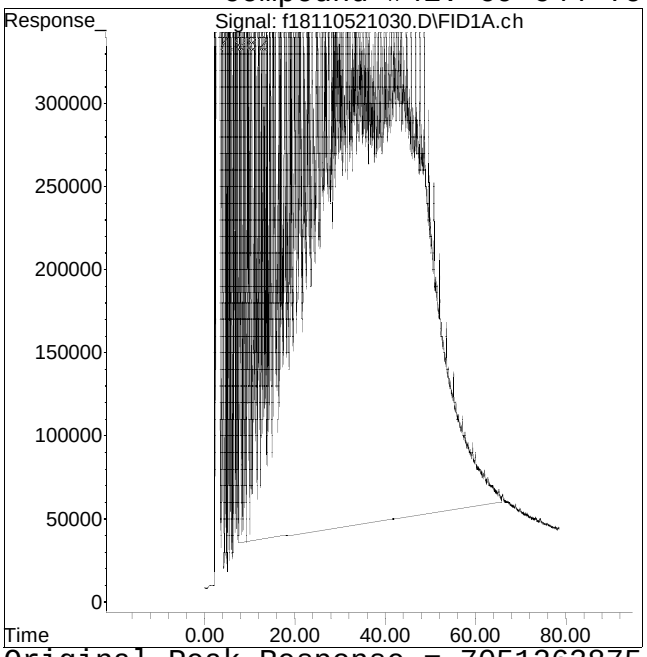
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

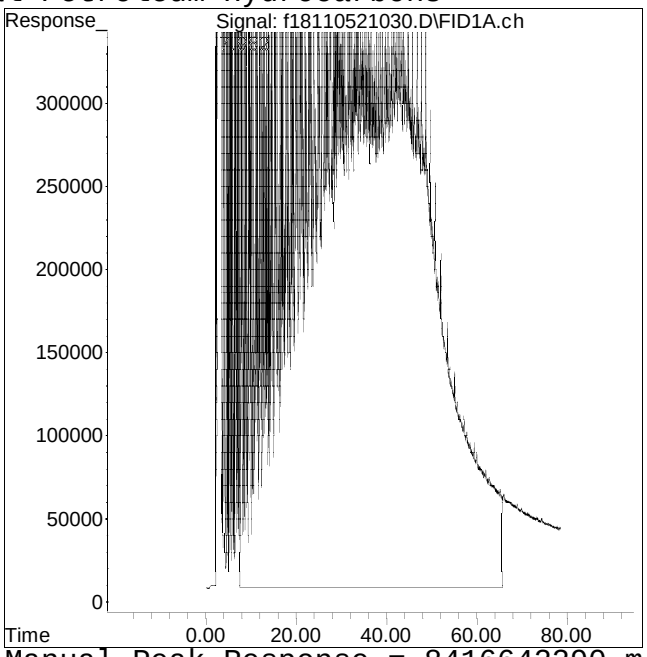
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #42: C9-C44 Total Petroleum Hydrocarbons



Original Peak Response = 7051263875



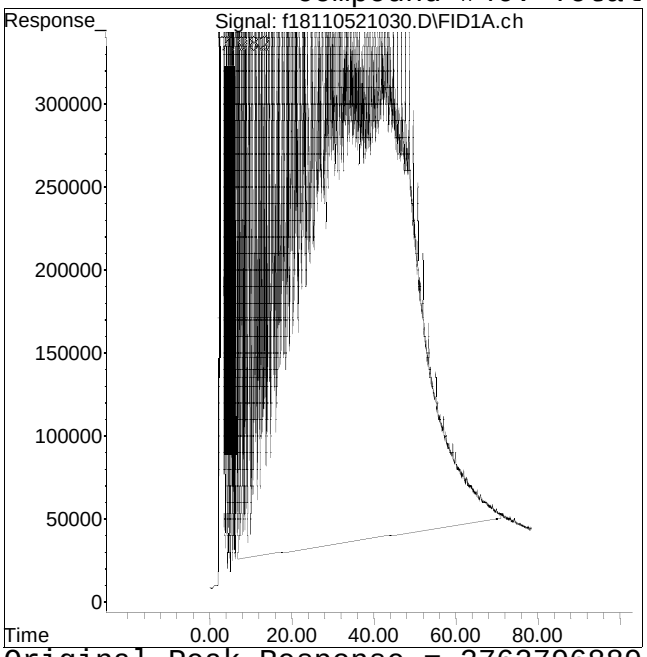
Manual Peak Response = 8416642290 m

Manual Integration/Negative Proof Report

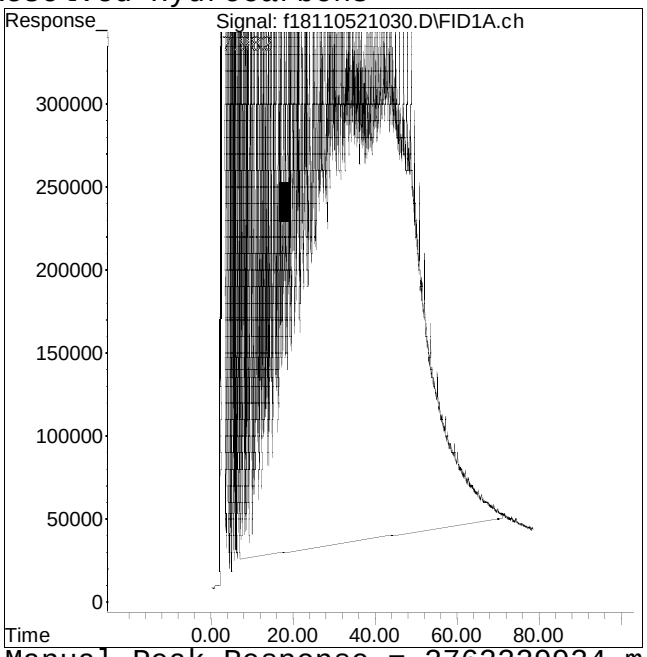
Data Path : O:\Forensics\Data\FID18\202Q
Data File : f18110521030.D
Date Inj'd : 11/6/2021 8:48 am
Sample : WG1581201-1,0.1008

Method : HC18110521F_DRO.M
Operator : FID18:WR
Instrument : FID 18
Quant Date : 11/17/2021 10:31 am

Compound #46: Total Resolved Hydrocarbons



Original Peak Response = 2762796889



Manual Peak Response = 2762229924 m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\NOV\NOV05\
Data File : f18110521028.D
Signal(s) : FID1A.ch
Acq On : 06 Nov 2021 07:22 am
Operator : FID18:WR
Sample : IB1811052101F
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Nov 17 10:29:31 2021
Quant Method : O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Nov 17 10:07:08 2021
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

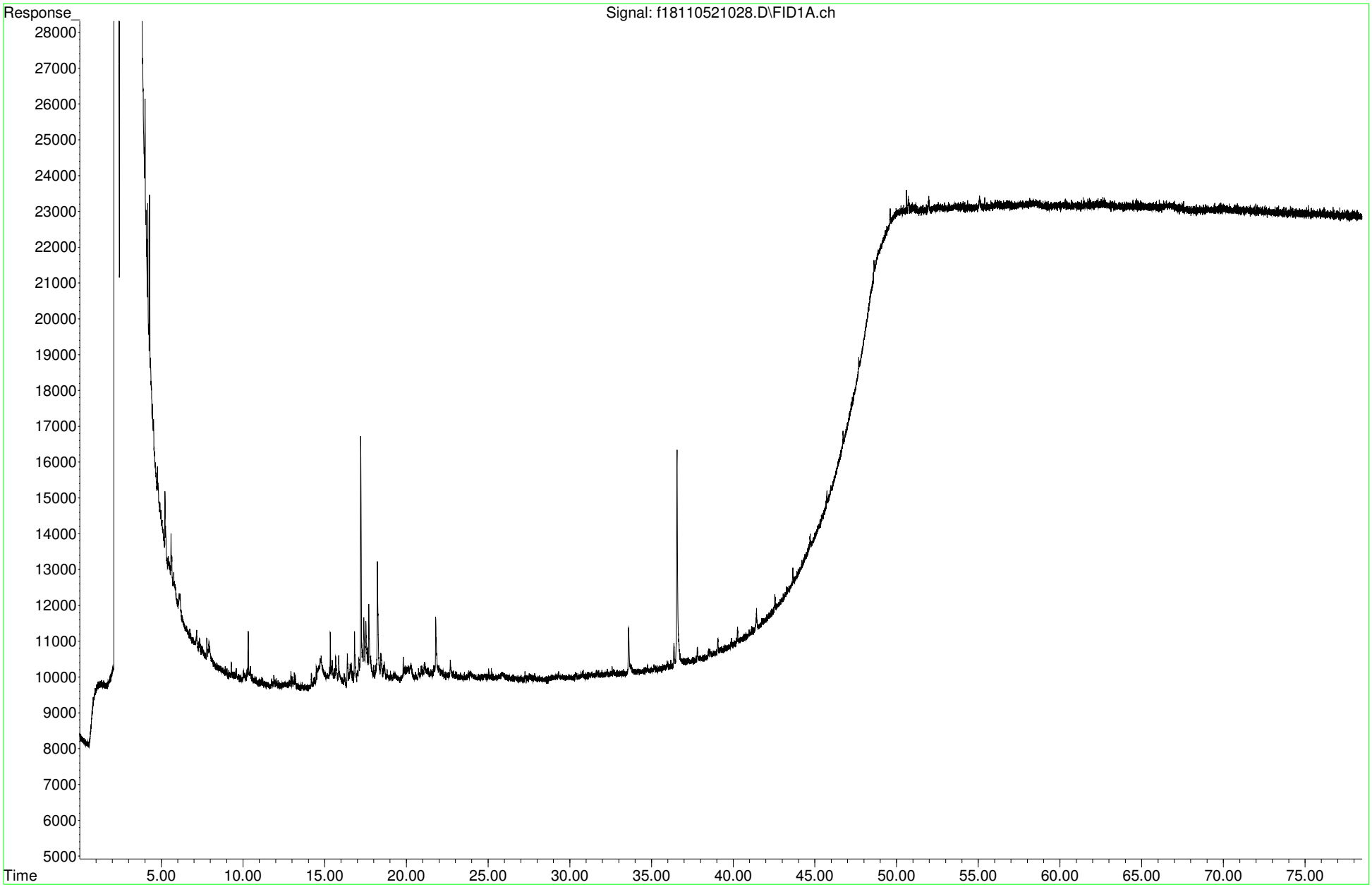
Sub List : TPH - TPH

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.364	8827	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
24) s	d50-Tetracosane	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
	Target Compounds					
42) h	C9-C44 Total Petroleu...	36.572	203136148	NoCal	ug/mL	M5
46) h	Total Resolved Hydroc...	38.937	3431209	NoCal	ug/mL	m
	SemiQuant Compounds - Not Calibrated on this Instrument					

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\NOV\NOV05\f18110521028.D
Operator : FID18:WR
Acquired : 06 Nov 2021 07:22 am using AcqMethod FID18.M
Sample Name: IB1811052101F
Instrument: FID 18
Misc Info :
Vial Number: 14
CurrentMeth: O:\Forensics\Data\FID18\2021\NOV\NOV05\HC18110521F_DRO.M



Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Jan 05 2022, 03:48 pm

Work Group: WG1579102 for Department: 2 Organic Preparation

Created: 04-DEC-21 Due: Operator: AL

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2166503-01	ERH1967	S	A2-SHC	OIL	DONE	U	1124	1206	2A	Glass-A.06
WG1579102-1	Laboratory Method Bl	S	A2-SHC	OIL	DONE	U				
WG1579102-2	Laboratory Control S	S	A2-SHC	OIL	DONE	U				
WG1579102-3	LCS Duplicate	S	A2-SHC	OIL	DONE	U				

Comments:

WG1579102-3 WG1579102-2

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Jan 05 2022, 03:48 pm

Work Group: WG1579126 for Department: 2 Organic Preparation

Created: 04-DEC-21 Due: Operator: NB

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2166503-02	ERH2051	S	A2-SHC	WATER	DONE	U	1209	1206	2A	Amber-A1
WG1579126-1	Laboratory Method Bl	S	A2-SHC	WATER	DONE	U				
WG1579126-2	Laboratory Control S	S	A2-SHC	WATER	DONE	U				
WG1579126-3	LCS Duplicate	S	A2-SHC	WATER	DONE	U				

Comments:

WG1579126-3 WG1579126-2

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Jan 05 2022, 03:48 pm

Work Group: WG1582496 for Department: 2 Organic Preparation

Created: 13-DEC-21 Due: Operator: BA

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2166503-03	ERH2052	S	A2-SHC	LIQUID	DONE	U	1210	0107	2A	Amber-A1
WG1582496-1	Laboratory Method Bl	S	A2-SHC	LIQUID	DONE	U				
WG1582496-2	Laboratory Control S	S	A2-SHC	LIQUID	DONE	U				
WG1582496-3	LCS Duplicate	S	A2-SHC	LIQUID	DONE	U				

Comments:

WG1582496-3 WG1582496-2

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Jan 05 2022, 03:48 pm

Work Group: WG1590340 for Department: 2 Organic Preparation

Created: 04-JAN-22 Due: Operator: BA

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2166503-06	ERH2052 PRE SILICA	S	A2-SHC	LIQUID	DONE	U	1210	0107	2A	Amber-A1
WG1590340-1	Laboratory Method Bl	S	A2-SHC	LIQUID	DONE	U				
WG1590340-2	Laboratory Control S	S	A2-SHC	LIQUID	DONE	U				
WG1590340-3	LCS Duplicate	S	A2-SHC	LIQUID	DONE	U				

Comments:

WG1590340-3 WG1590340-2

Sequence Logs

Analysis log File

DMP 4/8/21

Total Files Reported in Log : 20
Log Generated From Directory: O:\Forensics\Data\FID18\2021\MAR\MAR19.SEC\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D	
1	f18031921001.D		ll		3/19/2021 16:46	__
2	f18031921003.D		ans		3/19/2021 18:13	__
3	f18031921005.D		ccv		3/19/2021 19:39	__
4	f18031921007.D		DCM		3/19/2021 21:06	__
5	f18031921009.D		DCM		3/19/2021 22:32	__
6	f18031921011.D		ll		3/19/2021 23:58	__
7	f18031921013.D		I1803192101R ✓	WG1479204,FRBC80	3/20/2021 1:25	__
8	f18031921015.D		I1803192102R ✓	WG1479204,FRBC81	3/20/2021 2:51	__
9	f18031921017.D		I1803192103R ✓	WG1479204,FRBD61	3/20/2021 4:18	__
10	f18031921019.D		I1803192104R ✓	WG1479204,FRBC82	3/20/2021 5:44	__
11	f18031921021.D		I1803192105R ✓	WG1479204,FRBC83	3/20/2021 7:10	__
12	f18031921023.D		I1803192106R ✓	WG1479204,FRBC84	3/20/2021 8:37	__
13	f18031921025.D		dcm		3/20/2021 10:03	__
14	f18031921027.D		CQ1803192101R - pass	WG1479204,FRBD15	3/20/2021 11:29	__
15	f18031921029.D		IB1803192101R	DCM	3/20/2021 12:55	__
16	f18031921031.D		ANS - Fails, PR	WG1479204,FRBD62	3/20/2021 14:22	__
17	f18031921033.D		dcm		3/20/2021 15:48	__
18	f18031921035.D		dcm		3/20/2021 17:14	__
19	f18031921037.D				3/20/2021 18:40	__
20	f18031921039.D				3/20/2021 20:07	__

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

DM 4/8/21

Total Files Reported in Log : 10
Log Generated From Directory: O:\Forensics\Data\FID18\2021\MAR\MAR24.SEC\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D	
1	f18032421001.D		WG1479204-1,0.10054 ✓	WG1479204,FRBD62	3/24/2021 15:51	__
2	f18032421003.D		CCV		3/24/2021 17:18	__
3	f18032421005.D		IB1803242101R ✓	DCM	3/24/2021 18:44	__
4	f18032421007.D		LL		3/24/2021 20:10	__
5	f18032421009.D		LL		3/24/2021 21:36	__
6	f18032421011.D		DCM		3/24/2021 23:02	__
7	f18032421013.D		DCM		3/25/2021 0:29	__
8	f18032421015.D		dcm		3/25/2021 1:55	__
9	f18032421017.D		DCM		3/25/2021 3:22	__
10	f18032421019.D		DCM		3/25/2021 4:49	__

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 27
Log Generated From Directory: O:\Forensics\Data\FID17\2021\MAY\MAY20\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1705202102.D	FID17A.M	LL		5/20/2021 1:25 pm
2	F1705202104.D	FID17A.M	ANS		5/20/2021 2:54 pm
3	F1705202106.D	FID17A.M	CCV		5/20/2021 4:23 pm
4	F1705202108.D	FID17A.M	DCM		5/20/2021 5:52 pm
5	F1705202110.D	FID17A.M	IB		5/20/2021 7:22 pm
6	F1705202112.D	FID17A.M	I1705202101F	WG1505003,FRBD77,1ug/ml	5/20/2021 8:50 pm
7	F1705202114.D	FID17A.M	I1705202102F	WG1505003,FRBD78,10ug/m..	5/20/2021 10:19 pm
8	F1705202116.D	FID17A.M	I1705202103F	WG1505003,FRBD73,50ug/m..	5/20/2021 11:47 pm
9	F1705202118.D	FID17A.M	I1705202104F	WG1505003,FRBD79,100ug/..	5/21/2021 1:16 am
10	F1705202120.D	FID17A.M	I1705202105F	WG1505003,FRBD80,200ug/..	5/21/2021 2:44 am
11	F1705202122.D	FID17A.M	I1705202106F	WG1505003,FRBD81,500ug/..	5/21/2021 4:13 am
12	F1705202124.D	FID17A.M	DCM		5/21/2021 5:41 am
13	F1705202126.D	FID17A.M	CQ1705202101F	WG1505003,FRBD82,50ug/m..	5/21/2021 7:10 am
14	F1705202128.D	FID17A.M	IB1705202101F		5/21/2021 8:39 am
15	F1705202130.D	FID17A.M	WG1505003-1,0.10054	WG1505003,FRBD62,10.054..	5/21/2021 10:07 am
16	F1705202132.D	FID17A.M	DCM		5/21/2021 11:36 am
17	F1705202134.D	FID17A.M			5/21/2021 1:05 pm
18	F1705202136.D	FID17A.M			5/21/2021 2:34 pm
19	F1705202138.D	FID17A.M			5/21/2021 4:04 pm
20	F1705202140.D	FID17A.M			5/21/2021 5:33 pm
21	F1705202142.D	FID17A.M			5/21/2021 7:02 pm
22	F1705202144.D	FID17A.M			5/21/2021 8:31 pm
23	F1705202146.D	FID17A.M			5/21/2021 10:00 pm
24	F1705202148.D	FID17A.M			5/21/2021 11:28 pm
25	F1705202150.D	FID17A.M			5/22/2021 12:56 am
26	F1705202152.D	FID17A.M			5/22/2021 2:24 am
27	F1705202154.D	FID17A.M			5/22/2021 3:52 am

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 26
Log Generated From Directory: O:\Forensics\Data\FID18\2021\NOV\NOV05\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	f18110521002.D	FID18.M	ll		11/5/2021 12:48 pm
2	f18110521004.D	FID18.M	ans		11/5/2021 2:15 pm
3	f18110521006.D	FID18.M	CCV		11/5/2021 3:41 pm
4	f18110521008.D	FID18.M	DCM		11/5/2021 5:07 pm
5	f18110521010.D	FID18.M	IB		11/5/2021 6:33 pm
6	f18110521012.D	FID18.M	I1811052101F	WG1581201,FRBD77,..	11/5/2021 7:59 pm
7	f18110521014.D	FID18.M	I1811052102F	WG1581201,FRBD78,..	11/5/2021 9:25 pm
8	f18110521016.D	FID18.M	I1811052103F	WG1581201,FRBE37,..	11/5/2021 10:50 pm
9	f18110521018.D	FID18.M	I1811052104F	WG1581201,FRBD79,..	11/6/2021 12:16 am
10	f18110521020.D	FID18.M	I1811052105F	WG1581201,FRBD80,..	11/6/2021 1:41 am
11	f18110521022.D	FID18.M	I1811052106F	WG1581201,FRBD81,..	11/6/2021 3:06 am
12	f18110521024.D	FID18.M	DCM		11/6/2021 4:31 am
13	f18110521026.D	FID18.M	CQ1811052101F	WG1581201,FRBD82,..	11/6/2021 5:57 am
14	f18110521028.D	FID18.M	IB1811052101F		11/6/2021 7:22 am
15	f18110521030.D	FID18.M	WG1581201-1,0.1008	WG1581201,FRBD96	11/6/2021 8:48 am
16	f18110521032.D	FID18.M	DCM		11/6/2021 10:14 am
17	f18110521034.D	FID18.M	DCM		11/6/2021 11:40 am
18	f18110521036.D	FID18.M			11/6/2021 1:05 pm
19	f18110521038.D	FID18.M			11/6/2021 2:31 pm
20	f18110521040.D	FID18.M			11/6/2021 3:57 pm
21	f18110521042.D	FID18.M			11/6/2021 5:23 pm
22	f18110521044.D	FID18.M			11/6/2021 6:49 pm
23	f18110521046.D	FID18.M			11/6/2021 8:15 pm
24	f18110521048.D	FID18.M			11/6/2021 9:40 pm
25	f18110521050.D	FID18.M			11/6/2021 11:06 pm
26	f18110521052.D	FID18.M			11/7/2021 12:31 am

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 36
Log Generated From Directory: O:\Forensics\Data\FID17\2021\DEC\DEC03\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1712032102.D	FID17A.M	LL		12/3/2021 10:44 am
2	F1712032104.D	FID17A.M	ANS		12/3/2021 12:13 pm
3	F1712032106.D	FID17A.M	WG1579117-1	WG1579117,FRBE18,..	12/3/2021 1:41 pm
4	F1712032108.D	FID17A.M	DCM		12/3/2021 3:10 pm
5	F1712032110.D	FID17A.M	IB1712032101		12/3/2021 4:38 pm
6	F1712032112.D	FID17A.M	WG1577487-1	WG1579117,WG15774..	12/3/2021 6:07 pm
7	F1712032114.D	FID17A.M	WG1577488-1	WG1579117,WG15774..	12/3/2021 7:35 pm
8	F1712032116.D	FID17A.M	WG1577487-2	WG1579117,WG15774..	12/3/2021 9:03 pm
9	F1712032118.D	FID17A.M	WG1577487-3	WG1579117,WG15774..	12/3/2021 10:32 pm
10	F1712032120.D	FID17A.M	WG1577488-2	WG1579117,WG15774..	12/4/2021 12:00 am
11	F1712032122.D	FID17A.M	WG1577488-3	WG1579117,WG15774..	12/4/2021 1:28 am
12	F1712032124.D	FID17A.M	DCM		12/4/2021 2:56 am
13	F1712032126.D	FID17A.M	L2165245-02	SEE DILUTION	12/4/2021 4:24 am
14	F1712032128.D	FID17A.M	L2165245-03	SEE DILUTION	12/4/2021 5:52 am
15	F1712032130.D	FID17A.M	WG1579117-2	WG1579117,FRBE18,..	12/4/2021 7:20 am
16	F1712032132.D	FID17A.M	DCM		12/4/2021 8:48 am
17	F1712032134.D	FID17A.M	IB1712032102		12/4/2021 10:16 am
18	F1712032136.D	FID17A.M	wG1579102-1,42,,	WG1579117,WG15791..	12/4/2021 11:44 am
19	F1712032138.D	FID17A.M	wG1579102-2,42,,	WG1579117,WG15791..	12/4/2021 1:13 pm
20	F1712032140.D	FID17A.M	wG1579102-3,42,,	WG1579117,WG15791..	12/4/2021 2:41 pm
21	F1712032142.D	FID17A.M	DCM		12/4/2021 4:10 pm
22	F1712032144.D	FID17A.M	l2166503-01,42,,,r2a	WG1579117,WG15791..	12/4/2021 5:38 pm
23	F1712032146.D	FID17A.M	WG1579117-3	WG1579117,FRBE18,..	12/4/2021 7:06 pm
24	F1712032148.D	FID17A.M	DCM		12/4/2021 8:34 pm
25	F1712032150.D	FID17A.M	IB1712032103		12/4/2021 10:02 pm
26	F1712032152.D	FID17A.M	wG1579126-1,42,,	WG1579117,WG15791..	12/4/2021 11:30 pm
27	F1712032154.D	FID17A.M	wg1579126-2,42,,	WG1579117,WG15791..	12/5/2021 12:59 am
28	F1712032156.D	FID17A.M	wg1579126-3,42,,	WG1579117,WG15791..	12/5/2021 2:27 am
29	F1712032158.D	FID17A.M	l2166503-02,42,,,r2a	WG1579117,WG15791..	12/5/2021 3:55 am
30	F1712032160.D	FID17A.M	L2165245-02D,42,10	WG1579117,WG15774..	12/5/2021 5:23 am
31	F1712032162.D	FID17A.M	L2165245-03D,42,20	WG1579117,WG15774..	12/5/2021 6:51 am
32	F1712032164.D	FID17A.M	WG1579117-4	WG1579117,FRBE18,..	12/5/2021 8:19 am
33	F1712032166.D	FID17A.M	IB1712032104		12/5/2021 9:47 am
34	F1712032168.D	FID17A.M	l2166503-01d,42,2	WG1579117,WG15791..	12/5/2021 12:50 pm
35	F1712032170.D	FID17A.M	l2166503-02d,42,10	WG1579117,WG15791..	12/5/2021 2:18 pm
36	F1712032172.D	FID17A.M	WG1579117-5	WG1579117,FRBE18,..	12/5/2021 3:46 pm

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 46
Log Generated From Directory: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	f18121421001.D		ll		12/14/2021 9:53 a
2	f18121421003.D		ans		12/14/2021 11:20 a
3	f18121421005.D		WG1583234-1	WG1583234,FRBE37,..	12/14/2021 12:46 p
4	f18121421007.D		DCN		12/14/2021 2:12 p
5	f18121421009.D		IB1812142101R		12/14/2021 3:38 p
6	f18121421011.D		WG1582496-1,42,,	WG1583234,WG15824..	12/14/2021 5:05 p
7	f18121421013.D		WG1582729-1,42,,		12/14/2021 6:31 p
8	f18121421015.D		WG1582496-2,42,,	WG1583234,WG15824..	12/14/2021 7:57 p
9	f18121421017.D		WG1582496-3,42,,	WG1583234,WG15824..	12/14/2021 9:23 p
10	f18121421019.D		dcm		12/14/2021 10:49 p
11	f18121421021.D		WG1582729-4,42,,		12/15/2021 12:15 a
12	f18121421023.D		WG1580280-4,32,,		12/15/2021 1:41 a
13	f18121421025.D		L2166503-03,42,,,R2A	WG1583234,WG15824..	12/15/2021 3:07 a
14	f18121421027.D		dcm		12/15/2021 4:33 a
15	f18121421029.D		silica check bccg3798		12/15/2021 5:59 a
16	f18121421031.D		WG1583234-2	WG1583234,FRBE37,..	12/15/2021 7:25 a
17	f18121421033.D		dcm		12/15/2021 8:51 a
18	f18121421035.D		ib		12/15/2021 10:17 a
19	f18121421037.D		squirt a		12/15/2021 11:43 a
20	f18121421039.D		squirt b		12/15/2021 1:10 p
21	f18121421041.D		squirt c		12/15/2021 2:36 p
22	f18121421043.D		squirt d		12/15/2021 4:02 p
23	f18121421045.D				12/15/2021 5:28 p
24	f18121421047.D				12/15/2021 6:54 p
25	f18121421049.D				12/15/2021 8:20 p
26	f18121421051.D				12/15/2021 9:46 p
27	f18121421053.D				12/15/2021 11:12 p
28	f18121421055.D				12/16/2021 12:39 a
29	f18121421057.D				12/16/2021 2:05 a
30	f18121421059.D				12/16/2021 3:31 a
31	f18121421061.D				12/16/2021 4:57 a
32	f18121421063.D				12/16/2021 6:24 a
33	f18121421065.D				12/16/2021 7:50 a
34	f18121421067.D				12/16/2021 9:16 a
35	f18121421069.D				12/16/2021 10:42 a
36	f18121421071.D				12/16/2021 12:08 p
37	f18121421073.D				12/16/2021 1:34 p
38	f18121421075.D				12/16/2021 3:00 p
39	f18121421077.D				12/16/2021 4:26 p
40	f18121421079.D				12/16/2021 5:53 p
41	f18121421081.D				12/16/2021 7:19 p
42	f18121421083.D				12/16/2021 8:45 p
43	f18121421085.D				12/16/2021 10:12 p
44	f18121421087.D				12/16/2021 11:38 p
45	f18121421089.D				12/17/2021 1:04 a
46	f18121421091.D				12/17/2021 2:31 a

Analysis log File

Total Files Reported in Log : 14
Log Generated From Directory: O:\Forensics\Data\FID18\2022\JAN\JAN04\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	f18010422002.D	FID18.M	ll		1/4/2022 11:37 am
2	f18010422004.D	FID18.M	ans		1/4/2022 1:03 pm
3	f18010422006.D	FID18.M	WG1590500-1	WG1590500,FRBE45,ICAL18..	1/4/2022 2:29 pm
4	f18010422008.D	FID18.M	DCM		1/4/2022 3:55 pm
5	f18010422010.D	FID18.M	IB1801042101F		1/4/2022 5:21 pm
6	f18010422012.D	FID18.M	WG1590340-1,42,,	WG1590500,WG1590340,ICA..	1/4/2022 6:47 pm
7	f18010422014.D	FID18.M	WG1590340-2,42,,	WG1590500,WG1590340,ICA..	1/4/2022 8:14 pm
8	f18010422016.D	FID18.M	WG1590340-3,42,,	WG1590500,WG1590340,ICA..	1/4/2022 9:40 pm
9	f18010422018.D	FID18.M	DCM		1/4/2022 11:06 pm
10	f18010422020.D	FID18.M	L2166503-03D,42,20	WG1590500,WG1582496,ICA..	1/5/2022 12:32 am
11	f18010422022.D	FID18.M	L2166503-06D,42,20	WG1590500,WG1590340,ICA..	1/5/2022 1:58 am
12	f18010422024.D	FID18.M	WG1590500-2	WG1590500,FRBE45,ICAL18..	1/5/2022 3:24 am
13	f18010422026.D	FID18.M	DCM		1/5/2022 4:50 am
14	f18010422028.D	FID18.M	IB		1/5/2022 6:17 am

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032130.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:20 am
Operator : FID17:CC
Sample : WG1579117-2
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 11:14:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	112	-0.01
2	t	n-Octane (C8)	0.864	0.837	3.1	107	-0.01
3	t	n-Nonane (C9)	0.922	0.866	6.1	106	0.00
4	t	n-Decane (C10)	0.944	0.932	1.3	109	0.00
5	t	n-Undecane (C11)	0.923	0.945	-2.4	112	-0.01
6	t	n-Dodecane (C12)	0.925	0.949	-2.6	112	-0.01
7	t	n-Tridecane (C13)	0.928	0.959	-3.3	113	-0.01
9	t	n-Tetradecane (C14)	0.956	0.977	-2.2	113	0.00
11	t	n-Pentadecane (C15)	0.957	0.971	-1.5	111	-0.01
12	t	n-Hexadecane (C16)	0.955	0.984	-3.0	114	0.00
14	t	n-Heptadecane (C17)	0.954	0.987	-3.5	113	-0.01
15	t	Pristane	0.990	1.014	-2.4	114	-0.01
16	t	n-Octadecane (C18)	0.970	1.001	-3.2	114	0.00
17	t	Phytane	0.908	0.945	-4.1	115	-0.01
18	t	n-Nonadecane (C19)	0.973	1.069	-9.9	121	0.00
19	s	ortho-terphenyl	1.084	1.155	-6.5	118	-0.01
20	t	n-Eicosane (C20)	0.979	1.008	-3.0	114	-0.01
21	t	n-Heneicosane (C21)	0.982	1.004	-2.2	113	0.00
22	t	n-Docosane (C22)	0.983	1.016	-3.4	114	0.00
23	t	n-Tricosane (C23)	0.985	1.017	-3.2	114	-0.01
24	s	d50-Tetracosane	0.860	0.973	-13.1	123	0.00
25	t	n-Tetracosane (C24)	0.982	0.959	2.3	108	0.00
26	t	n-Pentacosane (C25)	0.961	0.992	-3.2	114	0.00
27	t	n-Hexacosane (C26)	0.987	1.020	-3.3	114	0.00
28	t	n-Heptacosane (C27)	0.989	0.984	0.5	111	0.00
29	t	n-Octacosane (C28)	1.026	1.024	0.2	113	0.00
30	t	n-Nonacosane (C29)	1.006	1.017	-1.1	113	0.00
31	t	n-Triacontane (C30)	1.010	1.018	-0.8	113	0.00
32	t	n-Hentriacontane (C31)	0.977	0.986	-0.9	113	0.00
33	t	n-Dotriacontane (C32)	1.025	1.032	-0.7	113	0.00
34	t	n-Tritriacontane (C33)	0.998	0.993	0.5	112	0.00
35	t	n-tetratriacontane (C34)	0.991	0.986	0.5	112	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032130.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:20 am
Operator : FID17:CC
Sample : WG1579117-2
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 11:14:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.992	-7.1	120	0.00
37 t	n-Hexatriacontane (C36)	1.115	1.060	4.9	107	-0.01
38 t	n-Heptatriacontane (C37)	1.011	0.971	4.0	107	0.00
39 t	n-Octatriacontane (C38)	1.022	0.997	2.4	109	-0.01
41 t	n-Tetracontane (C40)	1.009	0.990	1.9	109	-0.02

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.05	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032130.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:20 am
Operator : FID17:CC
Sample : WG1579117-2
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 11:14:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.620	59971545	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.683	69242557	53.262 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 106.52%	
24) s	d50-Tetracosane	34.427	58375832	56.596 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 113.19%	
	Target Compounds			
2) t	n-Octane (C8)	4.601	50225864	48.442 ug/mL M4
3) t	n-Nonane (C9)	6.622	51917217	46.925 ug/mL M4
4) t	n-Decane (C10)	9.004	55889343	49.345 ug/mL M4
5) t	n-Undecane (C11)	11.463	56698547	51.238 ug/mL M4
6) t	n-Dodecane (C12)	13.863	56922416	51.300 ug/mL M4
7) t	n-Tridecane (C13)	16.151	57511827	51.691 ug/mL M4
9) t	n-Tetradecane (C14)	18.322	58613281	51.131 ug/mL M4
11) t	n-Pentadecane (C15)	20.374	58211496	50.722 ug/mL M4
12) t	n-Hexadecane (C16)	22.323	59015381	51.514 ug/mL M4
14) t	n-Heptadecane (C17)	24.172	59204569	51.728 ug/mL M4
15) t	Pristane	24.281	60790886	51.215 ug/mL M4
16) t	n-Octadecane (C18)	25.933	60015392	51.572 ug/mL M4
17) t	Phytane	26.087	56693013	52.077 ug/mL M4
18) t	n-Nonadecane (C19)	27.609	64089284	54.907 ug/mL M4
20) t	n-Eicosane (C20)	29.209	60460215	51.503 ug/mL M4
21) t	n-Heneicosane (C21)	30.741	60201282	51.119 ug/mL M4
22) t	n-Docosane (C22)	32.208	60918607	51.648 ug/mL M4
23) t	n-Tricosane (C23)	33.613	60964391	51.584 ug/mL M4
25) t	n-Tetracosane (C24)	34.966	57520235	48.822 ug/mL M4
26) t	n-Pentacosane (C25)	36.269	59513422	51.623 ug/mL M4
27) t	n-Hexacosane (C26)	37.521	61161811	51.683 ug/mL M4
28) t	n-Heptacosane (C27)	38.730	58993436	49.717 ug/mL M4
29) t	n-Octacosane (C28)	39.900	61428734	49.937 ug/mL M4
30) t	n-Nonacosane (C29)	41.027	61001398	50.559 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032130.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:20 am
Operator : FID17:CC
Sample : WG1579117-2
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 15 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 11:14:01 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

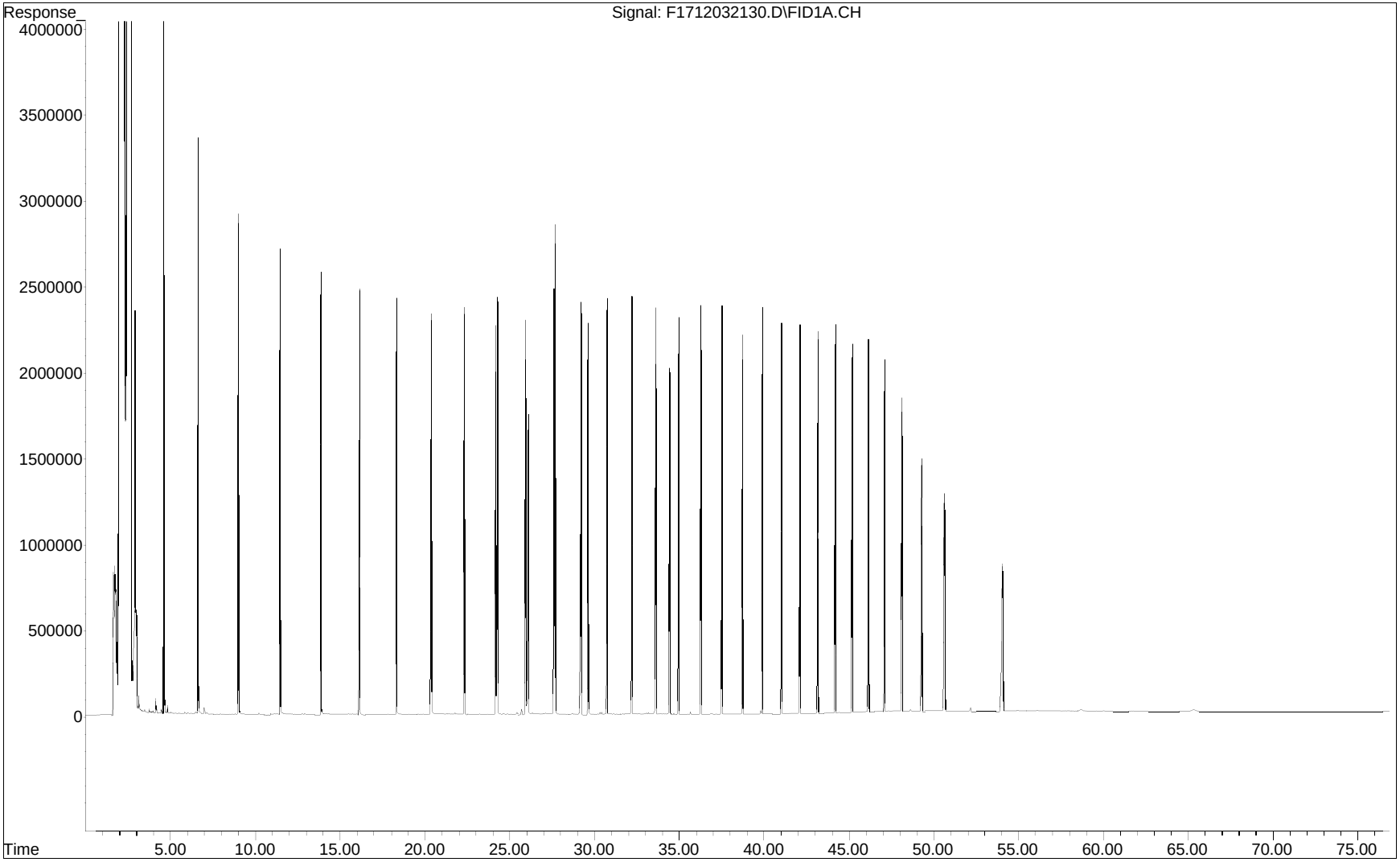
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.121	61070971	50.420 ug/mL M4
32) t	n-Hentriacontane (C31)	43.177	59137002	50.478 ug/mL M4
33) t	n-Dotriacontane (C32)	44.202	61868558	50.311 ug/mL M4
34) t	n-Tritriacontane (C33)	45.196	59560382	49.758 ug/mL M4
35) t	n-tetratriacontane (C34)	46.158	59142468	49.755 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.103	59464897	53.548 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.124	63551517	47.537 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.289	58208144	48.009 ug/mL M4
39) t	n-Octatriacontane (C38)	50.633	59786136	48.774 ug/mL M4
41) t	n-Tetracontane (C40)	54.047	59363044	49.071 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032130.D
Operator : FID17:CC
Acquired : 04 Dec 2021 7:20 am using AcqMethod FID17A.M
Sample Name: WG1579117-2
Instrument: FID17
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 15
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032144.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 5:38 pm
Operator : FID17:MJS
Sample : l2166503-01,42,,,r2a
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 22 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:36:02 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.614	60931884	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.656	15593654	11.806	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.61%#		
24) s	d50-Tetracosane	34.404	12051854	11.500	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.00%#		
	Target Compounds					
2) t	n-Octane (C8)	4.565	4587348	4.355	ug/mL	M4
3) t	n-Nonane (C9)	6.599	26561651	23.629	ug/mL	M4
4) t	n-Decane (C10)	9.014	122909758	106.808	ug/mL	M4
5) t	n-Undecane (C11)	11.515	275139602	244.725	ug/mL	M4
6) t	n-Dodecane (C12)	13.919	299348595	265.527	ug/mL	M4
7) t	n-Tridecane (C13)	16.198	247539518	218.980	ug/mL	M4
8) t	1380	17.829	36235776	31.112	ug/mL	M4
9) t	n-Tetradecane (C14)	18.351	130597457	112.129	ug/mL	M4
10) t	1470	19.600	29103098	24.959	ug/mL	M4
11) t	n-Pentadecane (C15)	20.377	47432255	40.678	ug/mL	M4
12) t	n-Hexadecane (C16)	22.303	9261287	7.957	ug/mL	M4
13) t	1650	23.205	1304384	1.122	ug/mL	M4
14) t	n-Heptadecane (C17)	24.153	2179286	1.874	ug/mL	M4
15) t	Pristane	24.247	949044	0.787	ug/mL	M4
16) t	n-Octadecane (C18)	25.909	668770	0.566	ug/mL	M4
17) t	Phytane	26.064	206411	0.187	ug/mL	M4
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.200	94341	0.079	ug/mL	M4
21) t	n-Heneicosane (C21)	30.730	38991	0.033	ug/mL	M4
22) t	n-Docosane (C22)	32.190	21633	0.018	ug/mL	M4
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032144.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 5:38 pm
Operator : FID17:MJS
Sample : l2166503-01,42,,,r2a
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 22 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:36:02 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : Default - All compounds listed

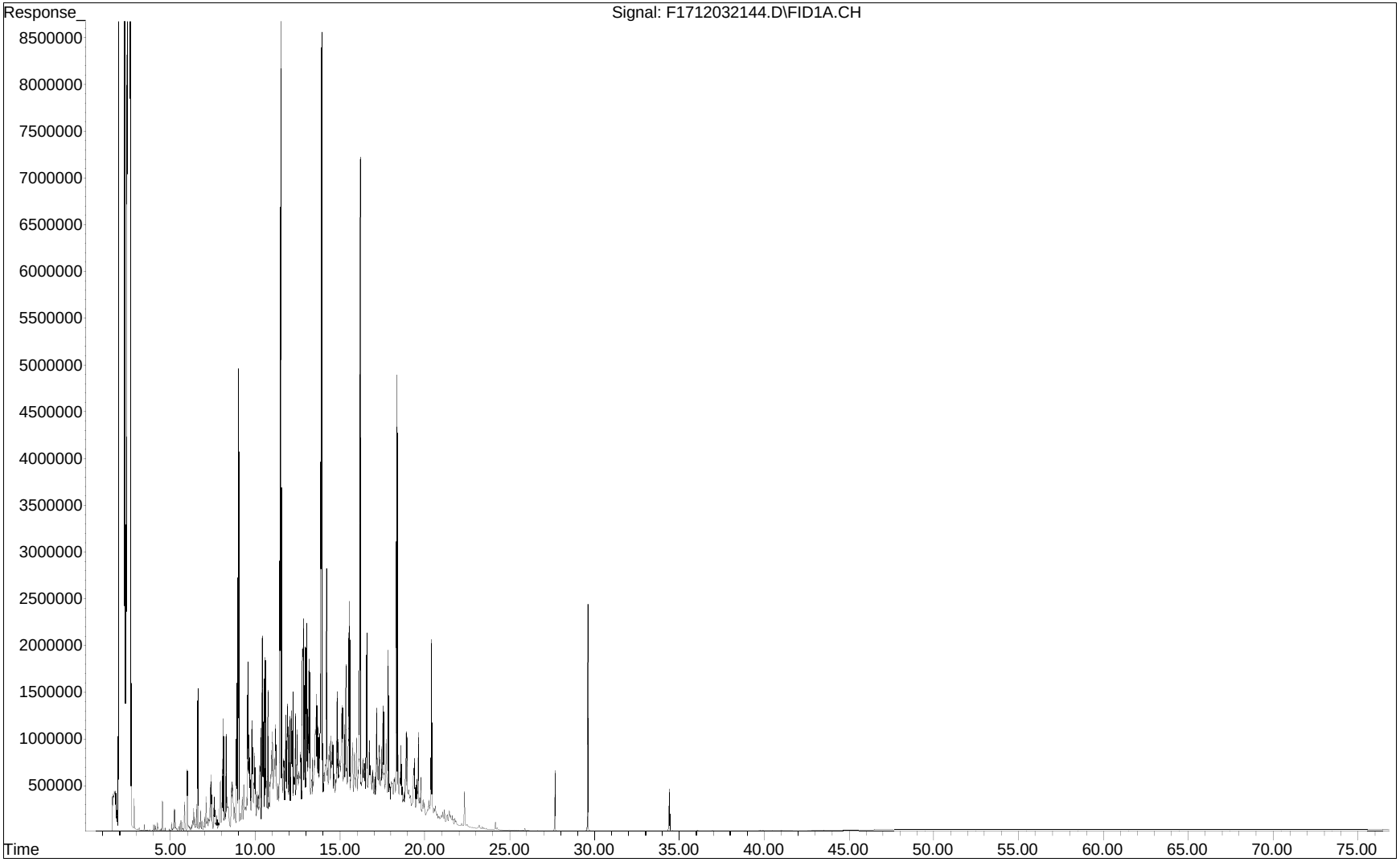
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	37.500	6614	0.006	ug/mL	M4
28) t	n-Heptacosane (C27)	38.709	12241	0.010	ug/mL	M4
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	40.995	232620	0.190	ug/mL	M4
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.038	6238003047	5235.037	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.038	5953690343	4996.437	ug/mL	m
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
44) h	C10-C28 DRO	24.454	5726955816	4863.504	ug/mL	m
44) h	C10-C28 DRO BS	24.454	5698901035	4839.679	ug/mL	m
45) h	C28-C40 ORO	46.963	88256295	71.739	ug/mL	m
45) h	C28-C40 ORO BS	46.963	-7791701	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	4368579723	3666.185	ug/mL	m

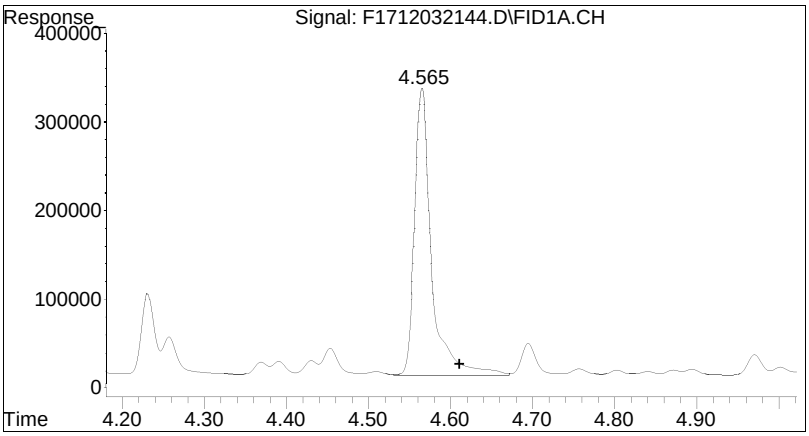
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

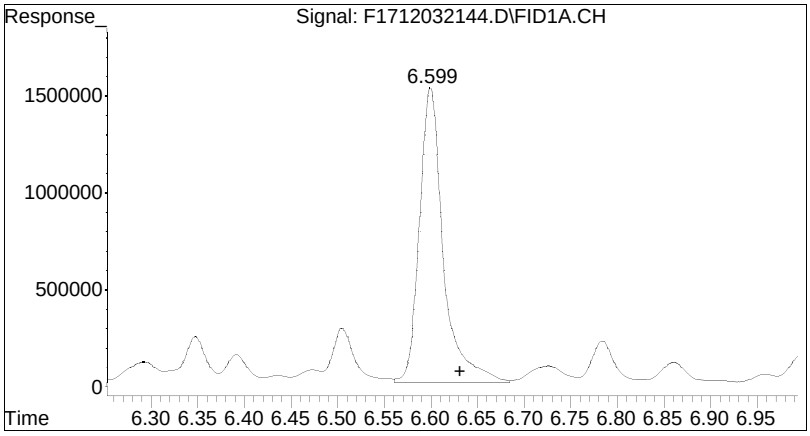
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032144.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 5:38 pm using AcqMethod FID17A.M
Sample Name: l2166503-01,42,,,r2a
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 22
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





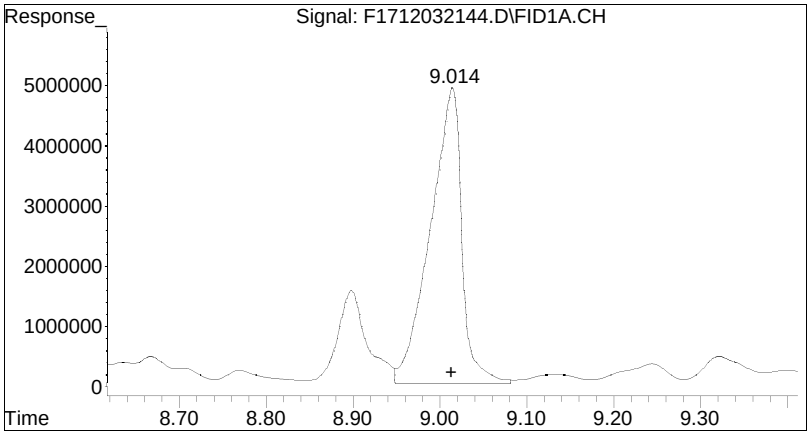
#2 n-Octane (C8)

R.T.:	4.565 min
Delta R.T.:	-0.046 min
Response:	4587348
Conc:	4.35 ug/mL M4



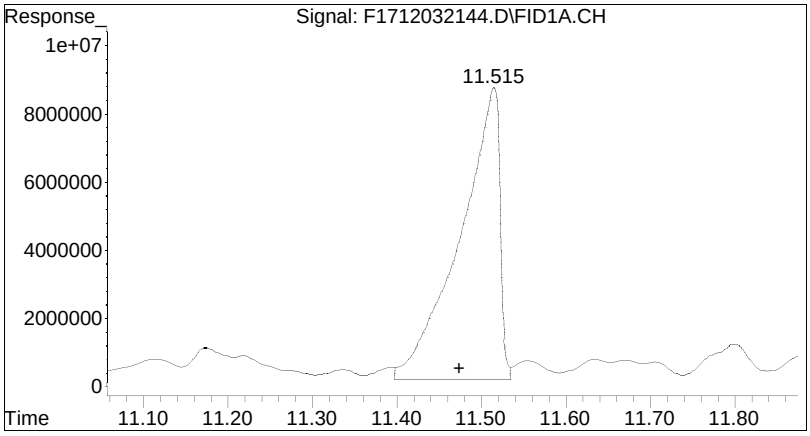
#3 n-Nonane (C9)

R.T.:	6.599 min
Delta R.T.:	-0.032 min
Response:	26561651
Conc:	23.63 ug/mL M4



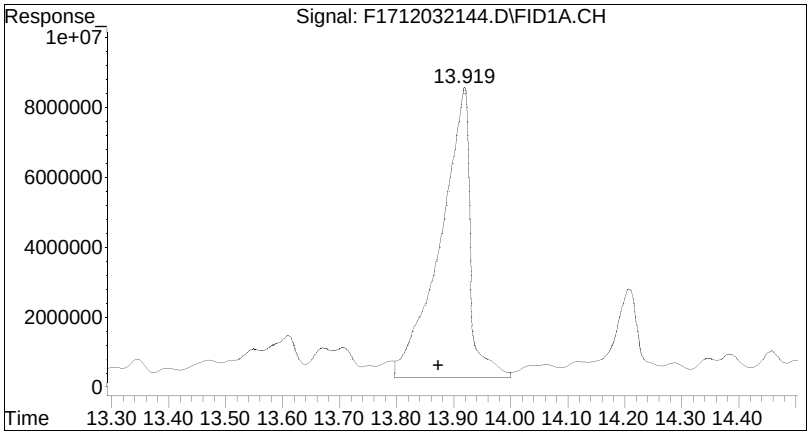
#4 n-Decane (C10)

R.T.: 9.014 min
Delta R.T.: 0.001 min
Response: 122909758
Conc: 106.81 ug/mL M4



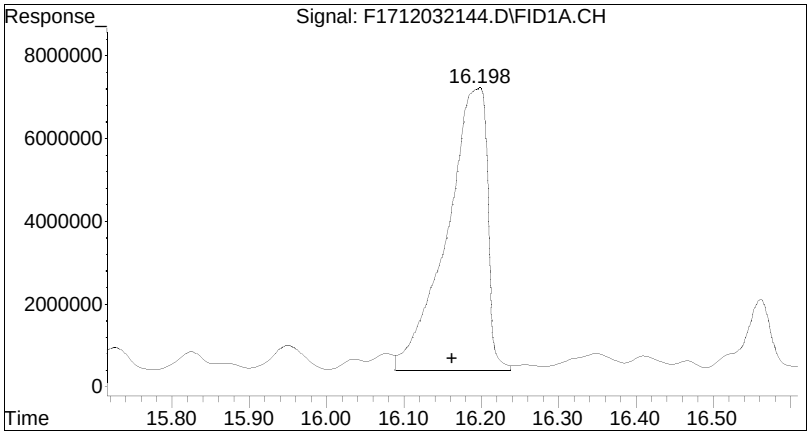
#5 n-Undecane (C11)

R.T.: 11.515 min
Delta R.T.: 0.041 min
Response: 275139602
Conc: 244.72 ug/mL M4



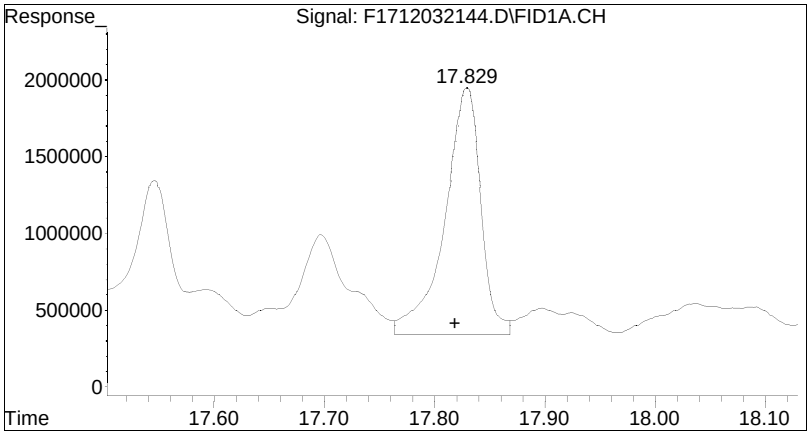
#6 n-Dodecane (C12)

R.T.: 13.919 min
Delta R.T.: 0.046 min
Response: 299348595
Conc: 265.53 ug/mL M4



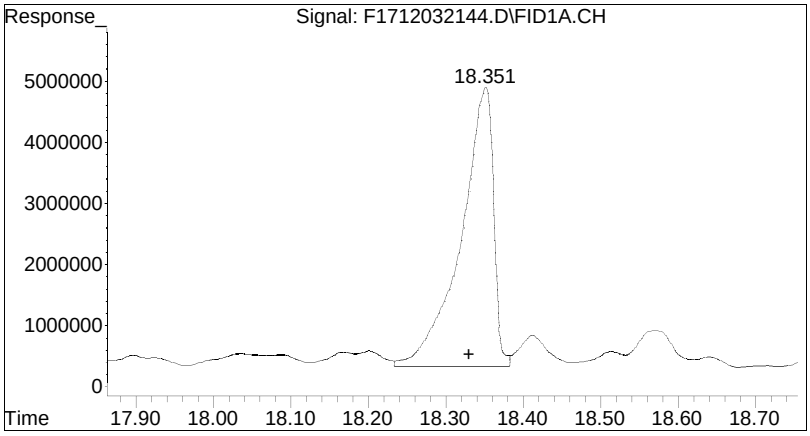
#7 n-Tridecane (C13)

R.T.: 16.198 min
Delta R.T.: 0.036 min
Response: 247539518
Conc: 218.98 ug/mL M4



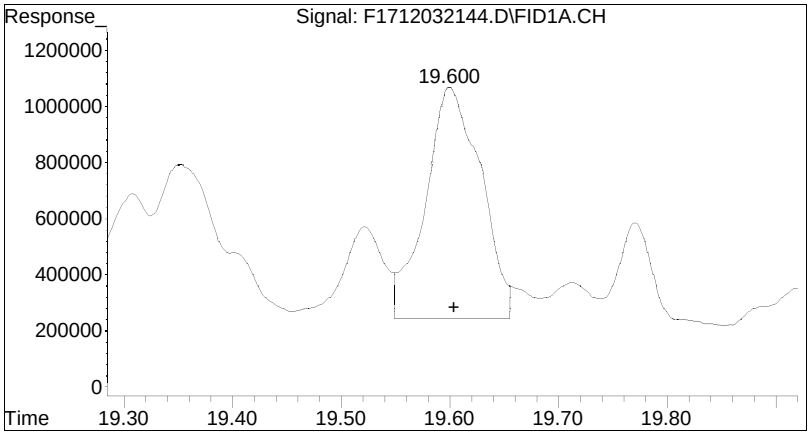
#8 1380

R.T.: 17.829 min
Delta R.T.: 0.011 min
Response: 36235776
Conc: 31.11 ug/mL M4



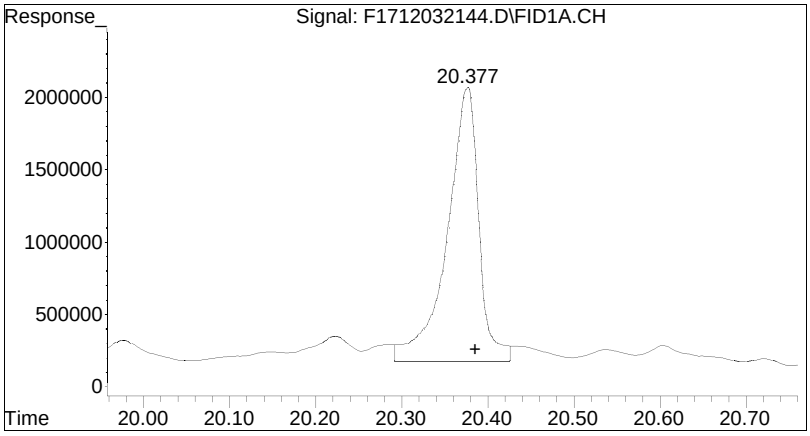
#9 n-Tetradecane (C14)

R.T.: 18.351 min
Delta R.T.: 0.021 min
Response: 130597457
Conc: 112.13 ug/mL M4



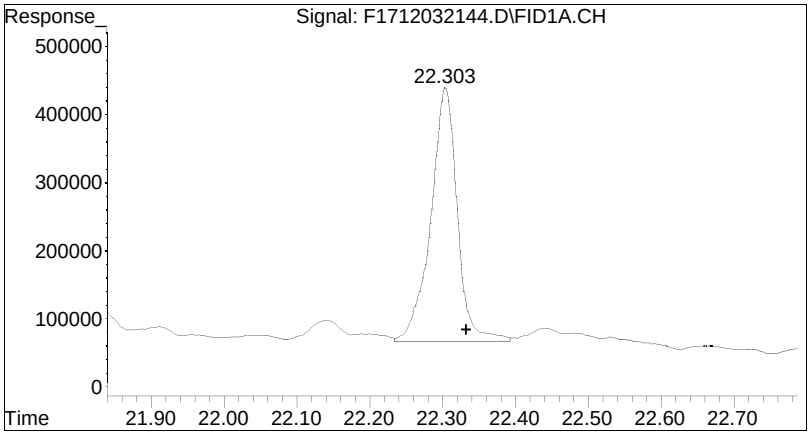
#10 1470

R.T.: 19.600 min
Delta R.T.: -0.004 min
Response: 29103098
Conc: 24.96 ug/mL M4



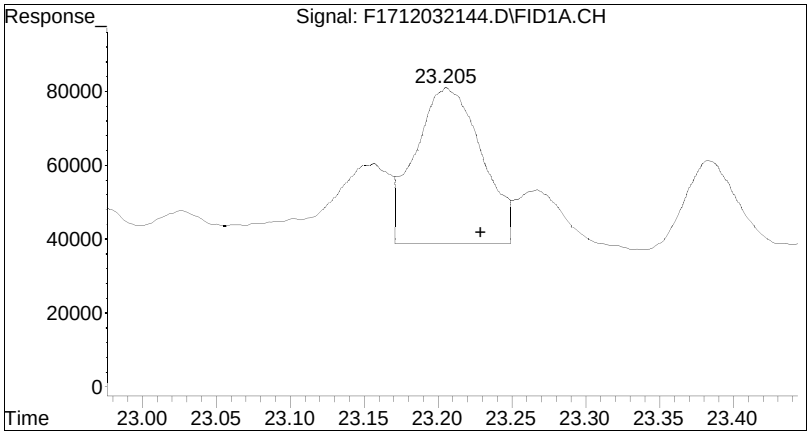
#11 n-Pentadecane (C15)

R.T.:	20.377 min
Delta R.T.:	-0.009 min
Response:	47432255
Conc:	40.68 ug/mL M4



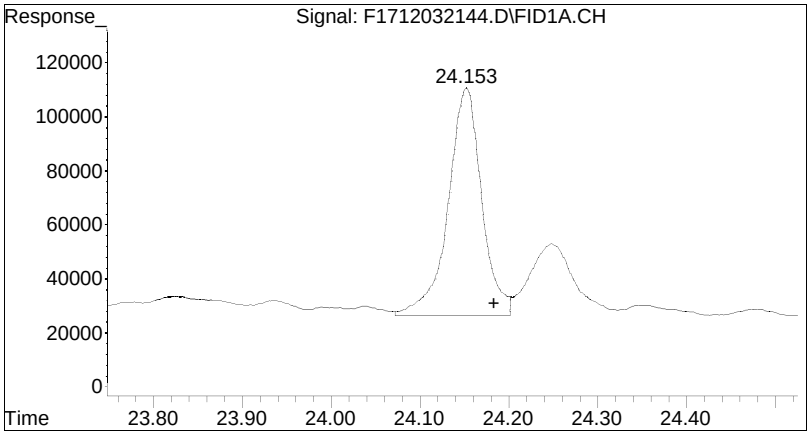
#12 n-Hexadecane (C16)

R.T.:	22.303 min
Delta R.T.:	-0.028 min
Response:	9261287
Conc:	7.96 ug/mL M4



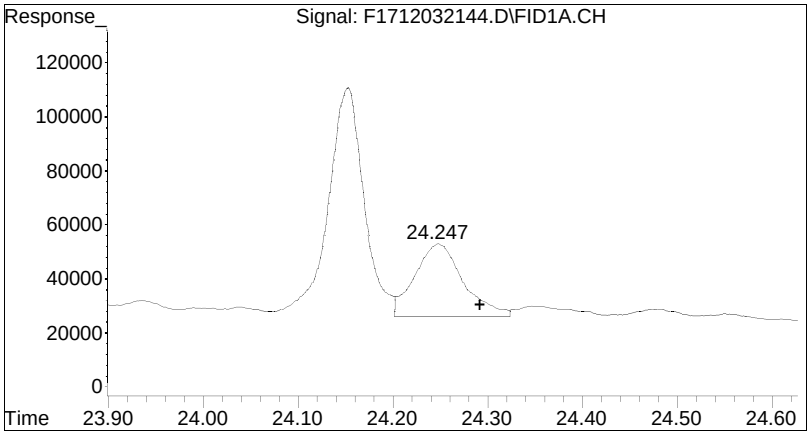
#13 1650

R.T.:	23.205 min
Delta R.T.:	-0.024 min
Response:	1304384
Conc:	1.12 ug/mL M4



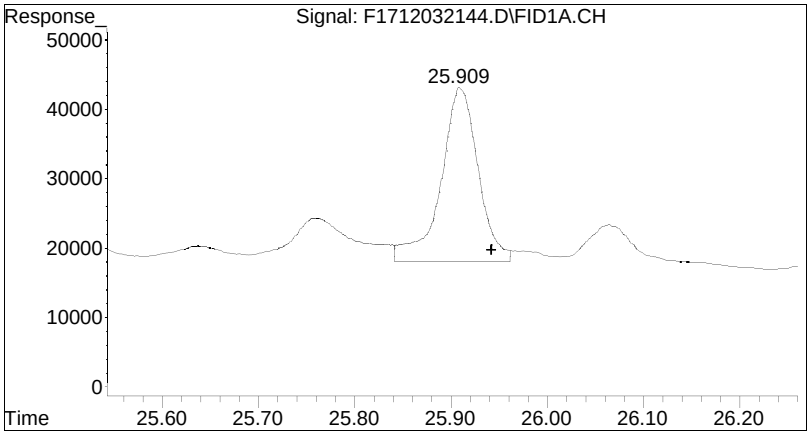
#14 n-Heptadecane (C17)

R.T.:	24.153 min
Delta R.T.:	-0.031 min
Response:	2179286
Conc:	1.87 ug/mL M4



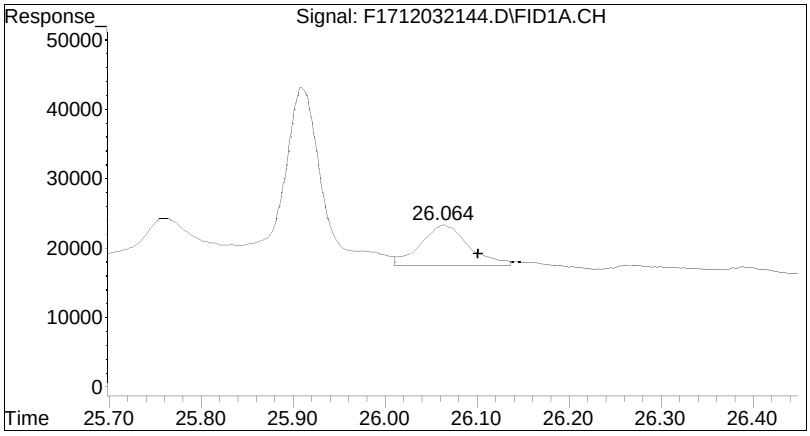
#15 Pristane

R.T.:	24.247 min
Delta R.T.:	-0.044 min
Response:	949044
Conc:	0.79 ug/mL M4



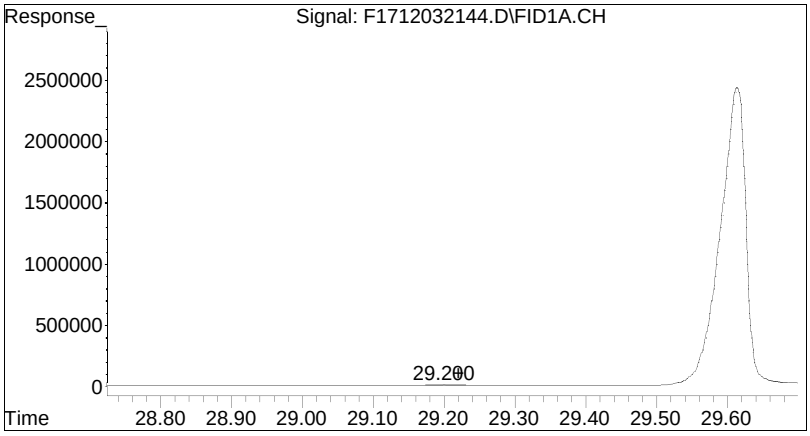
#16 n-Octadecane (C18)

R.T.:	25.909 min
Delta R.T.:	-0.034 min
Response:	668770
Conc:	0.57 ug/mL M4



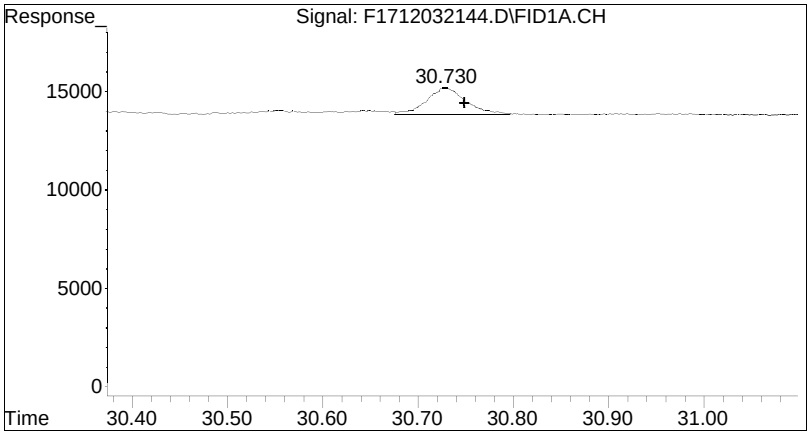
#17 Phytane

R.T.:	26.064 min
Delta R.T.:	-0.037 min
Response:	206411
Conc:	0.19 ug/mL M4



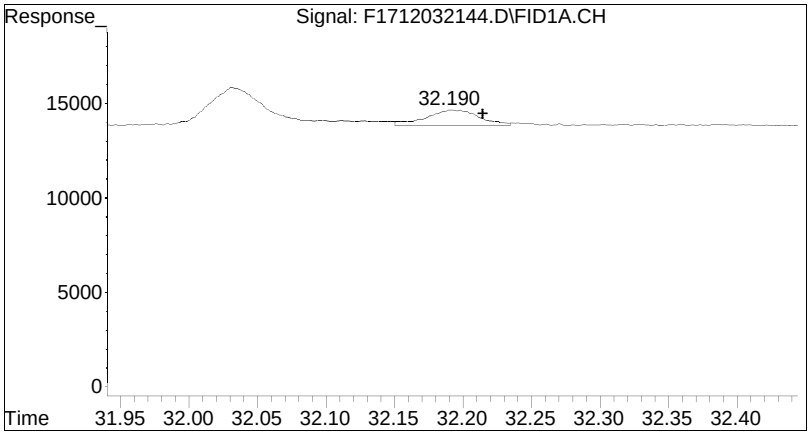
#20 n-Eicosane (C20)

R.T.:	29.200 min
Delta R.T.:	-0.020 min
Response:	94341
Conc:	0.08 ug/mL M4



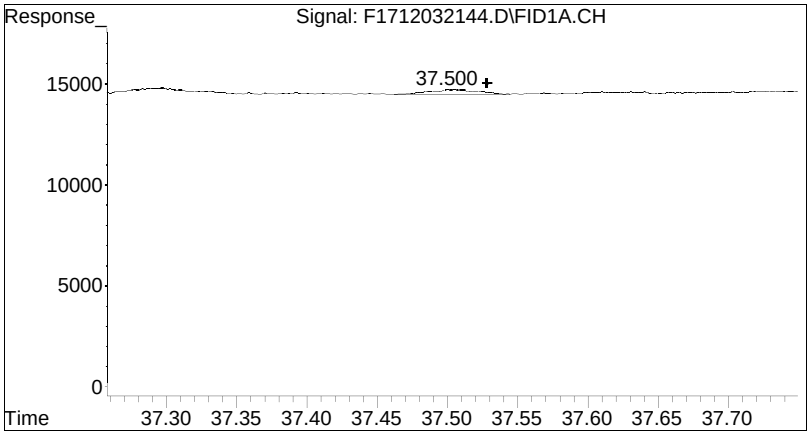
#21 n-Heneicosane (C21)

R.T.:	30.730 min
Delta R.T.:	-0.019 min
Response:	38991
Conc:	0.03 ug/mL M4



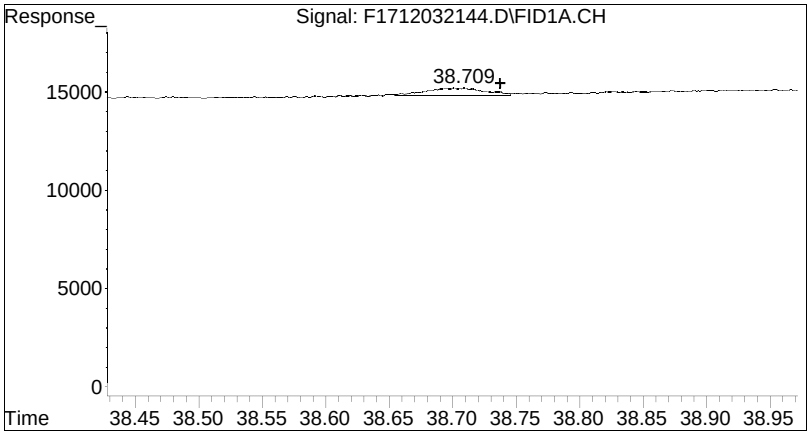
#22 n-Docosane (C22)

R.T.:	32.190 min
Delta R.T.:	-0.024 min
Response:	21633
Conc:	0.02 ug/mL M4



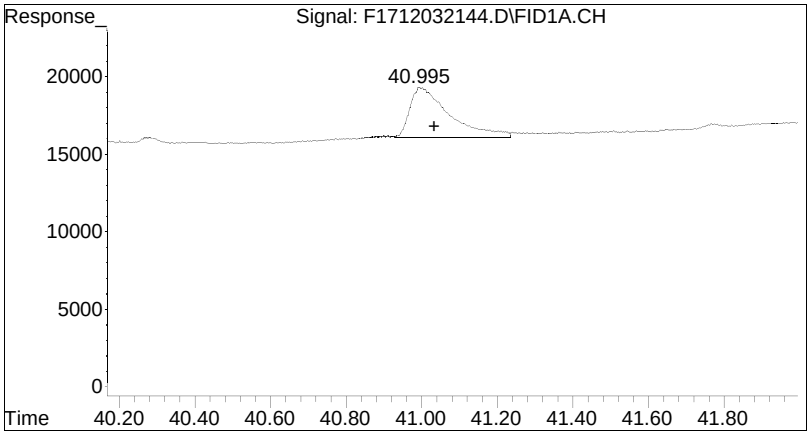
#27 n-Hexacosane (C26)

R.T.:	37.500 min
Delta R.T.:	-0.029 min
Response:	6614
Conc:	0.01 ug/mL M4



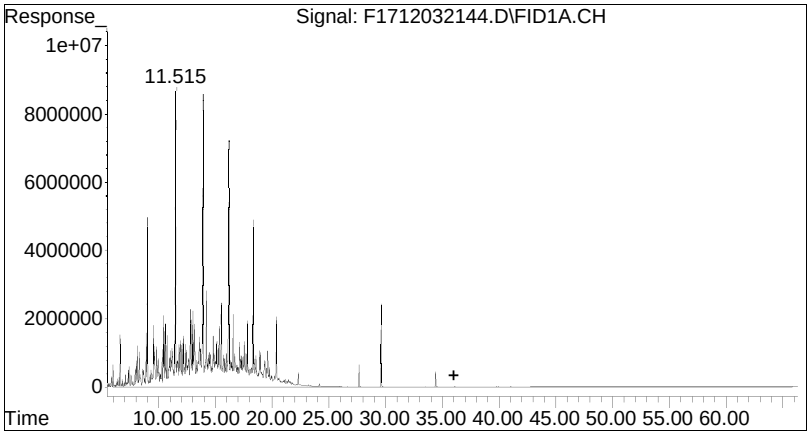
#28 n-Heptacosane (C27)

R.T.:	38.709 min
Delta R.T.:	-0.028 min
Response:	12241
Conc:	0.01 ug/mL M4



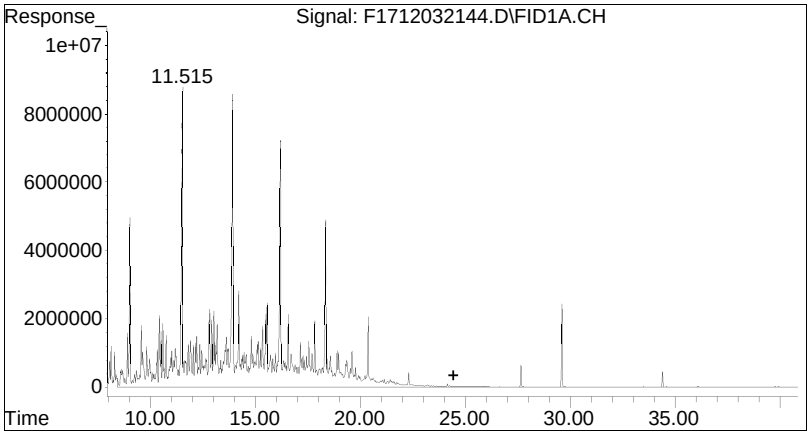
#30 n-Nonacosane (C29)

R.T.:	40.995 min
Delta R.T.:	-0.039 min
Response:	232620
Conc:	0.19 ug/mL M4



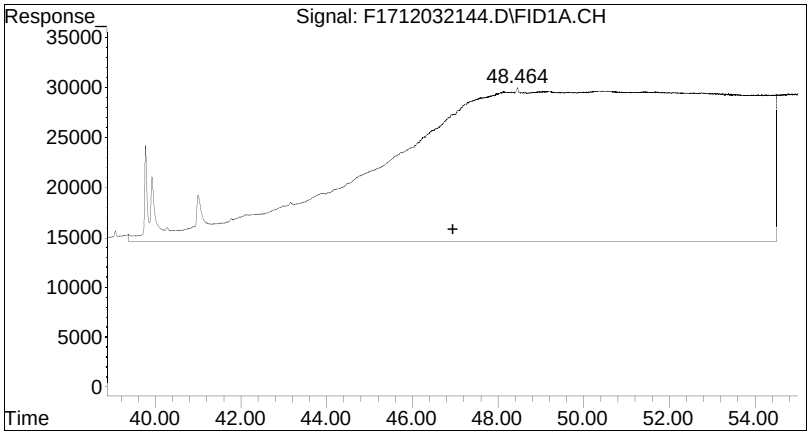
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 6238003047
Conc: 5235.04 ug/mL m



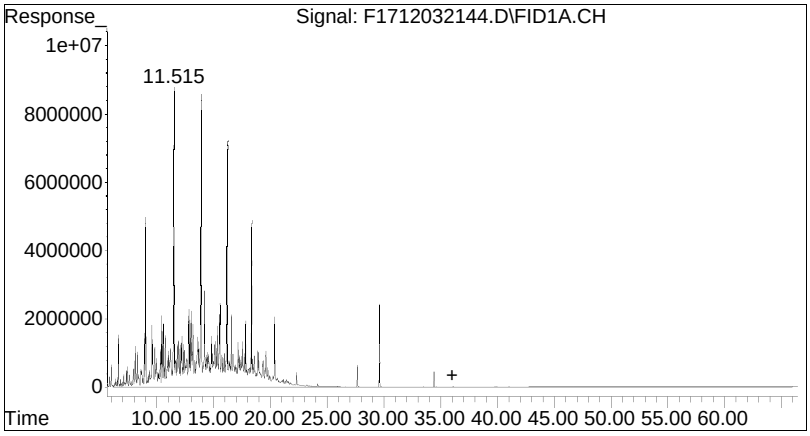
#44 C10-C28 DRO

R.T.: 24.454 min
Delta R.T.: 0.000 min
Response: 5726955816
Conc: 4863.50 ug/mL m



#45 C28-C40 ORO

R.T.: 46.963 min
Delta R.T.: 0.000 min
Response: 88256295
Conc: 71.74 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 4368579723
Conc: 3666.19 ug/mL m

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032146.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:06 pm
Operator : FID17:CC
Sample : WG1579117-3
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:06:08 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	110	-0.02
2	t	n-Octane (C8)	0.864	0.847	2.0	106	0.00
3	t	n-Nonane (C9)	0.922	0.866	6.1	105	-0.01
4	t	n-Decane (C10)	0.944	0.938	0.6	108	-0.01
5	t	n-Undecane (C11)	0.923	0.955	-3.5	111	-0.01
6	t	n-Dodecane (C12)	0.925	0.953	-3.0	110	-0.01
7	t	n-Tridecane (C13)	0.928	0.966	-4.1	112	-0.01
9	t	n-Tetradecane (C14)	0.956	0.984	-2.9	111	-0.01
11	t	n-Pentadecane (C15)	0.957	0.976	-2.0	110	-0.01
12	t	n-Hexadecane (C16)	0.955	0.988	-3.5	112	-0.01
14	t	n-Heptadecane (C17)	0.954	0.992	-4.0	112	-0.01
15	t	Pristane	0.990	1.019	-2.9	112	-0.01
16	t	n-Octadecane (C18)	0.970	1.004	-3.5	112	-0.01
17	t	Phytane	0.908	0.945	-4.1	113	-0.01
18	t	n-Nonadecane (C19)	0.973	1.055	-8.4	117	-0.01
19	s	ortho-terphenyl	1.084	1.162	-7.2	117	-0.01
20	t	n-Eicosane (C20)	0.979	1.007	-2.9	111	-0.02
21	t	n-Heneicosane (C21)	0.982	1.002	-2.0	110	-0.01
22	t	n-Docosane (C22)	0.983	1.014	-3.2	112	0.00
23	t	n-Tricosane (C23)	0.985	1.014	-2.9	112	-0.01
24	s	d50-Tetracosane	0.860	0.969	-12.7	121	-0.01
25	t	n-Tetracosane (C24)	0.982	0.957	2.5	106	0.00
26	t	n-Pentacosane (C25)	0.961	0.990	-3.0	112	-0.01
27	t	n-Hexacosane (C26)	0.987	1.017	-3.0	112	0.00
28	t	n-Heptacosane (C27)	0.989	0.980	0.9	108	-0.01
29	t	n-Octacosane (C28)	1.026	1.021	0.5	110	0.00
30	t	n-Nonacosane (C29)	1.006	1.014	-0.8	110	0.00
31	t	n-Triacontane (C30)	1.010	1.015	-0.5	110	-0.01
32	t	n-Hentriacontane (C31)	0.977	0.983	-0.6	111	0.00
33	t	n-Dotriacontane (C32)	1.025	1.029	-0.4	111	-0.01
34	t	n-Tritriacontane (C33)	0.998	0.991	0.7	110	0.00
35	t	n-tetratriacontane (C34)	0.991	0.986	0.5	110	-0.01

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032146.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:06 pm
Operator : FID17:CC
Sample : WG1579117-3
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:06:08 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.995	-7.5	119	-0.01
37 t	n-Hexatriacontane (C36)	1.115	1.067	4.3	106	-0.02
38 t	n-Heptatriacontane (C37)	1.011	0.981	3.0	106	-0.01
39 t	n-Octatriacontane (C38)	1.022	1.011	1.1	108	-0.01
41 t	n-Tetracontane (C40)	1.009	1.007	0.2	109	-0.02

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.06	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032146.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:06 pm
Operator : FID17:CC
Sample : WG1579117-3
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:06:08 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.618	58886559	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.681	68408191	53.590 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 107.18%	
24) s	d50-Tetracosane	34.424	57075194	56.355 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 112.71%	
	Target Compounds			
2) t	n-Octane (C8)	4.603	49898589	49.013 ug/mL M4
3) t	n-Nonane (C9)	6.621	51019497	46.963 ug/mL M4
4) t	n-Decane (C10)	9.002	55219009	49.652 ug/mL M4
5) t	n-Undecane (C11)	11.462	56209490	51.732 ug/mL M4
6) t	n-Dodecane (C12)	13.861	56109495	51.499 ug/mL M4
7) t	n-Tridecane (C13)	16.149	56857295	52.044 ug/mL M4
9) t	n-Tetradecane (C14)	18.319	57916591	51.454 ug/mL M4
11) t	n-Pentadecane (C15)	20.371	57492397	51.018 ug/mL M4
12) t	n-Hexadecane (C16)	22.319	58167574	51.709 ug/mL M4
14) t	n-Heptadecane (C17)	24.170	58437068	51.998 ug/mL M4
15) t	Pristane	24.277	59999015	51.479 ug/mL M4
16) t	n-Octadecane (C18)	25.930	59097378	51.719 ug/mL M4
17) t	Phytane	26.087	55657638	52.068 ug/mL M4
18) t	n-Nonadecane (C19)	27.607	62137345	54.216 ug/mL M4
20) t	n-Eicosane (C20)	29.206	59317152	51.461 ug/mL M4
21) t	n-Heneicosane (C21)	30.737	59002659	51.024 ug/mL M4
22) t	n-Docosane (C22)	32.206	59694030	51.542 ug/mL M4
23) t	n-Tricosane (C23)	33.611	59707883	51.452 ug/mL M4
25) t	n-Tetracosane (C24)	34.966	56359224	48.718 ug/mL M4
26) t	n-Pentacosane (C25)	36.263	58316047	51.517 ug/mL M4
27) t	n-Hexacosane (C26)	37.520	59904752	51.553 ug/mL M4
28) t	n-Heptacosane (C27)	38.728	57730878	49.549 ug/mL M4
29) t	n-Octacosane (C28)	39.898	60118564	49.773 ug/mL M4
30) t	n-Nonacosane (C29)	41.025	59697070	50.389 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032146.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 7:06 pm
Operator : FID17:CC
Sample : WG1579117-3
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 23 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:06:08 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

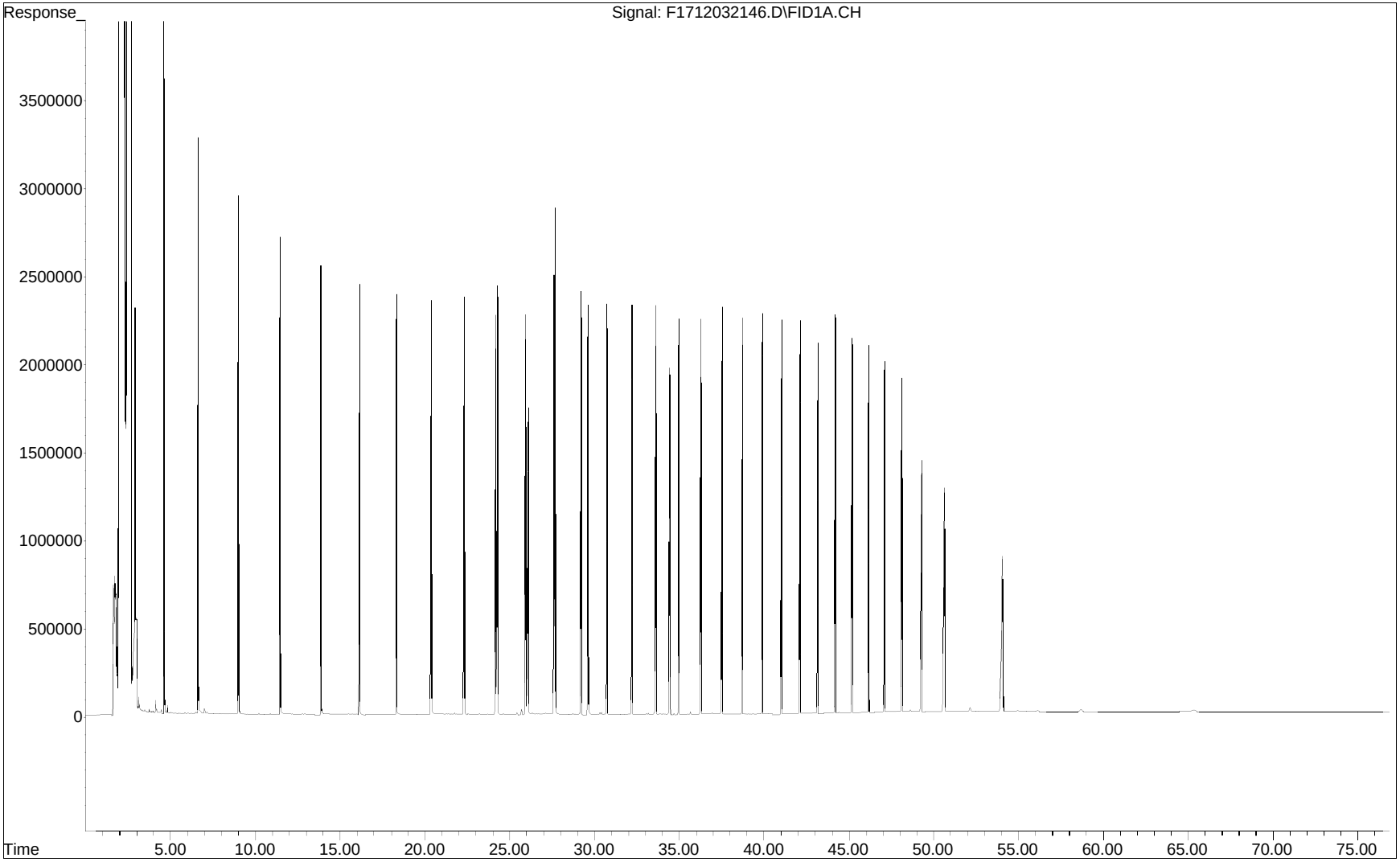
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.117	59772899	50.257 ug/mL M4
32) t	n-Hentriacontane (C31)	43.174	57887464	50.322 ug/mL M4
33) t	n-Dotriacontane (C32)	44.198	60596461	50.185 ug/mL M4
34) t	n-Tritriacontane (C33)	45.192	58385076	49.674 ug/mL M4
35) t	n-tetratriacontane (C34)	46.155	58035611	49.724 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.098	58593027	53.735 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.118	62855725	47.883 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.281	57776042	48.531 ug/mL M4
39) t	n-Octatriacontane (C38)	50.630	59527229	49.458 ug/mL M4
41) t	n-Tetracontane (C40)	54.047	59295958	49.919 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032146.D
Operator : FID17:CC
Acquired : 04 Dec 2021 7:06 pm using AcqMethod FID17A.M
Sample Name: WG1579117-3
Instrument: FID17
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 23
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032158.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 3:55 am
Operator : FID17:MJS
Sample : l2166503-02,42,,,r2a
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 29 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:54:35 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.613	60863386	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.734	293436171	222.405	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	444.81%#		
24) s	d50-Tetracosane	34.473	230711024	220.401	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	440.80%#		
	Target Compounds					
2) t	n-Octane (C8)	4.563	655928	0.623	ug/mL	M4
3) t	n-Nonane (C9)	6.600	18452137	16.434	ug/mL	M4
4) t	n-Decane (C10)	9.034	218133923	189.771	ug/mL	M4
5) t	n-Undecane (C11)	11.592f	769707744	685.393	ug/mL	M4
6) t	n-Dodecane (C12)	14.022f	1001308806	889.176	ug/mL	M4
7) t	n-Tridecane (C13)	16.314f	985948442	873.177	ug/mL	M4
8) t	1380	17.907	133339158	114.612	ug/mL	M4
9) t	n-Tetradecane (C14)	18.454f	529727848	455.330	ug/mL	M4
10) t	1470	19.658	121517895	104.331	ug/mL	M4
11) t	n-Pentadecane (C15)	20.436	207364649	178.036	ug/mL	M4
12) t	n-Hexadecane (C16)	22.321	38627938	33.224	ug/mL	M4
13) t	1650	23.211	5762709	4.961	ug/mL	M4
14) t	n-Heptadecane (C17)	24.151	9247940	7.962	ug/mL	M4
15) t	Pristane	24.247	4271315	3.546	ug/mL	M4
16) t	n-Octadecane (C18)	25.905	2996969	2.538	ug/mL	M4
17) t	Phytane	26.059	1040200	0.942	ug/mL	M4
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	29.182	415156	0.348	ug/mL	M4
21) t	n-Heneicosane (C21)	30.707	225520	0.189	ug/mL	M4
22) t	n-Docosane (C22)	32.175	127091	0.106	ug/mL	M4
23) t	n-Tricosane (C23)	33.577	226551	0.189	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032158.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 3:55 am
Operator : FID17:MJS
Sample : l2166503-02,42,,,r2a
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 29 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:54:35 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

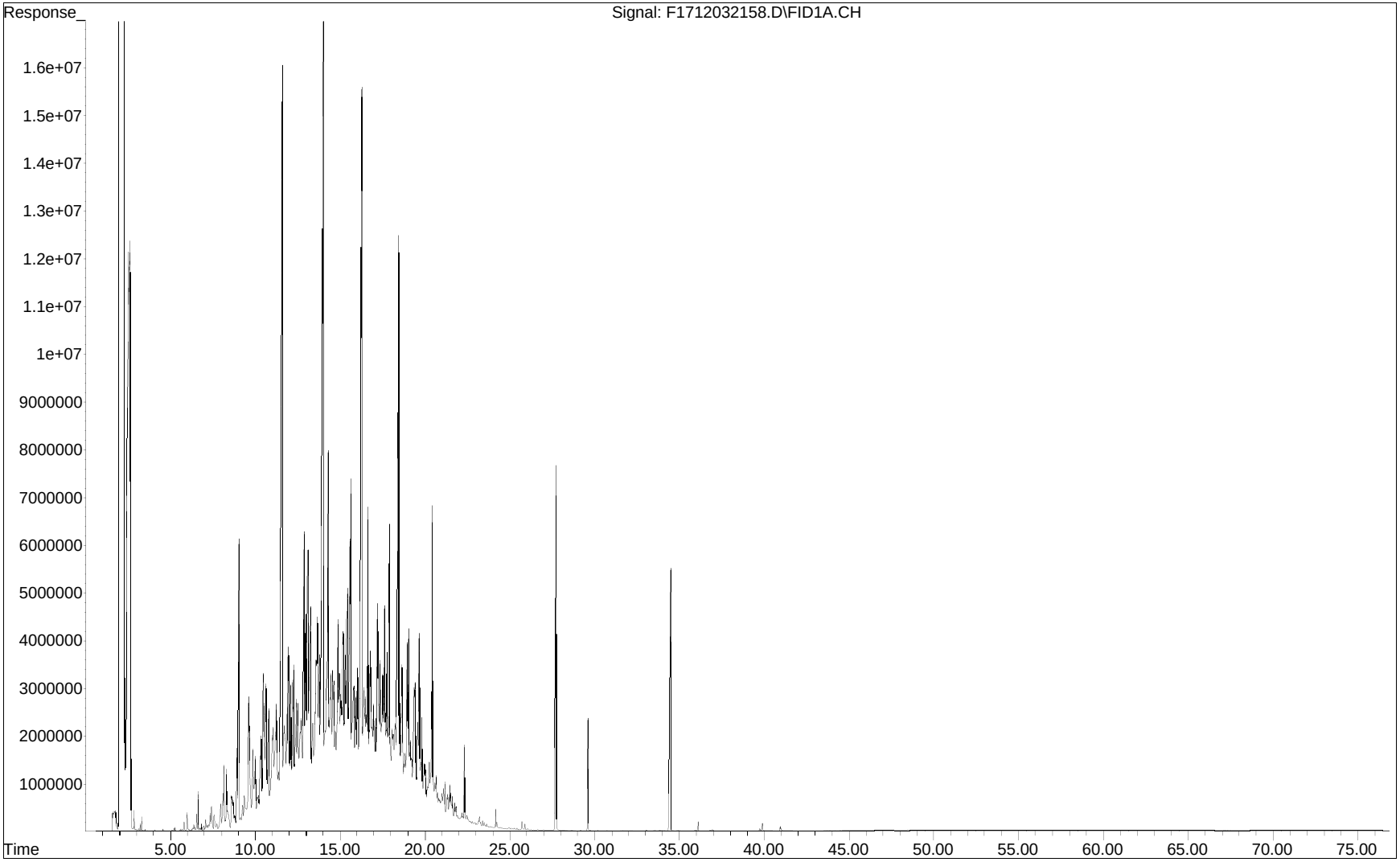
	Compound	R.T.	Response	Conc Units
25) t	n-Tetracosane (C24)	34.942	195637	0.164 ug/mL M4
26) t	n-Pentacosane (C25)	36.235	184130	0.157 ug/mL M4
27) t	n-Hexacosane (C26)	37.487	86413	0.072 ug/mL M4
28) t	n-Heptacosane (C27)	38.694	95313	0.079 ug/mL M4
29) t	n-Octacosane (C28)	39.864	5878335C	4.709 ug/mL M4
30) t	n-Nonacosane (C29)	0.000	0	N.D. ug/mL d
31) t	n-Triacontane (C30)	42.085	81323	0.066 ug/mL M4
32) t	n-Hentriacontane (C31)	43.141	47514	0.040 ug/mL M4
33) t	n-Dotriacontane (C32)	44.164	40292	0.032 ug/mL M4
34) t	n-Tritriacontane (C33)	45.152	339299	0.279 ug/mL M4
35) t	n-tetratriacontane (C34)	0.000	0	N.D. ug/mL
36) t	n-Pentatriacontane (C35)	0.000	0	N.D. ug/mL
37) t	n-Hexatriacontane (C36)	0.000	0	N.D. ug/mL
38) t	n-Heptatriacontane (C37)	0.000	0	N.D. ug/mL
39) t	n-Octatriacontane (C38)	0.000	0	N.D. ug/mL
40) t	n-Nonatriacontane (C39)	0.000	0	N.D. ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D. ug/mL
42) h	C9-C44 Total Petroleu...	36.038	20115859000	16900.565 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	19870000936	16694.004 ug/mLm
43) h	C9-C40 Total Petroleu...	0.000	0	N.D. ug/ml d
44) h	C10-C28 DRO	24.454	19560967233	16630.461 ug/mL m
44) h	C10-C28 DRO BS	24.454	19541014487	16613.497 ug/mLm
45) h	C28-C40 ORO	46.963	113376439	92.262 ug/mL m
45) h	C28-C40 ORO BS	46.963	31772562	25.855 ug/mLm
46) h	Total Resolved Hydroc...	36.038	13556360518	11389.528 ug/mL m

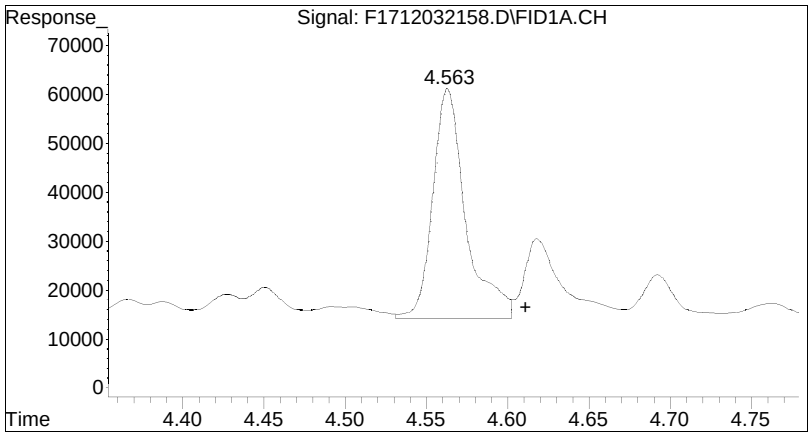
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

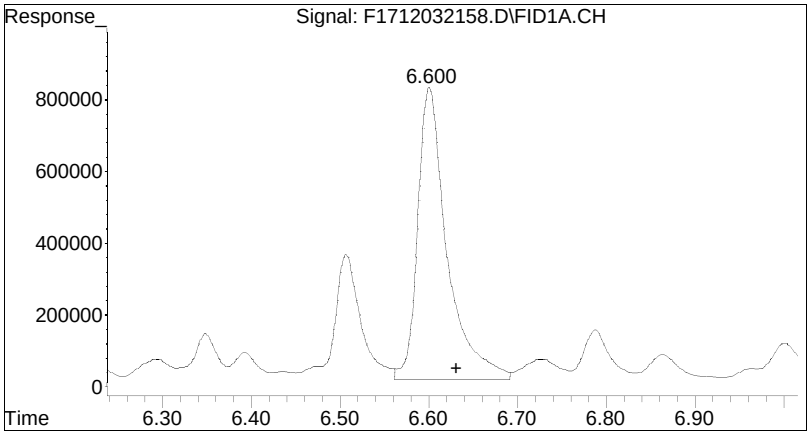
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032158.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 3:55 am using AcqMethod FID17A.M
Sample Name: l2166503-02,42,,,r2a
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 29
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





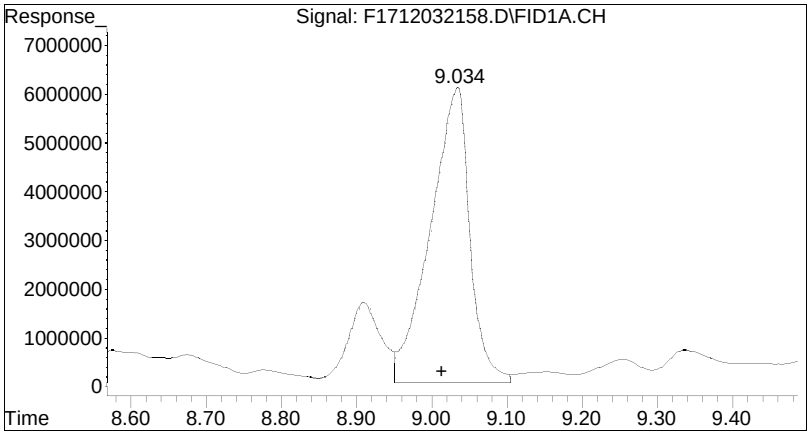
#2 n-Octane (C8)

R.T.:	4.563 min
Delta R.T.:	-0.048 min
Response:	655928
Conc:	0.62 ug/mL M4



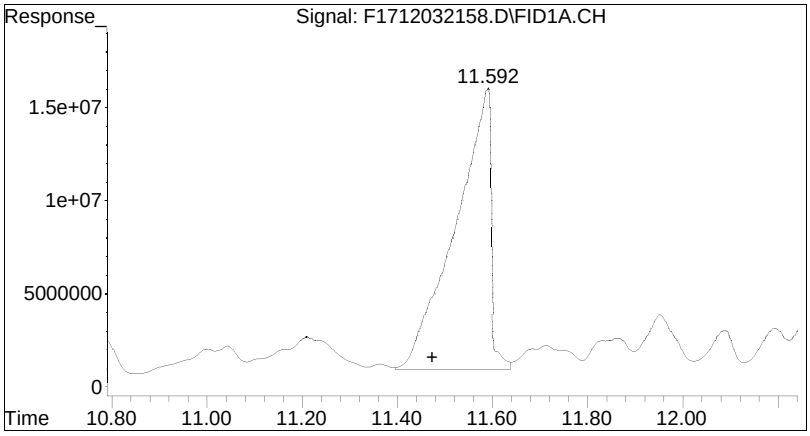
#3 n-Nonane (C9)

R.T.:	6.600 min
Delta R.T.:	-0.031 min
Response:	18452137
Conc:	16.43 ug/mL M4



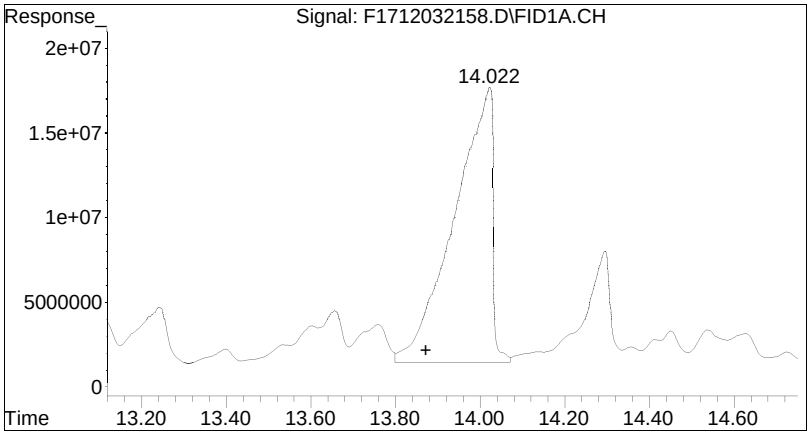
#4 n-Decane (C10)

R.T.: 9.034 min
Delta R.T.: 0.021 min
Response: 218133923
Conc: 189.77 ug/mL M4



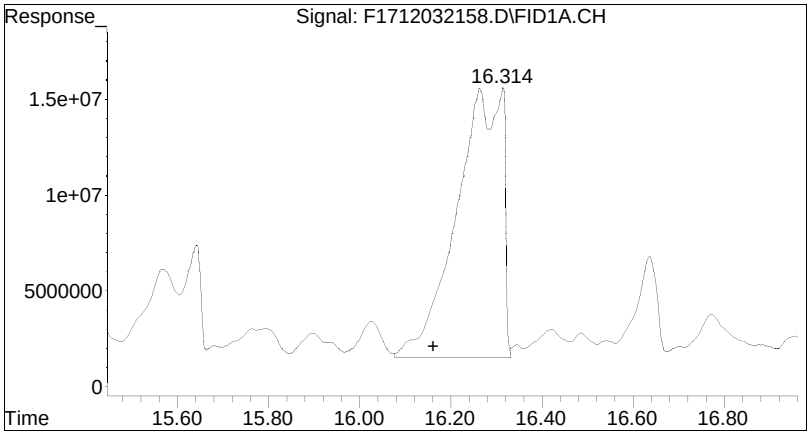
#5 n-Undecane (C11)

R.T.: 11.592 min
Delta R.T.: 0.118 min
Response: 769707744
Conc: 685.39 ug/mL M4



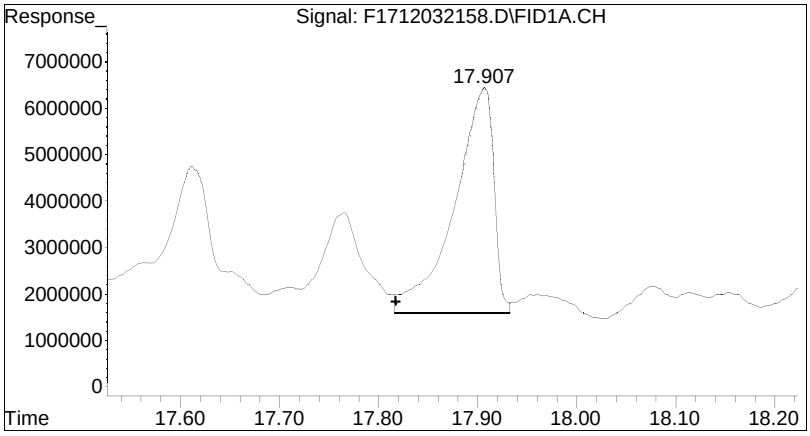
#6 n-Dodecane (C12)

R.T.: 14.022 min
Delta R.T.: 0.149 min
Response: 1001308806
Conc: 889.18 ug/mL M4



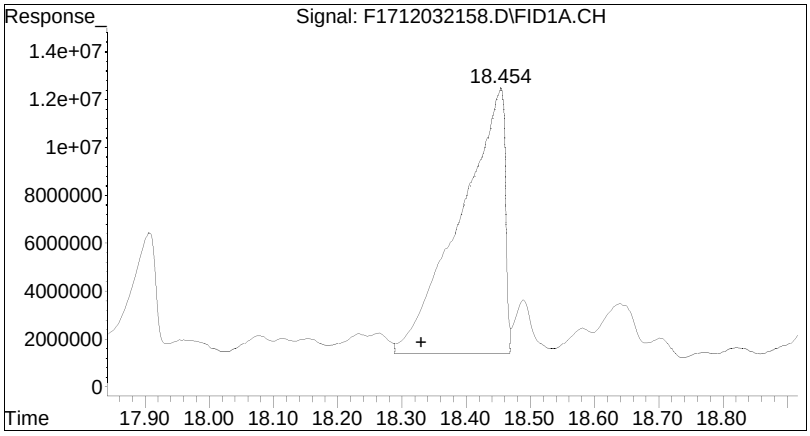
#7 n-Tridecane (C13)

R.T.: 16.314 min
Delta R.T.: 0.152 min
Response: 985948442
Conc: 873.18 ug/mL M4



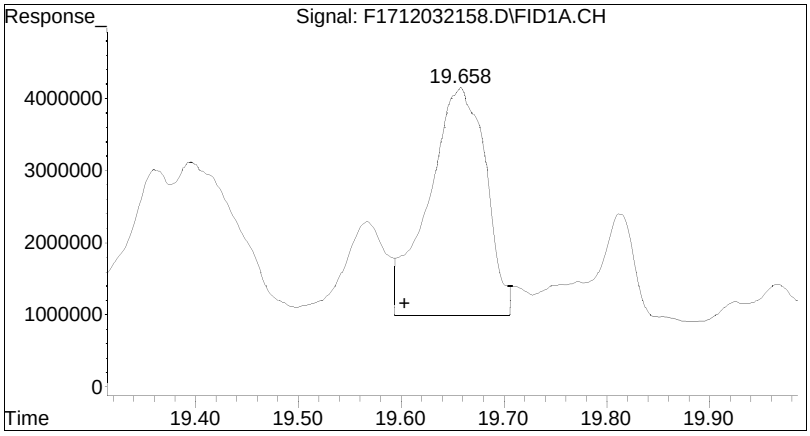
#8 1380

R.T.: 17.907 min
Delta R.T.: 0.088 min
Response: 133339158
Conc: 114.61 ug/mL M4



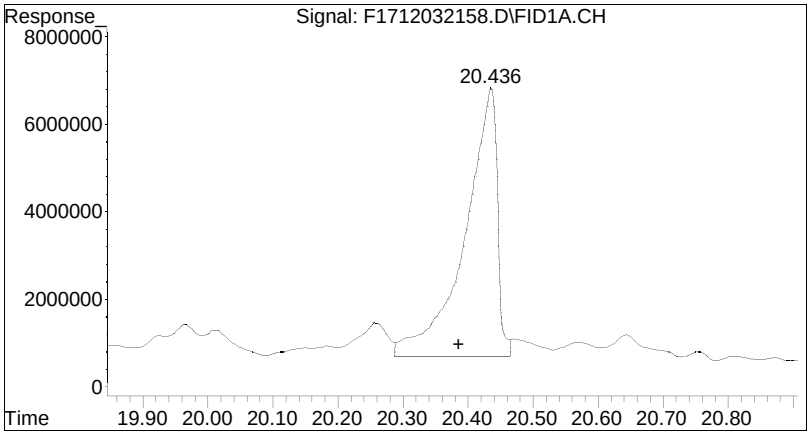
#9 n-Tetradecane (C14)

R.T.: 18.454 min
Delta R.T.: 0.124 min
Response: 529727848
Conc: 455.33 ug/mL M4



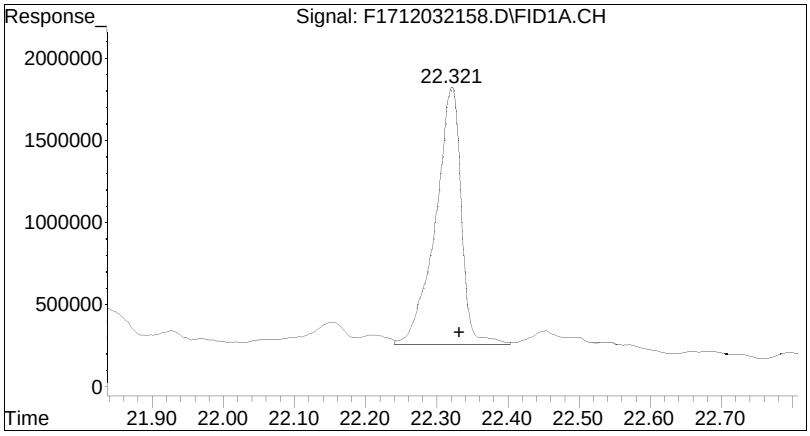
#10 1470

R.T.: 19.658 min
Delta R.T.: 0.054 min
Response: 121517895
Conc: 104.33 ug/mL M4



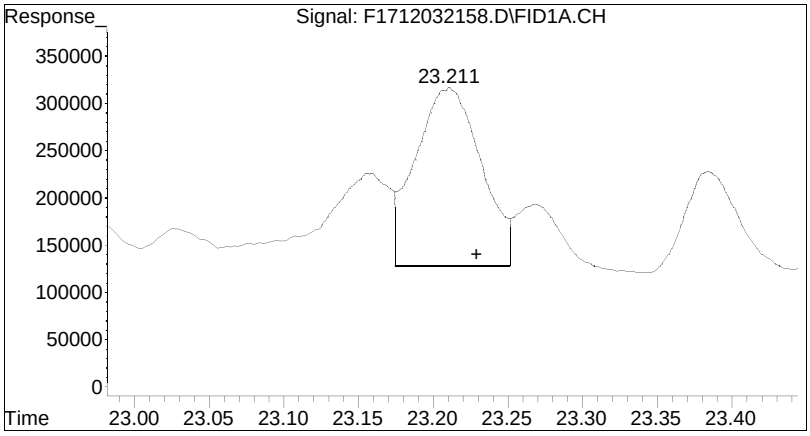
#11 n-Pentadecane (C15)

R.T.: 20.436 min
Delta R.T.: 0.050 min
Response: 207364649
Conc: 178.04 ug/mL M4



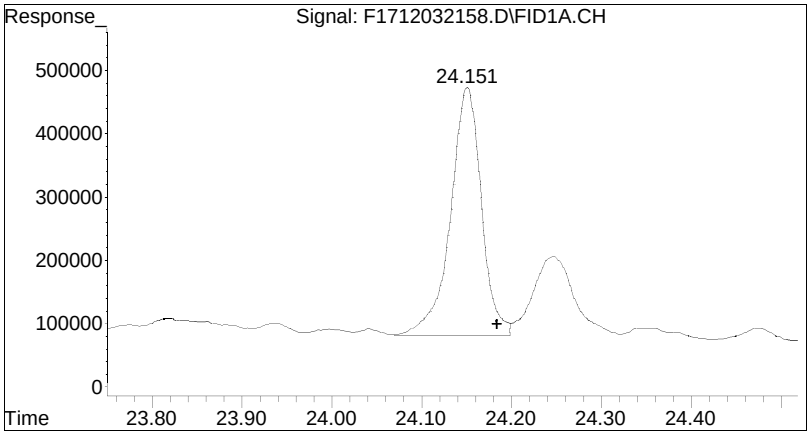
#12 n-Hexadecane (C16)

R.T.:	22.321 min
Delta R.T.:	-0.011 min
Response:	38627938
Conc:	33.22 ug/mL M4



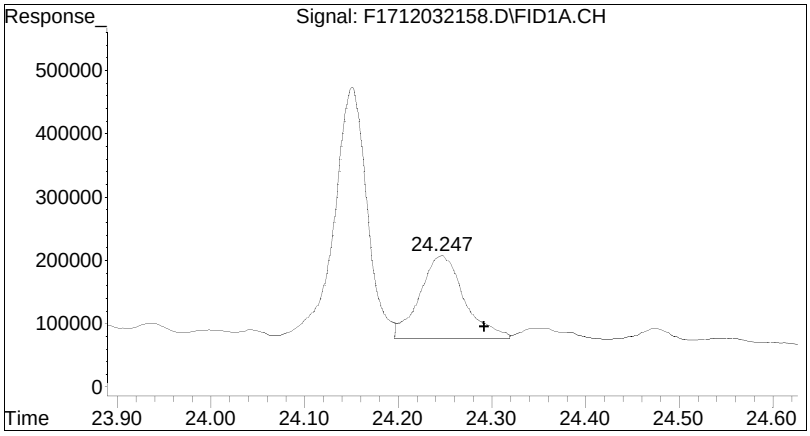
#13 1650

R.T.:	23.211 min
Delta R.T.:	-0.018 min
Response:	5762709
Conc:	4.96 ug/mL M4



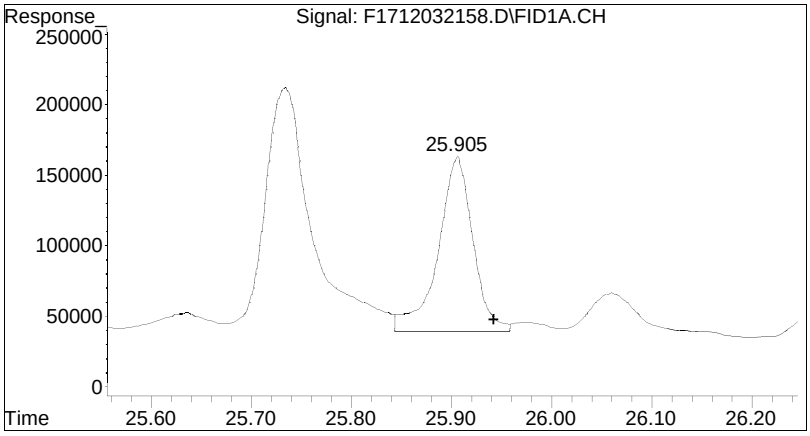
#14 n-Heptadecane (C17)

R.T.:	24.151 min
Delta R.T.:	-0.032 min
Response:	9247940
Conc:	7.96 ug/mL M4



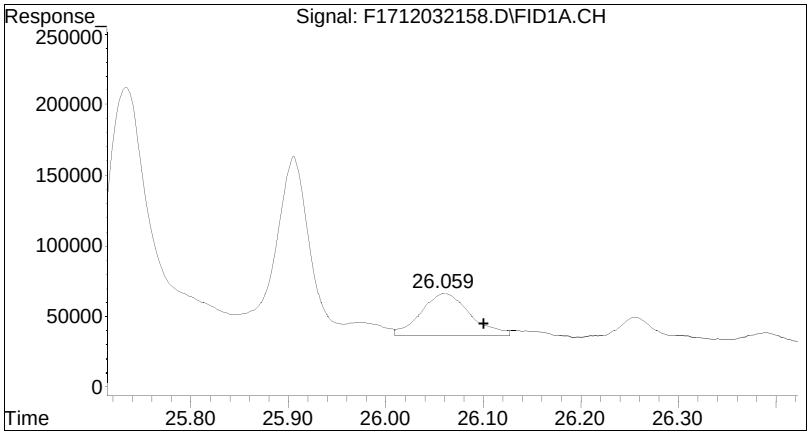
#15 Pristane

R.T.:	24.247 min
Delta R.T.:	-0.044 min
Response:	4271315
Conc:	3.55 ug/mL M4



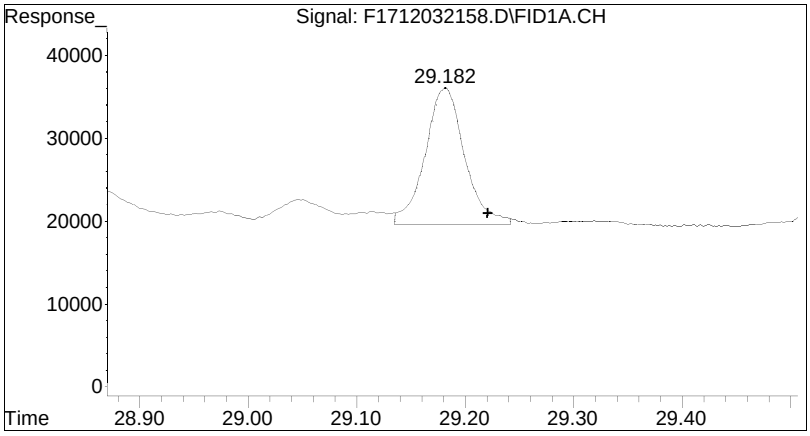
#16 n-Octadecane (C18)

R.T.:	25.905 min
Delta R.T.:	-0.037 min
Response:	2996969
Conc:	2.54 ug/mL M4



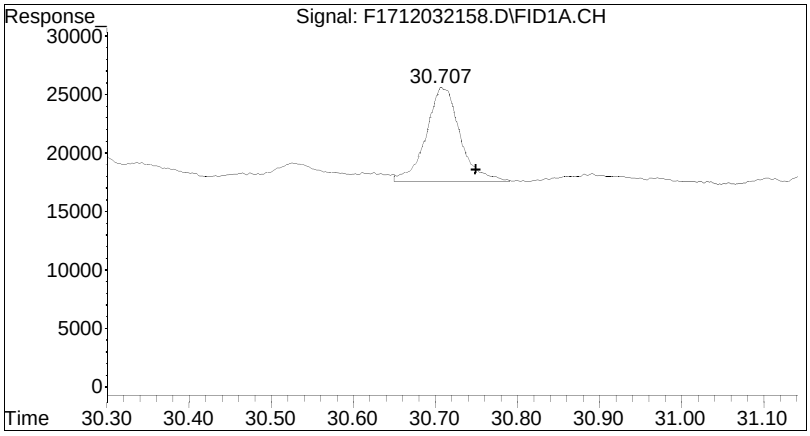
#17 Phytane

R.T.:	26.059 min
Delta R.T.:	-0.042 min
Response:	1040200
Conc:	0.94 ug/mL M4



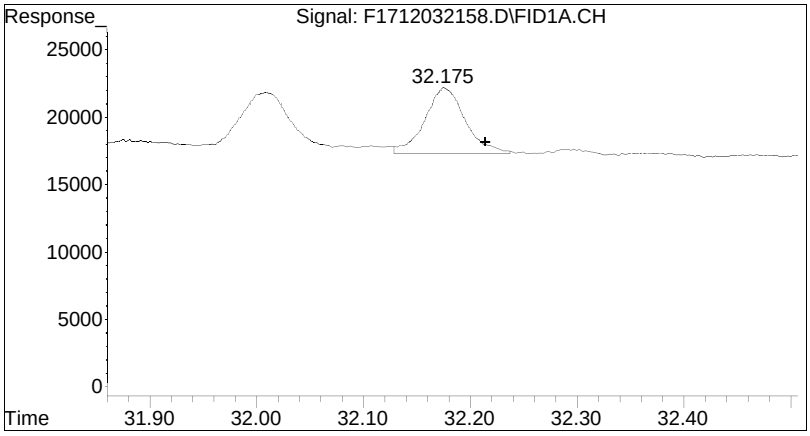
#20 n-Eicosane (C20)

R.T.:	29.182 min
Delta R.T.:	-0.039 min
Response:	415156
Conc:	0.35 ug/mL M4



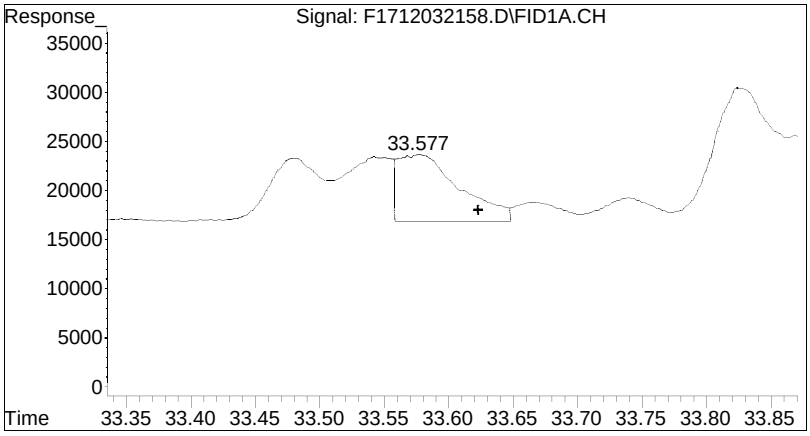
#21 n-Heneicosane (C21)

R.T.:	30.707 min
Delta R.T.:	-0.041 min
Response:	225520
Conc:	0.19 ug/mL M4



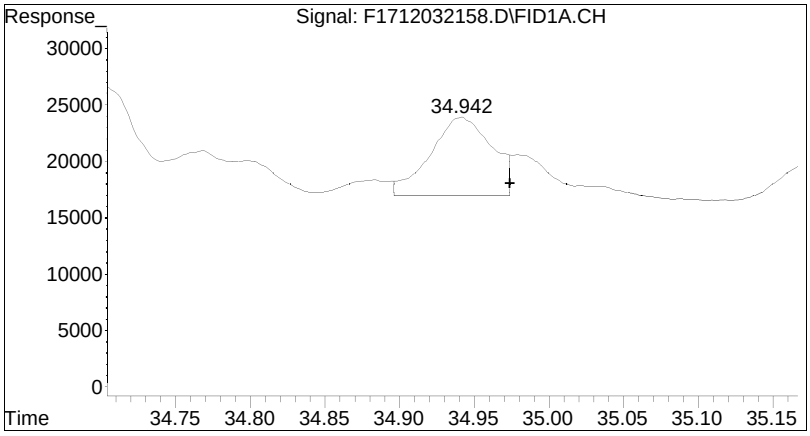
#22 n-Docosane (C22)

R.T.:	32.175 min
Delta R.T.:	-0.039 min
Response:	127091
Conc:	0.11 ug/mL M4



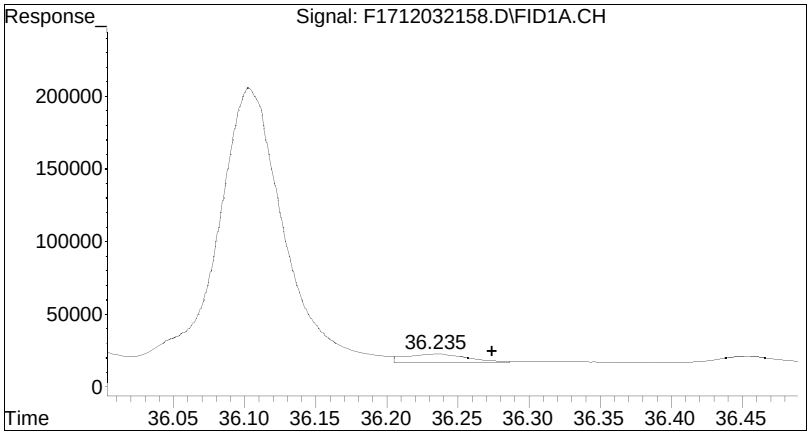
#23 n-Tricosane (C23)

R.T.:	33.577 min
Delta R.T.:	-0.046 min
Response:	226551
Conc:	0.19 ug/mL M4



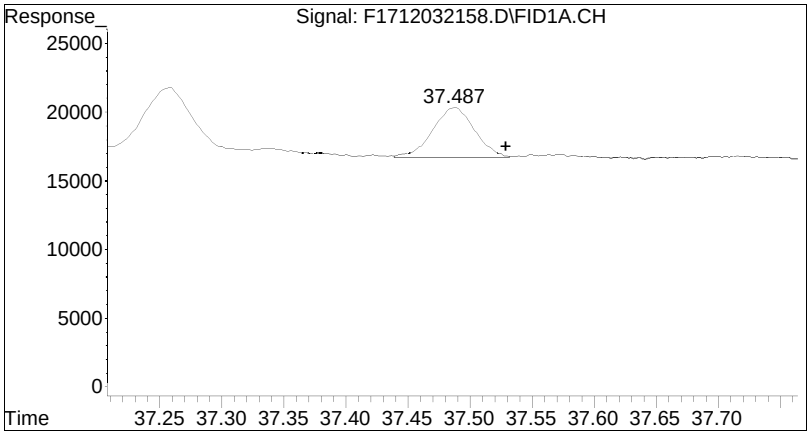
#25 n-Tetracosane (C24)

R.T.:	34.942 min
Delta R.T.:	-0.033 min
Response:	195637
Conc:	0.16 ug/mL M4



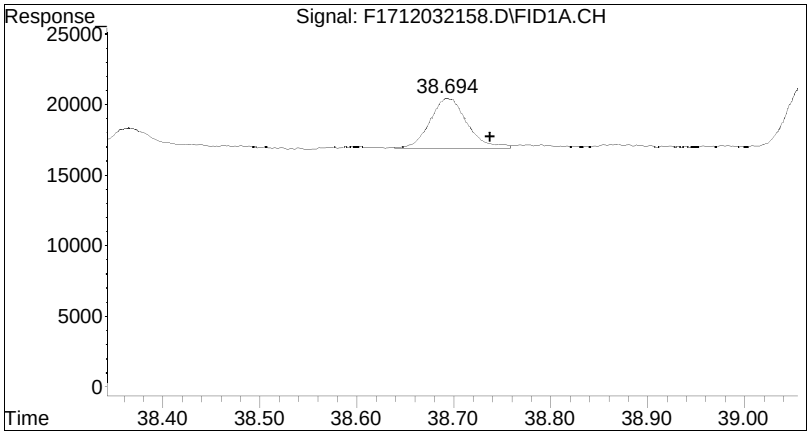
#26 n-Pentacosane (C25)

R.T.:	36.235 min
Delta R.T.:	-0.040 min
Response:	184130
Conc:	0.16 ug/mL M4



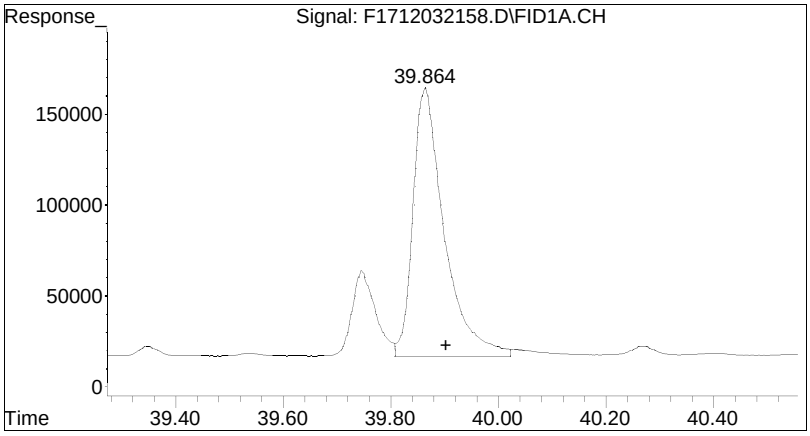
#27 n-Hexacosane (C26)

R.T.:	37.487 min
Delta R.T.:	-0.041 min
Response:	86413
Conc:	0.07 ug/mL M4



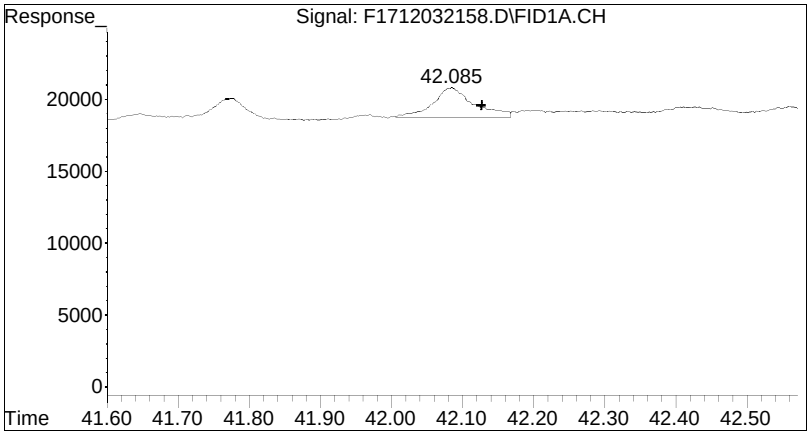
#28 n-Heptacosane (C27)

R.T.:	38.694 min
Delta R.T.:	-0.044 min
Response:	95313
Conc:	0.08 ug/mL M4



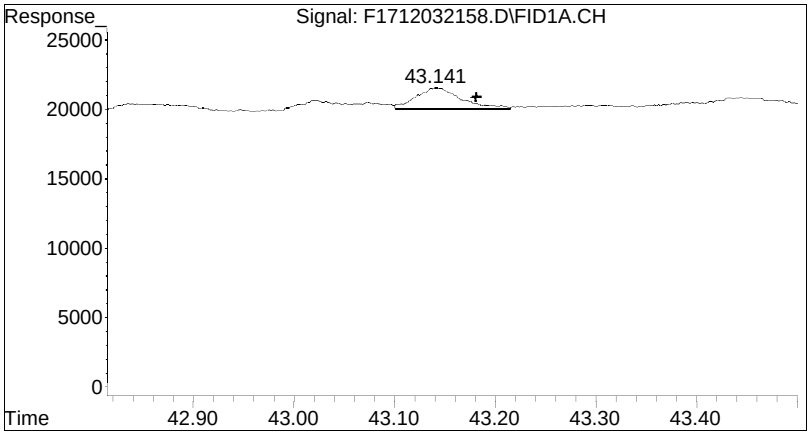
#29 n-Octacosane (C28)

R.T.:	39.864 min
Delta R.T.:	-0.039 min
Response:	5878335
Conc:	4.71 ug/mL M4



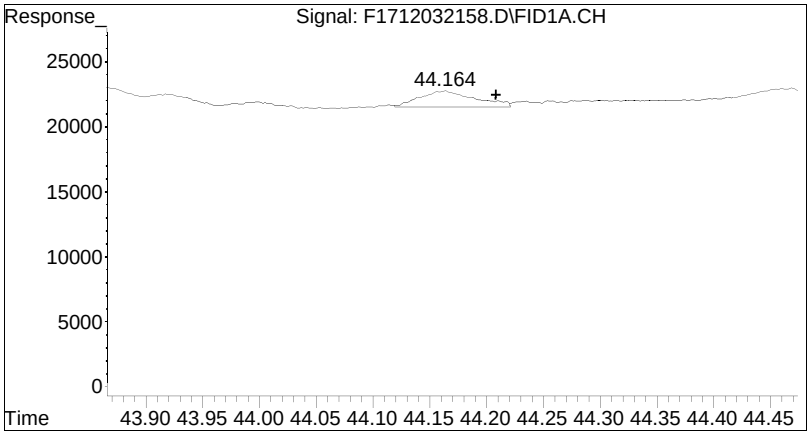
#31 n-Triacontane (C30)

R.T.:	42.085 min
Delta R.T.:	-0.042 min
Response:	81323
Conc:	0.07 ug/mL M4



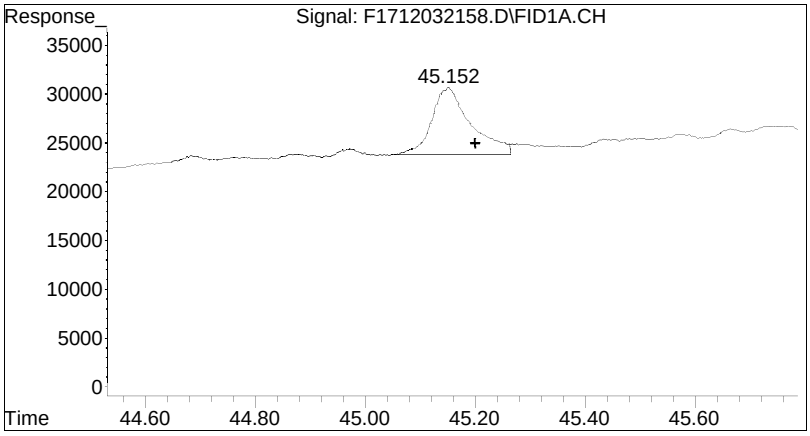
#32 n-Hentriacontane (C31)

R.T.:	43.141 min
Delta R.T.:	-0.040 min
Response:	47514
Conc:	0.04 ug/mL M4



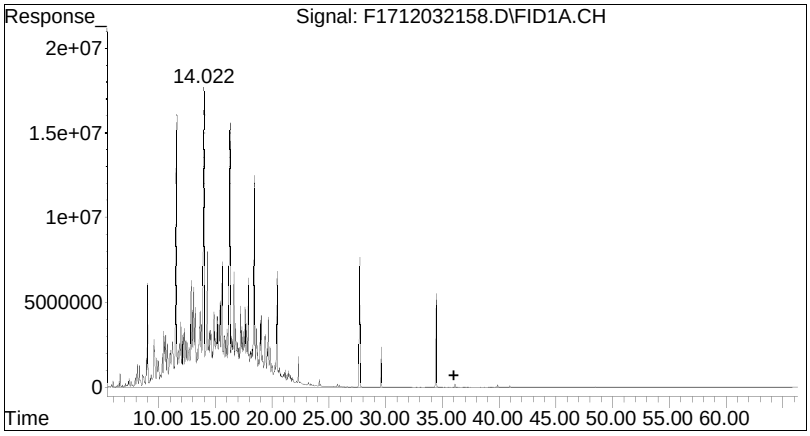
#33 n-Dotriacontane (C32)

R.T.:	44.164 min
Delta R.T.:	-0.045 min
Response:	40292
Conc:	0.03 ug/mL M4



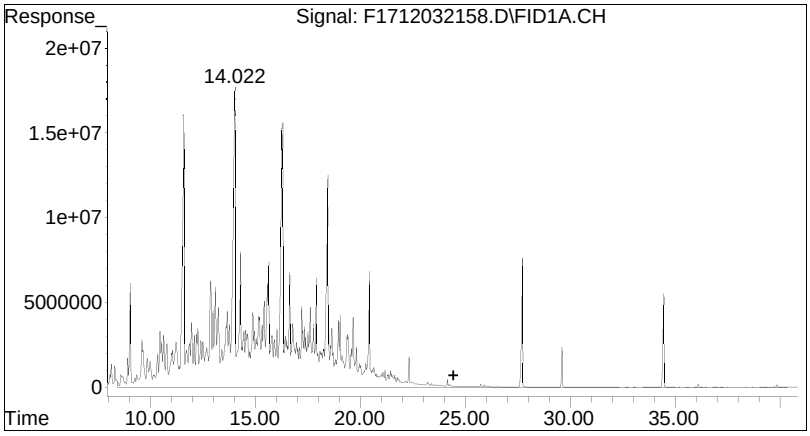
#34 n-Tritriacontane (C33)

R.T.:	45.152 min
Delta R.T.:	-0.049 min
Response:	339299
Conc:	0.28 ug/mL M4



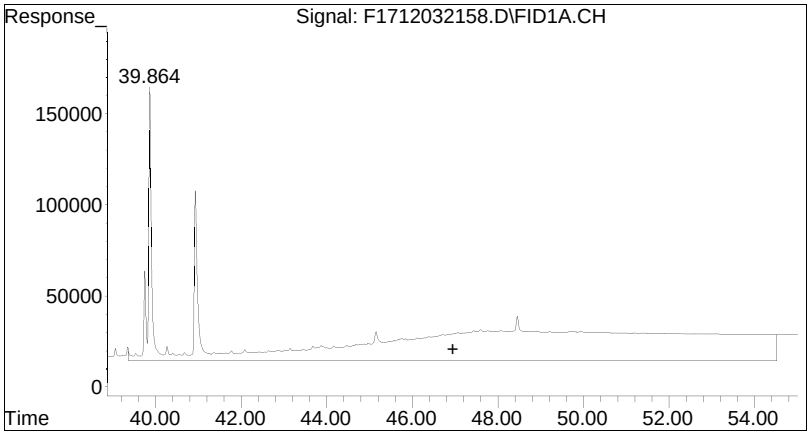
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 20115859000
Conc: 16900.56 ug/mL m



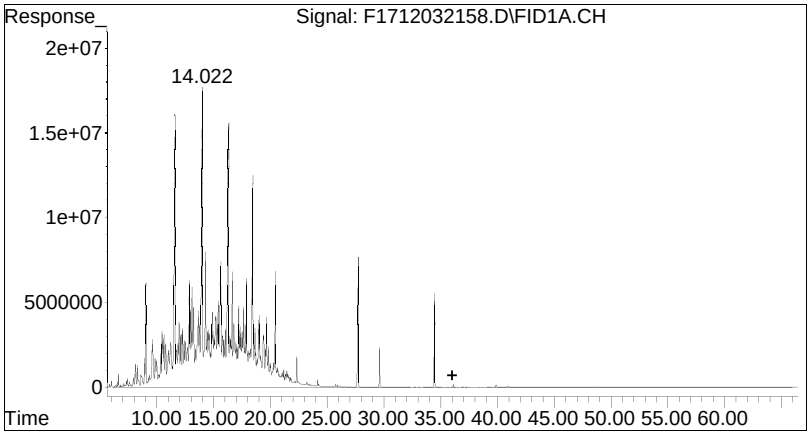
#44 C10-C28 DRO

R.T.: 24.454 min
Delta R.T.: 0.000 min
Response: 19560967233
Conc: 16630.46 ug/mL m



#45 C28-C40 ORO

R.T.: 46.963 min
Delta R.T.: 0.000 min
Response: 113376439
Conc: 92.26 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 13556360518
Conc: 11389.53 ug/mL m

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032164.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 8:19 am
Operator : FID17:CC
Sample : WG1579117-4
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 32 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 14:05:42 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	110	-0.02
2	t	n-Octane (C8)	0.864	0.845	2.2	105	0.00
3	t	n-Nonane (C9)	0.922	0.878	4.8	105	-0.01
4	t	n-Decane (C10)	0.944	0.926	1.9	106	-0.01
5	t	n-Undecane (C11)	0.923	0.943	-2.2	109	-0.01
6	t	n-Dodecane (C12)	0.925	0.948	-2.5	109	-0.02
7	t	n-Tridecane (C13)	0.928	0.955	-2.9	110	-0.02
9	t	n-Tetradecane (C14)	0.956	0.972	-1.7	109	-0.02
11	t	n-Pentadecane (C15)	0.957	0.967	-1.0	108	-0.02
12	t	n-Hexadecane (C16)	0.955	0.979	-2.5	111	-0.02
14	t	n-Heptadecane (C17)	0.954	0.981	-2.8	110	-0.02
15	t	Pristane	0.990	1.020	-3.0	112	-0.02
16	t	n-Octadecane (C18)	0.970	0.998	-2.9	111	-0.02
17	t	Phytane	0.908	0.943	-3.9	112	-0.02
18	t	n-Nonadecane (C19)	0.973	1.063	-9.2	117	-0.02
19	s	ortho-terphenyl	1.084	1.139	-5.1	114	-0.02
20	t	n-Eicosane (C20)	0.979	1.004	-2.6	110	-0.02
21	t	n-Heneicosane (C21)	0.982	1.001	-1.9	110	-0.02
22	t	n-Docosane (C22)	0.983	1.013	-3.1	111	-0.02
23	t	n-Tricosane (C23)	0.985	1.014	-2.9	111	-0.02
24	s	d50-Tetracosane	0.860	0.970	-12.8	120	-0.02
25	t	n-Tetracosane (C24)	0.982	0.956	2.6	105	-0.02
26	t	n-Pentacosane (C25)	0.961	0.990	-3.0	111	-0.02
27	t	n-Hexacosane (C26)	0.987	1.019	-3.2	112	-0.02
28	t	n-Heptacosane (C27)	0.989	0.982	0.7	108	-0.02
29	t	n-Octacosane (C28)	1.026	1.023	0.3	110	-0.02
30	t	n-Nonacosane (C29)	1.006	1.016	-1.0	110	-0.02
31	t	n-Triacontane (C30)	1.010	1.018	-0.8	110	-0.02
32	t	n-Hentriacontane (C31)	0.977	0.986	-0.9	110	-0.02
33	t	n-Dotriacontane (C32)	1.025	1.032	-0.7	110	-0.02
34	t	n-Tritriacontane (C33)	0.998	0.994	0.4	109	-0.02
35	t	n-tetratriacontane (C34)	0.991	0.990	0.1	109	-0.02

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032164.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 8:19 am
Operator : FID17:CC
Sample : WG1579117-4
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 32 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 14:05:42 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.998	-7.8	118	-0.02
37 t	n-Hexatriacontane (C36)	1.115	1.071	3.9	105	-0.03
38 t	n-Heptatriacontane (C37)	1.011	0.985	2.6	106	-0.03
39 t	n-Octatriacontane (C38)	1.022	1.016	0.6	108	-0.03
41 t	n-Tetracontane (C40)	1.009	1.015	-0.6	109	-0.05

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.07	0.85 - 1.15

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032164.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 8:19 am
Operator : FID17:CC
Sample : WG1579117-4
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 32 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 14:05:42 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.609	58469116	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.672	66585387	52.534	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 105.07%			
24) s	d50-Tetracosane	34.414	56701887	56.386	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 112.77%			
	Target Compounds					
2) t	n-Octane (C8)	4.602	49388484	48.858	ug/mL	M4
3) t	n-Nonane (C9)	6.621	51334424	47.591	ug/mL	M4
4) t	n-Decane (C10)	8.999	54128691	49.019	ug/mL	M4
5) t	n-Undecane (C11)	11.459	55130252	51.101	ug/mL	M4
6) t	n-Dodecane (C12)	13.857	55422084	51.231	ug/mL	M4
7) t	n-Tridecane (C13)	16.144	55835972	51.474	ug/mL	M4
9) t	n-Tetradecane (C14)	18.313	56828363	50.847	ug/mL	M4
11) t	n-Pentadecane (C15)	20.368	56535568	50.527	ug/mL	M4
12) t	n-Hexadecane (C16)	22.313	57261049	51.267	ug/mL	M4
14) t	n-Heptadecane (C17)	24.164	57355218	51.400	ug/mL	M4
15) t	Pristane	24.270	59622574	51.521	ug/mL	M4
16) t	n-Octadecane (C18)	25.923	58337169	51.418	ug/mL	M4
17) t	Phytane	26.078	55153237	51.965	ug/mL	M4
18) t	n-Nonadecane (C19)	27.600	62153459	54.617	ug/mL	M4
20) t	n-Eicosane (C20)	29.200	58703954	51.292	ug/mL	M4
21) t	n-Heneicosane (C21)	30.728	58528167	50.975	ug/mL	M4
22) t	n-Docosane (C22)	32.198	59219090	51.497	ug/mL	M4
23) t	n-Tricosane (C23)	33.605	59265317	51.435	ug/mL	M4
25) t	n-Tetracosane (C24)	34.956	55920620	48.684	ug/mL	M4
26) t	n-Pentacosane (C25)	36.257	57906506	51.520	ug/mL	M4
27) t	n-Hexacosane (C26)	37.510	59598846	51.656	ug/mL	M4
28) t	n-Heptacosane (C27)	38.719	57394273	49.612	ug/mL	M4
29) t	n-Octacosane (C28)	39.886	59826509	49.884	ug/mL	M4
30) t	n-Nonacosane (C29)	41.014	59394027	50.491	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032164.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 8:19 am
Operator : FID17:CC
Sample : WG1579117-4
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 32 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 14:05:42 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

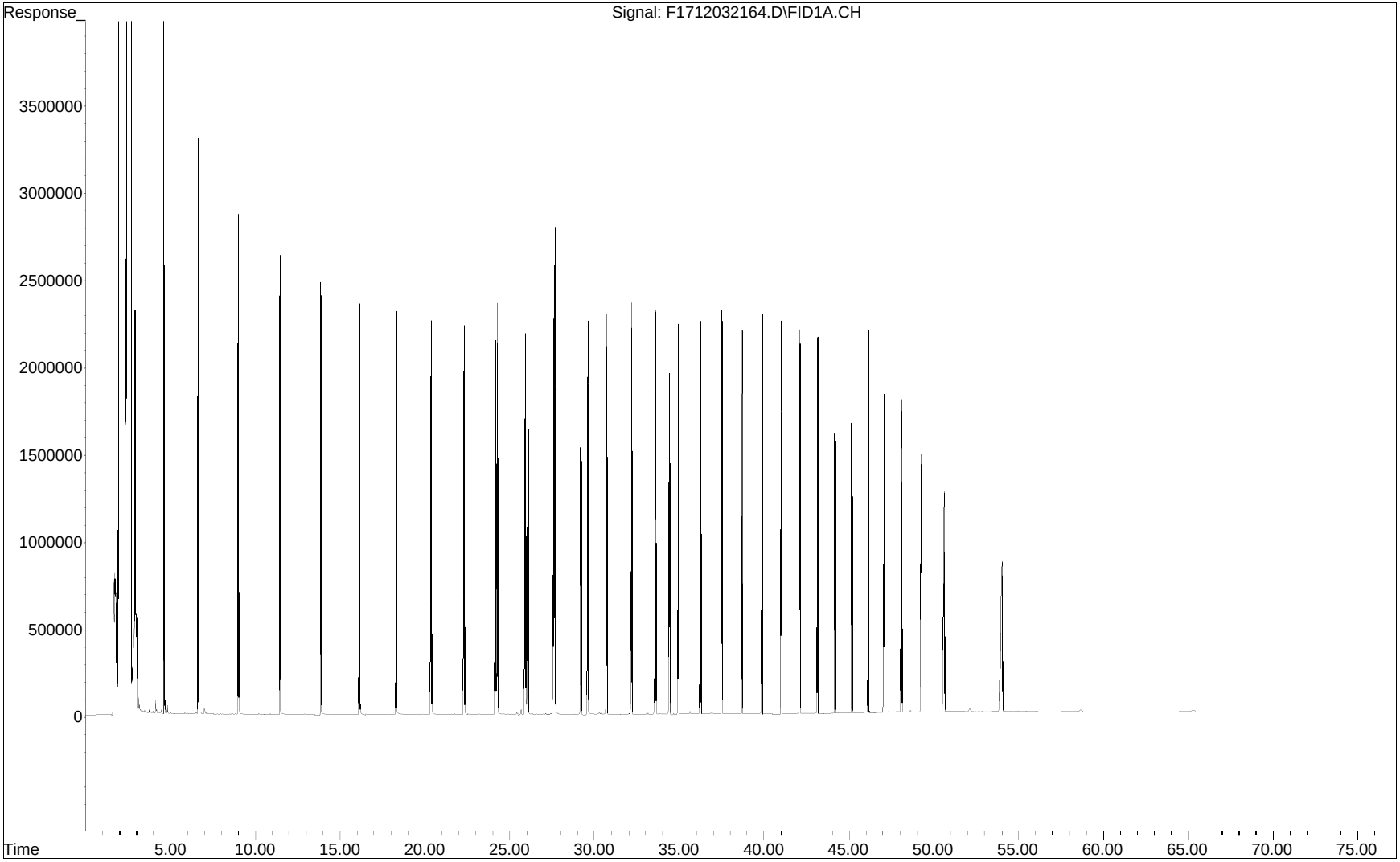
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.105	59495947	50.382 ug/mL M4
32) t	n-Hentriacontane (C31)	43.162	57638511	50.463 ug/mL M4
33) t	n-Dotriacontane (C32)	44.185	60315880	50.309 ug/mL M4
34) t	n-Tritriacontane (C33)	45.180	58143822	49.822 ug/mL M4
35) t	n-tetratriacontane (C34)	46.144	57873178	49.939 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.087	58365991	53.909 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.108	62642133	48.061 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.269	57606982	48.734 ug/mL M4
39) t	n-Octatriacontane (C38)	50.611	59423255	49.724 ug/mL M4
41) t	n-Tetracontane (C40)	54.017	59348979	50.320 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032164.D
Operator : FID17:CC
Acquired : 05 Dec 2021 8:19 am using AcqMethod FID17A.M
Sample Name: WG1579117-4
Instrument: FID17
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 32
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032172.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 3:46 pm
Operator : FID17:WR
Sample : WG1579117-5
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 36 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 10:26:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	104	-0.03
2	t	n-Octane (C8)	0.864	0.863	0.1	102	0.00
3	t	n-Nonane (C9)	0.922	0.885	4.0	100	-0.01
4	t	n-Decane (C10)	0.944	0.932	1.3	101	-0.02
5	t	n-Undecane (C11)	0.923	0.951	-3.0	104	-0.02
6	t	n-Dodecane (C12)	0.925	0.951	-2.8	103	-0.02
7	t	n-Tridecane (C13)	0.928	0.962	-3.7	104	-0.02
9	t	n-Tetradecane (C14)	0.956	0.985	-3.0	104	-0.02
11	t	n-Pentadecane (C15)	0.957	0.971	-1.5	103	-0.02
12	t	n-Hexadecane (C16)	0.955	0.994	-4.1	106	-0.02
14	t	n-Heptadecane (C17)	0.954	0.952	0.2	101	-0.02
15	t	Pristane	0.990	1.053	-6.4	109	-0.02
16	t	n-Octadecane (C18)	0.970	0.996	-2.7	104	-0.02
17	t	Phytane	0.908	0.956	-5.3	107	-0.03
18	t	n-Nonadecane (C19)	0.973	1.048	-7.7	109	-0.02
19	s	ortho-terphenyl	1.084	1.184	-9.2	111	-0.03
20	t	n-Eicosane (C20)	0.979	1.011	-3.3	105	-0.02
21	t	n-Heneicosane (C21)	0.982	1.005	-2.3	104	-0.02
22	t	n-Docosane (C22)	0.983	1.017	-3.5	105	-0.02
23	t	n-Tricosane (C23)	0.985	1.017	-3.2	105	-0.02
24	s	d50-Tetracosane	0.860	0.972	-13.0	113	-0.02
25	t	n-Tetracosane (C24)	0.982	0.959	2.3	100	-0.02
26	t	n-Pentacosane (C25)	0.961	0.993	-3.3	105	-0.02
27	t	n-Hexacosane (C26)	0.987	1.020	-3.3	105	-0.02
28	t	n-Heptacosane (C27)	0.989	0.983	0.6	102	-0.02
29	t	n-Octacosane (C28)	1.026	1.024	0.2	104	-0.02
30	t	n-Nonacosane (C29)	1.006	1.015	-0.9	104	-0.02
31	t	n-Triacontane (C30)	1.010	1.014	-0.4	103	-0.02
32	t	n-Hentriacontane (C31)	0.977	0.980	-0.3	103	-0.02
33	t	n-Dotriacontane (C32)	1.025	1.019	0.6	103	-0.02
34	t	n-Tritriacontane (C33)	0.998	0.979	1.9	102	-0.03
35	t	n-tetratriacontane (C34)	0.991	0.961	3.0	100	-0.03

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032172.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 3:46 pm
Operator : FID17:WR
Sample : WG1579117-5
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 36 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 10:26:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.926	0.962	-3.9	108	-0.03
37 t	n-Hexatriacontane (C36)	1.115	1.024	8.2	95	-0.04
38 t	n-Heptatriacontane (C37)	1.011	0.934	7.6	95	-0.04
39 t	n-Octatriacontane (C38)	1.022	0.956	6.5	96	-0.04
41 t	n-Tetracontane (C40)	1.009	0.941	6.7	96	-0.08

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.01	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032172.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 3:46 pm
Operator : FID17:WR
Sample : WG1579117-5
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 36 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 10:26:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.604	55200172	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.668	65375841	54.634 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 109.27%	
24) s	d50-Tetracosane	34.414	53630746	56.490 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 112.98%	
	Target Compounds			
2) t	n-Octane (C8)	4.602	47653362	49.933 ug/mL M4
3) t	n-Nonane (C9)	6.619	48824702	47.945 ug/mL M4
4) t	n-Decane (C10)	8.998	51429937	49.333 ug/mL M4
5) t	n-Undecane (C11)	11.457	52507060	51.552 ug/mL M4
6) t	n-Dodecane (C12)	13.855	52478739	51.383 ug/mL M4
7) t	n-Tridecane (C13)	16.142	53097195	51.848 ug/mL M4
9) t	n-Tetradecane (C14)	18.311	54394393	51.552 ug/mL M4
11) t	n-Pentadecane (C15)	20.365	53578953	50.720 ug/mL M4
12) t	n-Hexadecane (C16)	22.310	54868256	52.033 ug/mL M4
14) t	n-Heptadecane (C17)	24.160	52555713	49.888 ug/mL M4
15) t	Pristane	24.268	58141177	53.216 ug/mL M4
16) t	n-Octadecane (C18)	25.919	54981373	51.330 ug/mL M4
17) t	Phytane	26.075	52774467	52.668 ug/mL M4
18) t	n-Nonadecane (C19)	27.597	57875113	53.869 ug/mL M4
20) t	n-Eicosane (C20)	29.197	55830942	51.671 ug/mL M4
21) t	n-Heneicosane (C21)	30.725	55499737	51.200 ug/mL M4
22) t	n-Docosane (C22)	32.193	56156534	51.726 ug/mL M4
23) t	n-Tricosane (C23)	33.601	56139644	51.607 ug/mL M4
25) t	n-Tetracosane (C24)	34.952	52953877	48.832 ug/mL M4
26) t	n-Pentacosane (C25)	36.255	54788485	51.633 ug/mL M4
27) t	n-Hexacosane (C26)	37.508	56320526	51.706 ug/mL M4
28) t	n-Heptacosane (C27)	38.715	54279242	49.698 ug/mL M4
29) t	n-Octacosane (C28)	39.883	56532287	49.929 ug/mL M4
30) t	n-Nonacosane (C29)	41.011	56043188	50.464 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032172.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 3:46 pm
Operator : FID17:WR
Sample : WG1579117-5
Misc : WG1579117,FRBE18,ICAL18012
ALS Vial : 36 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 10:26:39 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

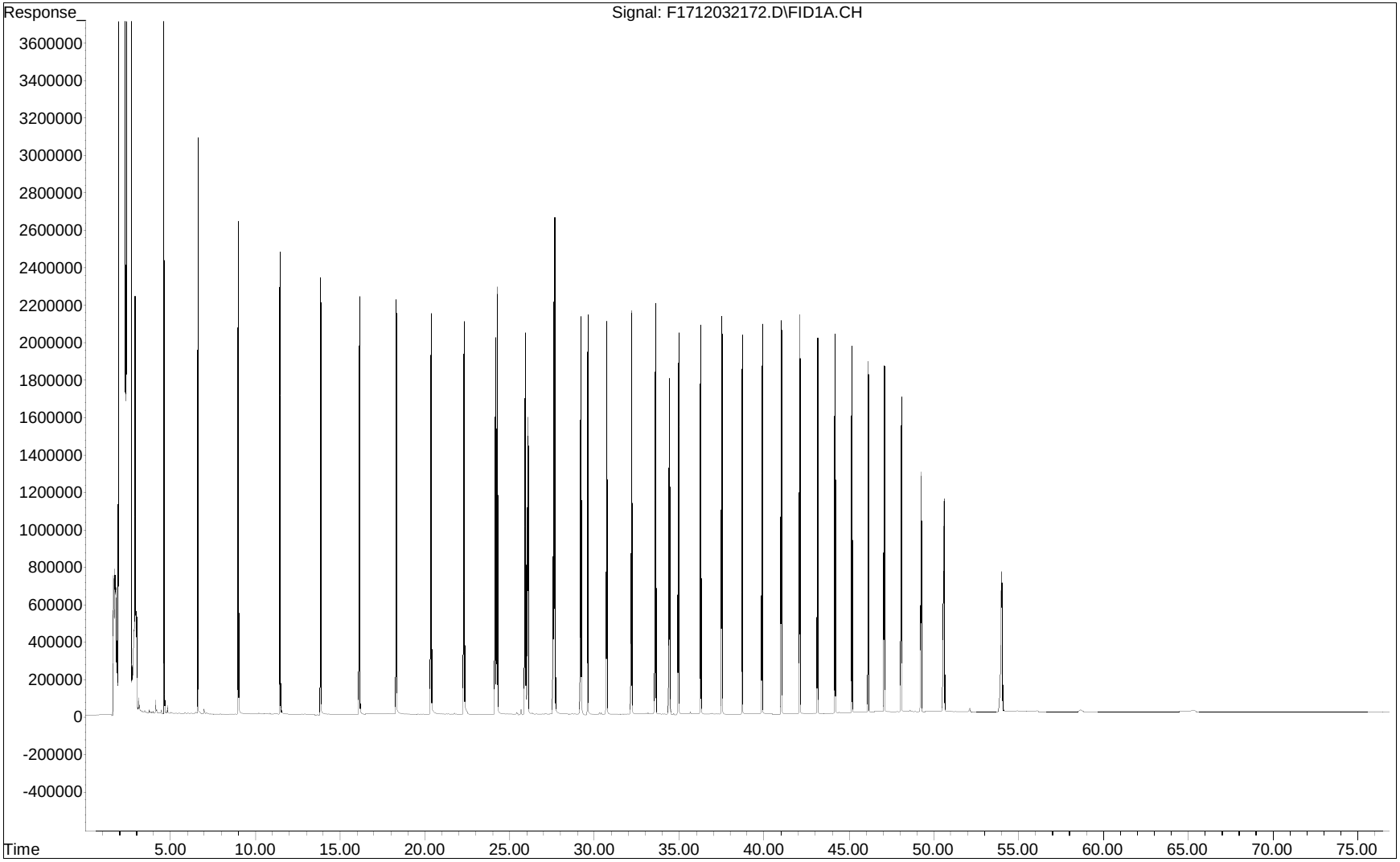
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.103	55971377	50.204 ug/mL M4
32) t	n-Hentriacontane (C31)	43.159	54098221	50.168 ug/mL M4
33) t	n-Dotriacontane (C32)	44.184	56227386	49.676 ug/mL M4
34) t	n-Tritriacontane (C33)	45.175	54014464	49.025 ug/mL M4
35) t	n-tetratriacontane (C34)	46.141	53064974	48.501 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.083	53124444	51.973 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.100	56515588	45.928 ug/mL M4
38) t	n-Heptatriacontane (C37)	49.260	51545708	46.189 ug/mL M4
39) t	n-Octatriacontane (C38)	50.602	52745461	46.750 ug/mL M4
41) t	n-Tetracontane (C40)	53.990	51932016	46.639 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032172.D
Operator : FID17:WR
Acquired : 05 Dec 2021 3:46 pm using AcqMethod FID17A.M
Sample Name: WG1579117-5
Instrument: FID17
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 36
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032168.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 12:50 pm
Operator : FID17:MJS
Sample : l2166503-01d,42,2
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 34 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 11:13:09 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032104
Blank File : F1712032166.D

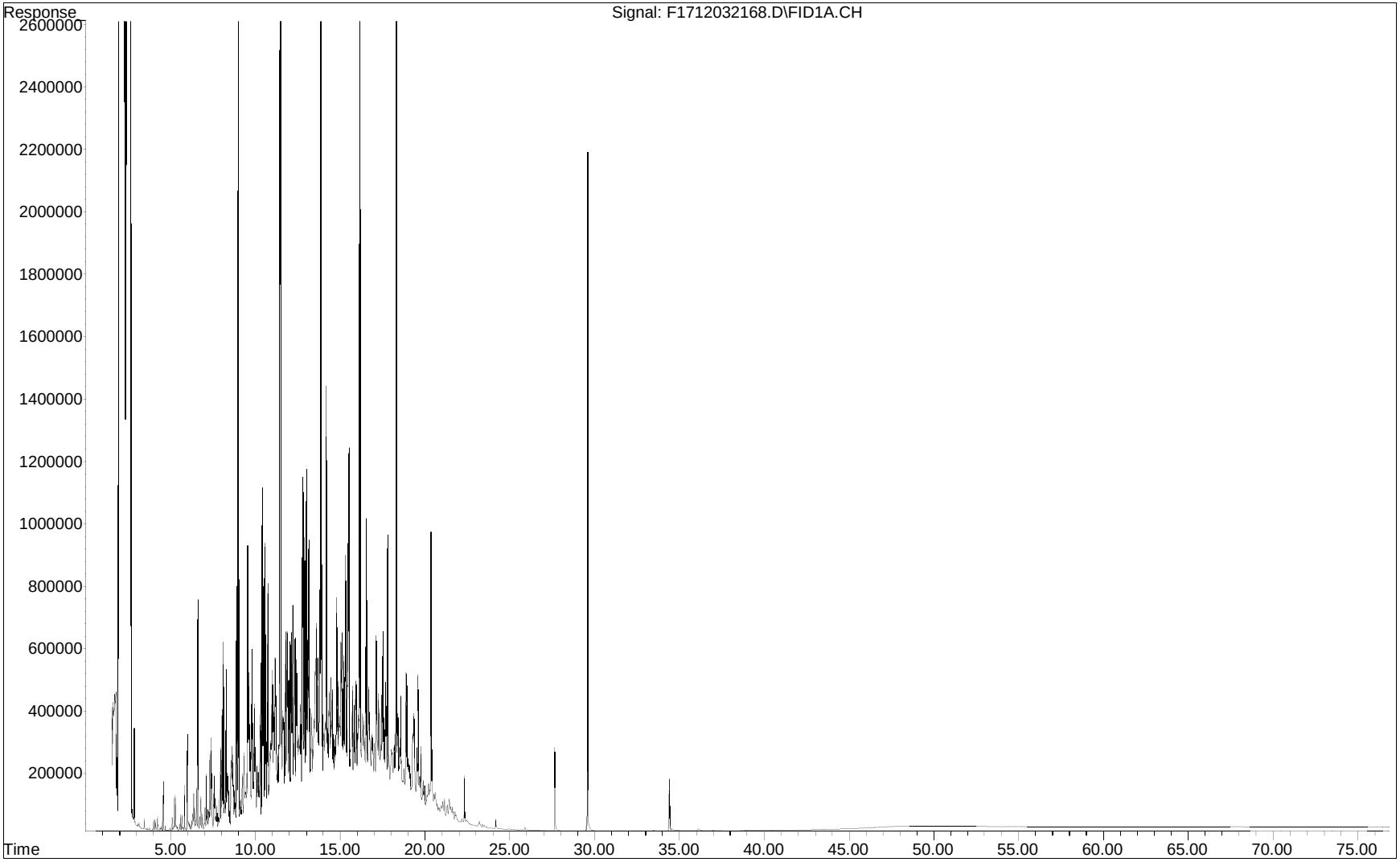
Sub List : Default - All compounds listed

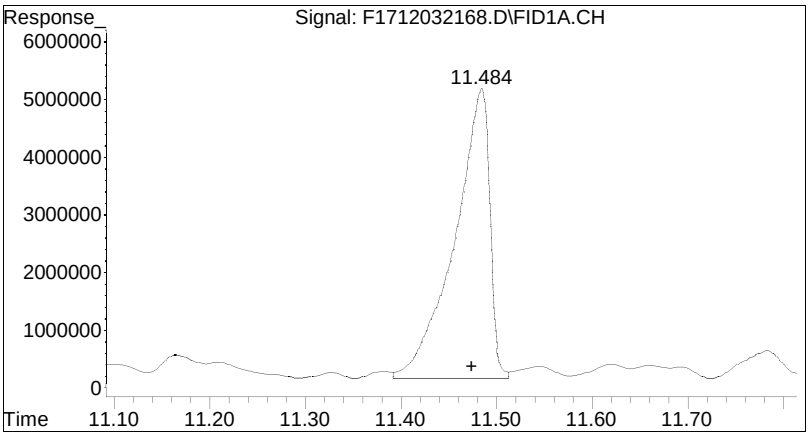
	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.608	56879843	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.649	7446140	6.039 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	12.08%#
24) s	d50-Tetracosane	34.401	5263549	5.380 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	10.76%#
	Target Compounds			
5) t	n-Undecane (C11)	11.484	125925015	119.984 ug/mL M4
6) t	n-Dodecane (C12)	13.886	136494315	129.698 ug/mL M4
7) t	n-Tridecane (C13)	16.167	116944618	110.822 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	3171255948	2850.963 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	2925322191	2629.869 ug/mLm
44) h	C10-C28 DRO	24.454	2799592011	2546.868 ug/mL m
44) h	C10-C28 DRO BS	24.454	2775217023	2524.693 ug/mLm
45) h	C28-C40 ORO	46.963	90409063	78.724 ug/mL m
45) h	C28-C40 ORO BS	46.963	12679496	11.041 ug/mLm
46) h	Total Resolved Hydroc...	36.038	2085527669	1874.892 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

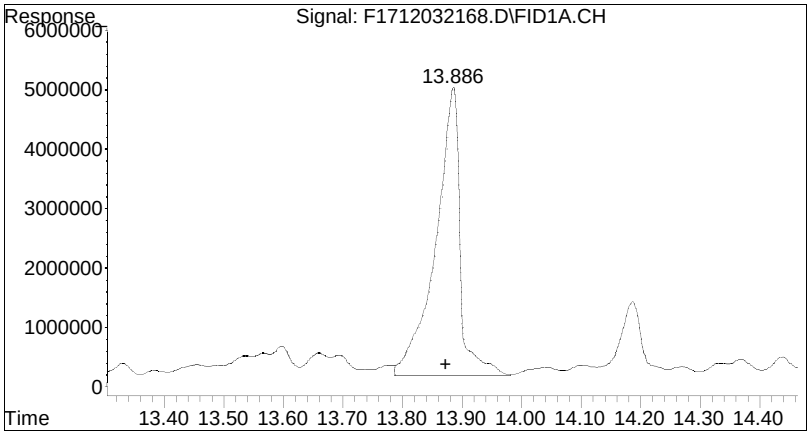
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032168.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 12:50 pm using AcqMethod FID17A.M
Sample Name: l2166503-01d,42,2
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 34
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





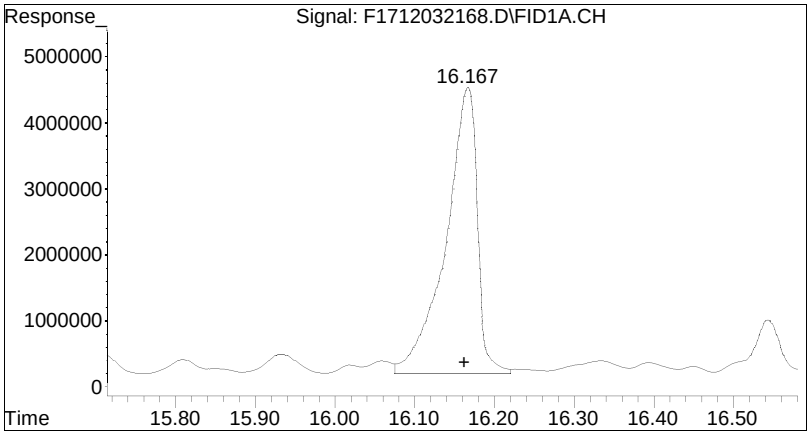
#5 n-Undecane (C11)

R.T.: 11.484 min
Delta R.T.: 0.010 min
Response: 125925015
Conc: 119.98 ug/mL M4



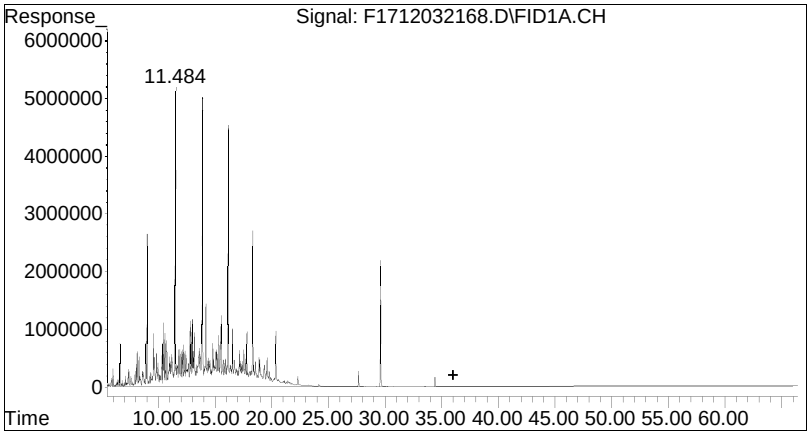
#6 n-Dodecane (C12)

R.T.: 13.886 min
Delta R.T.: 0.013 min
Response: 136494315
Conc: 129.70 ug/mL M4



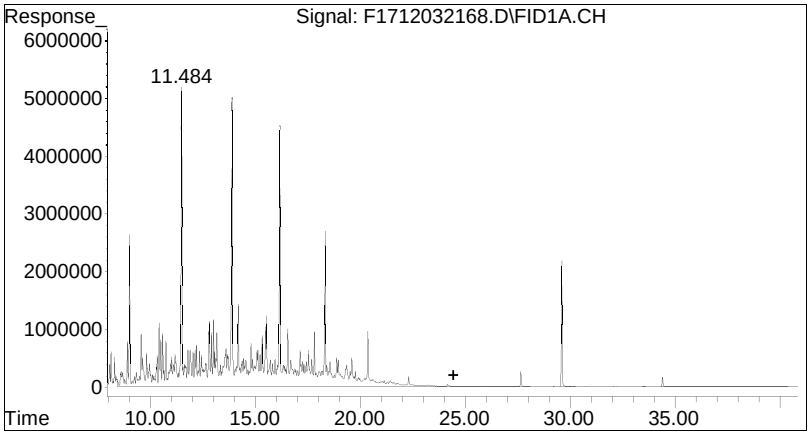
#7 n-Tridecane (C13)

R.T.: 16.167 min
Delta R.T.: 0.004 min
Response: 116944618
Conc: 110.82 ug/mL M4



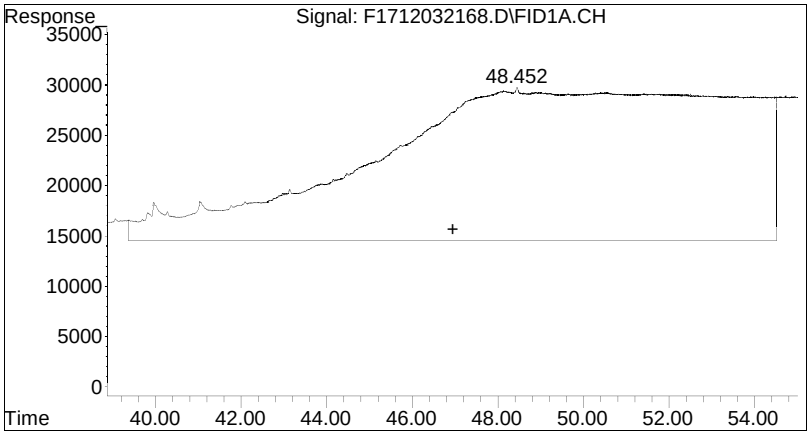
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 3171255948
Conc: 2850.96 ug/mL m



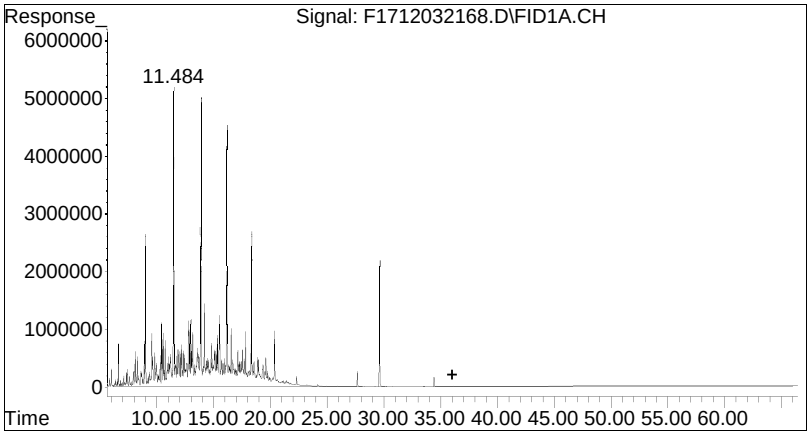
#44 C10-C28 DRO

R.T.: 24.454 min
Delta R.T.: 0.000 min
Response: 2799592011
Conc: 2546.87 ug/mL m



#45 C28-C40 ORO

R.T.:	46.963 min
Delta R.T.:	0.000 min
Response:	90409063
Conc:	78.72 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 2085527669
Conc: 1874.89 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032170.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 2:18 pm
Operator : FID17:MJS
Sample : l2166503-02d,42,10
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 35 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 11:14:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032104
Blank File : F1712032166.D

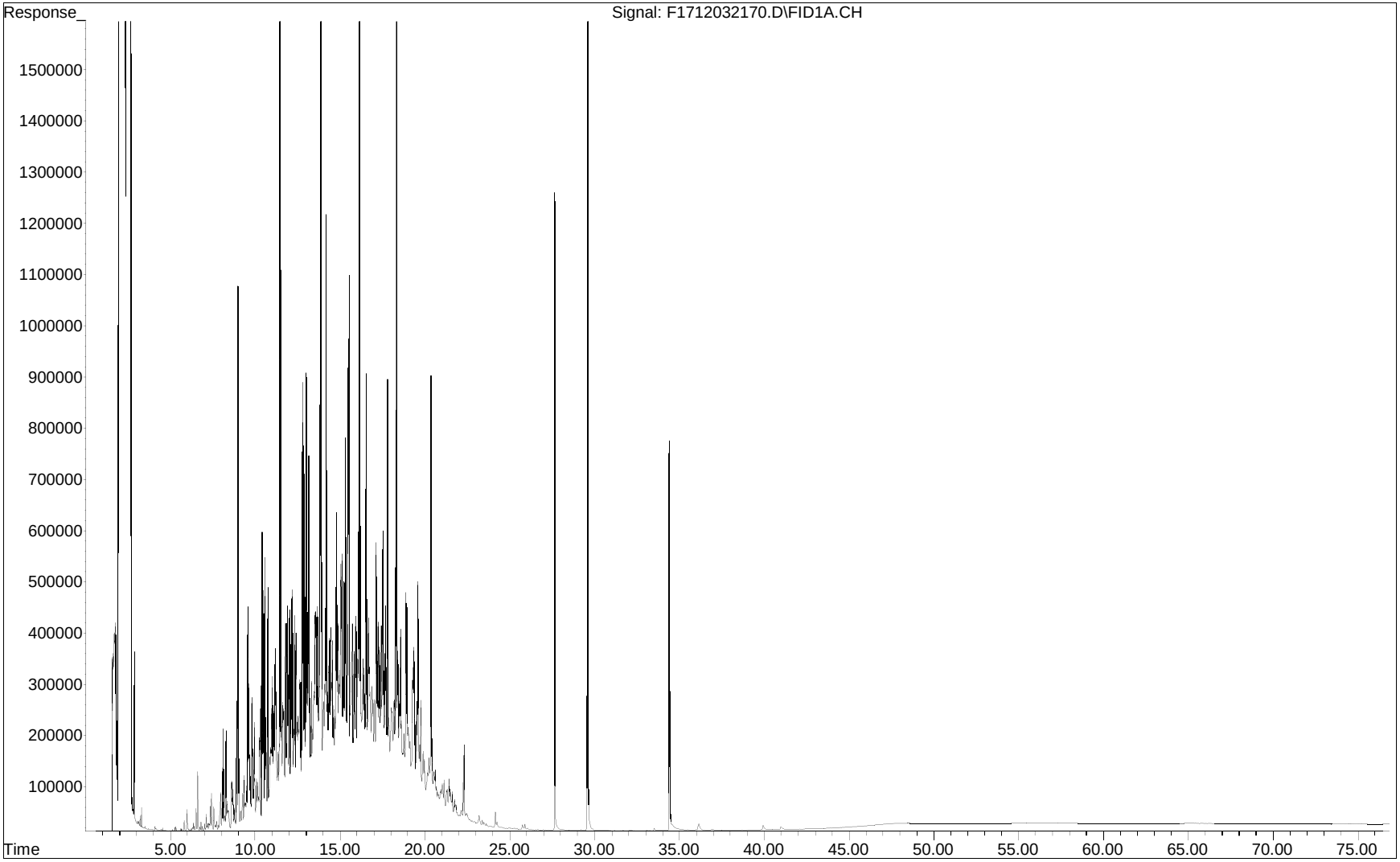
Sub List : Default - All compounds listed

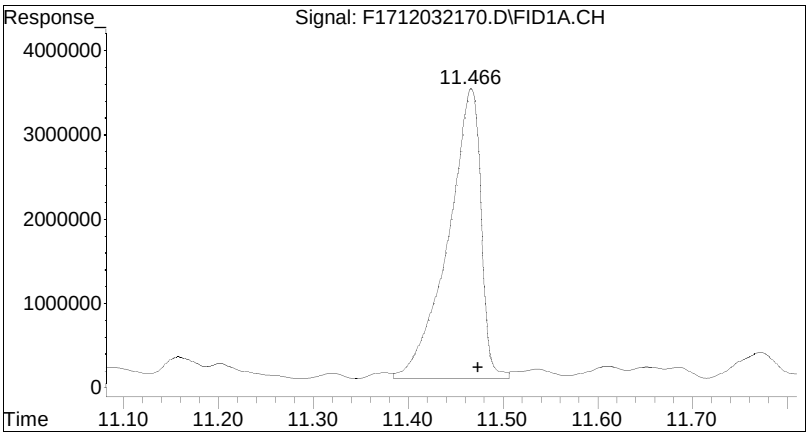
	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.601	56895765	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.652	31863869	25.835 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	51.67%
24) s	d50-Tetracosane	34.400	23230533	23.740 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	47.48%#
	Target Compounds			
5) t	n-Undecane (C11)	11.466	81726027	77.848 ug/mL M4
6) t	n-Dodecane (C12)	13.874	110066790	104.557 ug/mL M4
7) t	n-Tridecane (C13)	16.158	102061734	96.691 ug/mL M4
9) t	n-Tetradecane (C14)	18.318	56228840	51.702 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	2436395714	2189.710 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	2190461957	1968.677 ug/mLm
44) h	C10-C28 DRO	24.454	2181803529	1984.293 ug/mL m
44) h	C10-C28 DRO BS	24.454	2157428541	1962.124 ug/mLm
45) h	C28-C40 ORO	46.963	79445219	69.158 ug/mL m
45) h	C28-C40 ORO BS	46.963	1715652	1.493 ug/mLm
46) h	Total Resolved Hydroc...	36.038	1523028535	1368.822 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

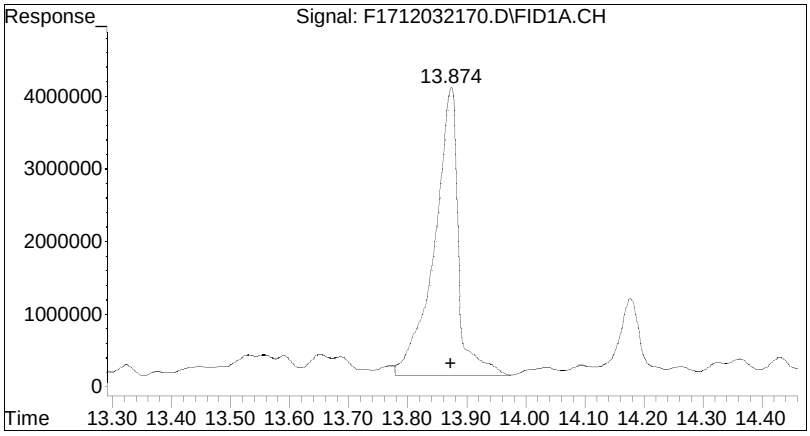
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032170.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 2:18 pm using AcqMethod FID17A.M
Sample Name: l2166503-02d,42,10
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 35
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





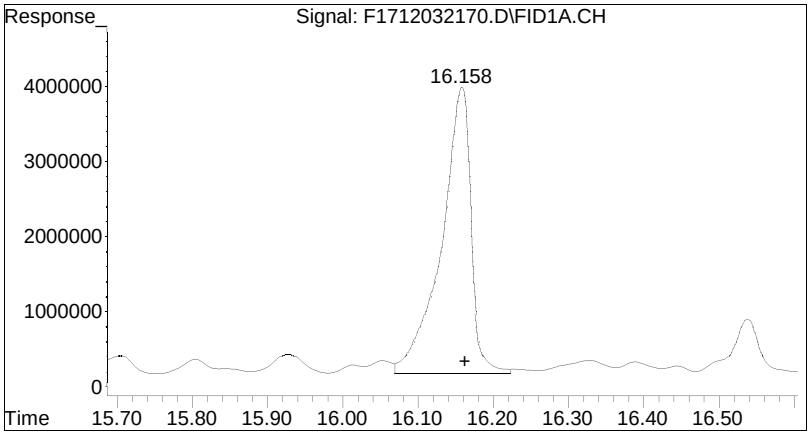
#5 n-Undecane (C11)

R.T.: 11.466 min
Delta R.T.: -0.008 min
Response: 81726027
Conc: 77.85 ug/mL M4



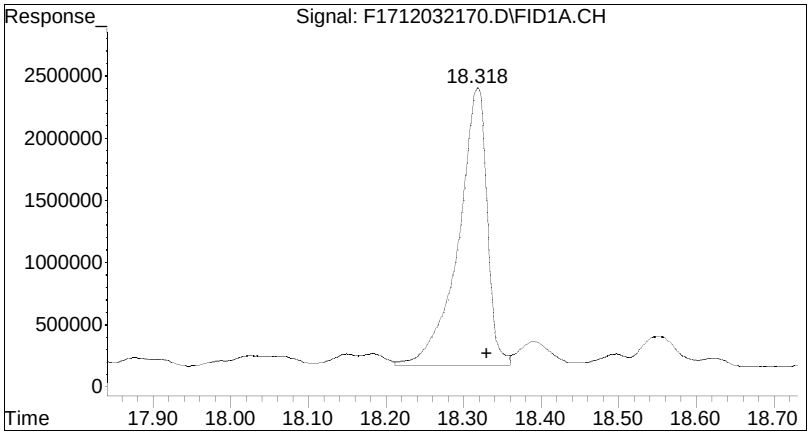
#6 n-Dodecane (C12)

R.T.: 13.874 min
Delta R.T.: 0.001 min
Response: 110066790
Conc: 104.56 ug/mL M4



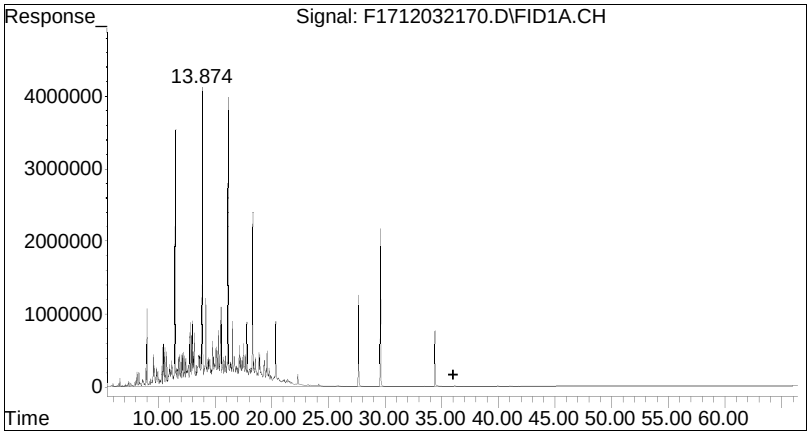
#7 n-Tridecane (C13)

R.T.: 16.158 min
Delta R.T.: -0.005 min
Response: 102061734
Conc: 96.69 ug/mL M4



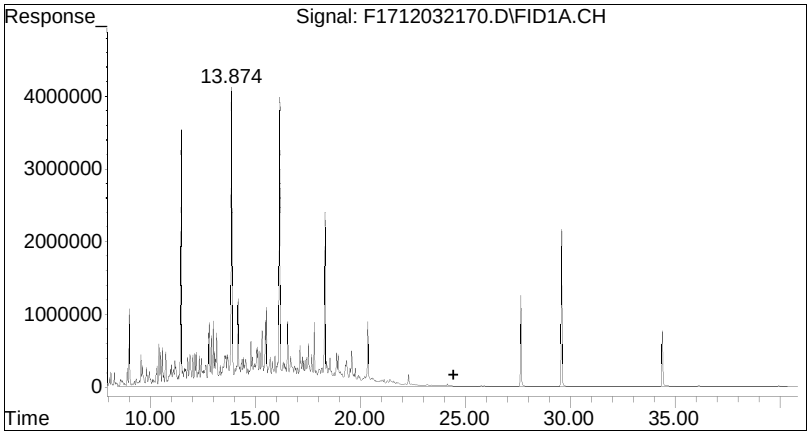
#9 n-Tetradecane (C14)

R.T.:	18.318 min
Delta R.T.:	-0.012 min
Response:	56228840
Conc:	51.70 ug/mL M4



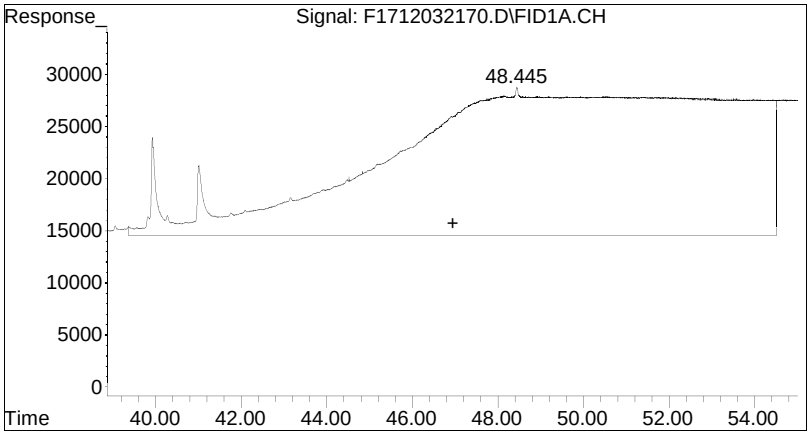
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 2436395714
Conc: 2189.71 ug/mL m



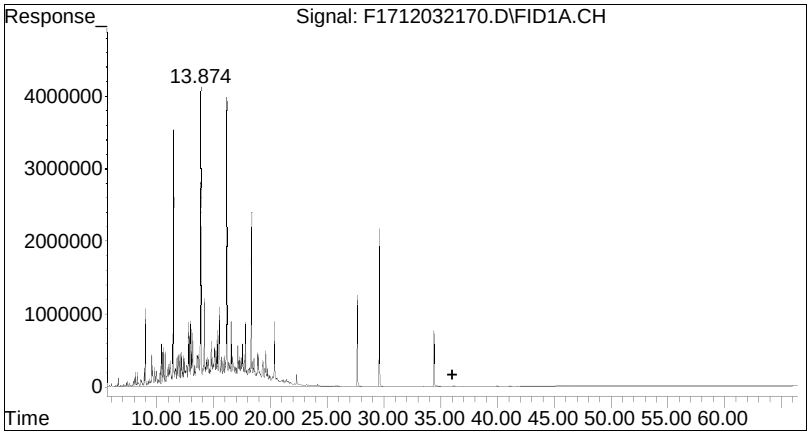
#44 C10-C28 DRO

R.T.: 24.454 min
Delta R.T.: 0.000 min
Response: 2181803529
Conc: 1984.29 ug/mL m



#45 C28-C40 ORO

R.T.: 46.963 min
Delta R.T.: 0.000 min
Response: 79445219
Conc: 69.16 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 1523028535
Conc: 1368.82 ug/mL m

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421005.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 12:46 pm
Operator : FID18:WR
Sample : WG1583234-1
Misc : WG1583234,FRBE37,ICAL17763
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:14:04 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	106	0.00
2	t	n-Octane (C8)	0.796	0.883	-10.9	119	0.00
3	t	n-Nonane (C9)	0.859	0.896	-4.3	110	0.00
4	t	n-Decane (C10)	0.924	0.935	-1.2	106	0.00
5	t	n-Undecane (C11)	0.925	0.948	-2.5	106	0.00
6	t	n-Dodecane (C12)	0.937	0.951	-1.5	105	0.00
7	t	n-Tridecane (C13)	0.939	0.962	-2.4	107	0.00
9	t	n-Tetradecane (C14)	0.966	0.983	-1.8	106	0.00
11	t	n-Pentadecane (C15)	0.969	0.974	-0.5	105	0.00
12	t	n-Hexadecane (C16)	0.957	0.985	-2.9	107	0.00
14	t	n-Heptadecane (C17)	0.968	0.988	-2.1	106	0.00
15	t	Pristane	1.006	1.032	-2.6	108	0.00
16	t	n-Octadecane (C18)	0.976	1.017	-4.2	108	0.00
17	t	Phytane	0.919	0.947	-3.0	108	0.00
18	t	n-Nonadecane (C19)	0.984	1.021	-3.8	107	0.00
19	s	ortho-terphenyl	1.114	1.214	-9.0	112	0.00
20	t	n-Eicosane (C20)	0.991	1.018	-2.7	106	0.00
21	t	n-Heneicosane (C21)	1.002	1.013	-1.1	105	0.00
22	t	n-Docosane (C22)	1.013	1.032	-1.9	107	0.00
23	t	n-Tricosane (C23)	1.006	1.031	-2.5	106	0.00
24	s	d50-Tetracosane	0.899	0.993	-10.5	113	0.00
25	t	n-Tetracosane (C24)	1.004	0.984	2.0	102	0.00
26	t	n-Pentacosane (C25)	0.995	1.018	-2.3	107	0.00
27	t	n-Hexacosane (C26)	1.024	1.050	-2.5	107	0.00
28	t	n-Heptacosane (C27)	1.032	1.017	1.5	104	0.00
29	t	n-Octacosane (C28)	1.050	1.066	-1.5	106	0.00
30	t	n-Nonacosane (C29)	1.043	1.064	-2.0	106	0.00
31	t	n-Triacontane (C30)	1.052	1.072	-1.9	106	0.00
32	t	n-Hentriacontane (C31)	1.020	1.047	-2.6	108	0.00
33	t	n-Dotriacontane (C32)	1.068	1.102	-3.2	108	0.00
34	t	n-Tritriacontane (C33)	1.040	1.071	-3.0	107	0.00
35	t	n-tetratriacontane (C34)	1.041	1.073	-3.1	108	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421005.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 12:46 pm
Operator : FID18:WR
Sample : WG1583234-1
Misc : WG1583234,FRBE37,ICAL17763
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:14:04 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.978	1.089	-11.3	117	0.00
37 t	n-Hexatriacontane (C36)	1.176	1.176	0.0	105	0.00
38 t	n-Heptatriacontane (C37)	1.071	1.089	-1.7	107	0.00
39 t	n-Octatriacontane (C38)	1.084	1.127	-4.0	109	0.00
41 t	n-Tetracontane (C40)	1.068	1.133	-6.1	111	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.16	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421005.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 12:46 pm
Operator : FID18:WR
Sample : WG1583234-1
Misc : WG1583234,FRBE37,ICAL17763
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:14:04 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.657	52128899	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.719	63267145	54.454 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	108.91%
24) s	d50-Tetracosane	34.453	51781861	55.222 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	110.44%
	Target Compounds			
2) t	n-Octane (C8)	4.700	46053846	55.494 ug/mL M4
3) t	n-Nonane (C9)	6.722	46725770	52.174 ug/mL M4
4) t	n-Decane (C10)	9.093	48725492	50.577 ug/mL M4
5) t	n-Undecane (C11)	11.544	49410248	51.258 ug/mL M4
6) t	n-Dodecane (C12)	13.936	49563460	50.712 ug/mL M4
7) t	n-Tridecane (C13)	16.219	50153108	51.217 ug/mL M4
9) t	n-Tetradecane (C14)	18.383	51216993	50.872 ug/mL M4
11) t	n-Pentadecane (C15)	20.431	50796714	50.273 ug/mL M4
12) t	n-Hexadecane (C16)	22.374	51337143	51.430 ug/mL M4
14) t	n-Heptadecane (C17)	24.220	51511762	51.024 ug/mL M4
15) t	Pristane	24.330	53771007	51.282 ug/mL M4
16) t	n-Octadecane (C18)	25.976	53010343	52.089 ug/mL M4
17) t	Phytane	26.136	49383544	51.561 ug/mL M4
18) t	n-Nonadecane (C19)	27.649	53236446	51.878 ug/mL M4
20) t	n-Eicosane (C20)	29.247	53070661	51.371 ug/mL M4
21) t	n-Heneicosane (C21)	30.773	52827832	50.554 ug/mL M4
22) t	n-Docosane (C22)	32.237	53780524	50.926 ug/mL M4
23) t	n-Tricosane (C23)	33.641	53747635	51.221 ug/mL M4
25) t	n-Tetracosane (C24)	34.991	51312769	49.012 ug/mL M4
26) t	n-Pentacosane (C25)	36.289	53043457	51.109 ug/mL M4
27) t	n-Hexacosane (C26)	37.541	54758113	51.296 ug/mL M4
28) t	n-Heptacosane (C27)	38.745	53032242	49.292 ug/mL M4
29) t	n-Octacosane (C28)	39.911	55551516	50.732 ug/mL M4
30) t	n-Nonacosane (C29)	41.036	55477708	50.996 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421005.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 12:46 pm
Operator : FID18:WR
Sample : WG1583234-1
Misc : WG1583234,FRBE37,ICAL17763
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:14:04 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

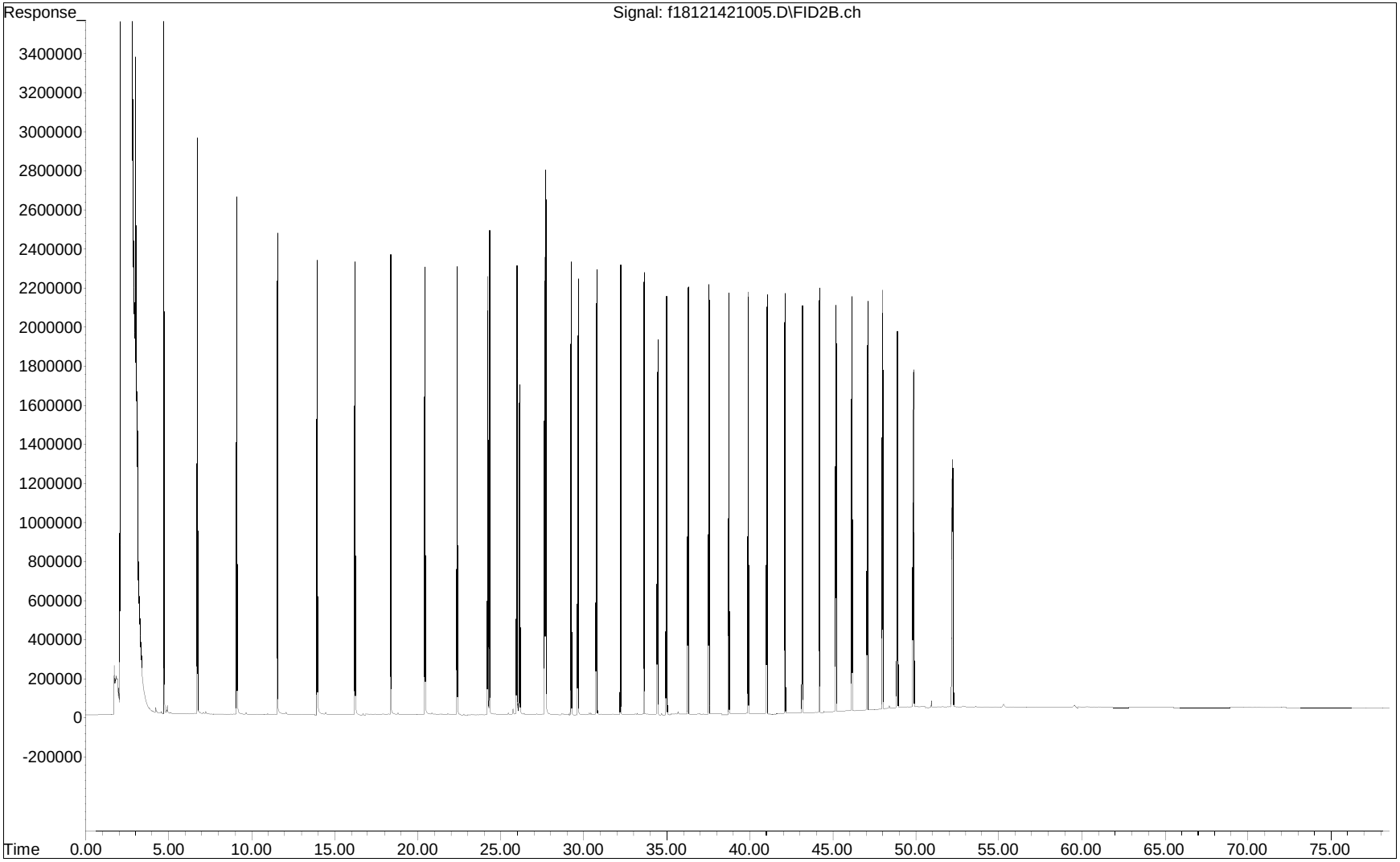
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.124	55905588	50.991 ug/mL M4
32) t	n-Hentriacontane (C31)	43.179	54576269	51.339 ug/mL M4
33) t	n-Dotriacontane (C32)	44.202	57468002	51.624 ug/mL M4
34) t	n-Tritriacontane (C33)	45.194	55826242	51.497 ug/mL M4
35) t	n-tetratriacontane (C34)	46.155	55911973	51.539 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.091	56791409	55.719 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.001	61327610	50.036 ug/mL M4
38) t	n-Heptatriacontane (C37)	48.891	56758321	50.850 ug/mL M4
39) t	n-Octatriacontane (C38)	49.865	58750537	51.995 ug/mL M4
41) t	n-Tetracontane (C40)	52.217	59036303	53.012 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\f18121421005.D
Operator : FID18:WR
Acquired : 14 Dec 2021 12:46 pm using AcqMethod FID18.M
Sample Name: WG1583234-1
Instrument: FID 18
Misc Info : WG1583234,FRBE37,ICAL17763
Vial Number: 53
CurrentMeth: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421031.D
Signal(s) : FID2B.ch
Acq On : 15 Dec 2021 07:25 am
Operator : FID18:WR
Sample : WG1583234-2
Misc : WG1583234,FRBE37,ICAL17763
ALS Vial : 66 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:42:46 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	116	-0.01
2	t	n-Octane (C8)	0.796	0.867	-8.9	127	0.01
3	t	n-Nonane (C9)	0.859	0.906	-5.5	122	0.00
4	t	n-Decane (C10)	0.924	0.937	-1.4	116	0.00
5	t	n-Undecane (C11)	0.925	0.952	-2.9	116	0.00
6	t	n-Dodecane (C12)	0.937	0.949	-1.3	114	0.00
7	t	n-Tridecane (C13)	0.939	0.960	-2.2	116	0.00
9	t	n-Tetradecane (C14)	0.966	0.979	-1.3	115	0.00
11	t	n-Pentadecane (C15)	0.969	0.969	0.0	113	0.00
12	t	n-Hexadecane (C16)	0.957	0.979	-2.3	116	0.00
14	t	n-Heptadecane (C17)	0.968	0.980	-1.2	114	0.00
15	t	Pristane	1.006	1.027	-2.1	117	0.00
16	t	n-Octadecane (C18)	0.976	1.009	-3.4	117	0.00
17	t	Phytane	0.919	0.948	-3.2	118	-0.01
18	t	n-Nonadecane (C19)	0.984	1.057	-7.4	121	0.00
19	s	ortho-terphenyl	1.114	1.161	-4.2	116	0.00
20	t	n-Eicosane (C20)	0.991	1.007	-1.6	115	0.00
21	t	n-Heneicosane (C21)	1.002	1.003	-0.1	113	0.00
22	t	n-Docosane (C22)	1.013	1.018	-0.5	115	-0.01
23	t	n-Tricosane (C23)	1.006	1.017	-1.1	114	0.00
24	s	d50-Tetracosane	0.899	0.977	-8.7	121	0.00
25	t	n-Tetracosane (C24)	1.004	0.965	3.9	108	-0.01
26	t	n-Pentacosane (C25)	0.995	0.998	-0.3	114	-0.01
27	t	n-Hexacosane (C26)	1.024	1.026	-0.2	114	-0.01
28	t	n-Heptacosane (C27)	1.032	0.990	4.1	110	-0.01
29	t	n-Octacosane (C28)	1.050	1.040	1.0	113	-0.01
30	t	n-Nonacosane (C29)	1.043	1.030	1.2	112	-0.01
31	t	n-Triacontane (C30)	1.052	1.035	1.6	112	0.00
32	t	n-Hentriacontane (C31)	1.020	1.007	1.3	113	-0.01
33	t	n-Dotriacontane (C32)	1.068	1.059	0.8	113	-0.01
34	t	n-Tritriacontane (C33)	1.040	1.024	1.5	112	-0.01
35	t	n-tetratriacontane (C34)	1.041	1.023	1.7	112	-0.01

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421031.D
Signal(s) : FID2B.ch
Acq On : 15 Dec 2021 07:25 am
Operator : FID18:WR
Sample : WG1583234-2
Misc : WG1583234,FRBE37,ICAL17763
ALS Vial : 66 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:42:46 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.978	1.037	-6.0	121	-0.01
37 t	n-Hexatriacontane (C36)	1.176	1.116	5.1	108	-0.01
38 t	n-Heptatriacontane (C37)	1.071	1.029	3.9	110	-0.01
39 t	n-Octatriacontane (C38)	1.084	1.062	2.0	112	-0.02
41 t	n-Tetracontane (C40)	1.068	1.058	0.9	113	-0.02

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.11	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421031.D
Signal(s) : FID2B.ch
Acq On : 15 Dec 2021 07:25 am
Operator : FID18:WR
Sample : WG1583234-2
Misc : WG1583234,FRBE37,ICAL17763
ALS Vial : 66 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:42:46 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.646	56757372	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.711	65915314	52.107 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	104.21%
24) s	d50-Tetracosane	34.443	55470671	54.332 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	108.66%
	Target Compounds			
2) t	n-Octane (C8)	4.712	49216273	54.469 ug/mL M4
3) t	n-Nonane (C9)	6.725	51449695	52.764 ug/mL M4
4) t	n-Decane (C10)	9.088	53160042	50.680 ug/mL M4
5) t	n-Undecane (C11)	11.538	54051559	51.501 ug/mL M4
6) t	n-Dodecane (C12)	13.929	53855745	50.610 ug/mL M4
7) t	n-Tridecane (C13)	16.212	54468759	51.089 ug/mL M4
9) t	n-Tetradecane (C14)	18.375	55567085	50.692 ug/mL M4
11) t	n-Pentadecane (C15)	20.424	54994926	49.990 ug/mL M4
12) t	n-Hexadecane (C16)	22.367	55571710	51.132 ug/mL M4
14) t	n-Heptadecane (C17)	24.213	55618267	50.599 ug/mL M4
15) t	Pristane	24.322	58301546	51.068 ug/mL M4
16) t	n-Octadecane (C18)	25.968	57293391	51.707 ug/mL M4
17) t	Phytane	26.125	53821633	51.613 ug/mL M4
18) t	n-Nonadecane (C19)	27.641	59977421	53.681 ug/mL M4
20) t	n-Eicosane (C20)	29.238	57163080	50.820 ug/mL M4
21) t	n-Heneicosane (C21)	30.764	56946287	50.051 ug/mL M4
22) t	n-Docosane (C22)	32.227	57760996	50.235 ug/mL M4
23) t	n-Tricosane (C23)	33.631	57725361	50.525 ug/mL M4
25) t	n-Tetracosane (C24)	34.981	54755696	48.035 ug/mL M4
26) t	n-Pentacosane (C25)	36.276	56625093	50.110 ug/mL M4
27) t	n-Hexacosane (C26)	37.530	58246092	50.113 ug/mL M4
28) t	n-Heptacosane (C27)	38.735	56199838	47.976 ug/mL M4
29) t	n-Octacosane (C28)	39.899	59018340	49.503 ug/mL M4
30) t	n-Nonacosane (C29)	41.025	58440065	49.338 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421031.D
Signal(s) : FID2B.ch
Acq On : 15 Dec 2021 07:25 am
Operator : FID18:WR
Sample : WG1583234-2
Misc : WG1583234,FRBE37,ICAL17763
ALS Vial : 66 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:42:46 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

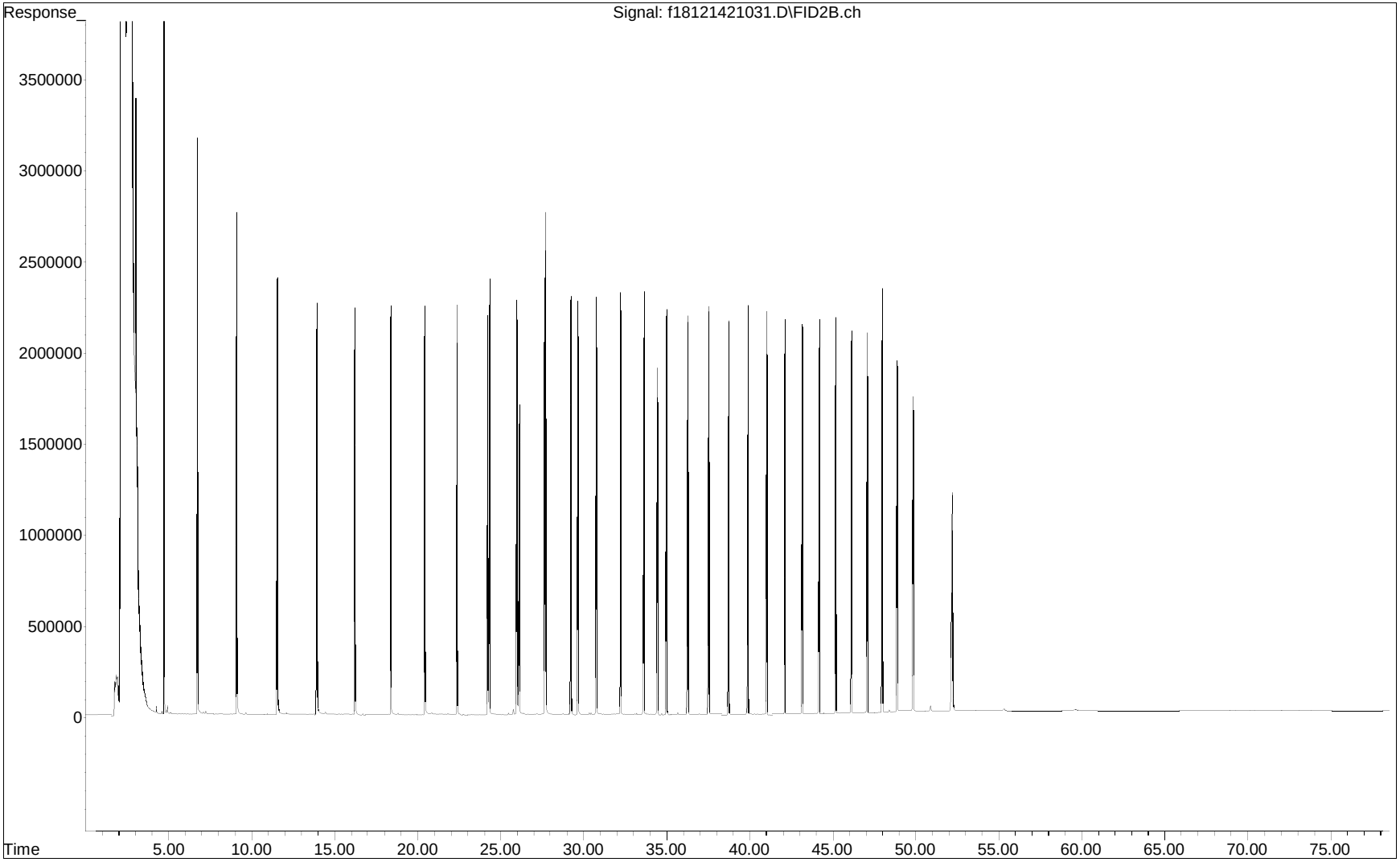
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	42.114	58722605	49.193 ug/mL M4
32) t	n-Hentriacontane (C31)	43.166	57153890	49.379 ug/mL M4
33) t	n-Dotriacontane (C32)	44.187	60109721	49.594 ug/mL M4
34) t	n-Tritriacontane (C33)	45.181	58144783	49.262 ug/mL M4
35) t	n-tetratriacontane (C34)	46.142	58075083	49.168 ug/mL M4
36) t	n-Pentatriacontane (C35)	47.078	58836798	53.018 ug/mL M4
37) t	n-Hexatriacontane (C36)	47.988	63349257	47.471 ug/mL M4
38) t	n-Heptatriacontane (C37)	48.879	58409485	48.062 ug/mL M4
39) t	n-Octatriacontane (C38)	49.847	60250920	48.974 ug/mL M4
41) t	n-Tetracontane (C40)	52.197	60024208	49.503 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\f18121421031.D
Operator : FID18:WR
Acquired : 15 Dec 2021 07:25 am using AcqMethod FID18.M
Sample Name: WG1583234-2
Instrument: FID 18
Misc Info : WG1583234,FRBE37,ICAL17763
Vial Number: 66
CurrentMeth: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421025.D
Signal(s) : FID2B.ch
Acq On : 15 Dec 2021 03:07 am
Operator : FID18:WR
Sample : L2166503-03,42,,,R2A
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 63 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 15:15:33 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.650	63815155	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.706	55341489	38.910	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	77.82%		
24) s	d50-Tetracosane	34.437	44503874	38.769	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	77.54%		
	Target Compounds					
2) t	n-Octane (C8)	4.671	712264	0.701	ug/mL	M4
3) t	n-Nonane (C9)	6.698	5756869	5.251	ug/mL	M4
4) t	n-Decane (C10)	9.091	75646577	64.141	ug/mL	M4
5) t	n-Undecane (C11)	11.538	25274903	21.419	ug/mL	M4
6) t	n-Dodecane (C12)	13.949	58284554	48.715	ug/mL	M4
7) t	n-Tridecane (C13)	16.270	1857277107	1549.356	ug/mL	M4
8) t	1380	17.937	272513314	221.110	ug/mL	M4
9) t	n-Tetradecane (C14)	18.373	898009	0.729	ug/mL	M4
10) t	1470	19.684	5421779	4.383	ug/mL	M4
11) t	n-Pentadecane (C15)	20.407	44872	0.036	ug/mL	M4
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	d
13) t	1650	23.198	1869858G	1.513	ug/mL	M4
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	24.323	369243	0.288	ug/mL	M4
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	d
17) t	Phytane	0.000	0	N.D.	ug/mL	d
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.205	2225480	1.760	ug/mL	M4
21) t	n-Heneicosane (C21)	30.786	2585913	2.021	ug/mL	M4
22) t	n-Docosane (C22)	32.250	1556093	1.204	ug/mL	M4
23) t	n-Tricosane (C23)	33.639	482003	0.375	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421025.D
Signal(s) : FID2B.ch
Acq On : 15 Dec 2021 03:07 am
Operator : FID18:WR
Sample : L2166503-03,42,,,R2A
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 63 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 15:15:33 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

Sub List : SHC - SHC

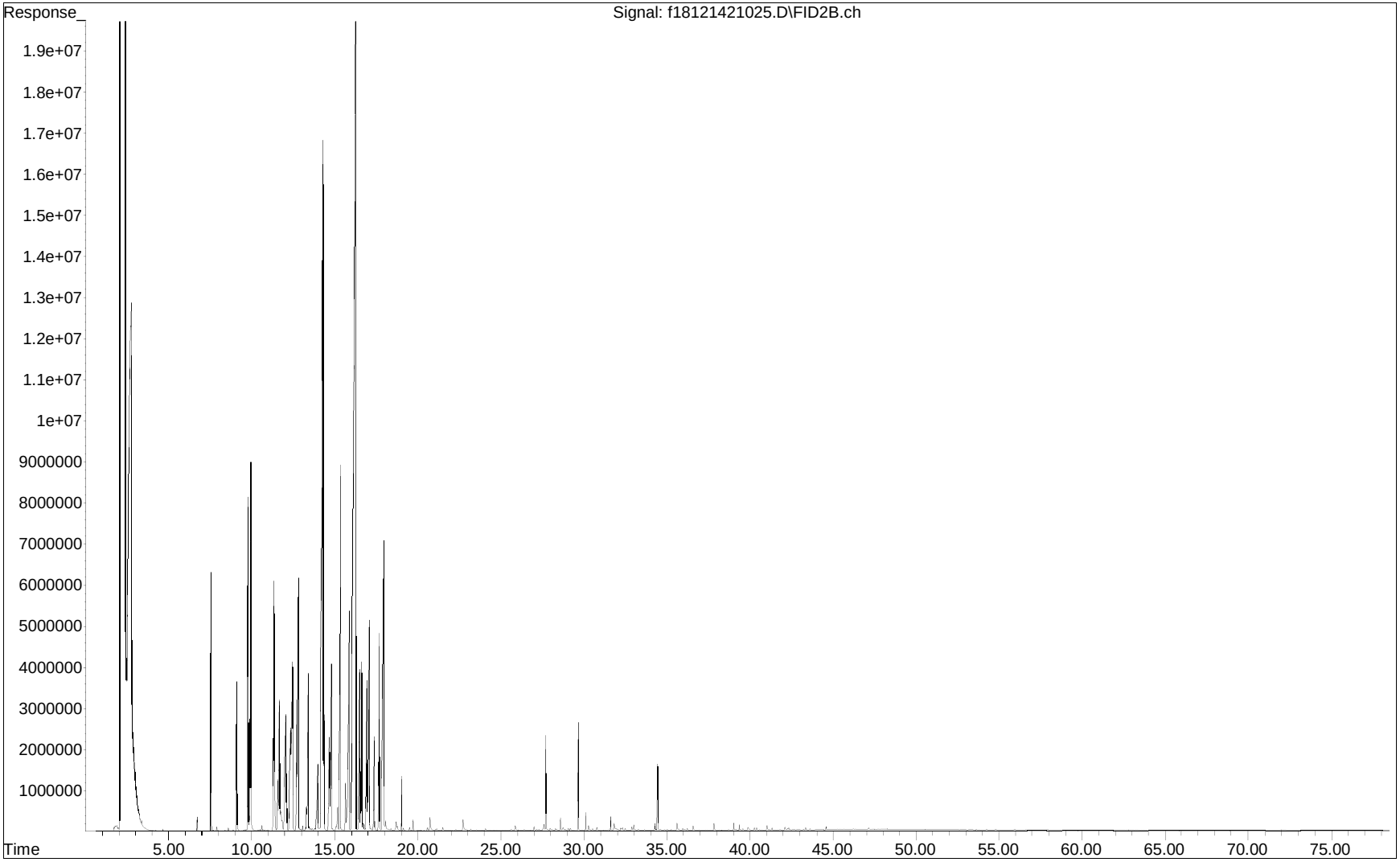
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	34.998	866898	0.676	ug/mL	M4
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	d
27) t	n-Hexacosane (C26)	37.494	283372	0.217	ug/mL	M4
28) t	n-Heptacosane (C27)	38.719	692228	0.526	ug/mL	M4
29) t	n-Octacosane (C28)	39.889	3691622	2.754	ug/mL	M4
30) t	n-Nonacosane (C29)	41.020	4059069	3.048	ug/mL	M4
31) t	n-Triacontane (C30)	42.116	2122044	1.581	ug/mL	M4
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	d
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	d
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	d
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	d
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	d
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	d
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	d
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	33.118	7763133459	6066.600	ug/mL	m
42) h	C9-C44 Total Petroleu BS	33.118	7431538918	5807.472	ug/mL	m
46) h	Total Resolved Hydroc...	37.870	7091870107	5542.033	ug/mL	m

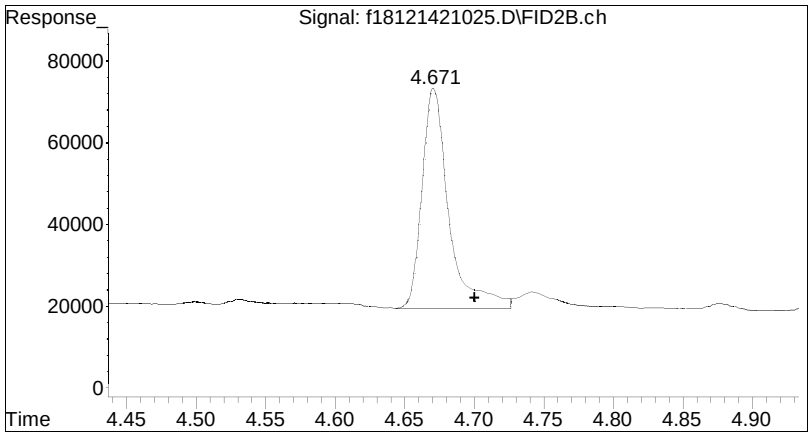
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

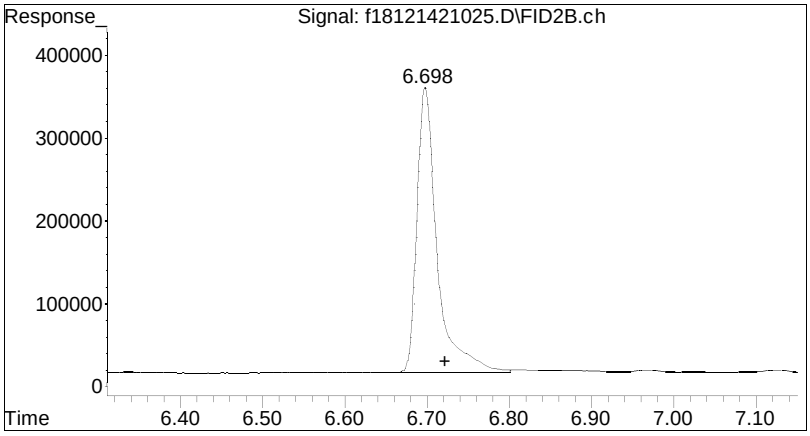
File :O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\f18121421025.D
Operator : FID18:WR
Acquired : 15 Dec 2021 03:07 am using AcqMethod FID18.M
Sample Name: L2166503-03,42,,,R2A
Instrument: FID 18
Misc Info : WG1583234,WG1582496,ICAL17763
Vial Number: 63
CurrentMeth: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M





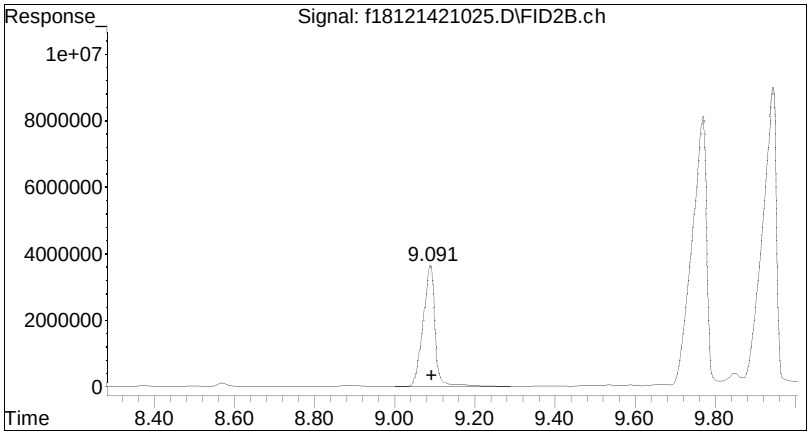
#2 n-Octane (C8)

R.T.:	4.671 min
Delta R.T.:	-0.030 min
Response:	712264
Conc:	0.70 ug/mL M4



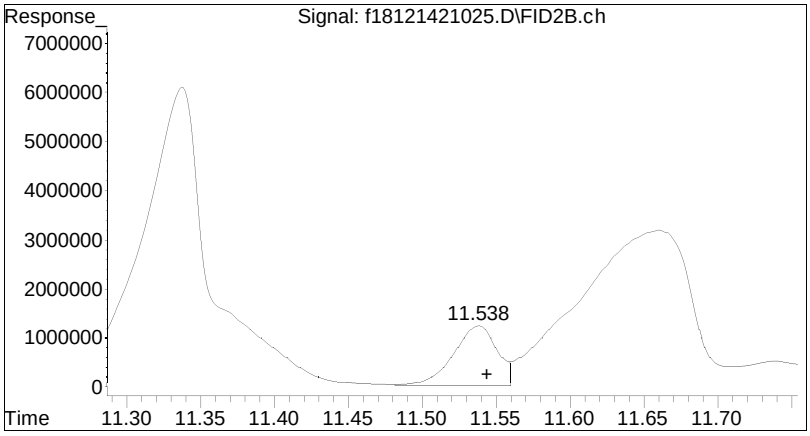
#3 n-Nonane (C9)

R.T.:	6.698 min
Delta R.T.:	-0.024 min
Response:	5756869
Conc:	5.25 ug/mL M4



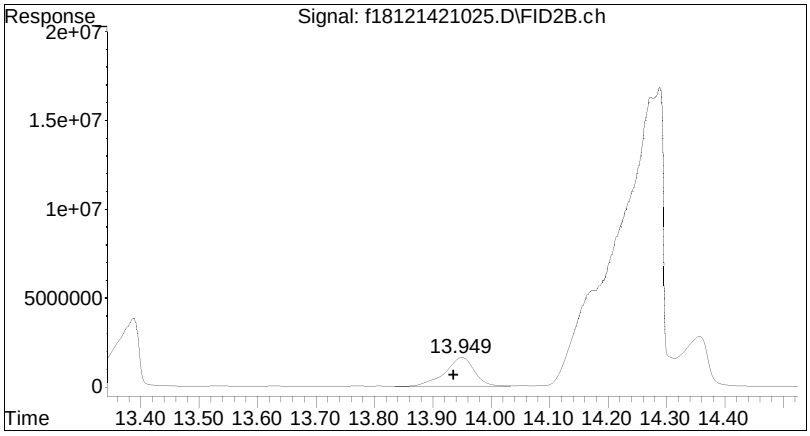
#4 n-Decane (C10)

R.T.:	9.091 min
Delta R.T.:	-0.002 min
Response:	75646577
Conc:	64.14 ug/mL M4



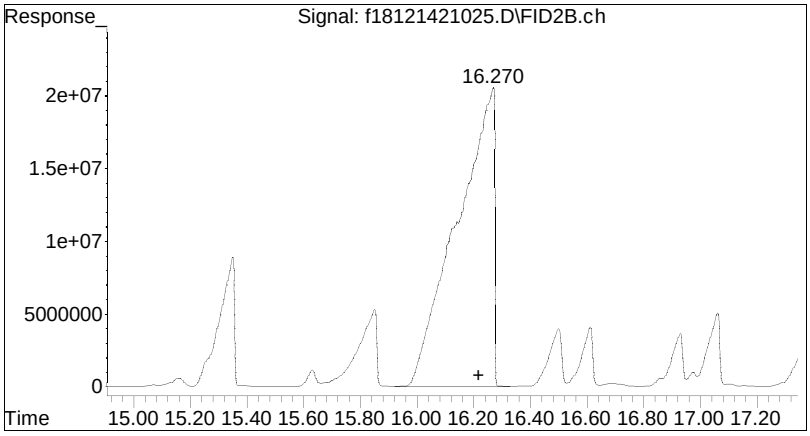
#5 n-Undecane (C11)

R.T.: 11.538 min
Delta R.T.: -0.006 min
Response: 25274903
Conc: 21.42 ug/mL M4



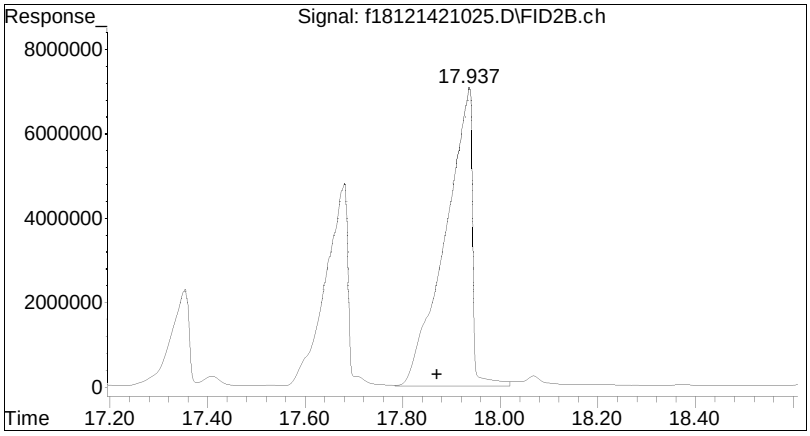
#6 n-Dodecane (C12)

R.T.: 13.949 min
Delta R.T.: 0.013 min
Response: 58284554
Conc: 48.71 ug/mL M4



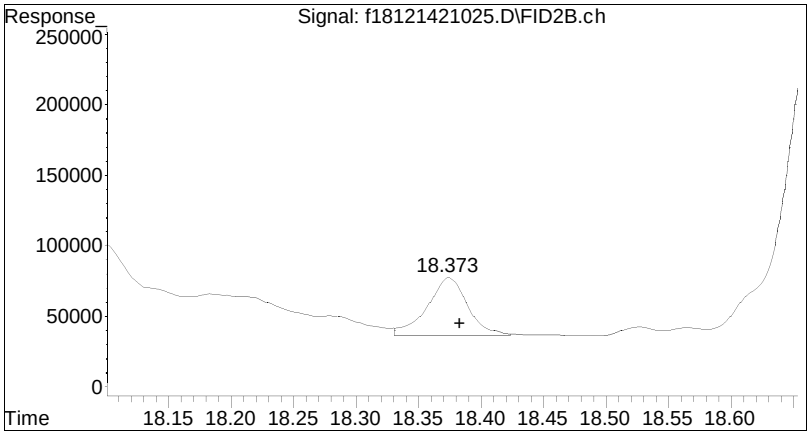
#7 n-Tridecane (C13)

R.T.: 16.270 min
Delta R.T.: 0.051 min
Response: 1857277107
Conc: 1549.36 ug/mL M4



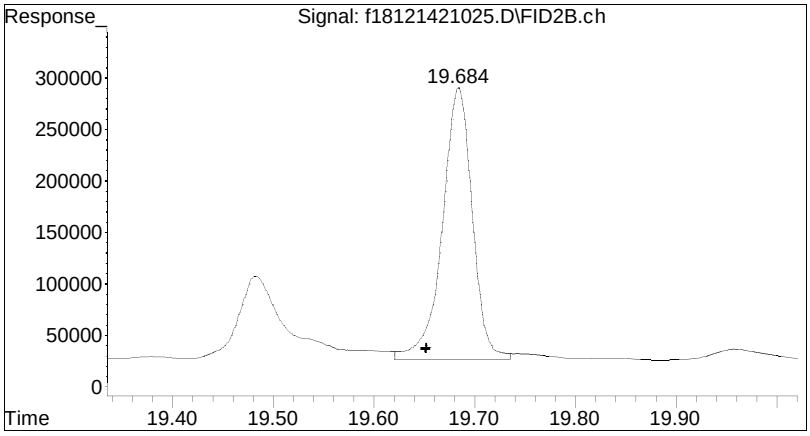
#8 1380

R.T.: 17.937 min
Delta R.T.: 0.066 min
Response: 272513314
Conc: 221.11 ug/mL M4



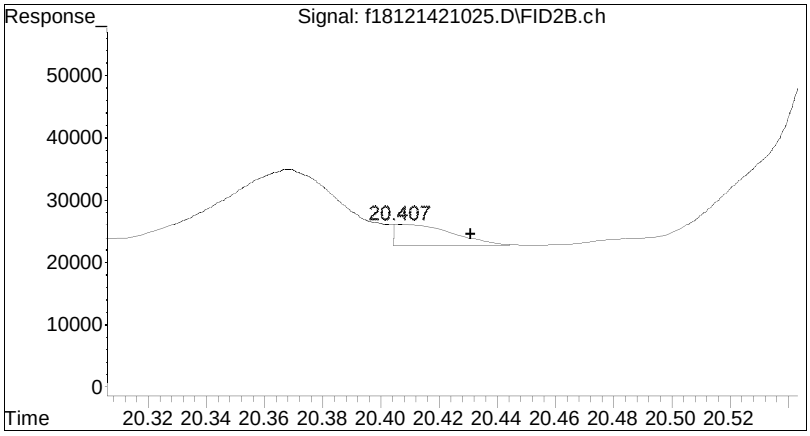
#9 n-Tetradecane (C14)

R.T.:	18.373 min
Delta R.T.:	-0.010 min
Response:	898009
Conc:	0.73 ug/mL M4



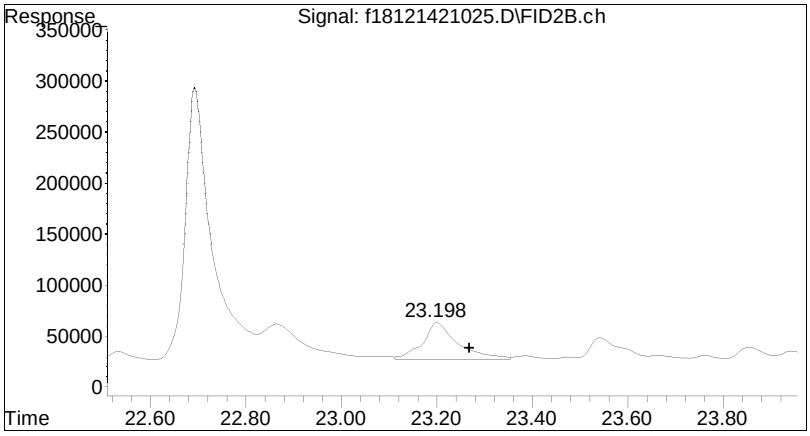
#10 1470

R.T.:	19.684 min
Delta R.T.:	0.032 min
Response:	5421779
Conc:	4.38 ug/mL M4



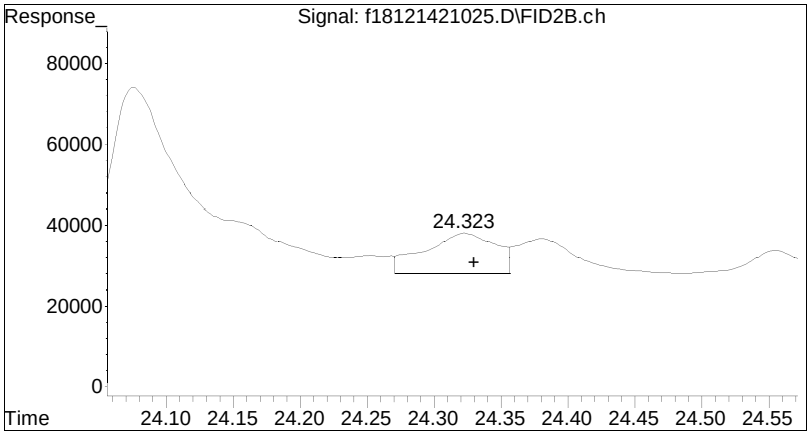
#11 n-Pentadecane (C15)

R.T.:	20.407 min
Delta R.T.:	-0.024 min
Response:	44872
Conc:	0.04 ug/mL M4



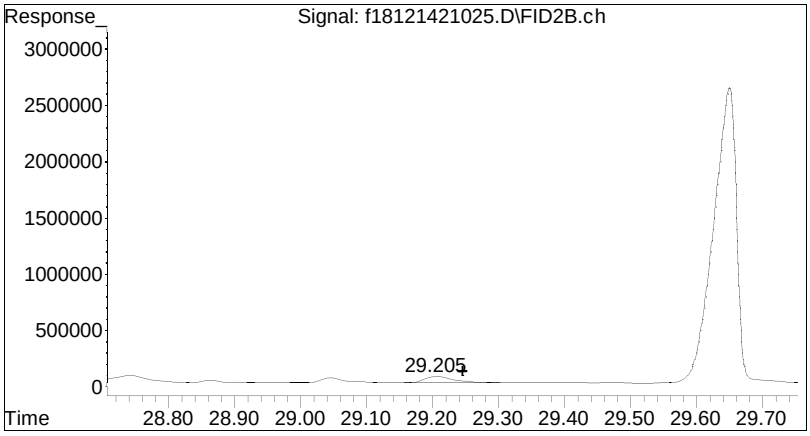
#13 1650

R.T.: 23.198 min
Delta R.T.: -0.070 min
Response: 1869858
Conc: 1.51 ug/mL M4



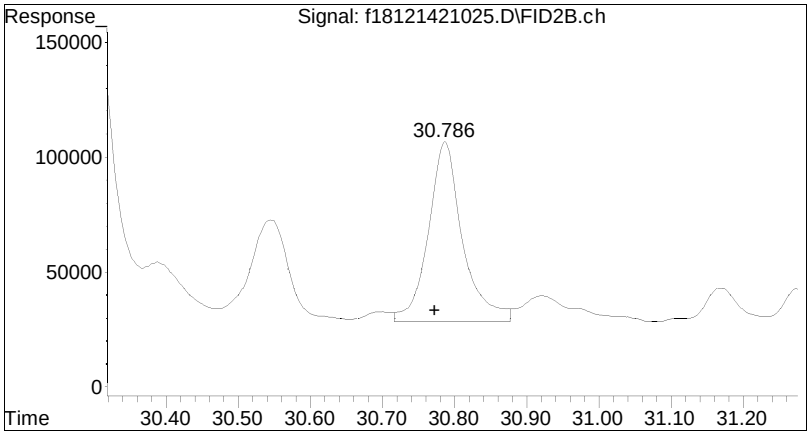
#15 Pristane

R.T.:	24.323 min
Delta R.T.:	-0.008 min
Response:	369243
Conc:	0.29 ug/mL M4



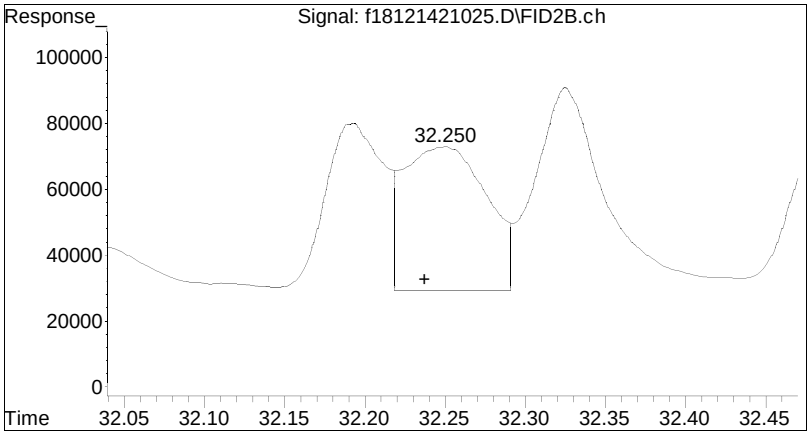
#20 n-Eicosane (C20)

R.T.:	29.205 min
Delta R.T.:	-0.042 min
Response:	2225480
Conc:	1.76 ug/mL M4



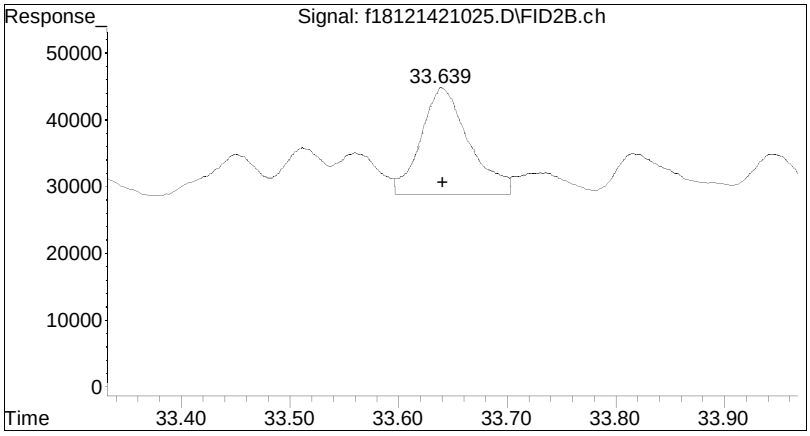
#21 n-Heneicosane (C21)

R.T.:	30.786 min
Delta R.T.:	0.014 min
Response:	2585913
Conc:	2.02 ug/mL M4



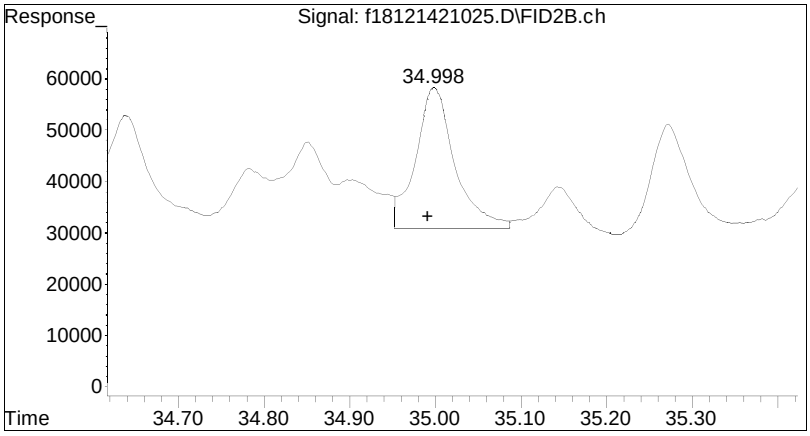
#22 n-Docosane (C22)

R.T.:	32.250 min
Delta R.T.:	0.013 min
Response:	1556093
Conc:	1.20 ug/mL M4



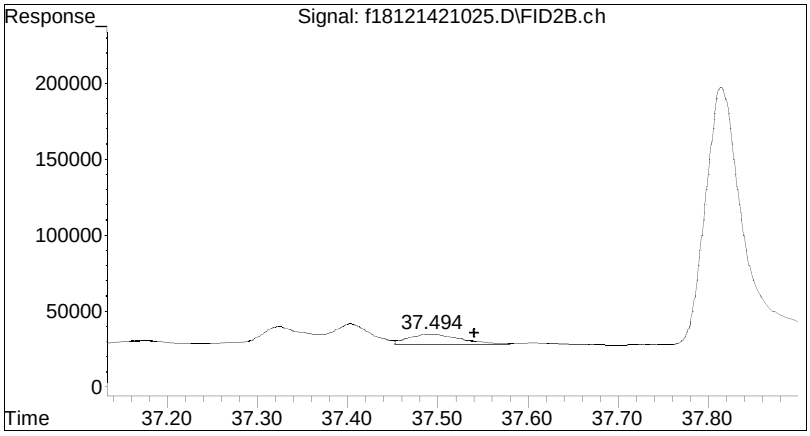
#23 n-Tricosane (C23)

R.T.:	33.639 min
Delta R.T.:	-0.002 min
Response:	482003
Conc:	0.38 ug/mL M4



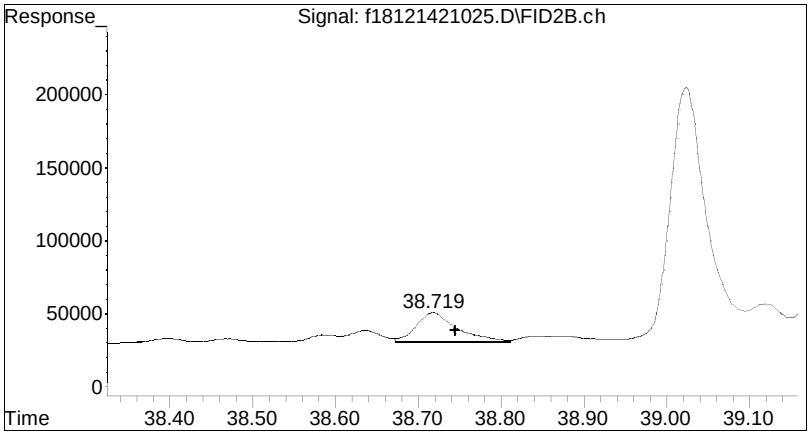
#25 n-Tetracosane (C24)

R.T.:	34.998 min
Delta R.T.:	0.007 min
Response:	866898
Conc:	0.68 ug/mL M4



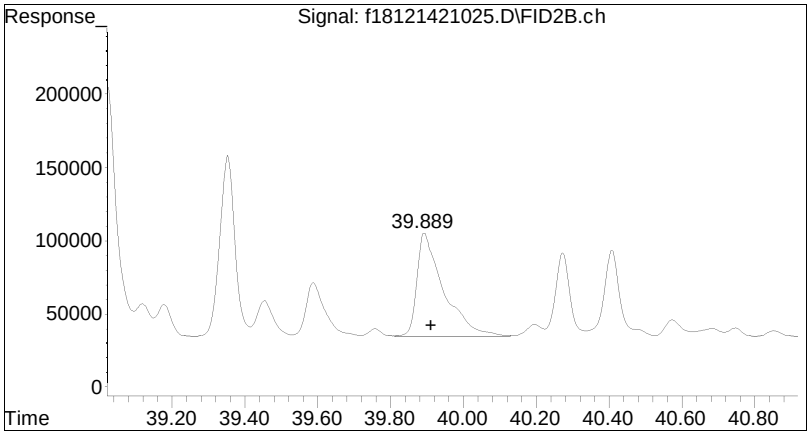
#27 n-Hexacosane (C26)

R.T.:	37.494 min
Delta R.T.:	-0.047 min
Response:	283372
Conc:	0.22 ug/mL M4



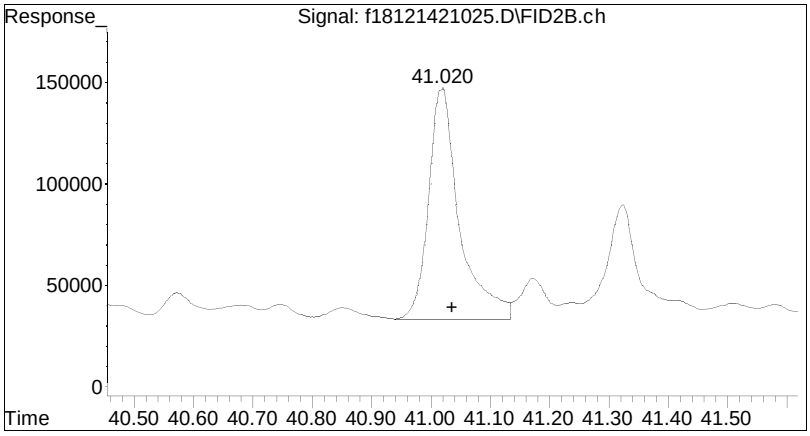
#28 n-Heptacosane (C27)

R.T.:	38.719 min
Delta R.T.:	-0.026 min
Response:	692228
Conc:	0.53 ug/mL M4



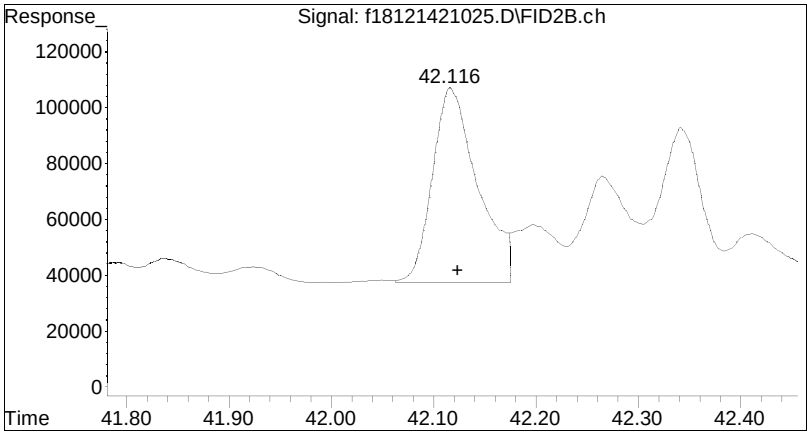
#29 n-Octacosane (C28)

R.T.:	39.889 min
Delta R.T.:	-0.022 min
Response:	3691622
Conc:	2.75 ug/mL M4



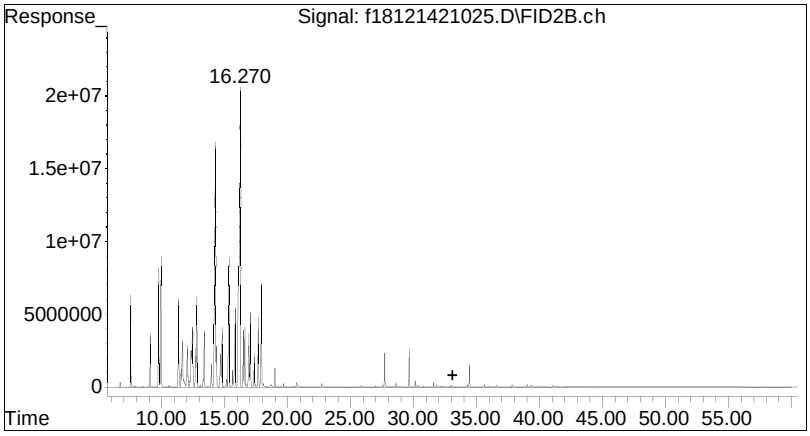
#30 n-Nonacosane (C29)

R.T.:	41.020 min
Delta R.T.:	-0.016 min
Response:	4059069
Conc:	3.05 ug/mL M4



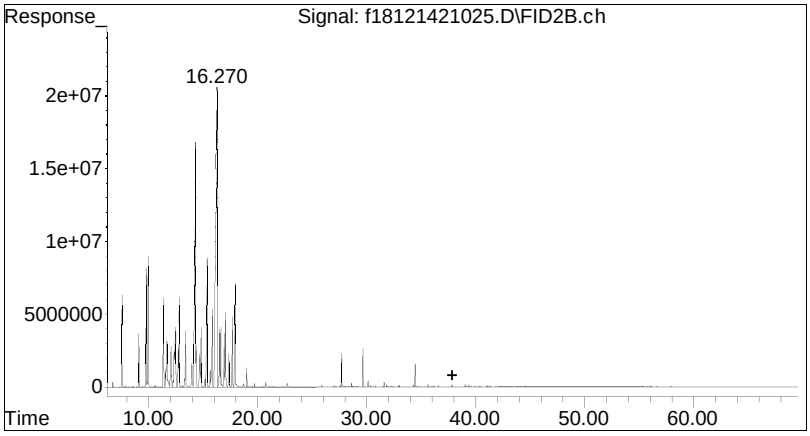
#31 n-Triacontane (C30)

R.T.:	42.116 min
Delta R.T.:	-0.008 min
Response:	2122044
Conc:	1.58 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 33.118 min
Delta R.T.: 0.000 min
Response: 7763133459
Conc: 6066.60 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 7091870107
Conc: 5542.03 ug/mL m

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422006.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 02:29 pm
Operator : FID18:WR
Sample : WG1590500-1
Misc : WG1590500,FRBE45,ICAL18548
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:32:02 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	88	0.00
2	t	n-Octane (C8)	0.811	0.763	5.9	81	0.00
3	t	n-Nonane (C9)	0.825	0.813	1.5	83	0.00
4	t	n-Decane (C10)	0.814	0.914	-12.3	95	0.00
5	t	n-Undecane (C11)	0.848	0.928	-9.4	89	0.00
6	t	n-Dodecane (C12)	0.879	0.935	-6.4	89	0.00
7	t	n-Tridecane (C13)	0.895	0.945	-5.6	89	0.00
9	t	n-Tetradecane (C14)	0.926	0.962	-3.9	89	0.00
11	t	n-Pentadecane (C15)	0.933	0.953	-2.1	88	0.00
12	t	n-Hexadecane (C16)	0.946	0.965	-2.0	87	0.00
14	t	n-Heptadecane (C17)	0.914	0.966	-5.7	86	0.00
15	t	Pristane	1.013	1.005	0.8	87	0.00
16	t	n-Octadecane (C18)	0.965	0.971	-0.6	84	0.00
17	t	Phytane	0.915	0.928	-1.4	87	0.00
18	t	n-Nonadecane (C19)	0.972	0.975	-0.3	85	0.00
19	s	ortho-terphenyl	1.115	1.076	3.5	77	0.00
20	t	n-Eicosane (C20)	0.985	0.995	-1.0	85	0.00
21	t	n-Heneicosane (C21)	0.990	0.994	-0.4	85	0.00
22	t	n-Docosane (C22)	1.000	1.008	-0.8	85	0.00
23	t	n-Tricosane (C23)	1.008	1.012	-0.4	85	0.00
24	s	d50-Tetracosane	0.909	0.865	4.8	75	0.00
25	t	n-Tetracosane (C24)	0.993	0.960	3.3	84	0.00
26	t	n-Pentacosane (C25)	0.987	0.995	-0.8	85	0.00
27	t	n-Hexacosane (C26)	1.013	1.024	-1.1	84	0.00
28	t	n-Heptacosane (C27)	1.006	0.991	1.5	84	0.00
29	t	n-Octacosane (C28)	1.032	1.034	-0.2	84	0.00
30	t	n-Nonacosane (C29)	1.024	1.028	-0.4	84	0.00
31	t	n-Triacontane (C30)	1.023	1.028	-0.5	84	0.00
32	t	n-Hentriacontane (C31)	0.985	0.994	-0.9	84	0.00
33	t	n-Dotriacontane (C32)	1.021	1.036	-1.5	85	0.00
34	t	n-Tritriacontane (C33)	0.984	1.002	-1.8	85	0.00
35	t	n-tetratriacontane (C34)	0.968	0.991	-2.4	85	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422006.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 02:29 pm
Operator : FID18:WR
Sample : WG1590500-1
Misc : WG1590500,FRBE45,ICAL18548
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:32:02 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.915	1.006	-9.9	85	0.00
37 t	n-Hexatriacontane (C36)	1.055	1.081	-2.5	85	0.00
38 t	n-Heptatriacontane (C37)	0.955	0.996	-4.3	86	0.00
39 t	n-Octatriacontane (C38)	0.959	1.036	-8.0	87	0.00
41 t	n-Tetracontane (C40)	0.940	1.044	-11.1	87	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.09	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422006.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 02:29 pm
Operator : FID18:WR
Sample : WG1590500-1
Misc : WG1590500,FRBE45,ICAL18548
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:32:02 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.114	53309513	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.111	57379625	48.276	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	96.55%		
24) s	d50-Tetracosane	35.750	46136598	47.590	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	95.18%		
	Target Compounds					
2) t	n-Octane (C8)	5.636	40689484	47.059	ug/mL	M4
3) t	n-Nonane (C9)	7.833	43319661	49.273	ug/mL	M4
4) t	n-Decane (C10)	10.299	48703452	56.111	ug/mL	M4
5) t	n-Undecane (C11)	12.789	49469775	54.697	ug/mL	M4
6) t	n-Dodecane (C12)	15.197	49825469	53.181	ug/mL	M4
7) t	n-Tridecane (C13)	17.488	50387615	52.808	ug/mL	M4
9) t	n-Tetradecane (C14)	19.657	51268862	51.907	ug/mL	M4
11) t	n-Pentadecane (C15)	21.710	50786706	51.038	ug/mL	M4
12) t	n-Hexadecane (C16)	23.654	51419580	50.967	ug/mL	M4
14) t	n-Heptadecane (C17)	25.505	51512848	52.841	ug/mL	M4
15) t	Pristane	25.614	53598338	49.627	ug/mL	M4
16) t	n-Octadecane (C18)	27.262	51773601	50.312	ug/mL	M4
17) t	Phytane	27.424	49473951	50.734	ug/mL	M4
18) t	n-Nonadecane (C19)	28.938	51978245	50.172	ug/mL	M4
20) t	n-Eicosane (C20)	30.539	53032849	50.493	ug/mL	M4
21) t	n-Heneicosane (C21)	32.069	52974495	50.165	ug/mL	M4
22) t	n-Docosane (C22)	33.536	53725988	50.415	ug/mL	M4
23) t	n-Tricosane (C23)	34.943	53946165	50.210	ug/mL	M4
25) t	n-Tetracosane (C24)	36.295	51177439	48.358	ug/mL	M4
26) t	n-Pentacosane (C25)	37.597	53038402	50.403	ug/mL	M4
27) t	n-Hexacosane (C26)	38.851	54611039	50.568	ug/mL	M4
28) t	n-Heptacosane (C27)	40.061	52825965	49.229	ug/mL	M4
29) t	n-Octacosane (C28)	41.230	55137907	50.092	ug/mL	M4
30) t	n-Nonacosane (C29)	42.357	54799519	50.178	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422006.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 02:29 pm
Operator : FID18:WR
Sample : WG1590500-1
Misc : WG1590500,FRBE45,ICAL18548
ALS Vial : 3 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:32:02 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

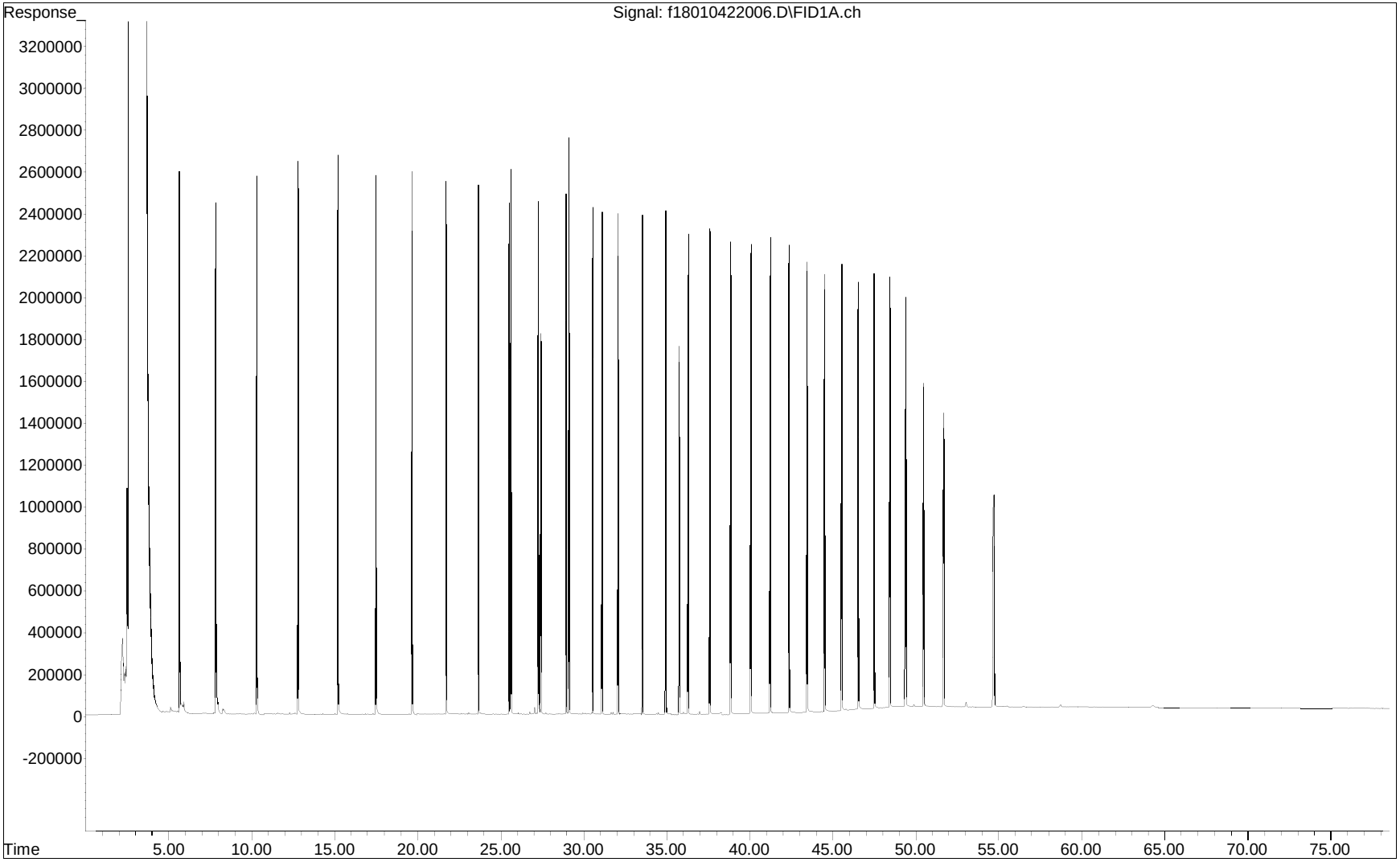
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.451	54782419	50.208 ug/mL M4
32) t	n-Hentriacontane (C31)	44.509	52987071	50.441 ug/mL M4
33) t	n-Dotriacontane (C32)	45.535	55203855	50.723 ug/mL M4
34) t	n-Tritriacontane (C33)	46.528	53424310	50.904 ug/mL M4
35) t	n-tetratriacontane (C34)	47.494	52832217	51.203 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.434	53619229	54.972 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.395	57633641	51.232 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.470	53086030	52.142 ug/mL M4
39) t	n-Octatriacontane (C38)	51.684	55242218	54.025 ug/mL M4
41) t	n-Tetracontane (C40)	54.697	55668764	55.526 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422006.D
Operator : FID18:WR
Acquired : 04 Jan 2022 02:29 pm using AcqMethod FID18.M
Sample Name: WG1590500-1
Instrument: FID 18
Misc Info : WG1590500,FRBE45,ICAL18548
Vial Number: 3
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422024.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 03:24 am
Operator : FID18:WR
Sample : WG1590500-2
Misc : WG1590500,FRBE45,ICAL18548
ALS Vial : 12 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:04:15 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	92	0.00
2	t	n-Octane (C8)	0.811	0.752	7.3	83	0.00
3	t	n-Nonane (C9)	0.825	0.797	3.4	86	0.00
4	t	n-Decane (C10)	0.814	0.904	-11.1	98	0.00
5	t	n-Undecane (C11)	0.848	0.918	-8.3	93	0.00
6	t	n-Dodecane (C12)	0.879	0.925	-5.2	93	0.00
7	t	n-Tridecane (C13)	0.895	0.936	-4.6	93	0.00
9	t	n-Tetradecane (C14)	0.926	0.956	-3.2	92	0.00
11	t	n-Pentadecane (C15)	0.933	0.950	-1.8	92	0.00
12	t	n-Hexadecane (C16)	0.946	0.966	-2.1	91	0.00
14	t	n-Heptadecane (C17)	0.914	0.972	-6.3	91	0.00
15	t	Pristane	1.013	0.994	1.9	91	0.00
16	t	n-Octadecane (C18)	0.965	0.980	-1.6	89	0.00
17	t	Phytane	0.915	0.922	-0.8	91	0.00
18	t	n-Nonadecane (C19)	0.972	0.979	-0.7	90	0.00
19	s	ortho-terphenyl	1.115	1.078	3.3	82	0.00
20	t	n-Eicosane (C20)	0.985	0.999	-1.4	90	0.00
21	t	n-Heneicosane (C21)	0.990	0.987	0.3	89	0.00
22	t	n-Docosane (C22)	1.000	1.007	-0.7	89	0.00
23	t	n-Tricosane (C23)	1.008	1.007	0.1	89	0.00
24	s	d50-Tetracosane	0.909	0.859	5.5	79	0.00
25	t	n-Tetracosane (C24)	0.993	0.951	4.2	88	0.00
26	t	n-Pentacosane (C25)	0.987	0.983	0.4	88	0.00
27	t	n-Hexacosane (C26)	1.013	1.011	0.2	87	0.00
28	t	n-Heptacosane (C27)	1.006	0.972	3.4	87	0.00
29	t	n-Octacosane (C28)	1.032	1.011	2.0	86	0.00
30	t	n-Nonacosane (C29)	1.024	1.000	2.3	86	0.00
31	t	n-Triacontane (C30)	1.023	0.998	2.4	85	0.00
32	t	n-Hentriacontane (C31)	0.985	0.958	2.7	85	0.00
33	t	n-Dotriacontane (C32)	1.021	0.992	2.8	85	0.00
34	t	n-Tritriacontane (C33)	0.984	0.962	2.2	85	0.00
35	t	n-tetratriacontane (C34)	0.968	0.938	3.1	84	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422024.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 03:24 am
Operator : FID18:WR
Sample : WG1590500-2
Misc : WG1590500,FRBE45,ICAL18548
ALS Vial : 12 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:04:15 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.915	0.940	-2.7	83	0.00
37 t	n-Hexatriacontane (C36)	1.055	1.004	4.8	83	0.00
38 t	n-Heptatriacontane (C37)	0.955	0.920	3.7	83	0.00
39 t	n-Octatriacontane (C38)	0.959	0.941	1.9	83	0.00
41 t	n-Tetracontane (C40)	0.940	0.938	0.2	83	-0.02

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.01	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422024.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 03:24 am
Operator : FID18:WR
Sample : WG1590500-2
Misc : WG1590500,FRBE45,ICAL18548
ALS Vial : 12 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:04:15 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.112	55988050	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.109	60371633	48.363 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	96.73%
24) s	d50-Tetracosane	35.749	48093558	47.235 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	94.47%
	Target Compounds			
2) t	n-Octane (C8)	5.640	42101873	46.363 ug/mL M4
3) t	n-Nonane (C9)	7.834	44597830	48.300 ug/mL M4
4) t	n-Decane (C10)	10.296	50631251	55.541 ug/mL M4
5) t	n-Undecane (C11)	12.786	51381043	54.092 ug/mL M4
6) t	n-Dodecane (C12)	15.194	51766852	52.609 ug/mL M4
7) t	n-Tridecane (C13)	17.485	52427730	52.318 ug/mL M4
9) t	n-Tetradecane (C14)	19.654	53497123	51.572 ug/mL M4
11) t	n-Pentadecane (C15)	21.707	53187393	50.893 ug/mL M4
12) t	n-Hexadecane (C16)	23.652	54106028	51.064 ug/mL M4
14) t	n-Heptadecane (C17)	25.501	54445300	53.177 ug/mL M4
15) t	Pristane	25.612	55669461	49.079 ug/mL M4
16) t	n-Octadecane (C18)	27.260	54862321	50.763 ug/mL M4
17) t	Phytane	27.420	51640487	50.422 ug/mL M4
18) t	n-Nonadecane (C19)	28.936	54797135	50.362 ug/mL M4
20) t	n-Eicosane (C20)	30.537	55927923	50.702 ug/mL M4
21) t	n-Heneicosane (C21)	32.066	55284742	49.848 ug/mL M4
22) t	n-Docosane (C22)	33.534	56360076	50.357 ug/mL M4
23) t	n-Tricosane (C23)	34.943	56386905	49.971 ug/mL M4
25) t	n-Tetracosane (C24)	36.295	53272394	47.929 ug/mL M4
26) t	n-Pentacosane (C25)	37.596	55063236	49.824 ug/mL M4
27) t	n-Hexacosane (C26)	38.852	56609160	49.910 ug/mL M4
28) t	n-Heptacosane (C27)	40.059	54446850	48.312 ug/mL M4
29) t	n-Octacosane (C28)	41.230	56580525	48.943 ug/mL M4
30) t	n-Nonacosane (C29)	42.356	55961594	48.791 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422024.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 03:24 am
Operator : FID18:WR
Sample : WG1590500-2
Misc : WG1590500,FRBE45,ICAL18548
ALS Vial : 12 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:04:15 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

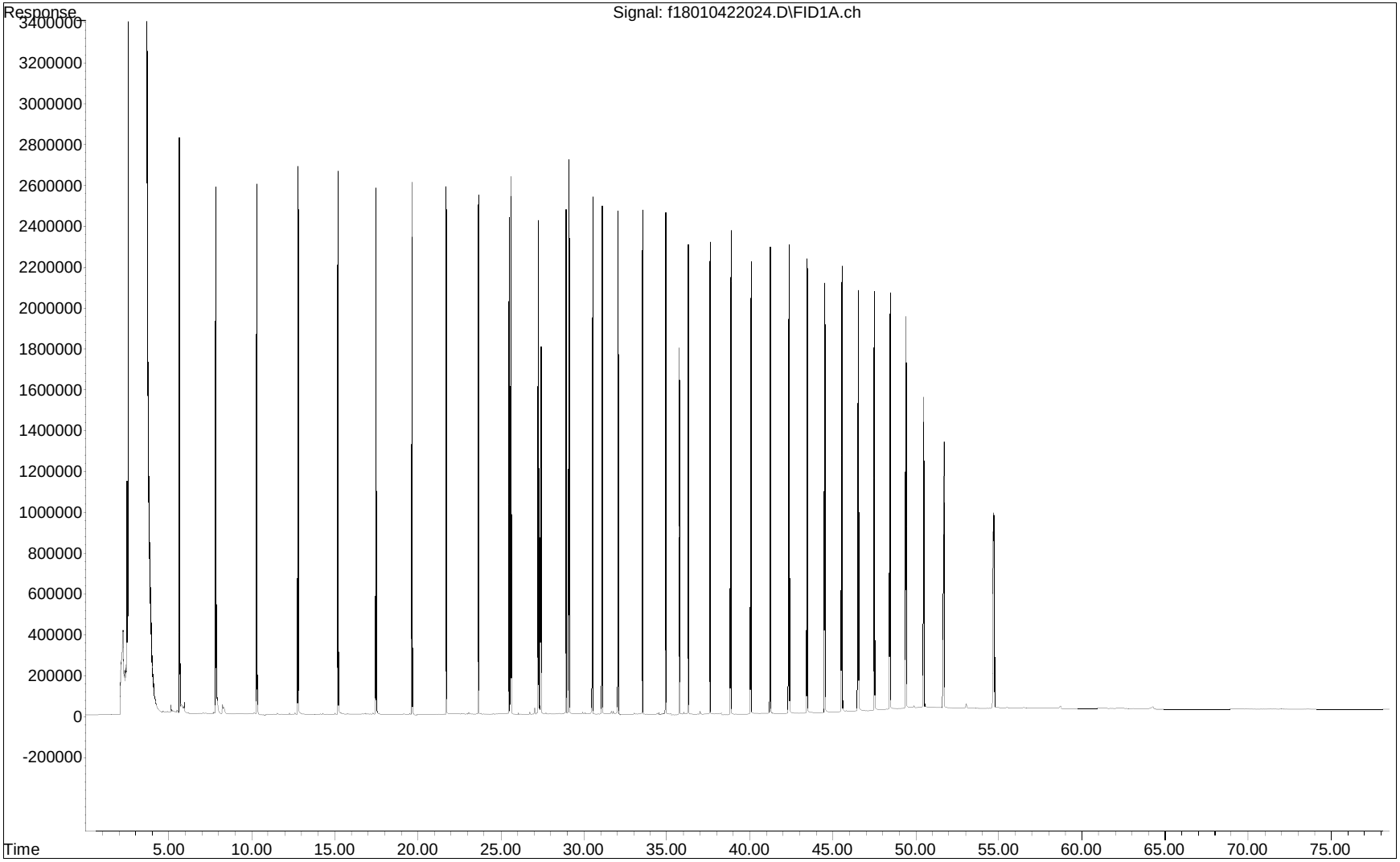
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.448	55859342	48.746 ug/mL M4
32) t	n-Hentriacontane (C31)	44.504	53656691	48.635 ug/mL M4
33) t	n-Dotriacontane (C32)	45.533	55554892	48.604 ug/mL M4
34) t	n-Tritriacontane (C33)	46.527	53835285	48.842 ug/mL M4
35) t	n-tetratriacontane (C34)	47.493	52495234	48.442 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.432	52607151	51.354 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.395	56208641	47.575 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.465	51490615	48.155 ug/mL M4
39) t	n-Octatriacontane (C38)	51.682	52664225	49.040 ug/mL M4
41) t	n-Tetracontane (C40)	54.680	52530534	49.889 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422024.D
Operator : FID18:WR
Acquired : 05 Jan 2022 03:24 am using AcqMethod FID18.M
Sample Name: WG1590500-2
Instrument: FID 18
Misc Info : WG1590500,FRBE45,ICAL18548
Vial Number: 12
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422020.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 12:32 am
Operator : FID18:WR
Sample : L2166503-03D,42,20
Misc : WG1590500,WG1582496,ICAL18548
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:47:25 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.106	51022137	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.082	2160453	1.899	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	3.80%#		
24) s	d50-Tetracosane	35.729	1597643	1.722	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	3.44%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	d
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	d
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	d
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422020.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 12:32 am
Operator : FID18:WR
Sample : L2166503-03D,42,20
Misc : WG1590500,WG1582496,ICAL18548
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:47:25 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

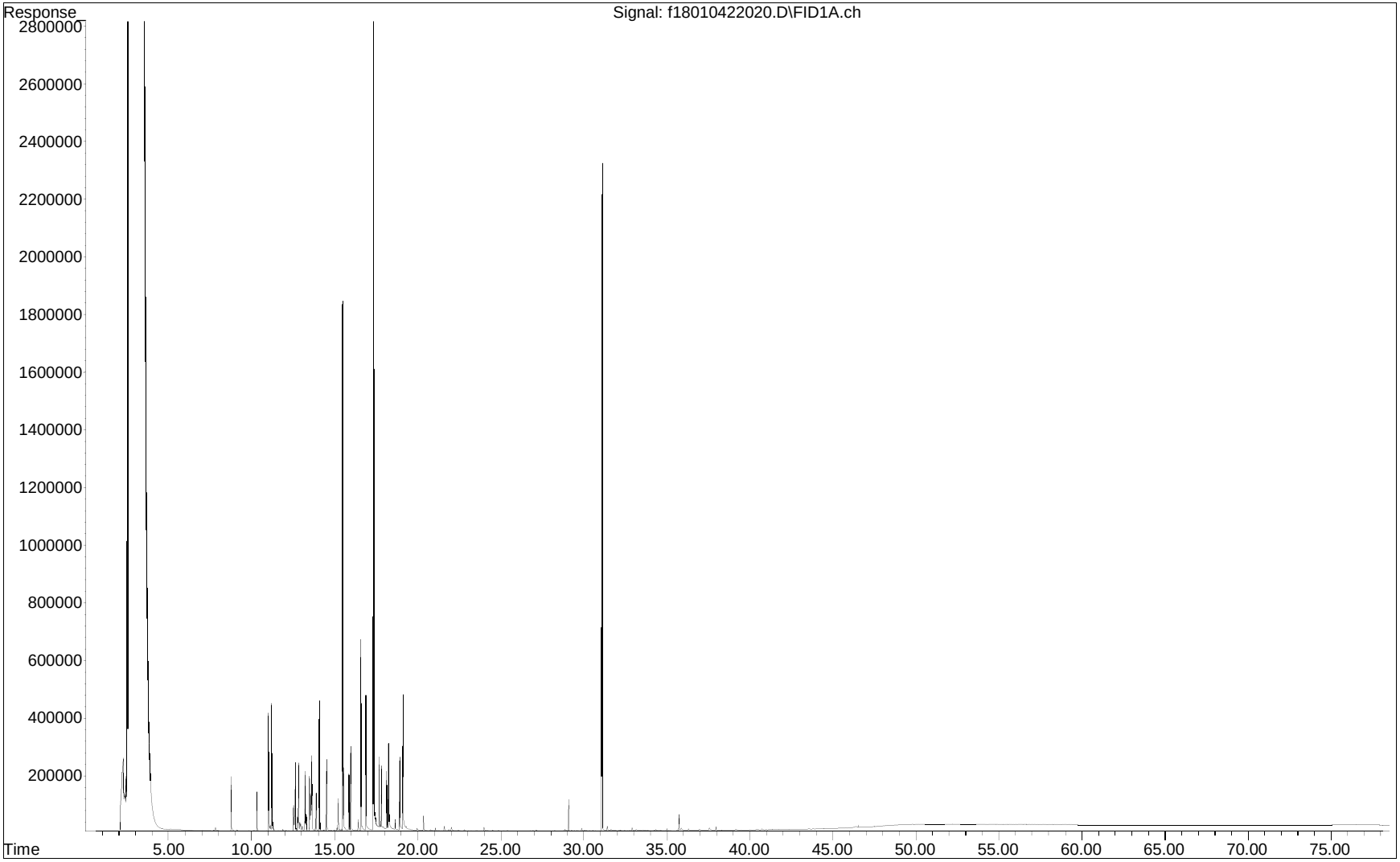
	Compound	R.T.	Response	Conc	Units
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	36.047	621748868	634.489	ug/mL m
42) h	C9-C44 Total Petroleu BS	36.047	241429362	246.377	ug/mLm
46) h	Total Resolved Hydroc...	38.937	276250369	281.911	ug/mL m

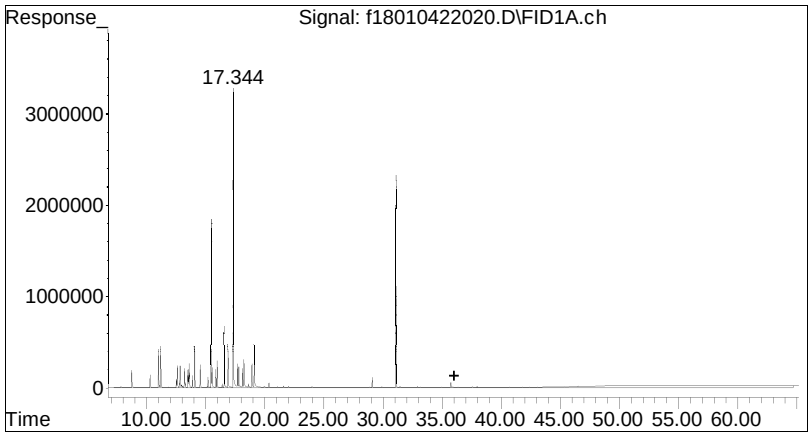
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

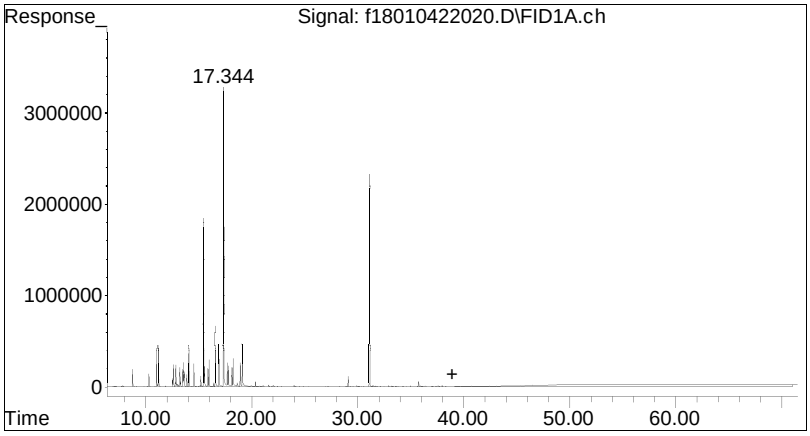
File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422020.D
Operator : FID18:WR
Acquired : 05 Jan 2022 12:32 am using AcqMethod FID18.M
Sample Name: L2166503-03D,42,20
Instrument: FID 18
Misc Info : WG1590500,WG1582496,ICAL18548
Vial Number: 10
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M





#42 C9-C44 Total Petroleum Hy

R.T.: 36.047 min
Delta R.T.: 0.000 min
Response: 621748868
Conc: 634.49 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 38.937 min
Delta R.T.: 0.000 min
Response: 276250369
Conc: 281.91 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422022.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 01:58 am
Operator : FID18:WR
Sample : L2166503-06D,42,20
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:46:59 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.111	59207847	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.087	656094	0.497	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.99%#		
24) s	d50-Tetracosane	35.728	780263	0.725	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	1.45%#		
	Target Compounds					
2) t	n-Octane (C8)	5.613	48553	0.051	ug/mL	M4
3) t	n-Nonane (C9)	7.817	176945	0.181	ug/mL	M4
4) t	n-Decane (C10)	10.283	1259187	1.306	ug/mL	M4
5) t	n-Undecane (C11)	12.773	281826	0.281	ug/mL	M4
6) t	n-Dodecane (C12)	15.180	758488	0.729	ug/mL	M4
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	d
8) t	1380	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	19.667	65896	0.060	ug/mL	M4
10) t	1470	20.937	83418	0.075	ug/mL	M4
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	23.617	239668	0.214	ug/mL	M4
13) t	1650	0.000	0	N.D.	ug/mL	d
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	25.611	1819734	1.517	ug/mL	M4
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	d
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	d
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	d
22) t	n-Docosane (C22)	33.543	20515983G	17.334	ug/mL	M4
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422022.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 01:58 am
Operator : FID18:WR
Sample : L2166503-06D,42,20
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:46:59 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

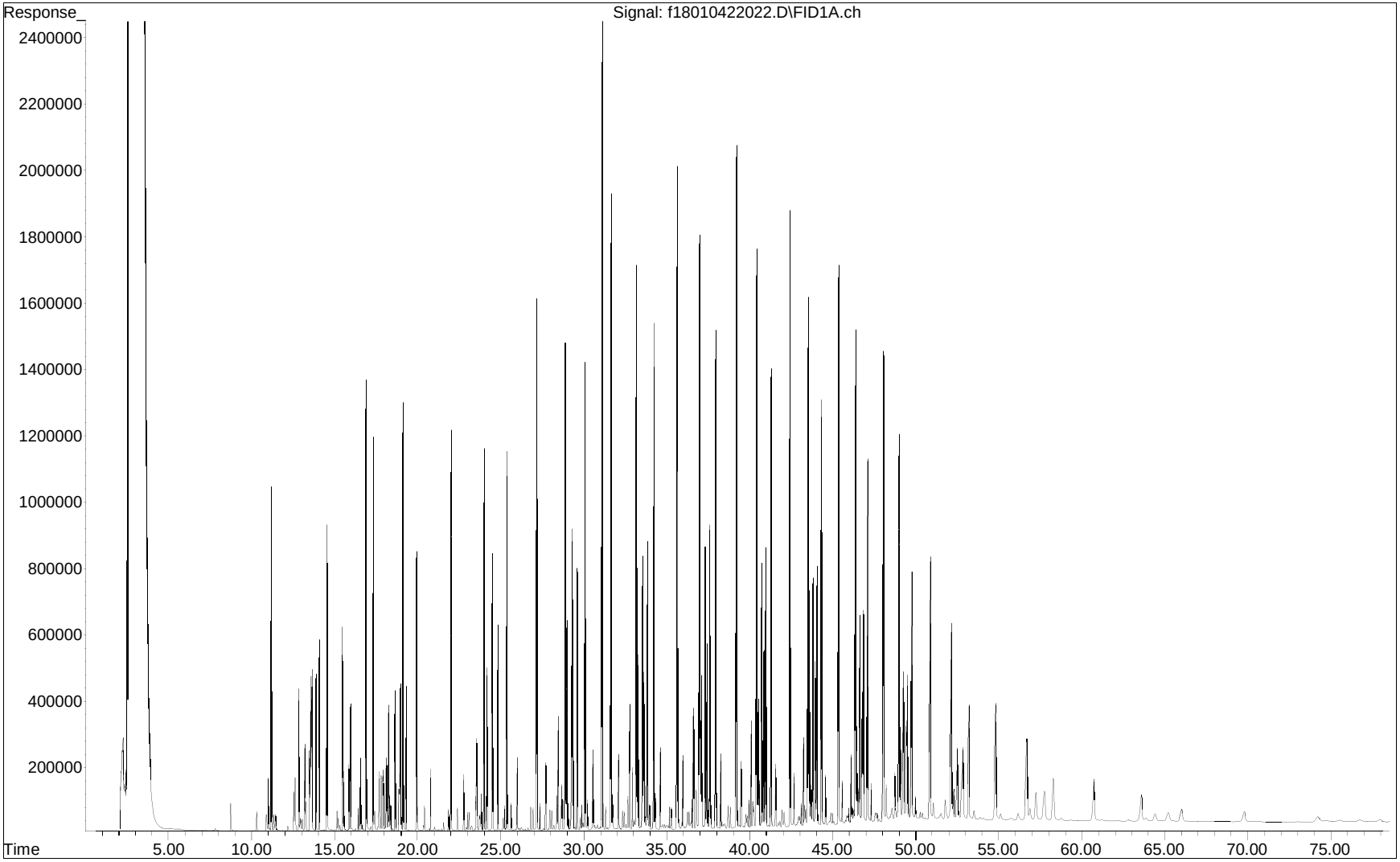
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	37.588	21670619	18.542	ug/mL	M4
27) t	n-Hexacosane (C26)	38.822	1696148	1.414	ug/mL	M4
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	d
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	d
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	d
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	d
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	d
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	d
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	d
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.047	2858649115	2513.908	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.047	2478329609	2179.454	ug/mL	m
46) h	Total Resolved Hydroc...	38.937	2237503461	1967.670	ug/mL	m

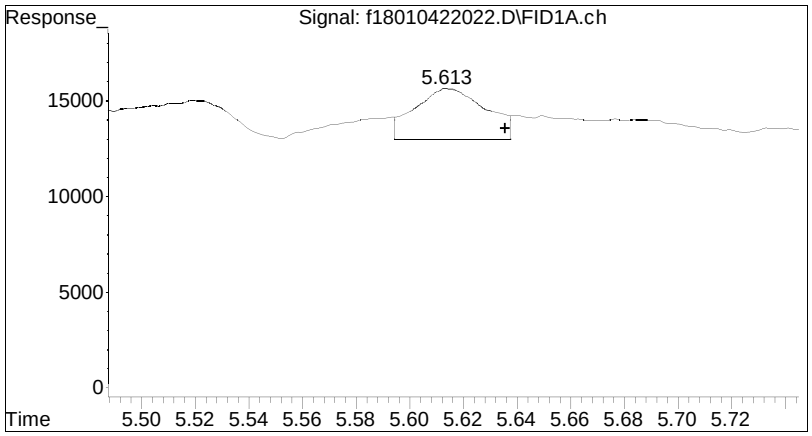
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

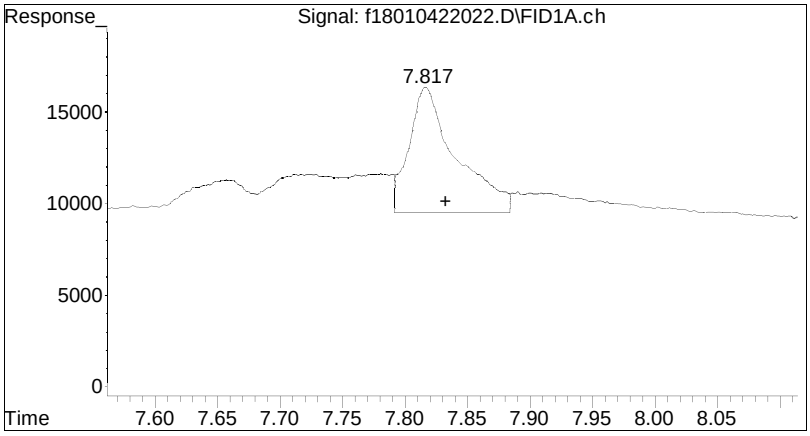
File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422022.D
Operator : FID18:WR
Acquired : 05 Jan 2022 01:58 am using AcqMethod FID18.M
Sample Name: L2166503-06D,42,20
Instrument: FID 18
Misc Info : WG1590500,WG1590340,ICAL18548
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M





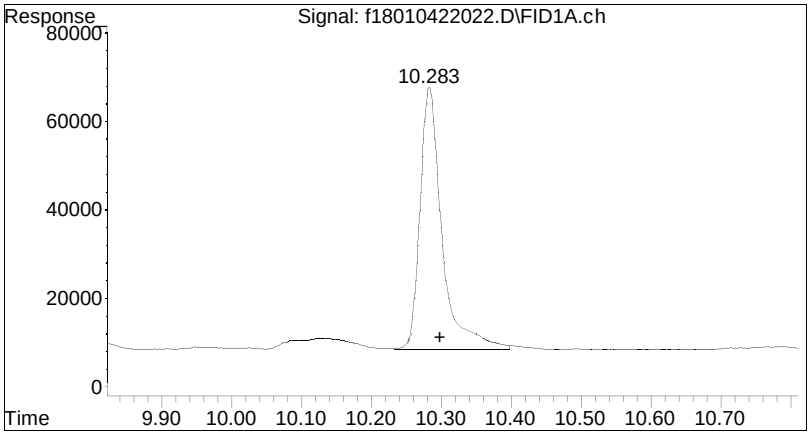
#2 n-Octane (C8)

R.T.:	5.613 min
Delta R.T.:	-0.023 min
Response:	48553
Conc:	0.05 ug/mL M4



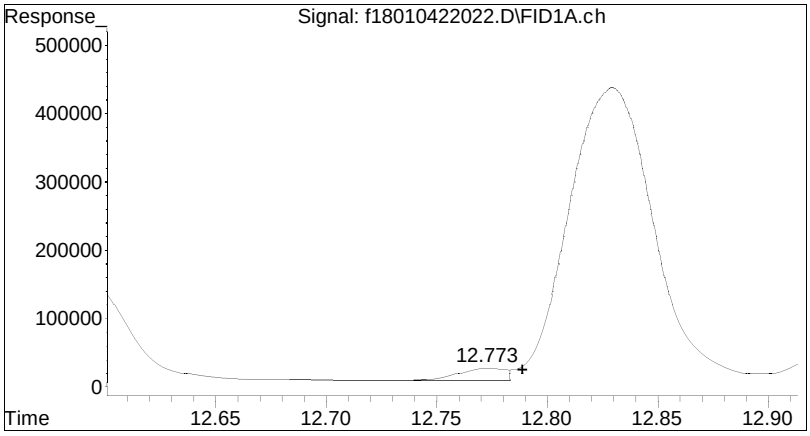
#3 n-Nonane (C9)

R.T.:	7.817 min
Delta R.T.:	-0.016 min
Response:	176945
Conc:	0.18 ug/mL M4



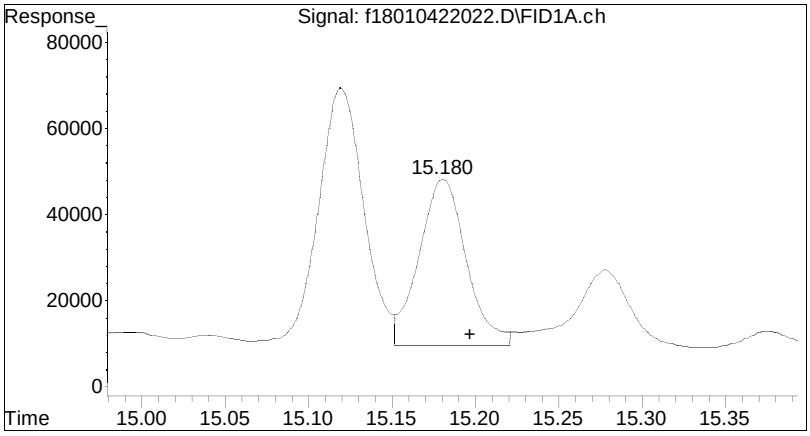
#4 n-Decane (C10)

R.T.:	10.283 min
Delta R.T.:	-0.016 min
Response:	1259187
Conc:	1.31 ug/mL M4



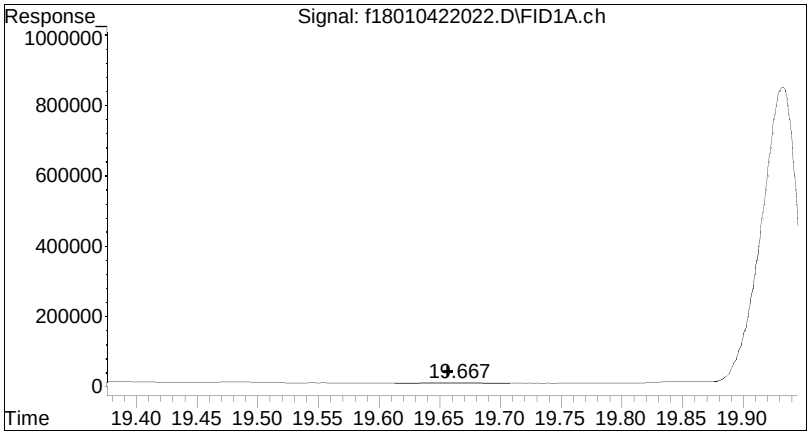
#5 n-Undecane (C11)

R.T.:	12.773 min
Delta R.T.:	-0.016 min
Response:	281826
Conc:	0.28 ug/mL M4



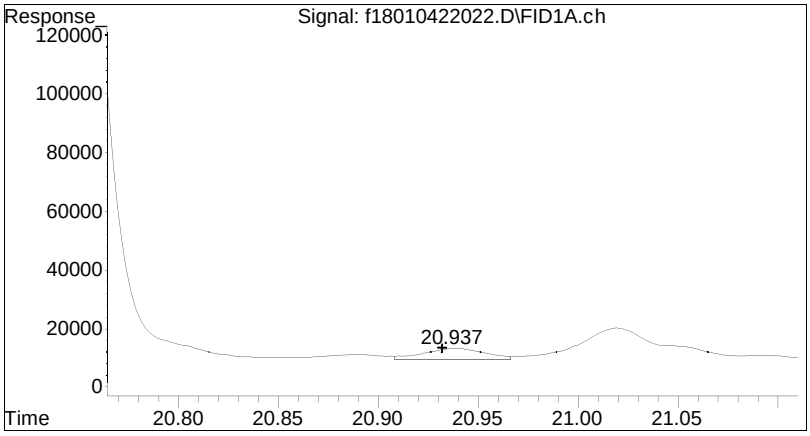
#6 n-Dodecane (C12)

R.T.:	15.180 min
Delta R.T.:	-0.017 min
Response:	758488
Conc:	0.73 ug/mL M4



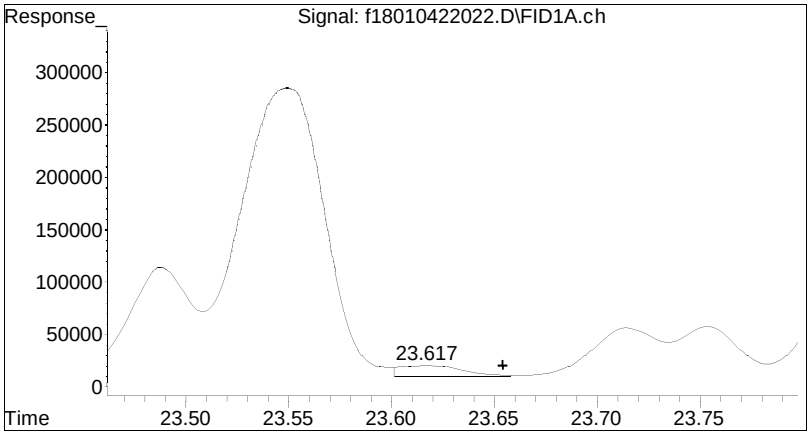
#9 n-Tetradecane (C14)

R.T.:	19.667 min
Delta R.T.:	0.009 min
Response:	65896
Conc:	0.06 ug/mL M4



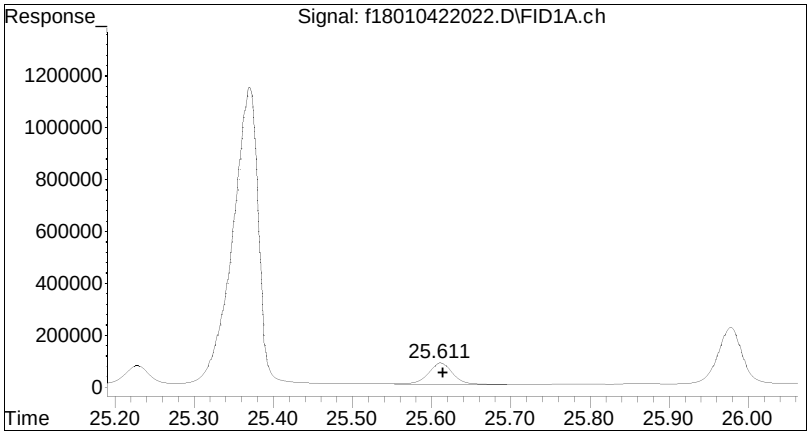
#10 1470

R.T.: 20.937 min
Delta R.T.: 0.005 min
Response: 83418
Conc: 0.08 ug/mL M4



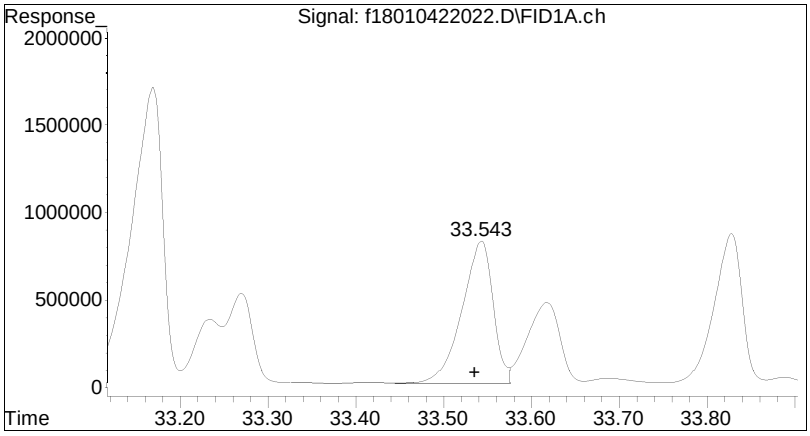
#12 n-Hexadecane (C16)

R.T.:	23.617 min
Delta R.T.:	-0.037 min
Response:	239668
Conc:	0.21 ug/mL M4



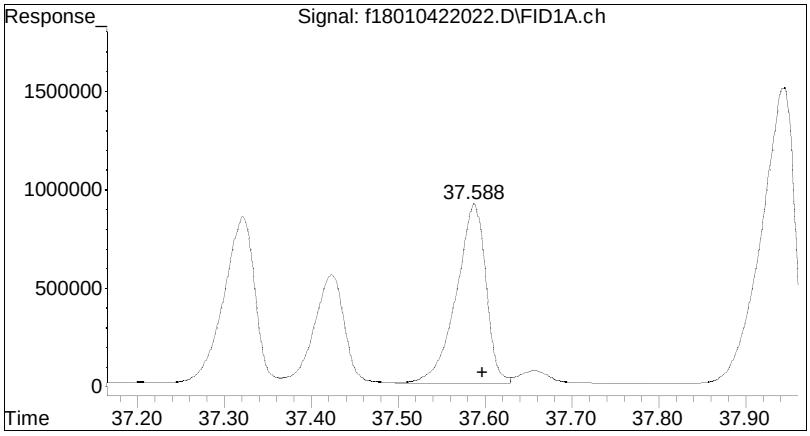
#15 Pristane

R.T.:	25.611 min
Delta R.T.:	-0.004 min
Response:	1819734
Conc:	1.52 ug/mL M4



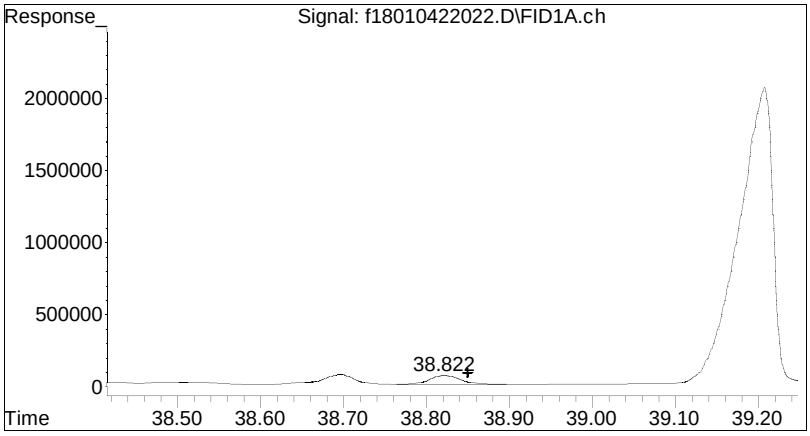
#22 n-Docosane (C22)

R.T.: 33.543 min
Delta R.T.: 0.008 min
Response: 20515983
Conc: 17.33 ug/mL M4



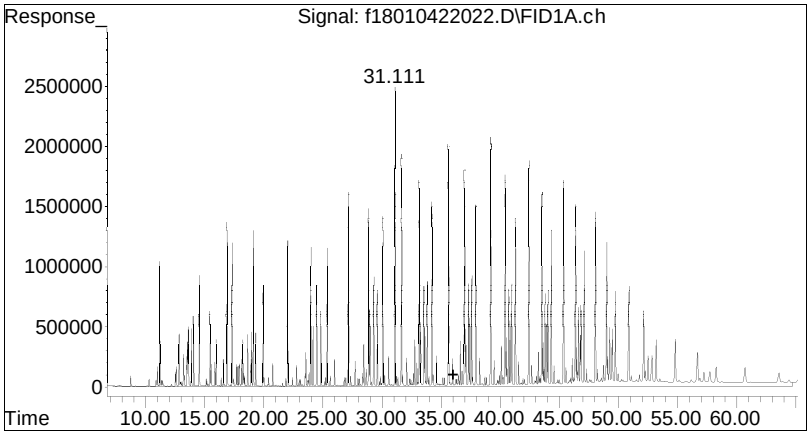
#26 n-Pentacosane (C25)

R.T.: 37.588 min
Delta R.T.: -0.009 min
Response: 21670619
Conc: 18.54 ug/mL M4



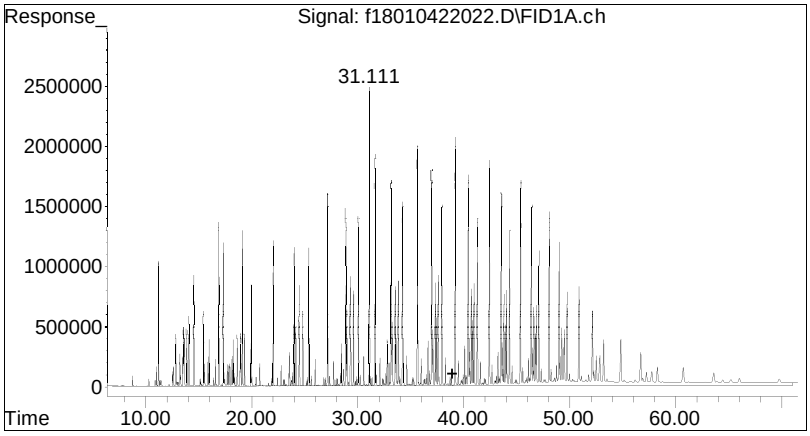
#27 n-Hexacosane (C26)

R.T.:	38.822 min
Delta R.T.:	-0.029 min
Response:	1696148
Conc:	1.41 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.047 min
Delta R.T.: 0.000 min
Response: 2858649115
Conc: 2513.91 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 38.937 min
Delta R.T.: 0.000 min
Response: 2237503461
Conc: 1967.67 ug/mL m

Batch Quality Control

Method Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032136.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 11:44 am
Operator : FID17:MJS
Sample : wG1579102-1,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 18 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:23:30 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:42 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.611	58826906	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.654	14950494	11.724	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.45%#		
24) s	d50-Tetracosane	34.400	11635797	11.501	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.00%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.205	17454	0.015	ug/mL	M2
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032136.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 11:44 am
Operator : FID17:MJS
Sample : wG1579102-1,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 18 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:23:30 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:42 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : Default - All compounds listed

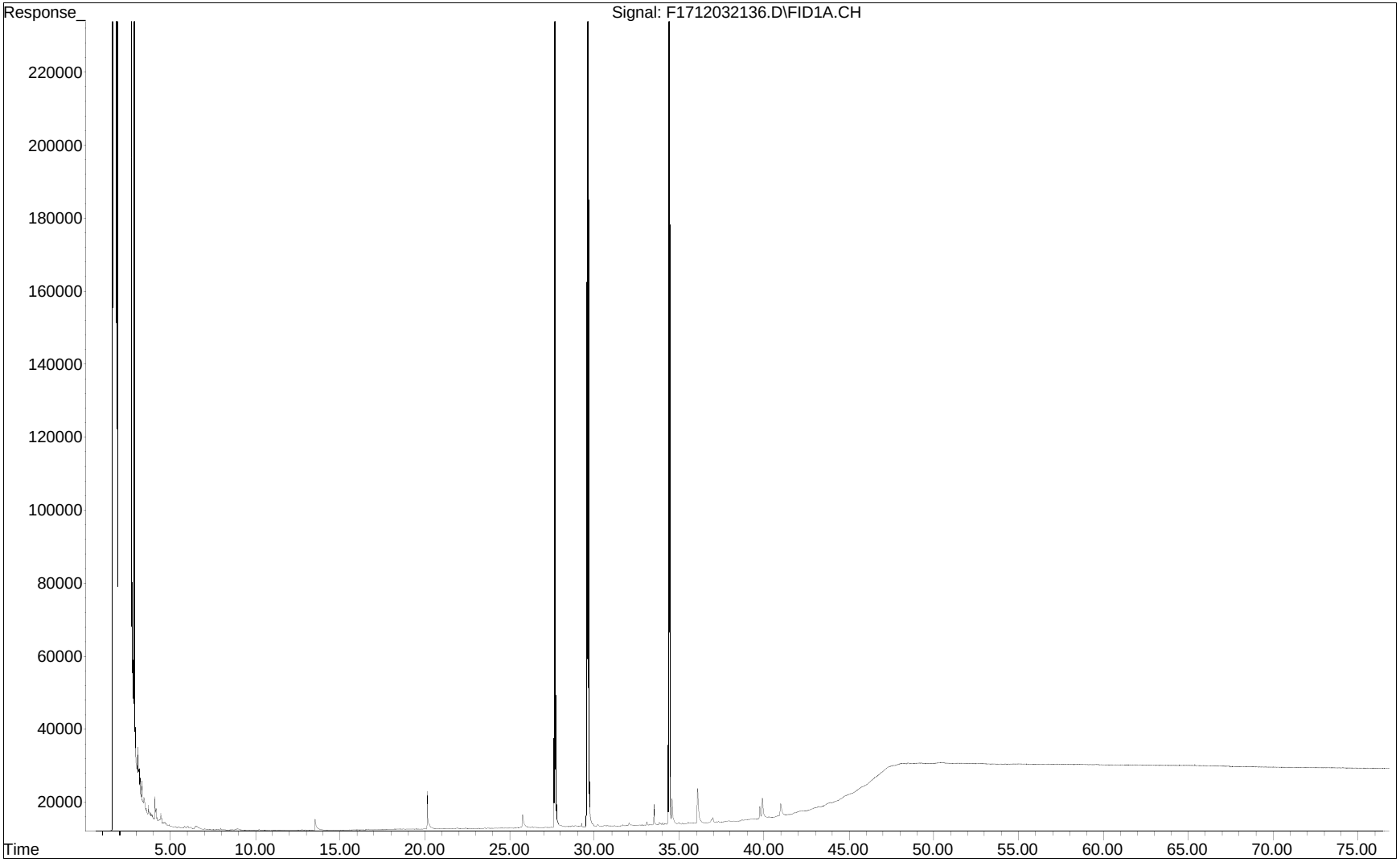
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	40.992	229049	0.194	ug/mL	M4
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.038	283115060	246.097	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.038	-1197644	N.D.	ug/mL	m
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
44) h	C10-C28 DRO	24.454	31258877	27.496	ug/mL	m
44) h	C10-C28 DRO BS	24.454	3204096	2.818	ug/mL	m
45) h	C28-C40 ORO	46.963	94388830	79.469	ug/mL	m
45) h	C28-C40 ORO BS	46.963	-1659166	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	4888119	4.249	ug/mL	m

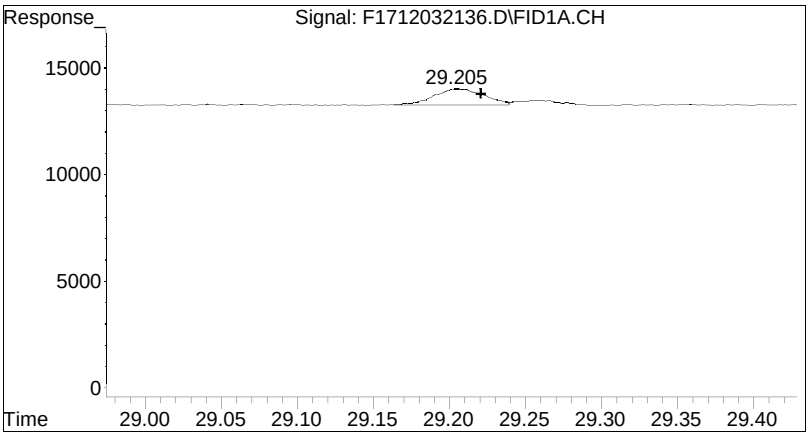
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

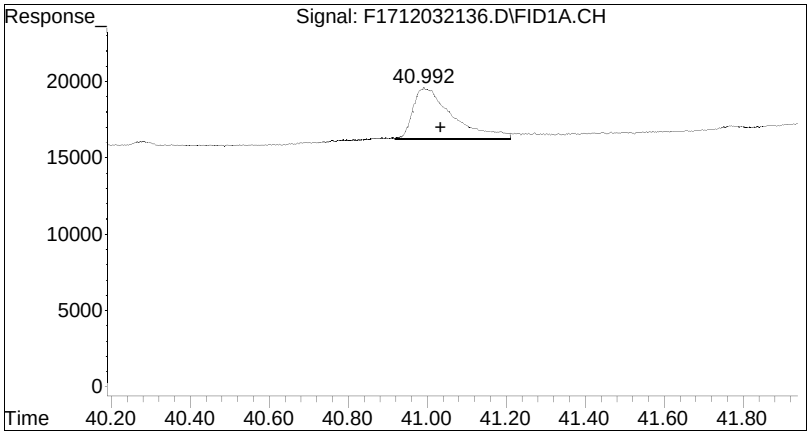
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032136.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 11:44 am using AcqMethod FID17A.M
Sample Name: wG1579102-1,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 18
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





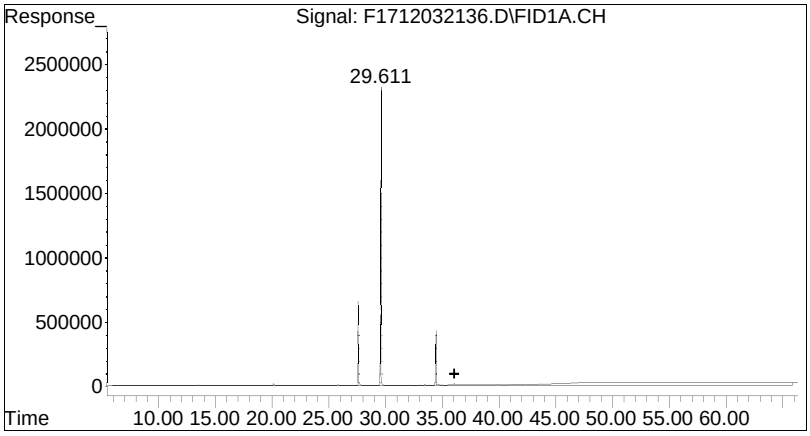
#20 n-Eicosane (C20)

R.T.:	29.205 min
Delta R.T.:	-0.016 min
Response:	17454
Conc:	0.02 ug/mL M2



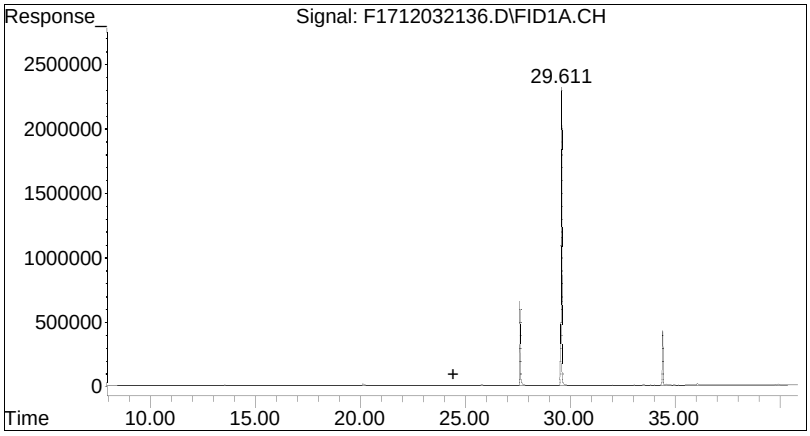
#30 n-Nonacosane (C29)

R.T.:	40.992 min
Delta R.T.:	-0.042 min
Response:	229049
Conc:	0.19 ug/mL M4



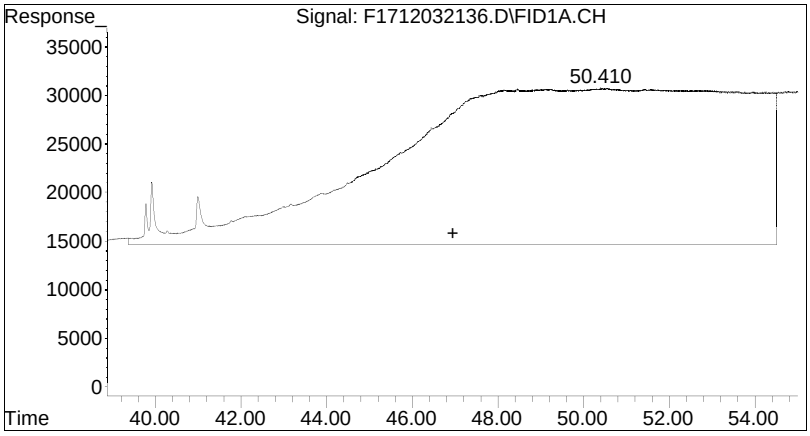
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 283115060
Conc: 246.10 ug/mL m



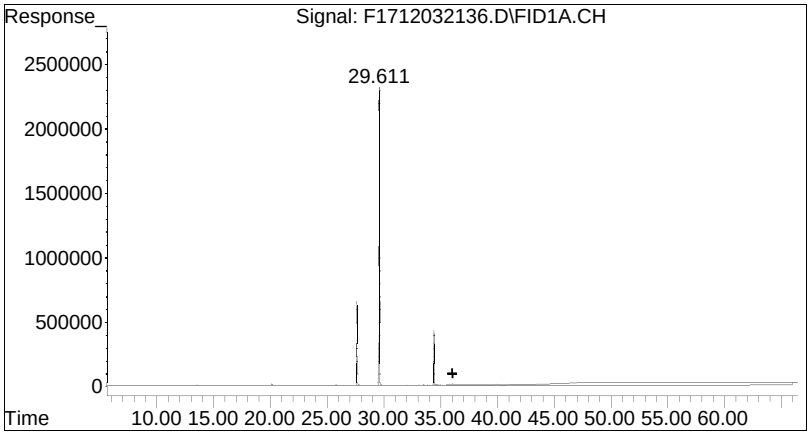
#44 C10-C28 DRO

R.T.: 24.454 min
Delta R.T.: 0.000 min
Response: 31258877
Conc: 27.50 ug/mL m



#45 C28-C40 ORO

R.T.:	46.963 min
Delta R.T.:	0.000 min
Response:	94388830
Conc:	79.47 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	36.038 min
Delta R.T.:	0.000 min
Response:	4888119
Conc:	4.25 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032152.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 11:30 pm
Operator : FID17:MJS
Sample : wG1579126-1,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 26 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:40:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.611	60523900	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.671	60603052	46.191	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	92.38%		
24) s	d50-Tetracosane	34.417	47594249	45.722	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	91.44%		
	Target Compounds					
2) t	n-Octane (C8)	4.571	73685	0.070	ug/mL	M4
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	8.984	94731	0.083	ug/mL	M4
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	22.333	49232	0.043	ug/mL	M4
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.203	25429	0.021	ug/mL	M2
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032152.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 11:30 pm
Operator : FID17:MJS
Sample : wG1579126-1,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 26 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:40:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

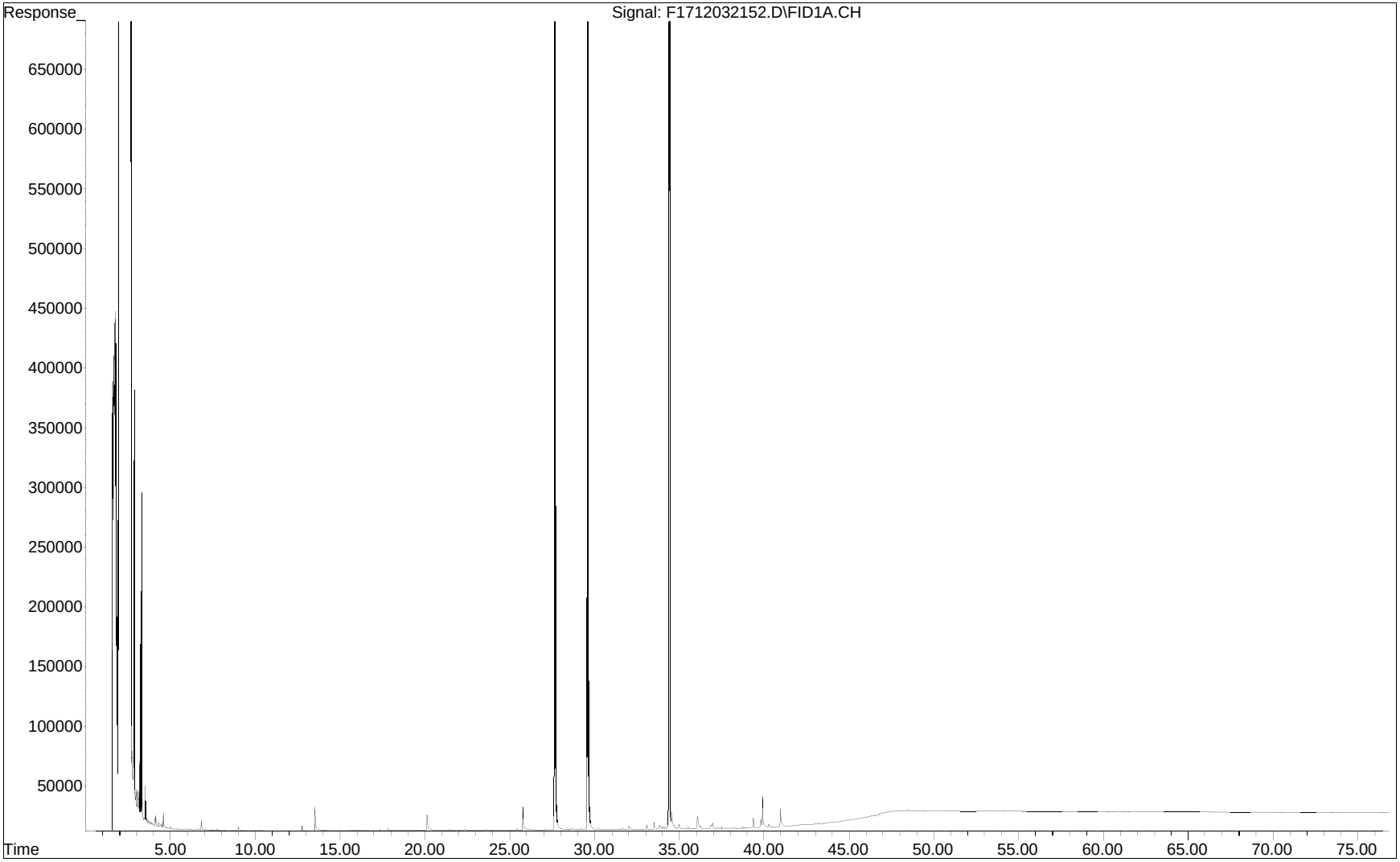
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	34.942	40568	0.034	ug/mL	M4
26) t	n-Pentacosane (C25)	36.246	64179	0.055	ug/mL	M4
27) t	n-Hexacosane (C26)	37.495	40942	0.034	ug/mL	M4
28) t	n-Heptacosane (C27)	38.703	42931	0.036	ug/mL	M4
29) t	n-Octacosane (C28)	39.887	1235914C	0.996	ug/mL	M4
30) t	n-Nonacosane (C29)	40.967	905285C	0.743	ug/mL	M4
31) t	n-Triacontane (C30)	42.091	21737	0.018	ug/mL	M4
32) t	n-Hentriacontane (C31)	43.147	18045	0.015	ug/mL	M4
33) t	n-Dotriacontane (C32)	44.167	13874	0.011	ug/mL	M4
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.038	261891732	221.265	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.038	16033668	13.546	ug/mL	m
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
44) h	C10-C28 DRO	24.454	34753742	29.713	ug/mL	m
44) h	C10-C28 DRO BS	24.454	14800996	12.654	ug/mL	m
45) h	C28-C40 ORO	46.963	84608981	69.238	ug/mL	m
45) h	C28-C40 ORO BS	46.963	3005104	2.459	ug/mL	m
46) h	Total Resolved Hydroc...	36.038	11702874	9.887	ug/mL	m

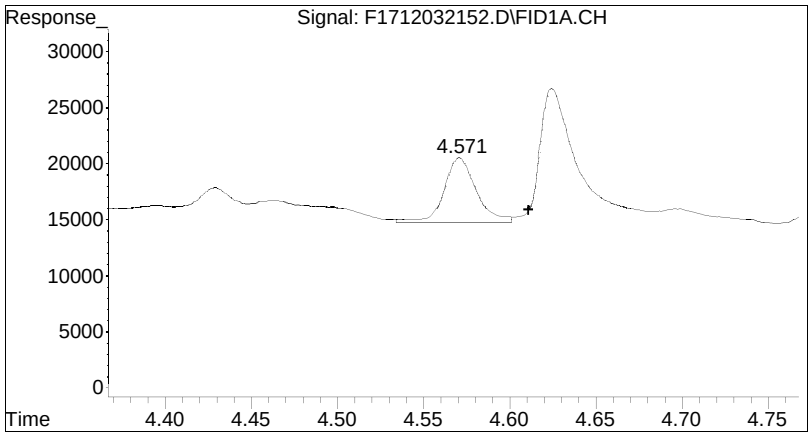
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

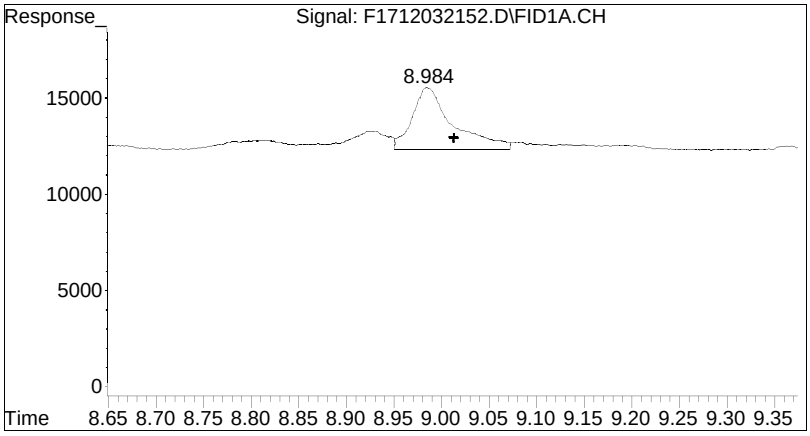
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032152.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 11:30 pm using AcqMethod FID17A.M
Sample Name: wG1579126-1,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 26
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





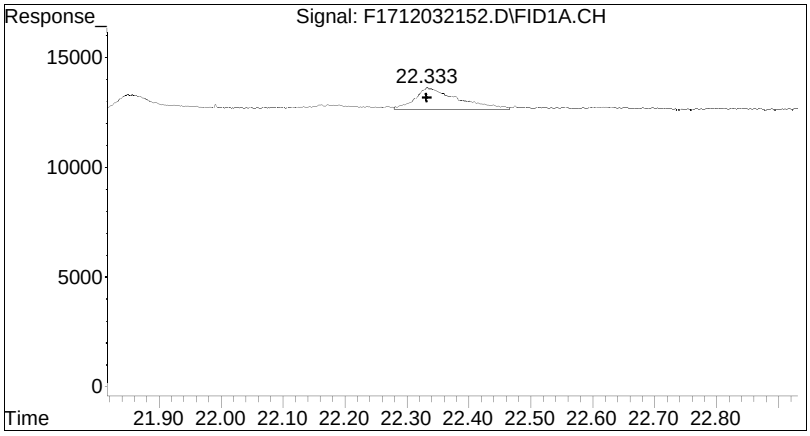
#2 n-Octane (C8)

R.T.:	4.571 min
Delta R.T.:	-0.040 min
Response:	73685
Conc:	0.07 ug/mL M4



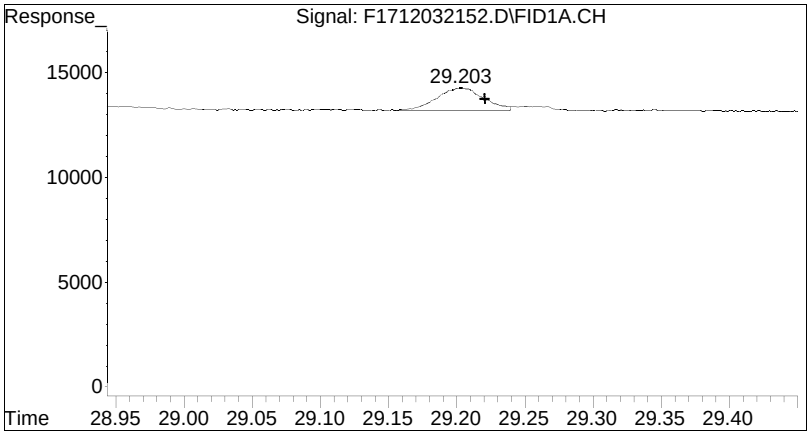
#4 n-Decane (C10)

R.T.:	8.984 min
Delta R.T.:	-0.029 min
Response:	94731
Conc:	0.08 ug/mL M4



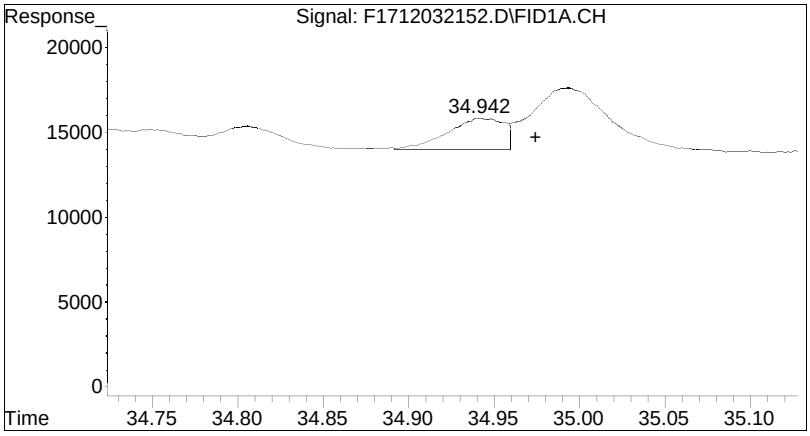
#12 n-Hexadecane (C16)

R.T.:	22.333 min
Delta R.T.:	0.001 min
Response:	49232
Conc:	0.04 ug/mL M4



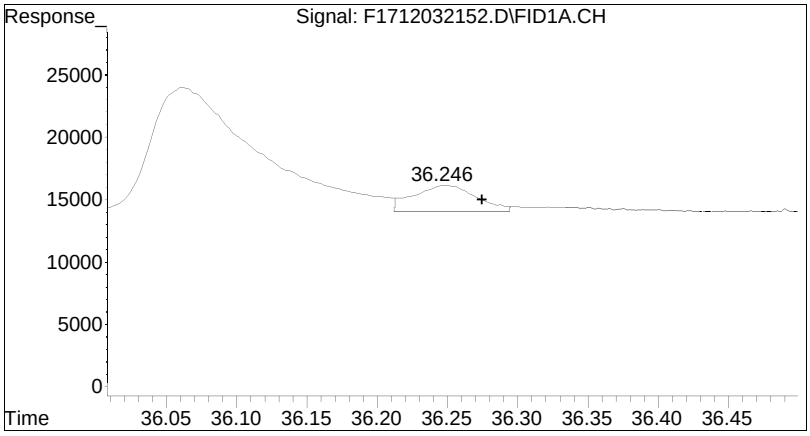
#20 n-Eicosane (C20)

R.T.:	29.203 min
Delta R.T.:	-0.017 min
Response:	25429
Conc:	0.02 ug/mL M2



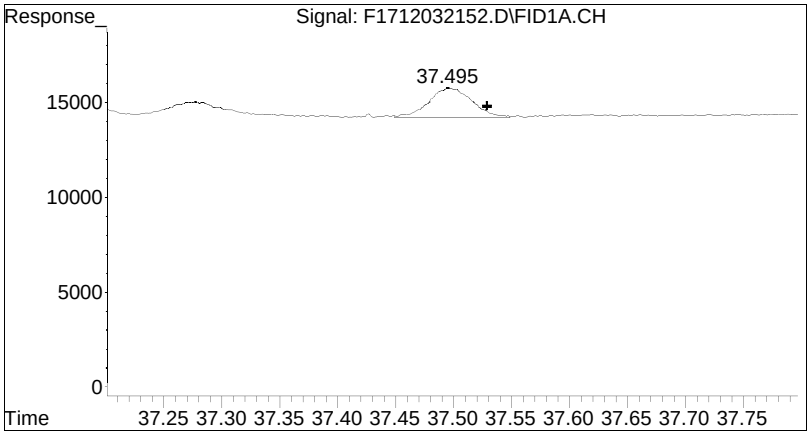
#25 n-Tetracosane (C24)

R.T.:	34.942 min
Delta R.T.:	-0.033 min
Response:	40568
Conc:	0.03 ug/mL M4



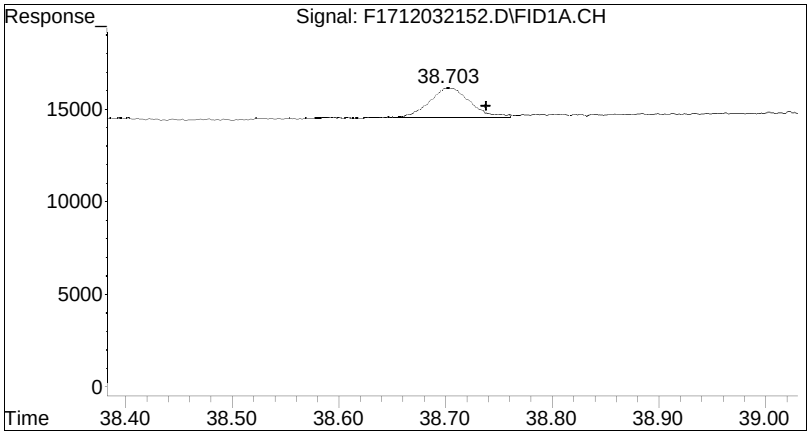
#26 n-Pentacosane (C25)

R.T.:	36.246 min
Delta R.T.:	-0.028 min
Response:	64179
Conc:	0.06 ug/mL M4



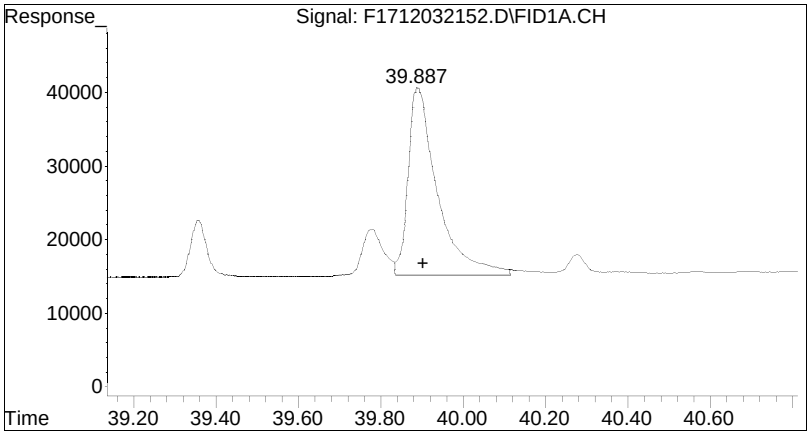
#27 n-Hexacosane (C26)

R.T.:	37.495 min
Delta R.T.:	-0.033 min
Response:	40942
Conc:	0.03 ug/mL M4



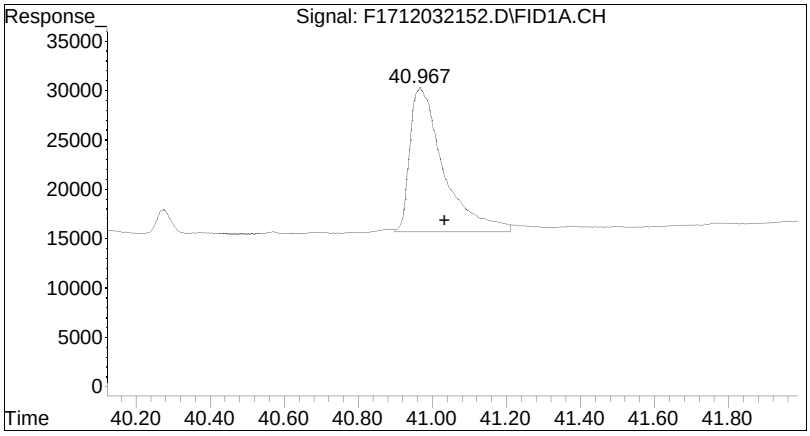
#28 n-Heptacosane (C27)

R.T.:	38.703 min
Delta R.T.:	-0.035 min
Response:	42931
Conc:	0.04 ug/mL M4



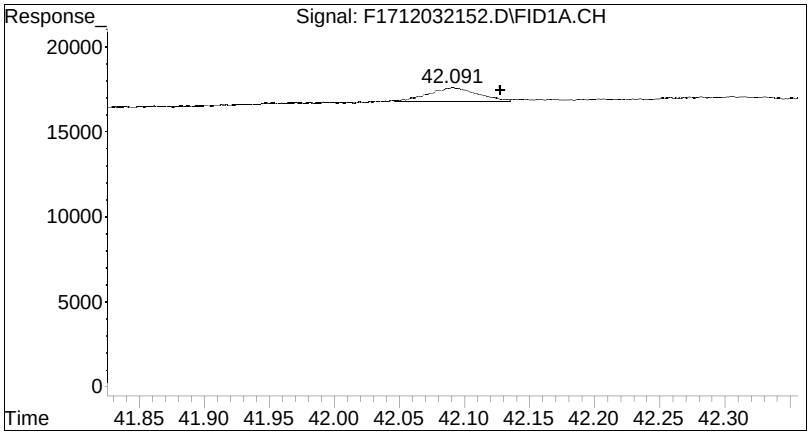
#29 n-Octacosane (C28)

R.T.:	39.887 min
Delta R.T.:	-0.016 min
Response:	1235914
Conc:	1.00 ug/mL M4



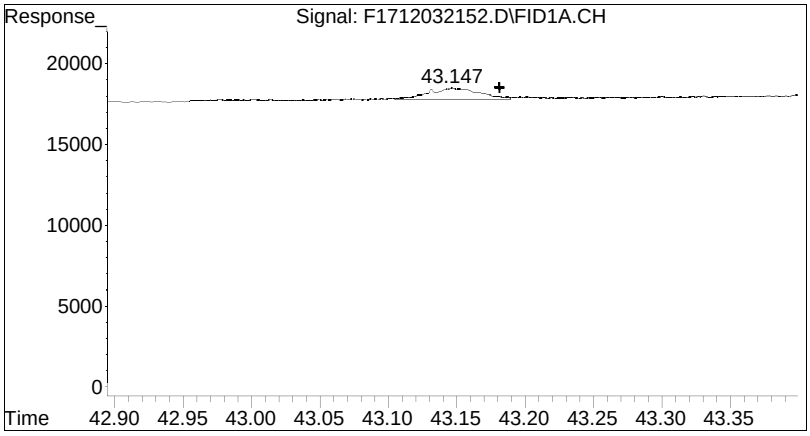
#30 n-Nonacosane (C29)

R.T.:	40.967 min
Delta R.T.:	-0.067 min
Response:	905285
Conc:	0.74 ug/mL M4



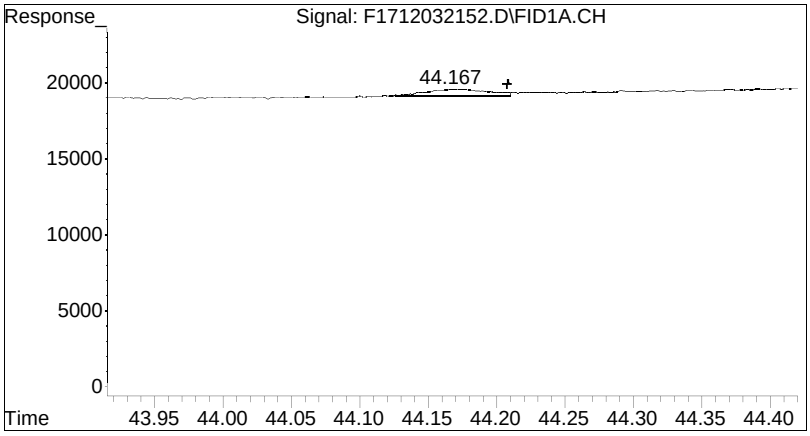
#31 n-Triacontane (C30)

R.T.:	42.091 min
Delta R.T.:	-0.036 min
Response:	21737
Conc:	0.02 ug/mL M4



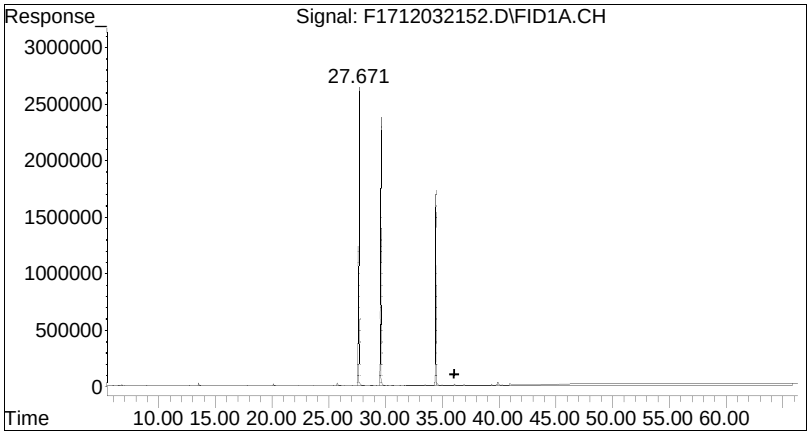
#32 n-Hentriacontane (C31)

R.T.:	43.147 min
Delta R.T.:	-0.034 min
Response:	18045
Conc:	0.02 ug/mL M4



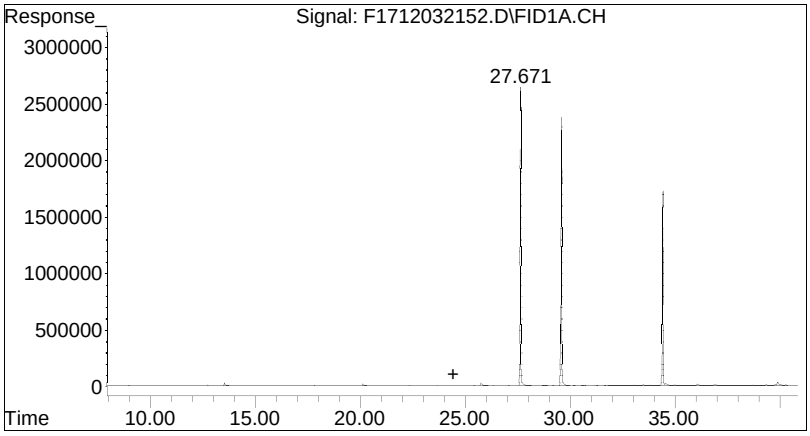
#33 n-Dotriacontane (C32)

R.T.:	44.167 min
Delta R.T.:	-0.042 min
Response:	13874
Conc:	0.01 ug/mL M4



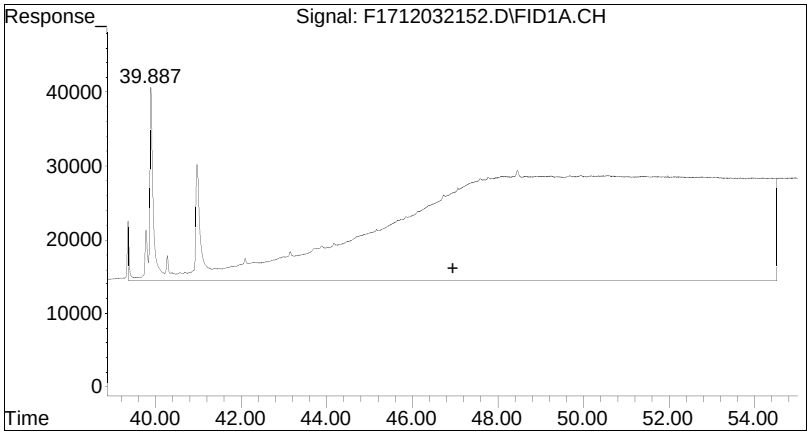
#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 261891732
Conc: 221.27 ug/mL m



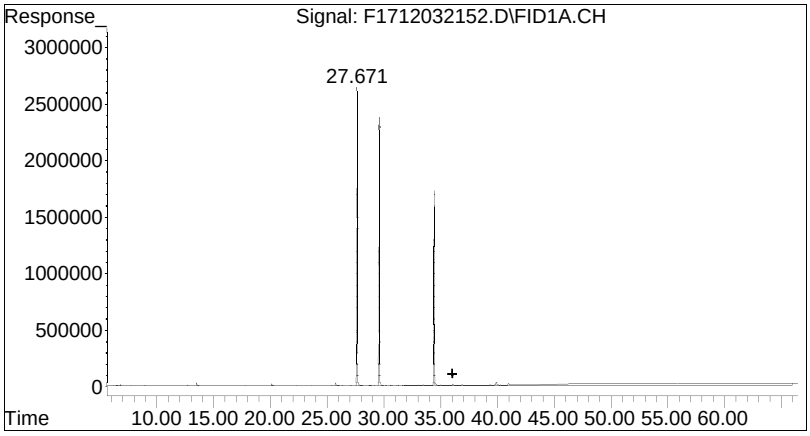
#44 C10-C28 DRO

R.T.:	24.454 min
Delta R.T.:	0.000 min
Response:	34753742
Conc:	29.71 ug/mL m



#45 C28-C40 ORO

R.T.:	46.963 min
Delta R.T.:	0.000 min
Response:	84608981
Conc:	69.24 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 11702874
Conc: 9.89 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421011.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 05:05 pm
Operator : FID18:WR
Sample : WG1582496-1,42,,
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 56 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 15:08:48 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.652	58616205	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.707	52596034	40.260	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	80.52%		
24) s	d50-Tetracosane	34.440	42342572	40.158	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	80.32%		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	d
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	d
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	25.869f	423754C	0.370	ug/mL	M4
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.237	36760	0.032	ug/mL	M4
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	32.227	14698	0.012	ug/mL	M4
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421011.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 05:05 pm
Operator : FID18:WR
Sample : WG1582496-1,42,,
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 56 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 15:08:48 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

Sub List : SHC - SHC

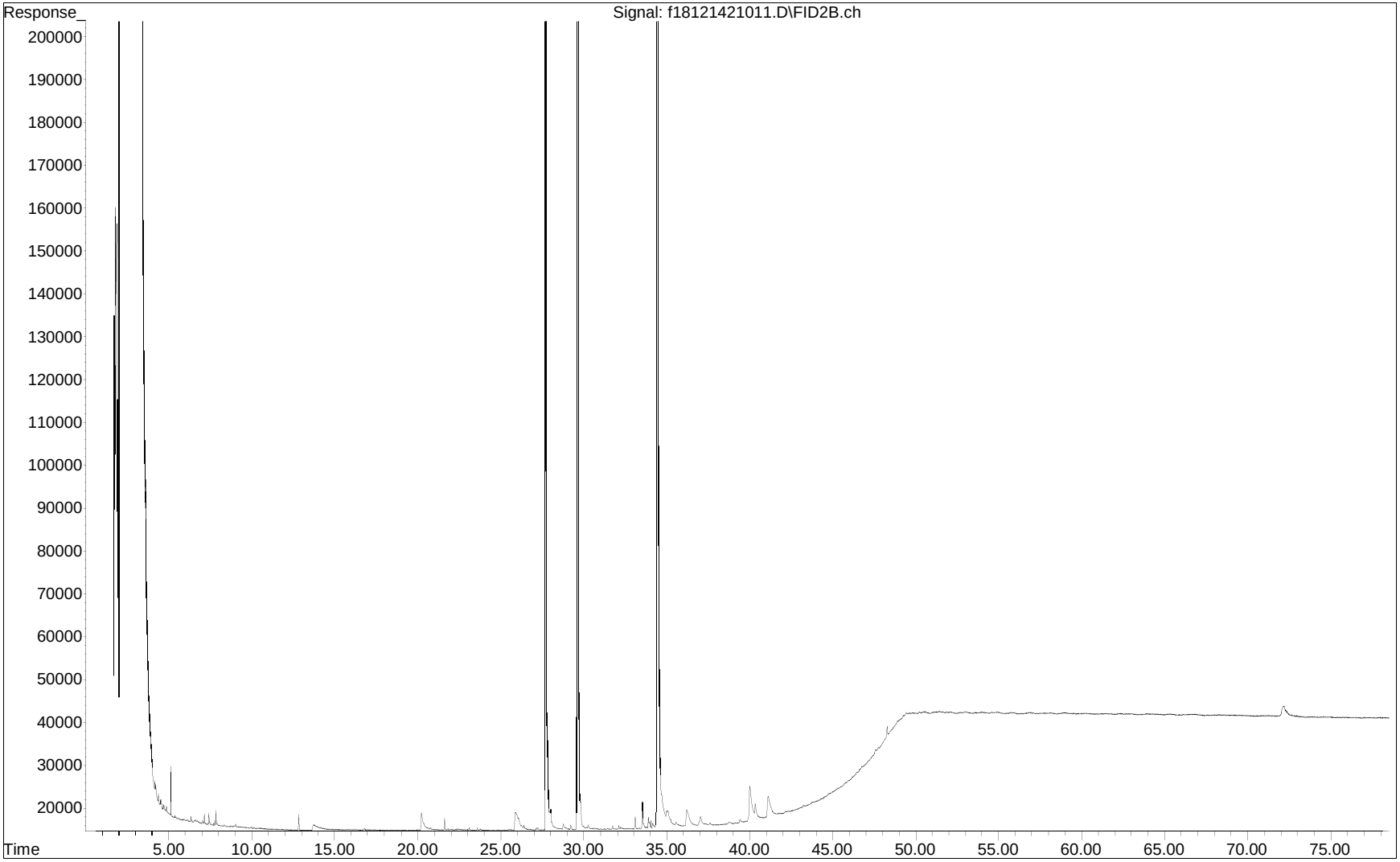
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	34.987	51691	0.044	ug/mL	M4
26) t	n-Pentacosane (C25)	36.214	512350C	0.439	ug/mL	M4
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	d
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	d
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	d
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	d
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	33.118	325977549	277.333	ug/mL	m
42) h	C9-C44 Total Petroleu BS	33.118	-5616992	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	37.870	8597005	7.314	ug/mL	m

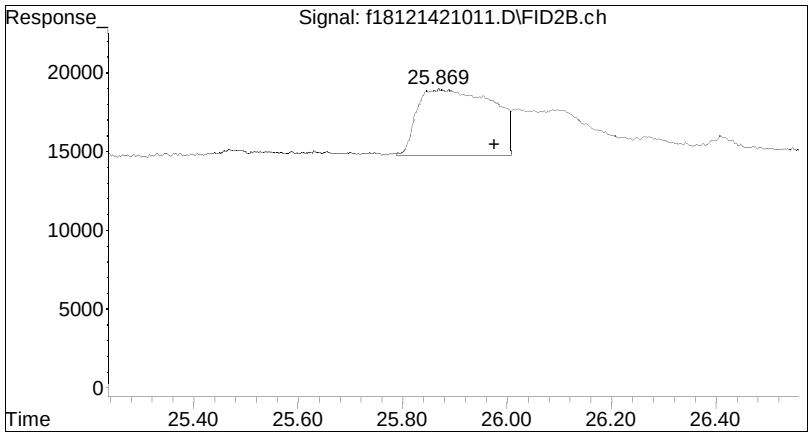
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

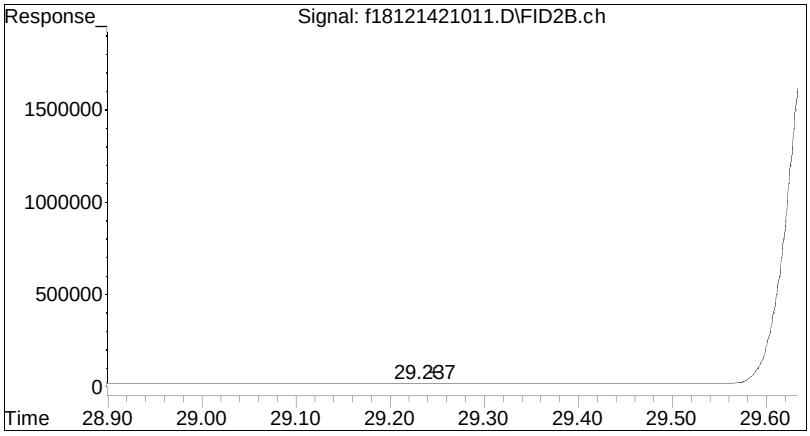
File :O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\f18121421011.D
Operator : FID18:WR
Acquired : 14 Dec 2021 05:05 pm using AcqMethod FID18.M
Sample Name: WG1582496-1,42,,
Instrument: FID 18
Misc Info : WG1583234,WG1582496,ICAL17763
Vial Number: 56
CurrentMeth: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M





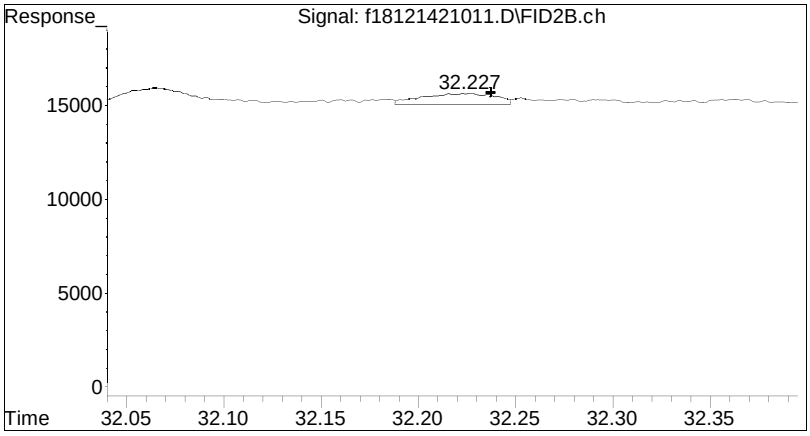
#16 n-Octadecane (C18)

R.T.:	25.869 min
Delta R.T.:	-0.107 min
Response:	423754
Conc:	0.37 ug/mL M4



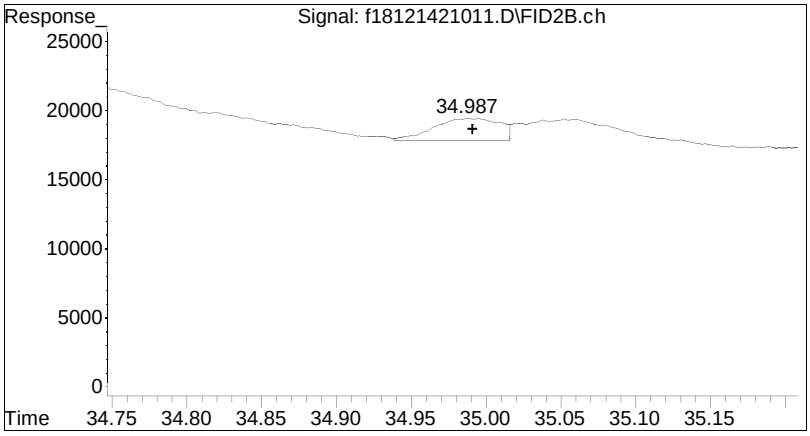
#20 n-Eicosane (C20)

R.T.:	29.237 min
Delta R.T.:	-0.010 min
Response:	36760
Conc:	0.03 ug/mL M4



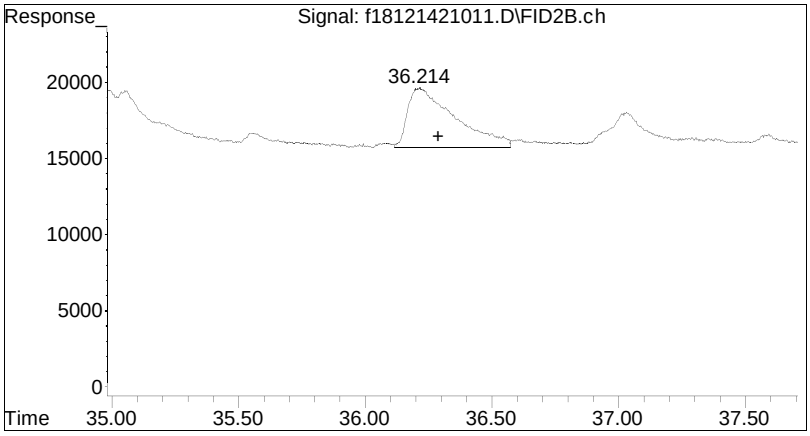
#22 n-Docosane (C22)

R.T.:	32.227 min
Delta R.T.:	-0.011 min
Response:	14698
Conc:	0.01 ug/mL M4



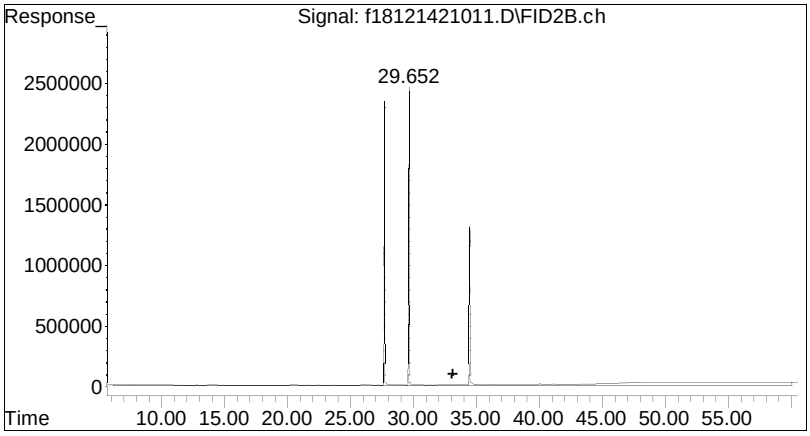
#25 n-Tetracosane (C24)

R.T.:	34.987 min
Delta R.T.:	-0.004 min
Response:	51691
Conc:	0.04 ug/mL M4



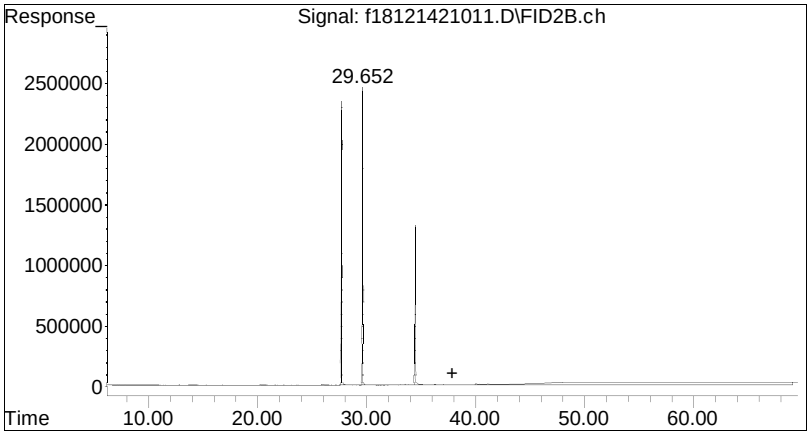
#26 n-Pentacosane (C25)

R.T.:	36.214 min
Delta R.T.:	-0.075 min
Response:	512350
Conc:	0.44 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 33.118 min
Delta R.T.: 0.000 min
Response: 325977549
Conc: 277.33 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	37.870 min
Delta R.T.:	0.000 min
Response:	8597005
Conc:	7.31 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422012.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 06:47 pm
Operator : FID18:WR
Sample : WG1590340-1,42,,
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:41:40 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.111	60277485	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.088	13786354	10.258	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	20.52%#		
24) s	d50-Tetracosane	35.732	10345872	9.438	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	18.88%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	27.209	184562	0.159	ug/mL	M4
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422012.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 06:47 pm
Operator : FID18:WR
Sample : WG1590340-1,42,,
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 6 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:41:40 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

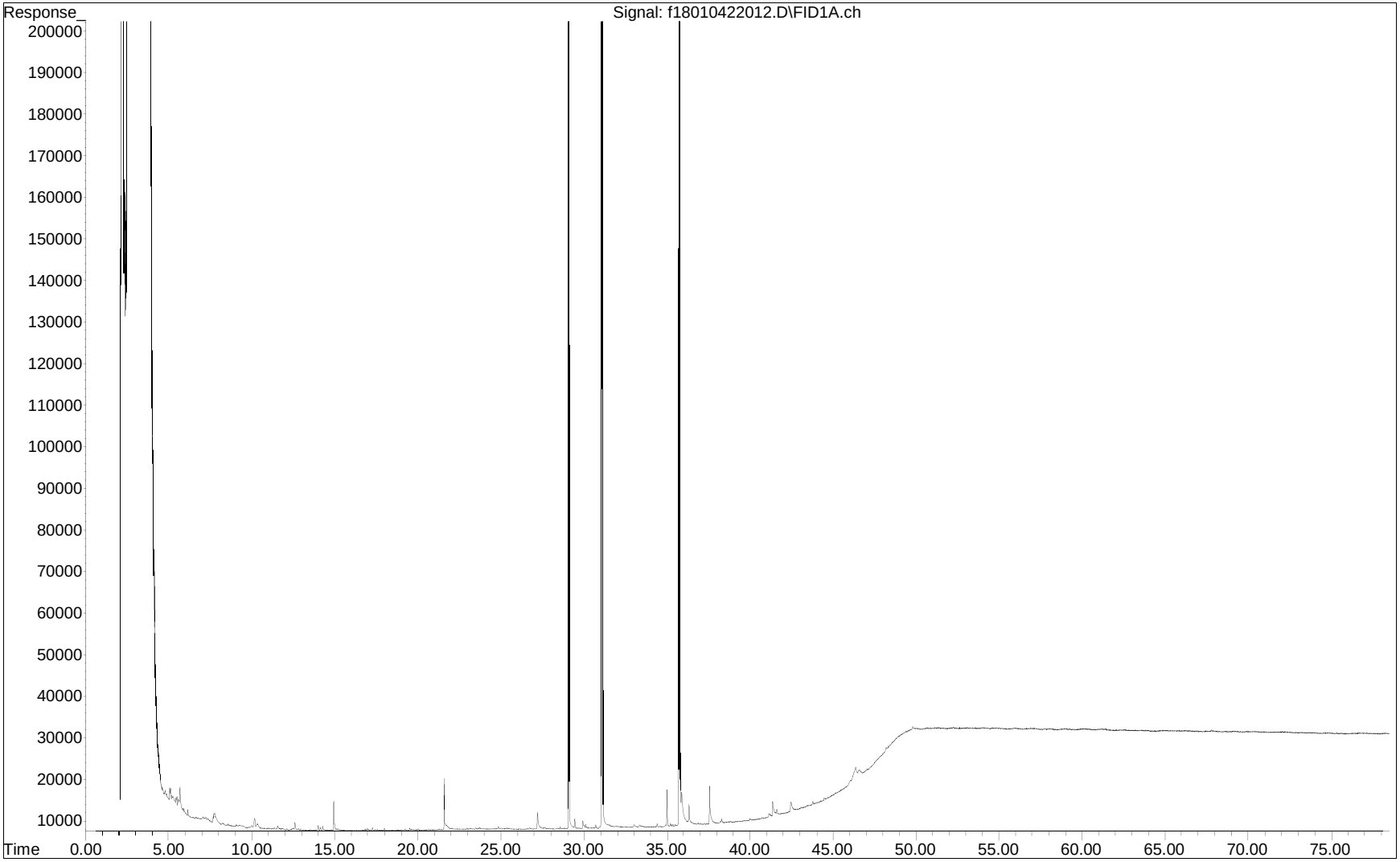
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	37.548	540416C	0.454	ug/mL	M4
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.047	357737425	309.013	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.047	-22582081	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	38.937	-2122099	N.D.	ug/mL	m

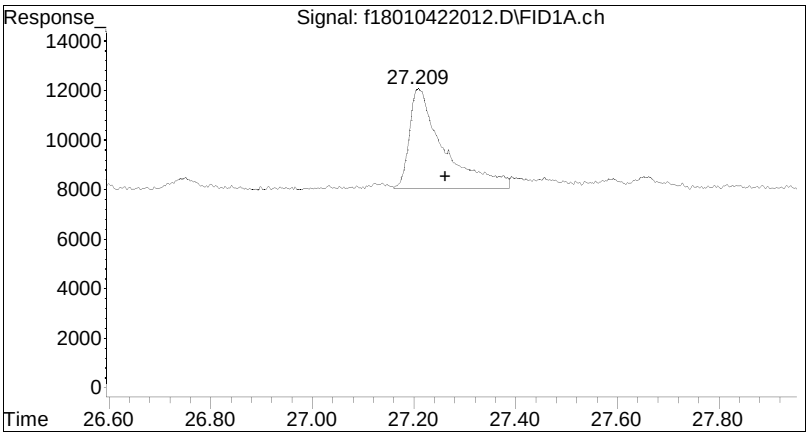
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

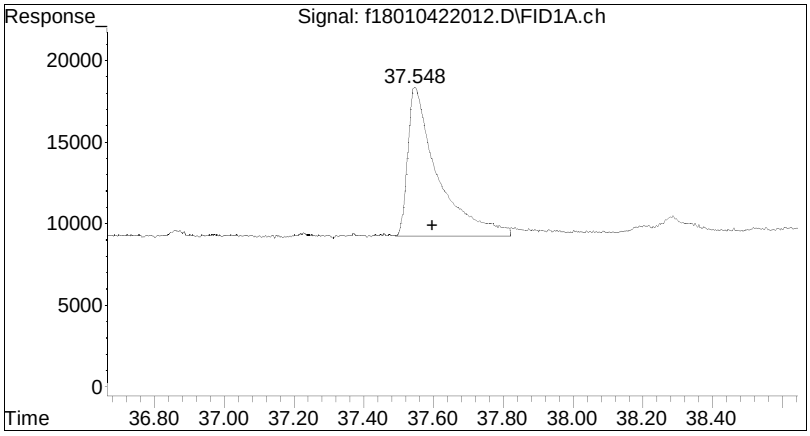
File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422012.D
Operator : FID18:WR
Acquired : 04 Jan 2022 06:47 pm using AcqMethod FID18.M
Sample Name: WG1590340-1,42,,
Instrument: FID 18
Misc Info : WG1590500,WG1590340,ICAL18548
Vial Number: 6
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M





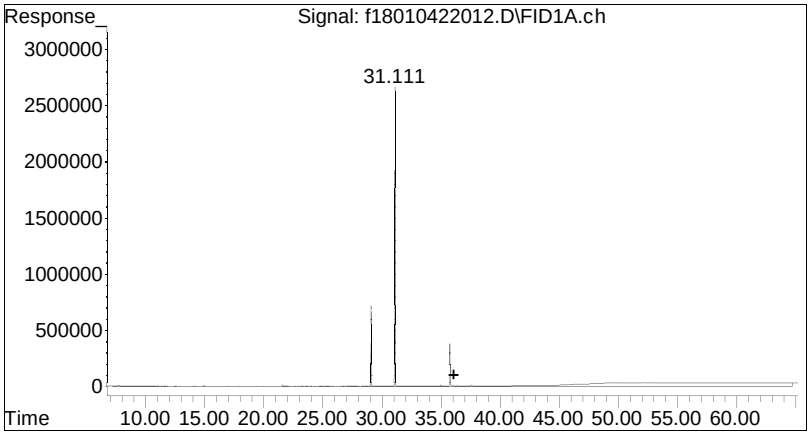
#16 n-Octadecane (C18)

R.T.:	27.209 min
Delta R.T.:	-0.054 min
Response:	184562
Conc:	0.16 ug/mL M4



#26 n-Pentacosane (C25)

R.T.:	37.548 min
Delta R.T.:	-0.050 min
Response:	540416
Conc:	0.45 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.047 min
Delta R.T.: 0.000 min
Response: 357737425
Conc: 309.01 ug/mL m

LCS Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032138.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 1:13 pm
Operator : FID17:MJS
Sample : wG1579102-2,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 19 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:26:35 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.615	60950214	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.654	15515102	11.743 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.49%#
24) s	d50-Tetracosane	34.401	12149721	11.590 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.18%#
	Target Compounds			
3) t	n-Nonane (C9)	6.597	4957692	4.409 ug/mL M4
4) t	n-Decane (C10)	8.984	5123006	4.451 ug/mL M4
6) t	n-Dodecane (C12)	13.846	5269066	4.672 ug/mL M4
9) t	n-Tetradecane (C14)	18.304	5439719	4.669 ug/mL M4
12) t	n-Hexadecane (C16)	22.303	5555775	4.772 ug/mL M4
16) t	n-Octadecane (C18)	25.907	5834258	4.933 ug/mL M4
18) t	n-Nonadecane (C19)	27.584	5633879	4.749 ug/mL M4
20) t	n-Eicosane (C20)	29.184	5660815	4.745 ug/mL M4
22) t	n-Docosane (C22)	32.182	5670831	4.731 ug/mL M4
25) t	n-Tetracosane (C24)	34.939	5786715	4.833 ug/mL M4
27) t	n-Hexacosane (C26)	37.494	5779347	4.805 ug/mL M4
29) t	n-Octacosane (C28)	39.867	6041312	4.832 ug/mL M4
31) t	n-Triacontane (C30)	42.084	5810330	4.720 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.083	5766407	4.244 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	362292584	303.951 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	77979880	65.422 ug/mLm
46) h	Total Resolved Hydroc...	36.038	88278340	74.062 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032138.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 1:13 pm
Operator : FID17:MJS
Sample : wG1579102-2,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 19 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:26:35 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

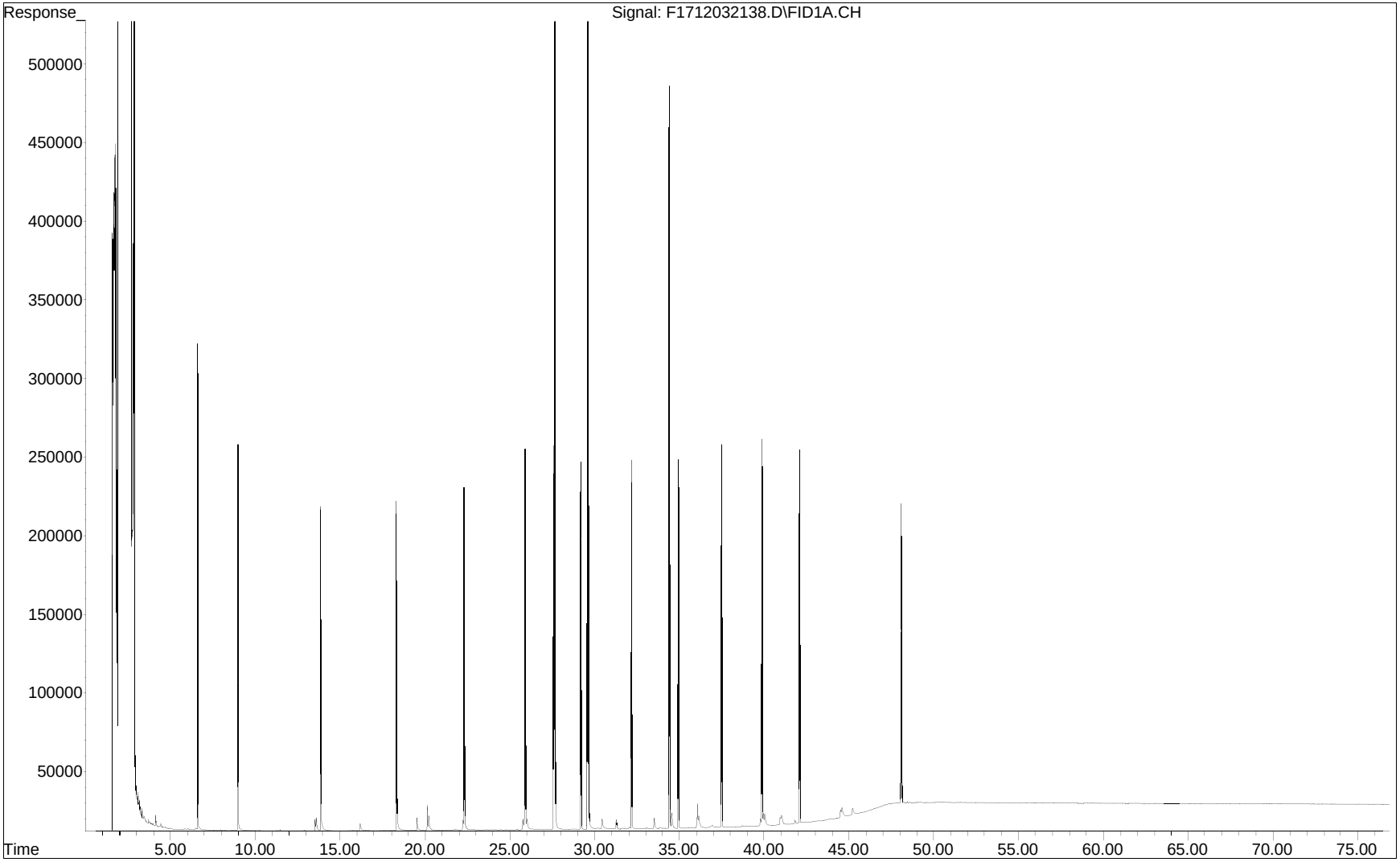
Sub List : SHC_QC_Samples - SHC_QC_Samples

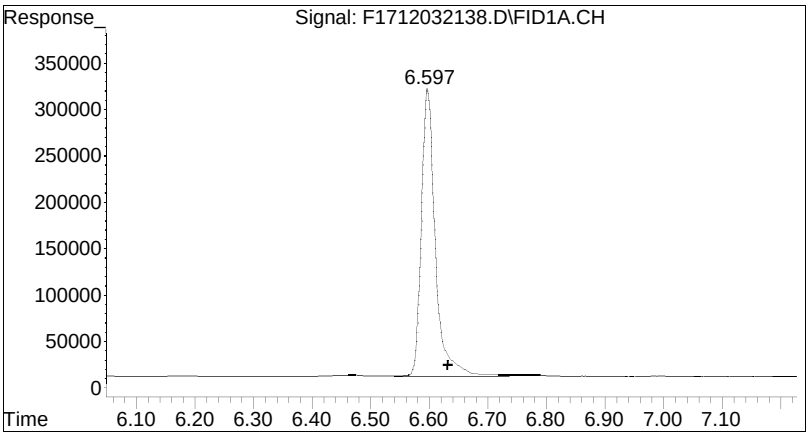
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

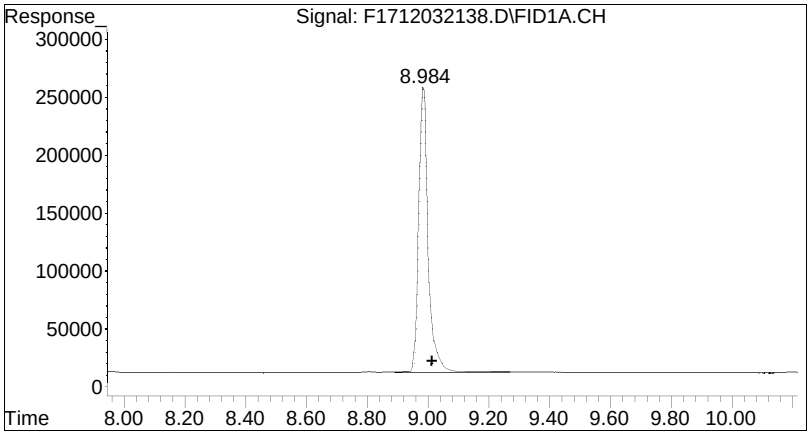
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032138.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 1:13 pm using AcqMethod FID17A.M
Sample Name: wG1579102-2,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 19
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





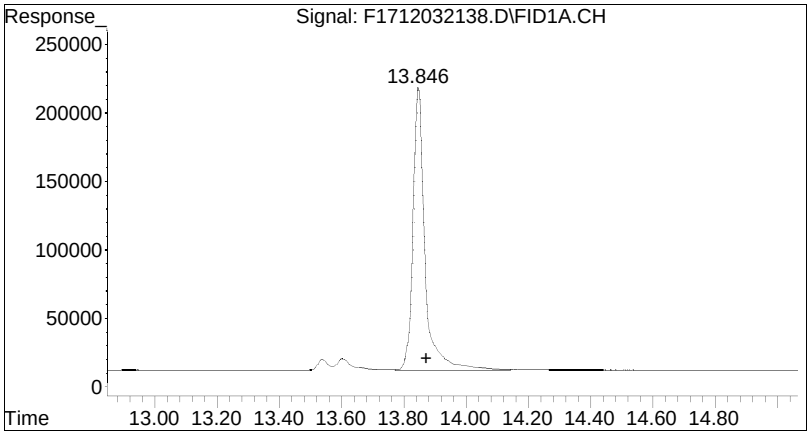
#3 n-Nonane (C9)

R.T.:	6.597 min
Delta R.T.:	-0.035 min
Response:	4957692
Conc:	4.41 ug/mL M4



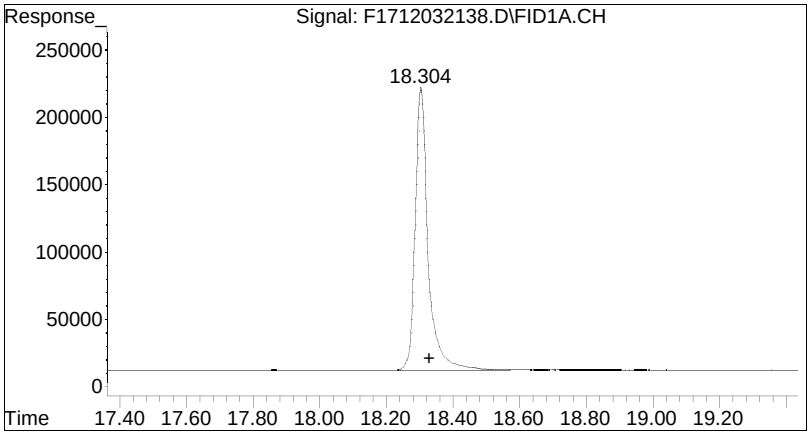
#4 n-Decane (C10)

R.T.:	8.984 min
Delta R.T.:	-0.030 min
Response:	5123006
Conc:	4.45 ug/mL M4



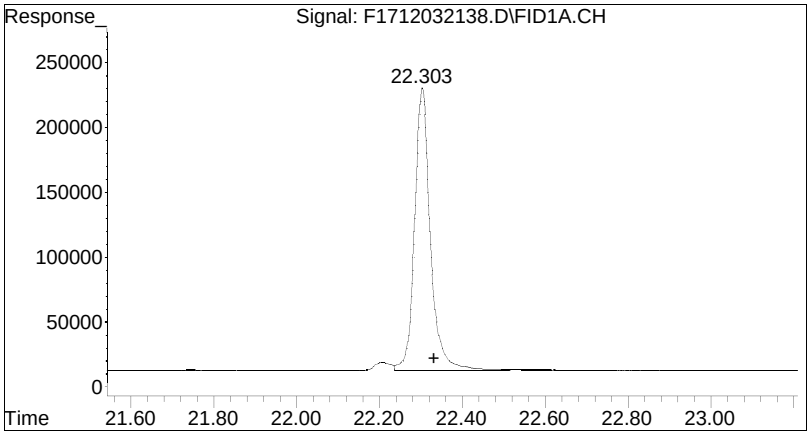
#6 n-Dodecane (C12)

R.T.:	13.846 min
Delta R.T.:	-0.027 min
Response:	5269066
Conc:	4.67 ug/mL M4



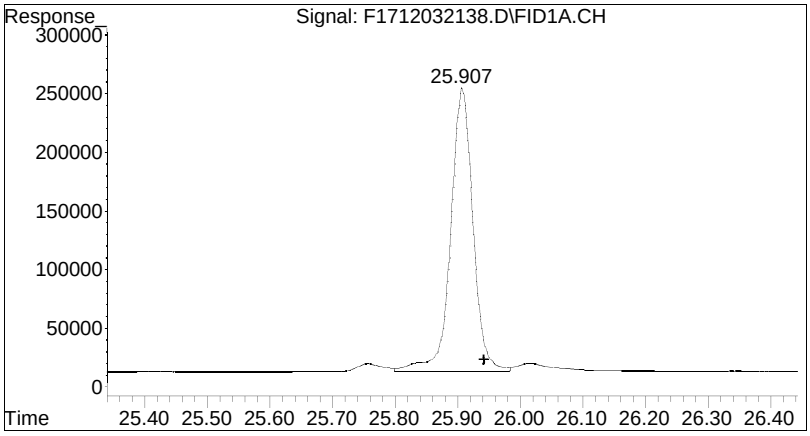
#9 n-Tetradecane (C14)

R.T.:	18.304 min
Delta R.T.:	-0.027 min
Response:	5439719
Conc:	4.67 ug/mL M4



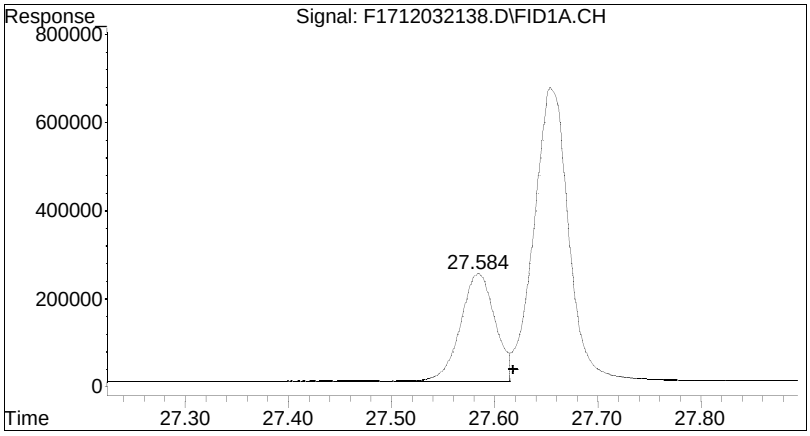
#12 n-Hexadecane (C16)

R.T.:	22.303 min
Delta R.T.:	-0.029 min
Response:	5555775
Conc:	4.77 ug/mL M4



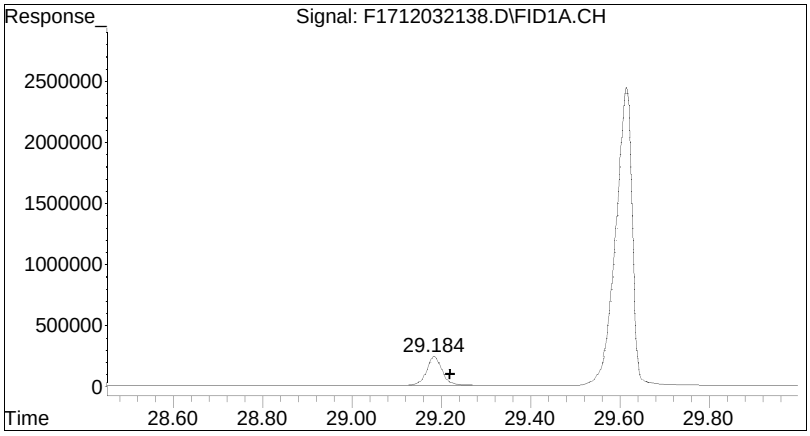
#16 n-Octadecane (C18)

R.T.:	25.907 min
Delta R.T.:	-0.036 min
Response:	5834258
Conc:	4.93 ug/mL M4



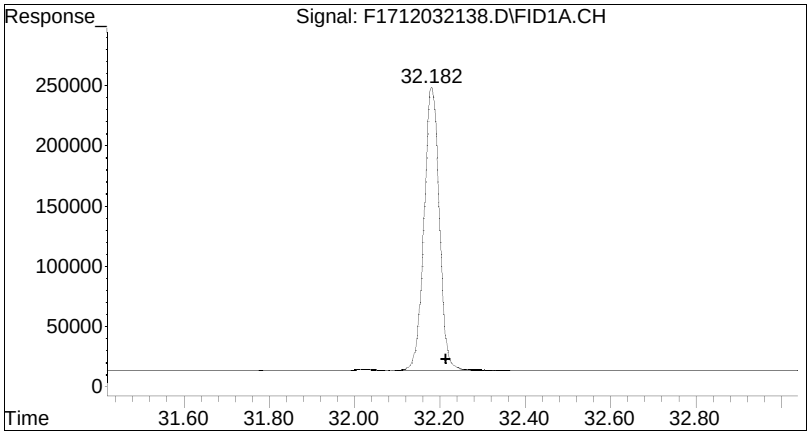
#18 n-Nonadecane (C19)

R.T.:	27.584 min
Delta R.T.:	-0.034 min
Response:	5633879
Conc:	4.75 ug/mL M4



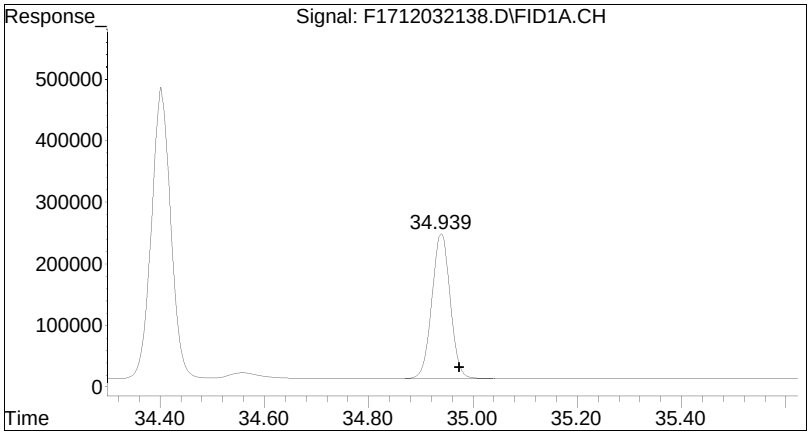
#20 n-Eicosane (C20)

R.T.:	29.184 min
Delta R.T.:	-0.037 min
Response:	5660815
Conc:	4.74 ug/mL M4



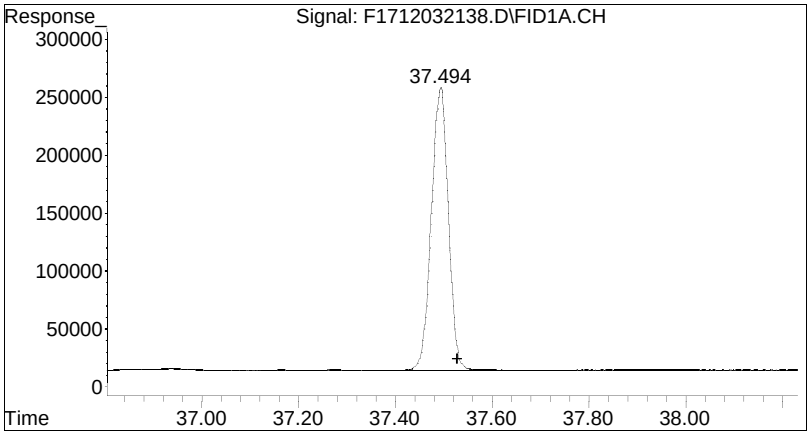
#22 n-Docosane (C22)

R.T.:	32.182 min
Delta R.T.:	-0.033 min
Response:	5670831
Conc:	4.73 ug/mL M4



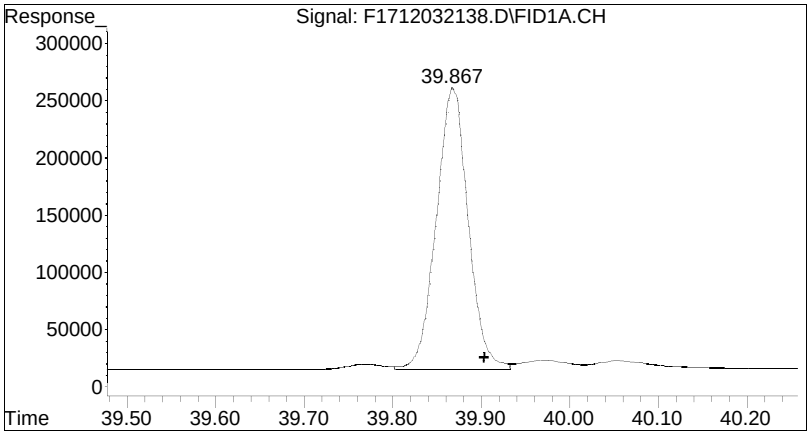
#25 n-Tetracosane (C24)

R.T.:	34.939 min
Delta R.T.:	-0.035 min
Response:	5786715
Conc:	4.83 ug/mL M4



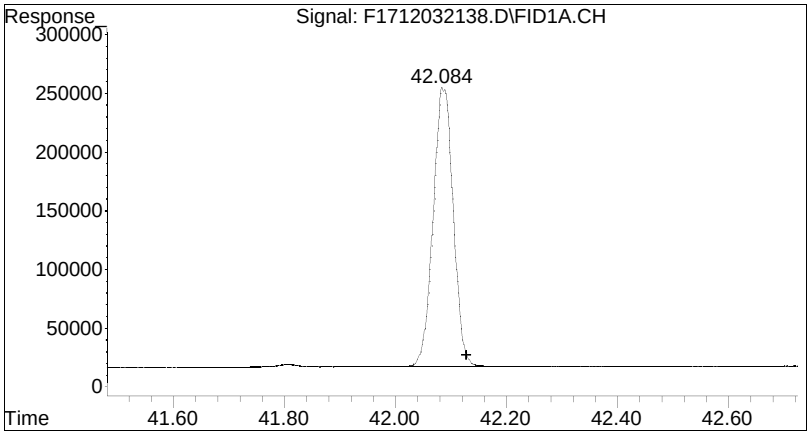
#27 n-Hexacosane (C26)

R.T.:	37.494 min
Delta R.T.:	-0.034 min
Response:	5779347
Conc:	4.81 ug/mL M4



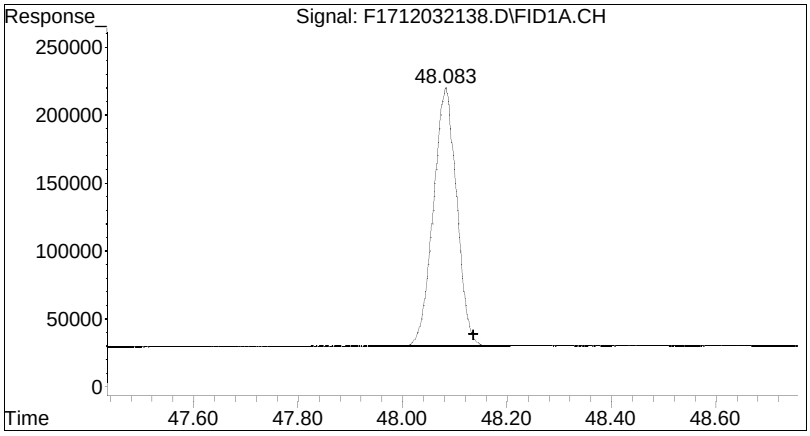
#29 n-Octacosane (C28)

R.T.:	39.867 min
Delta R.T.:	-0.036 min
Response:	6041312
Conc:	4.83 ug/mL M4



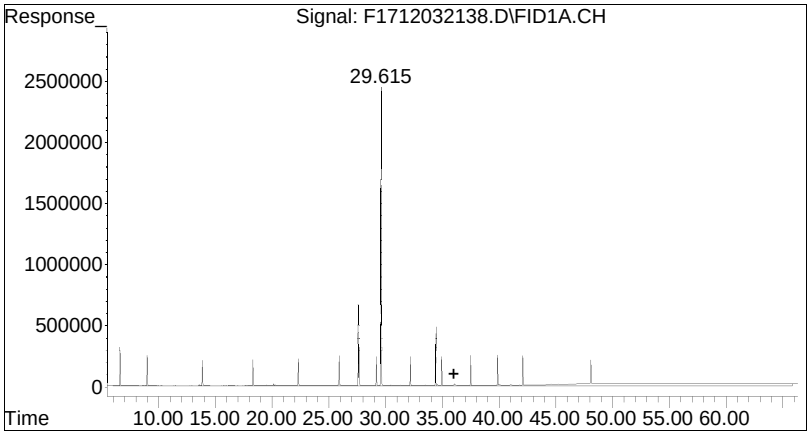
#31 n-Triacontane (C30)

R.T.:	42.084 min
Delta R.T.:	-0.043 min
Response:	5810330
Conc:	4.72 ug/mL M4



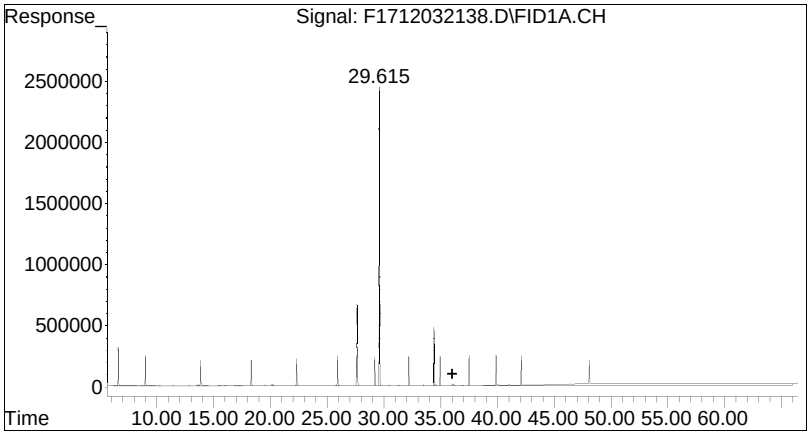
#37 n-Hexatriacontane (C36)

R.T.:	48.083 min
Delta R.T.:	-0.052 min
Response:	5766407
Conc:	4.24 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 362292584
Conc: 303.95 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	36.038 min
Delta R.T.:	0.000 min
Response:	88278340
Conc:	74.06 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032154.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 12:59 am
Operator : FID17:MJS
Sample : wg1579126-2,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 27 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:43:44 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.611	61217856	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.670	57984710	43.694 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	87.39%
24) s	d50-Tetracosane	34.413	46737945	44.391 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	88.78%
	Target Compounds			
3) t	n-Nonane (C9)	6.595	15177263	13.439 ug/mL M4
4) t	n-Decane (C10)	8.983	17561975	15.190 ug/mL M4
6) t	n-Dodecane (C12)	13.846	19264680	17.008 ug/mL M4
9) t	n-Tetradecane (C14)	18.304	20137210	17.209 ug/mL M4
12) t	n-Hexadecane (C16)	22.302	21000025	17.957 ug/mL M4
16) t	n-Octadecane (C18)	25.909	21783411	18.338 ug/mL M4
18) t	n-Nonadecane (C19)	27.588	22673942	19.030 ug/mL M4
20) t	n-Eicosane (C20)	29.185	21862068	18.244 ug/mL M4
22) t	n-Docosane (C22)	32.184	22004130	18.276 ug/mL M4
25) t	n-Tetracosane (C24)	34.945	22557306	18.757 ug/mL M4
27) t	n-Hexacosane (C26)	37.493	22473552	18.604 ug/mL M4
29) t	n-Octacosane (C28)	39.872	23619570	18.810 ug/mL M4
31) t	n-Triacontane (C30)	42.092	22568098	18.253 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.087	22403900	16.417 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	578631755	483.329 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	332773691	277.965 ug/mLm
46) h	Total Resolved Hydroc...	36.038	321695453	268.711 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032154.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 12:59 am
Operator : FID17:MJS
Sample : wg1579126-2,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 27 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:43:44 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

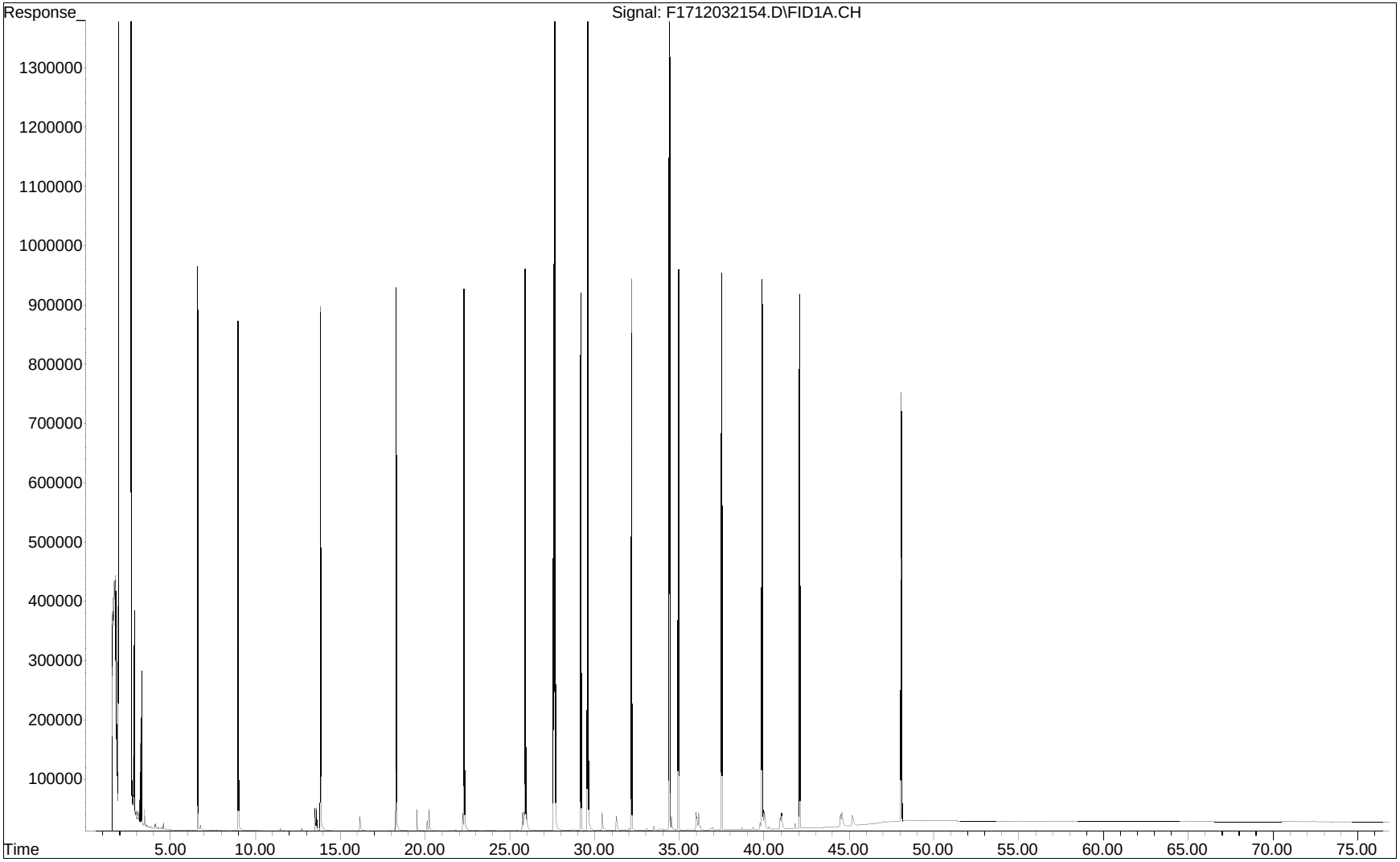
Sub List : SHC_QC_Samples - SHC_QC_Samples

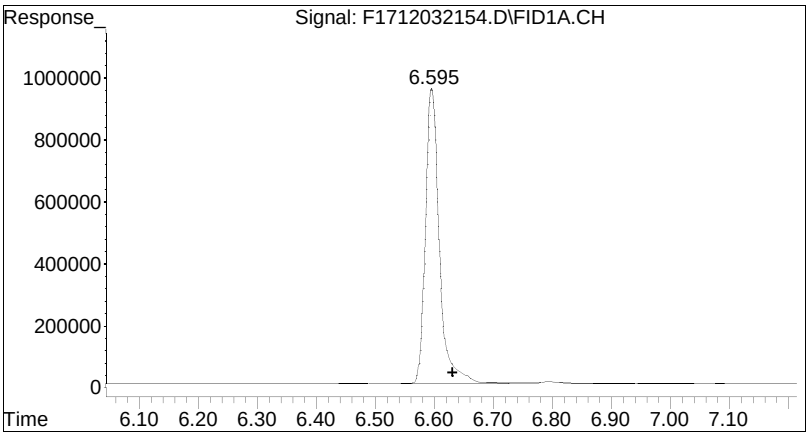
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

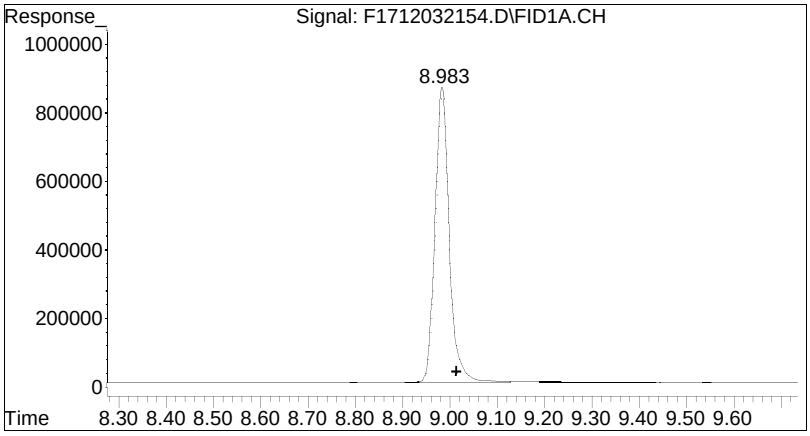
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032154.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 12:59 am using AcqMethod FID17A.M
Sample Name: wg1579126-2,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 27
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





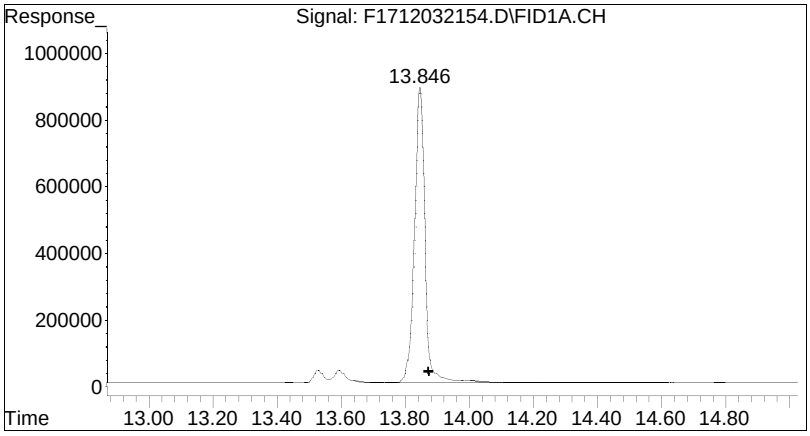
#3 n-Nonane (C9)

R.T.: 6.595 min
Delta R.T.: -0.036 min
Response: 15177263
Conc: 13.44 ug/mL M4



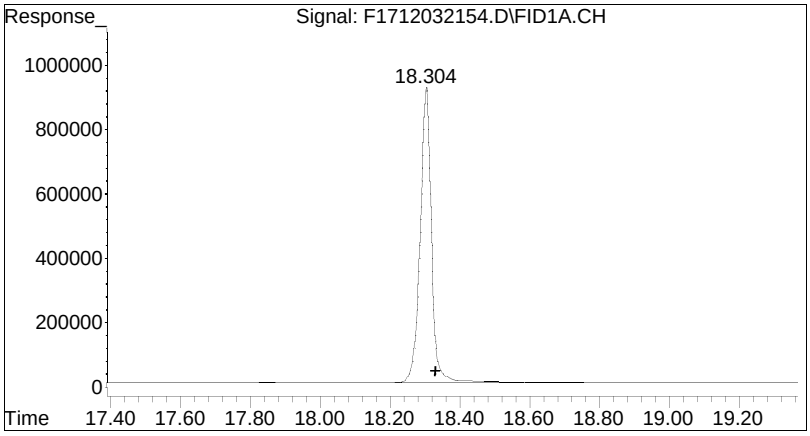
#4 n-Decane (C10)

R.T.:	8.983 min
Delta R.T.:	-0.030 min
Response:	17561975
Conc:	15.19 ug/mL M4



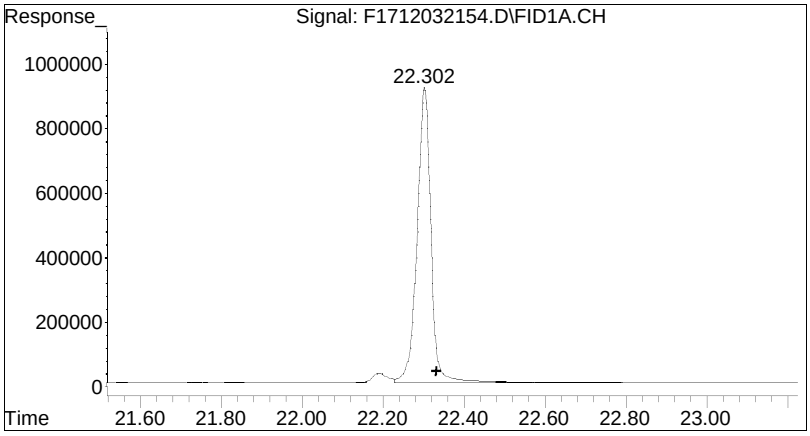
#6 n-Dodecane (C12)

R.T.: 13.846 min
Delta R.T.: -0.027 min
Response: 19264680
Conc: 17.01 ug/mL M4



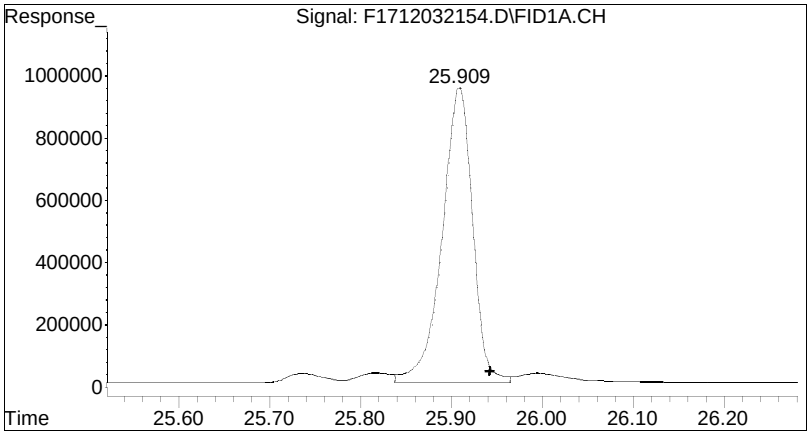
#9 n-Tetradecane (C14)

R.T.: 18.304 min
Delta R.T.: -0.026 min
Response: 20137210
Conc: 17.21 ug/mL M4



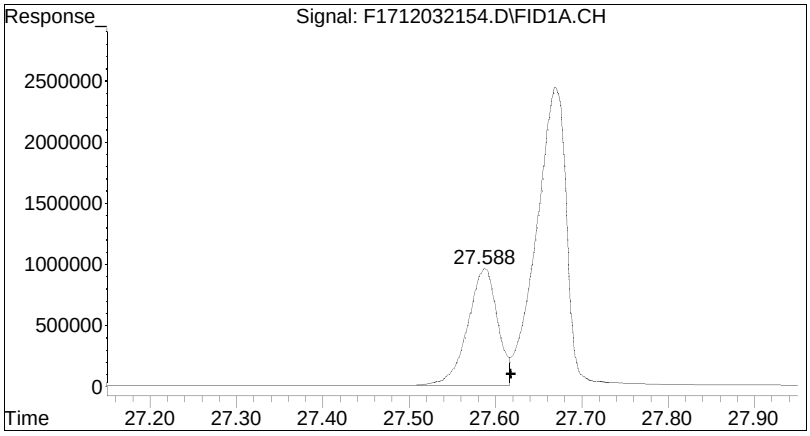
#12 n-Hexadecane (C16)

R.T.: 22.302 min
Delta R.T.: -0.029 min
Response: 21000025
Conc: 17.96 ug/mL M4



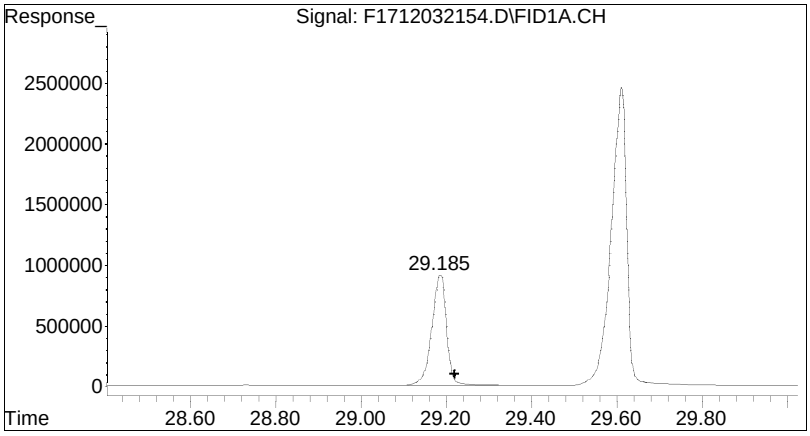
#16 n-Octadecane (C18)

R.T.: 25.909 min
Delta R.T.: -0.033 min
Response: 21783411
Conc: 18.34 ug/mL M4



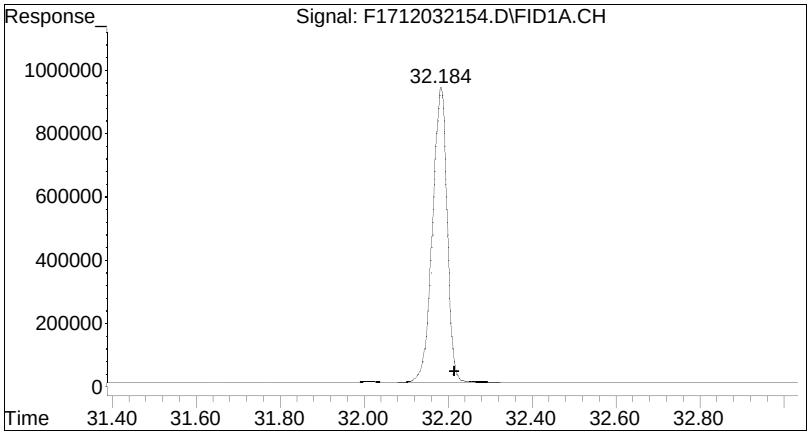
#18 n-Nonadecane (C19)

R.T.:	27.588 min
Delta R.T.:	-0.031 min
Response:	22673942
Conc:	19.03 ug/mL M4



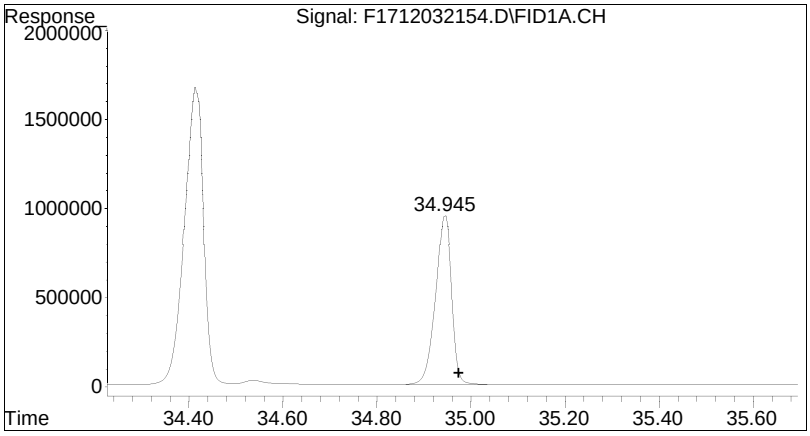
#20 n-Eicosane (C20)

R.T.: 29.185 min
Delta R.T.: -0.036 min
Response: 21862068
Conc: 18.24 ug/mL M4



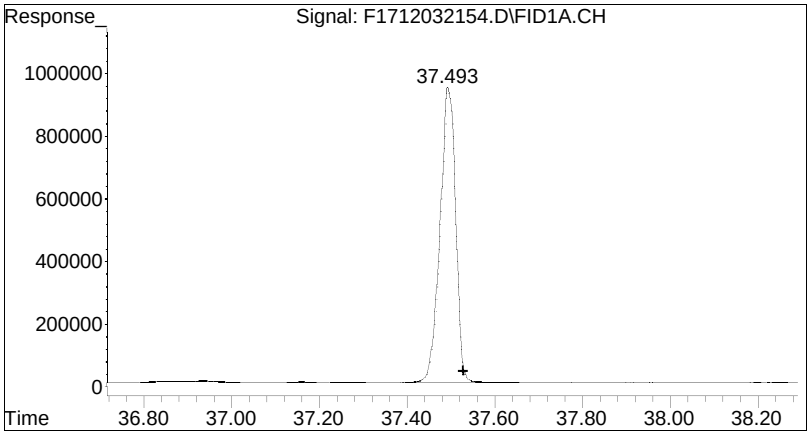
#22 n-Docosane (C22)

R.T.:	32.184 min
Delta R.T.:	-0.030 min
Response:	22004130
Conc:	18.28 ug/mL M4



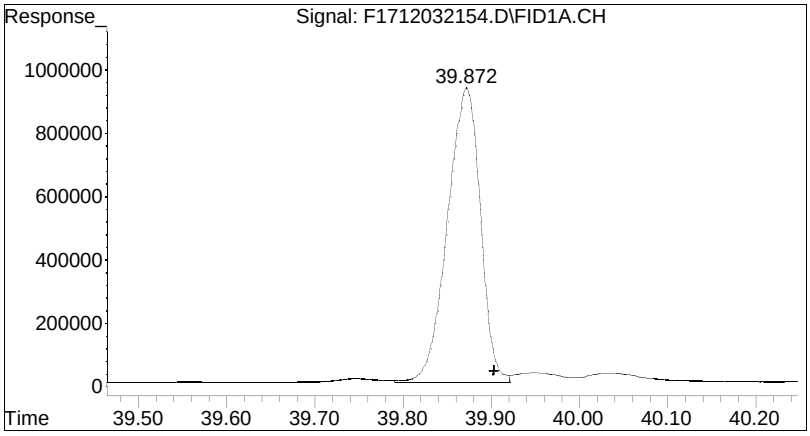
#25 n-Tetracosane (C24)

R.T.: 34.945 min
Delta R.T.: -0.029 min
Response: 22557306
Conc: 18.76 ug/mL M4



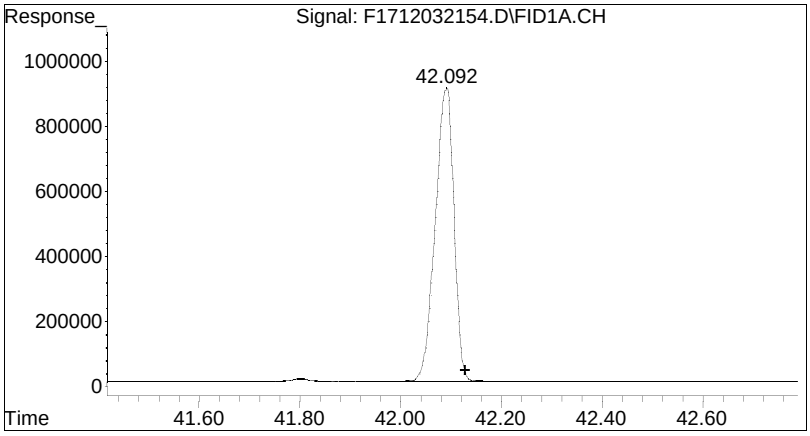
#27 n-Hexacosane (C26)

R.T.: 37.493 min
Delta R.T.: -0.035 min
Response: 22473552
Conc: 18.60 ug/mL M4



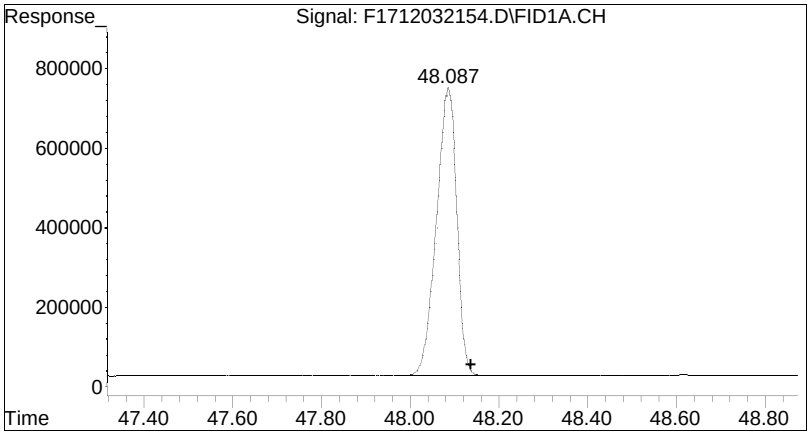
#29 n-Octacosane (C28)

R.T.: 39.872 min
Delta R.T.: -0.031 min
Response: 23619570
Conc: 18.81 ug/mL M4



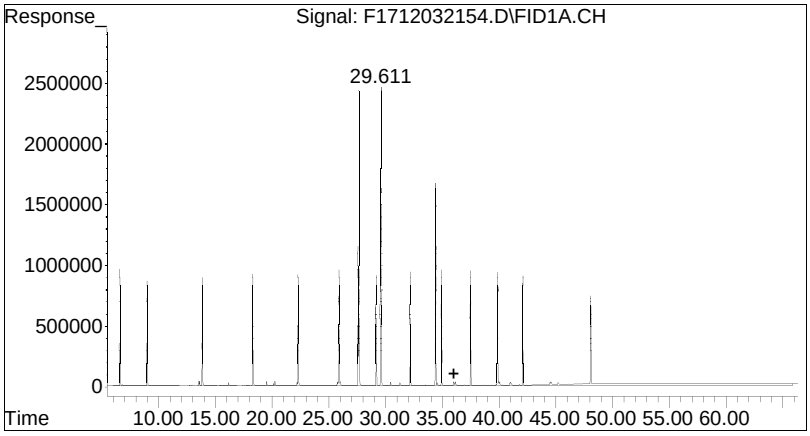
#31 n-Triacontane (C30)

R.T.: 42.092 min
Delta R.T.: -0.035 min
Response: 22568098
Conc: 18.25 ug/mL M4



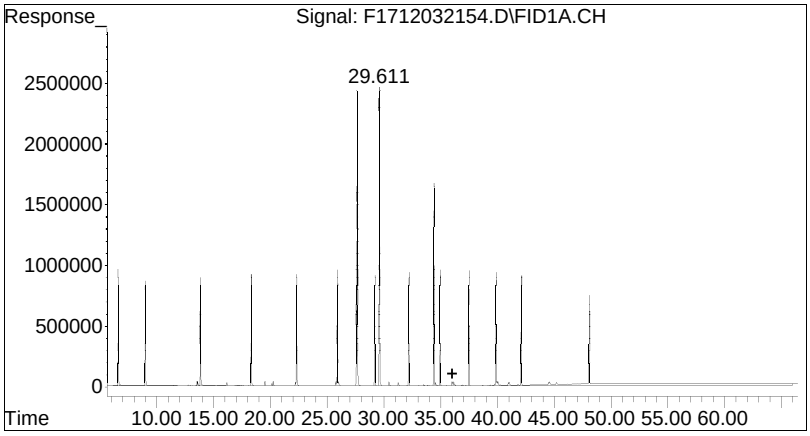
#37 n-Hexatriacontane (C36)

R.T.: 48.087 min
Delta R.T.: -0.049 min
Response: 22403900
Conc: 16.42 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 578631755
Conc: 483.33 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 321695453
Conc: 268.71 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421015.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 07:57 pm
Operator : FID18:WR
Sample : WG1582496-2,42,,
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 58 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:29:04 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.648	60827799	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.704	55464270	40.911 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	81.82%
24) s	d50-Tetracosane	34.439	45028643	41.153 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	82.31%
	Target Compounds			
3) t	n-Nonane (C9)	6.701	12267504	11.739 ug/mL M4
4) t	n-Decane (C10)	9.073	14303490	12.724 ug/mL M4
6) t	n-Dodecane (C12)	13.919	15811199	13.864 ug/mL M4
9) t	n-Tetradecane (C14)	18.366	16842888	14.337 ug/mL M4
12) t	n-Hexadecane (C16)	22.359	19366328	16.627 ug/mL M4
16) t	n-Octadecane (C18)	25.954	20525867	17.285 ug/mL M4
18) t	n-Nonadecane (C19)	27.629	20534269	17.149 ug/mL M4
20) t	n-Eicosane (C20)	29.227	20478150	16.988 ug/mL M4
22) t	n-Docosane (C22)	32.216	20745831	16.835 ug/mL M4
25) t	n-Tetracosane (C24)	34.968	21373934	17.496 ug/mL M4
27) t	n-Hexacosane (C26)	37.518	21204934	17.023 ug/mL M4
29) t	n-Octacosane (C28)	39.886	21854898	17.105 ug/mL M4
31) t	n-Triacontane (C30)	42.098	21257642	16.616 ug/mL M4
37) t	n-Hexatriacontane (C36)	47.970	20886714	14.604 ug/mL M4
42) h	C9-C44 Total Petroleu...	33.118	595776136	488.442 ug/mL m
42) h	C9-C44 Total Petroleu BS	33.118	264181595	216.587 ug/mLm
46) h	Total Resolved Hydroc...	37.870	282633341	231.715 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421015.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 07:57 pm
Operator : FID18:WR
Sample : WG1582496-2,42,,
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 58 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:29:04 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

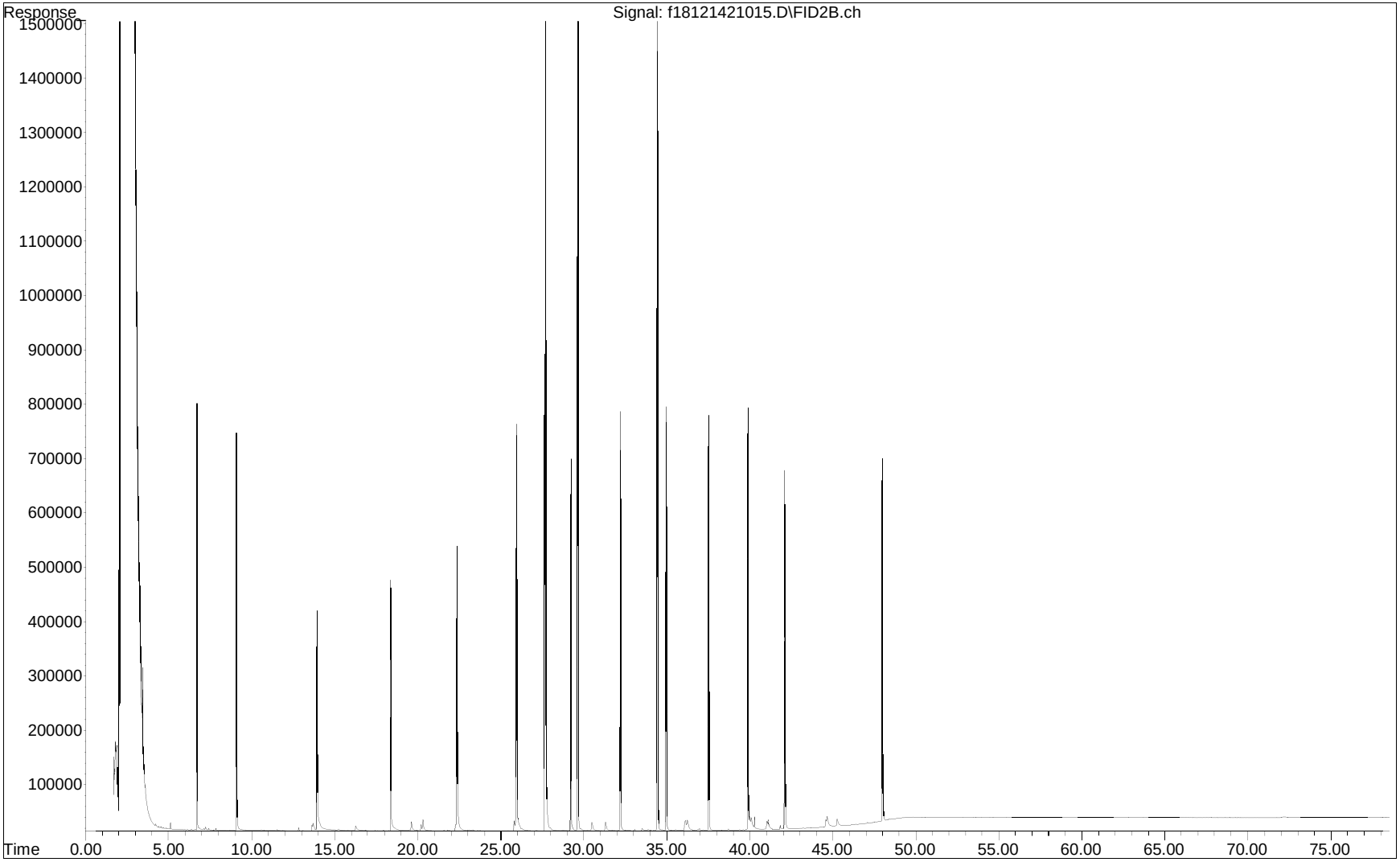
Sub List : SHC_QC_Samples - SHC_QC_Samples

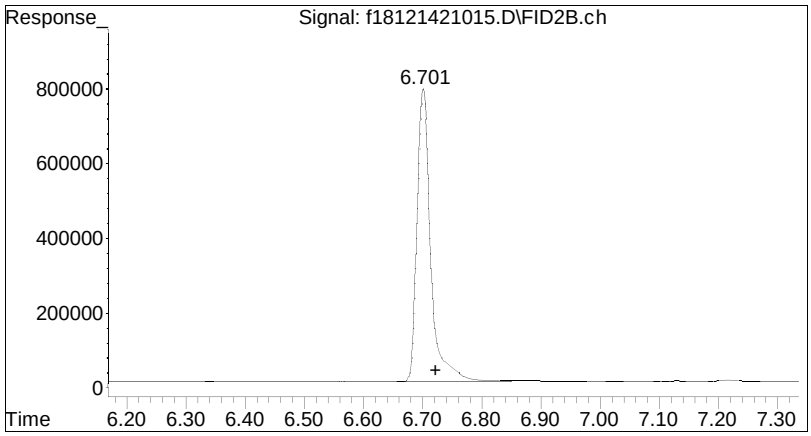
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

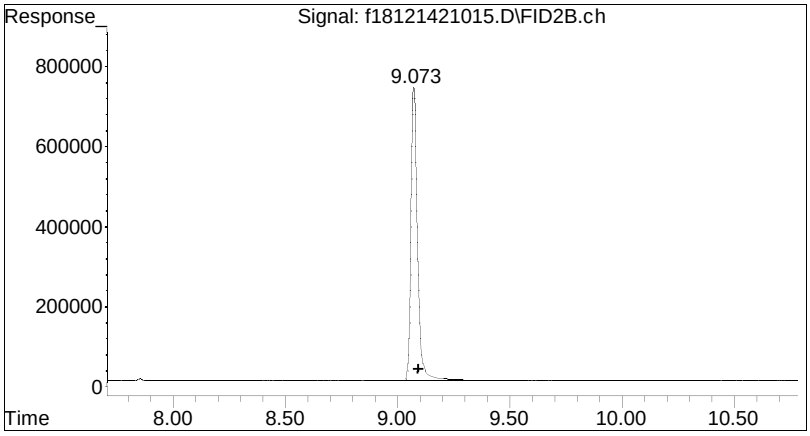
File :O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\f18121421015.D
Operator : FID18:WR
Acquired : 14 Dec 2021 07:57 pm using AcqMethod FID18.M
Sample Name: WG1582496-2,42,,
Instrument: FID 18
Misc Info : WG1583234,WG1582496,ICAL17763
Vial Number: 58
CurrentMeth: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M





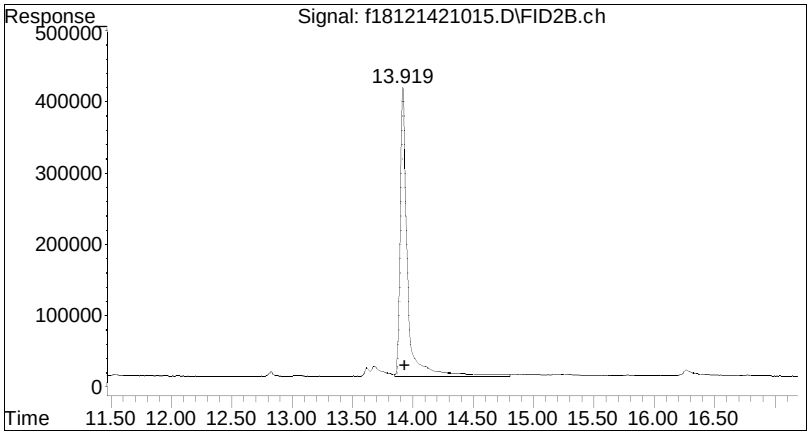
#3 n-Nonane (C9)

R.T.:	6.701 min
Delta R.T.:	-0.022 min
Response:	12267504
Conc:	11.74 ug/mL M4



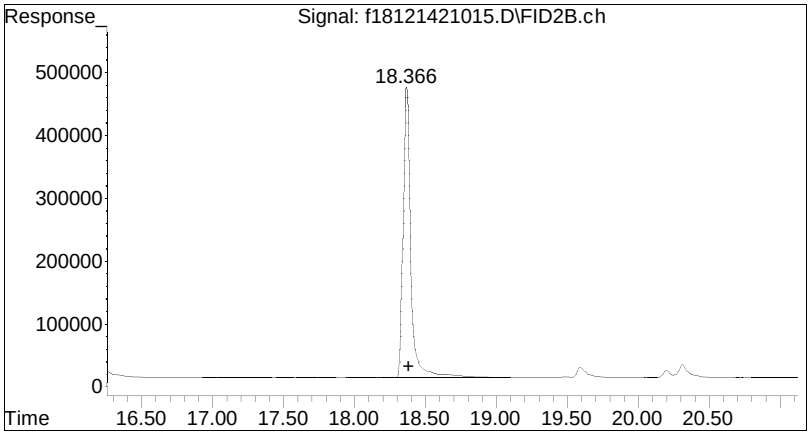
#4 n-Decane (C10)

R.T.:	9.073 min
Delta R.T.:	-0.020 min
Response:	14303490
Conc:	12.72 ug/mL M4



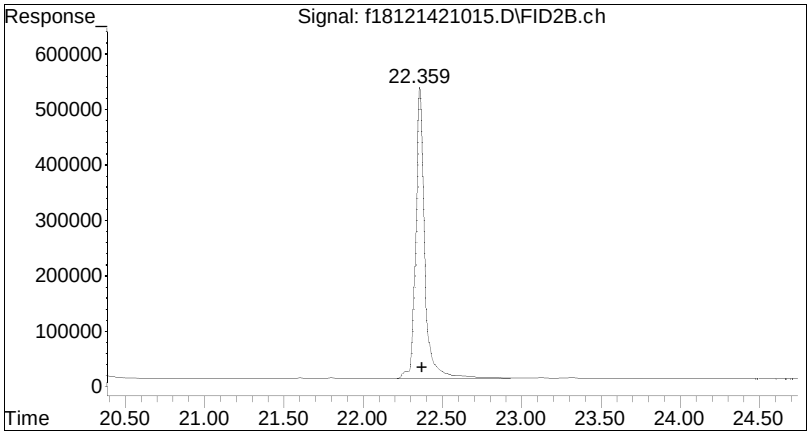
#6 n-Dodecane (C12)

R.T.:	13.919 min
Delta R.T.:	-0.017 min
Response:	15811199
Conc:	13.86 ug/mL M4



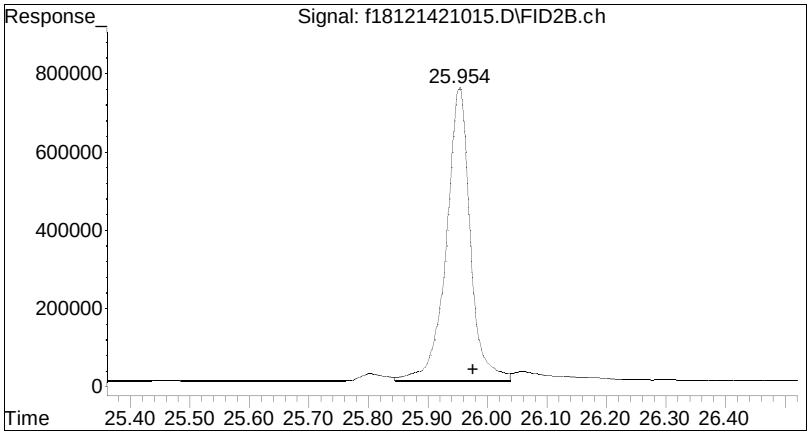
#9 n-Tetradecane (C14)

R.T.:	18.366 min
Delta R.T.:	-0.017 min
Response:	16842888
Conc:	14.34 ug/mL M4



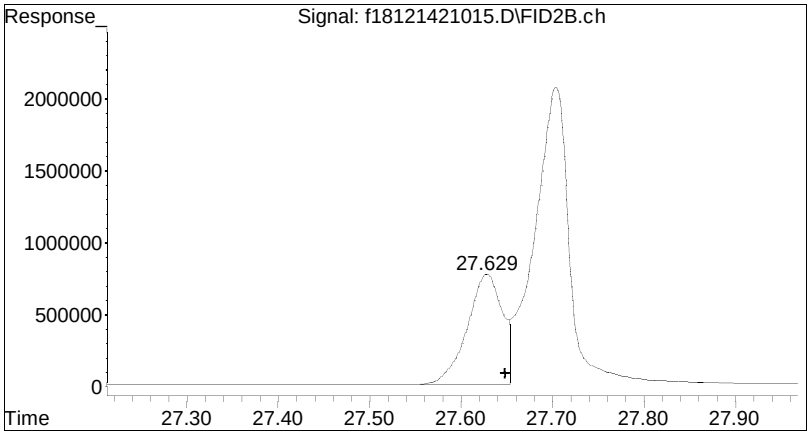
#12 n-Hexadecane (C16)

R.T.: 22.359 min
Delta R.T.: -0.015 min
Response: 19366328
Conc: 16.63 ug/mL M4



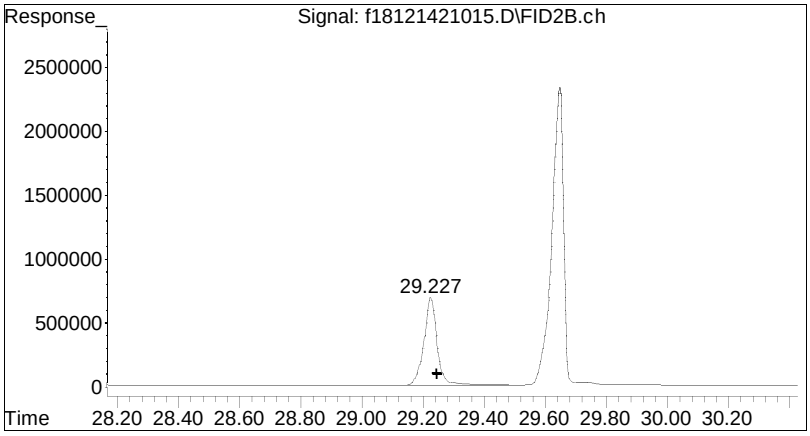
#16 n-Octadecane (C18)

R.T.: 25.954 min
Delta R.T.: -0.022 min
Response: 20525867
Conc: 17.28 ug/mL M4



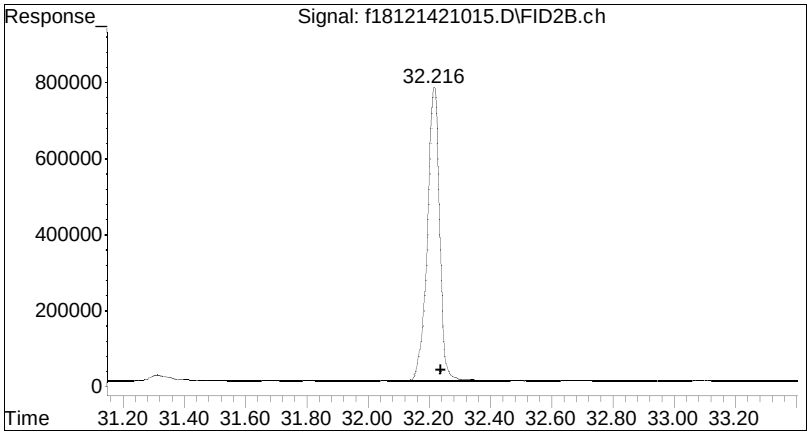
#18 n-Nonadecane (C19)

R.T.: 27.629 min
Delta R.T.: -0.020 min
Response: 20534269
Conc: 17.15 ug/mL M4



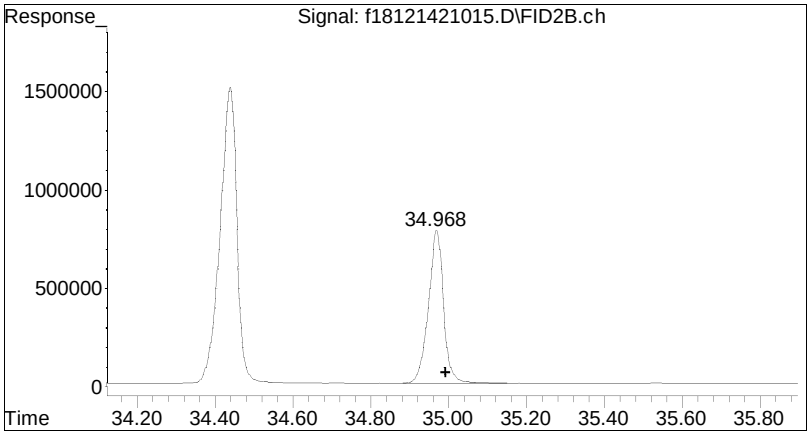
#20 n-Eicosane (C20)

R.T.: 29.227 min
Delta R.T.: -0.020 min
Response: 20478150
Conc: 16.99 ug/mL M4



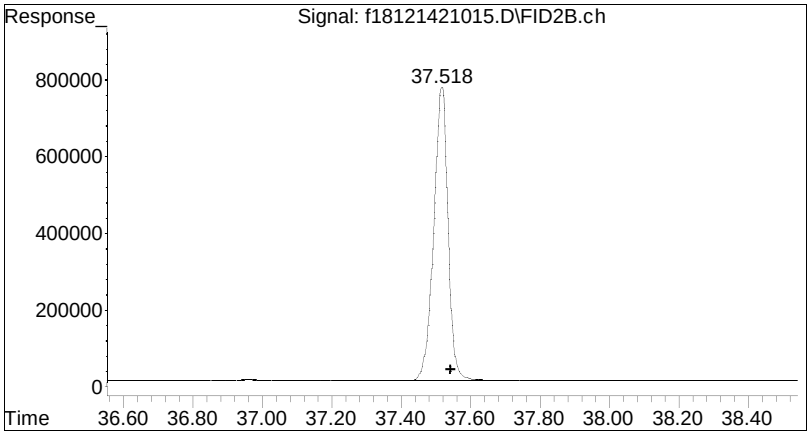
#22 n-Docosane (C22)

R.T.:	32.216 min
Delta R.T.:	-0.021 min
Response:	20745831
Conc:	16.84 ug/mL M4



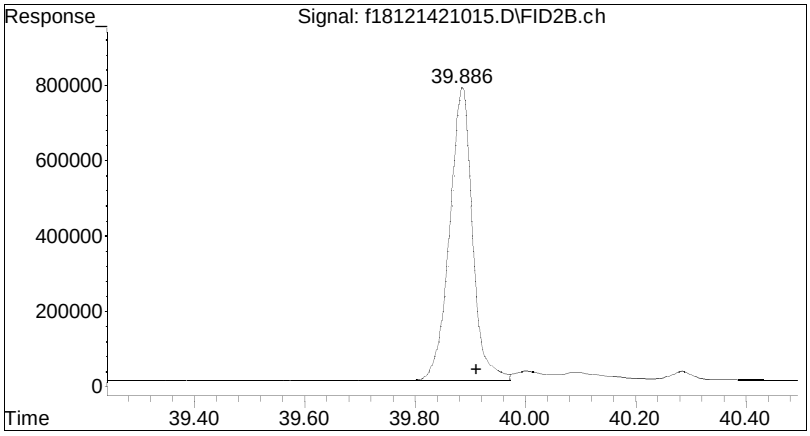
#25 n-Tetracosane (C24)

R.T.: 34.968 min
Delta R.T.: -0.024 min
Response: 21373934
Conc: 17.50 ug/mL M4



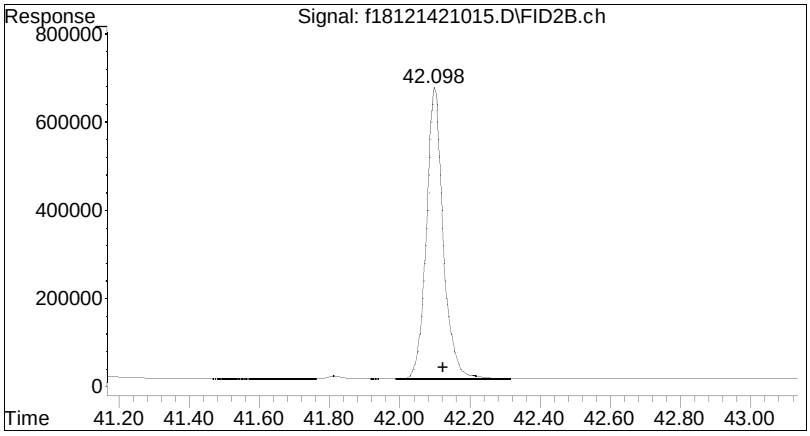
#27 n-Hexacosane (C26)

R.T.: 37.518 min
Delta R.T.: -0.023 min
Response: 21204934
Conc: 17.02 ug/mL M4



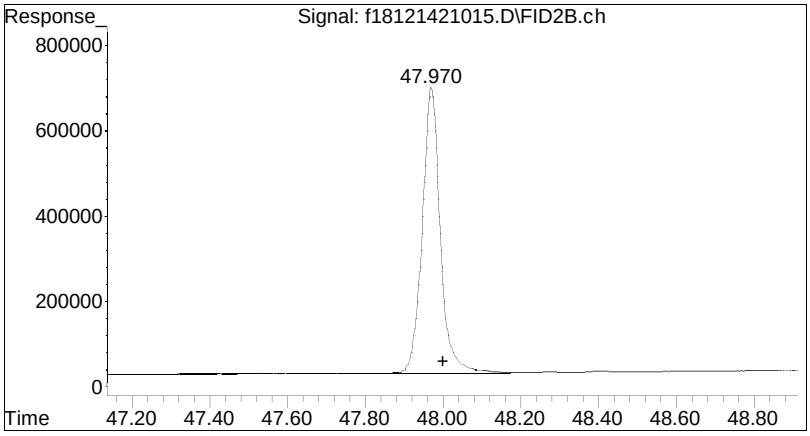
#29 n-Octacosane (C28)

R.T.: 39.886 min
Delta R.T.: -0.025 min
Response: 21854898
Conc: 17.10 ug/mL M4



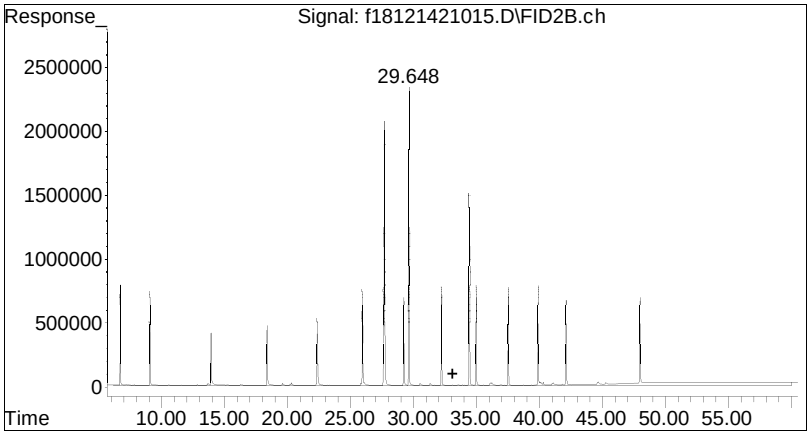
#31 n-Triacontane (C30)

R.T.:	42.098 min
Delta R.T.:	-0.025 min
Response:	21257642
Conc:	16.62 ug/mL M4



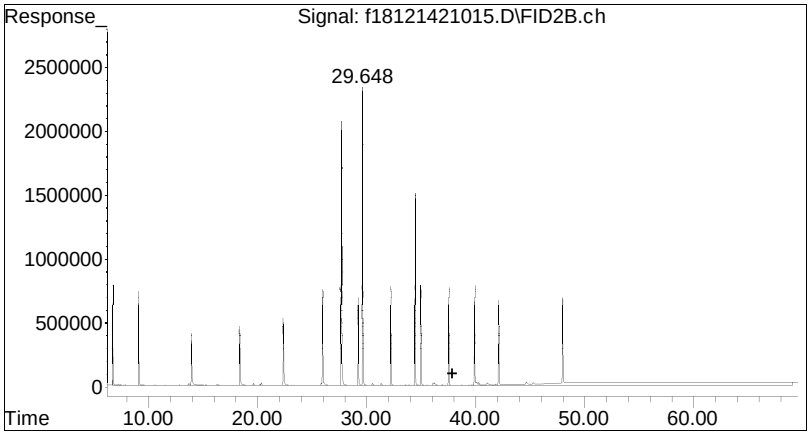
#37 n-Hexatriacontane (C36)

R.T.:	47.970 min
Delta R.T.:	-0.031 min
Response:	20886714
Conc:	14.60 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 33.118 min
Delta R.T.: 0.000 min
Response: 595776136
Conc: 488.44 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 282633341
Conc: 231.71 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422014.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 08:14 pm
Operator : FID18:WR
Sample : WG1590340-2,42,,
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:44:56 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.108	50348225	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.087	11415793	10.169 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	20.34%#
24) s	d50-Tetracosane	35.730	8721355	9.525 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	19.05%#
	Target Compounds			
3) t	n-Nonane (C9)	7.817	3670378	4.420 ug/mL M4
4) t	n-Decane (C10)	10.286	3616199	4.411 ug/mL M4
6) t	n-Dodecane (C12)	15.182	3553100	4.015 ug/mL M4
9) t	n-Tetradecane (C14)	19.638	3651429	3.914 ug/mL M4
12) t	n-Hexadecane (C16)	23.637	4078292	4.280 ug/mL M4
16) t	n-Octadecane (C18)	27.239	4259966	4.383 ug/mL M4
18) t	n-Nonadecane (C19)	28.916	3936972	4.024 ug/mL M4
20) t	n-Eicosane (C20)	30.515	3923931	3.956 ug/mL M4
22) t	n-Docosane (C22)	33.512	4021965	3.996 ug/mL M4
25) t	n-Tetracosane (C24)	36.272	4260207	4.262 ug/mL M4
27) t	n-Hexacosane (C26)	38.829	4090806	4.011 ug/mL M4
29) t	n-Octacosane (C28)	41.205	4049644	3.895 ug/mL M4
31) t	n-Triacontane (C30)	43.426	4054199	3.934 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.364	4023684	3.787 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.047	416390367	430.610 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.047	36070861	37.303 ug/mLm
46) h	Total Resolved Hydroc...	38.937	62964344	65.115 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422014.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 08:14 pm
Operator : FID18:WR
Sample : WG1590340-2,42,,
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 7 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:44:56 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

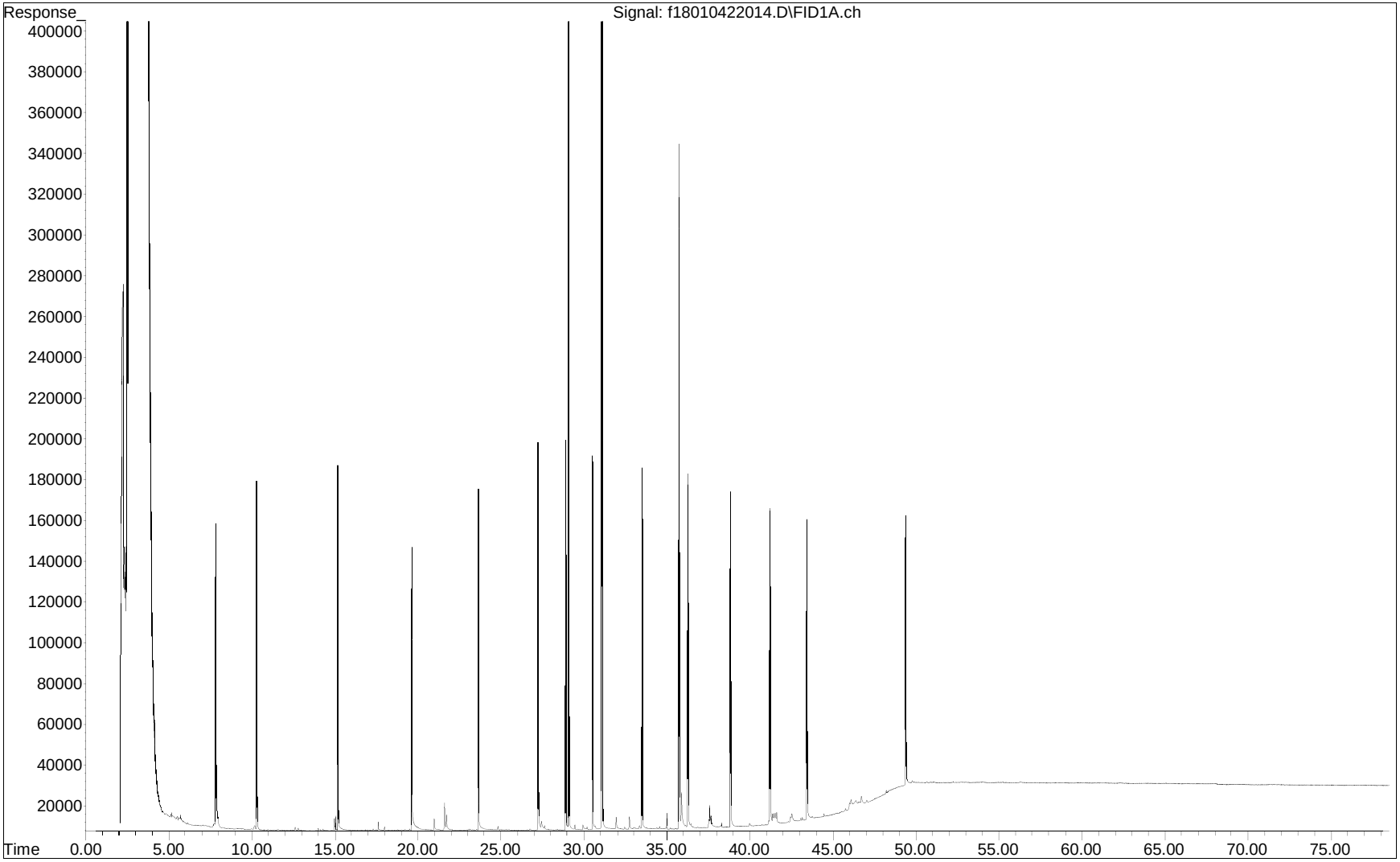
Sub List : SHC_QC_Samples - SHC_QC_Samples

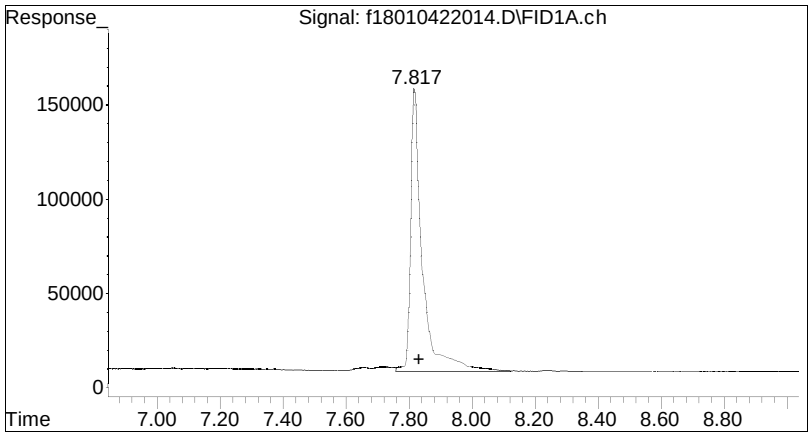
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

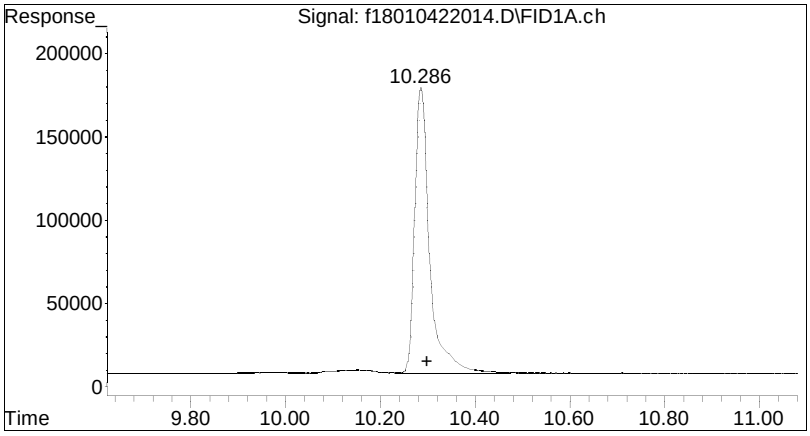
File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422014.D
Operator : FID18:WR
Acquired : 04 Jan 2022 08:14 pm using AcqMethod FID18.M
Sample Name: WG1590340-2,42,,
Instrument: FID 18
Misc Info : WG1590500,WG1590340,ICAL18548
Vial Number: 7
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M





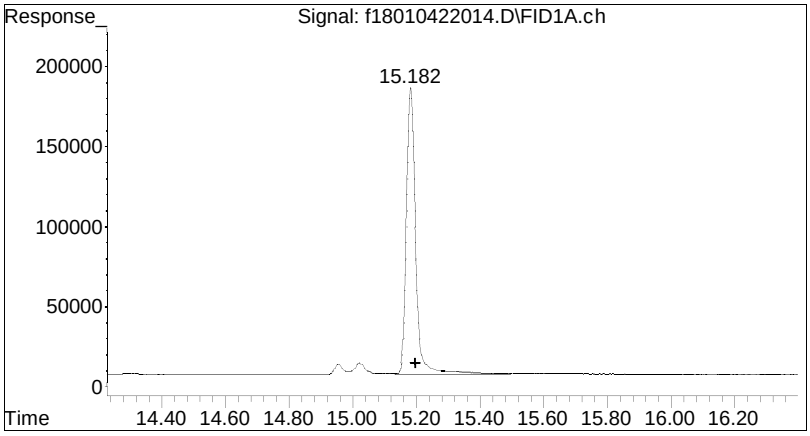
#3 n-Nonane (C9)

R.T.:	7.817 min
Delta R.T.:	-0.016 min
Response:	3670378
Conc:	4.42 ug/mL M4



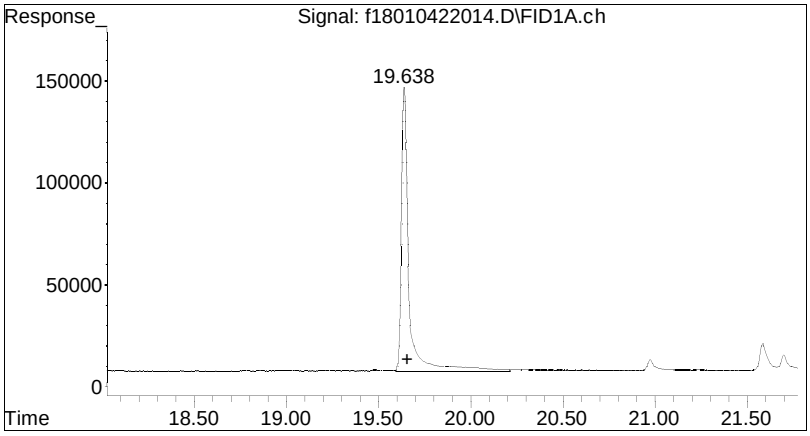
#4 n-Decane (C10)

R.T.:	10.286 min
Delta R.T.:	-0.013 min
Response:	3616199
Conc:	4.41 ug/mL M4



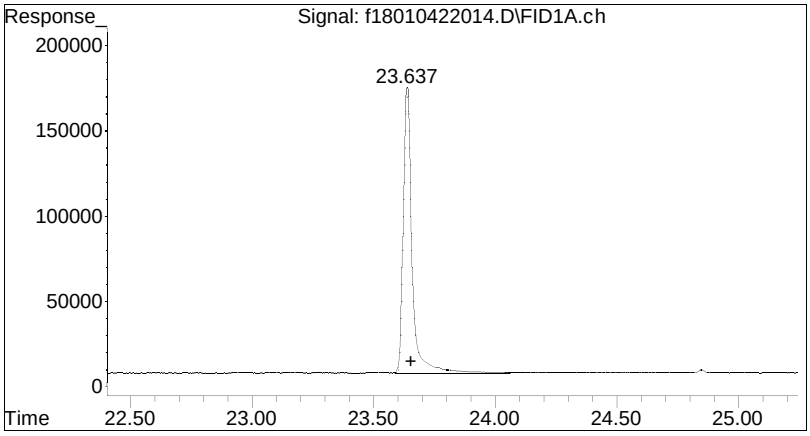
#6 n-Dodecane (C12)

R.T.:	15.182 min
Delta R.T.:	-0.015 min
Response:	3553100
Conc:	4.02 ug/mL M4



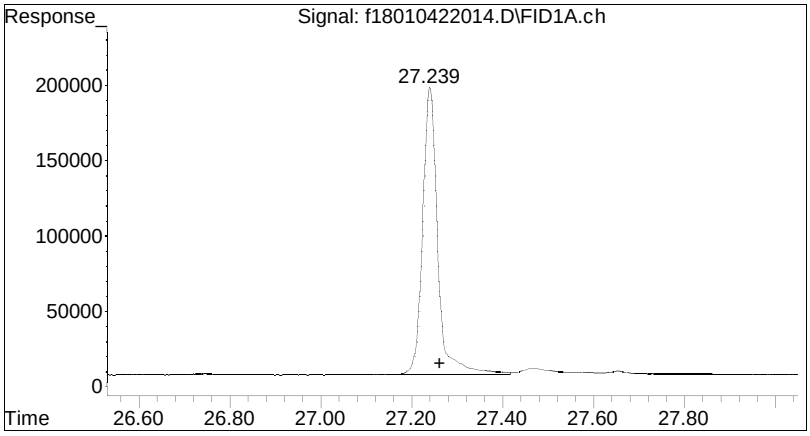
#9 n-Tetradecane (C14)

R.T.:	19.638 min
Delta R.T.:	-0.019 min
Response:	3651429
Conc:	3.91 ug/mL M4



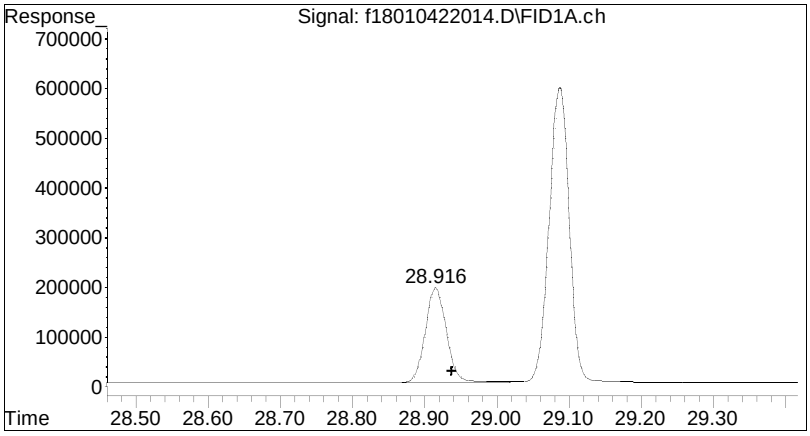
#12 n-Hexadecane (C16)

R.T.:	23.637 min
Delta R.T.:	-0.017 min
Response:	4078292
Conc:	4.28 ug/mL M4



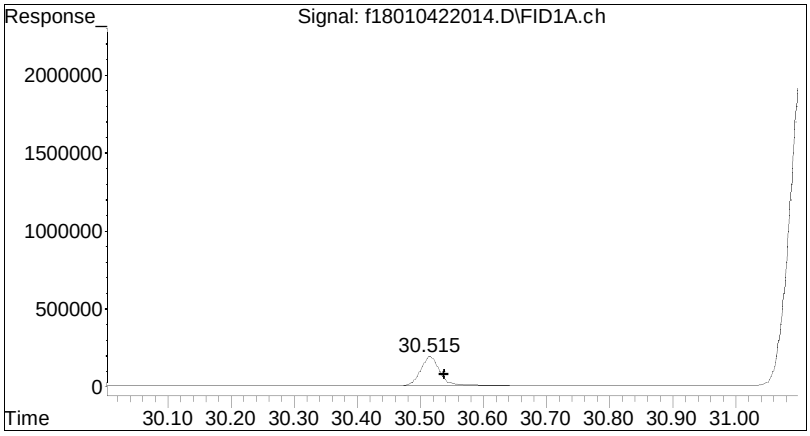
#16 n-Octadecane (C18)

R.T.:	27.239 min
Delta R.T.:	-0.023 min
Response:	4259966
Conc:	4.38 ug/mL M4



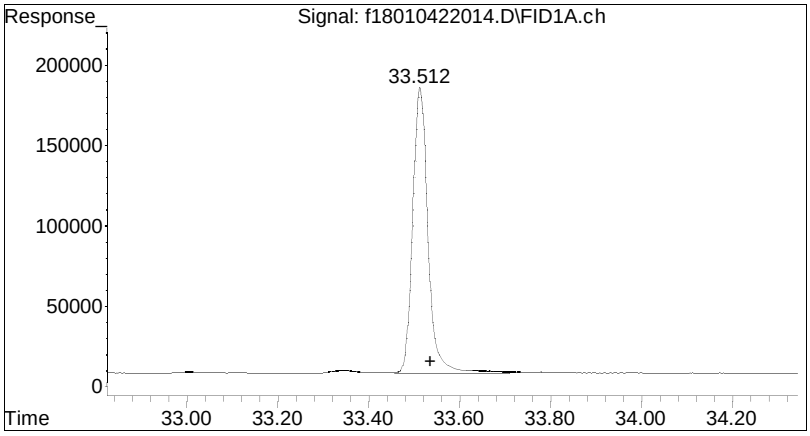
#18 n-Nonadecane (C19)

R.T.:	28.916 min
Delta R.T.:	-0.022 min
Response:	3936972
Conc:	4.02 ug/mL M4



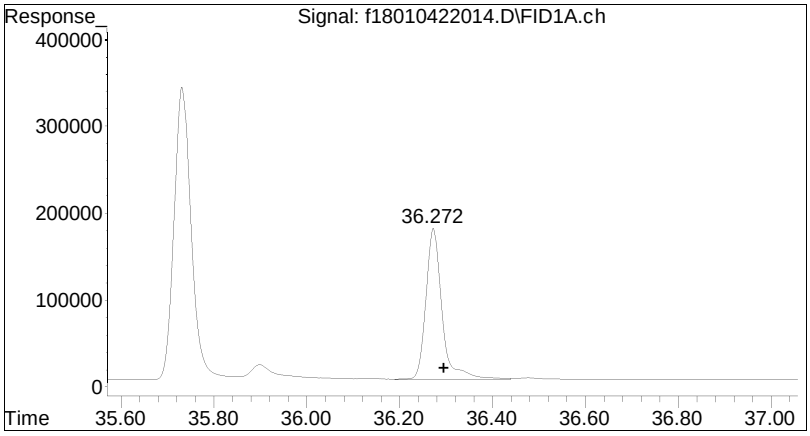
#20 n-Eicosane (C20)

R.T.:	30.515 min
Delta R.T.:	-0.024 min
Response:	3923931
Conc:	3.96 ug/mL M4



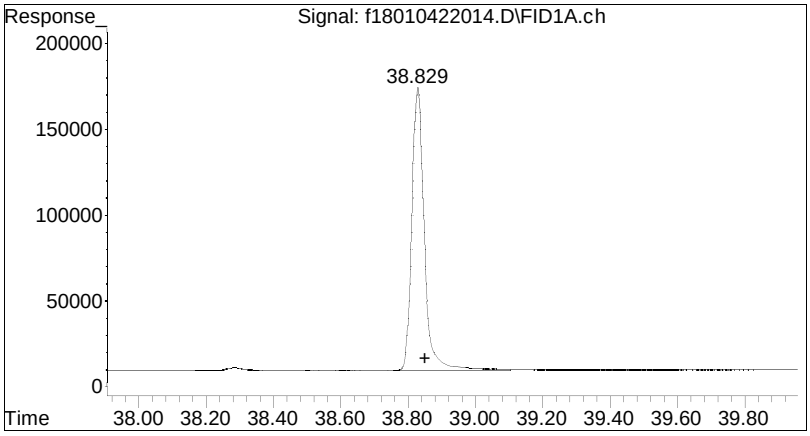
#22 n-Docosane (C22)

R.T.:	33.512 min
Delta R.T.:	-0.023 min
Response:	4021965
Conc:	4.00 ug/mL M4



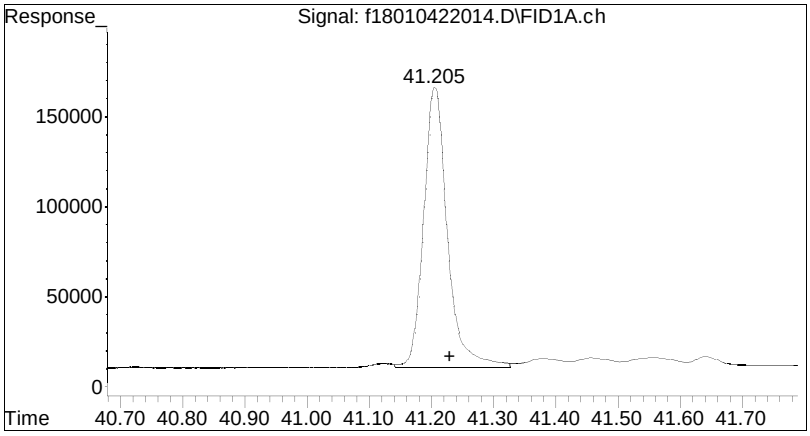
#25 n-Tetracosane (C24)

R.T.:	36.272 min
Delta R.T.:	-0.023 min
Response:	4260207
Conc:	4.26 ug/mL M4



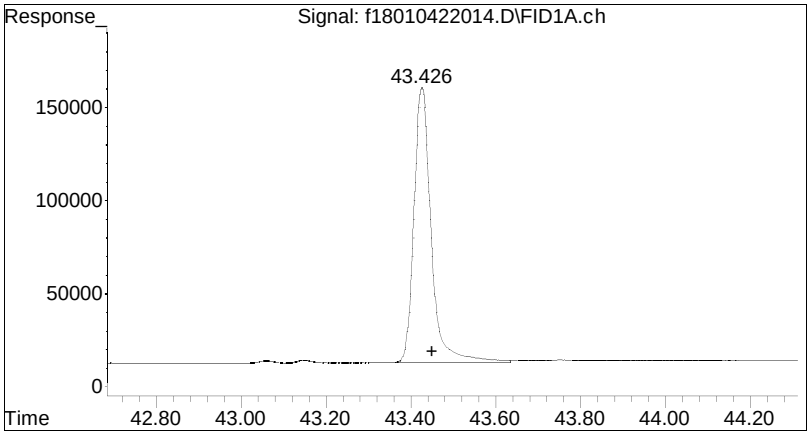
#27 n-Hexacosane (C26)

R.T.:	38.829 min
Delta R.T.:	-0.022 min
Response:	4090806
Conc:	4.01 ug/mL M4



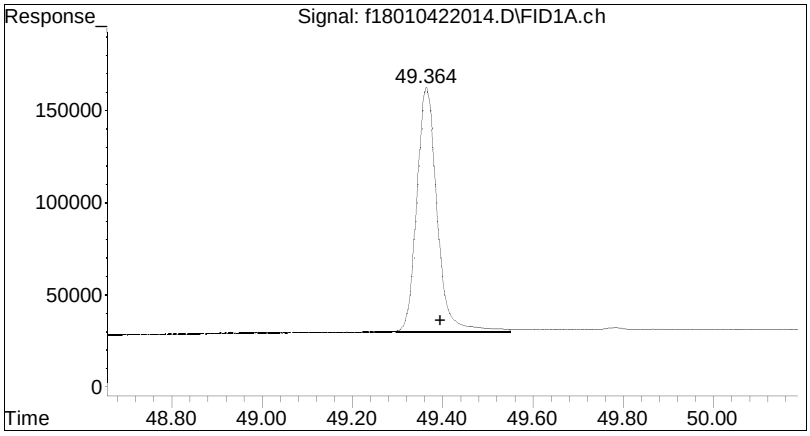
#29 n-Octacosane (C28)

R.T.:	41.205 min
Delta R.T.:	-0.025 min
Response:	4049644
Conc:	3.90 ug/mL M4



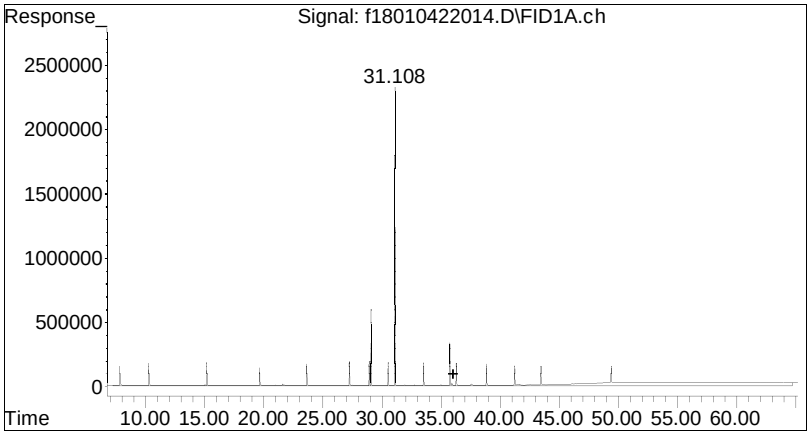
#31 n-Triacontane (C30)

R.T.:	43.426 min
Delta R.T.:	-0.025 min
Response:	4054199
Conc:	3.93 ug/mL M4



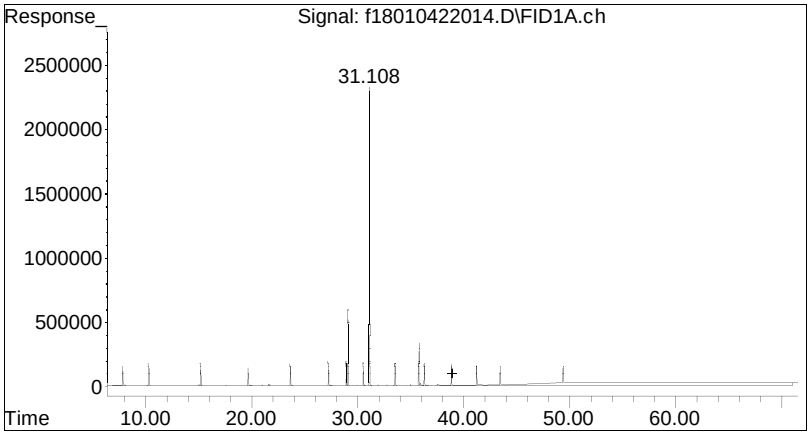
#37 n-Hexatriacontane (C36)

R.T.:	49.364 min
Delta R.T.:	-0.031 min
Response:	4023684
Conc:	3.79 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.047 min
Delta R.T.: 0.000 min
Response: 416390367
Conc: 430.61 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	38.937 min
Delta R.T.:	0.000 min
Response:	62964344
Conc:	65.11 ug/mL m

LCS Duplicate Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032140.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 2:41 pm
Operator : FID17:MJS
Sample : wG1579102-3,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 20 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:29:52 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.614	60851340	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.656	15700464	11.902 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.80%#
24) s	d50-Tetracosane	34.402	12400466	11.849 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.70%#
	Target Compounds			
3) t	n-Nonane (C9)	6.597	5013979	4.466 ug/mL M4
4) t	n-Decane (C10)	8.983	5153116	4.484 ug/mL M4
6) t	n-Dodecane (C12)	13.845	5415850	4.810 ug/mL M4
9) t	n-Tetradecane (C14)	18.303	5556241	4.777 ug/mL M4
12) t	n-Hexadecane (C16)	22.301	5754460	4.950 ug/mL M4
16) t	n-Octadecane (C18)	25.906	6033426	5.110 ug/mL M4
18) t	n-Nonadecane (C19)	27.584	5809068	4.905 ug/mL M4
20) t	n-Eicosane (C20)	29.184	5793934	4.864 ug/mL M4
22) t	n-Docosane (C22)	32.181	5815150	4.859 ug/mL M4
25) t	n-Tetracosane (C24)	34.941	5942122	4.971 ug/mL M4
27) t	n-Hexacosane (C26)	37.492	5920632	4.931 ug/mL M4
29) t	n-Octacosane (C28)	39.871	6200443	4.968 ug/mL M4
31) t	n-Triacontane (C30)	42.086	5970366	4.858 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.082	5965127	4.397 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	359592102	302.175 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	75279398	63.259 ug/mLm
46) h	Total Resolved Hydroc...	36.038	88459159	74.335 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032140.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 2:41 pm
Operator : FID17:MJS
Sample : wG1579102-3,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 20 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:29:52 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

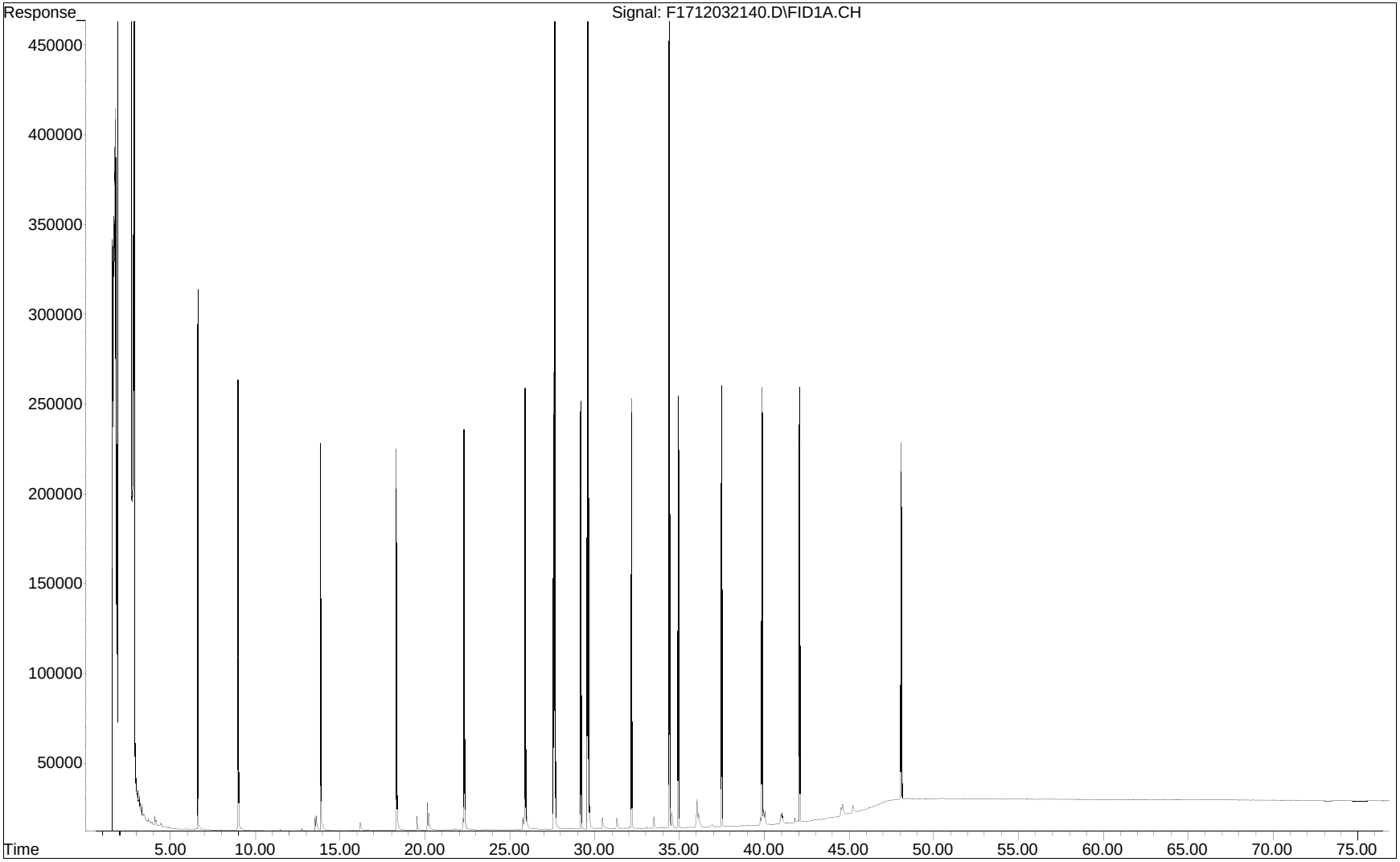
Sub List : SHC_QC_Samples - SHC_QC_Samples

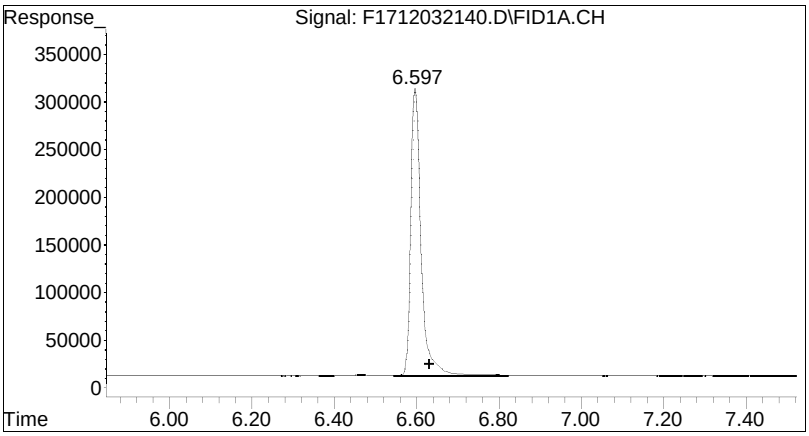
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

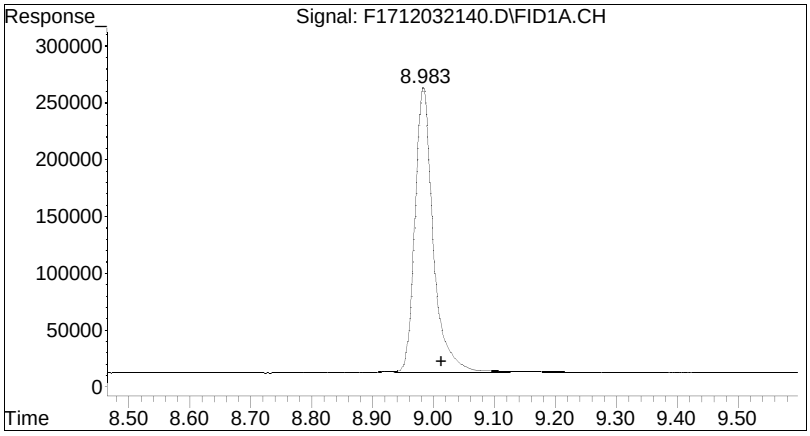
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032140.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 2:41 pm using AcqMethod FID17A.M
Sample Name: wG1579102-3,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 20
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





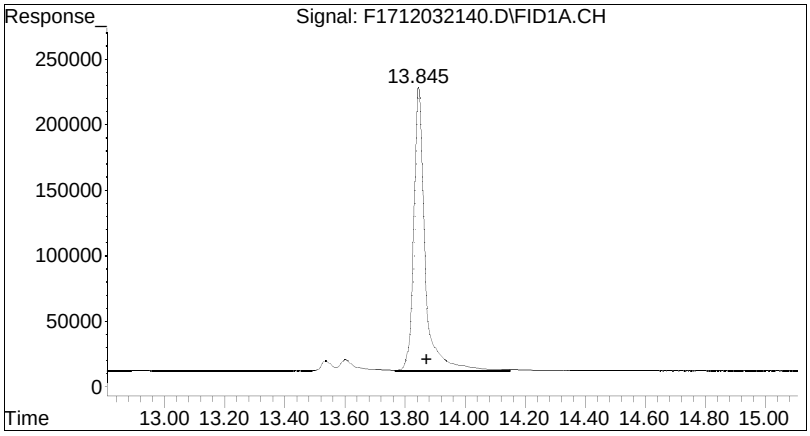
#3 n-Nonane (C9)

R.T.:	6.597 min
Delta R.T.:	-0.035 min
Response:	5013979
Conc:	4.47 ug/mL M4



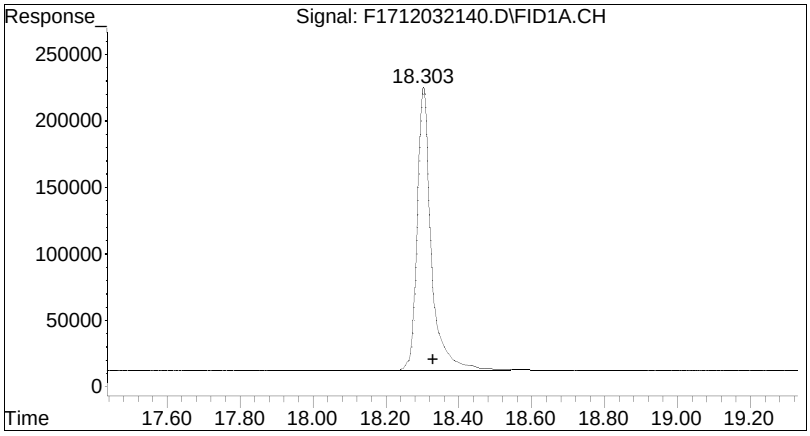
#4 n-Decane (C10)

R.T.:	8.983 min
Delta R.T.:	-0.030 min
Response:	5153116
Conc:	4.48 ug/mL M4



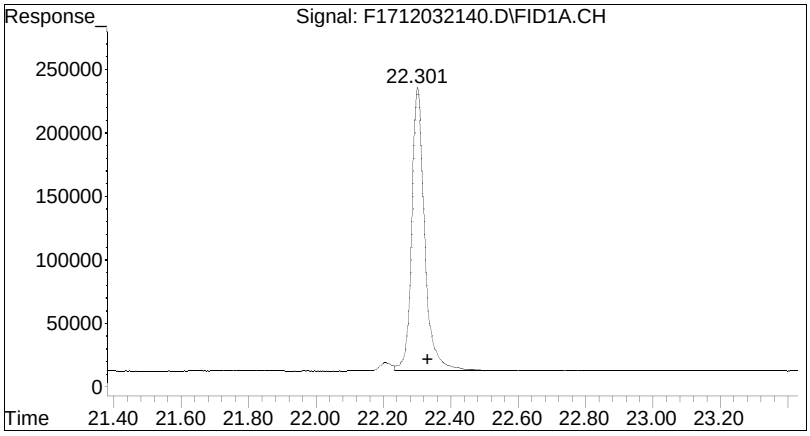
#6 n-Dodecane (C12)

R.T.:	13.845 min
Delta R.T.:	-0.028 min
Response:	5415850
Conc:	4.81 ug/mL M4



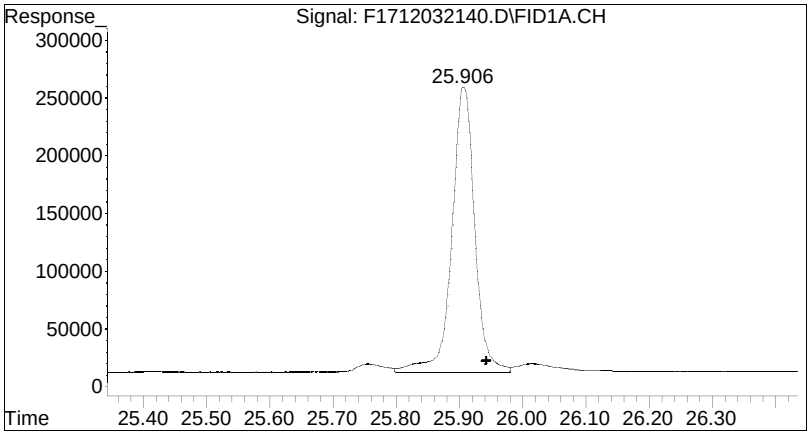
#9 n-Tetradecane (C14)

R.T.:	18.303 min
Delta R.T.:	-0.027 min
Response:	5556241
Conc:	4.78 ug/mL M4



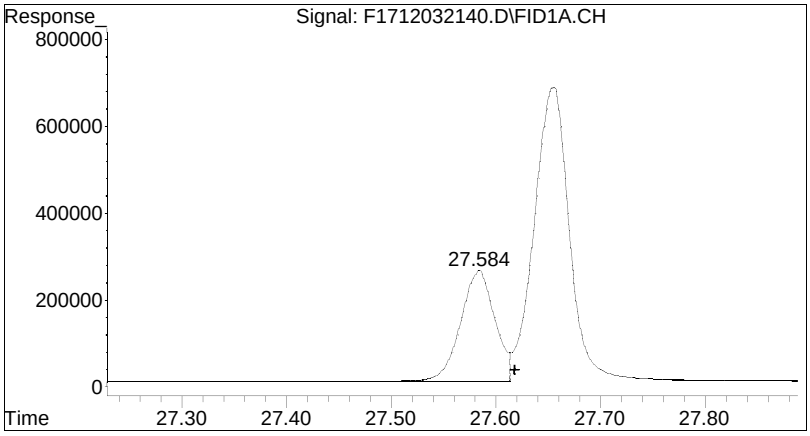
#12 n-Hexadecane (C16)

R.T.:	22.301 min
Delta R.T.:	-0.031 min
Response:	5754460
Conc:	4.95 ug/mL M4



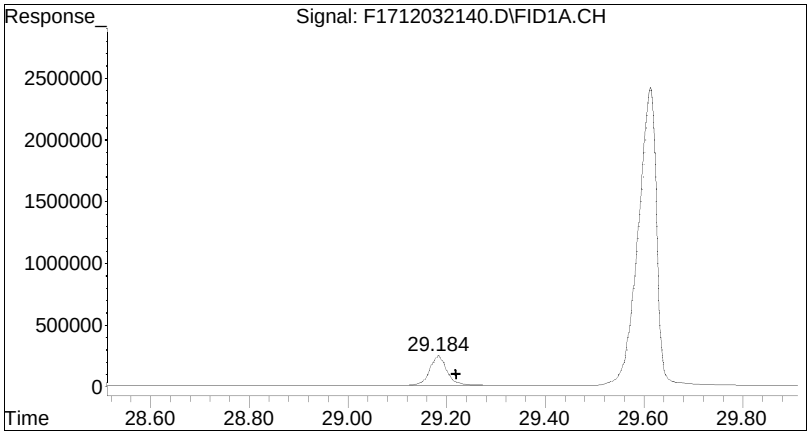
#16 n-Octadecane (C18)

R.T.:	25.906 min
Delta R.T.:	-0.036 min
Response:	6033426
Conc:	5.11 ug/mL M4



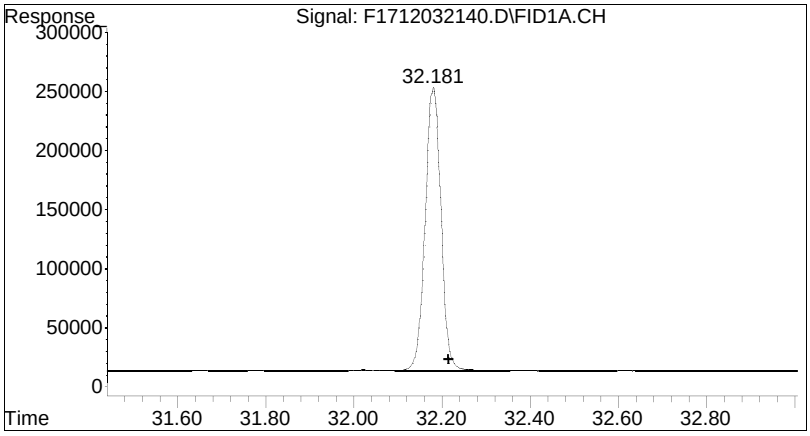
#18 n-Nonadecane (C19)

R.T.:	27.584 min
Delta R.T.:	-0.034 min
Response:	5809068
Conc:	4.90 ug/mL M4



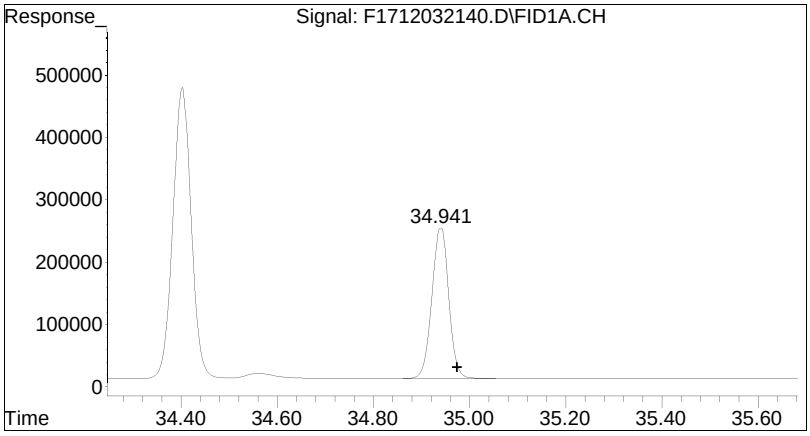
#20 n-Eicosane (C20)

R.T.:	29.184 min
Delta R.T.:	-0.037 min
Response:	5793934
Conc:	4.86 ug/mL M4



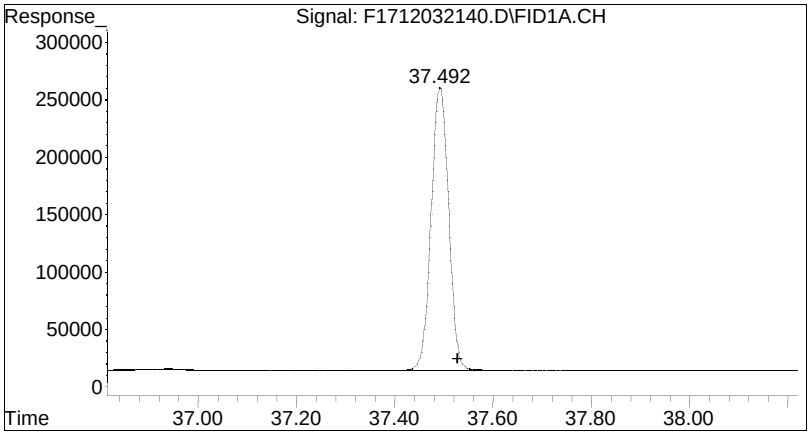
#22 n-Docosane (C22)

R.T.:	32.181 min
Delta R.T.:	-0.033 min
Response:	5815150
Conc:	4.86 ug/mL M4



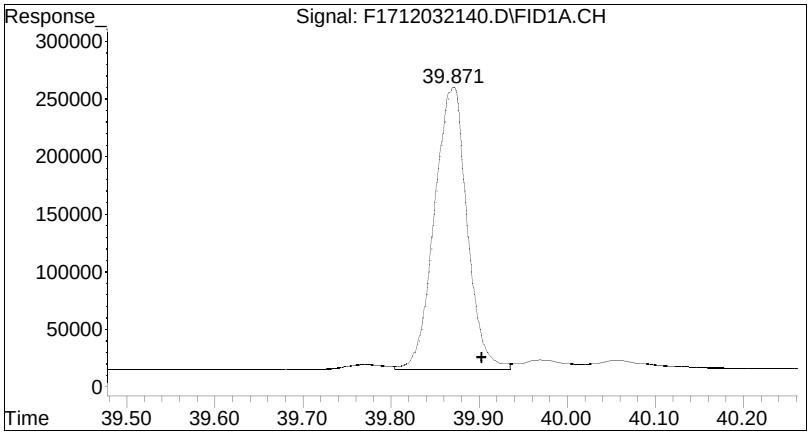
#25 n-Tetracosane (C24)

R.T.:	34.941 min
Delta R.T.:	-0.033 min
Response:	5942122
Conc:	4.97 ug/mL M4



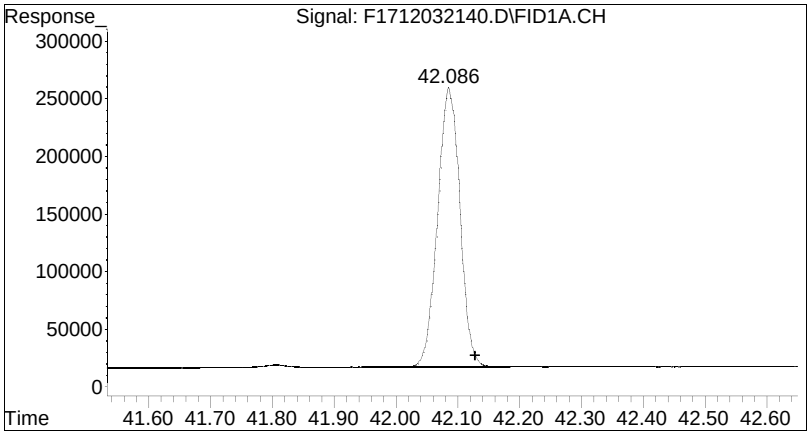
#27 n-Hexacosane (C26)

R.T.:	37.492 min
Delta R.T.:	-0.036 min
Response:	5920632
Conc:	4.93 ug/mL M4



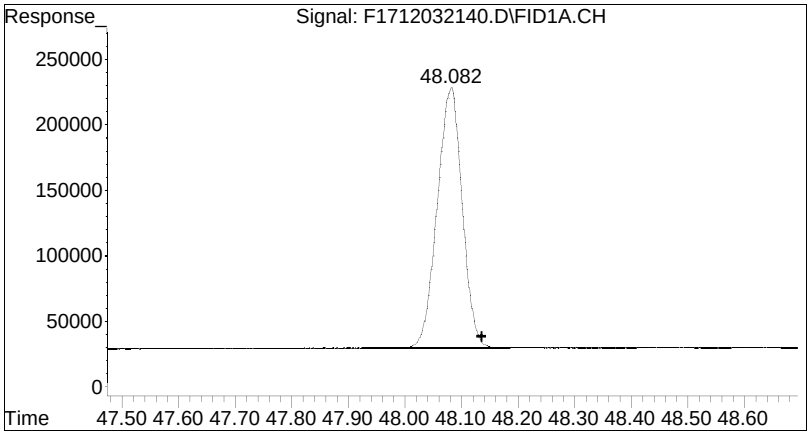
#29 n-Octacosane (C28)

R.T.:	39.871 min
Delta R.T.:	-0.032 min
Response:	6200443
Conc:	4.97 ug/mL M4



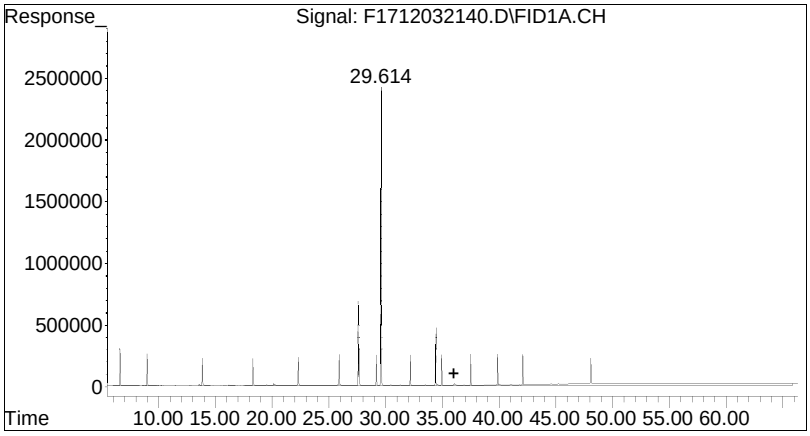
#31 n-Triacontane (C30)

R.T.:	42.086 min
Delta R.T.:	-0.041 min
Response:	5970366
Conc:	4.86 ug/mL M4



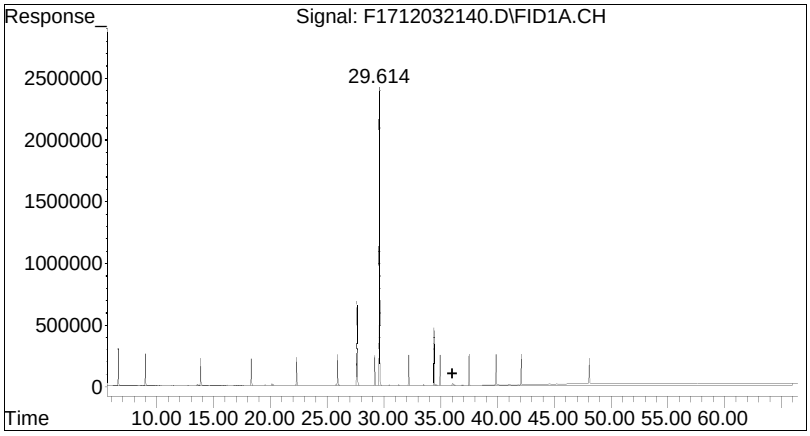
#37 n-Hexatriacontane (C36)

R.T.:	48.082 min
Delta R.T.:	-0.053 min
Response:	5965127
Conc:	4.40 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 359592102
Conc: 302.18 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 88459159
Conc: 74.33 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032156.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 2:27 am
Operator : FID17:MJS
Sample : wg1579126-3,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 28 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:46:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.609	57860408	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.668	56830018	45.309 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	90.62%
24) s	d50-Tetracosane	34.411	46139946	46.366 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	92.73%
	Target Compounds			
3) t	n-Nonane (C9)	6.596	13962381	13.080 ug/mL M4
4) t	n-Decane (C10)	8.984	16094924	14.729 ug/mL M4
6) t	n-Dodecane (C12)	13.846	17865514	16.688 ug/mL M4
9) t	n-Tetradecane (C14)	18.303	19225259	17.383 ug/mL M4
12) t	n-Hexadecane (C16)	22.302	20576030	18.616 ug/mL M4
16) t	n-Octadecane (C18)	25.909	21581458	19.222 ug/mL M4
18) t	n-Nonadecane (C19)	27.588	22824616	20.268 ug/mL M4
20) t	n-Eicosane (C20)	29.186	21654004	19.119 ug/mL M4
22) t	n-Docosane (C22)	32.182	21809413	19.165 ug/mL M4
25) t	n-Tetracosane (C24)	34.943	22392725	19.700 ug/mL M4
27) t	n-Hexacosane (C26)	37.495	22365951	19.589 ug/mL M4
29) t	n-Octacosane (C28)	39.870	23526720	19.823 ug/mL M4
31) t	n-Triacontane (C30)	42.088	22539269	19.287 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.081	22470973	17.422 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	570095694	503.831 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	324237630	286.550 ug/mLm
46) h	Total Resolved Hydroc...	36.038	321109793	283.786 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032156.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 2:27 am
Operator : FID17:MJS
Sample : wg1579126-3,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 28 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:46:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

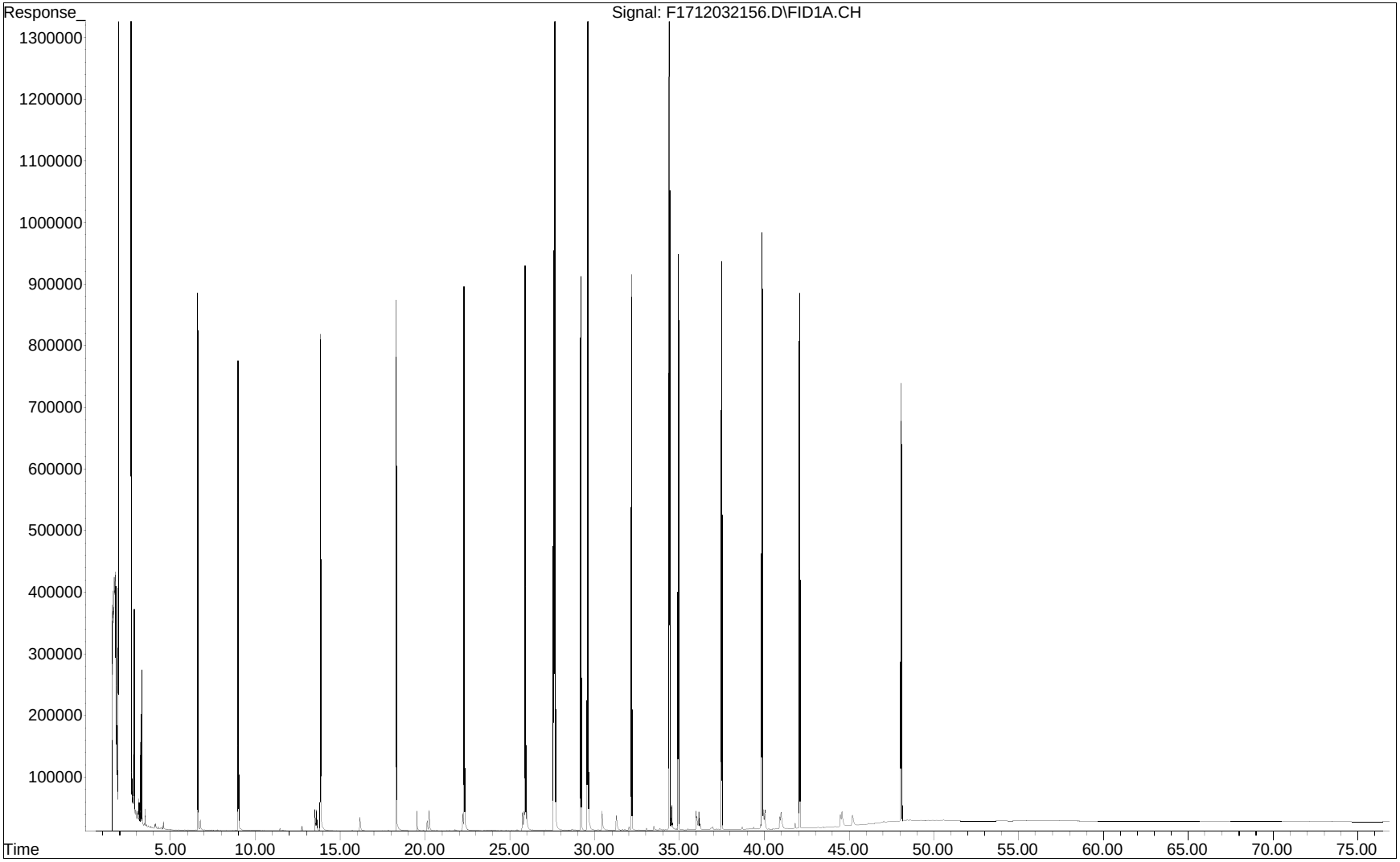
Sub List : SHC_QC_Samples - SHC_QC_Samples

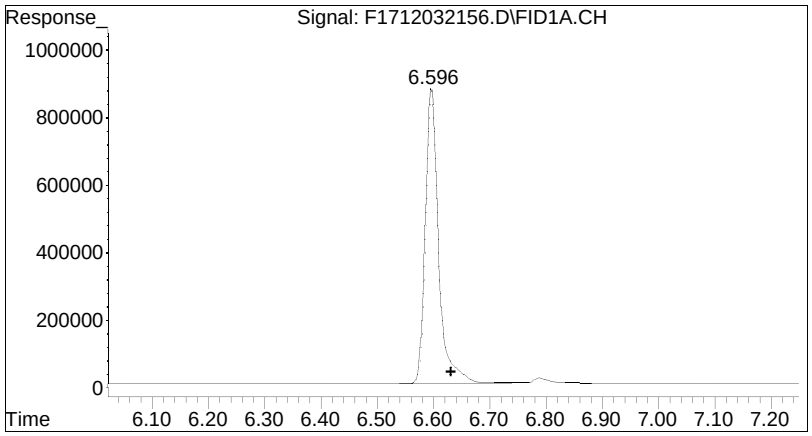
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

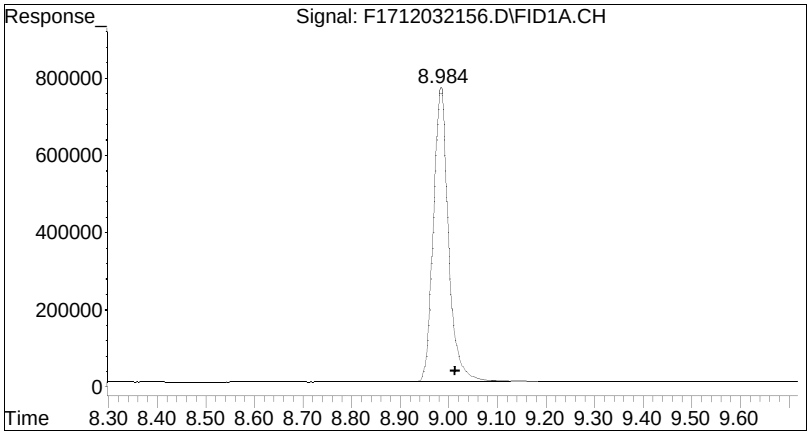
File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032156.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 2:27 am using AcqMethod FID17A.M
Sample Name: wg1579126-3,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 28
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M





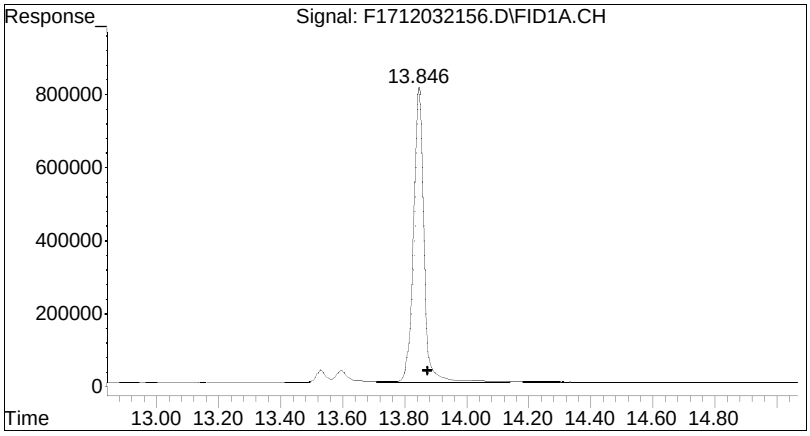
#3 n-Nonane (C9)

R.T.: 6.596 min
Delta R.T.: -0.036 min
Response: 13962381
Conc: 13.08 ug/mL M4



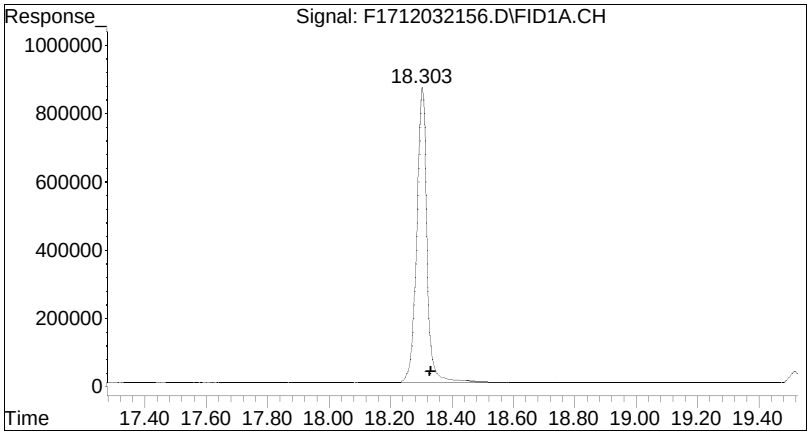
#4 n-Decane (C10)

R.T.:	8.984 min
Delta R.T.:	-0.029 min
Response:	16094924
Conc:	14.73 ug/mL M4



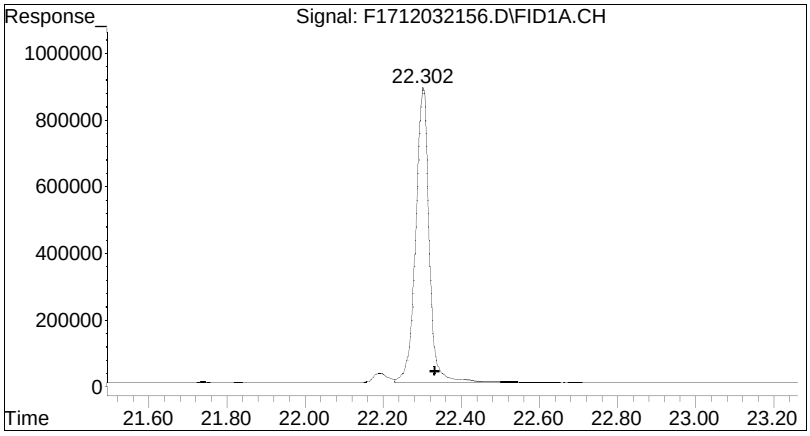
#6 n-Dodecane (C12)

R.T.: 13.846 min
Delta R.T.: -0.027 min
Response: 17865514
Conc: 16.69 ug/mL M4



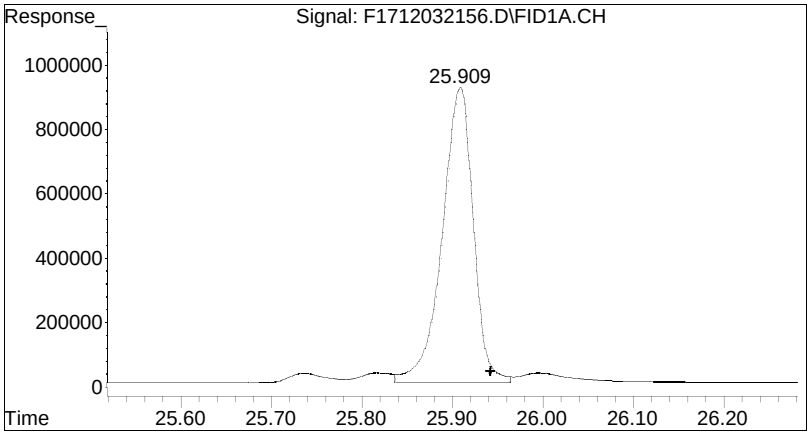
#9 n-Tetradecane (C14)

R.T.: 18.303 min
Delta R.T.: -0.028 min
Response: 19225259
Conc: 17.38 ug/mL M4



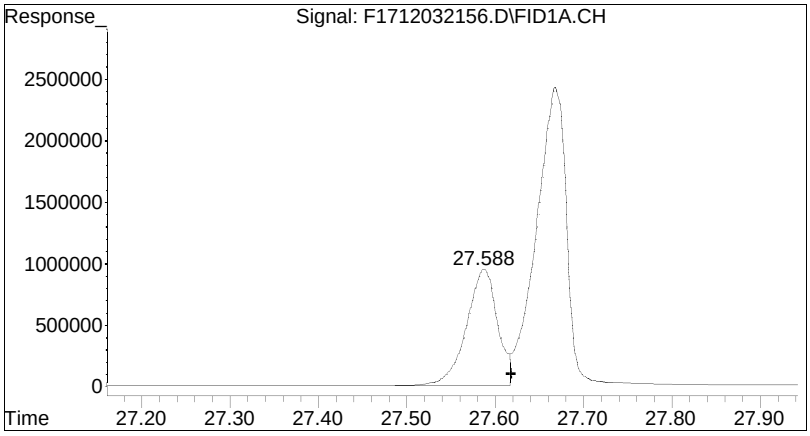
#12 n-Hexadecane (C16)

R.T.: 22.302 min
Delta R.T.: -0.029 min
Response: 20576030
Conc: 18.62 ug/mL M4



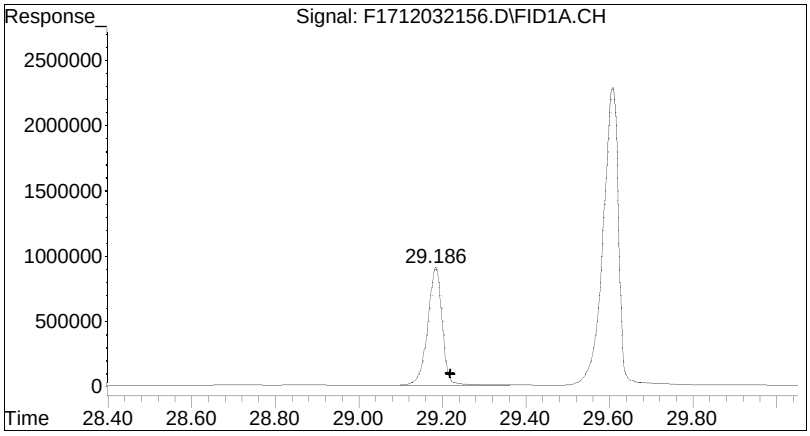
#16 n-Octadecane (C18)

R.T.: 25.909 min
Delta R.T.: -0.033 min
Response: 21581458
Conc: 19.22 ug/mL M4



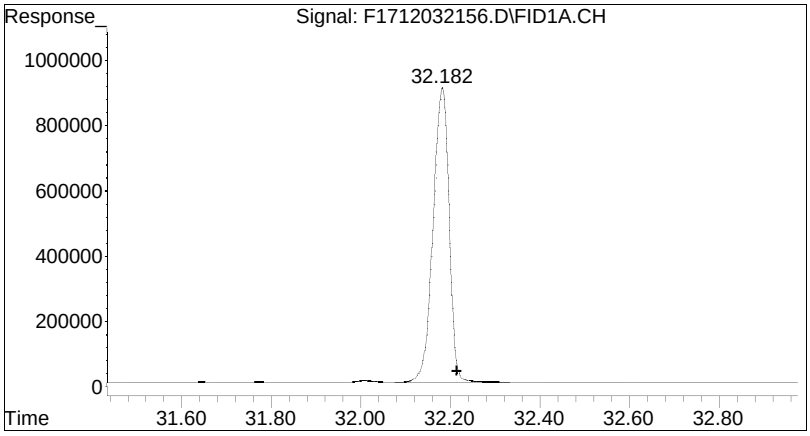
#18 n-Nonadecane (C19)

R.T.: 27.588 min
Delta R.T.: -0.031 min
Response: 22824616
Conc: 20.27 ug/mL M4



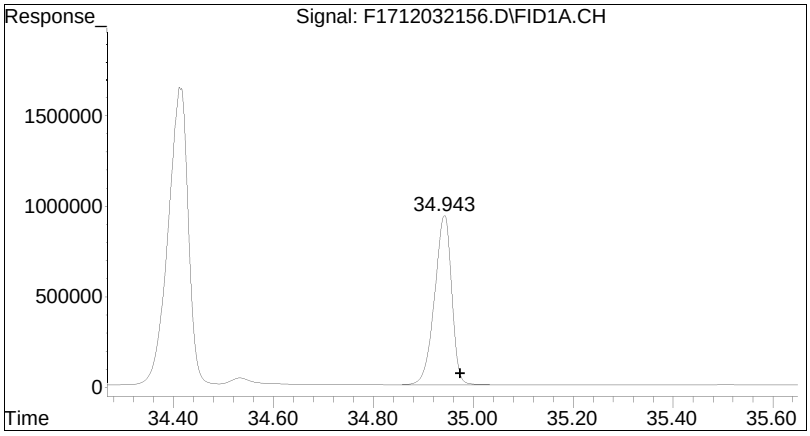
#20 n-Eicosane (C20)

R.T.: 29.186 min
Delta R.T.: -0.035 min
Response: 21654004
Conc: 19.12 ug/mL M4



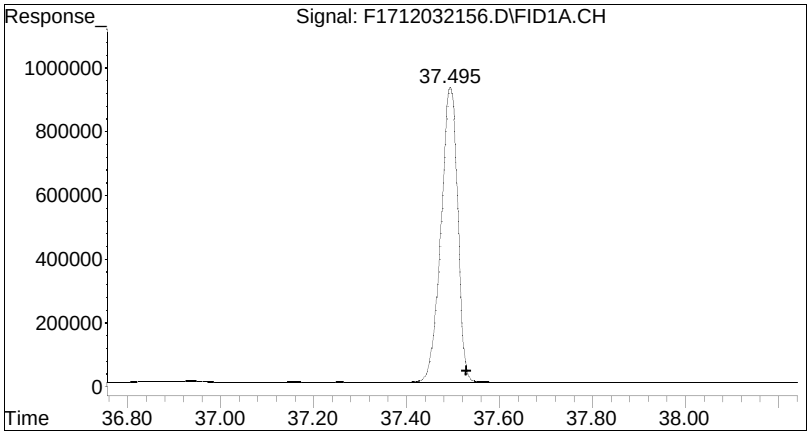
#22 n-Docosane (C22)

R.T.: 32.182 min
Delta R.T.: -0.032 min
Response: 21809413
Conc: 19.16 ug/mL M4



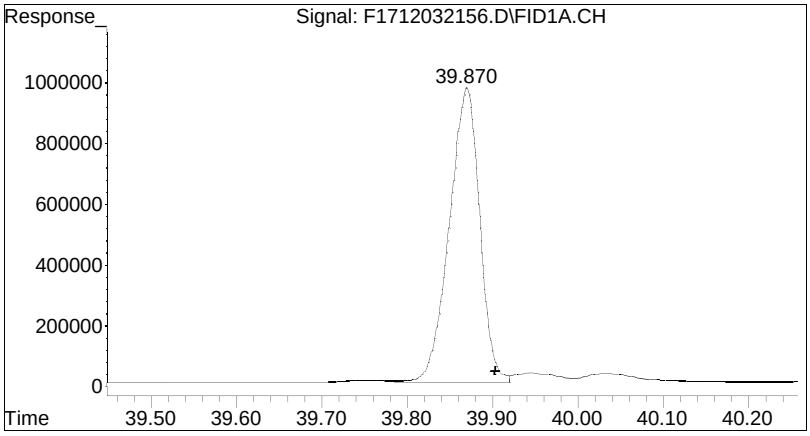
#25 n-Tetracosane (C24)

R.T.: 34.943 min
Delta R.T.: -0.031 min
Response: 22392725
Conc: 19.70 ug/mL M4



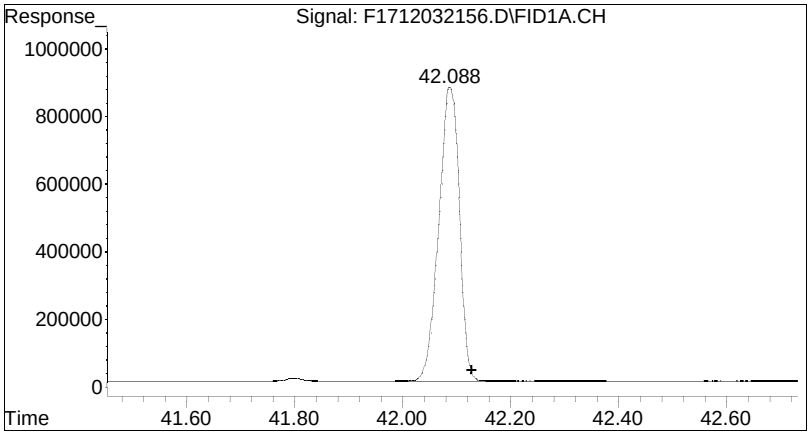
#27 n-Hexacosane (C26)

R.T.: 37.495 min
Delta R.T.: -0.034 min
Response: 22365951
Conc: 19.59 ug/mL M4



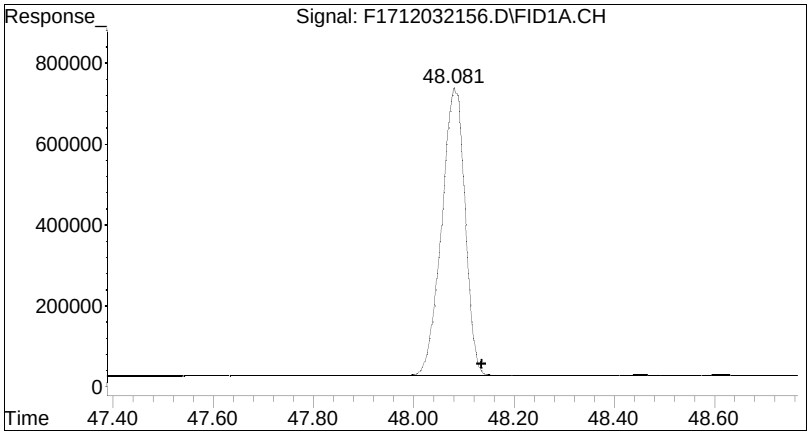
#29 n-Octacosane (C28)

R.T.: 39.870 min
Delta R.T.: -0.033 min
Response: 23526720
Conc: 19.82 ug/mL M4



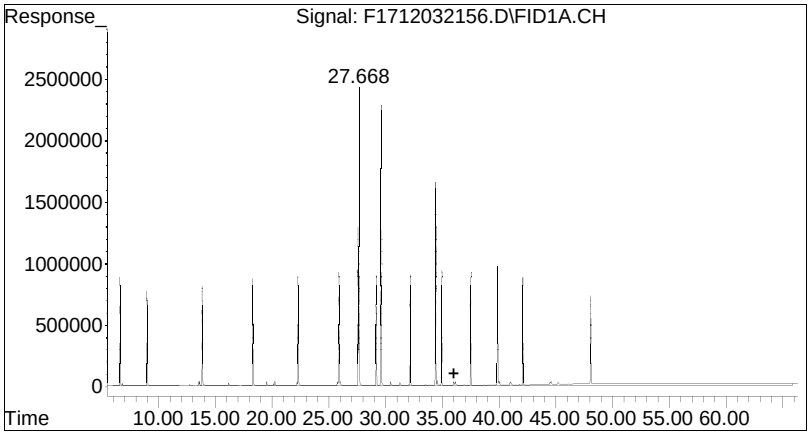
#31 n-Triacontane (C30)

R.T.: 42.088 min
Delta R.T.: -0.039 min
Response: 22539269
Conc: 19.29 ug/mL M4



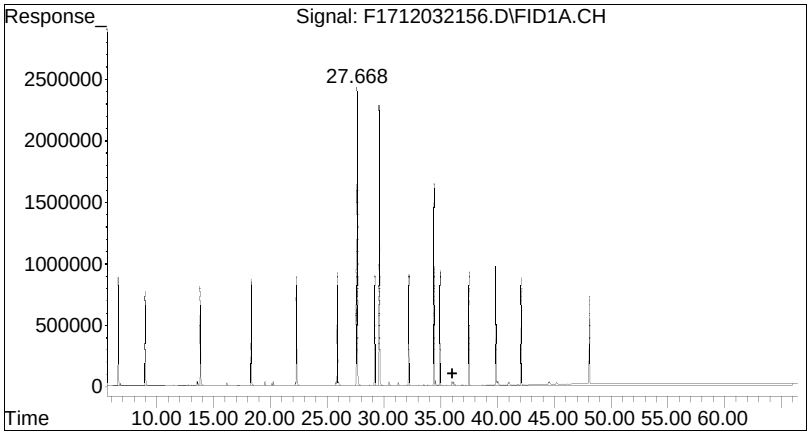
#37 n-Hexatriacontane (C36)

R.T.: 48.081 min
Delta R.T.: -0.055 min
Response: 22470973
Conc: 17.42 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 570095694
Conc: 503.83 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 36.038 min
Delta R.T.: 0.000 min
Response: 321109793
Conc: 283.79 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421017.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 09:23 pm
Operator : FID18:WR
Sample : WG1582496-3,42,,
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 59 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:31:51 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.648	55452262	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.704	52961110	42.852 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	85.70%
24) s	d50-Tetracosane	34.440	41882072	41.988 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	83.98%
	Target Compounds			
3) t	n-Nonane (C9)	6.697	11922954	12.515 ug/mL M4
4) t	n-Decane (C10)	9.074	13738879	13.406 ug/mL M4
6) t	n-Dodecane (C12)	13.922	15560229	14.967 ug/mL M4
9) t	n-Tetradecane (C14)	18.368	16718807	15.611 ug/mL M4
12) t	n-Hexadecane (C16)	22.360	18844696	17.747 ug/mL M4
16) t	n-Octadecane (C18)	25.953	19460526	17.976 ug/mL M4
18) t	n-Nonadecane (C19)	27.627	18381113	16.839 ug/mL M4
20) t	n-Eicosane (C20)	29.225	19353984	17.611 ug/mL M4
22) t	n-Docosane (C22)	32.218	19620054	17.465 ug/mL M4
25) t	n-Tetracosane (C24)	34.968	20234466	18.169 ug/mL M4
27) t	n-Hexacosane (C26)	37.516	20205086	17.793 ug/mL M4
29) t	n-Octacosane (C28)	39.885	21259672	18.252 ug/mL M4
31) t	n-Triacontane (C30)	42.097	20416607	17.506 ug/mL M4
37) t	n-Hexatriacontane (C36)	47.970	20177340	15.476 ug/mL M4
42) h	C9-C44 Total Petroleu...	33.118	572930726	515.246 ug/mL m
42) h	C9-C44 Total Petroleu BS	33.118	241336185	217.038 ug/mLm
46) h	Total Resolved Hydroc...	37.870	270007964	242.823 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421017.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 09:23 pm
Operator : FID18:WR
Sample : WG1582496-3,42,,
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 59 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:31:51 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

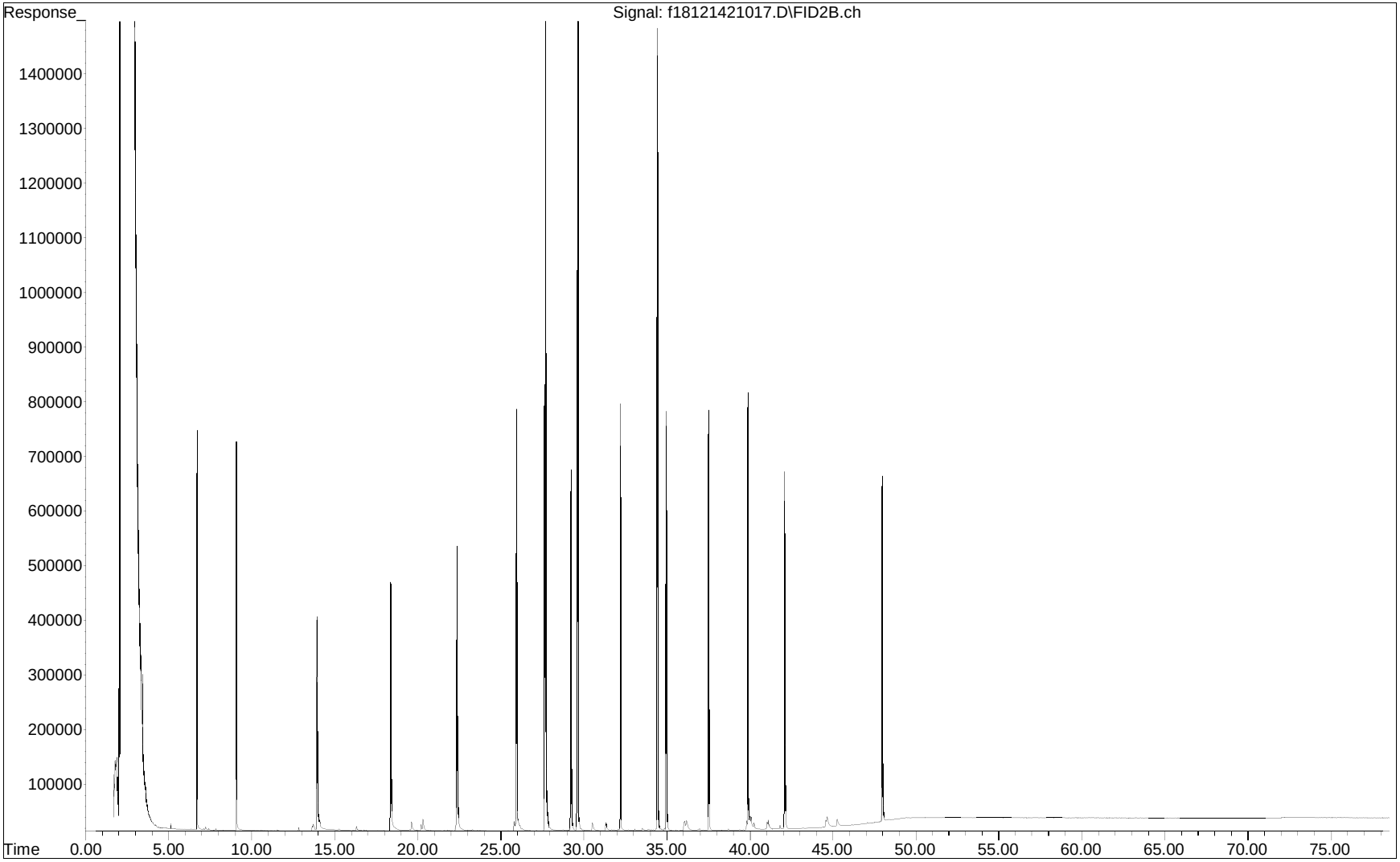
Sub List : SHC_QC_Samples - SHC_QC_Samples

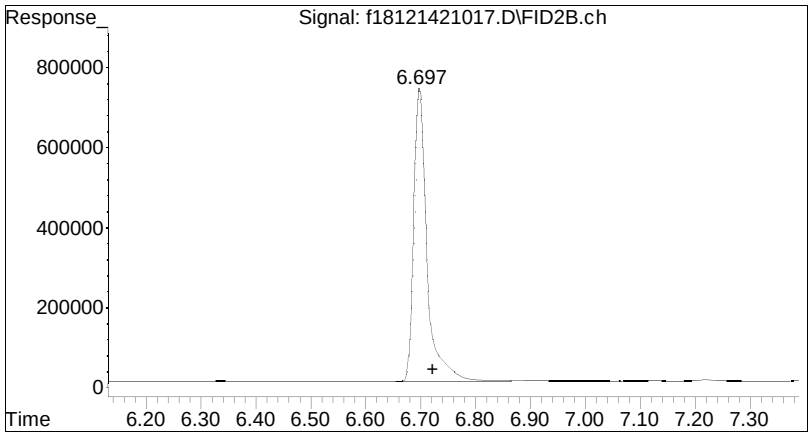
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

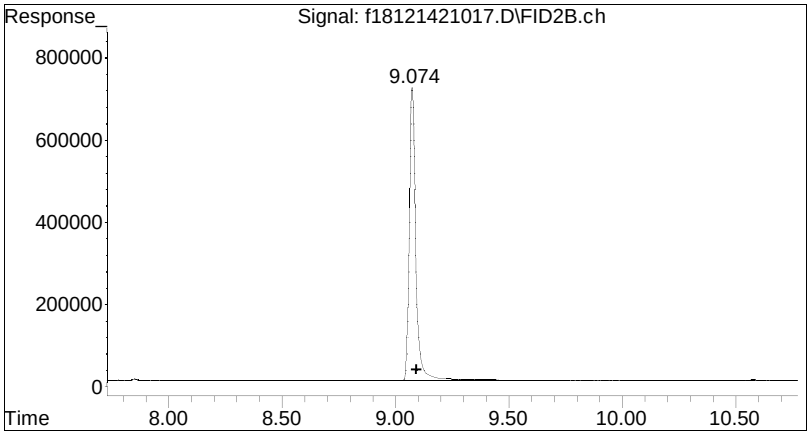
File :O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\f18121421017.D
Operator : FID18:WR
Acquired : 14 Dec 2021 09:23 pm using AcqMethod FID18.M
Sample Name: WG1582496-3,42,,
Instrument: FID 18
Misc Info : WG1583234,WG1582496,ICAL17763
Vial Number: 59
CurrentMeth: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M





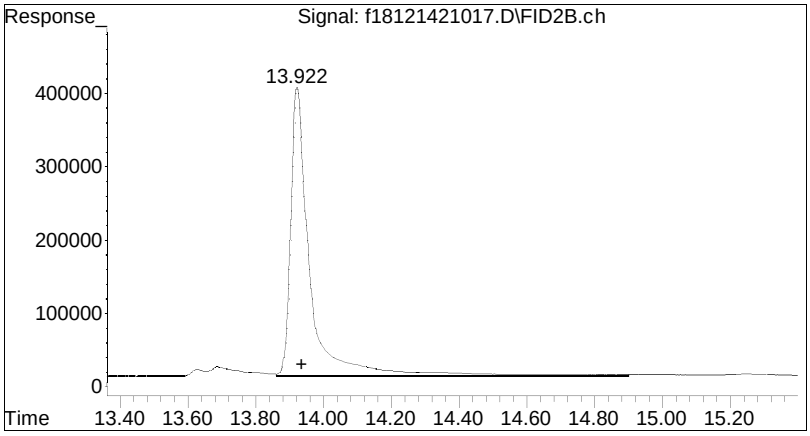
#3 n-Nonane (C9)

R.T.: 6.697 min
Delta R.T.: -0.025 min
Response: 11922954
Conc: 12.52 ug/mL M4



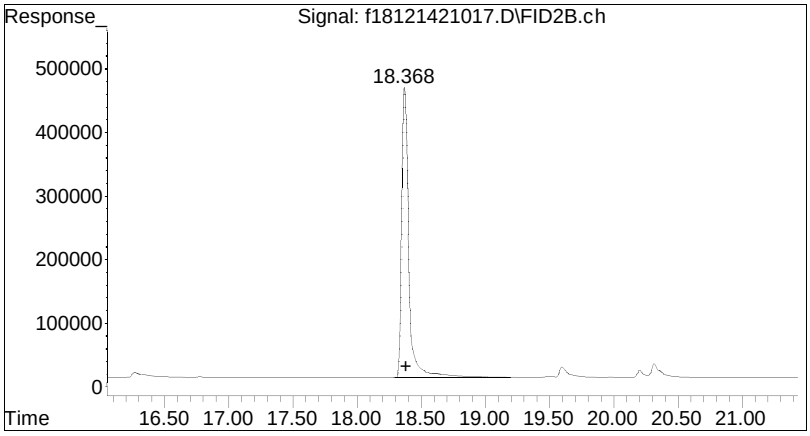
#4 n-Decane (C10)

R.T.:	9.074 min
Delta R.T.:	-0.019 min
Response:	13738879
Conc:	13.41 ug/mL M4



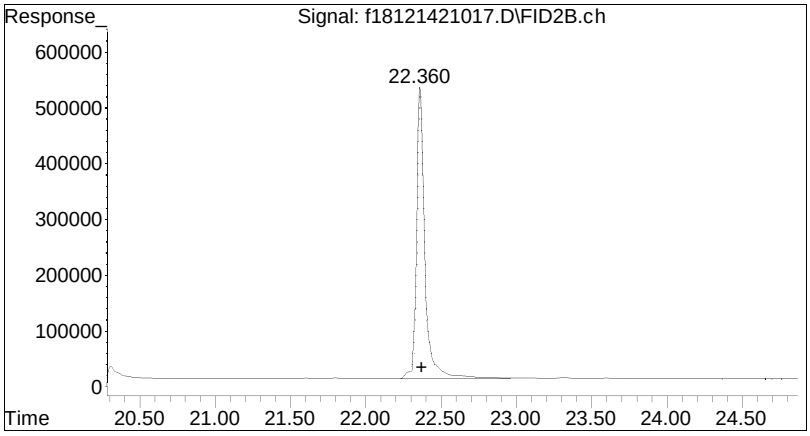
#6 n-Dodecane (C12)

R.T.:	13.922 min
Delta R.T.:	-0.014 min
Response:	15560229
Conc:	14.97 ug/mL M4



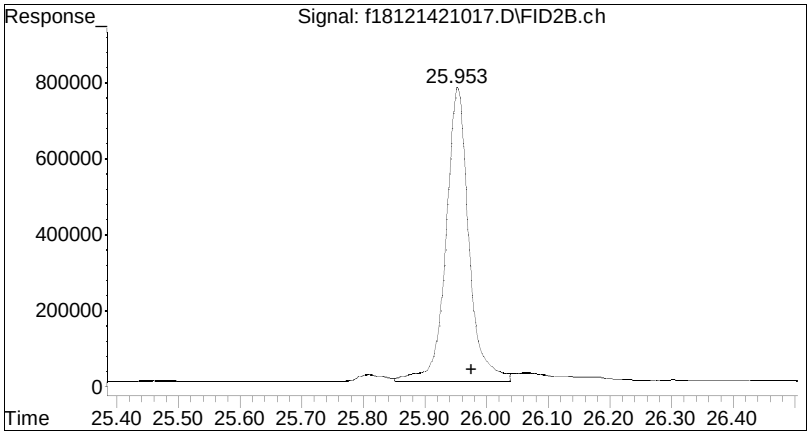
#9 n-Tetradecane (C14)

R.T.:	18.368 min
Delta R.T.:	-0.015 min
Response:	16718807
Conc:	15.61 ug/mL M4



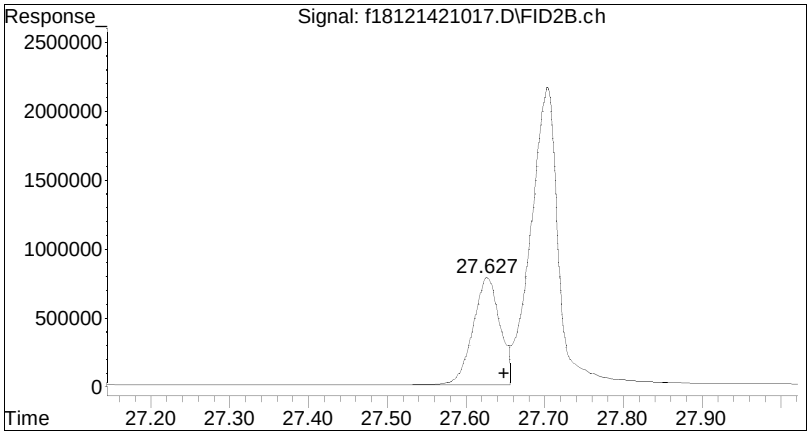
#12 n-Hexadecane (C16)

R.T.: 22.360 min
Delta R.T.: -0.014 min
Response: 18844696
Conc: 17.75 ug/mL M4



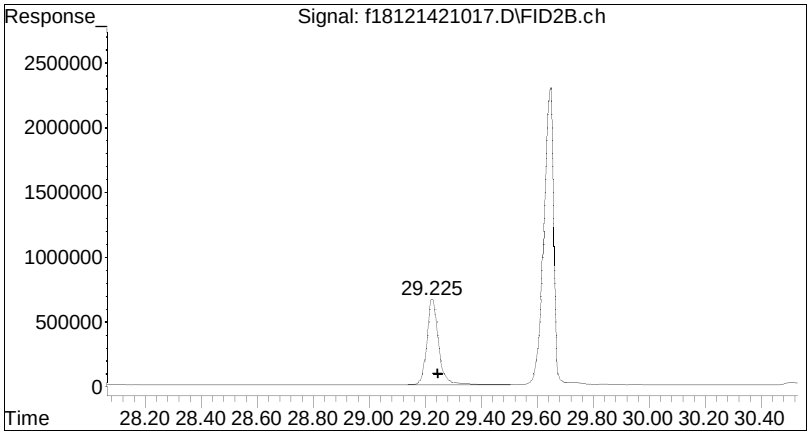
#16 n-Octadecane (C18)

R.T.:	25.953 min
Delta R.T.:	-0.023 min
Response:	19460526
Conc:	17.98 ug/mL M4



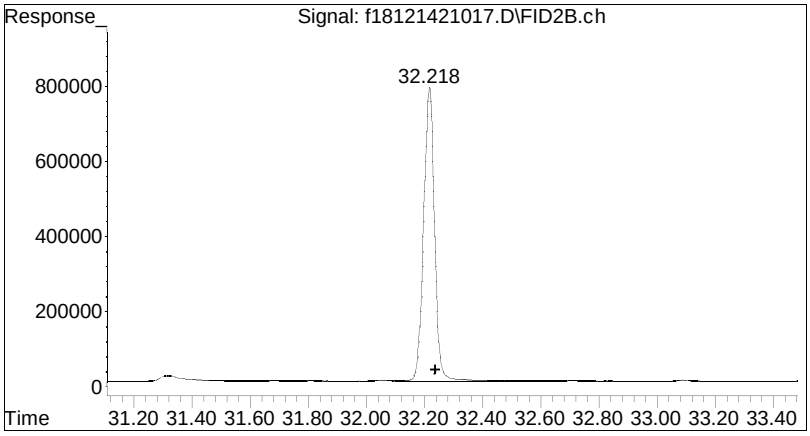
#18 n-Nonadecane (C19)

R.T.: 27.627 min
Delta R.T.: -0.021 min
Response: 18381113
Conc: 16.84 ug/mL M4



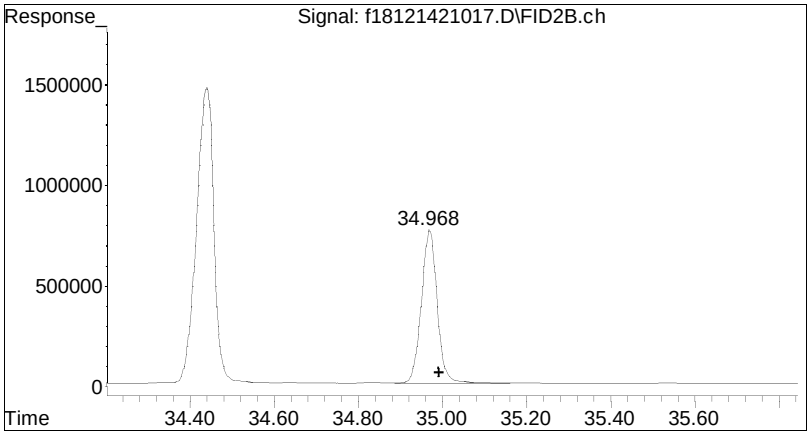
#20 n-Eicosane (C20)

R.T.: 29.225 min
Delta R.T.: -0.022 min
Response: 19353984
Conc: 17.61 ug/mL M4



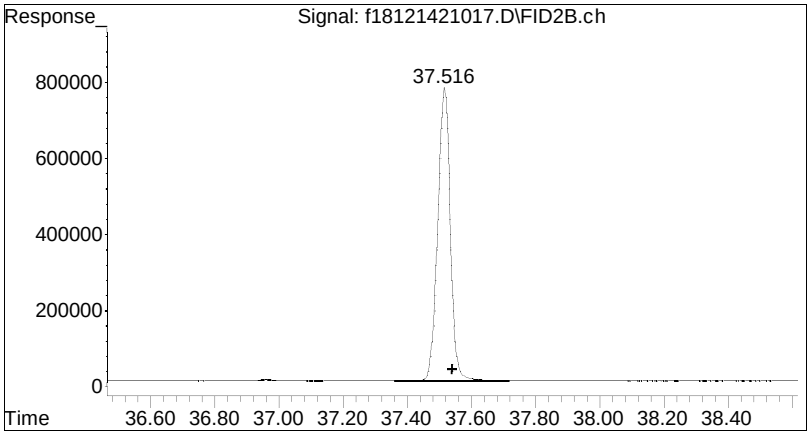
#22 n-Docosane (C22)

R.T.:	32.218 min
Delta R.T.:	-0.020 min
Response:	19620054
Conc:	17.47 ug/mL M4



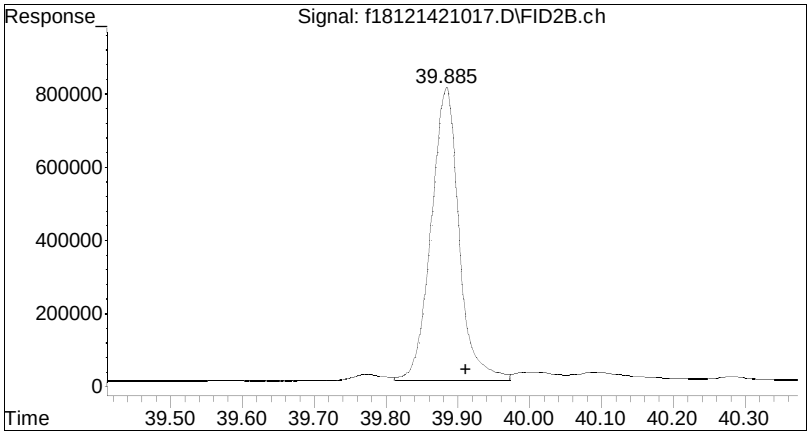
#25 n-Tetracosane (C24)

R.T.: 34.968 min
Delta R.T.: -0.024 min
Response: 20234466
Conc: 18.17 ug/mL M4



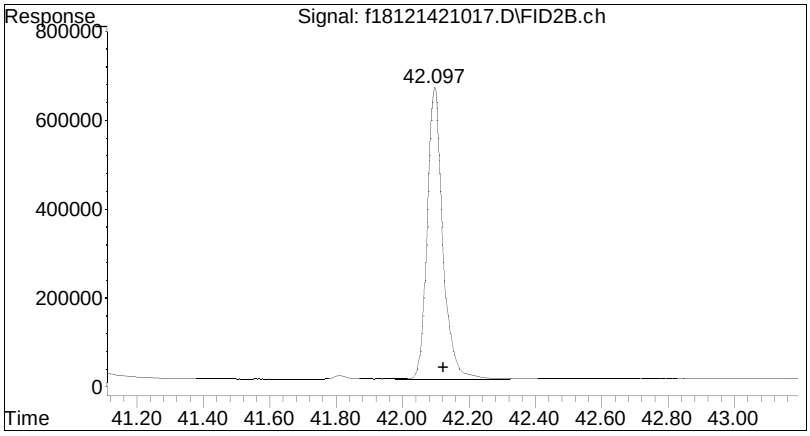
#27 n-Hexacosane (C26)

R.T.: 37.516 min
Delta R.T.: -0.025 min
Response: 20205086
Conc: 17.79 ug/mL M4



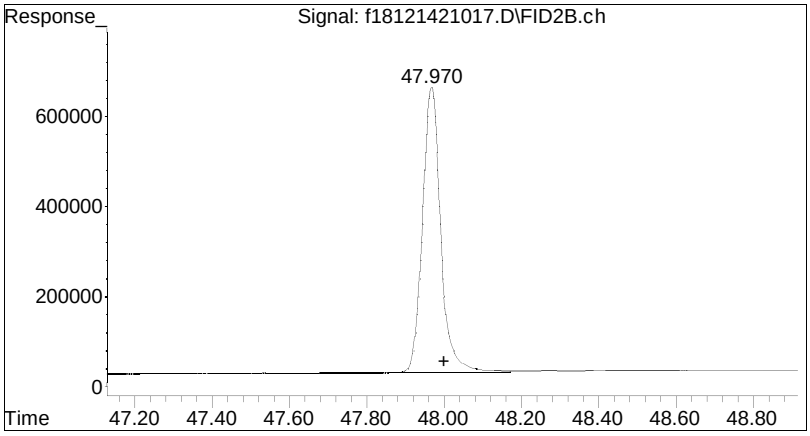
#29 n-Octacosane (C28)

R.T.: 39.885 min
Delta R.T.: -0.027 min
Response: 21259672
Conc: 18.25 ug/mL M4



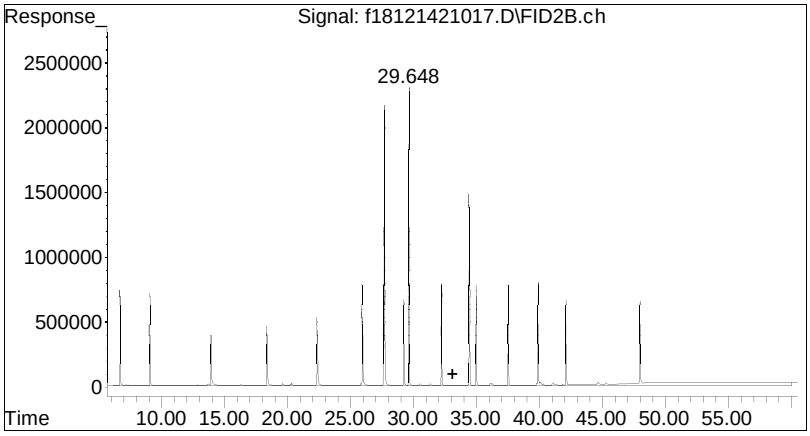
#31 n-Triacontane (C30)

R.T.: 42.097 min
Delta R.T.: -0.027 min
Response: 20416607
Conc: 17.51 ug/mL M4



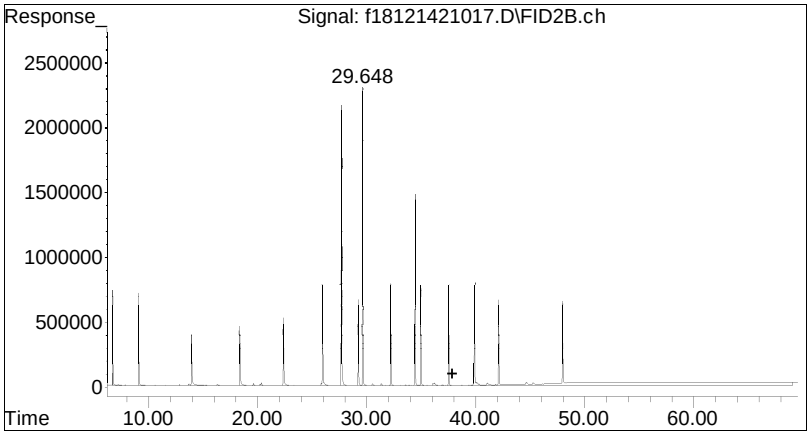
#37 n-Hexatriacontane (C36)

R.T.:	47.970 min
Delta R.T.:	-0.031 min
Response:	20177340
Conc:	15.48 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 33.118 min
Delta R.T.: 0.000 min
Response: 572930726
Conc: 515.25 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 270007964
Conc: 242.82 ug/mL m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422016.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 09:40 pm
Operator : FID18:WR
Sample : WG1590340-3,42,,
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:47:56 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.111	61969760	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.088	13969915	10.111 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	20.22%#
24) s	d50-Tetracosane	35.733	10655570	9.455 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	18.91%#
	Target Compounds			
3) t	n-Nonane (C9)	7.814	4186992	4.097 ug/mL M4
4) t	n-Decane (C10)	10.282	4213563	4.176 ug/mL M4
6) t	n-Dodecane (C12)	15.180	4221113	3.876 ug/mL M4
9) t	n-Tetradecane (C14)	19.637	4404461	3.836 ug/mL M4
12) t	n-Hexadecane (C16)	23.635	4964855	4.233 ug/mL M4
16) t	n-Octadecane (C18)	27.240	5260225	4.397 ug/mL M4
18) t	n-Nonadecane (C19)	28.917	4862743	4.038 ug/mL M4
20) t	n-Eicosane (C20)	30.517	4898375	4.012 ug/mL M4
22) t	n-Docosane (C22)	33.512	4994670	4.032 ug/mL M4
25) t	n-Tetracosane (C24)	36.272	5320502	4.325 ug/mL M4
27) t	n-Hexacosane (C26)	38.830	5079629	4.046 ug/mL M4
29) t	n-Octacosane (C28)	41.206	5007252	3.913 ug/mL M4
31) t	n-Triacontane (C30)	43.425	4992054	3.936 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.362	4528442	3.463 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.047	417105950	350.457 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.047	36786444	30.908 ug/mLm
46) h	Total Resolved Hydroc...	38.937	75473189	63.413 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422016.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 09:40 pm
Operator : FID18:WR
Sample : WG1590340-3,42,,
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 8 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:47:56 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

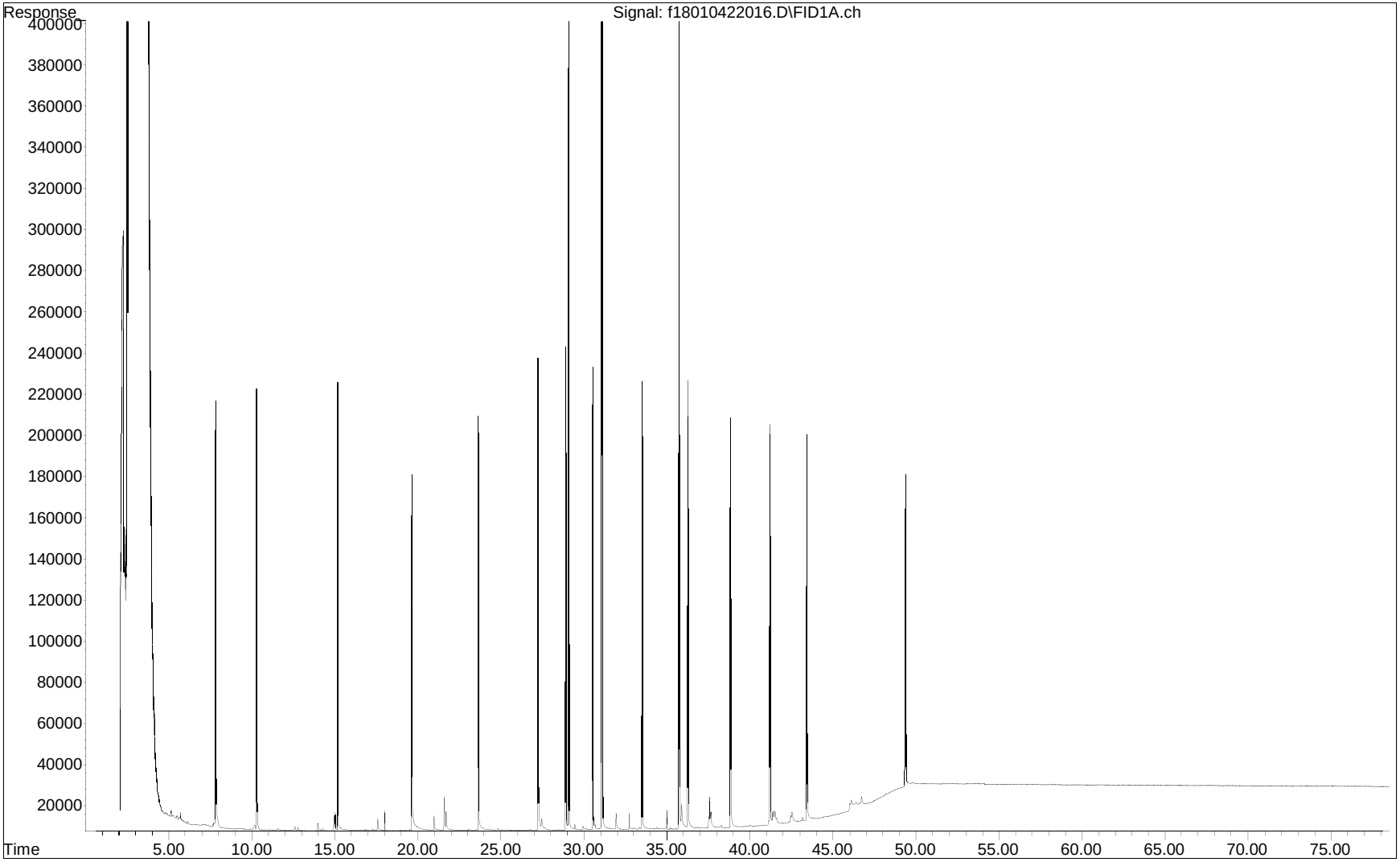
Sub List : SHC_QC_Samples - SHC_QC_Samples

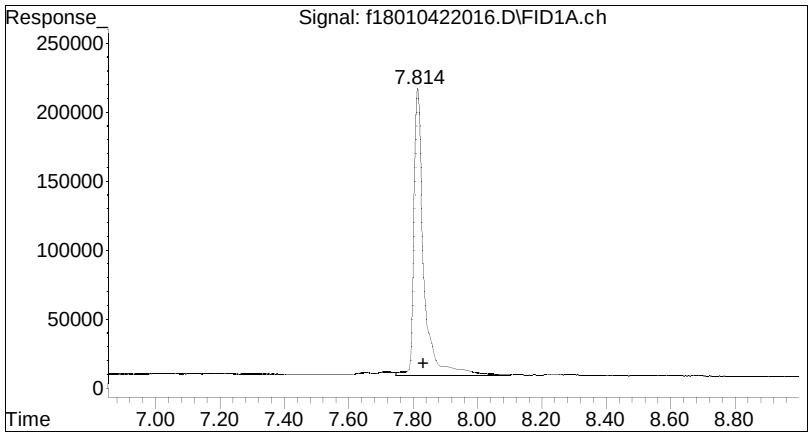
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

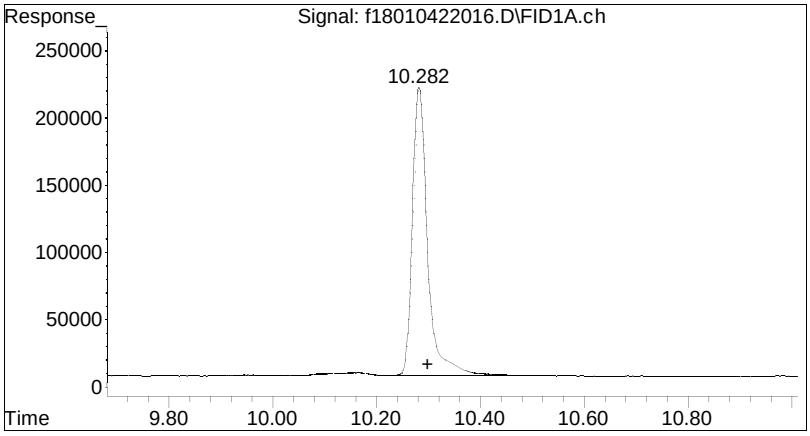
File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422016.D
Operator : FID18:WR
Acquired : 04 Jan 2022 09:40 pm using AcqMethod FID18.M
Sample Name: WG1590340-3,42,,
Instrument: FID 18
Misc Info : WG1590500,WG1590340,ICAL18548
Vial Number: 8
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M





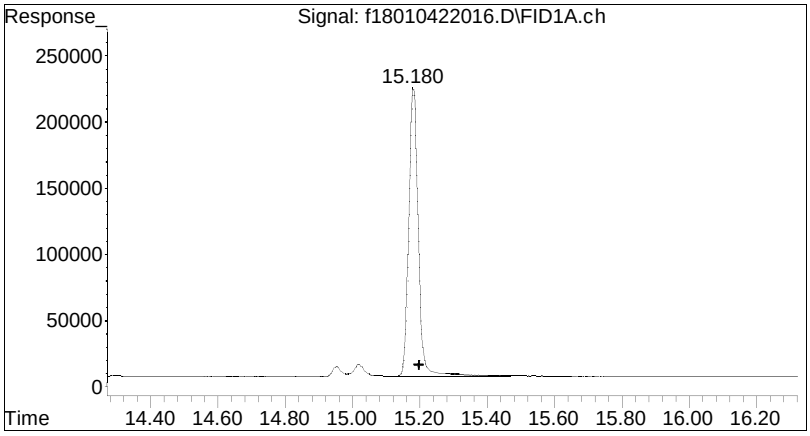
#3 n-Nonane (C9)

R.T.:	7.814 min
Delta R.T.:	-0.019 min
Response:	4186992
Conc:	4.10 ug/mL M4



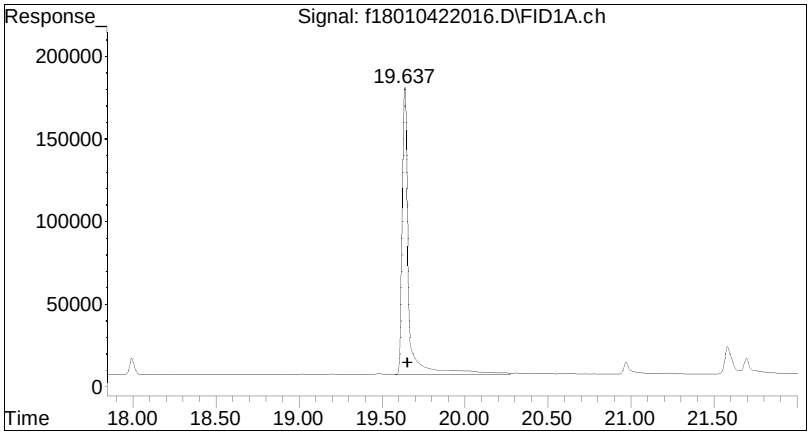
#4 n-Decane (C10)

R.T.:	10.282 min
Delta R.T.:	-0.017 min
Response:	4213563
Conc:	4.18 ug/mL M4



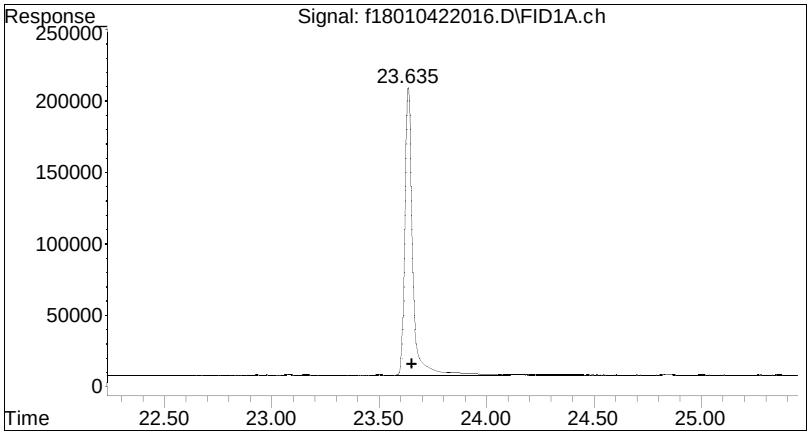
#6 n-Dodecane (C12)

R.T.:	15.180 min
Delta R.T.:	-0.017 min
Response:	4221113
Conc:	3.88 ug/mL M4



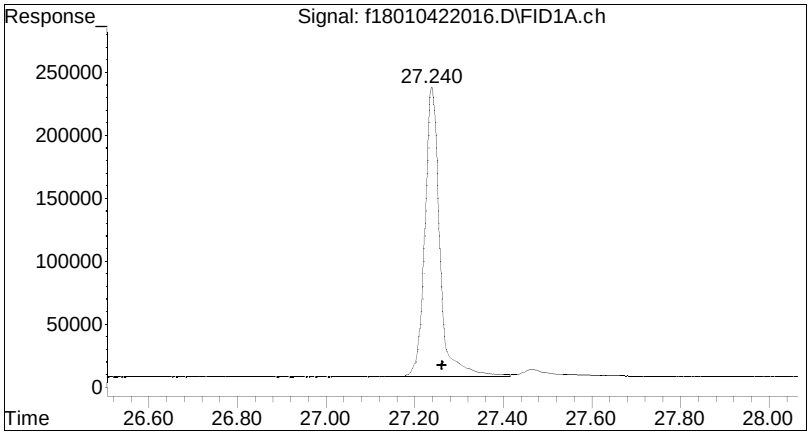
#9 n-Tetradecane (C14)

R.T.:	19.637 min
Delta R.T.:	-0.020 min
Response:	4404461
Conc:	3.84 ug/mL M4



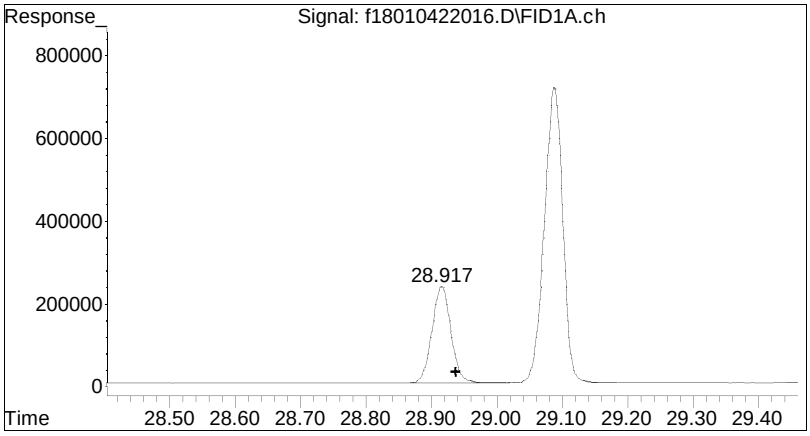
#12 n-Hexadecane (C16)

R.T.:	23.635 min
Delta R.T.:	-0.020 min
Response:	4964855
Conc:	4.23 ug/mL M4



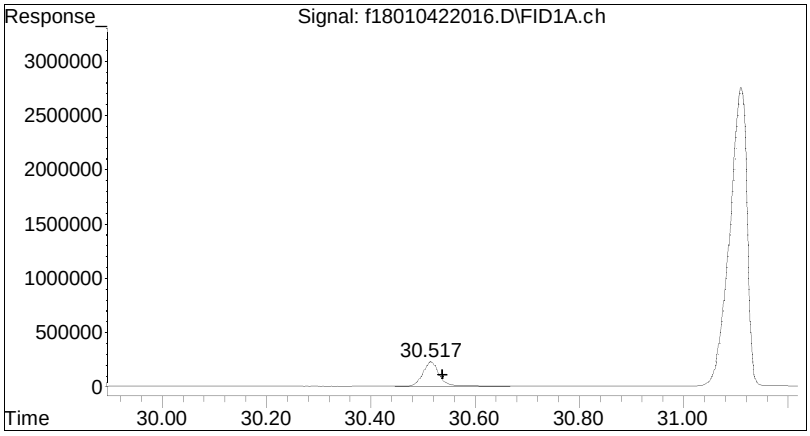
#16 n-Octadecane (C18)

R.T.:	27.240 min
Delta R.T.:	-0.023 min
Response:	5260225
Conc:	4.40 ug/mL M4



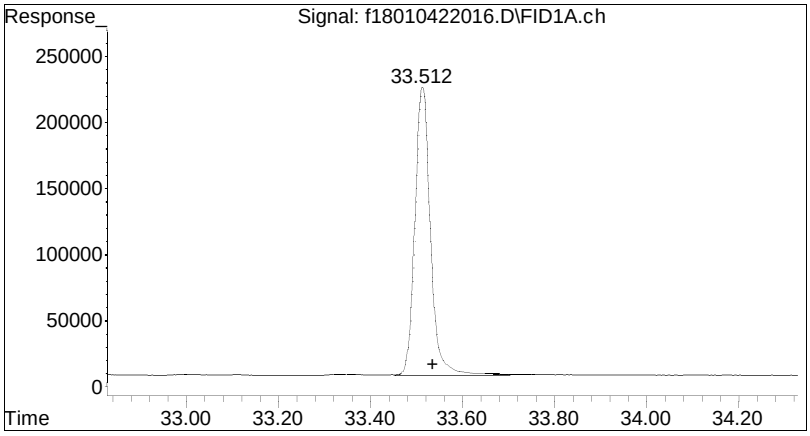
#18 n-Nonadecane (C19)

R.T.:	28.917 min
Delta R.T.:	-0.021 min
Response:	4862743
Conc:	4.04 ug/mL M4



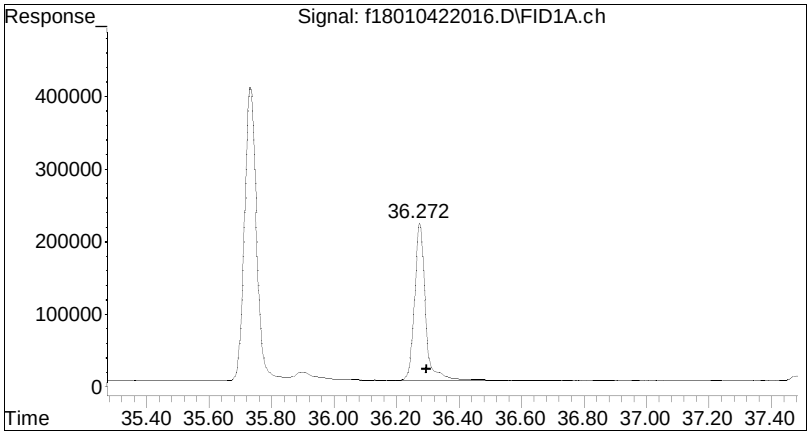
#20 n-Eicosane (C20)

R.T.:	30.517 min
Delta R.T.:	-0.022 min
Response:	4898375
Conc:	4.01 ug/mL M4



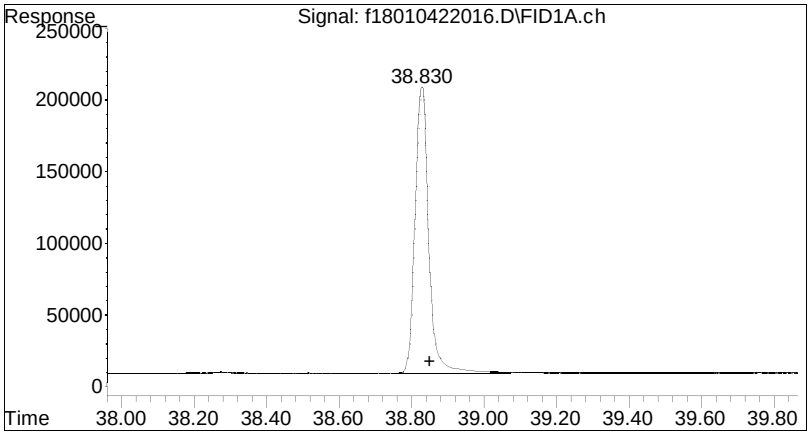
#22 n-Docosane (C22)

R.T.:	33.512 min
Delta R.T.:	-0.024 min
Response:	4994670
Conc:	4.03 ug/mL M4



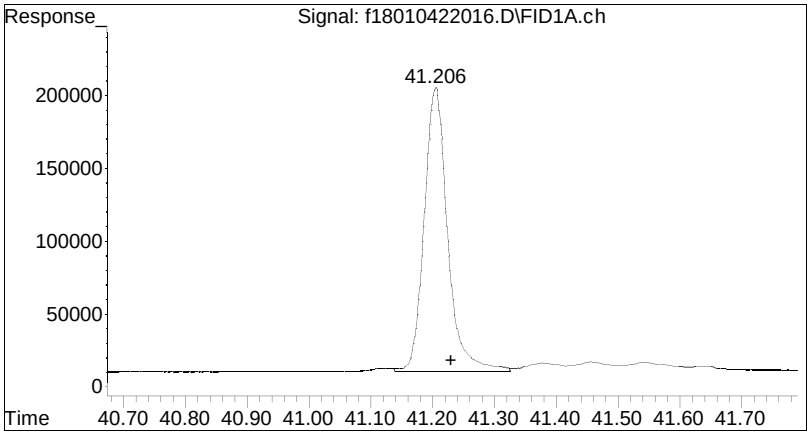
#25 n-Tetracosane (C24)

R.T.:	36.272 min
Delta R.T.:	-0.023 min
Response:	5320502
Conc:	4.32 ug/mL M4



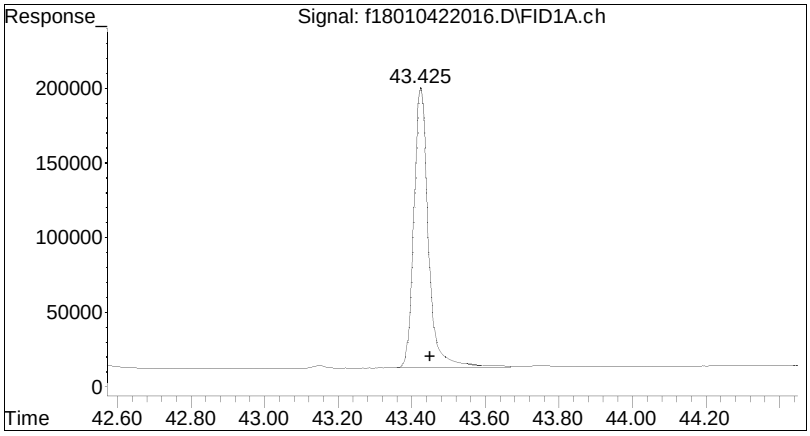
#27 n-Hexacosane (C26)

R.T.:	38.830 min
Delta R.T.:	-0.021 min
Response:	5079629
Conc:	4.05 ug/mL M4



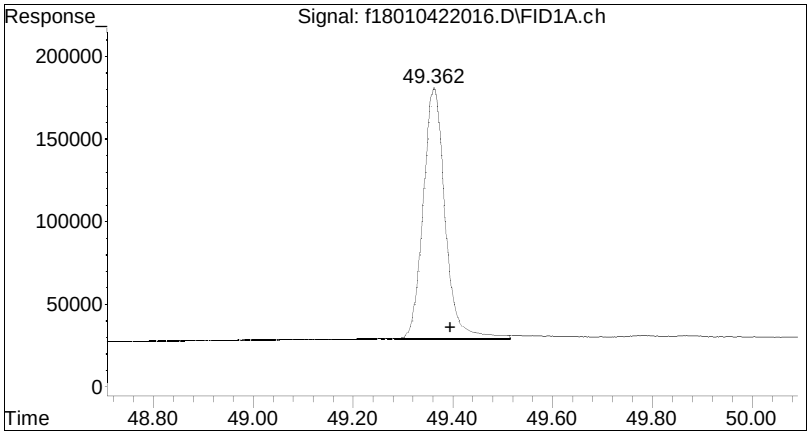
#29 n-Octacosane (C28)

R.T.:	41.206 min
Delta R.T.:	-0.024 min
Response:	5007252
Conc:	3.91 ug/mL M4



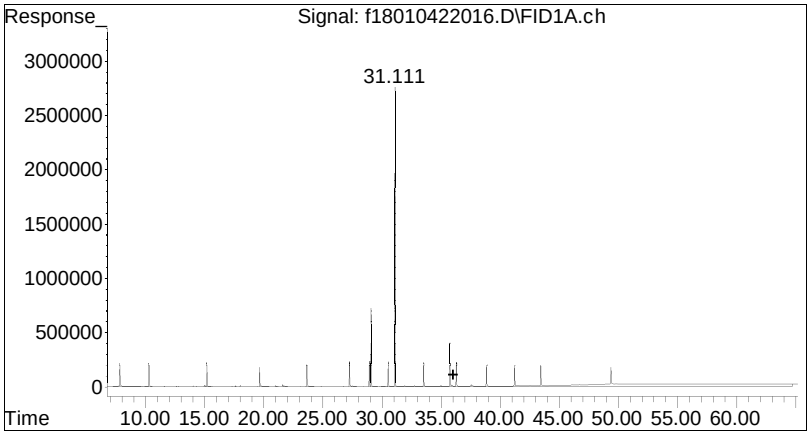
#31 n-Triacontane (C30)

R.T.:	43.425 min
Delta R.T.:	-0.026 min
Response:	4992054
Conc:	3.94 ug/mL M4



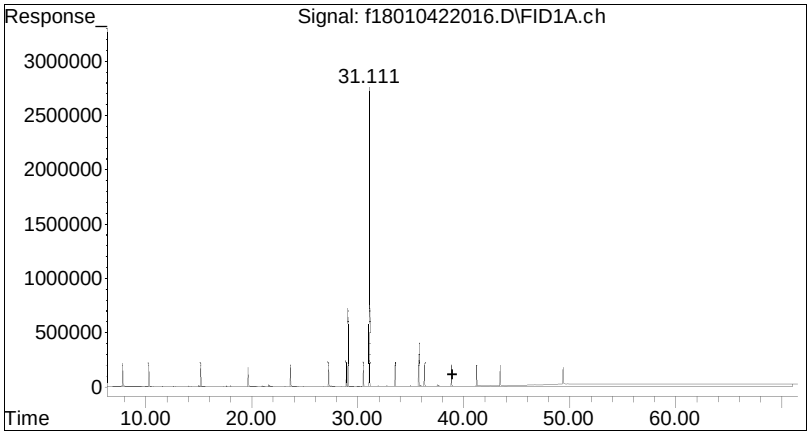
#37 n-Hexatriacontane (C36)

R.T.:	49.362 min
Delta R.T.:	-0.033 min
Response:	4528442
Conc:	3.46 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 36.047 min
Delta R.T.: 0.000 min
Response: 417105950
Conc: 350.46 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	38.937 min
Delta R.T.:	0.000 min
Response:	75473189
Conc:	63.41 ug/mL m

Instrument Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032134.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 10:16 am
Operator : FID17:WR
Sample : IB1712032102
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:53:00 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032101
Blank File : F1712032110.D

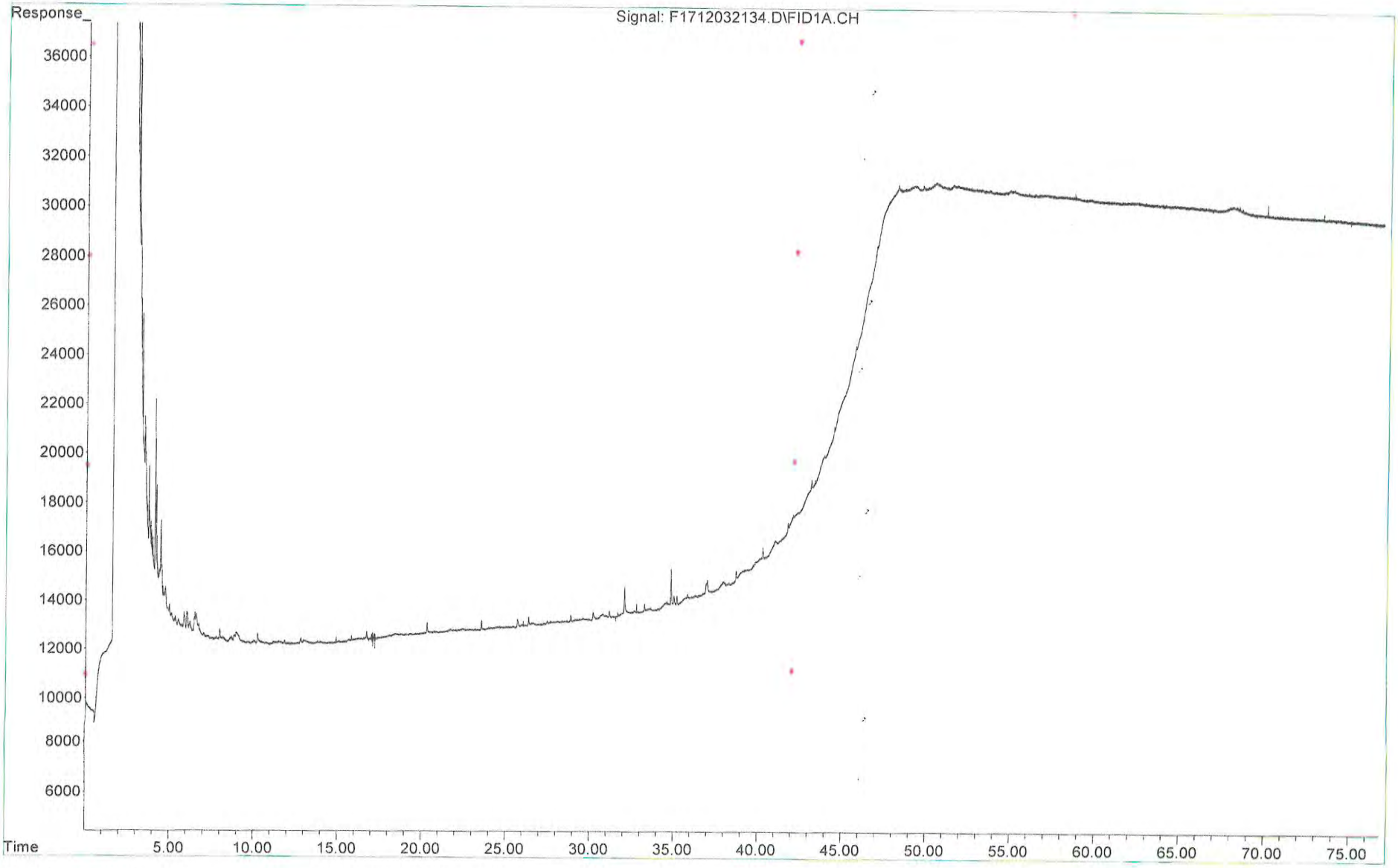
Sub List : TPH_DRO_ORO - IS,SURR & RANGES

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.576	2555	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
24) s	d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
	Target Compounds			
42) h	C9-C44 Total Petroleu...	36.038	284312704	5689201.114 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	-79389048	N.D. ug/mLm
44) h	C10-C28 DRO	24.454	28054781	568084.886 ug/mL m
44) h	C10-C28 DRO BS	24.454	1942741	39338.818 ug/mLm
45) h	C28-C40 ORO	46.963	96047996	1861574.180 ug/mL m
45) h	C28-C40 ORO BS	46.963	-41838805	N.D. ug/mLm
46) h	Total Resolved Hydroc...	36.038	2541109	50848.519 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032134.D
Operator : FID17:WR
Acquired : 04 Dec 2021 10:16 am using AcqMethod FID17A.M
Sample Name: IB1712032102
Instrument: FID17
Misc Info :
Vial Number: 17
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032150.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 10:02 pm
Operator : FID17:WR
Sample : IB1712032103
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 12:58:12 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

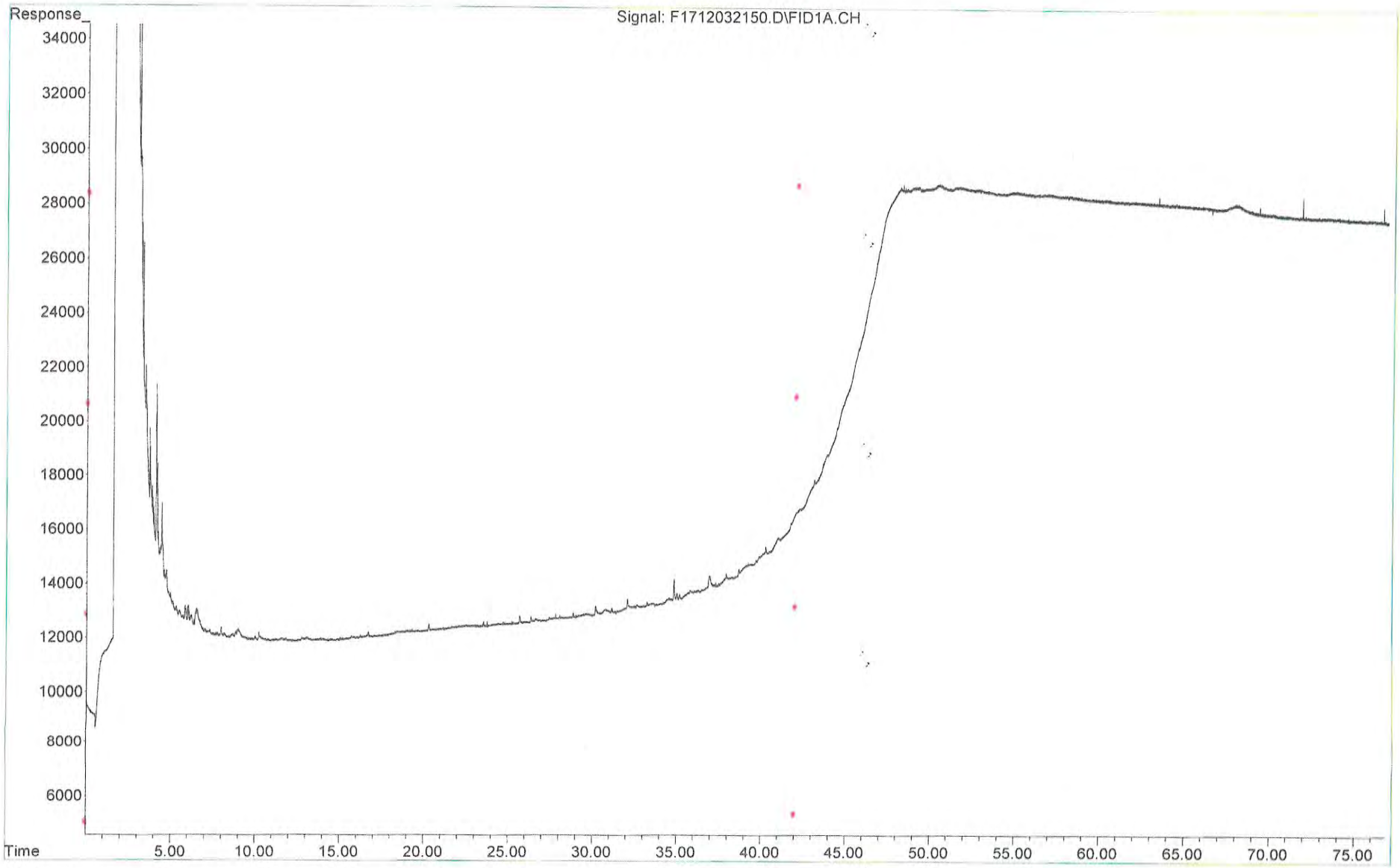
Sub List : TPH_DRO_ORO - IS,SURR & RANGES

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.651	3544	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
24) s	d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
	Target Compounds			
42) h	C9-C44 Total Petroleu...	36.038	245858064	3546985.917 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	-38454640	N.D. ug/mLm
44) h	C10-C28 DRO	24.454	19952746	291292.295 ug/mL m
44) h	C10-C28 DRO BS	24.454	-8102035	N.D. ug/mLm
45) h	C28-C40 ORO	46.963	81603877	1140309.704 ug/mL M5
45) h	C28-C40 ORO BS	46.963	-14444119	N.D. ug/mLM5
46) h	Total Resolved Hydroc...	36.038	1577508	22758.656 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032150.D
Operator : FID17:WR
Acquired : 04 Dec 2021 10:02 pm using AcqMethod FID17A.M
Sample Name: IB1712032103
Instrument: FID17
Misc Info :
Vial Number: 25
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032166.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 9:47 am
Operator : FID17:WR
Sample : IB1712032104
Misc :
ALS Vial : 33 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 10:58:00 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:42 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

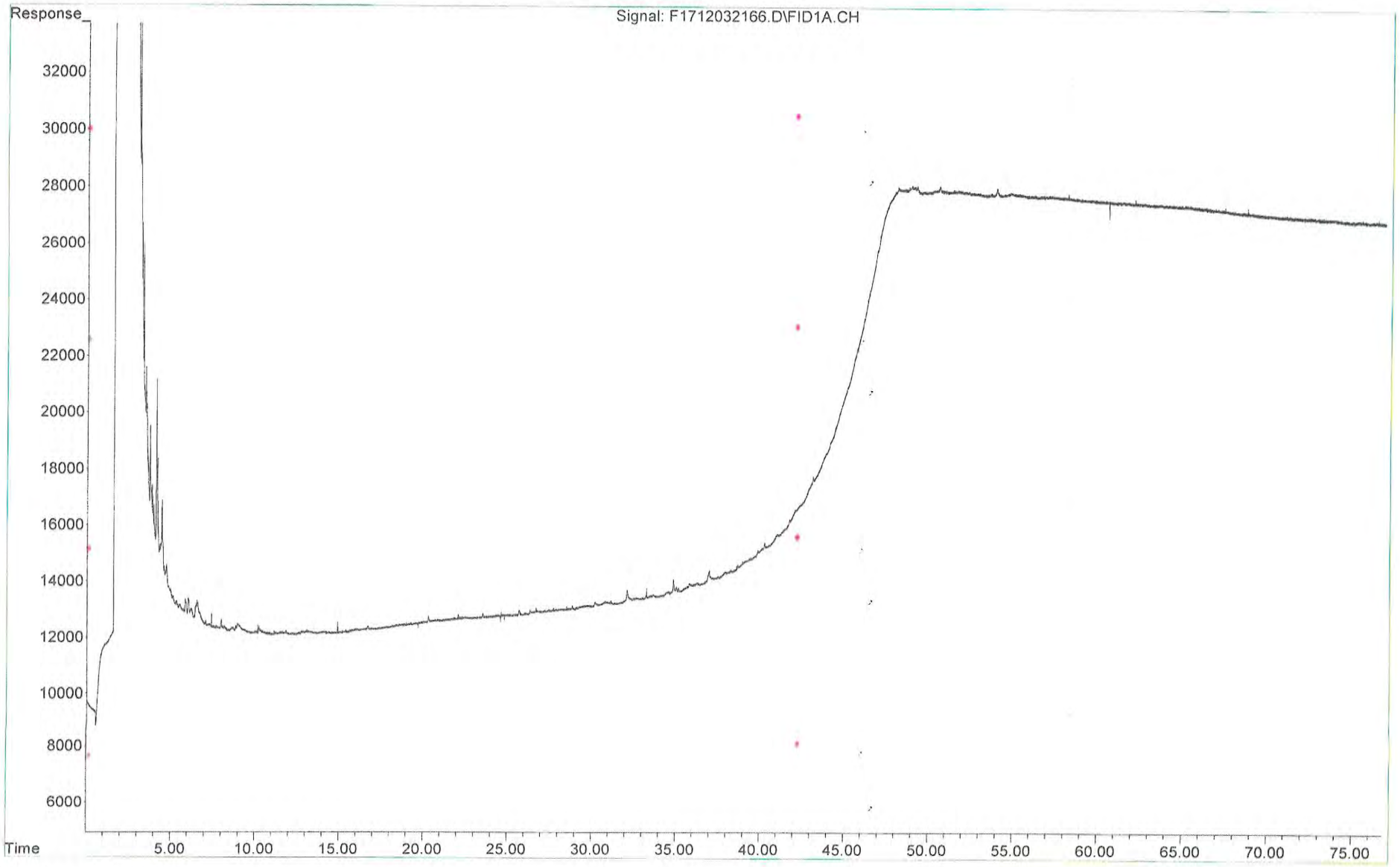
Sub List : TPH_DRO_ORO - IS,SURR & RANGES

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.753f	8211	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
24) s	d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
	Target Compounds			
42) h	C9-C44 Total Petroleu...	36.038	245933757	1531578.693 ug/mL M5
42) h	C9-C44 Total Petroleu BS	36.038	75693	471.388 ug/mLM5
44) h	C10-C28 DRO	24.454	24374988	153609.086 ug/mL m
44) h	C10-C28 DRO BS	24.454	4422242	27868.589 ug/mLm
45) h	C28-C40 ORO	46.963	77729567	468861.354 ug/mL m
45) h	C28-C40 ORO BS	46.963	-3874310	N.D. ug/mLm
46) h	Total Resolved Hydroc...	36.038	900709	5609.263 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032166.D
Operator : FID17:WR
Acquired : 05 Dec 2021 9:47 am using AcqMethod FID17A.M
Sample Name: IB1712032104
Instrument: FID17
Misc Info :
Vial Number: 33
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421009.D
Signal(s) : FID2B.ch
Acq On : 14 Dec 2021 03:38 pm
Operator : FID18:WR
Sample : IB1812142101R
Misc :
ALS Vial : 55 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 14:17:35 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

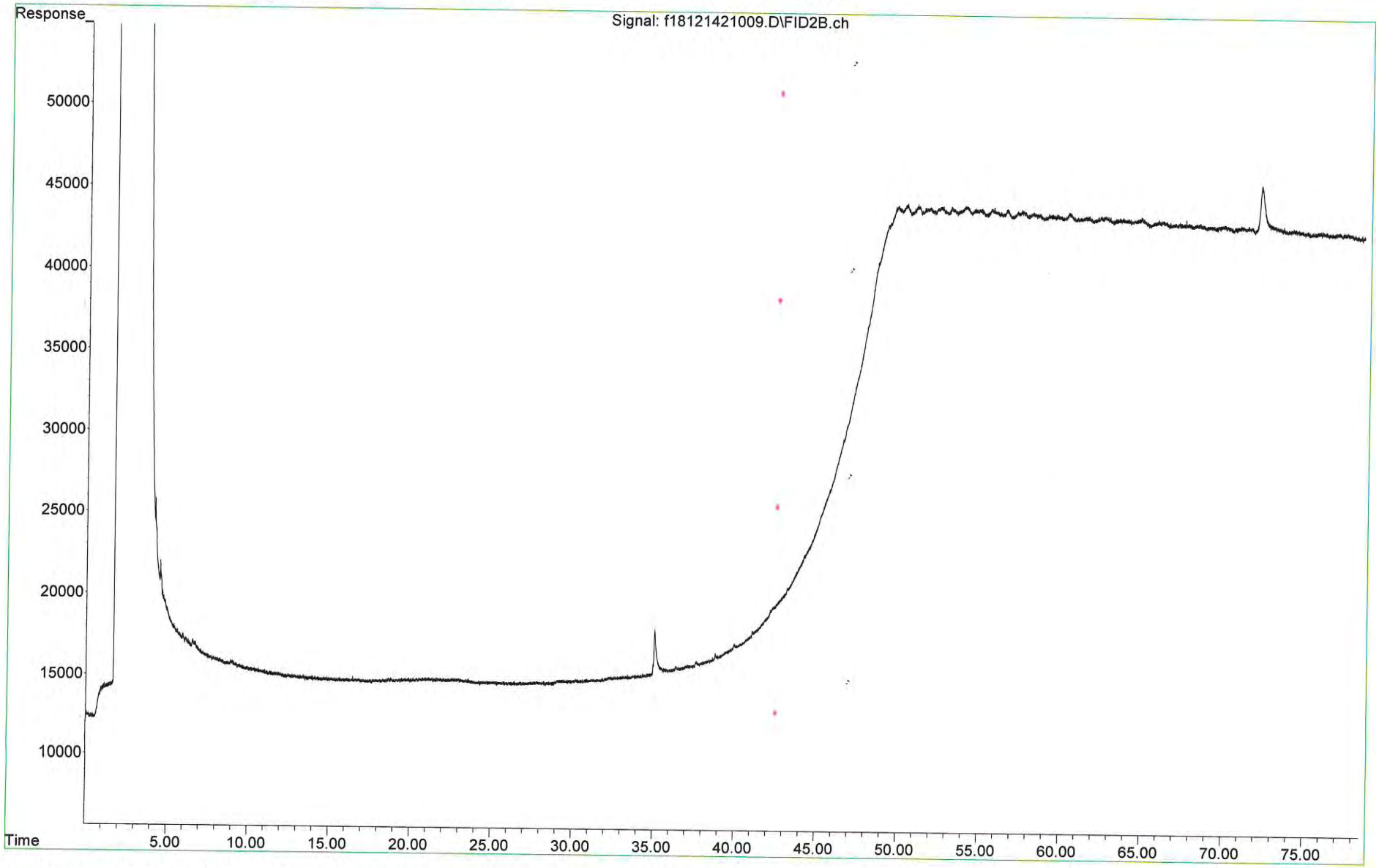
Sub List : TPH - TPH

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	29.674	13651	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount 50.000	Range 50 - 130	Recovery =	0.00%#
24) s d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount 50.000	Range 50 - 130	Recovery =	0.00%#
Target Compounds			
42) h C9-C44 Total Petroleu...	33.118	331594541	1211409.178 ug/mL M5
46) h Total Resolved Hydroc...	37.870	2656183	9703.793 ug/mL m
SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\f18121421009.D
Operator : FID18:WR
Acquired : 14 Dec 2021 03:38 pm using AcqMethod FID18.M
Sample Name: IB1812142101R
Instrument: FID 18
Misc Info :
Vial Number: 55
CurrentMeth: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422010.D
Signal(s) : FID1A.ch
Acq On : 04 Jan 2022 05:21 pm
Operator : FID18:WR
Sample : IB1801042101F
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 11:34:50 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

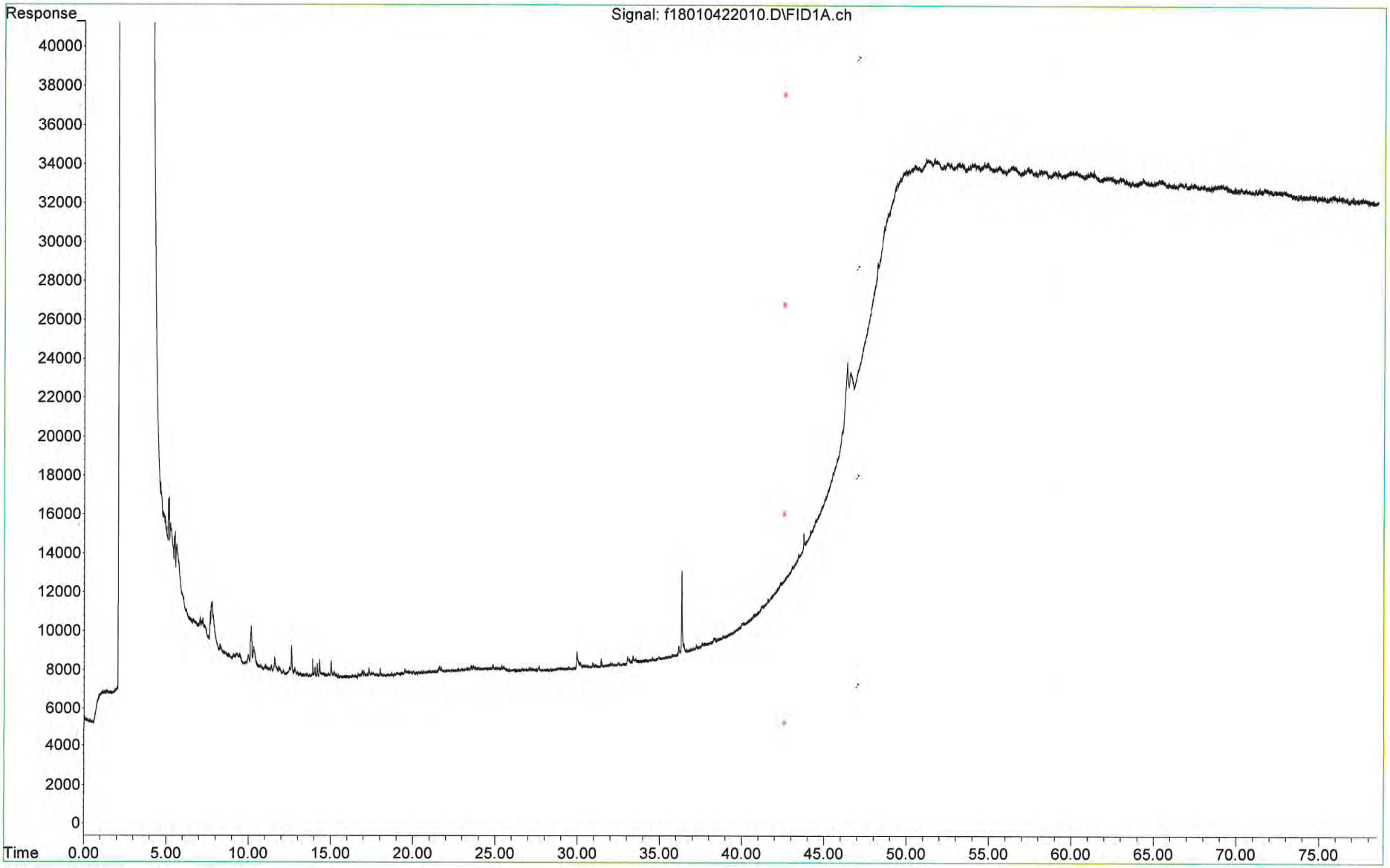
Sub List : TPH - TPH

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.092	5348	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
24) s	d50-Tetracosane	0.000	0	N.D. ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#
	Target Compounds			
42) h	C9-C44 Total Petroleu...	36.047	380319506	3703057.900 ug/mL M5
46) h	Total Resolved Hydroc...	38.937	4034431	39282.054 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422010.D
Operator : FID18:WR
Acquired : 04 Jan 2022 05:21 pm using AcqMethod FID18.M
Sample Name: IB1801042101F
Instrument: FID 18
Misc Info :
Vial Number: 5
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M



Sample Preparation

ORGANIC ELN REPORT

Workgroup: WG1579126

Prep Method: EPA 3510C
Solvent Type: DCM **Lot #:** EC757-US
Surrogate Type: A2-PAH/SHC **Lot #:** FRBE39
Spike Type: A2-PAH/SHC **Lot #:** FRBE40
Spike Verify by: NA
Lims Spikelot: A2-PAH/SHC

Additional Reagents/Stds

Glass Wool	14721999
Na2SO4	21J1161019

Conc.Method: S-EVAP/N-EVAP
Solvent Type: DCM
Lot #: EC757-US

Additional Reagents/Stds

RIS	FRBE38

Cleanup 1

Cleanup Method 1:
Cleanup Method 2:
Solvent Type: **Lot #:**

Additional Reagents/Stds

Sample/ Type	Extraction: Extract Date	Analyst	Sample Vol ml	Surr Amt ml	Spike Amt ml	Concentration: Conc Date	Analyst	Final Vol ml	Conc Unit
L2166503-02 SAMP	12/04/21 11:30	Nolan Bradley	1000	.5		12/04/21 12:45	Amanda Luiz	1	SEVAP 3/NEV AP2
	Sample has strong petroleum smell. Spiked high. 12/4/21 NTB								
WG1579126-1 BLANK	12/04/21 11:30	Nolan Bradley	1000	.1		12/04/21 12:45	Amanda Luiz	1	SEVAP 3/NEV AP2
						All samples spiked with 50uL of RIS 12/4/21 AL			
WG1579126-2 LCS	12/04/21 11:30	Nolan Bradley	1000	.1	.1	12/04/21 12:45	Amanda Luiz	1	SEVAP 3/NEV AP2
WG1579126-3 LCSD	12/04/21 11:30	Nolan Bradley	1000	.1	.1	12/04/21 12:45	Amanda Luiz	1	SEVAP 3/NEV AP2

Reported: 05-JAN-22 03:48 PM

ORGANIC ELN REPORT

Workgroup: WG1582496

Prep Method: EPA 3510C
Solvent Type: DCM **Lot #:** EC757-US
Surrogate Type: A2-PAH/SHC **Lot #:** FRBE39
Spike Type: A2-PAH/SHC **Lot #:** FRBE40
Spike Verify by: NA
Lims Spikelot: A2-PAH/SHC

Additional Reagents/Stds

Glass Wool	06521999
Na2SO4	21J1161019

Conc.Method: S-EVAP
Solvent Type: DCM
Lot #: EC757-US

Additional Reagents/Stds

Cleanup 1

Cleanup Method 1: EPA 3630(M)
Cleanup Method 2:
Solvent Type: DCM **Lot #:** EC757-US

Additional Reagents/Stds

Glass Wool	06521999
Silica Gel	BCCG0836
Na2SO4	21J1161019
RIS	FRBE38

Sample/ Type	Extraction					Concentration			
	Extract Date	Analyst	Sample Vol ml	Surr Amt ml	Spike Amt ml	Conc Date	Analyst	Final Vol ml	Conc Unit
L2166503-03 SAMP	12/13/21 10:00	Brian Anderson	25	.1		12/13/21 11:00	Brian Anderson	4	SEVAP 3
WG1582496-1 BLANK	12/13/21 10:00	Brian Anderson	25	.1		12/13/21 11:00	Brian Anderson	4	SEVAP 3
WG1582496-2 LCS	12/13/21 10:00	Brian Anderson	25	.1	.1	12/13/21 11:00	Brian Anderson	4	SEVAP 3
WG1582496-3 LCSD	12/13/21 10:00	Brian Anderson	25	.1	.1	12/13/21 11:00	Brian Anderson	4	SEVAP 3

Reported: 05-JAN-22 03:48 PM

ORGANIC ELN REPORT

Workgroup: WG1582496

Sample/ Type	Cleanup 1 Cleanup Date	Cleanup 1 Cleanup Vol ml	Cleanup 1 Conc Date	Cleanup 1 Analyst	Cleanup 1 Conc Method	Cleanup 1 Final Cleanup Vol	Cleanup 2 Cleanup Date	Cleanup 2 Frac Cleanup Vol	Cleanup 2 Conc Date	Cleanup 2 Analyst	Cleanup 2 Conc Method	Cleanup 2 Final Frac Cleanup Vol
L2166503-03 SAMP	12/14/21 08:00	2	12/14/21 09:00	BRIAN ANDERSON	SEVAP3/ NEVAP2	0.5						
WG1582496-1 BLANK	12/14/21 08:00	2	12/14/21 09:00	BRIAN ANDERSON	SEVAP3/ NEVAP2	0.5						
WG1582496-2 LCS	12/14/21 08:00	2	12/14/21 09:00	BRIAN ANDERSON	SEVAP3/ NEVAP2	0.5						
WG1582496-3 LCSD	12/14/21 08:00	2	12/14/21 09:00	BRIAN ANDERSON	SEVAP3/ NEVAP2	0.5						

Reported: 05-JAN-22 03:48 PM

ORGANIC ELN REPORT

Workgroup: WG1590340

Prep Method: EPA 3510C
Solvent Type: DCM **Lot #:** EC757-US
Surrogate Type: A2-PAH/SHC **Lot #:** FRBE39
Spike Type: A2-PAH/SHC **Lot #:** FRBE40
Spike Verify by: NA
Lims Spikelot: A2-PAH/SHC

Additional Reagents/Stds

Glass Wool	06521999
Na2SO4	21J1161019

Conc.Method: S-EVAP
Solvent Type: DCM
Lot #: EC757-US

Additional Reagents/Stds

RIS	FRBE38

Cleanup 1

Cleanup Method 1:
Cleanup Method 2:
Solvent Type: **Lot #:**

Additional Reagents/Stds

Sample/ Type	Extraction: Extract Date	Analyst	Sample Vol ml	Surr Amt ml	Spike Amt ml	Concentration: Conc Date	Analyst	Final Vol ml	Conc Unit
L2166503-06 SAMP	12/13/21 10:00	Brian Anderson	25	.1		12/13/21 11:00	Brian Anderson	4	SEVAP 3
WG1590340-1 BLANK	12/13/21 10:00	Brian Anderson	25	.1		12/13/21 11:00	Brian Anderson	4	SEVAP 3
	Original extract in WG1582496. BA 1/4/22								
WG1590340-2 LCS	12/13/21 10:00	Brian Anderson	25	.1	.1	12/13/21 11:00	Brian Anderson	4	SEVAP 3
WG1590340-3 LCSD	12/13/21 10:00	Brian Anderson	25	.1	.1	12/13/21 11:00	Brian Anderson	4	SEVAP 3

Reported: 05-JAN-22 03:48 PM

ORGANIC ELN REPORT

Workgroup: WG1579102

Prep Method: EPA 3580A
Solvent Type: DCM **Lot #:** EC757-US
Surrogate Type: A2-PAH/SHC **Lot #:** FRBE39
Spike Type: A2-PAH/SHC **Lot #:** FRBE40
Spike Verify by: AL
Lims Spikelot: A2-PAH/SHC

Additional Reagents/Stds

RIS	FRBE38

Conc.Method:
Solvent Type:
Lot #:

Additional Reagents/Stds

Cleanup 1

Cleanup Method 1:
Cleanup Method 2:
Solvent Type: **Lot #:**

Additional Reagents/Stds

Sample/ Type	Extraction: Extract Date	Analyst	Sample Weight g	Balance Id	Extract Vol ml	Split Vol ml	Surr Amt ml	Spike Amt ml	Is Amt ml	Final Vol ml	Concentration
L2166503-01 SAMP	12/04/21 09:50	Amanda Luiz	.1112	BAL 23	10	10	.5		.1	20	
WG1579102-1 BLANK	12/04/21 09:50	Amanda Luiz	.1	BAL 23	10	10	.5		.1	20	
WG1579102-2 LCS	12/04/21 09:50	Amanda Luiz	.1	BAL 23	10	10	.5	.5	.1	20	
WG1579102-3 LCSD	12/04/21 09:50	Amanda Luiz	.1	BAL 23	10	10	.5	.5	.1	20	

Reported: 05-JAN-22 03:48 PM

Alpha Report

ANALYTICAL REPORT

Lab Number:	L2166503
Client:	GSI Environmental Inc. 2211 Norfolk Suite 1000 Houston, TX 77098
ATTN:	Ileana Rhodes
Phone:	(713) 522-6300
Project Name:	RED HILL
Project Number:	Not Specified
Report Date:	01/05/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2166503-01	ERH1967	OIL	HAWAII	11/24/21 00:00	11/29/21
L2166503-02	ERH2051	WATER	HAWAII	12/02/21 17:00	12/04/21
L2166503-03	ERH2052	LIQUID	HAWAII	12/03/21 13:15	12/04/21
L2166503-04	ERH2049		HAWAII	12/02/21 16:50	12/04/21
L2166503-06	ERH2052 PRE SILICA	LIQUID	HAWAII	12/03/21 13:15	12/04/21

Project Name:	RED HILL	**Lab Number:**	L2166503
Project Number:	Not Specified	**Report Date:**	01/05/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Case Narrative (continued)

Report Submission

January 5, 2022: This final report includes the reults of the analysis of sample -03 (ERH2052 - Simple Green - silica gel cleanup) and -06 (ERH2052 - Simple Green - no cleanup).

December 20, 2021: This preliminary report includes the PIANO analyses results. The final report will be generated when the analyses request on sample L2166503-03 are completed.

December 6, 2021: This is a preliminary report including final SHC results. The final report will be generated when the requested PIANO analyses are completed.

December 5, 2021: This is a preliminary report pending SHC dilution analyses.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2166503-03: The sample identified as "ERH2052" on the chain of custody had no identification recorded on the container labels. At the client's request, the sample is logged in as "ERH2052".

L2166503-03: The collection date and time on the chain of custody was 03-DEC-21 13:15; however, the collection date/time on the container label was 03-DEC-21 00:00. At the client's request, the collection date/time is reported as 03-DEC-21 13:15.

L2166503-04: A sample identified as "ERH2049" was received but not analyzed per the client's request.

PIANO Volatile Organics

L2166503-01D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L2166503-01D2: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

Project Name:	RED HILL	**Lab Number:**	L2166503
Project Number:	Not Specified	**Report Date:**	01/05/22

Case Narrative (continued)

The WG1581735-5 Method Blank, associated with L2166503-02, has concentrations below the reporting limits and "J" qualified. Associated field sample results are "B" qualified if the concentrations are less than 10x the concentrations in the blank.
The WG1581735-4 LCS recovery for dodecane (c12) (138%) is above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of this analyte.

Saturated Hydrocarbons
L2166503-01 and -02: The samples were extracted and then analyzed using a gas chromatograph equipped with a flame ionization detector (GC/FID). The temperature program and associated experimental conditions were optimized to obtain maximum resolution in an eighty minute chromatographic run representative of hydrocarbons in the n-Octane (C8) to n-Tetracontane (C40) range. Qualitative evaluation of the sample was conducted by reviewing the sample chromatogram in conjunction with a chromatogram of a normal alkane series generated with the same chromatographic conditions. Chromatograms of hydrocarbon reference materials obtained from our library of 82 reference standards were also utilized to provide the best possible sample match. Quantitative determination of the sample's hydrocarbon concentration was performed in accordance with EPA Method 8015M. The sample's total hydrocarbon concentration and all associated quality control data are included in the report.
The following qualitative information is based on a tentative interpretation of chromatographic pattern recognition and boiling point ranges:
Total Petroleum Hydrocarbon Identification
L2166503-01 and -02 contain hydrocarbons eluting in the range of n-Octane (C8) to after the elution of n-Eicosane (C20).
Based on the data generated, L2166503-01 and -02 contain material eluting in the low to mid weight ranges of the chromatogram which is similar to a JP-5 Jet Fuel/Kerosene type product.

L2166503-01D and -02D: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Case Narrative (continued)

compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2166503-03: An interference with n-Tridecane (C13) and 2,6,10-Trimethyldodecane (1380) was over the instrument calibration limit, therefore the sample was diluted until separation was achieved; both initial and diluted analyses were reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 01/05/22

ORGANICS

VOLATILES

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01 D2
Client ID: ERH1967
Sample Location: HAWAII
Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8260B
Analytical Date: 12/14/21 00:15
Analyst: RY
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	21500		mg/kg	1760	--	200
Undecane	48800		mg/kg	1760	--	200
Dodecane (C12)	45800		mg/kg	4400	--	200
Tridecane	31400		mg/kg	4400	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	98		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	98		70-130

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01 D
Client ID: ERH1967
Sample Location: HAWAII

Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8260B
Analytical Date: 12/13/21 19:28
Analyst: RY
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		mg/kg	88.1	--	10
Isopentane	ND		mg/kg	88.1	--	10
1-Pentene	ND		mg/kg	88.1	--	10
2-Methyl-1-Butene	ND		mg/kg	88.1	--	10
Pentane	ND		mg/kg	88.1	--	10
trans-2-Pentene	ND		mg/kg	88.1	--	10
Isoprene	ND		mg/kg	88.1	--	10
cis-2-Pentene	ND		mg/kg	88.1	--	10
Tertiary Butanol	ND		mg/kg	1100	--	10
2,2-Dimethylbutane	ND		mg/kg	88.1	--	10
4-Methyl-1-pentene	ND		mg/kg	88.1	--	10
Cyclopentane	ND		mg/kg	88.1	--	10
2,3-Dimethylbutane	ND		mg/kg	88.1	--	10
2-Methylpentane	ND		mg/kg	88.1	--	10
Methyl tert butyl ether	ND		mg/kg	88.1	--	10
3-Methylpentane	ND		mg/kg	88.1	--	10
1-Hexene	ND		mg/kg	88.1	--	10
n-Hexane	ND		mg/kg	88.1	--	10
Isopropyl Ether	ND		mg/kg	88.1	--	10
trans-2-Hexene	ND		mg/kg	88.1	--	10
2-Methyl-2-pentene	ND		mg/kg	88.1	--	10
cis-2-Hexene	ND		mg/kg	88.1	--	10
Ethyl-Tert-Butyl-Ether	ND		mg/kg	88.1	--	10
2,2-Dimethylpentane	ND		mg/kg	88.1	--	10
Methylcyclopentane	ND		mg/kg	88.1	--	10
2,4-Dimethylpentane	ND		mg/kg	88.1	--	10
2,2,3-Trimethylbutane	ND		mg/kg	88.1	--	10
1,2-Dichloroethane	ND		mg/kg	88.1	--	10

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01 D
Client ID: ERH1967
Sample Location: HAWAII
Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		mg/kg	88.1	--	10
Cyclohexane	ND		mg/kg	88.1	--	10
2-Methylhexane	ND		mg/kg	88.1	--	10
Benzene	ND		mg/kg	88.1	--	10
2,3-Dimethylpentane	ND		mg/kg	88.1	--	10
Thiophene	ND		mg/kg	88.1	--	10
1,1-Dimethylcyclopentane	ND		mg/kg	88.1	--	10
3-Methylhexane	ND		mg/kg	88.1	--	10
Tertiary-Amyl Methyl Ether	ND		mg/kg	88.1	--	10
1,3-Dimethylcyclopentane (cis)	ND		mg/kg	88.1	--	10
3-Ethylpentane	ND		mg/kg	88.1	--	10
1-Heptene/1,2-DMCP (trans)	ND		mg/kg	176	--	10
Isooctane	ND		mg/kg	88.1	--	10
trans-3-Heptene	ND		mg/kg	88.1	--	10
Heptane	ND		mg/kg	88.1	--	10
trans-2-Heptene	ND		mg/kg	88.1	--	10
cis-2-Heptene	ND		mg/kg	88.1	--	10
2,2-Dimethylhexane	ND		mg/kg	88.1	--	10
Methylcyclohexane	133		mg/kg	88.1	--	10
2,5-Dimethylhexane	ND		mg/kg	88.1	--	10
2,4-Dimethylhexane	ND		mg/kg	88.1	--	10
Ethylcyclopentane	ND		mg/kg	88.1	--	10
2,2,3-Trimethylpentane	ND		mg/kg	88.1	--	10
2,3,4-Trimethylpentane	ND		mg/kg	88.1	--	10
Xylene (Total)[1]	2250		mg/kg	88.1	--	10
2,3,3-Trimethylpentane	ND		mg/kg	88.1	--	10
2,3-Dimethylhexane	ND		mg/kg	88.1	--	10
2-Methylheptane	148		mg/kg	88.1	--	10
4-Methylheptane	ND		mg/kg	88.1	--	10
3-Methylheptane	123		mg/kg	88.1	--	10
3-Ethylhexane	ND		mg/kg	88.1	--	10
Toluene	126		mg/kg	88.1	--	10
2-Methylthiophene	ND		mg/kg	88.1	--	10
1,4-Dimethylcyclohexane (trans)	97.3		mg/kg	88.1	--	10
3-Methylthiophene	ND		mg/kg	88.1	--	10
1-Octene	ND		mg/kg	220	--	10
Octane	681		mg/kg	88.1	--	10

Project Name: RED HILL **Lab Number:** L2166503

Project Number: Not Specified **Report Date:** 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01 D Date Collected: 11/24/21 00:00

Client ID: ERH1967 Date Received: 11/29/21

Sample Location: HAWAII Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	190		mg/kg	88.1	--	10
1,2-Dibromoethane	ND		mg/kg	88.1	--	10
cis-2-Octene	ND		mg/kg	88.1	--	10
Isopropylcyclopentane	ND		mg/kg	88.1	--	10
1,2-Dimethylcyclohexane (cis)	121		mg/kg	88.1	--	10
2,5-Dimethylheptane	191		mg/kg	88.1	--	10
3,5-Dimethylheptane	ND		mg/kg	88.1	--	10
3,3-Dimethylheptane	ND		mg/kg	88.1	--	10
1,1,4-Trimethylcyclohexane	ND		mg/kg	88.1	--	10
2,3-Dimethylheptane	360		mg/kg	88.1	--	10
3,4-Dimethylheptane	164		mg/kg	88.1	--	10
4-Methyloctane	410		mg/kg	88.1	--	10
2-Methyloctane	561		mg/kg	88.1	--	10
Ethylbenzene	300		mg/kg	88.1	--	10
2-Ethylthiophene	ND		mg/kg	88.1	--	10
3-Methyloctane	781		mg/kg	88.1	--	10
3,3-Diethylpentane	ND		mg/kg	88.1	--	10
p/m-Xylene	1450		mg/kg	176	--	10
1-Nonene	ND		mg/kg	220	--	10
trans-3-Nonene	ND		mg/kg	88.1	--	10
cis-3-Nonene	ND		mg/kg	88.1	--	10
Nonane (C9)	4780		mg/kg	88.1	--	10
Styrene	ND		mg/kg	88.1	--	10
o-Xylene	803		mg/kg	88.1	--	10
2-Nonene	ND		mg/kg	220	--	10
Isopropylcyclohexane	531		mg/kg	88.1	--	10
Isopropylbenzene	243		mg/kg	88.1	--	10
3,3-Dimethyloctane	196		mg/kg	88.1	--	10
n-Propylbenzene	719		mg/kg	88.1	--	10
2-Methylnonane	2490		mg/kg	88.1	--	10
3-Methylnonane	2520		mg/kg	88.1	--	10
1-Methyl-3-Ethylbenzene	1820		mg/kg	88.1	--	10
1-Methyl-4-Ethylbenzene	970		mg/kg	88.1	--	10
1,3,5-Trimethylbenzene	1520		mg/kg	88.1	--	10
1-Decene	ND		mg/kg	88.1	--	10
Isobutylcyclohexane	ND		mg/kg	88.1	--	10
1-Methyl-2-Ethylbenzene	1260		mg/kg	88.1	--	10

Project Name: RED HILL **Lab Number:** L2166503

Project Number: Not Specified **Report Date:** 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01 D Date Collected: 11/24/21 00:00

Client ID: ERH1967 Date Received: 11/29/21

Sample Location: HAWAII Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	21900	E	mg/kg	88.1	--	10
tert-Butylbenzene	ND		mg/kg	88.1	--	10
1,2,4-Trimethylbenzene	5210		mg/kg	88.1	--	10
Isobutylbenzene	257		mg/kg	88.1	--	10
sec-Butylbenzene	675		mg/kg	88.1	--	10
1-Methyl-3-Isopropylbenzene	899		mg/kg	88.1	--	10
1-Methyl-4-Isopropylbenzene	724		mg/kg	88.1	--	10
1,2,3-Trimethylbenzene	2820		mg/kg	88.1	--	10
1-Methyl-2-Isopropylbenzene	170		mg/kg	88.1	--	10
Indane	457		mg/kg	88.1	--	10
1,3-Diethylbenzene	848		mg/kg	88.1	--	10
1-Methyl-3-N-Propylbenzene	2610		mg/kg	88.1	--	10
Indene	97.4		mg/kg	88.1	--	10
1-Methyl-4-N-Propylbenzene	1270		mg/kg	88.1	--	10
n-Butylbenzene	1240		mg/kg	88.1	--	10
1,2-Dimethyl-4-Ethylbenzene	2120		mg/kg	88.1	--	10
1,2-Diethylbenzene	509		mg/kg	88.1	--	10
1-Methyl-2-N-Propylbenzene	2220		mg/kg	88.1	--	10
1,4-Dimethyl-2-Ethylbenzene	2010		mg/kg	88.1	--	10
Undecane	44000	E	mg/kg	88.1	--	10
1,3-Dimethyl-4-Ethylbenzene	2500		mg/kg	88.1	--	10
1,3-Dimethyl-5-Ethylbenzene	2650		mg/kg	88.1	--	10
1,3-Dimethyl-2-Ethylbenzene	366		mg/kg	88.1	--	10
1,2-Dimethyl-3-Ethylbenzene	1390		mg/kg	88.1	--	10
1,2,4,5-Tetramethylbenzene	1590		mg/kg	88.1	--	10
1,2,3,5-Tetramethylbenzene	2930		mg/kg	88.1	--	10
N-Pentylbenzene	760		mg/kg	88.1	--	10
1,2,3,4-Tetramethylbenzene	2320		mg/kg	88.1	--	10
1,3-Dimethyl-5-tert-Butylbenzene	ND		mg/kg	88.1	--	10
Dodecane (C12)	37200	E	mg/kg	220	--	10
1,3,5-Triethylbenzene	ND		mg/kg	88.1	--	10
Naphthalene	3070		mg/kg	88.1	--	10
Benzothiophene	ND		mg/kg	88.1	--	10
1,2,4-Triethylbenzene	276		mg/kg	88.1	--	10
Hexylbenzene	708		mg/kg	88.1	--	10
MMT	ND		mg/kg	220	--	10
Tridecane	19100	E	mg/kg	220	--	10

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01 D
Client ID: ERH1967
Sample Location: HAWAII
Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	5070		mg/kg	220	--	10
1-Methylnaphthalene	3360		mg/kg	220	--	10
Tetradecane (C14)	3830		mg/kg	220	--	10
Pentadecane	411		mg/kg	220	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	102		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-02
Client ID: ERH2051
Sample Location: HAWAII

Date Collected: 12/02/21 17:00
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260B
Analytical Date: 12/08/21 10:30
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		ug/l	2.00	--	1
Isopentane	ND		ug/l	2.00	--	1
1-Pentene	ND		ug/l	2.00	--	1
2-Methyl-1-Butene	ND		ug/l	2.00	--	1
Pentane	ND		ug/l	2.00	--	1
trans-2-Pentene	ND		ug/l	2.00	--	1
Isoprene	ND		ug/l	2.00	--	1
cis-2-Pentene	ND		ug/l	2.00	--	1
Tertiary Butanol	ND		ug/l	25.0	--	1
2,2-Dimethylbutane	ND		ug/l	2.00	--	1
4-Methyl-1-pentene	ND		ug/l	2.00	--	1
Cyclopentane	ND		ug/l	2.00	--	1
2,3-Dimethylbutane	ND		ug/l	2.00	--	1
2-Methylpentane	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	2.00	--	1
3-Methylpentane	ND		ug/l	2.00	--	1
1-Hexene	ND		ug/l	2.00	--	1
n-Hexane	ND		ug/l	2.00	--	1
Isopropyl Ether	ND		ug/l	2.00	--	1
trans-2-Hexene	ND		ug/l	2.00	--	1
2-Methyl-2-pentene	ND		ug/l	2.00	--	1
cis-2-Hexene	ND		ug/l	2.00	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--	1
2,2-Dimethylpentane	ND		ug/l	2.00	--	1
Methylcyclopentane	ND		ug/l	2.00	--	1
2,4-Dimethylpentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	--	1
1,2-Dichloroethane	ND		ug/l	2.00	--	1

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-02
Client ID: ERH2051
Sample Location: HAWAII

Date Collected: 12/02/21 17:00
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	2.00	--	1
Cyclohexane	ND		ug/l	2.00	--	1
2-Methylhexane	ND		ug/l	2.00	--	1
Benzene	ND		ug/l	2.00	--	1
2,3-Dimethylpentane	ND		ug/l	2.00	--	1
Thiophene	ND		ug/l	2.00	--	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--	1
3-Methylhexane	ND		ug/l	2.00	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--	1
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--	1
3-Ethylpentane	ND		ug/l	2.00	--	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--	1
Isooctane	ND		ug/l	2.00	--	1
trans-3-Heptene	ND		ug/l	2.00	--	1
Heptane	ND		ug/l	2.00	--	1
trans-2-Heptene	ND		ug/l	2.00	--	1
cis-2-Heptene	ND		ug/l	2.00	--	1
2,2-Dimethylhexane	ND		ug/l	2.00	--	1
Methylcyclohexane	ND		ug/l	2.00	--	1
2,5-Dimethylhexane	ND		ug/l	2.00	--	1
2,4-Dimethylhexane	ND		ug/l	2.00	--	1
Ethylcyclopentane	ND		ug/l	2.00	--	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	--	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	--	1
Xylene (Total)[1]	ND		ug/l	2.00	--	1
2,3-Dimethylhexane	ND		ug/l	2.00	--	1
2-Methylheptane	ND		ug/l	2.00	--	1
4-Methylheptane	ND		ug/l	2.00	--	1
3-Methylheptane	ND		ug/l	2.00	--	1
3-Ethylhexane	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
2-Methylthiophene	ND		ug/l	2.00	--	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
3-Methylthiophene	ND		ug/l	2.00	--	1
1-Octene	ND		ug/l	5.00	--	1
Octane	ND		ug/l	2.00	--	1

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-02
Client ID: ERH2051
Sample Location: HAWAII
Date Collected: 12/02/21 17:00
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--	1
1,2-Dibromoethane	ND		ug/l	2.00	--	1
cis-2-Octene	ND		ug/l	2.00	--	1
Isopropylcyclopentane	ND		ug/l	2.00	--	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--	1
2,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,5-Dimethylheptane	ND		ug/l	2.00	--	1
3,3-Dimethylheptane	ND		ug/l	2.00	--	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--	1
2,3-Dimethylheptane	ND		ug/l	2.00	--	1
3,4-Dimethylheptane	ND		ug/l	2.00	--	1
4-Methyloctane	ND		ug/l	2.00	--	1
2-Methyloctane	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
2-Ethylthiophene	ND		ug/l	2.00	--	1
3-Methyloctane	ND		ug/l	2.00	--	1
3,3-Diethylpentane	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	4.00	--	1
1-Nonene	ND		ug/l	5.00	--	1
trans-3-Nonene	ND		ug/l	2.00	--	1
cis-3-Nonene	ND		ug/l	2.00	--	1
Nonane (C9)	ND		ug/l	2.00	--	1
Styrene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
2-Nonene	ND		ug/l	5.00	--	1
Isopropylcyclohexane	ND		ug/l	2.00	--	1
Isopropylbenzene	ND		ug/l	2.00	--	1
3,3-Dimethyloctane	ND		ug/l	2.00	--	1
n-Propylbenzene	ND		ug/l	2.00	--	1
2-Methylnonane	ND		ug/l	2.00	--	1
3-Methylnonane	ND		ug/l	2.00	--	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Decene	ND		ug/l	2.00	--	1
Isobutylcyclohexane	ND		ug/l	2.00	--	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--	1

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-02
Client ID: ERH2051
Sample Location: HAWAII
Date Collected: 12/02/21 17:00
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	ND		ug/l	2.00	--	1
tert-Butylbenzene	ND		ug/l	2.00	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--	1
Isobutylbenzene	ND		ug/l	2.00	--	1
sec-Butylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--	1
Indane	ND		ug/l	2.00	--	1
1,3-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--	1
Indene	ND		ug/l	2.00	--	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--	1
n-Butylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Diethylbenzene	ND		ug/l	2.00	--	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--	1
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
Undecane	ND		ug/l	2.00	--	1
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--	1
N-Pentylbenzene	ND		ug/l	2.00	--	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--	1
Dodecane (C12)	ND		ug/l	5.00	--	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	--	1
Naphthalene	ND		ug/l	2.00	--	1
Benzothiophene	ND		ug/l	2.00	--	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	--	1
Hexylbenzene	ND		ug/l	2.00	--	1
MMT	ND		ug/l	5.00	--	1
Tridecane	ND		ug/l	5.00	--	1

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-02
Client ID: ERH2051
Sample Location: HAWAII

Date Collected: 12/02/21 17:00
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	ND		ug/l	5.00	--	1
1-Methylnaphthalene	ND		ug/l	5.00	--	1
Tetradecane (C14)	ND		ug/l	5.00	--	1
Pentadecane	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	117		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	93		70-130

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/07/21 23:16
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 02 Batch: WG1581735-5					
3-Methyl-1-butene	ND		ug/l	2.00	--
Isopentane	ND		ug/l	2.00	--
1-Pentene	ND		ug/l	2.00	--
2-Methyl-1-Butene	ND		ug/l	2.00	--
Pentane	ND		ug/l	2.00	--
trans-2-Pentene	ND		ug/l	2.00	--
Isoprene	ND		ug/l	2.00	--
cis-2-Pentene	ND		ug/l	2.00	--
Tertiary Butanol	ND		ug/l	25.0	--
2,2-Dimethylbutane	ND		ug/l	2.00	--
4-Methyl-1-pentene	ND		ug/l	2.00	--
Cyclopentane	ND		ug/l	2.00	--
2,3-Dimethylbutane	ND		ug/l	2.00	--
2-Methylpentane	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	2.00	--
3-Methylpentane	ND		ug/l	2.00	--
1-Hexene	ND		ug/l	2.00	--
n-Hexane	ND		ug/l	2.00	--
Isopropyl Ether	ND		ug/l	2.00	--
trans-2-Hexene	ND		ug/l	2.00	--
2-Methyl-2-pentene	ND		ug/l	2.00	--
cis-2-Hexene	ND		ug/l	2.00	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	--
2,2-Dimethylpentane	ND		ug/l	2.00	--
Methylcyclopentane	ND		ug/l	2.00	--
2,4-Dimethylpentane	ND		ug/l	2.00	--
2,2,3-Trimethylbutane	ND		ug/l	2.00	--
1,2-Dichloroethane	ND		ug/l	2.00	--
3,3-Dimethylpentane	ND		ug/l	2.00	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/07/21 23:16
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 02 Batch: WG1581735-5					
Cyclohexane	ND		ug/l	2.00	--
2-Methylhexane	ND		ug/l	2.00	--
Benzene	ND		ug/l	2.00	--
2,3-Dimethylpentane	ND		ug/l	2.00	--
Thiophene	ND		ug/l	2.00	--
1,1-Dimethylcyclopentane	ND		ug/l	2.00	--
3-Methylhexane	ND		ug/l	2.00	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	--
1,3-Dimethylcyclopentane (cis)	ND		ug/l	2.00	--
3-Ethylpentane	ND		ug/l	2.00	--
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	--
Isooctane	ND		ug/l	2.00	--
trans-3-Heptene	ND		ug/l	2.00	--
Heptane	ND		ug/l	2.00	--
trans-2-Heptene	ND		ug/l	2.00	--
cis-2-Heptene	ND		ug/l	2.00	--
2,2-Dimethylhexane	ND		ug/l	2.00	--
Methylcyclohexane	ND		ug/l	2.00	--
2,5-Dimethylhexane	ND		ug/l	2.00	--
2,4-Dimethylhexane	ND		ug/l	2.00	--
Ethylcyclopentane	ND		ug/l	2.00	--
2,2,3-Trimethylpentane	ND		ug/l	2.00	--
2,3,4-Trimethylpentane	ND		ug/l	2.00	--
2,3,3-Trimethylpentane	ND		ug/l	2.00	--
Xylene (Total)[1]	ND		ug/l	2.00	--
2,3-Dimethylhexane	ND		ug/l	2.00	--
2-Methylheptane	ND		ug/l	2.00	--
4-Methylheptane	ND		ug/l	2.00	--
3-Methylheptane	ND		ug/l	2.00	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/07/21 23:16
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 02 Batch: WG1581735-5					
3-Ethylhexane	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
2-Methylthiophene	ND		ug/l	2.00	--
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--
3-Methylthiophene	ND		ug/l	2.00	--
1-Octene	ND		ug/l	5.00	--
Octane	ND		ug/l	2.00	--
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	--
1,2-Dibromoethane	ND		ug/l	2.00	--
cis-2-Octene	ND		ug/l	2.00	--
Isopropylcyclopentane	ND		ug/l	2.00	--
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	--
2,5-Dimethylheptane	ND		ug/l	2.00	--
3,5-Dimethylheptane	ND		ug/l	2.00	--
3,3-Dimethylheptane	ND		ug/l	2.00	--
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	--
2,3-Dimethylheptane	ND		ug/l	2.00	--
3,4-Dimethylheptane	ND		ug/l	2.00	--
4-Methyloctane	ND		ug/l	2.00	--
2-Methyloctane	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
2-Ethylthiophene	ND		ug/l	2.00	--
3-Methyloctane	ND		ug/l	2.00	--
3,3-Diethylpentane	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	4.00	--
1-Nonene	ND		ug/l	5.00	--
trans-3-Nonene	ND		ug/l	2.00	--
cis-3-Nonene	ND		ug/l	2.00	--
Nonane (C9)	ND		ug/l	2.00	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/07/21 23:16
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 02 Batch: WG1581735-5					
Styrene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
2-Nonene	ND		ug/l	5.00	--
Isopropylcyclohexane	ND		ug/l	2.00	--
Isopropylbenzene	ND		ug/l	2.00	--
3,3-Dimethyloctane	ND		ug/l	2.00	--
n-Propylbenzene	ND		ug/l	2.00	--
2-Methylnonane	ND		ug/l	2.00	--
3-Methylnonane	ND		ug/l	2.00	--
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	--
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,3,5-Trimethylbenzene	ND		ug/l	2.00	--
1-Decene	ND		ug/l	2.00	--
Isobutylcyclohexane	ND		ug/l	2.00	--
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	--
Decane (C10)	ND		ug/l	2.00	--
tert-Butylbenzene	ND		ug/l	2.00	--
1,2,4-Trimethylbenzene	ND		ug/l	2.00	--
Isobutylbenzene	ND		ug/l	2.00	--
sec-Butylbenzene	ND		ug/l	2.00	--
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	--
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	--
1,2,3-Trimethylbenzene	ND		ug/l	2.00	--
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	--
Indane	ND		ug/l	2.00	--
1,3-Diethylbenzene	ND		ug/l	2.00	--
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	--
Indene	ND		ug/l	2.00	--
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/07/21 23:16
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 02 Batch: WG1581735-5					
n-Butylbenzene	ND		ug/l	2.00	--
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,2-Diethylbenzene	ND		ug/l	2.00	--
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	--
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--
Undecane	ND		ug/l	2.00	--
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	--
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	--
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	--
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	--
N-Pentylbenzene	ND		ug/l	2.00	--
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	--
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	--
Dodecane (C12)	ND		ug/l	5.00	--
1,3,5-Triethylbenzene	ND		ug/l	2.00	--
Naphthalene	ND		ug/l	2.00	--
Benzothiophene	ND		ug/l	2.00	--
1,2,4-Triethylbenzene	ND		ug/l	2.00	--
Hexylbenzene	ND		ug/l	2.00	--
MMT	ND		ug/l	5.00	--
Tridecane	ND		ug/l	5.00	--
2-Methylnaphthalene	ND		ug/l	5.00	--
1-Methylnaphthalene	ND		ug/l	5.00	--
Tetradecane (C14)	ND		ug/l	5.00	--
Pentadecane	ND		ug/l	5.00	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/07/21 23:16
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 02 Batch: WG1581735-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	116		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	93		70-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/13/21 14:42
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1582700-5					
3-Methyl-1-butene	ND		mg/kg	10.0	--
Isopentane	ND		mg/kg	10.0	--
1-Pentene	ND		mg/kg	10.0	--
2-Methyl-1-Butene	ND		mg/kg	10.0	--
Pentane	ND		mg/kg	10.0	--
trans-2-Pentene	ND		mg/kg	10.0	--
Isoprene	ND		mg/kg	10.0	--
cis-2-Pentene	ND		mg/kg	10.0	--
Tertiary Butanol	ND		mg/kg	125	--
2,2-Dimethylbutane	ND		mg/kg	10.0	--
4-Methyl-1-pentene	ND		mg/kg	10.0	--
Cyclopentane	ND		mg/kg	10.0	--
2,3-Dimethylbutane	ND		mg/kg	10.0	--
2-Methylpentane	ND		mg/kg	10.0	--
Methyl tert butyl ether	ND		mg/kg	10.0	--
3-Methylpentane	ND		mg/kg	10.0	--
1-Hexene	ND		mg/kg	10.0	--
n-Hexane	ND		mg/kg	10.0	--
Isopropyl Ether	ND		mg/kg	10.0	--
trans-2-Hexene	ND		mg/kg	10.0	--
2-Methyl-2-pentene	ND		mg/kg	10.0	--
cis-2-Hexene	ND		mg/kg	10.0	--
Ethyl-Tert-Butyl-Ether	ND		mg/kg	10.0	--
2,2-Dimethylpentane	ND		mg/kg	10.0	--
Methylcyclopentane	ND		mg/kg	10.0	--
2,4-Dimethylpentane	ND		mg/kg	10.0	--
2,2,3-Trimethylbutane	ND		mg/kg	10.0	--
1,2-Dichloroethane	ND		mg/kg	10.0	--
3,3-Dimethylpentane	ND		mg/kg	10.0	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/13/21 14:42
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1582700-5					
Cyclohexane	ND		mg/kg	10.0	--
2-Methylhexane	ND		mg/kg	10.0	--
Benzene	ND		mg/kg	10.0	--
2,3-Dimethylpentane	ND		mg/kg	10.0	--
Thiophene	ND		mg/kg	10.0	--
1,1-Dimethylcyclopentane	ND		mg/kg	10.0	--
3-Methylhexane	ND		mg/kg	10.0	--
Tertiary-Amyl Methyl Ether	ND		mg/kg	10.0	--
1,3-Dimethylcyclopentane (cis)	ND		mg/kg	10.0	--
3-Ethylpentane	ND		mg/kg	10.0	--
1-Heptene/1,2-DMCP (trans)	ND		mg/kg	20.0	--
Isooctane	ND		mg/kg	10.0	--
trans-3-Heptene	ND		mg/kg	10.0	--
Heptane	ND		mg/kg	10.0	--
trans-2-Heptene	ND		mg/kg	10.0	--
cis-2-Heptene	ND		mg/kg	10.0	--
2,2-Dimethylhexane	ND		mg/kg	10.0	--
Methylcyclohexane	ND		mg/kg	10.0	--
2,5-Dimethylhexane	ND		mg/kg	10.0	--
2,4-Dimethylhexane	ND		mg/kg	10.0	--
Ethylcyclopentane	ND		mg/kg	10.0	--
2,2,3-Trimethylpentane	ND		mg/kg	10.0	--
2,3,4-Trimethylpentane	ND		mg/kg	10.0	--
Xylene (Total)[1]	ND		mg/kg	10.0	--
2,3,3-Trimethylpentane	ND		mg/kg	10.0	--
2,3-Dimethylhexane	ND		mg/kg	10.0	--
2-Methylheptane	ND		mg/kg	10.0	--
4-Methylheptane	ND		mg/kg	10.0	--
3-Methylheptane	ND		mg/kg	10.0	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/13/21 14:42
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1582700-5					
3-Ethylhexane	ND		mg/kg	10.0	--
Toluene	ND		mg/kg	10.0	--
2-Methylthiophene	ND		mg/kg	10.0	--
1,4-Dimethylcyclohexane (trans)	ND		mg/kg	10.0	--
3-Methylthiophene	ND		mg/kg	10.0	--
1-Octene	ND		mg/kg	25.0	--
Octane	ND		mg/kg	10.0	--
1,2-Dimethylcyclohexane (trans)	ND		mg/kg	10.0	--
1,2-Dibromoethane	ND		mg/kg	10.0	--
cis-2-Octene	ND		mg/kg	10.0	--
Isopropylcyclopentane	ND		mg/kg	10.0	--
1,2-Dimethylcyclohexane (cis)	ND		mg/kg	10.0	--
2,5-Dimethylheptane	ND		mg/kg	10.0	--
3,5-Dimethylheptane	ND		mg/kg	10.0	--
3,3-Dimethylheptane	ND		mg/kg	10.0	--
1,1,4-Trimethylcyclohexane	ND		mg/kg	10.0	--
2,3-Dimethylheptane	ND		mg/kg	10.0	--
3,4-Dimethylheptane	ND		mg/kg	10.0	--
4-Methyloctane	ND		mg/kg	10.0	--
2-Methyloctane	ND		mg/kg	10.0	--
Ethylbenzene	ND		mg/kg	10.0	--
2-Ethylthiophene	ND		mg/kg	10.0	--
3-Methyloctane	ND		mg/kg	10.0	--
3,3-Diethylpentane	ND		mg/kg	10.0	--
p/m-Xylene	ND		mg/kg	20.0	--
1-Nonene	ND		mg/kg	25.0	--
trans-3-Nonene	ND		mg/kg	10.0	--
cis-3-Nonene	ND		mg/kg	10.0	--
Nonane (C9)	ND		mg/kg	10.0	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/13/21 14:42
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1582700-5					
Styrene	ND		mg/kg	10.0	--
o-Xylene	ND		mg/kg	10.0	--
2-Nonene	ND		mg/kg	25.0	--
Isopropylcyclohexane	ND		mg/kg	10.0	--
Isopropylbenzene	ND		mg/kg	10.0	--
3,3-Dimethyloctane	ND		mg/kg	10.0	--
n-Propylbenzene	ND		mg/kg	10.0	--
2-Methylnonane	ND		mg/kg	10.0	--
3-Methylnonane	ND		mg/kg	10.0	--
1-Methyl-3-Ethylbenzene	ND		mg/kg	10.0	--
1-Methyl-4-Ethylbenzene	ND		mg/kg	10.0	--
1,3,5-Trimethylbenzene	ND		mg/kg	10.0	--
1-Decene	ND		mg/kg	10.0	--
Isobutylcyclohexane	ND		mg/kg	10.0	--
1-Methyl-2-Ethylbenzene	ND		mg/kg	10.0	--
Decane (C10)	ND		mg/kg	10.0	--
tert-Butylbenzene	ND		mg/kg	10.0	--
1,2,4-Trimethylbenzene	ND		mg/kg	10.0	--
Isobutylbenzene	ND		mg/kg	10.0	--
sec-Butylbenzene	ND		mg/kg	10.0	--
1-Methyl-3-Isopropylbenzene	ND		mg/kg	10.0	--
1-Methyl-4-Isopropylbenzene	ND		mg/kg	10.0	--
1,2,3-Trimethylbenzene	ND		mg/kg	10.0	--
1-Methyl-2-Isopropylbenzene	ND		mg/kg	10.0	--
Indane	ND		mg/kg	10.0	--
1,3-Diethylbenzene	ND		mg/kg	10.0	--
1-Methyl-3-N-Propylbenzene	ND		mg/kg	10.0	--
Indene	ND		mg/kg	10.0	--
1-Methyl-4-N-Propylbenzene	ND		mg/kg	10.0	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/13/21 14:42
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1582700-5					
n-Butylbenzene	ND		mg/kg	10.0	--
1,2-Dimethyl-4-Ethylbenzene	ND		mg/kg	10.0	--
1,2-Diethylbenzene	ND		mg/kg	10.0	--
1-Methyl-2-N-Propylbenzene	ND		mg/kg	10.0	--
1,4-Dimethyl-2-Ethylbenzene	ND		mg/kg	10.0	--
Undecane	ND		mg/kg	10.0	--
1,3-Dimethyl-4-Ethylbenzene	ND		mg/kg	10.0	--
1,3-Dimethyl-5-Ethylbenzene	ND		mg/kg	10.0	--
1,3-Dimethyl-2-Ethylbenzene	ND		mg/kg	10.0	--
1,2-Dimethyl-3-Ethylbenzene	ND		mg/kg	10.0	--
1,2,4,5-Tetramethylbenzene	ND		mg/kg	10.0	--
1,2,3,5-Tetramethylbenzene	ND		mg/kg	10.0	--
N-Pentylbenzene	ND		mg/kg	10.0	--
1,2,3,4-Tetramethylbenzene	ND		mg/kg	10.0	--
1,3-Dimethyl-5-tert-Butylbenzene	ND		mg/kg	10.0	--
Dodecane (C12)	ND		mg/kg	25.0	--
1,3,5-Triethylbenzene	ND		mg/kg	10.0	--
Naphthalene	ND		mg/kg	10.0	--
Benzothiophene	ND		mg/kg	10.0	--
1,2,4-Triethylbenzene	ND		mg/kg	10.0	--
Hexylbenzene	ND		mg/kg	10.0	--
MMT	ND		mg/kg	25.0	--
Tridecane	ND		mg/kg	25.0	--
2-Methylnaphthalene	ND		mg/kg	25.0	--
1-Methylnaphthalene	ND		mg/kg	25.0	--
Tetradecane (C14)	ND		mg/kg	25.0	--
Pentadecane	ND		mg/kg	25.0	--

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/13/21 14:42
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1582700-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 02 Batch: WG1581735-3 WG1581735-4								
1-Pentene	98		96		50-130	2		30
Pentane	87		84		50-130	4		30
Tertiary Butanol	122		117		50-130	4		30
Cyclopentane	90		90		50-130	0		30
2-Methylpentane	98		96		50-130	2		30
Methyl tert butyl ether	96		92		50-130	4		30
3-Methylpentane	100		98		50-130	2		30
1-Hexene	102		96		50-130	6		30
n-Hexane	96		92		50-130	4		30
Isopropyl Ether	99		98		50-130	1		30
Ethyl-Tert-Butyl-Ether	96		93		50-130	3		30
Methylcyclopentane	101		100		50-130	1		30
2,4-Dimethylpentane	105		106		50-130	1		30
Cyclohexane	106		105		50-130	1		30
2-Methylhexane	105		103		50-130	2		30
Benzene	99		96		50-130	3		30
2,3-Dimethylpentane	106		104		50-130	2		30
3-Methylhexane	98		99		50-130	1		30
Tertiary-Amyl Methyl Ether	88		91		50-130	3		30
Isooctane	106		108		50-130	2		30
Heptane	114		114		50-130	0		30
Methylcyclohexane	98		99		50-130	1		30
2-Methylheptane	100		100		50-130	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 02 Batch: WG1581735-3 WG1581735-4								
3-Methylheptane	104		106		50-130	2		30
Toluene	96		97		50-130	1		30
Octane	112		108		50-130	4		30
Ethylbenzene	94		92		50-130	2		30
p/m-Xylene	96		93		50-130	3		30
Nonane (C9)	98		94		50-130	4		30
o-Xylene	96		95		50-130	1		30
Isopropylbenzene	94		92		50-130	2		30
n-Propylbenzene	94		92		50-130	2		30
1-Methyl-3-Ethylbenzene	91		91		50-130	0		30
1-Methyl-4-Ethylbenzene	95		94		50-130	1		30
1,3,5-Trimethylbenzene	92		92		50-130	0		30
1-Decene	86		85		50-130	1		30
1-Methyl-2-Ethylbenzene	94		94		50-130	0		30
Decane (C10)	115		113		50-130	2		30
1,2,4-Trimethylbenzene	89		89		50-130	0		30
sec-Butylbenzene	96		97		50-130	1		30
1-Methyl-4-N-Propylbenzene	91		94		50-130	3		30
n-Butylbenzene	94		96		50-130	2		30
1,2-Diethylbenzene	91		93		50-130	2		30
Undecane	107		108		50-130	1		30
N-Pentylbenzene	96		100		50-130	4		30
Dodecane (C12)	130		**138**	Q	50-130	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 02 Batch: WG1581735-3 WG1581735-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Dibromofluoromethane	106		101		70-130
Toluene-d8	113		113		70-130
4-Bromofluorobenzene	93		94		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RED HILL

Project Number: Not Specified

Lab Number: L2166503

Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01 Batch: WG1582700-3 WG1582700-4								
1-Pentene	104		90		50-130	14		30
Pentane	94		80		50-130	16		30
Tertiary Butanol	95		98		50-130	3		30
Cyclopentane	100		90		50-130	11		30
2-Methylpentane	100		86		50-130	15		30
Methyl tert butyl ether	98		92		50-130	6		30
3-Methylpentane	107		94		50-130	13		30
1-Hexene	108		94		50-130	14		30
n-Hexane	101		88		50-130	14		30
Isopropyl Ether	97		88		50-130	10		30
Ethyl-Tert-Butyl-Ether	95		87		50-130	9		30
Methylcyclopentane	107		93		50-130	14		30
2,4-Dimethylpentane	105		92		50-130	13		30
Cyclohexane	109		96		50-130	13		30
2-Methylhexane	104		91		50-130	13		30
Benzene	100		96		50-130	4		30
2,3-Dimethylpentane	106		92		50-130	14		30
3-Methylhexane	95		79		50-130	18		30
Tertiary-Amyl Methyl Ether	89		87		50-130	2		30
Isooctane	110		95		50-130	15		30
Heptane	115		98		50-130	16		30
Methylcyclohexane	106		91		50-130	15		30
2-Methylheptane	104		90		50-130	14		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01 Batch: WG1582700-3 WG1582700-4								
3-Methylheptane	104		92		50-130	12		30
Toluene	102		96		50-130	6		30
Octane	106		96		50-130	10		30
Ethylbenzene	99		96		50-130	3		30
p/m-Xylene	100		99		50-130	1		30
Nonane (C9)	92		84		50-130	9		30
o-Xylene	102		101		50-130	1		30
Isopropylbenzene	100		100		50-130	0		30
n-Propylbenzene	99		102		50-130	3		30
1-Methyl-3-Ethylbenzene	98		102		50-130	4		30
1-Methyl-4-Ethylbenzene	103		107		50-130	4		30
1,3,5-Trimethylbenzene	100		107		50-130	7		30
1-Decene	86		85		50-130	1		30
1-Methyl-2-Ethylbenzene	102		108		50-130	6		30
Decane (C10)	105		105		50-130	0		30
1,2,4-Trimethylbenzene	98		105		50-130	7		30
sec-Butylbenzene	105		112		50-130	6		30
1-Methyl-4-N-Propylbenzene	101		110		50-130	9		30
n-Butylbenzene	102		113		50-130	10		30
1,2-Diethylbenzene	102		113		50-130	10		30
Undecane	103		114		50-130	10		30
N-Pentylbenzene	104		115		50-130	10		30
Dodecane (C12)	120		130		50-130	8		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01 Batch: WG1582700-3 WG1582700-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Dibromofluoromethane	100		92		70-130
Toluene-d8	101		95		70-130
4-Bromofluorobenzene	99		105		70-130

PETROLEUM HYDROCARBONS

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01
Client ID: ERH1967
Sample Location: HAWAII

Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8015D(M)
Analytical Date: 12/04/21 17:38
Analyst: MJS
Percent Solids:

Extraction Method: EPA 3580A
Extraction Date: 12/04/21 09:50

Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	4250		mg/kg	180	--	1
n-Decane (C10)	19200		mg/kg	180	--	1
n-Undecane (C11)	44000	E	mg/kg	180	--	1
n-Dodecane (C12)	47800	E	mg/kg	180	--	1
n-Tridecane (C13)	39400	E	mg/kg	180	--	1
2,6,10-Trimethyldodecane (1380)	5600		mg/kg	180	--	1
n-Tetradecane (C14)	20200		mg/kg	180	--	1
2,6,10-Trimethyltridecane (1470)	4490		mg/kg	180	--	1
n-Pentadecane (C15)	7320		mg/kg	180	--	1
n-Hexadecane (C16)	1430		mg/kg	180	--	1
Norpristane (1650)	202		mg/kg	180	--	1
n-Heptadecane (C17)	337		mg/kg	180	--	1
Pristane	ND		mg/kg	180	--	1
n-Octadecane (C18)	ND		mg/kg	180	--	1
Phytane	ND		mg/kg	180	--	1
n-Nonadecane (C19)	ND		mg/kg	180	--	1
n-Eicosane (C20)	ND		mg/kg	180	--	1
n-Heneicosane (C21)	ND		mg/kg	180	--	1
n-Docosane (C22)	ND		mg/kg	180	--	1
n-Tricosane (C23)	ND		mg/kg	180	--	1
n-Tetracosane (C24)	ND		mg/kg	180	--	1
n-Pentacosane (C25)	ND		mg/kg	180	--	1
n-Hexacosane (C26)	ND		mg/kg	180	--	1
n-Heptacosane (C27)	ND		mg/kg	180	--	1
n-Octacosane (C28)	ND		mg/kg	180	--	1
n-Nonacosane (C29)	ND		mg/kg	180	--	1
n-Triacontane (C30)	ND		mg/kg	180	--	1
n-Hentriacontane (C31)	ND		mg/kg	180	--	1

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01
Client ID: ERH1967
Sample Location: HAWAII

Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	180	--	1
n-Tritriacontane (C33)	ND		mg/kg	180	--	1
n-Tetratriacontane (C34)	ND		mg/kg	180	--	1
n-Pentatriacontane (C35)	ND		mg/kg	180	--	1
n-Hexatriacontane (C36)	ND		mg/kg	180	--	1
n-Heptatriacontane (C37)	ND		mg/kg	180	--	1
n-Octatriacontane (C38)	ND		mg/kg	180	--	1
n-Nonatriacontane (C39)	ND		mg/kg	180	--	1
n-Tetracontane (C40)	ND		mg/kg	180	--	1
C9-C44 Total Petroleu	899000		mg/kg	5940	--	1
C10-C28 DRO	870000		mg/kg	3780	--	1
C28-C40 ORO	ND		mg/kg	1980	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	94		50-130
d50-Tetracosane	92		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-01 D
Client ID: ERH1967
Sample Location: HAWAII

Date Collected: 11/24/21 00:00
Date Received: 11/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8015D(M)
Analytical Date: 12/05/21 12:50
Analyst: MJS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Extraction Method: EPA 3580A
Extraction Date: 12/04/21 09:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Undecane (C11)	43200		mg/kg	360	--	2
n-Dodecane (C12)	46600		mg/kg	360	--	2
n-Tridecane (C13)	39900		mg/kg	360	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	97		50-130
d50-Tetracosane	86		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-02
Client ID: ERH2051
Sample Location: HAWAII

Date Collected: 12/02/21 17:00
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8015D(M)
Analytical Date: 12/05/21 03:55
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/04/21 11:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	0.016		mg/l	0.001	--	1
n-Decane (C10)	0.190		mg/l	0.001	--	1
n-Undecane (C11)	0.685	E	mg/l	0.001	--	1
n-Dodecane (C12)	0.889	E	mg/l	0.001	--	1
n-Tridecane (C13)	0.873	E	mg/l	0.005	--	1
2,6,10-Trimethyldodecane (1380)	0.115		mg/l	0.001	--	1
n-Tetradecane (C14)	0.455	E	mg/l	0.001	--	1
2,6,10-Trimethyltridecane (1470)	0.104		mg/l	0.001	--	1
n-Pentadecane (C15)	0.178		mg/l	0.001	--	1
n-Hexadecane (C16)	0.033		mg/l	0.001	--	1
Norpristane (1650)	0.005		mg/l	0.001	--	1
n-Heptadecane (C17)	0.008		mg/l	0.001	--	1
Pristane	0.004		mg/l	0.001	--	1
n-Octadecane (C18)	0.002		mg/l	0.001	--	1
Phytane	ND		mg/l	0.001	--	1
n-Nonadecane (C19)	ND		mg/l	0.001	--	1
n-Eicosane (C20)	ND		mg/l	0.0010	--	1
n-Heneicosane (C21)	ND		mg/l	0.0010	--	1
n-Docosane (C22)	ND		mg/l	0.0010	--	1
n-Tricosane (C23)	ND		mg/l	0.0010	--	1
n-Tetracosane (C24)	ND		mg/l	0.0010	--	1
n-Pentacosane (C25)	ND		mg/l	0.005	--	1
n-Hexacosane (C26)	ND		mg/l	0.001	--	1
n-Heptacosane (C27)	ND		mg/l	0.001	--	1
n-Octacosane (C28)	0.005	C	mg/l	0.001	--	1
n-Nonacosane (C29)	ND		mg/l	0.001	--	1
n-Triacontane (C30)	ND		mg/l	0.001	--	1
n-Hentriacontane (C31)	ND		mg/l	0.001	--	1

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-02
Client ID: ERH2051
Sample Location: HAWAII
Date Collected: 12/02/21 17:00
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/l	0.001	--	1
n-Tritriacontane (C33)	ND		mg/l	0.0010	--	1
n-Tetratriacontane (C34)	ND		mg/l	0.001	--	1
n-Pentatriacontane (C35)	ND		mg/l	0.001	--	1
n-Hexatriacontane (C36)	ND		mg/l	0.001	--	1
n-Heptatriacontane (C37)	ND		mg/l	0.001	--	1
n-Octatriacontane (C38)	ND		mg/l	0.001	--	1
n-Nonatriacontane (C39)	ND		mg/l	0.001	--	1
n-Tetracontane (C40)	ND		mg/l	0.001	--	1
C9-C44 Total Petroleu	16.7		mg/l	0.033	--	1
C10-C28 DRO	16.6		mg/l	0.021	--	1
C28-C40 ORO	0.026		mg/l	0.011	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	89		50-130
d50-Tetracosane	88		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-02 D
Client ID: ERH2051
Sample Location: HAWAII

Date Collected: 12/02/21 17:00
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8015D(M)
Analytical Date: 12/05/21 14:18
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/04/21 11:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Undecane (C11)	0.778		mg/l	0.010	--	10
n-Dodecane (C12)	1.04		mg/l	0.010	--	10
n-Tridecane (C13)	0.967		mg/l	0.050	--	10
n-Tetradecane (C14)	0.517		mg/l	0.010	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	103		50-130
d50-Tetracosane	95		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-03
Client ID: ERH2052
Sample Location: HAWAII

Date Collected: 12/03/21 13:15
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Liquid
Analytical Method: 1,8015D(M)
Analytical Date: 12/15/21 03:07
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 12/13/21 10:00
Cleanup Method: EPA 3630(M)
Cleanup Date: 12/14/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	0.210		mg/l	0.040	--	1
n-Decane (C10)	2.56		mg/l	0.040	--	1
n-Undecane (C11)	0.857		mg/l	0.040	--	1
n-Dodecane (C12)	1.95		mg/l	0.040	--	1
n-Tridecane (C13)	62.0	E	mg/l	0.200	--	1
2,6,10-Trimethyldodecane (1380)	8.84	E	mg/l	0.040	--	1
n-Tetradecane (C14)	ND		mg/l	0.040	--	1
2,6,10-Trimethyltridecane (1470)	0.175		mg/l	0.040	--	1
n-Pentadecane (C15)	ND		mg/l	0.040	--	1
n-Hexadecane (C16)	ND		mg/l	0.040	--	1
Norpristane (1650)	0.061	G	mg/l	0.040	--	1
n-Heptadecane (C17)	ND		mg/l	0.040	--	1
Pristane	ND		mg/l	0.040	--	1
n-Octadecane (C18)	ND		mg/l	0.040	--	1
Phytane	ND		mg/l	0.040	--	1
n-Nonadecane (C19)	ND		mg/l	0.040	--	1
n-Eicosane (C20)	0.070		mg/l	0.040	--	1
n-Heneicosane (C21)	0.081		mg/l	0.040	--	1
n-Docosane (C22)	0.048		mg/l	0.040	--	1
n-Tricosane (C23)	ND		mg/l	0.040	--	1
n-Tetracosane (C24)	ND		mg/l	0.040	--	1
n-Pentacosane (C25)	ND		mg/l	0.200	--	1
n-Hexacosane (C26)	ND		mg/l	0.040	--	1
n-Heptacosane (C27)	ND		mg/l	0.040	--	1
n-Octacosane (C28)	0.110		mg/l	0.040	--	1
n-Nonacosane (C29)	0.122		mg/l	0.040	--	1
n-Triacontane (C30)	0.063		mg/l	0.040	--	1
n-Hentriacontane (C31)	ND		mg/l	0.040	--	1

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-03
Client ID: ERH2052
Sample Location: HAWAII
Date Collected: 12/03/21 13:15
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/l	0.040	--	1
n-Tritriacontane (C33)	ND		mg/l	0.040	--	1
n-Tetratriacontane (C34)	ND		mg/l	0.040	--	1
n-Pentatriacontane (C35)	ND		mg/l	0.040	--	1
n-Hexatriacontane (C36)	ND		mg/l	0.040	--	1
n-Heptatriacontane (C37)	ND		mg/l	0.040	--	1
n-Octatriacontane (C38)	ND		mg/l	0.040	--	1
n-Nonatriacontane (C39)	ND		mg/l	0.040	--	1
n-Tetracontane (C40)	ND		mg/l	0.040	--	1
Total Petroleum Hydrocarbons (C9-C44)	232		mg/l	1.32	--	1
Total Saturated Hydrocarbons	5.51		mg/l	0.040	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	78		50-130
d50-Tetracosane	78		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-03 D
Client ID: ERH2052
Sample Location: HAWAII

Date Collected: 12/03/21 13:15
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Liquid
Analytical Method: 1,8015D(M)
Analytical Date: 01/05/22 00:32
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 12/13/21 10:00
Cleanup Method: EPA 3630(M)
Cleanup Date: 12/14/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Tridecane (C13)	ND		mg/l	4.00	--	20
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.800	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	76		50-130
d50-Tetracosane	69		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-06 D
Client ID: ERH2052 PRE SILICA
Sample Location: HAWAII

Date Collected: 12/03/21 13:15
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:
Matrix: Liquid
Analytical Method: 1,8015D(M)
Analytical Date: 01/05/22 01:58
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 12/13/21 10:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	ND		mg/l	3.20	--	20
n-Decane (C10)	4.18		mg/l	3.20	--	20
n-Undecane (C11)	ND		mg/l	3.20	--	20
n-Dodecane (C12)	ND		mg/l	3.20	--	20
n-Tridecane (C13)	ND		mg/l	16.0	--	20
2,6,10-Trimethyldodecane (1380)	ND		mg/l	3.20	--	20
n-Tetradecane (C14)	ND		mg/l	3.20	--	20
2,6,10-Trimethyltridecane (1470)	ND		mg/l	3.20	--	20
n-Pentadecane (C15)	ND		mg/l	3.20	--	20
n-Hexadecane (C16)	ND		mg/l	3.20	--	20
Norpristane (1650)	ND		mg/l	3.20	--	20
n-Heptadecane (C17)	ND		mg/l	3.20	--	20
Pristane	4.85		mg/l	3.20	--	20
n-Octadecane (C18)	ND		mg/l	3.20	--	20
Phytane	ND		mg/l	3.20	--	20
n-Nonadecane (C19)	ND		mg/l	3.20	--	20
n-Eicosane (C20)	ND		mg/l	3.20	--	20
n-Heneicosane (C21)	ND		mg/l	3.20	--	20
n-Docosane (C22)	55.5	G	mg/l	3.20	--	20
n-Tricosane (C23)	ND		mg/l	3.20	--	20
n-Tetracosane (C24)	ND		mg/l	3.20	--	20
n-Pentacosane (C25)	59.3		mg/l	16.0	--	20
n-Hexacosane (C26)	4.52		mg/l	3.20	--	20
n-Heptacosane (C27)	ND		mg/l	3.20	--	20
n-Octacosane (C28)	ND		mg/l	3.20	--	20
n-Nonacosane (C29)	ND		mg/l	3.20	--	20
n-Triacontane (C30)	ND		mg/l	3.20	--	20
n-Hentriacontane (C31)	ND		mg/l	3.20	--	20

Project Name: RED HILL **Lab Number:** L2166503

Project Number: Not Specified **Report Date:** 01/05/22

SAMPLE RESULTS

Lab ID: L2166503-06 D
Client ID: ERH2052 PRE SILICA
Sample Location: HAWAII

Date Collected: 12/03/21 13:15
Date Received: 12/04/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/l	3.20	--	20
n-Tritriacontane (C33)	ND		mg/l	3.20	--	20
n-Tetratriacontane (C34)	ND		mg/l	3.20	--	20
n-Pentatriacontane (C35)	ND		mg/l	3.20	--	20
n-Hexatriacontane (C36)	ND		mg/l	3.20	--	20
n-Heptatriacontane (C37)	ND		mg/l	3.20	--	20
n-Octatriacontane (C38)	ND		mg/l	3.20	--	20
n-Nonatriacontane (C39)	ND		mg/l	3.20	--	20
n-Tetracontane (C40)	ND		mg/l	3.20	--	20
Total Petroleum Hydrocarbons (C9-C44)	6970		mg/l	106	--	20
Total Saturated Hydrocarbons	128		mg/l	3.20	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	80		50-130
d50-Tetracosane	116		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/04/21 11:44
Analyst: MJS

Extraction Method: EPA 3580A
Extraction Date: 12/04/21 09:50

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01 Batch: WG1579102-1					
n-Nonane (C9)	ND		mg/kg	200	--
n-Decane (C10)	ND		mg/kg	200	--
n-Undecane (C11)	ND		mg/kg	200	--
n-Dodecane (C12)	ND		mg/kg	200	--
n-Tridecane (C13)	ND		mg/kg	200	--
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	200	--
n-Tetradecane (C14)	ND		mg/kg	200	--
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	200	--
n-Pentadecane (C15)	ND		mg/kg	200	--
n-Hexadecane (C16)	ND		mg/kg	200	--
Norpristane (1650)	ND		mg/kg	200	--
n-Heptadecane (C17)	ND		mg/kg	200	--
Pristane	ND		mg/kg	200	--
n-Octadecane (C18)	ND		mg/kg	200	--
Phytane	ND		mg/kg	200	--
n-Nonadecane (C19)	ND		mg/kg	200	--
n-Eicosane (C20)	ND		mg/kg	200	--
n-Heneicosane (C21)	ND		mg/kg	200	--
n-Docosane (C22)	ND		mg/kg	200	--
n-Tricosane (C23)	ND		mg/kg	200	--
n-Tetracosane (C24)	ND		mg/kg	200	--
n-Pentacosane (C25)	ND		mg/kg	200	--
n-Hexacosane (C26)	ND		mg/kg	200	--
n-Heptacosane (C27)	ND		mg/kg	200	--
n-Octacosane (C28)	ND		mg/kg	200	--
n-Nonacosane (C29)	ND		mg/kg	200	--
n-Triacontane (C30)	ND		mg/kg	200	--
n-Hentriacontane (C31)	ND		mg/kg	200	--
n-Dotriacontane (C32)	ND		mg/kg	200	--

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/04/21 11:44
Analyst: MJS

Extraction Method: EPA 3580A
Extraction Date: 12/04/21 09:50

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01 Batch: WG1579102-1					
n-Tritriacontane (C33)	ND		mg/kg	200	--
n-Tetratriacontane (C34)	ND		mg/kg	200	--
n-Pentatriacontane (C35)	ND		mg/kg	200	--
n-Hexatriacontane (C36)	ND		mg/kg	200	--
n-Heptatriacontane (C37)	ND		mg/kg	200	--
n-Octatriacontane (C38)	ND		mg/kg	200	--
n-Nonatriacontane (C39)	ND		mg/kg	200	--
n-Tetracontane (C40)	ND		mg/kg	200	--
C9-C44 Total Petroleu	ND		mg/kg	6600	--
C10-C28 DRO	ND		mg/kg	4200	--
C28-C40 ORO	ND		mg/kg	2200	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	94		50-130
d50-Tetracosane	92		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/04/21 23:30
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/04/21 11:30

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 02 Batch: WG1579126-1					
n-Nonane (C9)	ND		mg/l	0.001	--
n-Decane (C10)	ND		mg/l	0.001	--
n-Undecane (C11)	ND		mg/l	0.001	--
n-Dodecane (C12)	ND		mg/l	0.001	--
n-Tridecane (C13)	ND		mg/l	0.005	--
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.001	--
n-Tetradecane (C14)	ND		mg/l	0.001	--
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.001	--
n-Pentadecane (C15)	ND		mg/l	0.001	--
n-Hexadecane (C16)	ND		mg/l	0.001	--
Norpristane (1650)	ND		mg/l	0.001	--
n-Heptadecane (C17)	ND		mg/l	0.001	--
Pristane	ND		mg/l	0.001	--
n-Octadecane (C18)	ND		mg/l	0.001	--
Phytane	ND		mg/l	0.001	--
n-Nonadecane (C19)	ND		mg/l	0.001	--
n-Eicosane (C20)	ND		mg/l	0.001	--
n-Heneicosane (C21)	ND		mg/l	0.001	--
n-Docosane (C22)	ND		mg/l	0.001	--
n-Tricosane (C23)	ND		mg/l	0.001	--
n-Tetracosane (C24)	ND		mg/l	0.001	--
n-Pentacosane (C25)	ND		mg/l	0.005	--
n-Hexacosane (C26)	ND		mg/l	0.001	--
n-Heptacosane (C27)	ND		mg/l	0.001	--
n-Octacosane (C28)	ND		mg/l	0.001	--
n-Nonacosane (C29)	ND		mg/l	0.001	--
n-Triacontane (C30)	ND		mg/l	0.001	--
n-Hentriacontane (C31)	ND		mg/l	0.001	--
n-Dotriacontane (C32)	ND		mg/l	0.001	--

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/04/21 23:30
Analyst: MJS

Extraction Method: EPA 3510C
Extraction Date: 12/04/21 11:30

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 02 Batch: WG1579126-1					
n-Tritriacontane (C33)	ND		mg/l	0.001	--
n-Tetratriacontane (C34)	ND		mg/l	0.001	--
n-Pentatriacontane (C35)	ND		mg/l	0.001	--
n-Hexatriacontane (C36)	ND		mg/l	0.001	--
n-Heptatriacontane (C37)	ND		mg/l	0.001	--
n-Octatriacontane (C38)	ND		mg/l	0.001	--
n-Nonatriacontane (C39)	ND		mg/l	0.001	--
n-Tetracontane (C40)	ND		mg/l	0.001	--
C9-C44 Total Petroleu	ND		mg/l	0.033	--
C10-C28 DRO	ND		mg/l	0.021	--
C28-C40 ORO	ND		mg/l	0.011	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	92		50-130
d50-Tetracosane	91		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/14/21 17:05
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 12/13/21 10:00
Cleanup Method: EPA 3630(M)
Cleanup Date: 12/14/21

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 03 Batch: WG1582496-1					
n-Nonane (C9)	ND		mg/l	0.040	--
n-Decane (C10)	ND		mg/l	0.040	--
n-Undecane (C11)	ND		mg/l	0.040	--
n-Dodecane (C12)	ND		mg/l	0.040	--
n-Tridecane (C13)	ND		mg/l	0.200	--
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.040	--
n-Tetradecane (C14)	ND		mg/l	0.040	--
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.040	--
n-Pentadecane (C15)	ND		mg/l	0.040	--
n-Hexadecane (C16)	ND		mg/l	0.040	--
Norpristane (1650)	ND		mg/l	0.040	--
n-Heptadecane (C17)	ND		mg/l	0.040	--
Pristane	ND		mg/l	0.040	--
n-Octadecane (C18)	ND		mg/l	0.040	--
Phytane	ND		mg/l	0.040	--
n-Nonadecane (C19)	ND		mg/l	0.040	--
n-Eicosane (C20)	ND		mg/l	0.040	--
n-Heneicosane (C21)	ND		mg/l	0.040	--
n-Docosane (C22)	ND		mg/l	0.040	--
n-Tricosane (C23)	ND		mg/l	0.040	--
n-Tetracosane (C24)	ND		mg/l	0.040	--
n-Pentacosane (C25)	ND		mg/l	0.200	--
n-Hexacosane (C26)	ND		mg/l	0.040	--
n-Heptacosane (C27)	ND		mg/l	0.040	--
n-Octacosane (C28)	ND		mg/l	0.040	--
n-Nonacosane (C29)	ND		mg/l	0.040	--
n-Triacontane (C30)	ND		mg/l	0.040	--
n-Hentriacontane (C31)	ND		mg/l	0.040	--
n-Dotriacontane (C32)	ND		mg/l	0.040	--

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 12/14/21 17:05
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 12/13/21 10:00
Cleanup Method: EPA 3630(M)
Cleanup Date: 12/14/21

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 03 Batch: WG1582496-1					
n-Tritriacontane (C33)	ND		mg/l	0.040	--
n-Tetratriacontane (C34)	ND		mg/l	0.040	--
n-Pentatriacontane (C35)	ND		mg/l	0.040	--
n-Hexatriacontane (C36)	ND		mg/l	0.040	--
n-Heptatriacontane (C37)	ND		mg/l	0.040	--
n-Octatriacontane (C38)	ND		mg/l	0.040	--
n-Nonatriacontane (C39)	ND		mg/l	0.040	--
n-Tetracontane (C40)	ND		mg/l	0.040	--
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/l	1.32	--
Total Saturated Hydrocarbons	ND		mg/l	0.040	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	81		50-130
d50-Tetracosane	80		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 01/04/22 18:47
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 12/13/21 10:00

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 06 Batch: WG1590340-1					
n-Nonane (C9)	ND		mg/l	0.160	--
n-Decane (C10)	ND		mg/l	0.160	--
n-Undecane (C11)	ND		mg/l	0.160	--
n-Dodecane (C12)	ND		mg/l	0.160	--
n-Tridecane (C13)	ND		mg/l	0.800	--
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.160	--
n-Tetradecane (C14)	ND		mg/l	0.160	--
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.160	--
n-Pentadecane (C15)	ND		mg/l	0.160	--
n-Hexadecane (C16)	ND		mg/l	0.160	--
Norpristane (1650)	ND		mg/l	0.160	--
n-Heptadecane (C17)	ND		mg/l	0.160	--
Pristane	ND		mg/l	0.160	--
n-Octadecane (C18)	ND		mg/l	0.160	--
Phytane	ND		mg/l	0.160	--
n-Nonadecane (C19)	ND		mg/l	0.160	--
n-Eicosane (C20)	ND		mg/l	0.160	--
n-Heneicosane (C21)	ND		mg/l	0.160	--
n-Docosane (C22)	ND		mg/l	0.160	--
n-Tricosane (C23)	ND		mg/l	0.160	--
n-Tetracosane (C24)	ND		mg/l	0.160	--
n-Pentacosane (C25)	ND		mg/l	0.800	--
n-Hexacosane (C26)	ND		mg/l	0.160	--
n-Heptacosane (C27)	ND		mg/l	0.160	--
n-Octacosane (C28)	ND		mg/l	0.160	--
n-Nonacosane (C29)	ND		mg/l	0.160	--
n-Triacontane (C30)	ND		mg/l	0.160	--
n-Hentriacontane (C31)	ND		mg/l	0.160	--
n-Dotriacontane (C32)	ND		mg/l	0.160	--

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 01/04/22 18:47
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 12/13/21 10:00

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 06 Batch: WG1590340-1					
n-Tritriacontane (C33)	ND		mg/l	0.160	--
n-Tetratriacontane (C34)	ND		mg/l	0.160	--
n-Pentatriacontane (C35)	ND		mg/l	0.160	--
n-Hexatriacontane (C36)	ND		mg/l	0.160	--
n-Heptatriacontane (C37)	ND		mg/l	0.160	--
n-Octatriacontane (C38)	ND		mg/l	0.160	--
n-Nonatriacontane (C39)	ND		mg/l	0.160	--
n-Tetracontane (C40)	ND		mg/l	0.160	--
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/l	5.28	--
Total Saturated Hydrocarbons	ND		mg/l	0.160	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	82		50-130
d50-Tetracosane	76		50-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 01 Batch: WG1579102-2 WG1579102-3								
Nonane (C9)	88		89		50-130	1		30
n-Decane (C10)	89		90		50-130	1		30
n-Dodecane (C12)	93		96		50-130	3		30
n-Tetradecane (C14)	93		96		50-130	3		30
n-Hexadecane (C16)	95		99		50-130	4		30
n-Octadecane (C18)	99		102		50-130	3		30
n-Nonadecane (C19)	95		98		50-130	3		30
n-Eicosane (C20)	95		97		50-130	2		30
n-Docosane (C22)	95		97		50-130	2		30
n-Tetracosane (C24)	97		99		50-130	2		30
n-Hexacosane (C26)	96		99		50-130	3		30
n-Octacosane (C28)	97		99		50-130	2		30
n-Triacontane (C30)	94		97		50-130	3		30
n-Hexatriacontane (C36)	85		88		50-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	94		95		50-130
d50-Tetracosane	93		95		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 02 Batch: WG1579126-2 WG1579126-3								
Nonane (C9)	67		65		50-130	3		30
n-Decane (C10)	76		74		50-130	3		30
n-Dodecane (C12)	85		83		50-130	2		30
n-Tetradecane (C14)	86		87		50-130	1		30
n-Hexadecane (C16)	90		93		50-130	3		30
n-Octadecane (C18)	92		96		50-130	4		30
n-Nonadecane (C19)	95		101		50-130	6		30
n-Eicosane (C20)	91		96		50-130	5		30
n-Docosane (C22)	91		96		50-130	5		30
n-Tetracosane (C24)	94		98		50-130	4		30
n-Hexacosane (C26)	93		98		50-130	5		30
n-Octacosane (C28)	94		99		50-130	5		30
n-Triacontane (C30)	91		96		50-130	5		30
n-Hexatriacontane (C36)	82		87		50-130	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	87		91		50-130
d50-Tetracosane	89		93		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 03 Batch: WG1582496-2 WG1582496-3								
Nonane (C9)	59		62		50-130	5		30
n-Decane (C10)	64		67		50-130	5		30
n-Dodecane (C12)	69		75		50-130	8		30
n-Tetradecane (C14)	72		78		50-130	8		30
n-Hexadecane (C16)	83		89		50-130	7		30
n-Octadecane (C18)	86		90		50-130	5		30
n-Nonadecane (C19)	86		84		50-130	2		30
n-Eicosane (C20)	85		88		50-130	3		30
n-Docosane (C22)	84		87		50-130	4		30
n-Tetracosane (C24)	87		91		50-130	4		30
n-Hexacosane (C26)	85		89		50-130	5		30
n-Octacosane (C28)	86		91		50-130	6		30
n-Triacontane (C30)	83		88		50-130	6		30
n-Hexatriacontane (C36)	73		77		50-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	82		86		50-130
d50-Tetracosane	82		84		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 06 Batch: WG1590340-2 WG1590340-3								
Nonane (C9)	88		82		50-130	7		30
n-Decane (C10)	88		84		50-130	5		30
n-Dodecane (C12)	80		78		50-130	3		30
n-Tetradecane (C14)	78		77		50-130	1		30
n-Hexadecane (C16)	86		85		50-130	1		30
n-Octadecane (C18)	88		88		50-130	0		30
n-Nonadecane (C19)	80		81		50-130	1		30
n-Eicosane (C20)	79		80		50-130	1		30
n-Docosane (C22)	80		81		50-130	1		30
n-Tetracosane (C24)	85		86		50-130	1		30
n-Hexacosane (C26)	80		81		50-130	1		30
n-Octacosane (C28)	78		78		50-130	0		30
n-Triacontane (C30)	79		79		50-130	0		30
n-Hexatriacontane (C36)	76		69		50-130	10		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	81		81		50-130
d50-Tetracosane	76		76		50-130

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2166503-01A	Vial unpreserved	A	NA		1.6	Y	Absent		A2-PIANO8260(365),A2-SHC(365)
L2166503-02A	Amber 1000ml unpreserved	B	7	7	1.2	Y	Present/Intact		A2-SHC(7)
L2166503-02B	Amber 1000ml unpreserved	B	7	7	1.2	Y	Present/Intact		A2-SHC(7)
L2166503-02C	Vial unpreserved	B	NA		1.2	Y	Present/Intact		A2-PIANO8260(14)
L2166503-02D	Vial unpreserved	B	NA		1.2	Y	Present/Intact		A2-PIANO8260(14)
L2166503-02E	Vial unpreserved	B	NA		1.2	Y	Present/Intact		A2-PIANO8260(14)
L2166503-02F	Vial H2SO4 preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-02G	Vial H2SO4 preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-02H	Vial H2SO4 preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-02I	Vial H2SO4 preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-02J	Amber 1000ml HCl preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-02K	Amber 1000ml HCl preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-03A	Glass 250ml/8oz unpreserved	B	NA		1.2	Y	Present/Intact		A2-SHC(7)
L2166503-04A	Vial HCl preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-04B	Vial HCl preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-04C	Vial HCl preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-04D	Vial H2SO4 preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-04E	Vial H2SO4 preserved	B	NA		1.2	Y	Present/Intact		A2-ARCHIVE()
L2166503-06A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		A2-SHC(7)

Container Comments

*Values in parentheses indicate holding time in days

Project Name: RED HILL
Project Number: Not Specified

Lab Number: L2166503
Report Date: 01/05/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)

Container Comments

L2166503-04B Vial has Headspace

*Values in parentheses indicate holding time in days

Project Name:	RED HILL	**Lab Number:**	L2166503
Project Number:	Not Specified	**Report Date:**	01/05/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	RED HILL	**Lab Number:**	L2166503
Project Number:	Not Specified	**Report Date:**	01/05/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	RED HILL	**Lab Number:**	L2166503
Project Number:	Not Specified	**Report Date:**	01/05/22

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name: RED HILL
Project Number: Not Specified
Lab Number: L2166503
Report Date: 01/05/22

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2166503 12/3/21

CoC ID 210111-27 NOI-RES

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd In Lab: 11/29/21

ALPHA Job #: L2166503

Client Information

Client: Ileana Rhodes GSI Environmental Inc.
Address: 2211 Norfolk Suite 1000
Houston, TX 77098-5669
Phone: 281-703-5669
Fax:
Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:
Project Location:
Project #:
Project Manager: Susan O'Neil
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C-10 to 24, C-24 to 40.
Include carbon marker and sample surrogate for TPH-d/o and w/SGC.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	EPA 8270D - Full Scan w/TICs	PHI w/ Qualitative Narrative	EPA 8015D(M) SHC+SGC	Sample Specific Comments	TOTAL # BOTTLES
L2166503-01	ERH1967	11/24/21	N/A	Product	Client	☒	☐	☒	☒	L2166503-01	5
	ERH1968	11/24/21	1415	GW	DM, JK	☒	☒	☒	☒		0

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☒ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Container Type	V/A	A	V/A	V/A	
Preservative	A/D	A	A/D	A/D	

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Yim	11/26/21 1200	Fedex	
Fedex			11/29/21 1010

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

MANSFIELD CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Project Information

Project Name: Red Hill

Project Location: Hawaii

Project #:

Project Manager:

ALPHA Quote #:

Client Information

Client: Ileana Rhodes - GSI

Address:

Phone: 281-703-5669

Fax:

Email: llrhodes@gsi-net.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☐ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: 12/6/2021 Time: 18:00 EST

Other Project Specific Requirements/Comments/Detection Limits:
Alpha PM - Susan O'Neil

☐ MS/MSD (at unit cost) will be omitted unless you check here

Date Rec'd in Lab: 12-4-21

ALPHA Job #: L2166503

Report Information

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Data Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

ANALYSIS

SHC by 8015 w/ PHI narration

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	SHC by 8015 w/ PHI narration	Sample Specific Comments
66503-02	ERH2051	12/02/21	17:00	GW	KL,CF	☒	
-03	ERH2052	12/03/21	13:15	SimpGrn	KL,CF	☐	Hold

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 101-093-RJ
(rev. 3-JAN-12)

L21066503

CHAIN OF CUSTODY

PAGE 1 OF 1

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 12-4-21

ALPHA Job #: L2112-01 AOI-FUS

Client Information

Client: Ileana Rhodes GSI Environmental Inc.

Address: 2211 Norfolk Suite 1000

Houston, TX 77098-5669

Phone: 281-703-5669

Fax:

Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Red Hill

Project Location: Hawaii

Project #:

Project Manager: Susan O'Neil

ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ Rush (ONLY IF PRE-APPROVED)

Due Date: 48 hr TAT

Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C-10 to 24, C-24 to 40.
Include carbon marker and sample surrogate for TPH-d/o and w/SGC.

ANALYSIS

SAMPLE HANDLING

Filtration
☐ Done
☐ Not Needed
☒ Lab to do

Preservation
☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	EPA 8270D - Full Scan w/TICs	PHI (as needed)	EPA 8015D(M) SHC+SGC	Hold analyzed with the EPA 8260 BTEX, naphthalene, TPH-g by this	EPA 8260 BTEX, naphthalene, TPH-g by this	Sample Specific Comments	TOTAL # BOTTLES
66503-01	ERH2049	12/03/21	1650	WQ	KL, CF	☒	☒	☐	☐	☐	☒		5
-02	ERH2051	12/03/21	1700	GW	KL, CF	☒	☒	☒	☒	☐	☒		11
-03	ERH2052	12/04/21	1315	AQ	MY, TN	☐	☐	☐	☐	☒	☐		1
						☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐		

MY 12/3/21

Container Type	A	AB	A	A	A	A	-	-	-	-	-	-	
Preservative	B	A	A	B	A	B	-	-	-	-	-	-	

Relinquished By:	Date/Time	Received By:	Date/Time
Matthew Yim	12/3/21 1400	AM	12/4/21 1005

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO. 01-01(R-NJ) (rev. 5-JAN-12)

Library Search

Reports

Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\
Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Title : Decalins & Alkylated PAH's

Signal : TIC: f812132104.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.287	370	374	392	rVB3	189406	375747	0.07%	0.026%
2	11.516	1255	1263	1280	rBV2	235144	459402	0.08%	0.031%
3	12.633	1440	1453	1497	rVV	9161674	19102649	3.39%	1.303%
4	14.257	1718	1729	1758	rVB	3446220	7460810	1.33%	0.509%
5	15.104	1852	1873	1883	rBV	15170730	44971826	7.99%	3.067%
6	15.210	1884	1891	1898	rVV4	383940	1131257	0.20%	0.077%
7	15.345	1898	1914	1932	rVB	15956788	43217384	7.68%	2.947%
8	15.986	2012	2023	2038	rBV	206548	593244	0.11%	0.040%
9	16.686	2112	2142	2149	rBV4	1419507	7914116	1.41%	0.540%
10	16.816	2153	2164	2172	rVB	6614325	19091491	3.39%	1.302%
11	16.933	2172	2184	2188	rBV4	2264268	7138696	1.27%	0.487%
12	17.421	2241	2267	2274	rBV	2521129	12903899	2.29%	0.880%
13	17.498	2275	2280	2290	rVB3	691942	1803977	0.32%	0.123%
14	17.727	2290	2319	2324	rBV2	3261910	16042475	2.85%	1.094%
15	18.115	2364	2385	2400	rVB	1855728	7159100	1.27%	0.488%
16	18.486	2416	2448	2456	rBV	8657897	35555450	6.32%	2.425%
17	18.745	2476	2492	2496	rBV3	1347993	5555135	0.99%	0.379%
18	18.827	2498	2506	2516	rVB	3364415	8549470	1.52%	0.583%
19	19.492	2593	2619	2627	rBV	1623734	6178148	1.10%	0.421%
20	19.562	2627	2631	2640	rVB2	185094	435119	0.08%	0.030%
21	19.868	2654	2683	2689	rBV2	35795855	214559397	38.12%	14.631%
22	20.215	2716	2742	2747	rBV	2848383	13703475	2.43%	0.934%
23	20.333	2755	2762	2784	rVB	3858051	9748307	1.73%	0.665%
24	20.803	2829	2842	2849	rBV3	282497	1215057	0.22%	0.083%
25	21.027	2850	2880	2888	rVV	17806436	82890651	14.73%	5.653%
26	21.115	2890	2895	2898	rVV	241142	563294	0.10%	0.038%
27	21.233	2899	2915	2926	rVV3	2694030	15238600	2.71%	1.039%
28	21.386	2928	2941	2962	rVB	5743347	19670560	3.50%	1.341%
29	21.998	2987	3045	3049	rBV3	58390185	562804283	100.00%	38.379%
30	22.109	3049	3064	3070	rVV	4597209	18283033	3.25%	1.247%
31	22.227	3070	3084	3097	rVV	4414030	15606990	2.77%	1.064%
32	22.386	3097	3111	3120	rVV6	227099	1034342	0.18%	0.071%
33	22.568	3121	3142	3147	rVV	3819927	15098241	2.68%	1.030%
34	22.686	3147	3162	3167	rVV	6308854	23517084	4.18%	1.604%
35	22.792	3167	3180	3189	rVB	3377032	10687875	1.90%	0.729%
36	22.903	3194	3199	3222	rVB2	103273	342503	0.06%	0.023%
37	23.186	3223	3247	3264	rVB	4981464	17610869	3.13%	1.201%
38	23.439	3268	3290	3296	rBV2	9554545	37740426	6.71%	2.574%
39	23.592	3296	3316	3341	rVV	14556976	55957920	9.94%	3.816%
40	23.797	3343	3351	3375	rVB2	227990	633603	0.11%	0.043%
41	24.397	3441	3453	3461	rVV2	497687	1347670	0.24%	0.092%
42	24.474	3462	3466	3485	rVV3	133187	438397	0.08%	0.030%
43	24.891	3518	3537	3550	rBV4	121058	491725	0.09%	0.034%
44	25.050	3551	3564	3578	rVB2	1958531	5102325	0.91%	0.348%
45	25.244	3586	3597	3622	rVB	216201	641314	0.11%	0.044%

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ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

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Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Title : Decalins & Alkylated PAH's

46	25.774	3676	3687	3698	rVB	432607	1110364	0.20%	0.076%
47	26.368	3766	3788	3800	rBV3	248814	791049	0.14%	0.054%
48	26.538	3801	3817	3837	rVV2	1070534	3099348	0.55%	0.211%
49	26.956	3877	3888	3898	rBV3	145341	421597	0.07%	0.029%
50	27.315	3932	3949	3968	rBV	288029	819804	0.15%	0.056%
51	28.568	4150	4162	4183	rVV	1180063	3220143	0.57%	0.220%
52	28.750	4184	4193	4215	rVB3	122292	417012	0.07%	0.028%
53	29.085	4239	4250	4275	rBV2	186024	671917	0.12%	0.046%
54	29.438	4295	4310	4333	rBV3	121968	410840	0.07%	0.028%
55	29.968	4392	4400	4425	rVB2	250807	770805	0.14%	0.053%
56	31.809	4700	4713	4738	rVV	564235	1533334	0.27%	0.105%
57	32.967	4899	4910	4918	rVB	232997	555068	0.10%	0.038%
58	33.567	5004	5012	5022	rVV	627015	1456863	0.26%	0.099%
59	33.691	5024	5033	5052	rVB4	153410	600342	0.11%	0.041%
60	33.973	5063	5081	5091	rBV	5736151	15189199	2.70%	1.036%
61	34.326	5131	5141	5161	rVB3	142898	567340	0.10%	0.039%
62	34.608	5177	5189	5198	rVB	772041	1864285	0.33%	0.127%
63	34.779	5199	5218	5229	rBV	324118	1025915	0.18%	0.070%
64	35.073	5256	5268	5275	rBV2	134691	394090	0.07%	0.027%
65	36.185	5434	5457	5458	rBV	1594337	3499535	0.62%	0.239%
66	36.250	5460	5468	5479	rVB	5452311	13737746	2.44%	0.937%
67	36.379	5480	5490	5507	rBV	618252	1607146	0.29%	0.110%
68	36.597	5519	5527	5546	rVB5	112089	410651	0.07%	0.028%
69	36.844	5559	5569	5583	rVV5	88487	319868	0.06%	0.022%
70	36.973	5583	5591	5600	rVB	147611	337525	0.06%	0.023%
71	37.673	5698	5710	5738	rVB	923515	2349401	0.42%	0.160%
72	37.914	5739	5751	5767	rBV	756024	2118004	0.38%	0.144%
73	38.055	5769	5775	5797	rVB4	145058	555385	0.10%	0.038%
74	38.308	5806	5818	5828	rBV4	243048	829897	0.15%	0.057%
75	38.408	5829	5835	5848	rVV4	113417	403215	0.07%	0.027%
76	38.602	5862	5868	5887	rVB2	159621	475298	0.08%	0.032%
77	38.991	5923	5934	5945	rBV2	382563	1052080	0.19%	0.072%
78	39.102	5945	5953	5971	rVB2	384803	928748	0.17%	0.063%
79	40.408	6163	6175	6183	rBV	708159	1815366	0.32%	0.124%
80	40.537	6183	6197	6216	rVB	3913025	11867734	2.11%	0.809%
81	41.767	6393	6406	6422	rBV	758197	2160539	0.38%	0.147%
82	42.120	6458	6466	6479	rBV3	227421	648020	0.12%	0.044%
83	42.249	6481	6488	6505	rVV4	96385	378810	0.07%	0.026%
84	42.396	6505	6513	6548	rVB2	189667	736009	0.13%	0.050%
85	42.731	6560	6570	6605	rBV2	436160	1521251	0.27%	0.104%
86	43.996	6774	6785	6807	rBV	695922	1926361	0.34%	0.131%
87	45.220	6982	6993	7008	rBV	679540	2054760	0.37%	0.140%
88	45.537	7039	7047	7049	rBV2	166276	333532	0.06%	0.023%
89	45.584	7050	7055	7065	rVV	419513	927645	0.16%	0.063%
90	45.796	7084	7091	7112	rVB2	135905	497903	0.09%	0.034%
91	46.078	7129	7139	7172	rVB2	290040	1106427	0.20%	0.075%
92	46.602	7221	7228	7234	rVV	219892	481834	0.09%	0.033%
93	47.225	7325	7334	7363	rBV	473990	1431537	0.25%	0.098%

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Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Title : Decalins & Alkylated PAH's

94	48.437	7531	7540	7557	rBV2	405741	1260393	0.22%	0.086%
95	48.602	7561	7568	7578	rVB4	126087	365347	0.06%	0.025%
96	48.790	7593	7600	7622	rVB3	89339	327560	0.06%	0.022%
97	49.078	7644	7649	7670	rVB5	82542	314090	0.06%	0.021%
98	49.396	7695	7703	7729	rVB3	145712	594165	0.11%	0.041%
99	50.819	7934	7945	7972	rBV4	211279	887789	0.16%	0.061%
100	52.443	8211	8221	8243	rBV3	156321	689100	0.12%	0.047%

Sum of corrected areas: 1466437322

Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\
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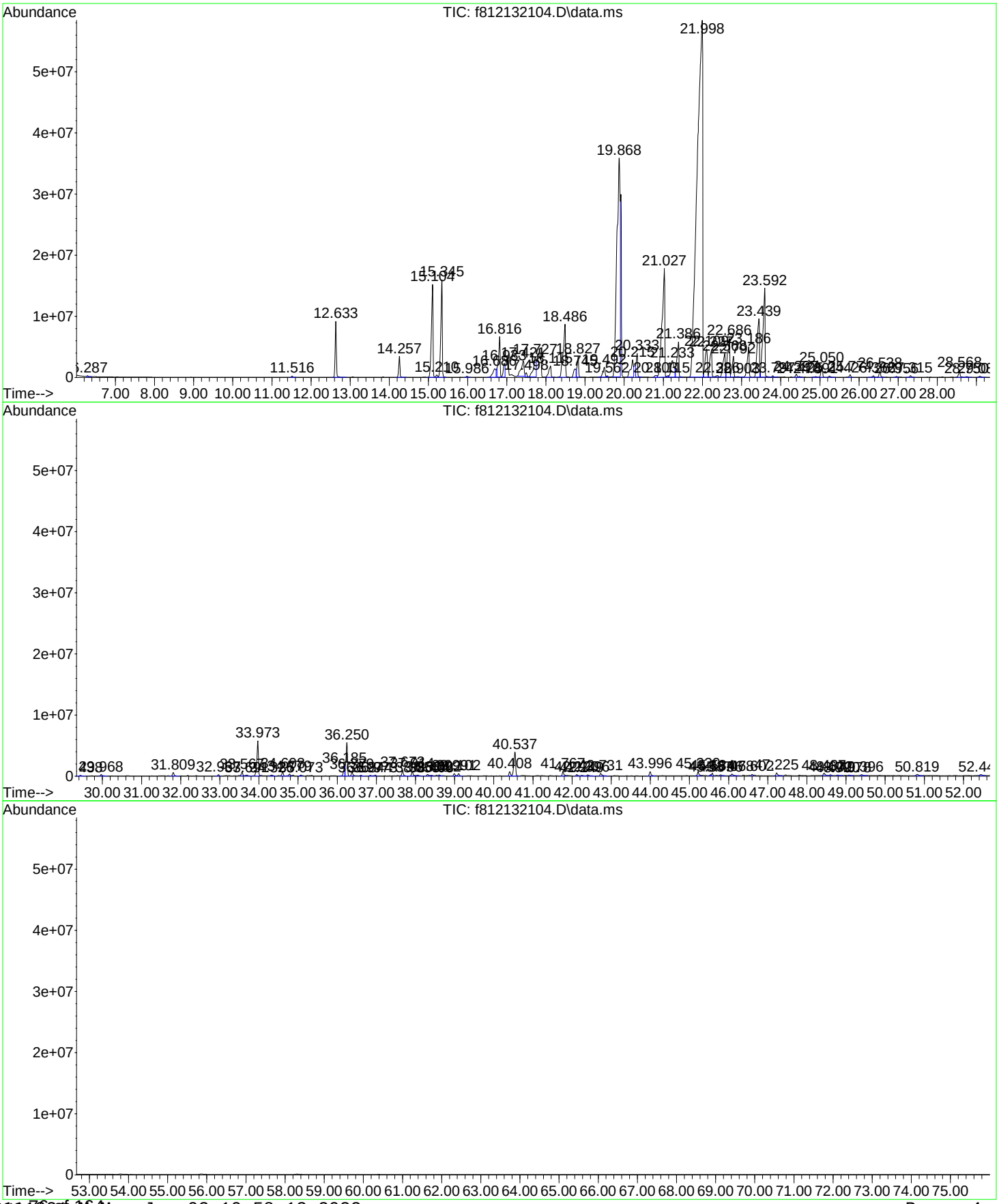
Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P



Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\
Data File : f812132104.D
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Quant Title : Decalins & Alkylated PAH's

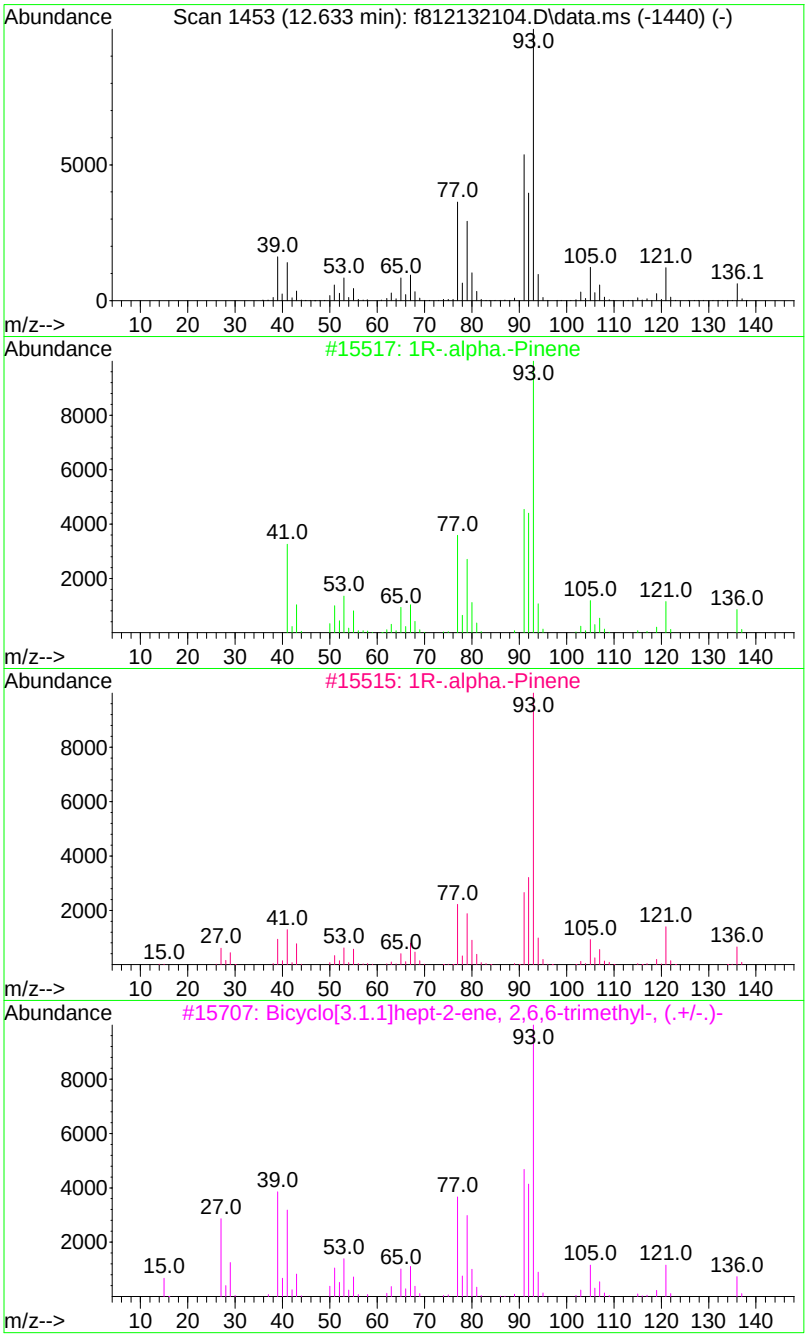
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

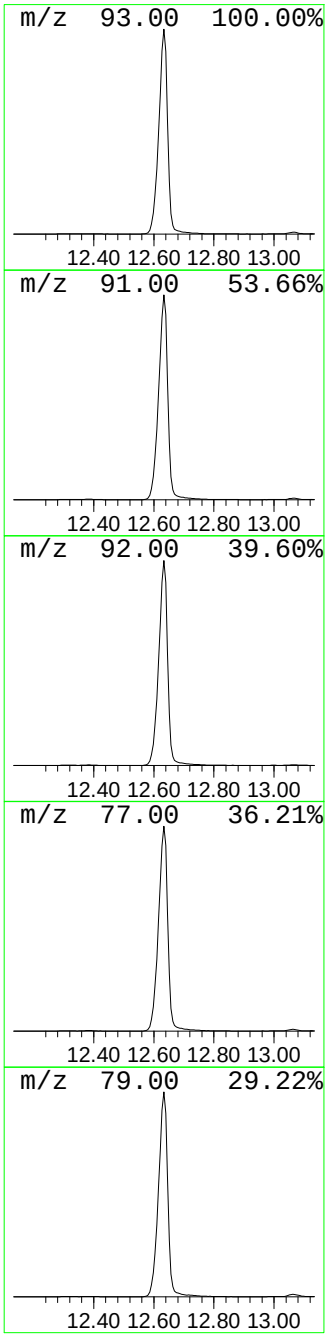
****

Peak Number 1 1R-.alpha.-Pinene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.633	12074.30 ng/mL	19102600	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1R-.alpha.-Pinene	136	C10H16	007785-70-8	96
2	1R-.alpha.-Pinene	136	C10H16	007785-70-8	95
3	Bicyclo[3.1.1]hept-2-ene, 2,6,6-...	136	C10H16	002437-95-8	95
4	.alpha.-Pinene	136	C10H16	000080-56-8	91
5	1S-.alpha.-Pinene	136	C10H16	007785-26-4	91





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Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\
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Operator  :
Sample    : L2166503-03,42,,,R2A
Misc      : simple green for libary  l
ALS Vial  : 3   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number  2  Benzene, 1-methyl-3-(1-meth...  Concentration Rank  5

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 15.104 28425.40 ng/mL    44971800  Acenaphthene-d10           26.333

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 Benzene, 1-methyl-3-(1-methyleth... 134 C10H14         000535-77-3 95
 2 Benzene, 1-methyl-4-(1-methyleth... 134 C10H14         000099-87-6 95
 3 Benzene, 1-methyl-2-(1-methyleth... 134 C10H14         000527-84-4 94
 4 Benzene, 1-methyl-2-(1-methyleth... 134 C10H14         000527-84-4 94
 5 Benzene, 2-ethyl-1,3-dimethyl-      134 C10H14         002870-04-4 91
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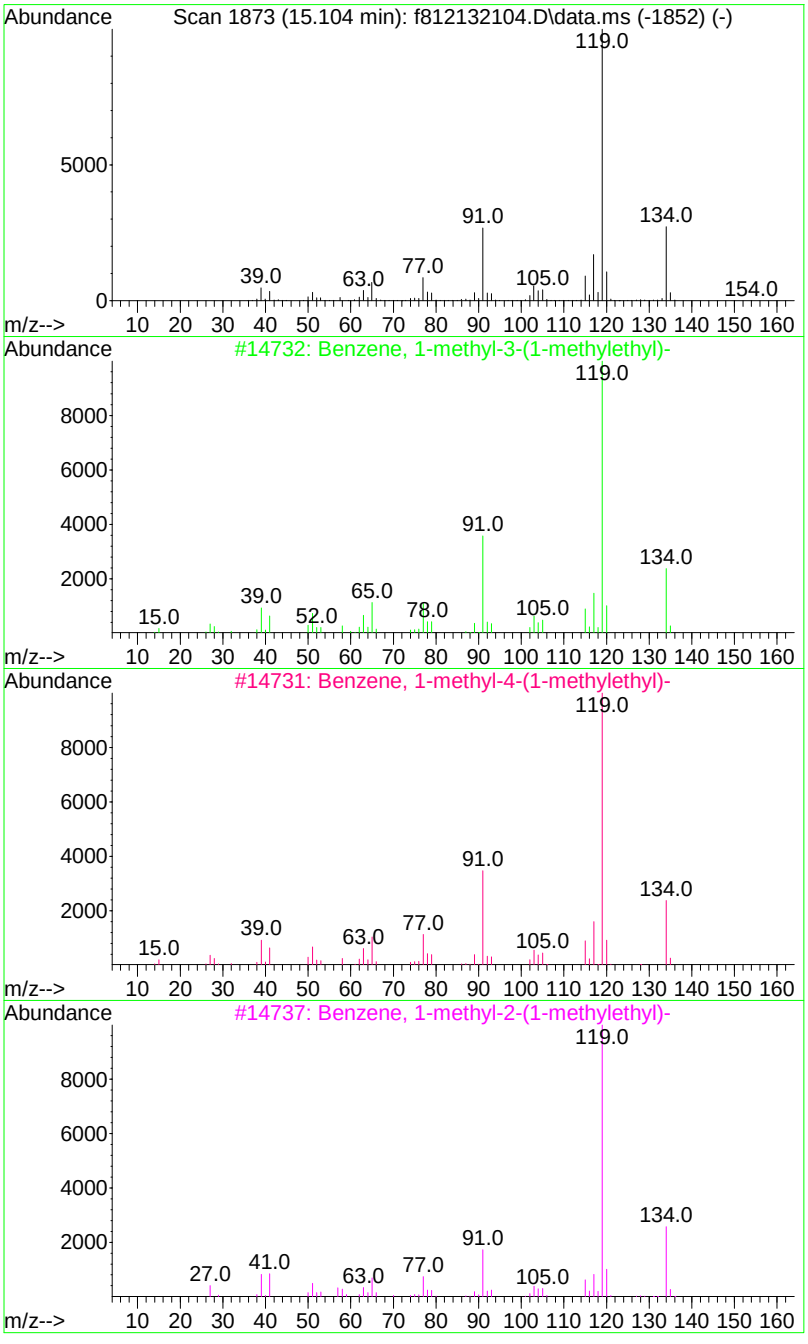

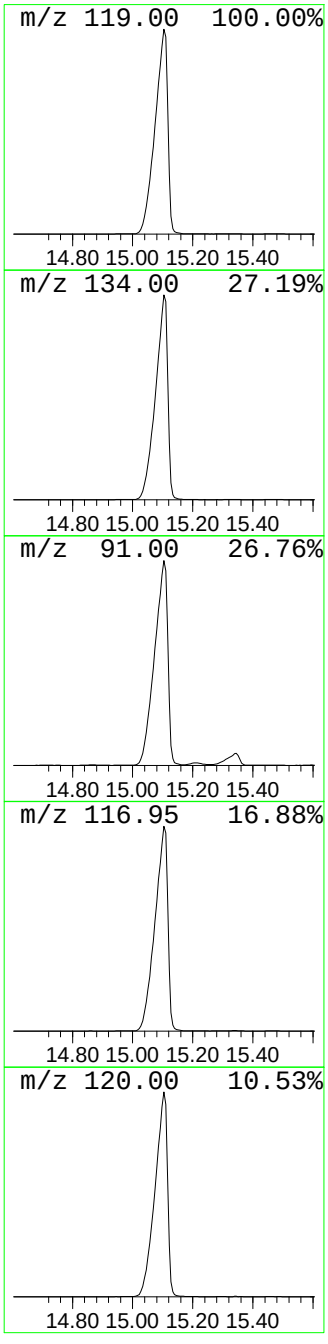

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Quant Title : Decalins & Alkylated PAH's

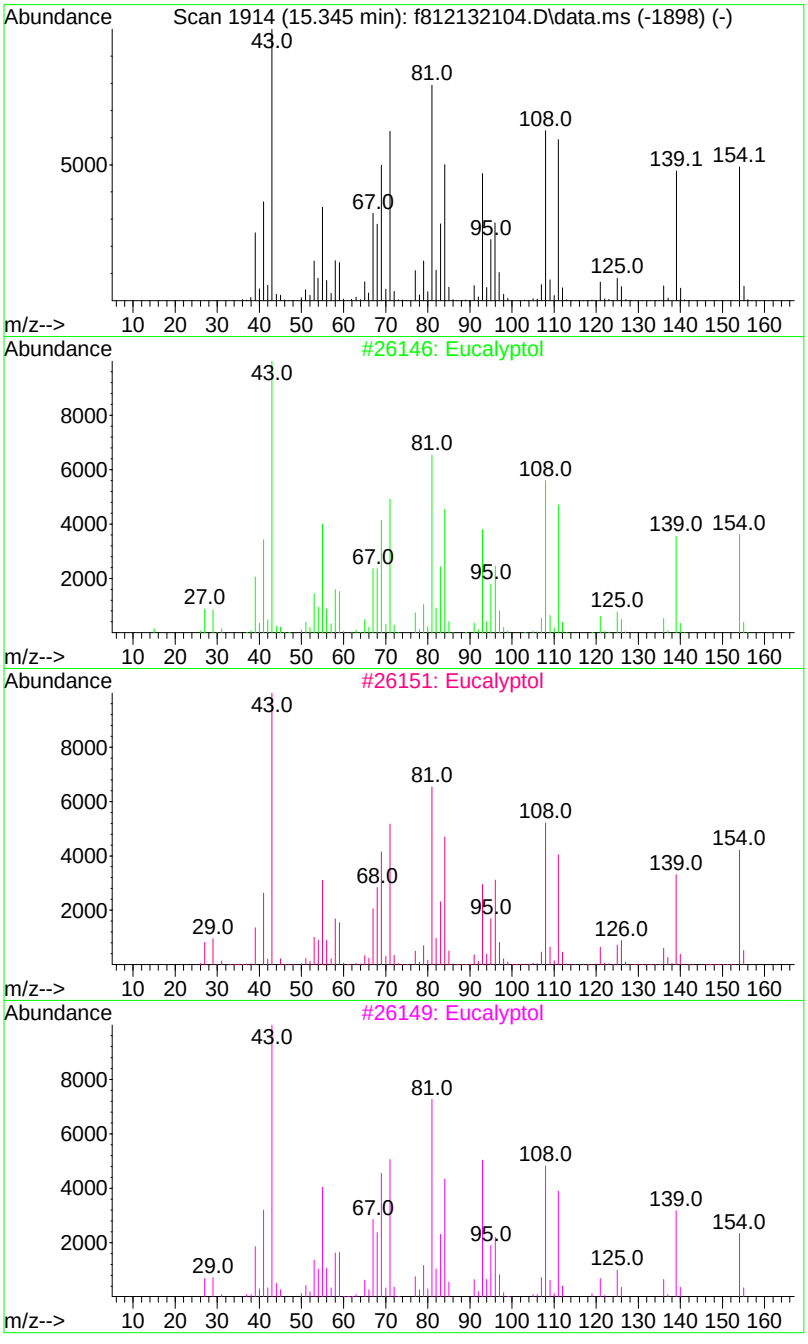
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

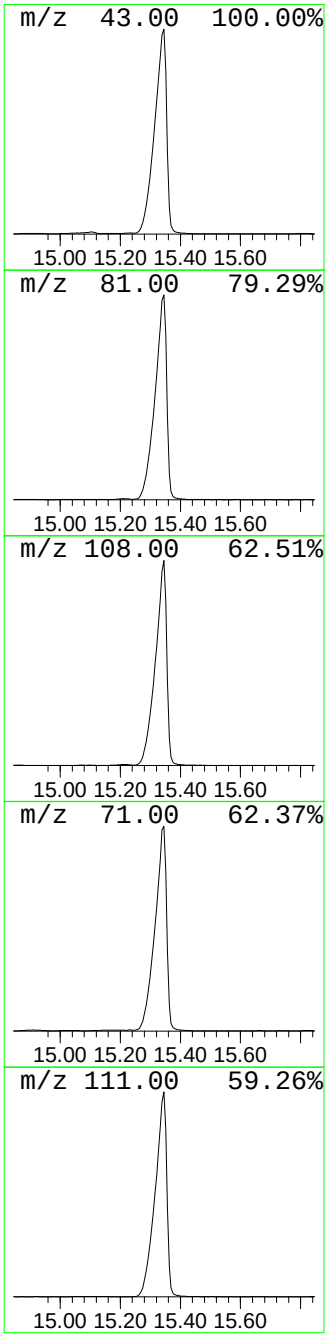
****

Peak Number 3 Eucalyptol Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.345	27316.50 ng/mL	43217400	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eucalyptol	154	C10H18O	000470-82-6	99
2	Eucalyptol	154	C10H18O	000470-82-6	93
3	Eucalyptol	154	C10H18O	000470-82-6	86
4	Trifluoroacetyl-.alpha.-terpineol	250	C12H17F3O2	1000058-17-6	58
5	Eucalyptol	154	C10H18O	000470-82-6	58





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

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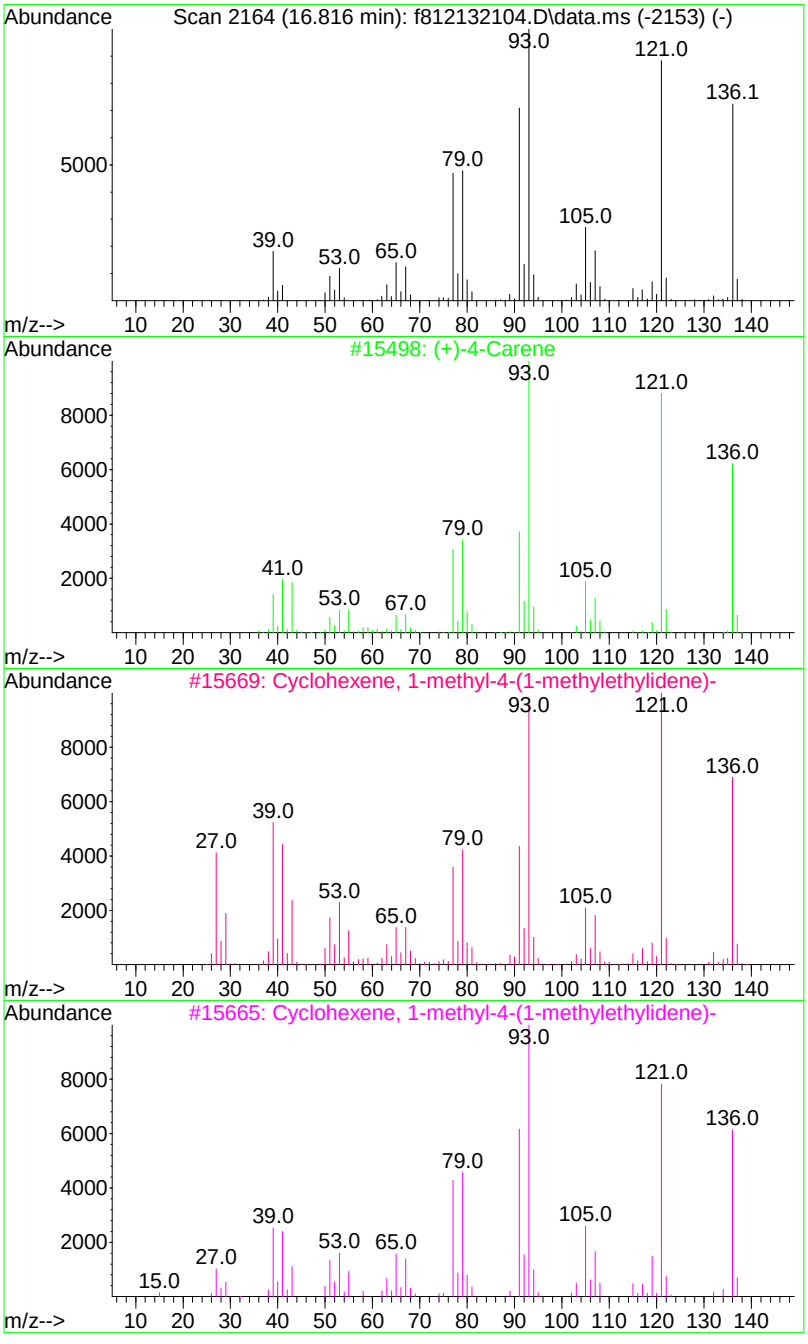
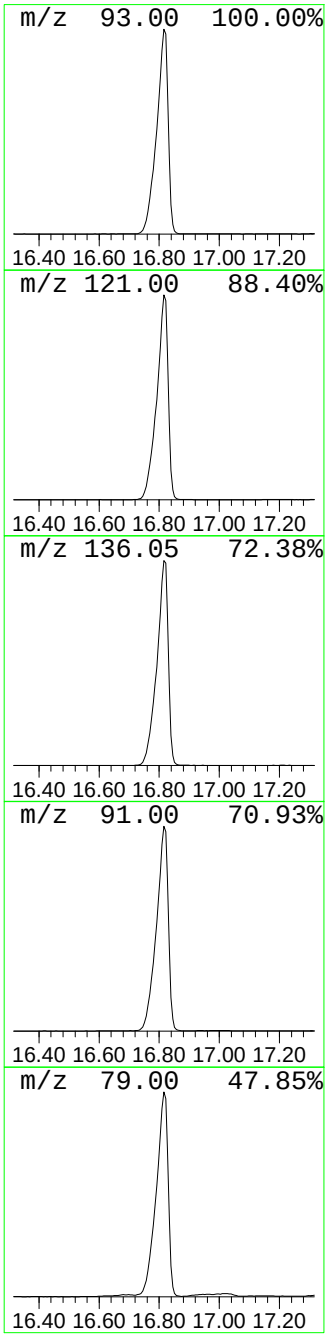
Peak Number 4 (+)-4-Carene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.816	12067.20 ng/mL	19091500	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	(+)-4-Carene	136	C10H16	029050-33-7	97
2	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95
3	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95
4	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95
5	1,3-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-86-5	94





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Quant Title : Decalins & Alkylated PAH's

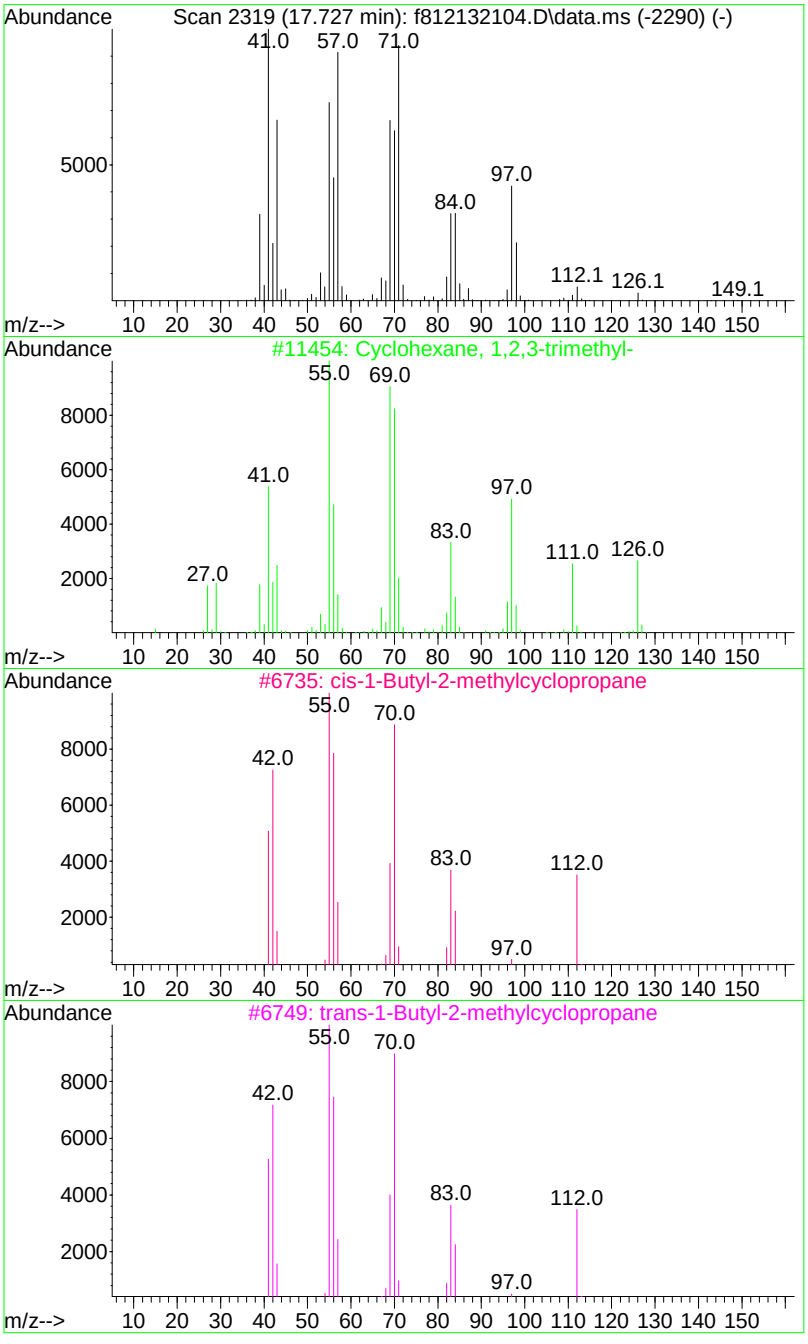
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

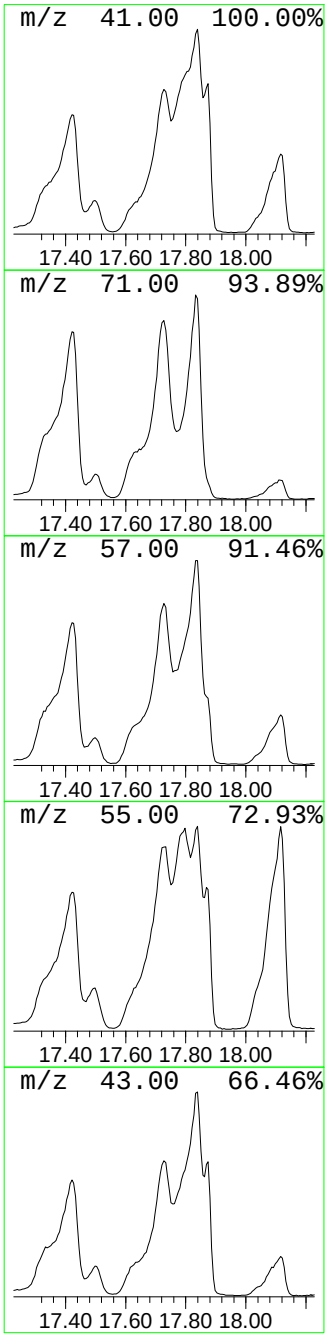
****

Peak Number 5 Cyclohexane, 1,2,3-trimethyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.727	10140.00 ng/mL	16042500	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,2,3-trimethyl-	126	C9H18	001678-97-3	49
2	cis-1-Butyl-2-methylcyclopropane	112	C8H16	038851-69-3	43
3	trans-1-Butyl-2-methylcyclopropane	112	C8H16	038851-70-6	38
4	Isooctanol	130	C8H18O	026952-21-6	35
5	2-Cyclohexen-1-ol	98	C6H10O	000822-67-3	30





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Data File : f812132104.D
Acq On    : 14 Dec 2021  11:57 am
Operator  :
Sample    : L2166503-03,42,,,R2A
Misc      : simple green for libary  l
ALS Vial  : 3   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number  6  Bicyclo[2.2.1]heptan-2-one,...  Concentration Rank  8

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 18.486 22473.60 ng/mL    35555500  Acenaphthene-d10           26.333

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 Bicyclo[2.2.1]heptan-2-one, 1,7,... 152 C10H16O        000464-48-2 98
 2 Bicyclo[2.2.1]heptan-2-one, 1,7,... 152 C10H16O        021368-68-3 97
 3 Bicyclo[2.2.1]heptan-2-one, 1,7,... 152 C10H16O        000464-49-3 97
 4 Camphor                             152 C10H16O        000076-22-2 97
 5 Bicyclo[2.2.1]heptan-2-one, 1,7,... 152 C10H16O        000464-49-3 96
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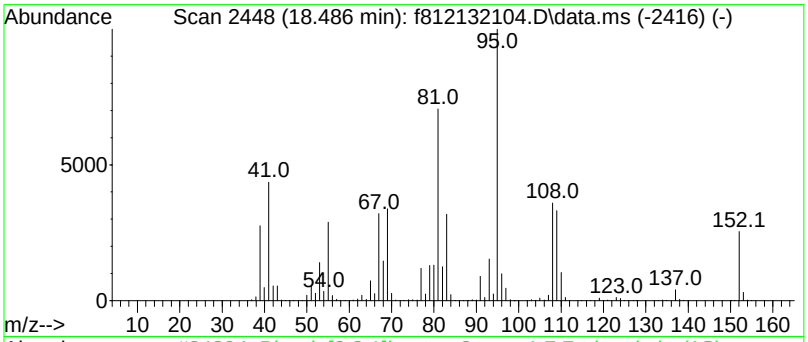

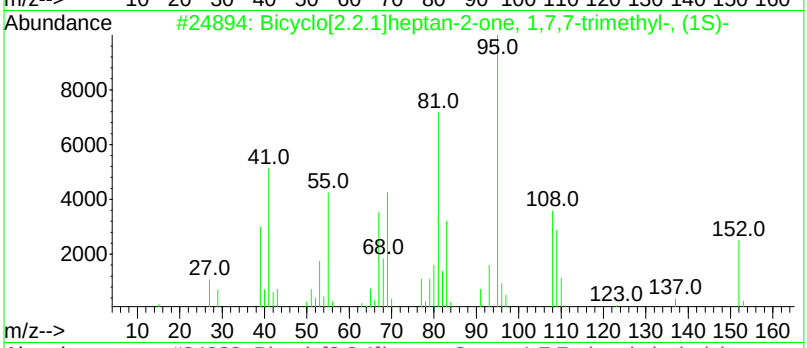

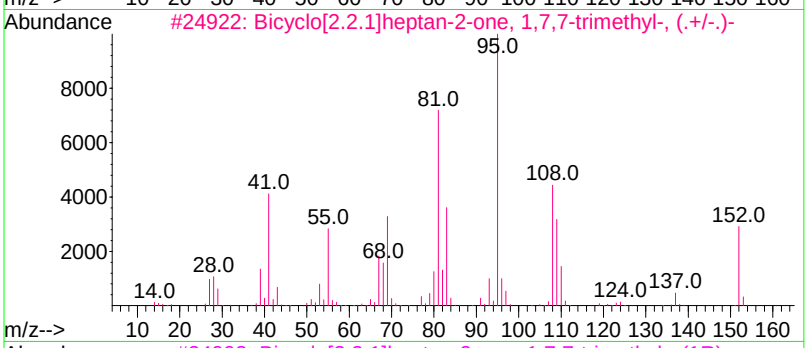

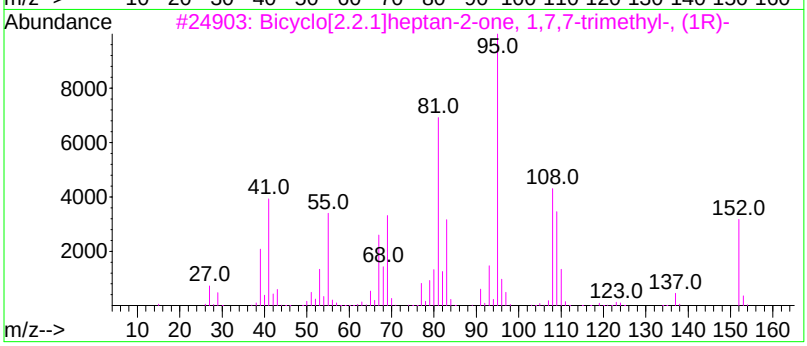

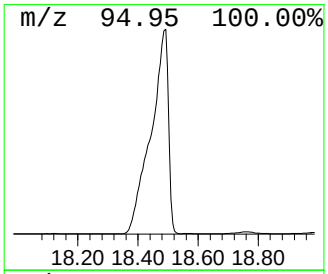

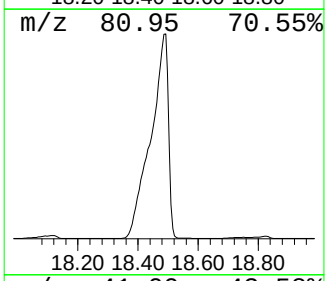

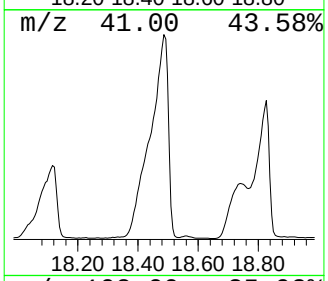

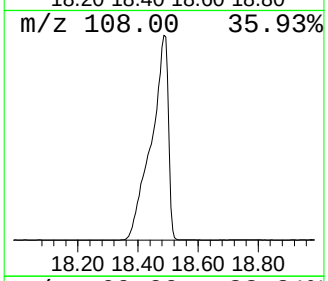

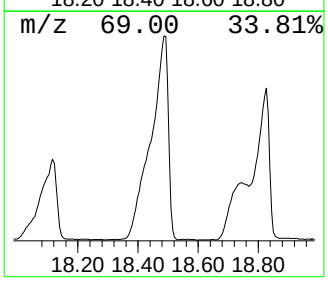

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Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

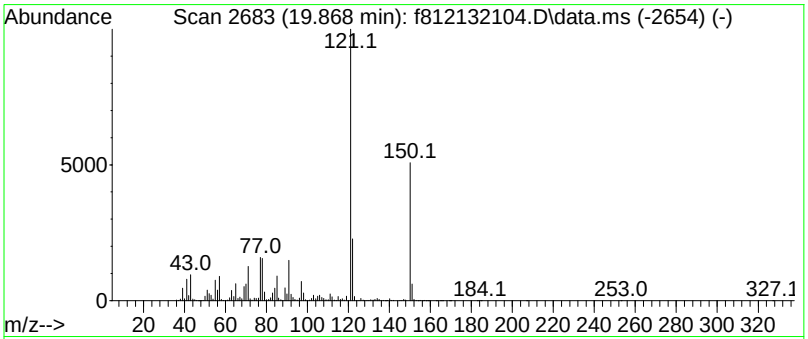
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

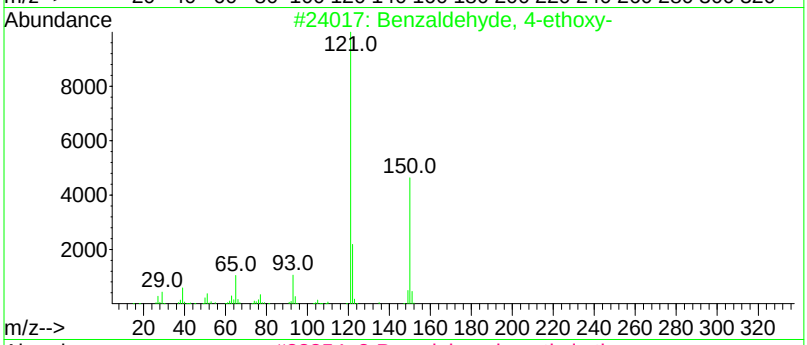
****

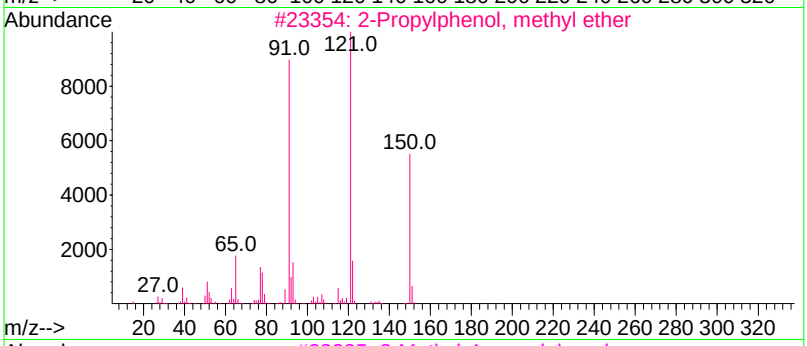
Peak Number 7 Benzaldehyde, 4-ethoxy- Concentration Rank 2

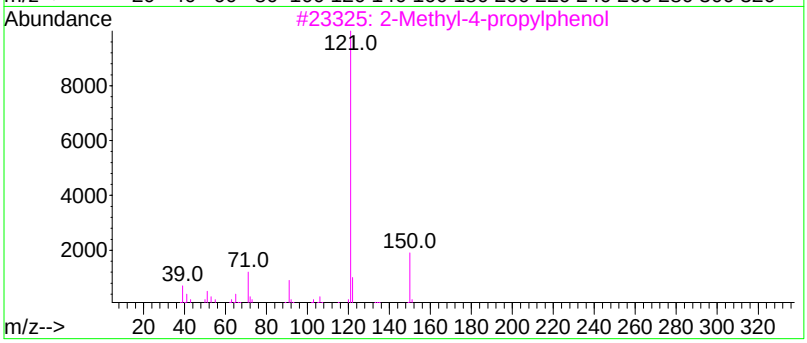
R.T.	EstConc	Area	Relative to ISTD	R.T.
19.868	135617.00 ng/mL	214559000	Acenaphthene-d10	26.333

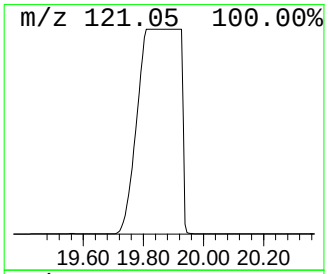
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzaldehyde, 4-ethoxy-	150	C9H10O2	010031-82-0	64
2	2-Propylphenol, methyl ether	150	C10H14O	1000333-48-4	64
3	2-Methyl-4-propylphenol	150	C10H14O	018441-56-0	59
4	(4-Methoxy-benzyl)-phenethyl-amine	241	C16H19NO	1000300-71-3	59
5	4-Methyl-2-propylphenol	150	C10H14O	004074-46-8	59

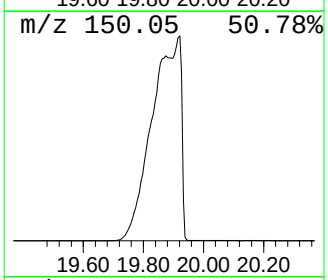


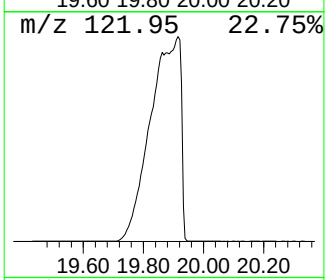


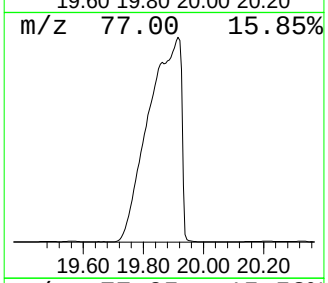


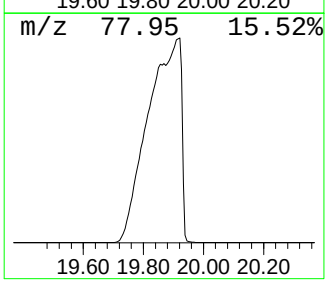












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Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

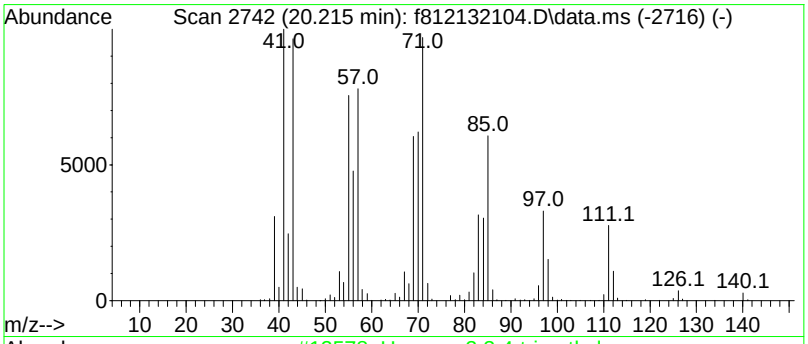
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

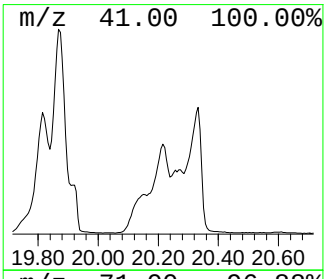
****

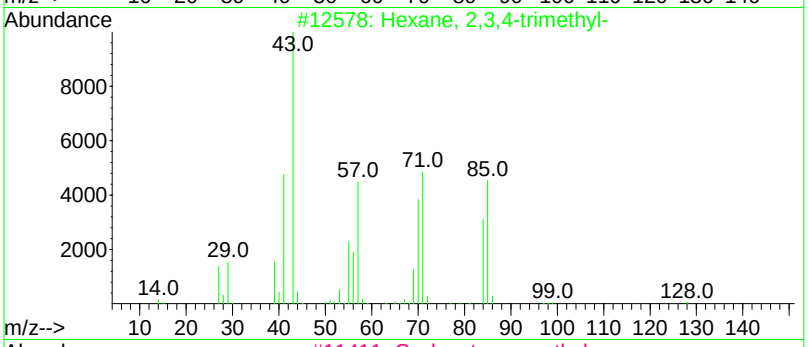
Peak Number 8 Hexane, 2,3,4-trimethyl- Concentration Rank 20

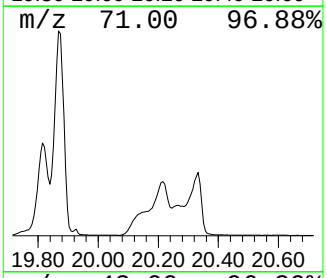
R.T.	EstConc	Area	Relative to ISTD	R.T.
20.215	8661.58 ng/mL	13703500	Acenaphthene-d10	26.333

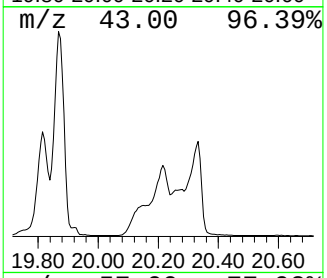
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	52
2	Cyclooctane, methyl-	126	C9H18	001502-38-1	46
3	2,4,4-Trimethyl-1-hexene	126	C9H18	051174-12-0	41
4	Diisoamylene	140	C10H20	054063-09-1	38
5	Cyclobutane, 1-butyl-2-ethyl-	140	C10H20	1000150-67-3	38

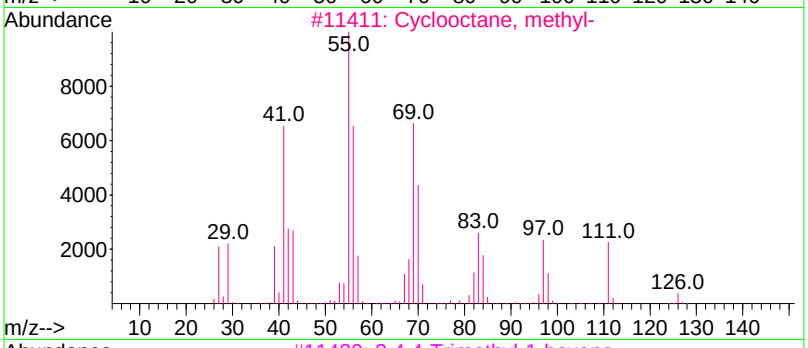


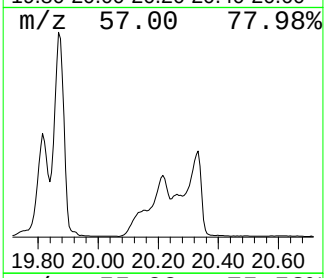


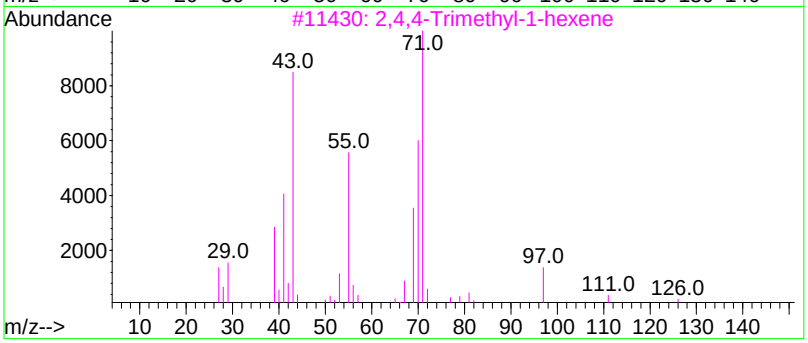


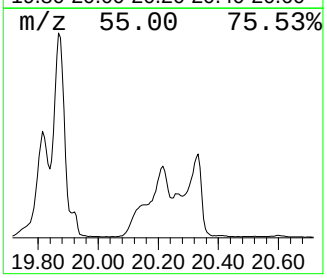












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Data File : f812132104.D
Acq On    : 14 Dec 2021  11:57 am
Operator  :
Sample    : L2166503-03,42,,,R2A
Misc      : simple green for libary  l
ALS Vial  : 3   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number  9  Benzene, 1-methoxy-4-(1-pro...  Concentration Rank  3

  R.T.     EstConc          Area       Relative to ISTD         R.T.
-----------------------------------------------------------------------
 21.027 52392.90 ng/mL    82890700  Acenaphthene-d10           26.333

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
-----------------------------------------------------------------------
 1 Benzene, 1-methoxy-4-(1-propenyl)-  148 C10H12O        000104-46-1 98
 2 Benzene, 1-methoxy-4-(1-propenyl)-  148 C10H12O        000104-46-1 98
 3 Estragole                           148 C10H12O        000140-67-0 91
 4 Estragole                           148 C10H12O        000140-67-0 90
 5 Benzene, 1-methoxy-4-(1-propenyl)-  148 C10H12O        000104-46-1 87
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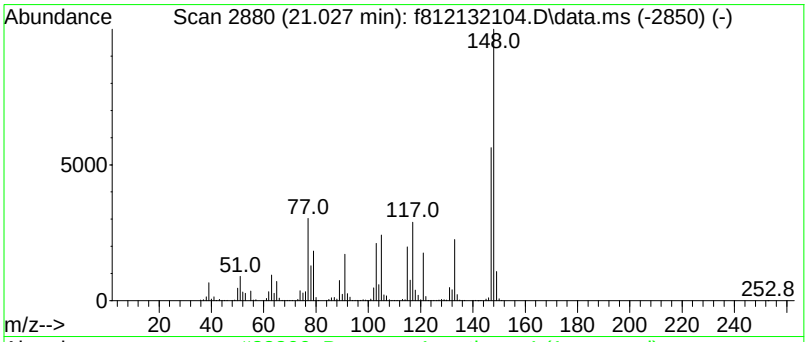

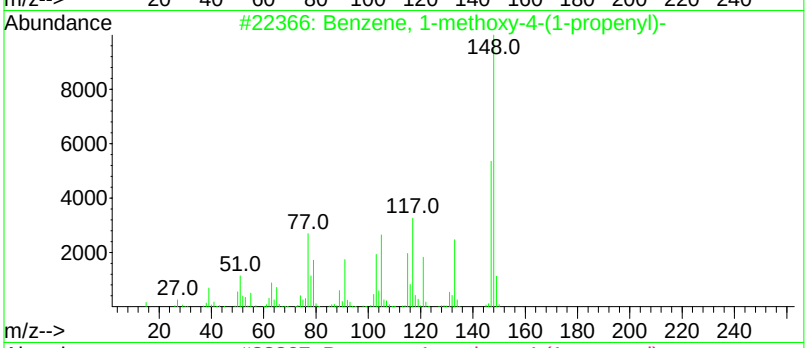

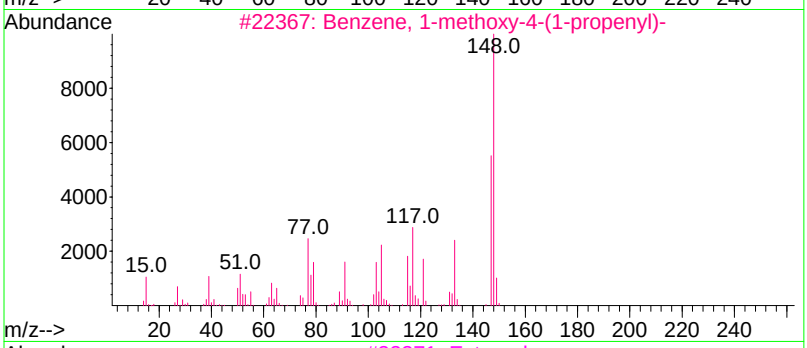

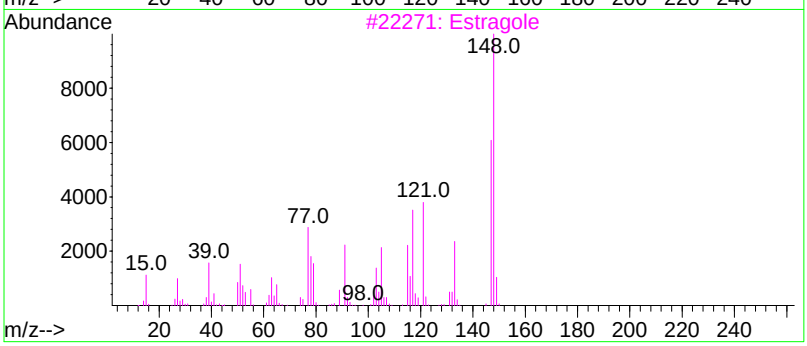

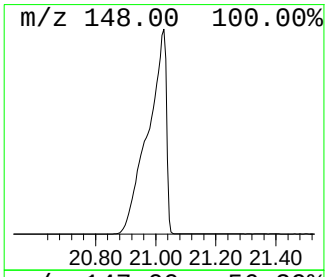

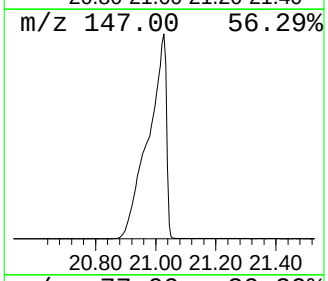

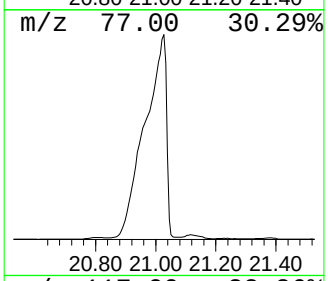

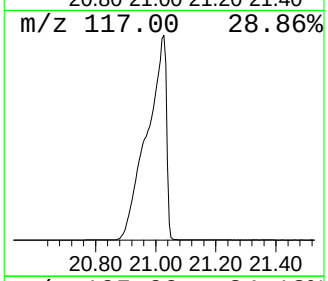

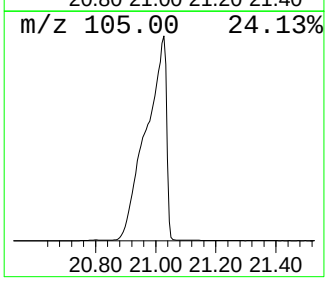

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Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

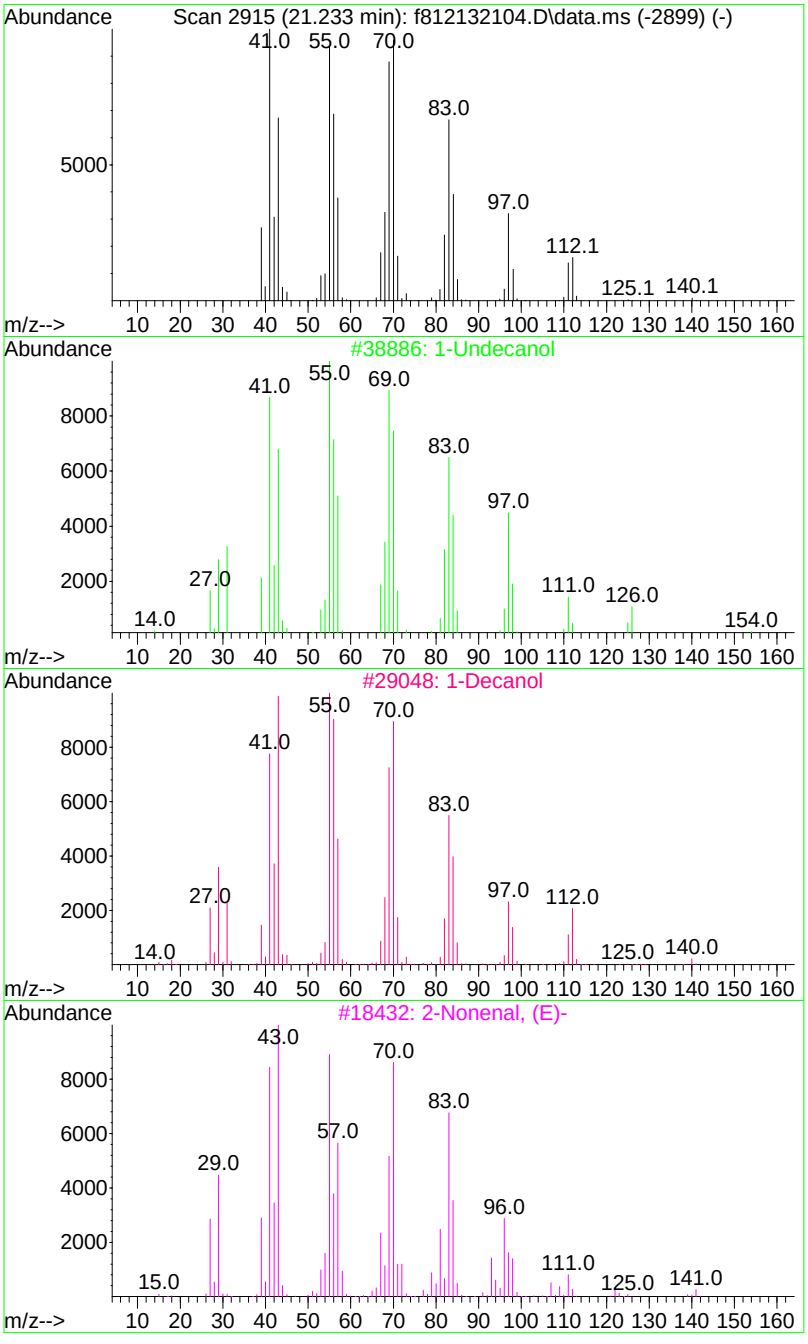
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

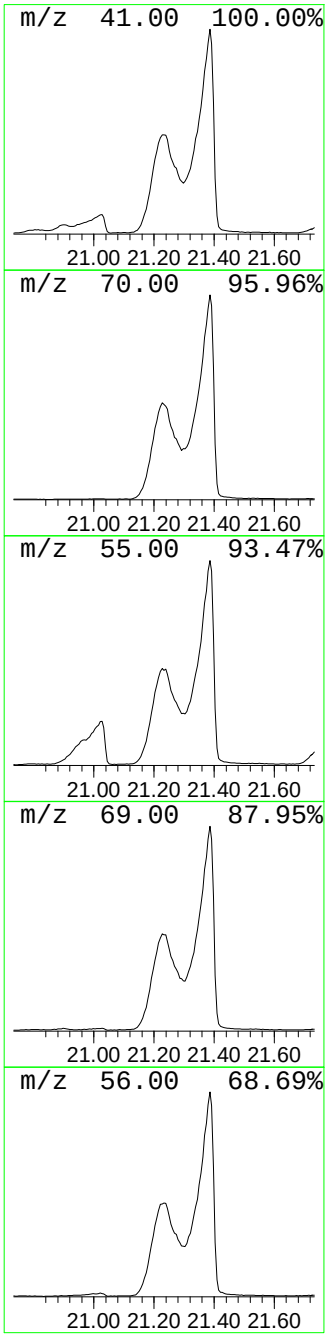
****

Peak Number 10 1-Undecanol Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.233	9631.89 ng/mL	15238600	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Undecanol	172	C11H24O	000112-42-5	72
2	1-Decanol	158	C10H22O	000112-30-1	58
3	2-Nonenal, (E)-	140	C9H16O	018829-56-6	53
4	Octane, 3-chloro-	148	C8H17Cl	001117-79-9	52
5	Cyclooctane, 1,4-dimethyl-, cis-	140	C10H20	013151-99-0	52





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Acq On    : 14 Dec 2021  11:57 am
Operator  :
Sample    : L2166503-03,42,,,R2A
Misc      : simple green for libary  l
ALS Vial  : 3   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number 11  Cyclodecane                    Concentration Rank 10

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 21.386 12433.20 ng/mL    19670600  Acenaphthene-d10           26.333

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 Cyclodecane                          140 C10H20         000293-96-9 93
 2 Cyclohexane, 1,2,3-trimethyl-        126 C9H18          001678-97-3 64
 3 1-Decanol                            158 C10H22O        000112-30-1 58
 4 2-Nonenal, (E)-                      140 C9H16O         018829-56-6 53
 5 Octane, 3-chloro-                    148 C8H17Cl        001117-79-9 52
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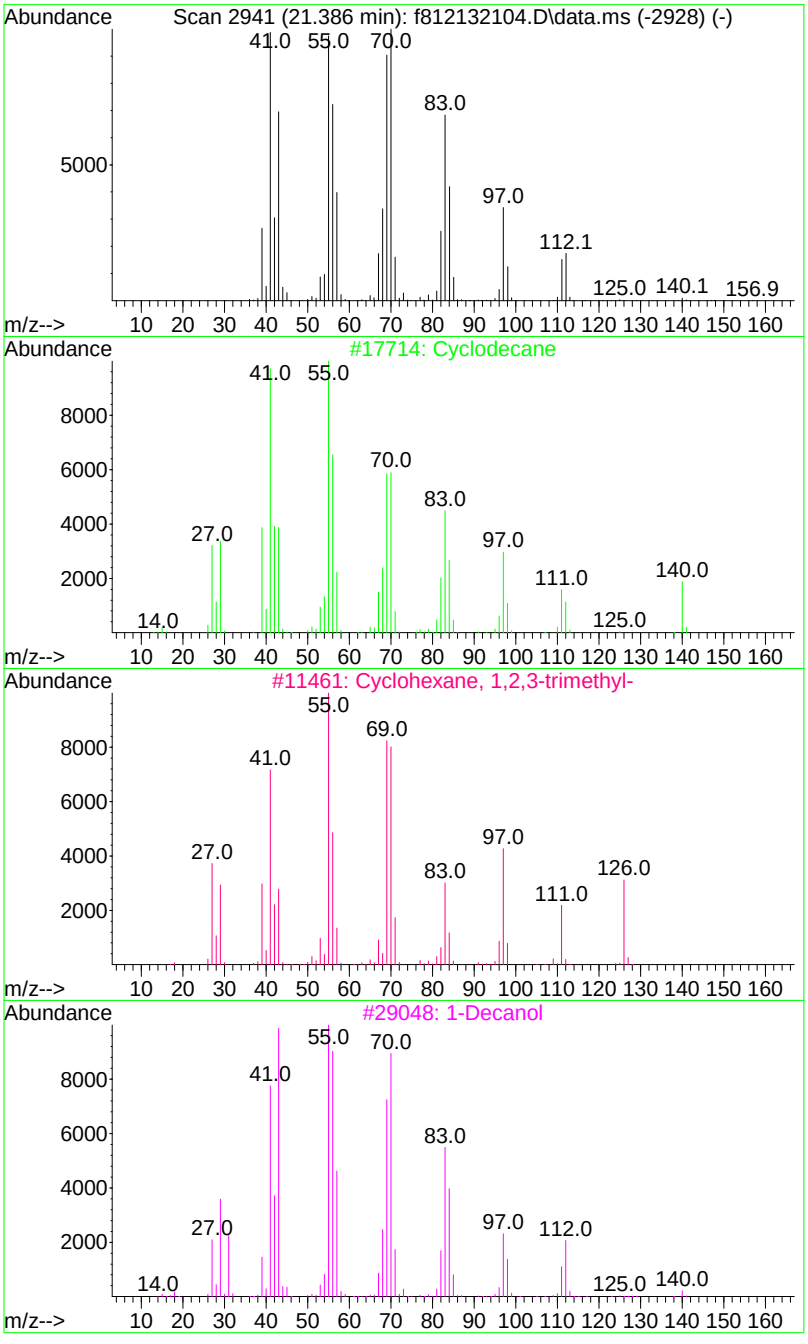

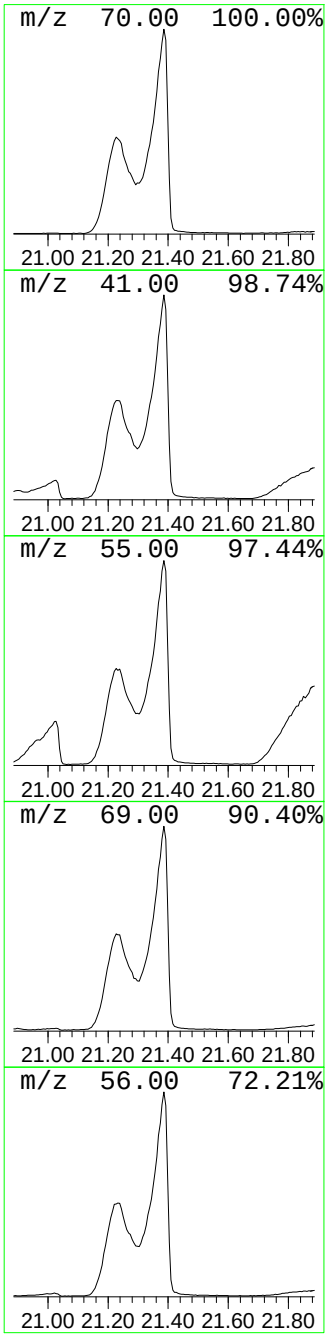

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Data File : f812132104.D
Acq On    : 14 Dec 2021  11:57 am
Operator  :
Sample    : L2166503-03,42,,,R2A
Misc      : simple green for libary  l
ALS Vial  : 3   Sample Multiplier: 1

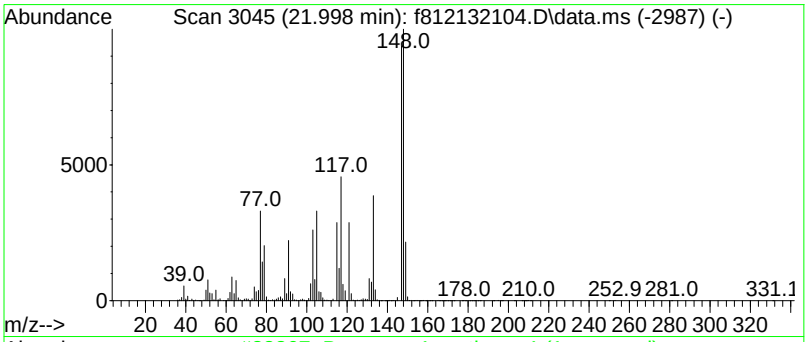
Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

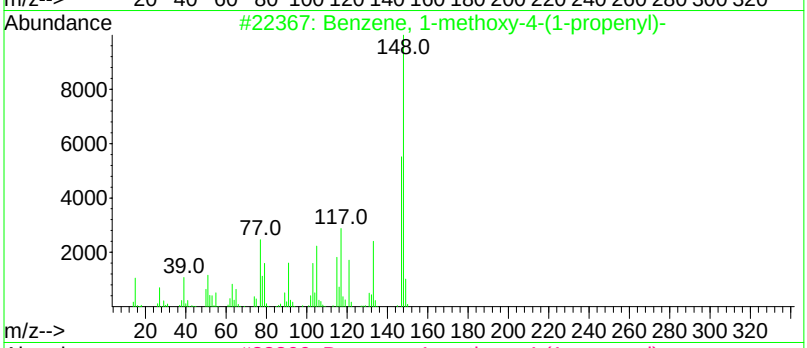
TIC Library    : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

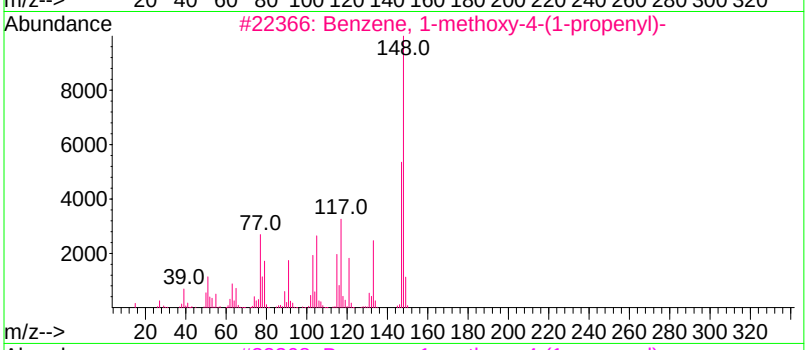
*********************************************************************
Peak Number 12  Benzene, 1-methoxy-4-(1-pro...  Concentration Rank  1

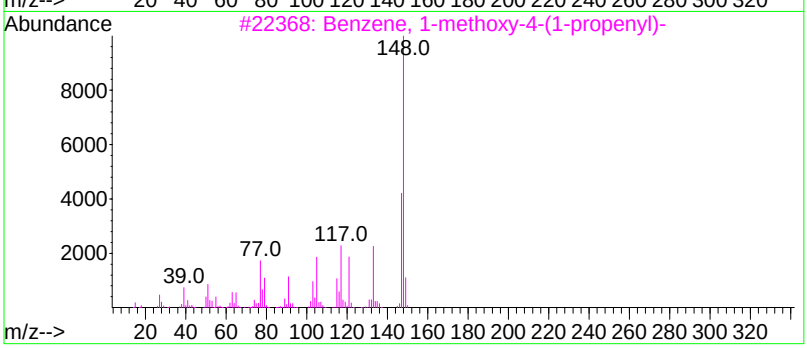
  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 21.997 355733.00 ng/mL   562804000 Acenaphthene-d10           26.333

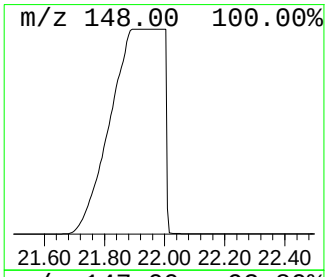
 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 Benzene, 1-methoxy-4-(1-propenyl)-  148 C10H12O        000104-46-1 94
 2 Benzene, 1-methoxy-4-(1-propenyl)-  148 C10H12O        000104-46-1 94
 3 Benzene, 1-methoxy-4-(1-propenyl)-  148 C10H12O        000104-46-1 81
 4 5-Methoxyindane                     148 C10H12O        1000342-73-8 76
 5 Estragole                           148 C10H12O        000140-67-0 70
```

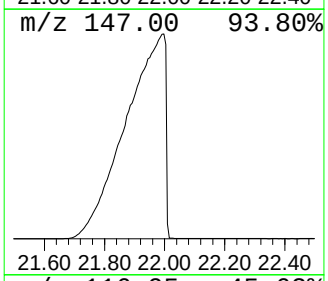


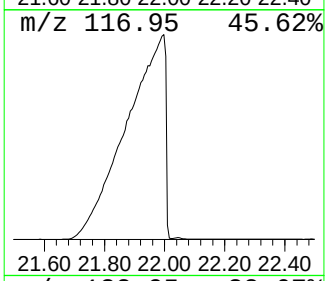


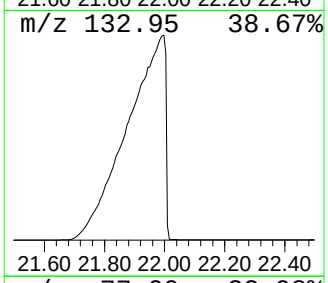


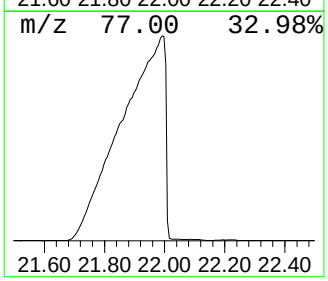












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Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

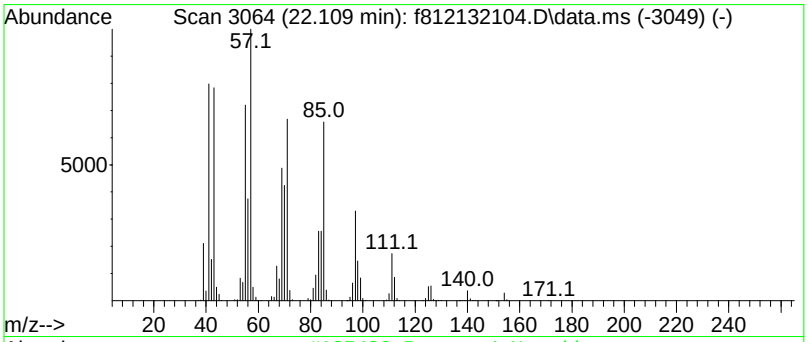
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

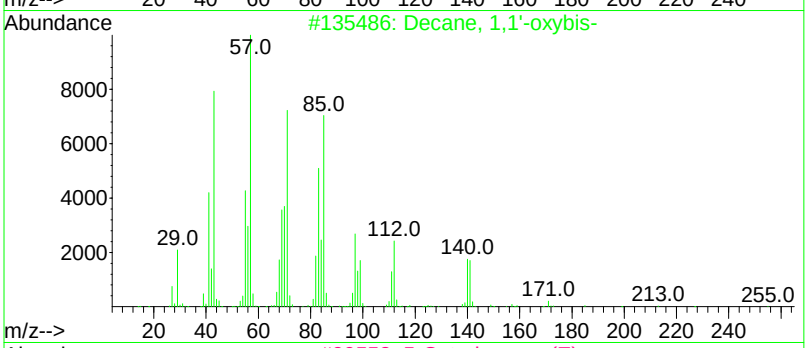
****

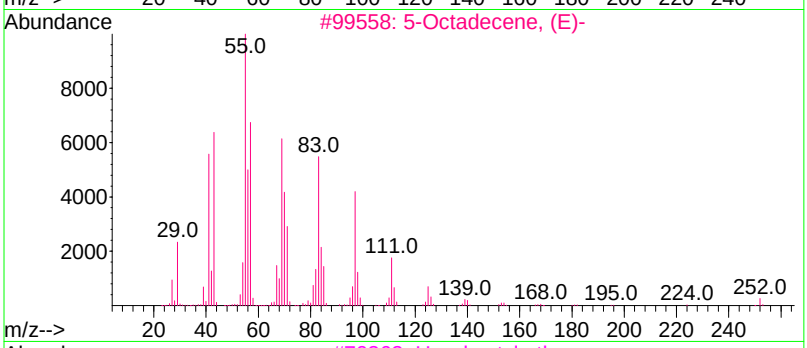
Peak Number 13 Decane, 1,1'-oxybis- Concentration Rank 13

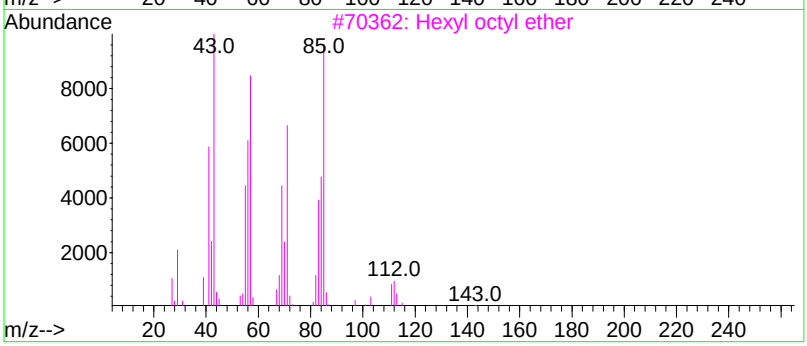
R.T.	EstConc	Area	Relative to ISTD	R.T.
22.109	11556.20 ng/mL	18283000	Acenaphthene-d10	26.333

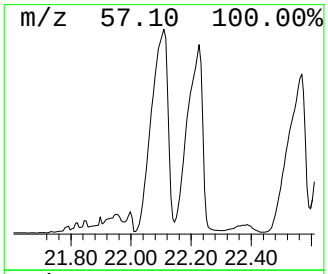
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Decane, 1,1'-oxybis-	298	C20H42O	002456-28-2	87
2	5-Octadecene, (E)-	252	C18H36	007206-21-5	53
3	Hexyl octyl ether	214	C14H30O	017071-54-4	49
4	Oxalic acid, 6-ethyloct-3-yl eth...	258	C14H26O4	1000309-33-9	46
5	1-Undecene	154	C11H22	000821-95-4	43

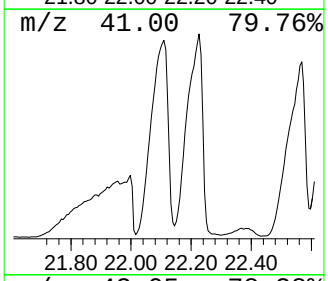


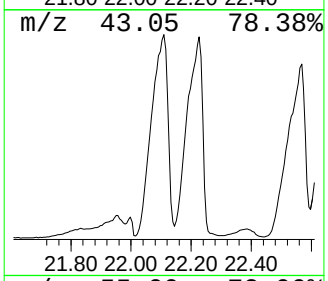


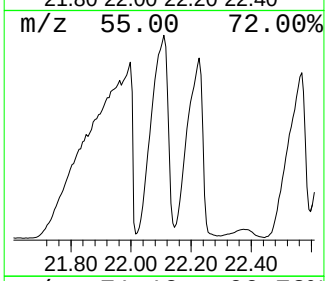


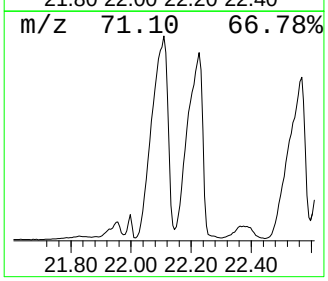












Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\
Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

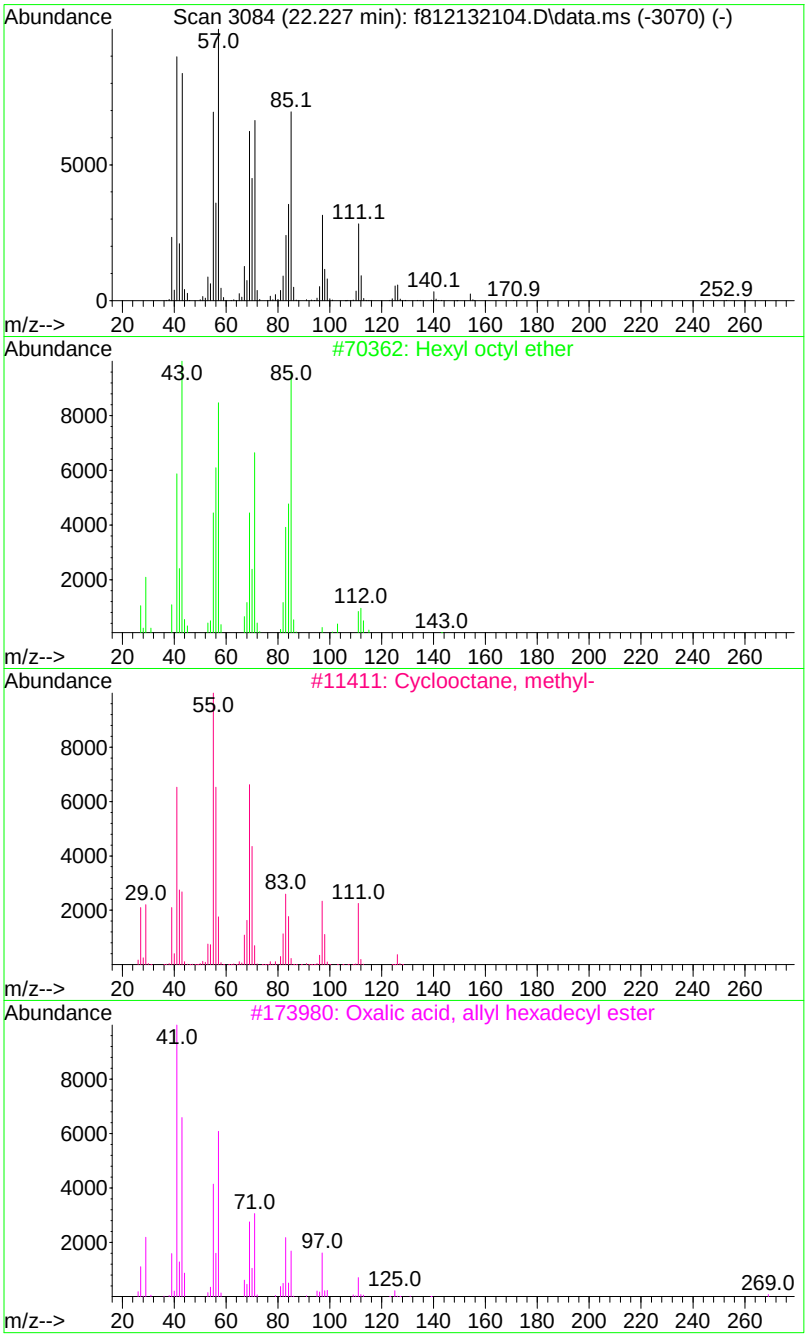
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

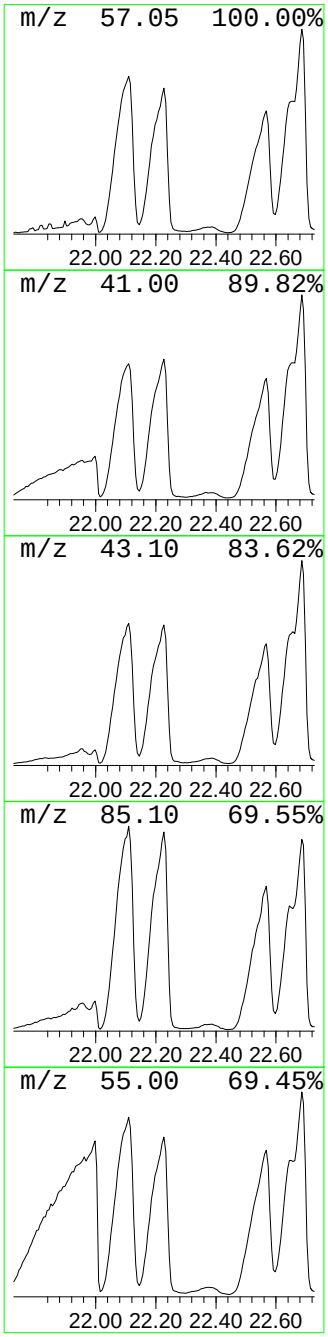
****

Peak Number 14 Hexyl octyl ether Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.227	9864.74 ng/mL	15607000	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexyl octyl ether	214	C14H30O	017071-54-4	52
2	Cyclooctane, methyl-	126	C9H18	001502-38-1	50
3	Oxalic acid, allyl hexadecyl ester	354	C21H38O4	1000309-24-4	46
4	Oxalic acid, 6-ethyloct-3-yl eth...	258	C14H26O4	1000309-33-9	43
5	1-Undecene	154	C11H22	000821-95-4	38





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Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

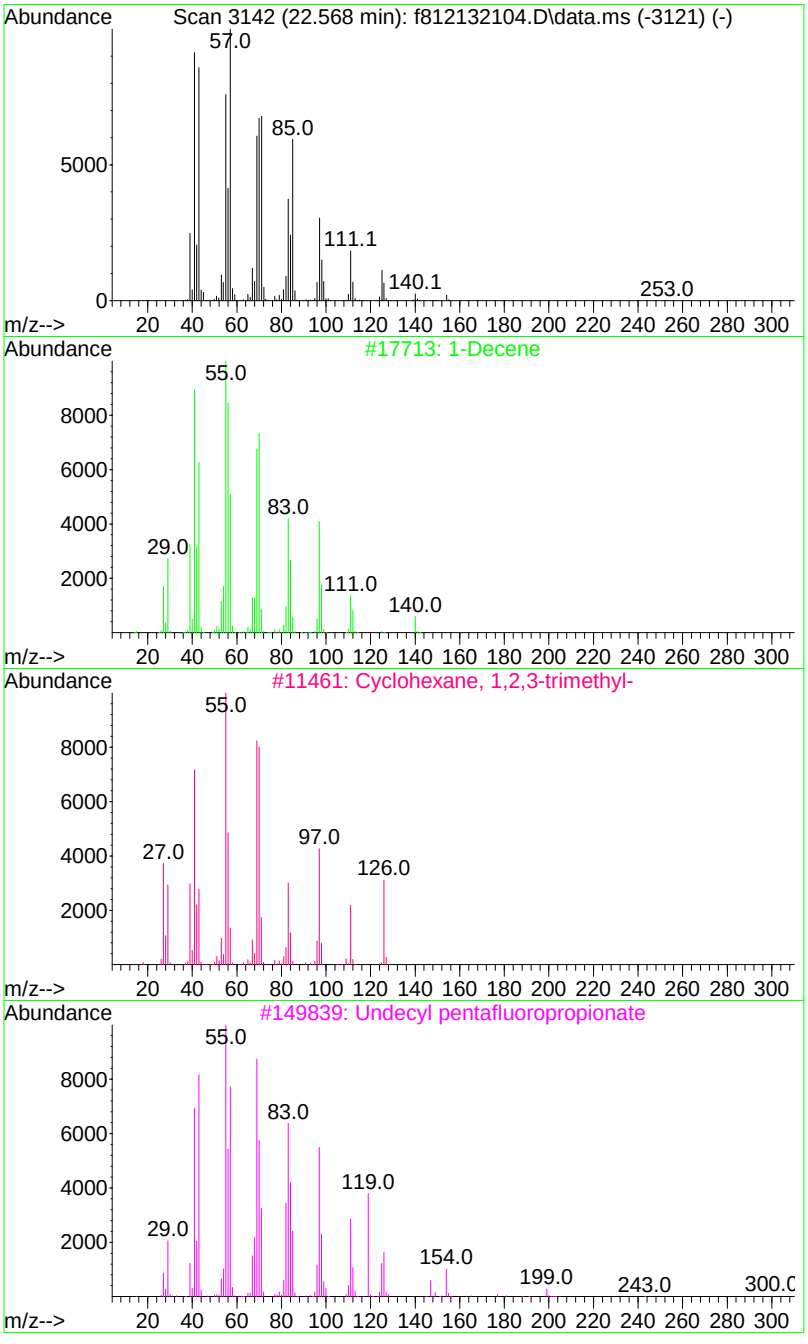
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

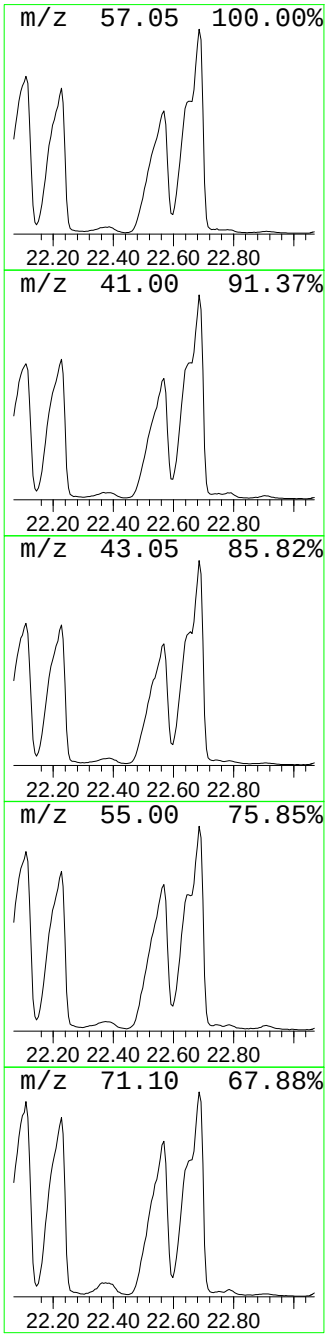
****

Peak Number 15 1-Decene Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.568	9543.18 ng/mL	15098200	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Decene	140	C10H20	000872-05-9	53
2	Cyclohexane, 1,2,3-trimethyl-	126	C9H18	001678-97-3	53
3	Undecyl pentafluoropropionate	318	C14H23F5O2	1000351-80-1	52
4	5-Octadecene, (E)-	252	C18H36	007206-21-5	52
5	Cyclohexane, 1,2,3-trimethyl-	126	C9H18	001678-97-3	49





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Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

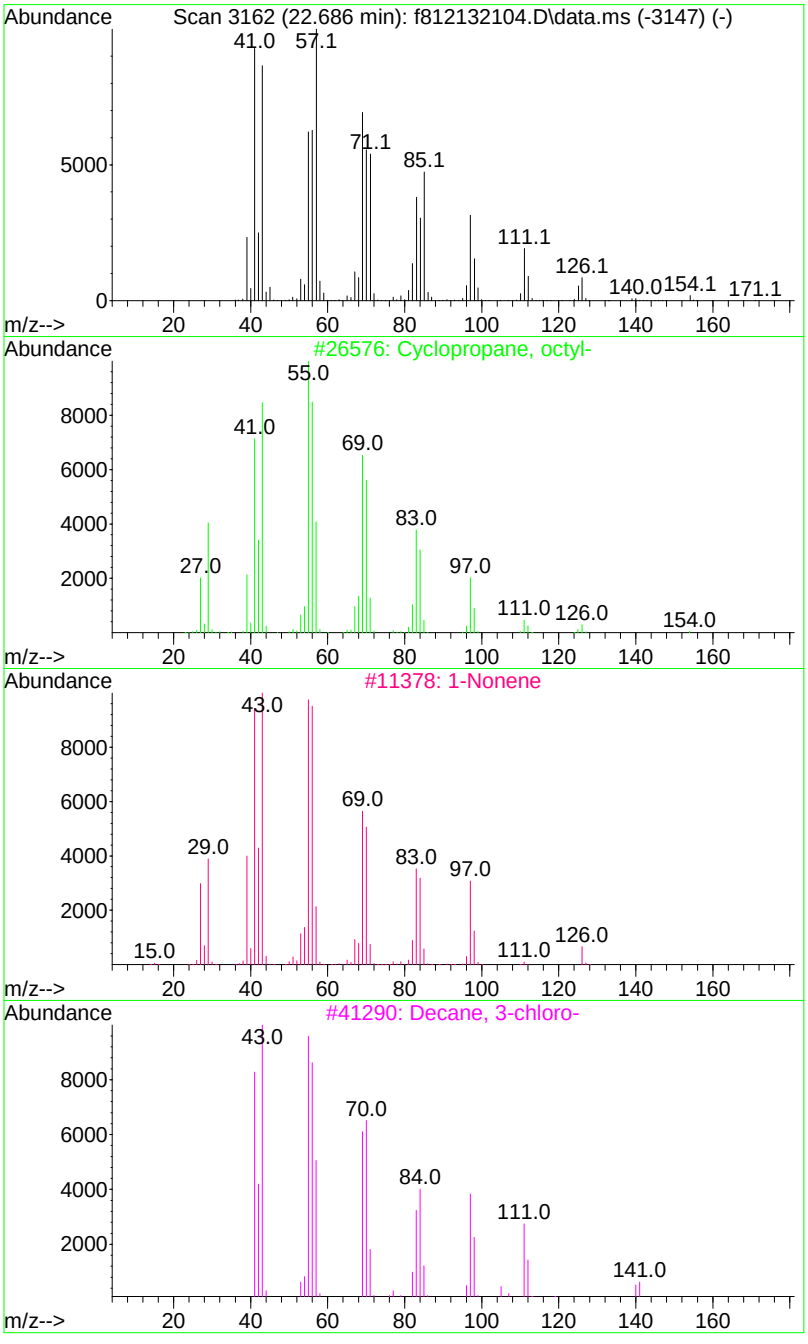
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

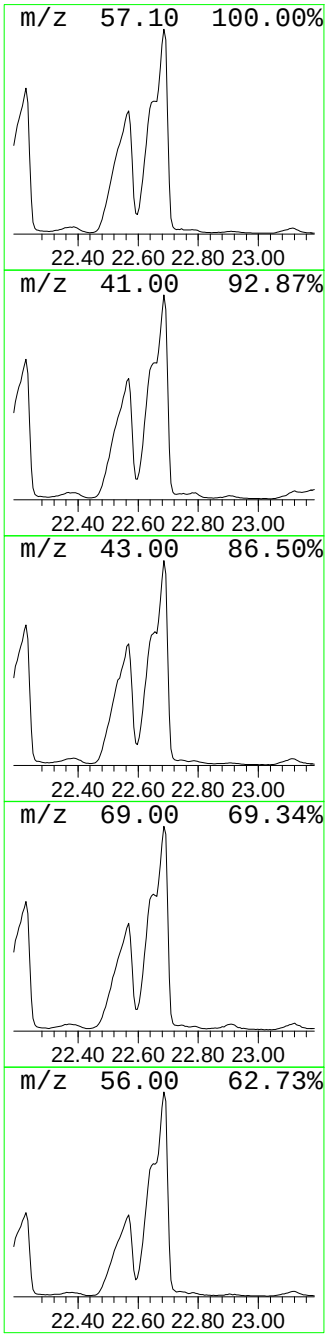
****

Peak Number 16 Cyclopropane, octyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.686	14864.50 ng/mL	23517100	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopropane, octyl-	154	C11H22	001472-09-9	60
2	1-Nonene	126	C9H18	000124-11-8	55
3	Decane, 3-chloro-	176	C10H21Cl	001002-11-5	52
4	Cyclooctane	112	C8H16	000292-64-8	50
5	1-Dodecene	168	C12H24	000112-41-4	49





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Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

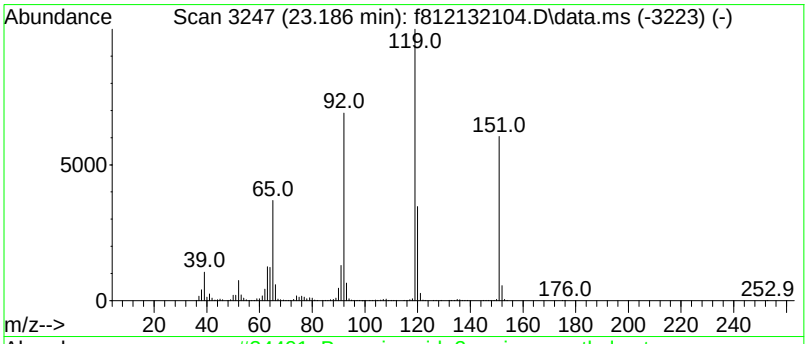
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

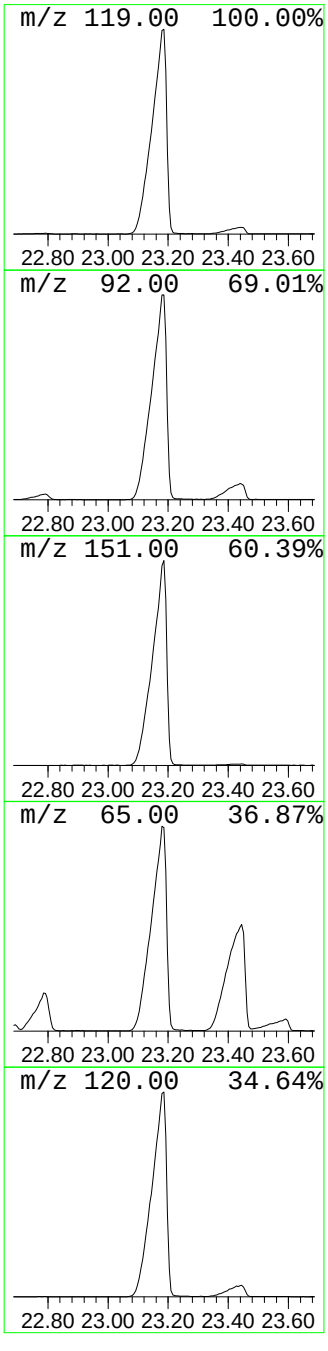
****

Peak Number 17 Benzoic acid, 2-amino-, met... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.186	11131.30 ng/mL	17610900	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzoic acid, 2-amino-, methyl e...	151	C8H9NO2	000134-20-3	97
2	Benzoic acid, 2-amino-, methyl e...	151	C8H9NO2	000134-20-3	94
3	Benzoic acid, 2-amino-, methyl e...	151	C8H9NO2	000134-20-3	94
4	Benzoic acid, 2-amino-, methyl e...	151	C8H9NO2	000134-20-3	93
5	2,1-Benzisoxazole	119	C7H5NO	000271-58-9	47





Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\
Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

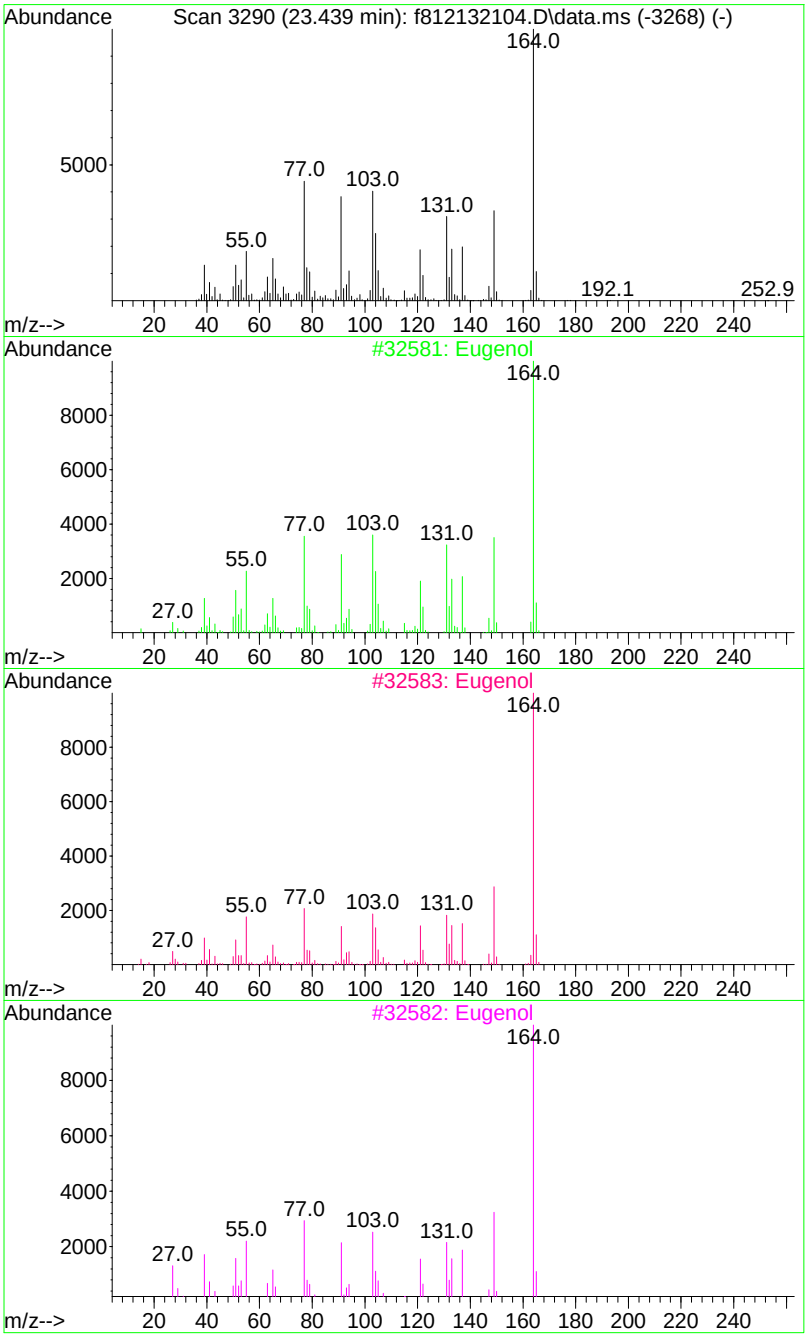
TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

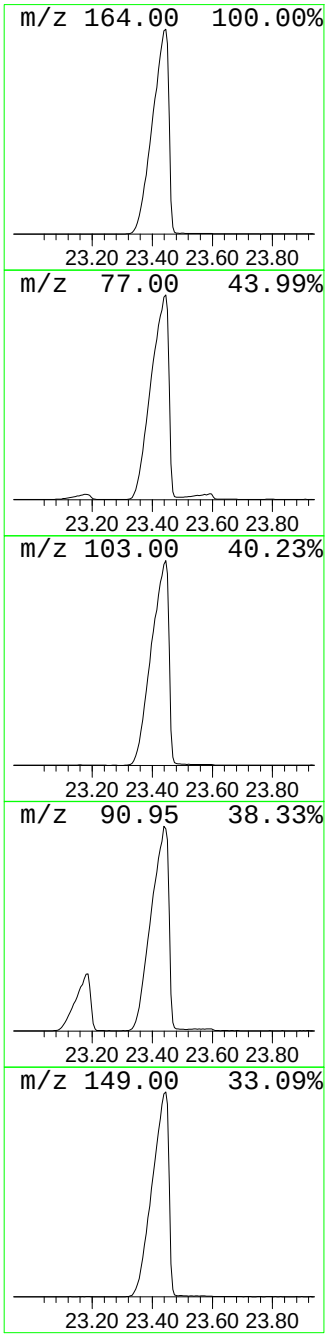
****

Peak Number 18 Eugenol Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
23.439	23854.70 ng/mL	37740400	Acenaphthene-d10	26.333

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eugenol	164	C10H12O2	000097-53-0	98
2	Eugenol	164	C10H12O2	000097-53-0	97
3	Eugenol	164	C10H12O2	000097-53-0	97
4	Phenol, 2-methoxy-4-(1-propenyl)...	164	C10H12O2	005912-86-7	96
5	Phenol, 2-methoxy-3-(2-propenyl)-	164	C10H12O2	001941-12-4	94





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Data File : f812132104.D
Acq On    : 14 Dec 2021  11:57 am
Operator  :
Sample    : L2166503-03,42,,,R2A
Misc      : simple green for libary  l
ALS Vial  : 3   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number 19  1-Undecanol                      Concentration Rank  4

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 23.592 35369.40 ng/mL    55957900  Acenaphthene-d10           26.333

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 1-Undecanol                           172 C11H24O        000112-42-5 91
 2 Pentafluoropropionic acid, undec...   318 C14H23F5O2     1000283-04-0 90
 3 1-Dodecanol                           186 C12H26O        000112-53-8 90
 4 1-Nonene                              126 C9H18          000124-11-8 87
 5 1-Nonene                              126 C9H18          000124-11-8 72
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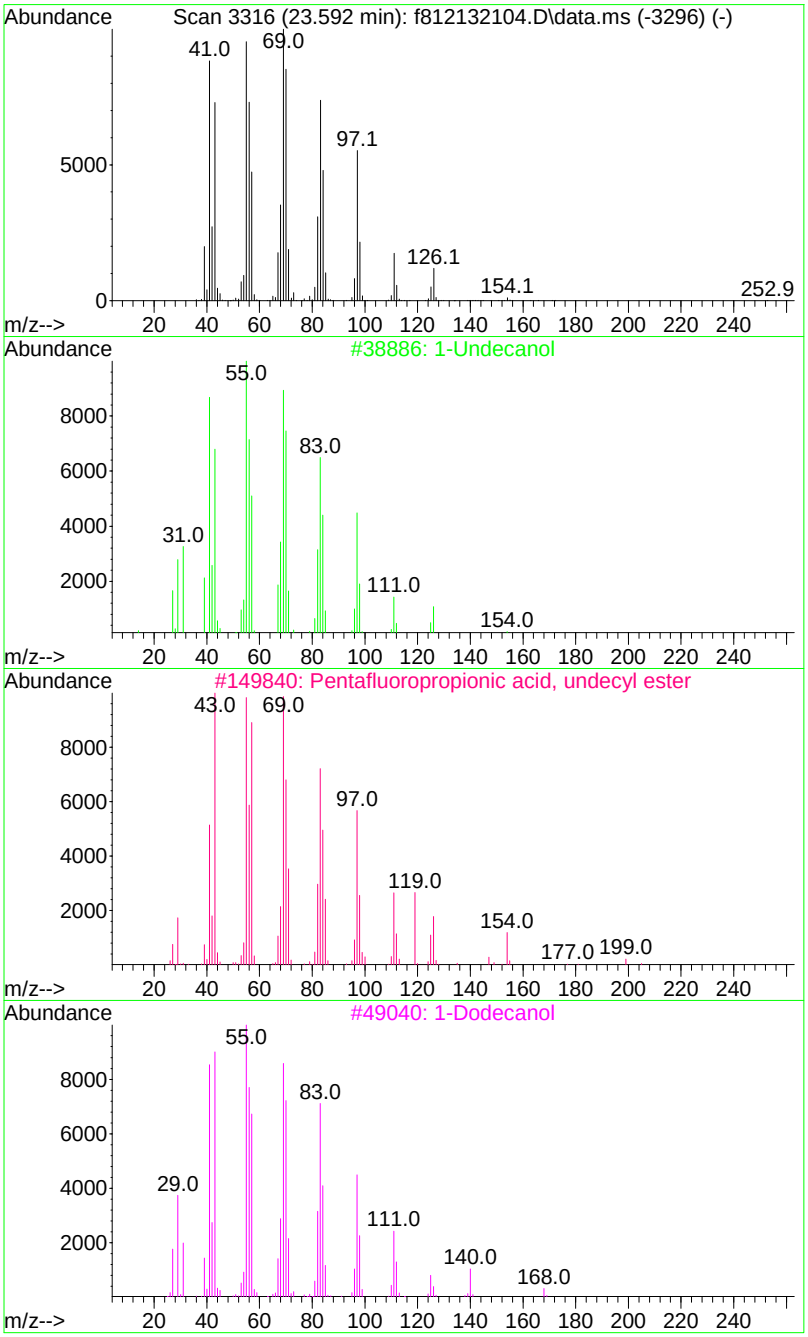
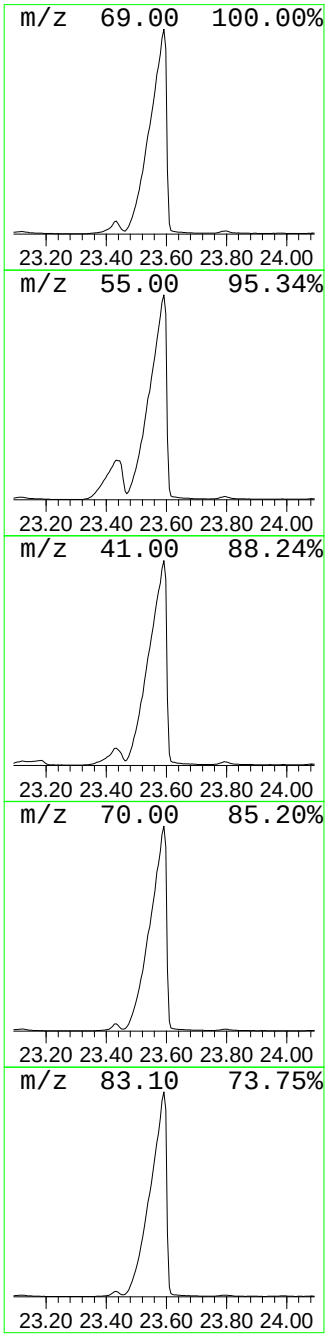




Data Path : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\
Data File : f812132104.D
Acq On : 14 Dec 2021 11:57 am
Operator :
Sample : L2166503-03,42,,,R2A
Misc : simple green for libary l
ALS Vial : 3 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2021\DEC21\DEC13\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Forensics\NIST08.L
TIC Integration Parameters: RTEINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
1R-.alpha.-Pinene	12.633	12074.3	ng/mL	19102600	1	26.333	791049	500.0
Benzene, 1-meth...	15.104	28425.4	ng/mL	44971800	1	26.333	791049	500.0
Eucalyptol	15.345	27316.5	ng/mL	43217400	1	26.333	791049	500.0
(+)-4-Carene	16.816	12067.2	ng/mL	19091500	1	26.333	791049	500.0
Cyclohexane, 1,...	17.727	10140.0	ng/mL	16042500	1	26.333	791049	500.0
Bicyclo[2.2.1]h...	18.486	22473.6	ng/mL	35555500	1	26.333	791049	500.0
Benzaldehyde, 4...	19.868	135617.0	ng/mL	214559000	1	26.333	791049	500.0
Hexane, 2,3,4-t...	20.215	8661.6	ng/mL	13703500	1	26.333	791049	500.0
Benzene, 1-meth...	21.027	52392.9	ng/mL	82890700	1	26.333	791049	500.0
1-Undecanol	21.233	9631.9	ng/mL	15238600	1	26.333	791049	500.0
Cyclodecane	21.386	12433.2	ng/mL	19670600	1	26.333	791049	500.0
Benzene, 1-meth...	21.997	355733.0	ng/mL	562804000	1	26.333	791049	500.0
Decane, 1,1'-ox...	22.109	11556.2	ng/mL	18283000	1	26.333	791049	500.0
Hexyl octyl ether	22.227	9864.7	ng/mL	15607000	1	26.333	791049	500.0
1-Decene	22.568	9543.2	ng/mL	15098200	1	26.333	791049	500.0
Cyclopropane, o...	22.686	14864.5	ng/mL	23517100	1	26.333	791049	500.0
Benzoic acid, 2...	23.186	11131.3	ng/mL	17610900	1	26.333	791049	500.0
Eugenol	23.439	23854.7	ng/mL	37740400	1	26.333	791049	500.0
1-Undecanol	23.592	35369.4	ng/mL	55957900	1	26.333	791049	500.0

Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Title : Decalins & Alkylated PAH's

Signal : TIC: f801042205.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.198	355	359	370	rVB	143977	231402	1.50%	0.472%
2	12.498	1424	1430	1440	rVB4	20527	41014	0.27%	0.084%
3	14.892	1829	1837	1841	rBV5	11250	31163	0.20%	0.064%
4	14.951	1841	1847	1857	rVB2	42017	87057	0.56%	0.178%
5	15.174	1874	1885	1899	rVB2	222996	478993	3.10%	0.978%
6	16.574	2115	2123	2129	rBV5	15936	36195	0.23%	0.074%
7	16.651	2129	2136	2147	rVB7	27006	77939	0.50%	0.159%
8	16.892	2167	2177	2191	rBV2	62469	171909	1.11%	0.351%
9	17.280	2235	2243	2250	rBV3	39444	84110	0.54%	0.172%
10	17.356	2250	2256	2269	rVB7	14686	46111	0.30%	0.094%
11	17.568	2284	2292	2298	rBV3	28602	68469	0.44%	0.140%
12	17.633	2298	2303	2306	rBV3	35379	69481	0.45%	0.142%
13	17.680	2307	2311	2315	rVV3	38425	65106	0.42%	0.133%
14	17.980	2352	2362	2375	rBV3	60334	142080	0.92%	0.290%
15	18.292	2406	2415	2429	rVV2	124476	269981	1.75%	0.551%
16	18.674	2470	2480	2496	rVV2	117638	266121	1.72%	0.543%
17	19.668	2637	2649	2657	rBV	198368	424450	2.75%	0.866%
18	19.739	2657	2661	2670	rVB5	18495	38718	0.25%	0.079%
19	20.062	2709	2716	2725	rVV3	25414	58311	0.38%	0.119%
20	20.174	2728	2735	2749	rVB2	46090	109232	0.71%	0.223%
21	20.833	2839	2847	2857	rBV2	64039	136905	0.89%	0.279%
22	21.127	2887	2897	2922	rBV2	202193	461929	2.99%	0.943%
23	21.644	2974	2985	2997	rBV	368577	814609	5.28%	1.663%
24	21.968	3031	3040	3053	rBV5	23989	61911	0.40%	0.126%
25	22.086	3053	3060	3069	rVB5	21075	46736	0.30%	0.095%
26	22.244	3075	3087	3107	rVB7	34757	153687	1.00%	0.314%
27	22.421	3108	3117	3129	rVV5	24622	77832	0.50%	0.159%
28	22.533	3129	3136	3146	rVV2	49574	126844	0.82%	0.259%
29	22.633	3147	3153	3162	rVV3	29343	66562	0.43%	0.136%
30	22.986	3204	3213	3222	rBV3	59014	148669	0.96%	0.303%
31	23.074	3222	3228	3240	rVB3	37061	90203	0.58%	0.184%
32	23.268	3249	3261	3263	rBV6	18561	48947	0.32%	0.100%
33	23.321	3263	3270	3281	rVV3	117510	294971	1.91%	0.602%
34	23.438	3281	3290	3312	rVB	197673	458027	2.97%	0.935%
35	23.685	3319	3332	3345	rBV3	69167	169673	1.10%	0.346%
36	24.315	3430	3439	3448	rBV2	130931	316023	2.05%	0.645%
37	25.168	3575	3584	3598	rBV4	28494	72145	0.47%	0.147%
38	26.238	3758	3766	3773	rBV2	39392	93269	0.60%	0.190%
39	26.462	3792	3804	3816	rBV2	215747	524940	3.40%	1.072%
40	27.244	3928	3937	3946	rVB4	27074	70228	0.45%	0.143%
41	27.497	3966	3980	3988	rBV4	12389	43337	0.28%	0.088%
42	27.615	3993	4000	4011	rVB5	13920	42589	0.28%	0.087%
43	27.985	4057	4063	4068	rBV6	15912	35558	0.23%	0.073%
44	28.062	4068	4076	4090	rVB4	60834	175869	1.14%	0.359%
45	28.338	4118	4123	4133	rVB7	20960	49274	0.32%	0.101%

Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Title : Decalins & Alkylated PAH's

46	28.491	4138	4149	4157	rBV3	191979	462186	2.99%	0.943%
47	28.685	4172	4182	4195	rVB3	102986	246286	1.60%	0.503%
48	29.020	4229	4239	4256	rVB2	173055	503389	3.26%	1.028%
49	29.373	4289	4299	4311	rVB2	132974	301751	1.95%	0.616%
50	29.909	4376	4390	4406	rVV3	250624	580088	3.76%	1.184%
51	30.173	4428	4435	4445	rVB6	14676	37085	0.24%	0.076%
52	30.544	4489	4498	4507	rBV4	41829	101160	0.66%	0.207%
53	31.632	4675	4683	4691	rBV3	35709	91624	0.59%	0.187%
54	31.750	4693	4703	4719	rVB2	396409	899450	5.83%	1.836%
55	31.950	4730	4737	4748	rVB5	14784	37362	0.24%	0.076%
56	32.326	4793	4801	4811	rBV5	39665	90211	0.58%	0.184%
57	32.603	4844	4848	4858	rVB8	16458	42051	0.27%	0.086%
58	32.714	4860	4867	4878	rVB9	16091	47434	0.31%	0.097%
59	32.973	4904	4911	4920	rBV5	22221	56740	0.37%	0.116%
60	33.091	4922	4931	4945	rVB2	85736	224332	1.45%	0.458%
61	33.297	4956	4966	4973	rBV4	33524	95842	0.62%	0.196%
62	33.379	4976	4980	4987	rVV6	15061	36010	0.23%	0.074%
63	33.502	4991	5001	5010	rVV	359585	830923	5.38%	1.696%
64	33.626	5011	5022	5036	rVB4	125303	424277	2.75%	0.866%
65	33.944	5067	5076	5081	rBV2	197119	443788	2.87%	0.906%
66	34.267	5122	5131	5148	rVB2	198409	476864	3.09%	0.973%
67	34.508	5167	5172	5182	rVB6	16802	40186	0.26%	0.082%
68	34.720	5199	5208	5227	rVB	399442	928024	6.01%	1.894%
69	34.891	5231	5237	5245	rVB6	18798	43418	0.28%	0.089%
70	35.226	5287	5294	5306	rVB3	55932	128276	0.83%	0.262%
71	35.879	5399	5405	5415	rVB7	16183	40115	0.26%	0.082%
72	36.143	5431	5450	5465	rVB	5933806	15438442	100.00%	31.515%
73	36.326	5471	5481	5492	rVB	598979	1302112	8.43%	2.658%
74	36.779	5551	5558	5569	rVB3	51055	120620	0.78%	0.246%
75	37.349	5649	5655	5663	rBV4	27908	60391	0.39%	0.123%
76	37.485	5670	5678	5690	rBV3	105193	255376	1.65%	0.521%
77	37.655	5701	5707	5720	rBV5	45625	116652	0.76%	0.238%
78	37.861	5733	5742	5749	rBV	510776	1165412	7.55%	2.379%
79	37.932	5750	5754	5758	rVV3	73213	156546	1.01%	0.320%
80	37.985	5759	5763	5776	rVB3	133981	312176	2.02%	0.637%
81	38.255	5800	5809	5817	rBV2	268172	598879	3.88%	1.223%
82	38.355	5818	5826	5836	rVB2	140498	365267	2.37%	0.746%
83	38.549	5851	5859	5875	rVB	243811	587456	3.81%	1.199%
84	38.943	5916	5926	5936	rBV	510001	1152216	7.46%	2.352%
85	39.349	5989	5995	6005	rVB5	64386	140921	0.91%	0.288%
86	40.361	6157	6167	6191	rVB	722497	1709137	11.07%	3.489%
87	40.726	6224	6229	6236	rVB2	49664	97861	0.63%	0.200%
88	41.384	6334	6341	6350	rVB4	101977	252320	1.63%	0.515%
89	41.720	6389	6398	6412	rBV	596431	1506684	9.76%	3.076%
90	41.837	6413	6418	6424	rBV2	84876	179204	1.16%	0.366%
91	42.078	6451	6459	6467	rBV	256310	581193	3.76%	1.186%
92	42.202	6474	6480	6489	rVB2	146731	349444	2.26%	0.713%
93	42.349	6498	6505	6513	rBV	243434	571525	3.70%	1.167%

Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Title : Decalins & Alkylated PAH's

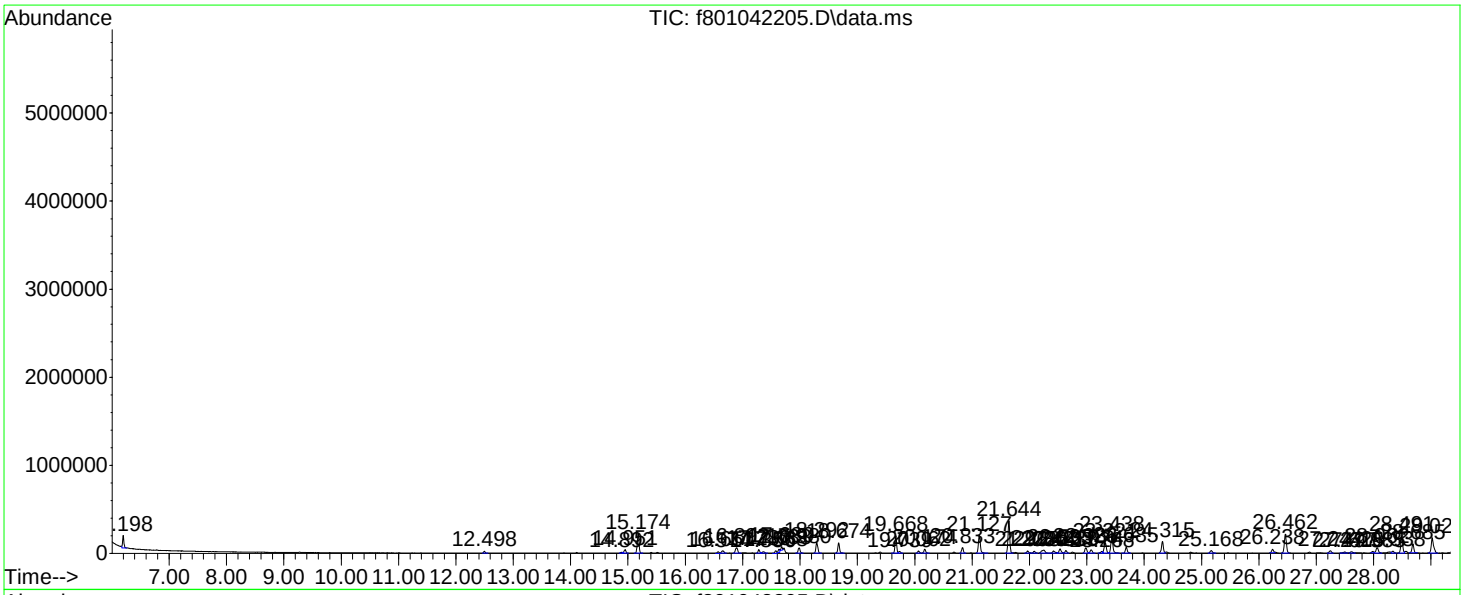
94	42.690	6554	6563	6582	rVB2	536415	1346763	8.72%	2.749%
95	43.955	6769	6778	6795	rVB	672043	1585838	10.27%	3.237%
96	45.178	6978	6986	6997	rVB	489045	1267190	8.21%	2.587%
97	45.490	7034	7039	7051	rVB2	227323	542724	3.52%	1.108%
98	45.755	7078	7084	7093	rVB2	209272	489495	3.17%	0.999%
99	46.043	7127	7133	7146	rVB	407465	959006	6.21%	1.958%
100	47.190	7321	7328	7339	rVB3	485397	1188649	7.70%	2.426%

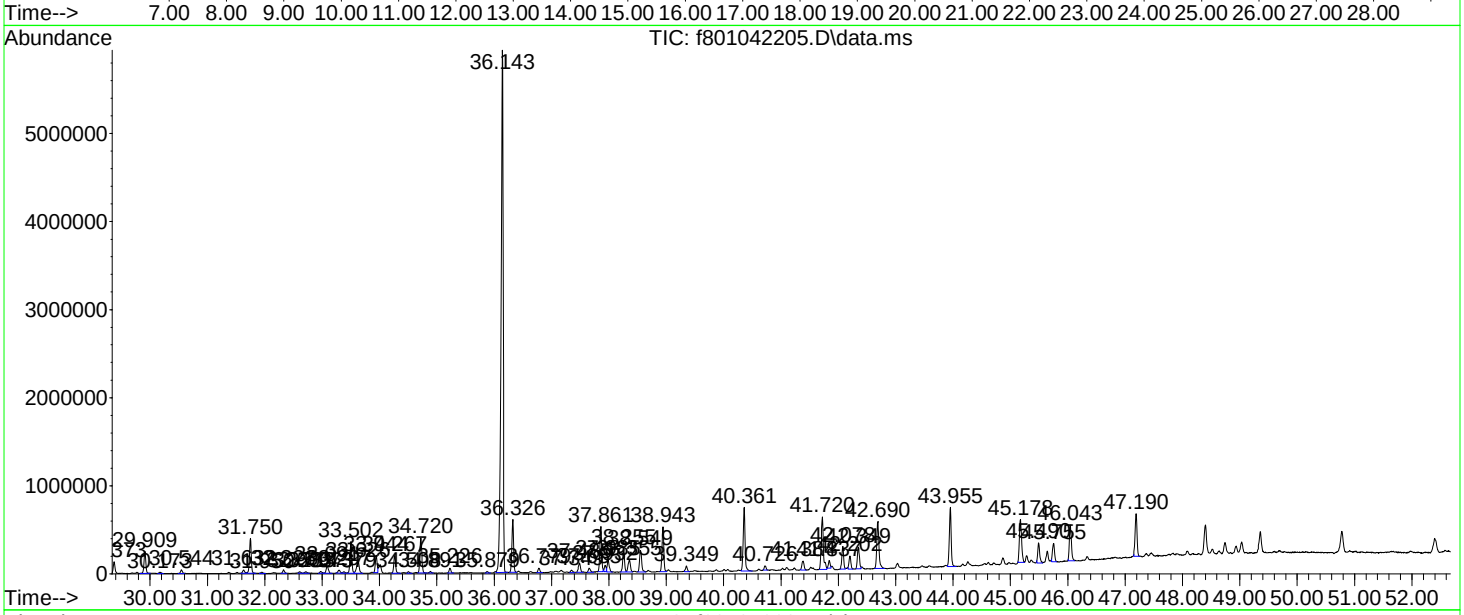
Sum of corrected areas: 48986950

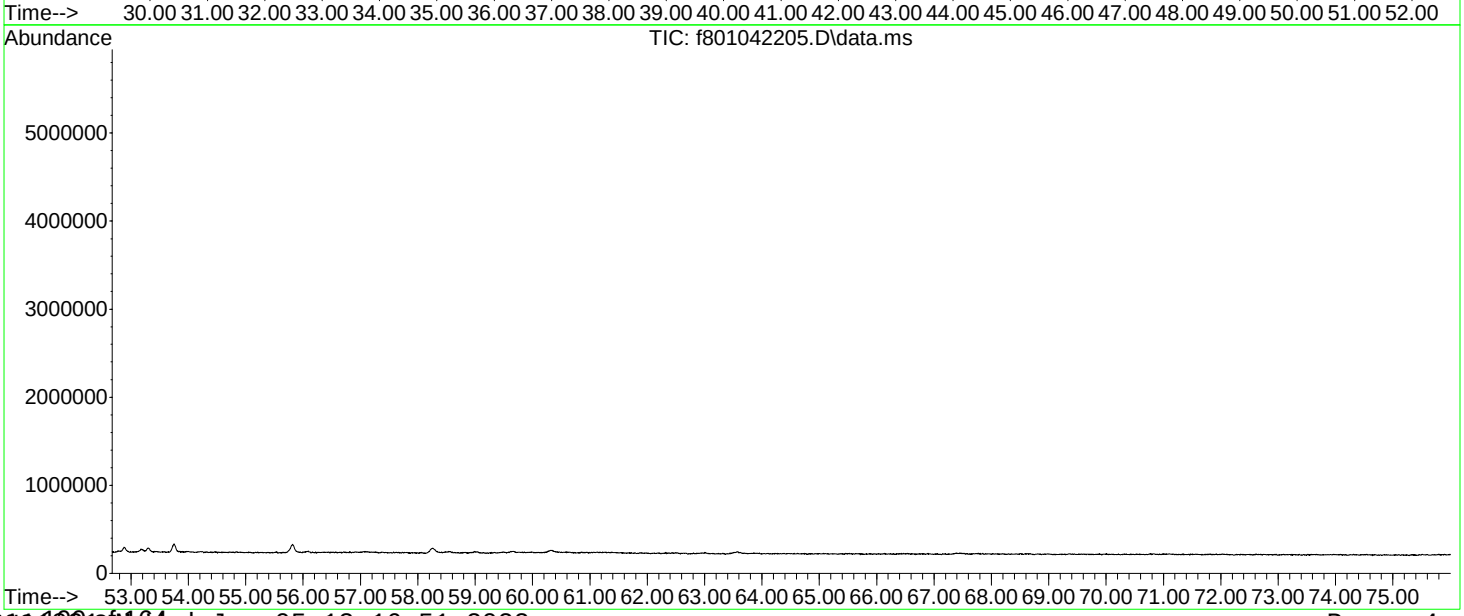
Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P







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Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On    :  4 Jan 2022   5:07 pm
Operator  :
Sample    : l2166503-06,42,,100
Misc      :
ALS Vial  : 5   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number  1  Eucalyptol                      Concentration Rank  8

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 15.174 2567.80 ng/mL      478993   Acenaphthene-d10           26.238

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 Eucalyptol                            154 C10H18O       000470-82-6 95
 2 Eucalyptol                            154 C10H18O       000470-82-6 89
 3 Eucalyptol                            154 C10H18O       000470-82-6 60
 4 Eucalyptol                            154 C10H18O       000470-82-6 53
 5 Trifluoroacetyl-.alpha.-terpineol     250 C12H17F3O2    1000058-17-6 47
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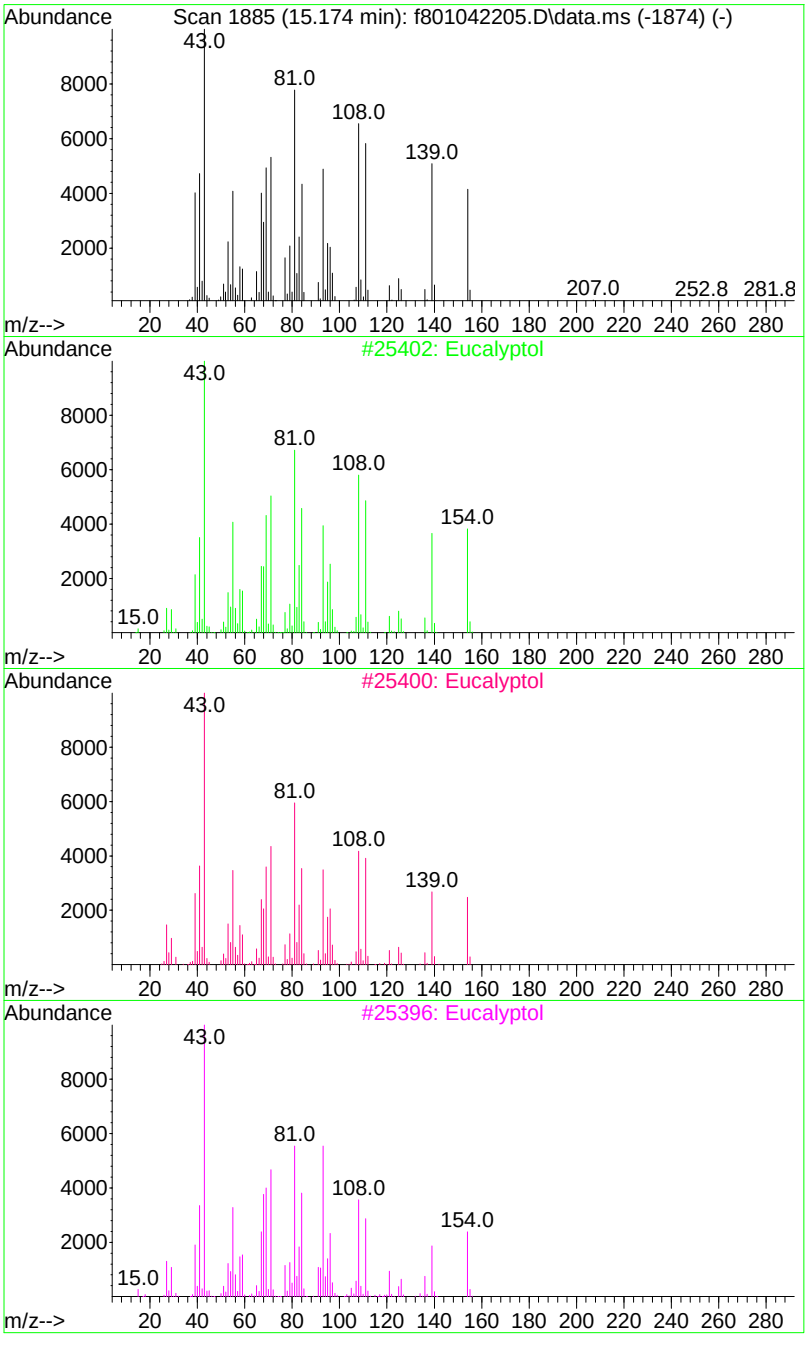
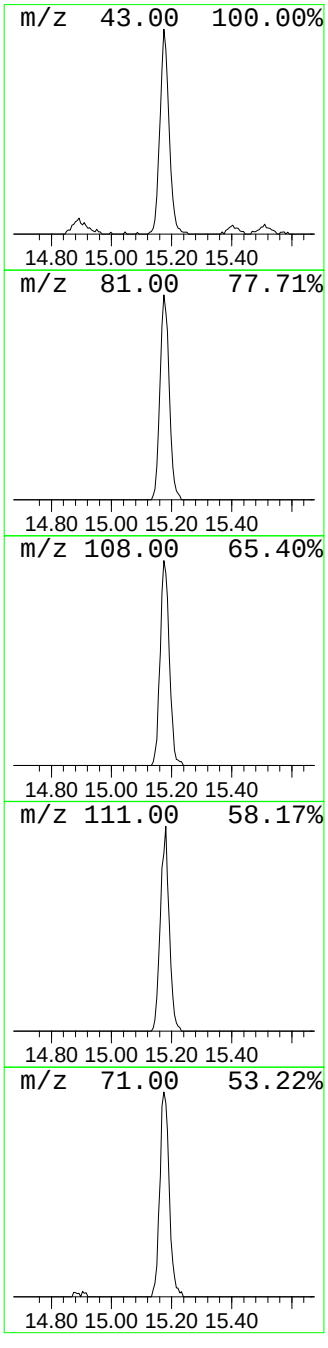




Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

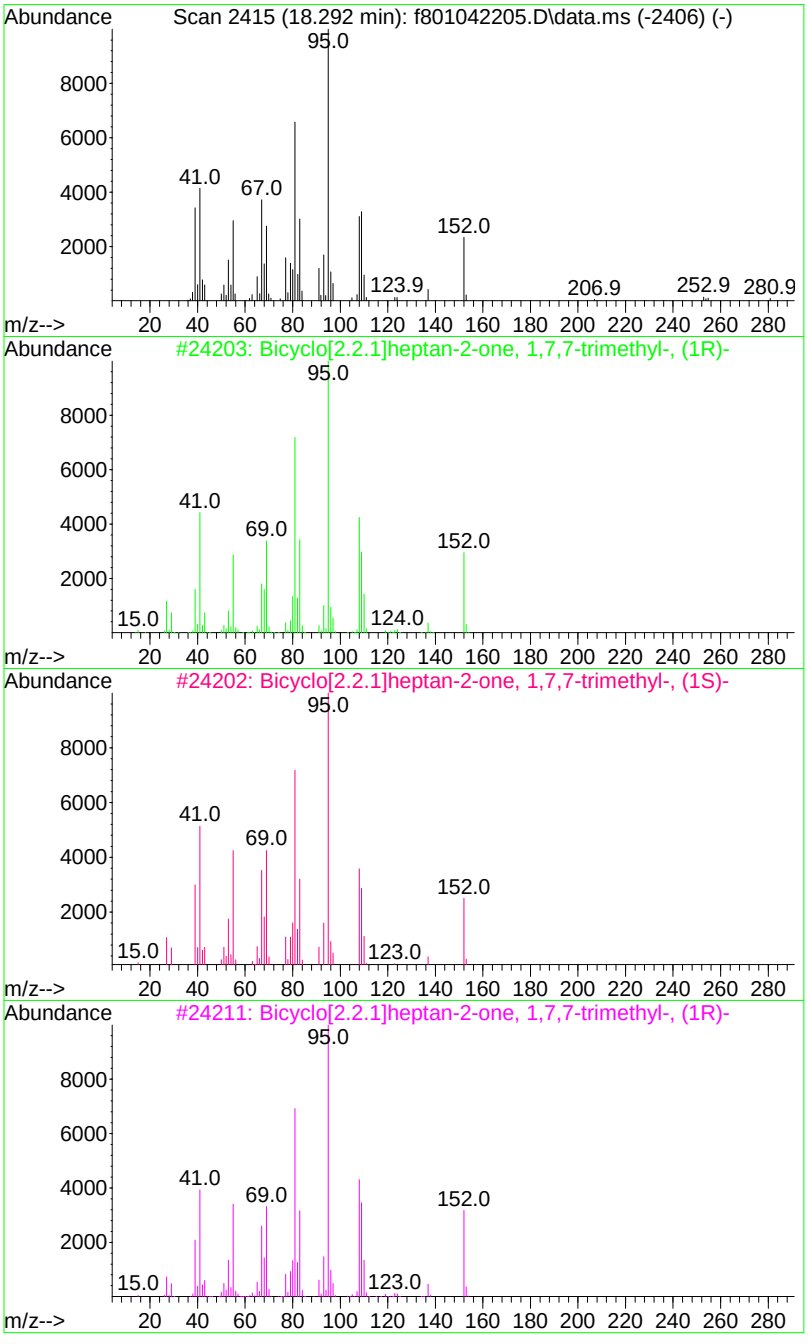
Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

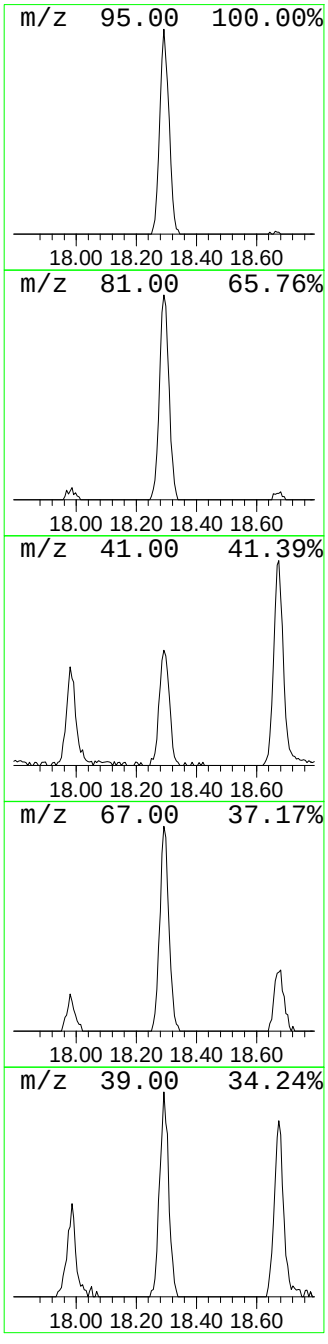
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

****
Peak Number 2 Bicyclo[2.2.1]heptan-2-one,... Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.292	1447.32 ng/mL	269981	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-49-3	97
2	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-48-2	96
3	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	000464-49-3	95
4	Bicyclo[2.2.1]heptan-2-one, 1,7,...	152	C10H16O	021368-68-3	95
5	Camphor	152	C10H16O	000076-22-2	93





Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

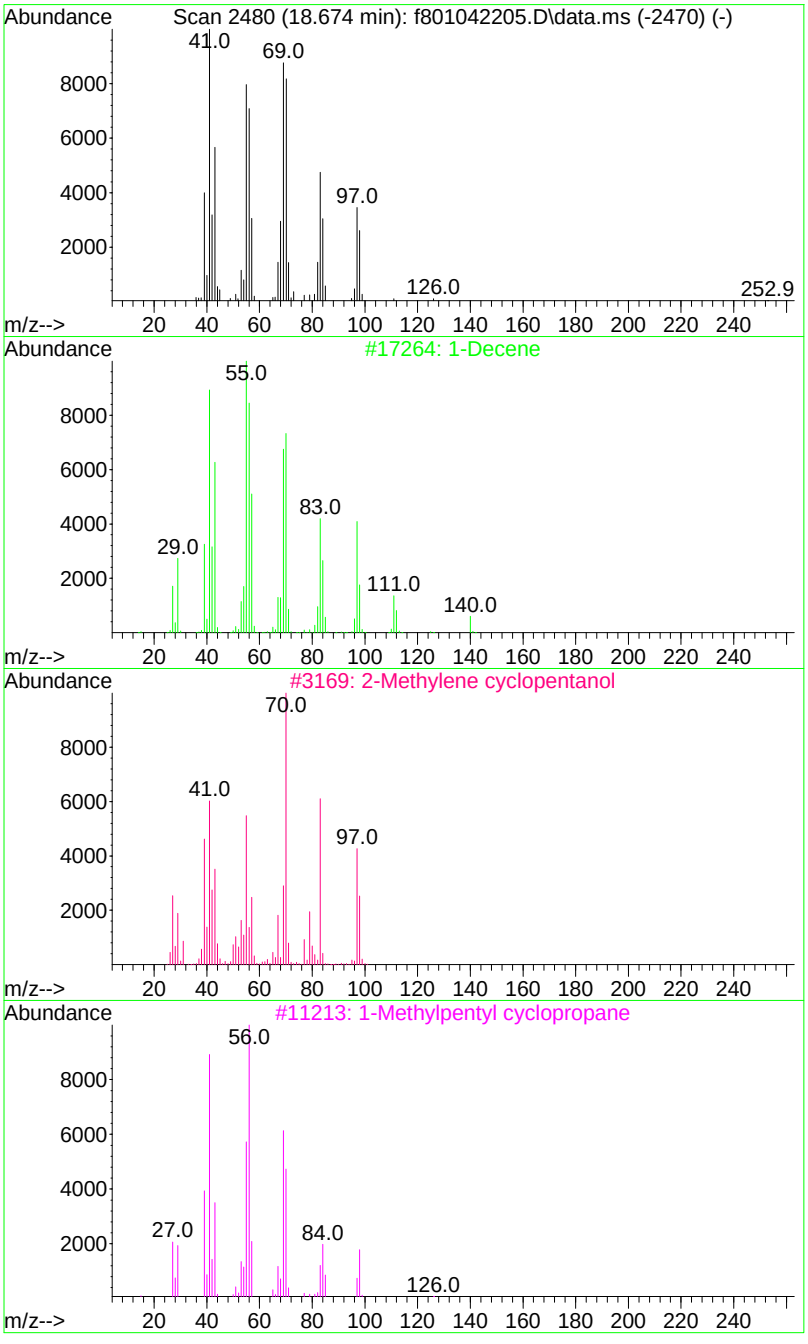
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

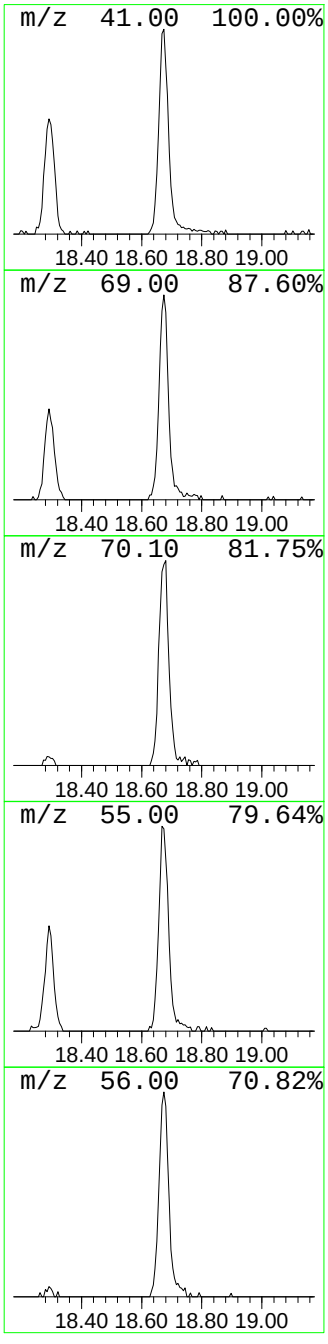
****

Peak Number 3 1-Decene Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.674	1426.63 ng/mL	266121	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Decene	140	C10H20	000872-05-9	58
2	2-Methylene cyclopentanol	98	C6H10O	020461-31-8	55
3	1-Methylpentyl cyclopropane	126	C9H18	006976-28-9	52
4	2-Cyclohexen-1-ol	98	C6H10O	000822-67-3	50
5	3-Heptene, (E)-	98	C7H14	014686-14-7	45





Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

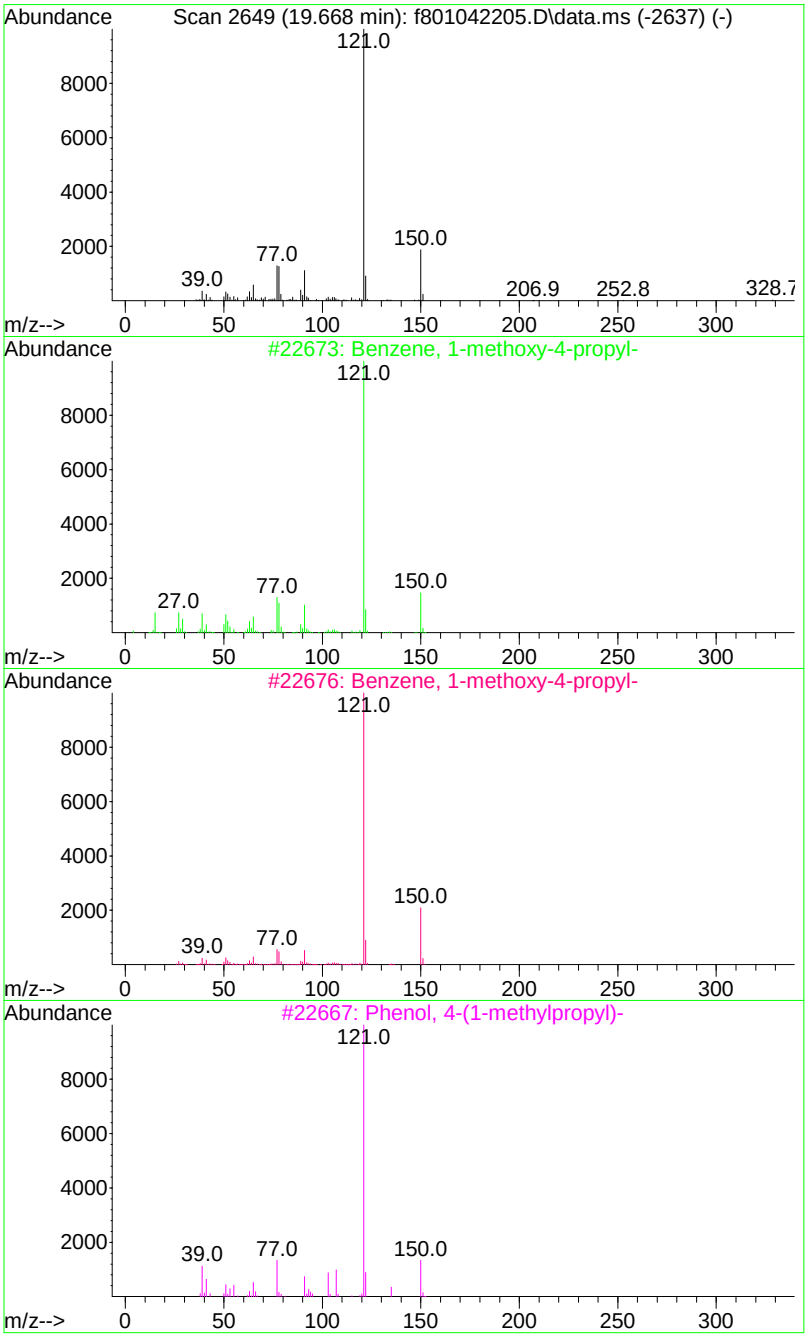
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

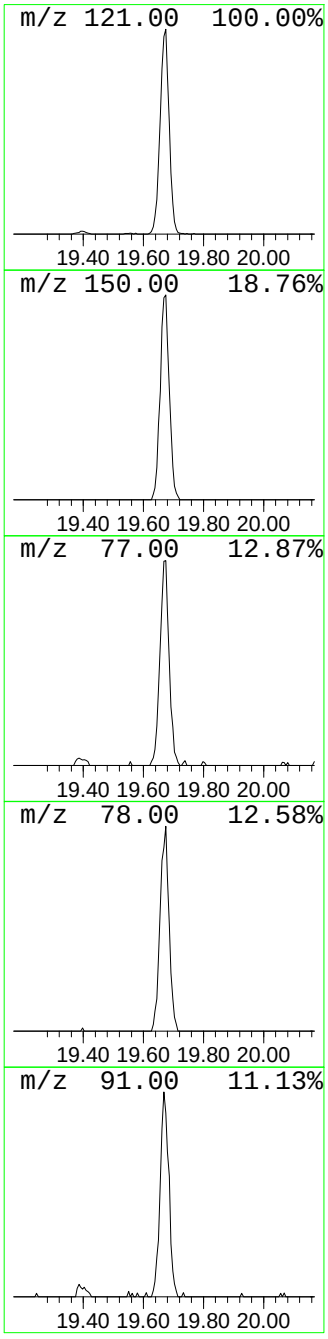
****

Peak Number 4 Benzene, 1-methoxy-4-propyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.668	2275.41 ng/mL	424450	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methoxy-4-propyl-	150	C10H14O	000104-45-0	94
2	Benzene, 1-methoxy-4-propyl-	150	C10H14O	000104-45-0	83
3	Phenol, 4-(1-methylpropyl)-	150	C10H14O	000099-71-8	80
4	Phenol, 2-(1-methylpropyl)-	150	C10H14O	000089-72-5	80
5	Benzene, 1-ethyl-4-methoxy-	136	C9H12O	001515-95-3	72





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Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On    :  4 Jan 2022   5:07 pm
Operator  :
Sample    : l2166503-06,42,,100
Misc      :
ALS Vial  : 5   Sample Multiplier: 1

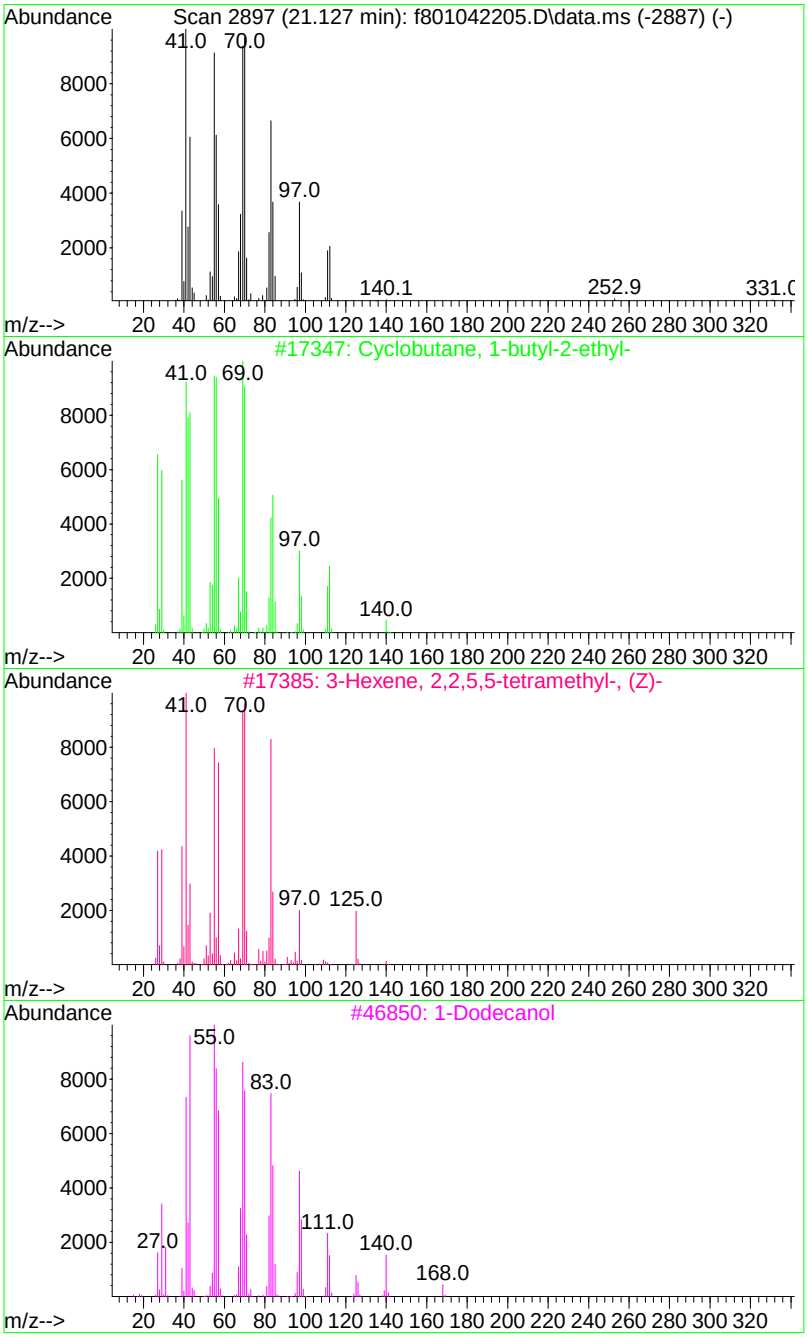
Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

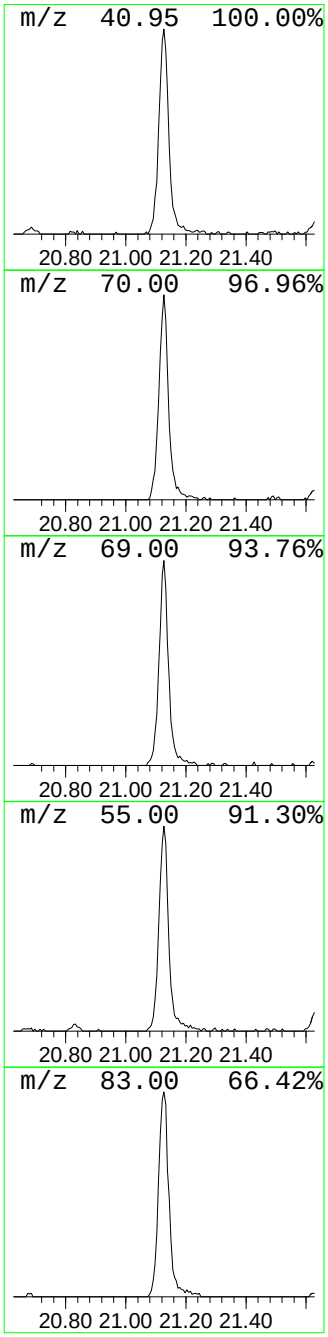
TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number  5  Cyclobutane, 1-butyl-2-ethyl-   Concentration Rank 11
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.127	2476.33 ng/mL	461929	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclobutane, 1-butyl-2-ethyl-	140	C10H20	1000150-67-3	74
2	3-Hexene, 2,2,5,5-tetramethyl-, ...	140	C10H20	000692-47-7	58
3	1-Dodecanol	186	C12H26O	000112-53-8	53
4	Cyclopentane, propyl-	112	C8H16	002040-96-2	49
5	Cyclopentane, 1,1,2-trimethyl-	112	C8H16	004259-00-1	49





Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

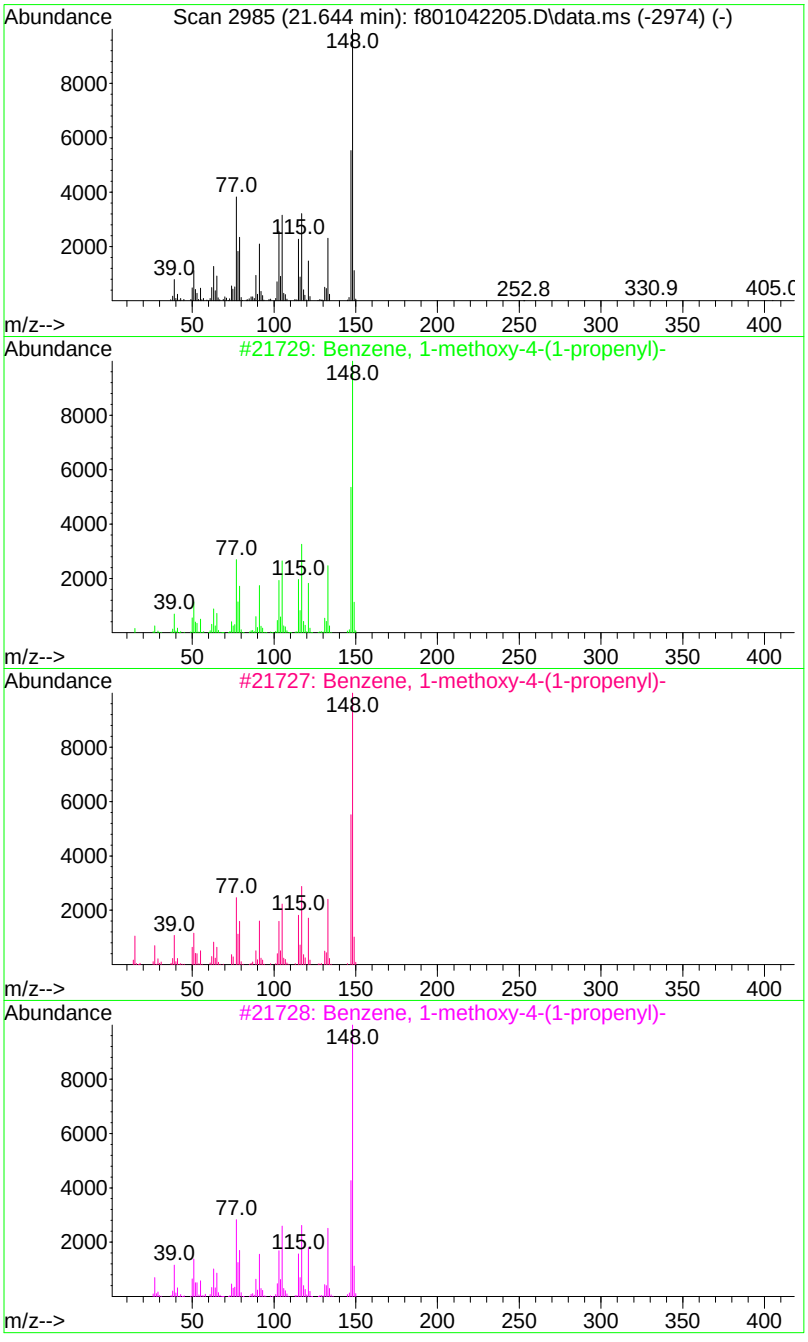
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

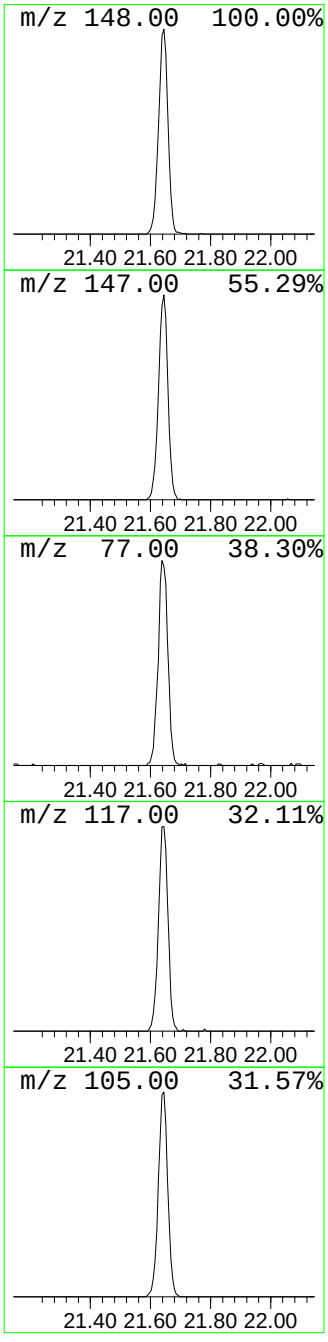
****

Peak Number 6 Benzene, 1-methoxy-4-(1-pro... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.644	4366.99 ng/mL	814609	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methoxy-4-(1-propenyl)-	148	C10H12O	000104-46-1	96
2	Benzene, 1-methoxy-4-(1-propenyl)-	148	C10H12O	000104-46-1	95
3	Benzene, 1-methoxy-4-(1-propenyl)-	148	C10H12O	000104-46-1	93
4	Anisole, p-allyl-	148	C10H12O	000140-67-0	93
5	Anisole, p-allyl-	148	C10H12O	000140-67-0	91





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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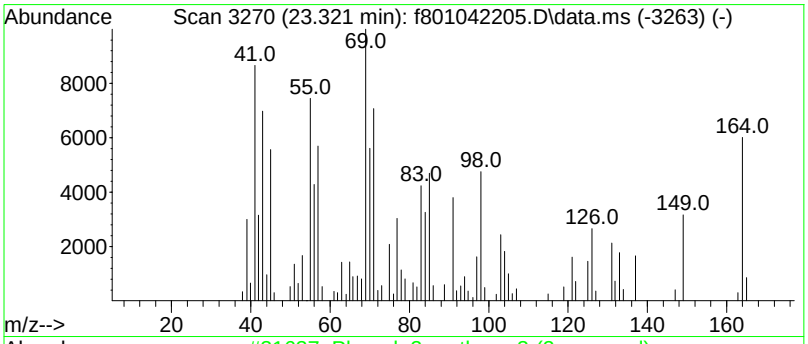
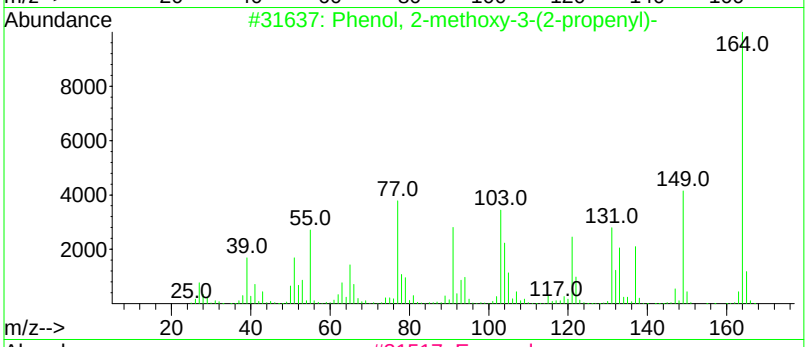
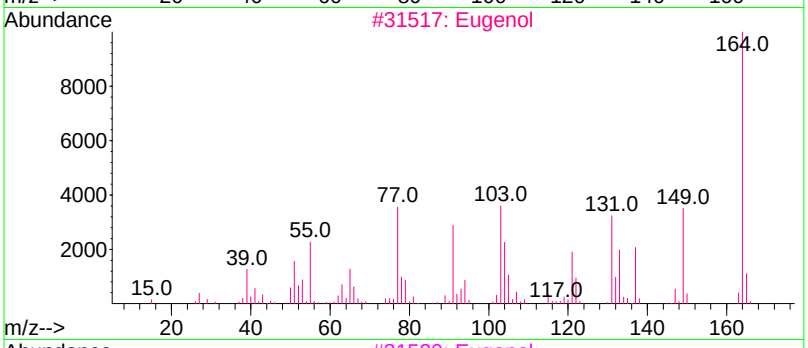
Peak Number 7 Phenol, 2-methoxy-3-(2-prop... Concentration Rank 18

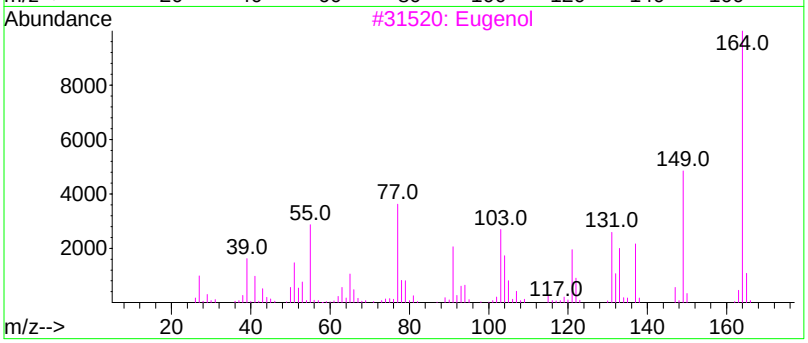
R.T.	EstConc	Area	Relative to ISTD	R.T.
23.321	1581.29 ng/mL	294971	Acenaphthene-d10	26.238

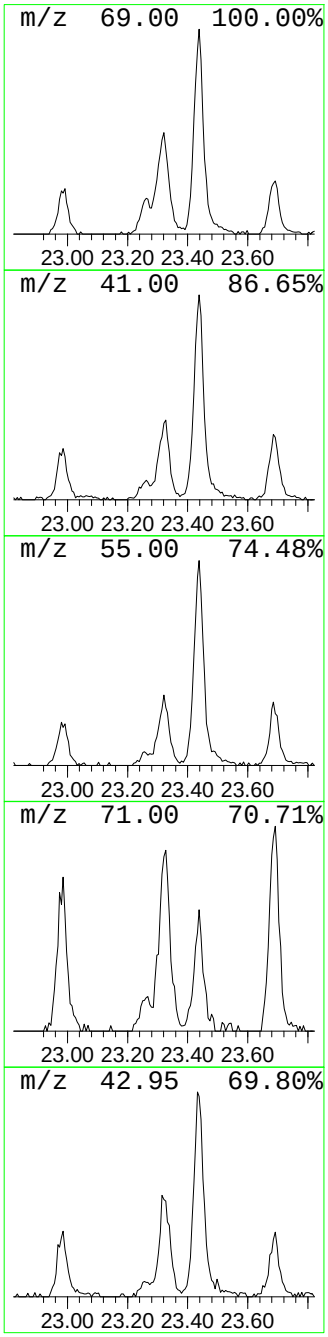
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-methoxy-3-(2-propenyl)-	164	C10H12O2	001941-12-4	92
2	Eugenol	164	C10H12O2	000097-53-0	91
3	Eugenol	164	C10H12O2	000097-53-0	90
4	3-Allyl-6-methoxyphenol	164	C10H12O2	000501-19-9	64
5	Eugenol	164	C10H12O2	000097-53-0	64











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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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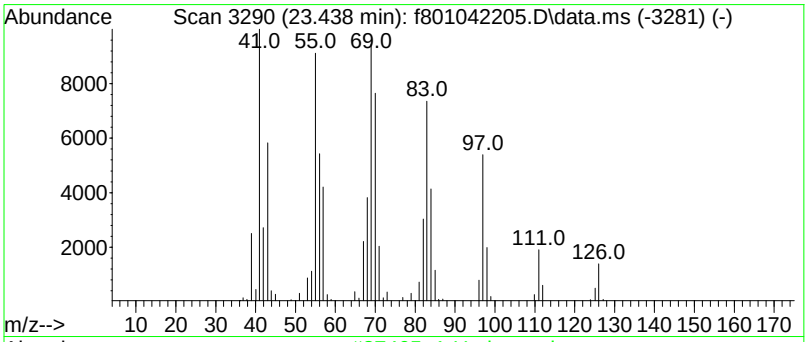
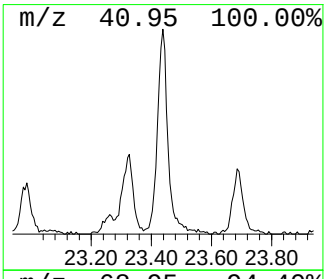
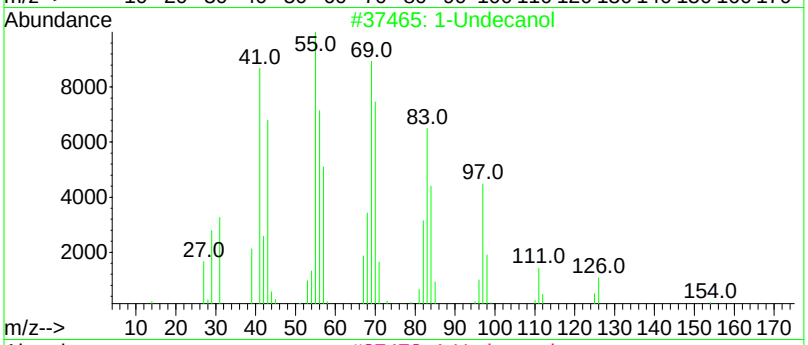
Peak Number 8 1-Undecanol Concentration Rank 12

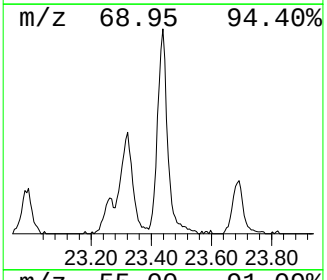
R.T.	EstConc	Area	Relative to ISTD	R.T.
23.438	2455.41 ng/mL	458027	Acenaphthene-d10	26.238

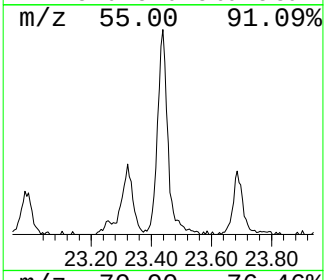
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Undecanol	172	C11H24O	000112-42-5	90
2	1-Undecanol	172	C11H24O	000112-42-5	80
3	Cyclohexane, 1,2,3-trimethyl-	126	C9H18	001678-97-3	64
4	E-11,13-Tetradecadien-1-ol	210	C14H26O	1000131-00-3	58
5	1-Nonene	126	C9H18	000124-11-8	52

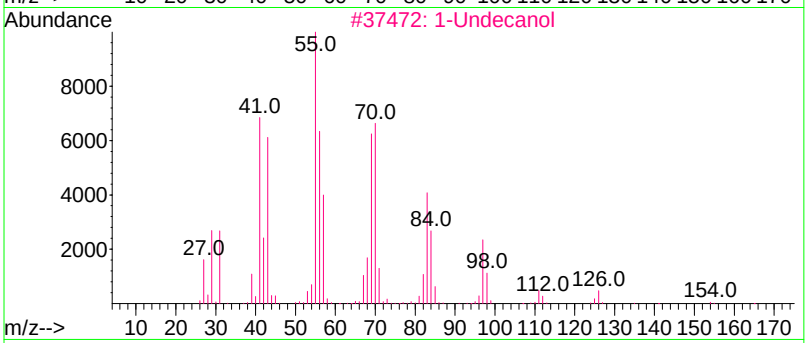


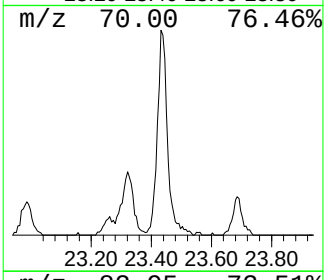


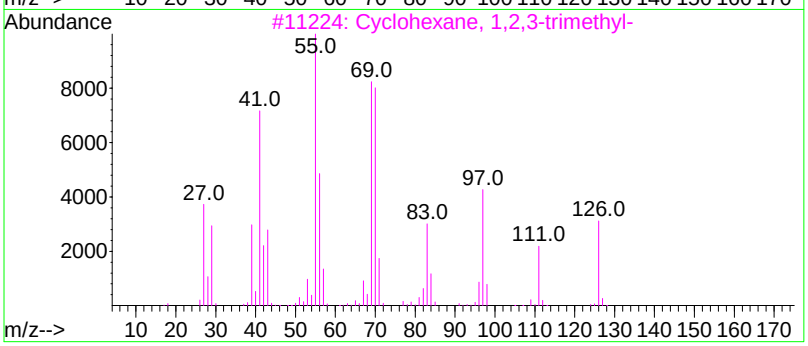


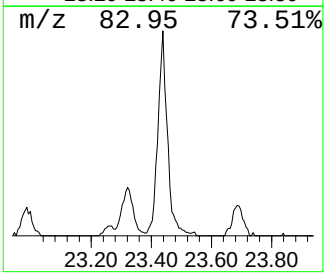












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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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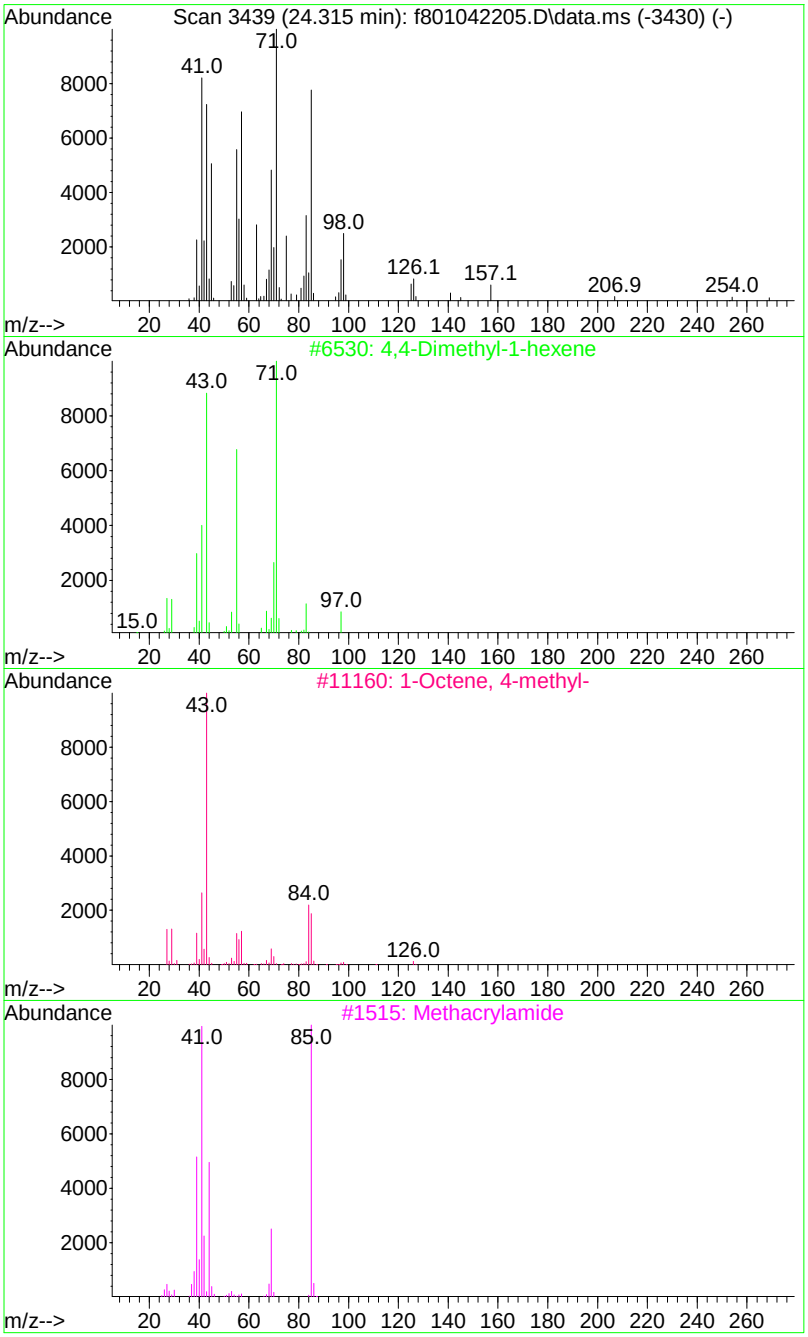
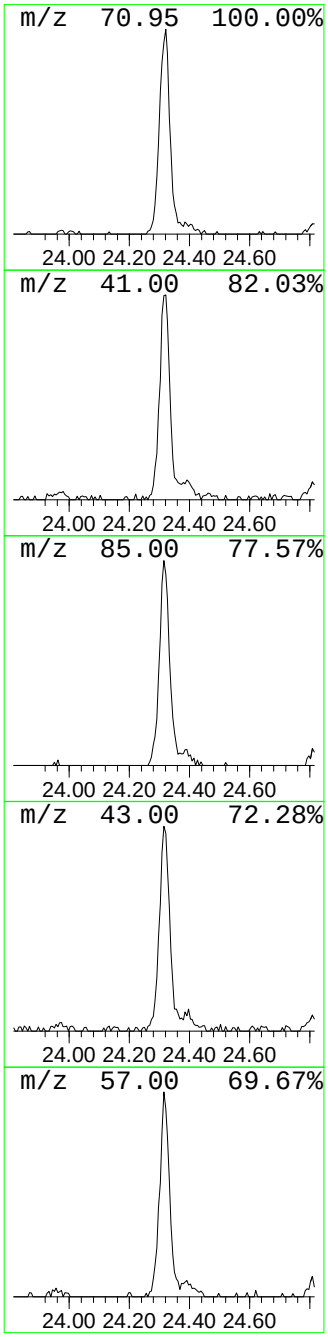
Peak Number 9 4,4-Dimethyl-1-hexene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.315	1694.15 ng/mL	316023	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4,4-Dimethyl-1-hexene	112	C8H16	001647-08-1	22
2	1-Octene, 4-methyl-	126	C9H18	013151-12-7	14
3	Methacrylamide	85	C4H7NO	000079-39-0	11
4	Cyclopentane, 1-methyl-2-propyl-	126	C9H18	003728-57-2	11
5	Pentafluoropropionic acid, dodec...	332	C15H25F5O2	006222-04-4	11





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Quant Title : Decalins & Alkylated PAH's

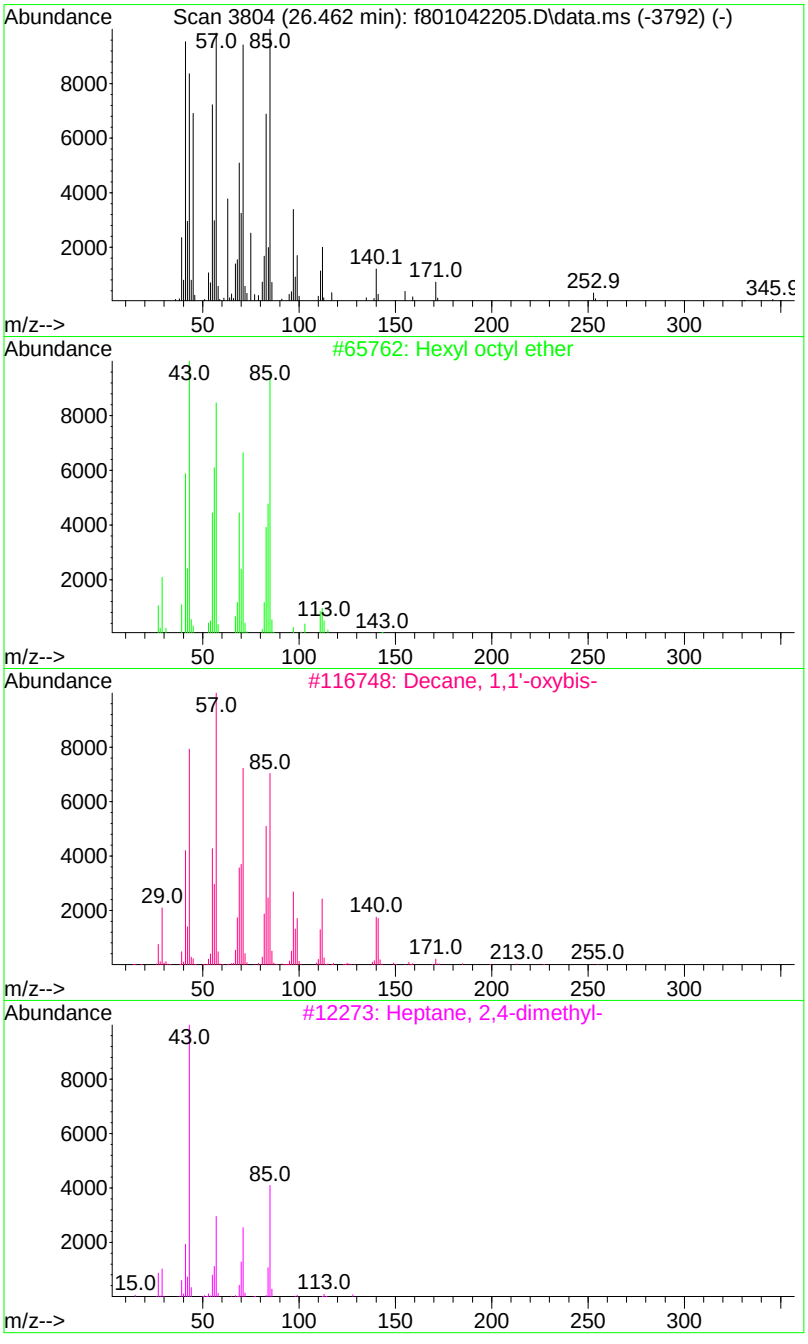
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

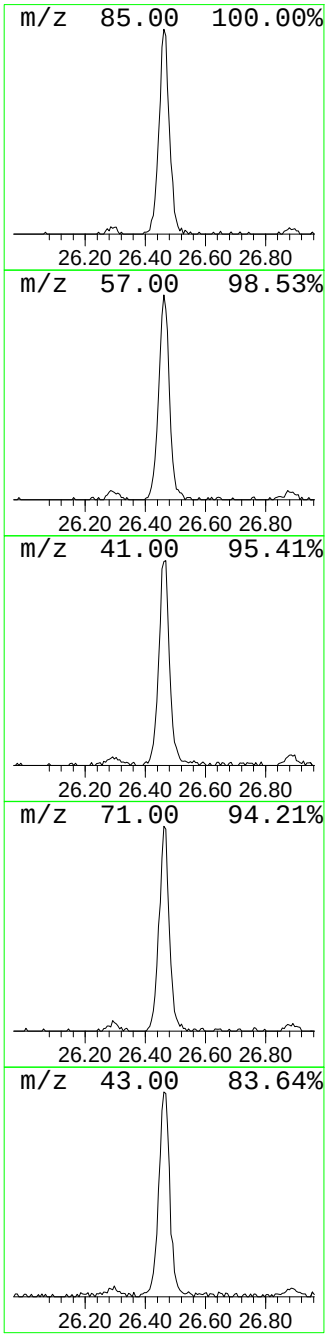
****

Peak Number 10 Hexyl octyl ether Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.462	2814.12 ng/mL	524940	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexyl octyl ether	214	C14H30O	017071-54-4	52
2	Decane, 1,1'-oxybis-	298	C20H42O	002456-28-2	49
3	Heptane, 2,4-dimethyl-	128	C9H20	002213-23-2	46
4	Cyclodecane	140	C10H20	000293-96-9	25
5	4,4-Dimethylcyclooctene	138	C10H18	1000113-56-7	22





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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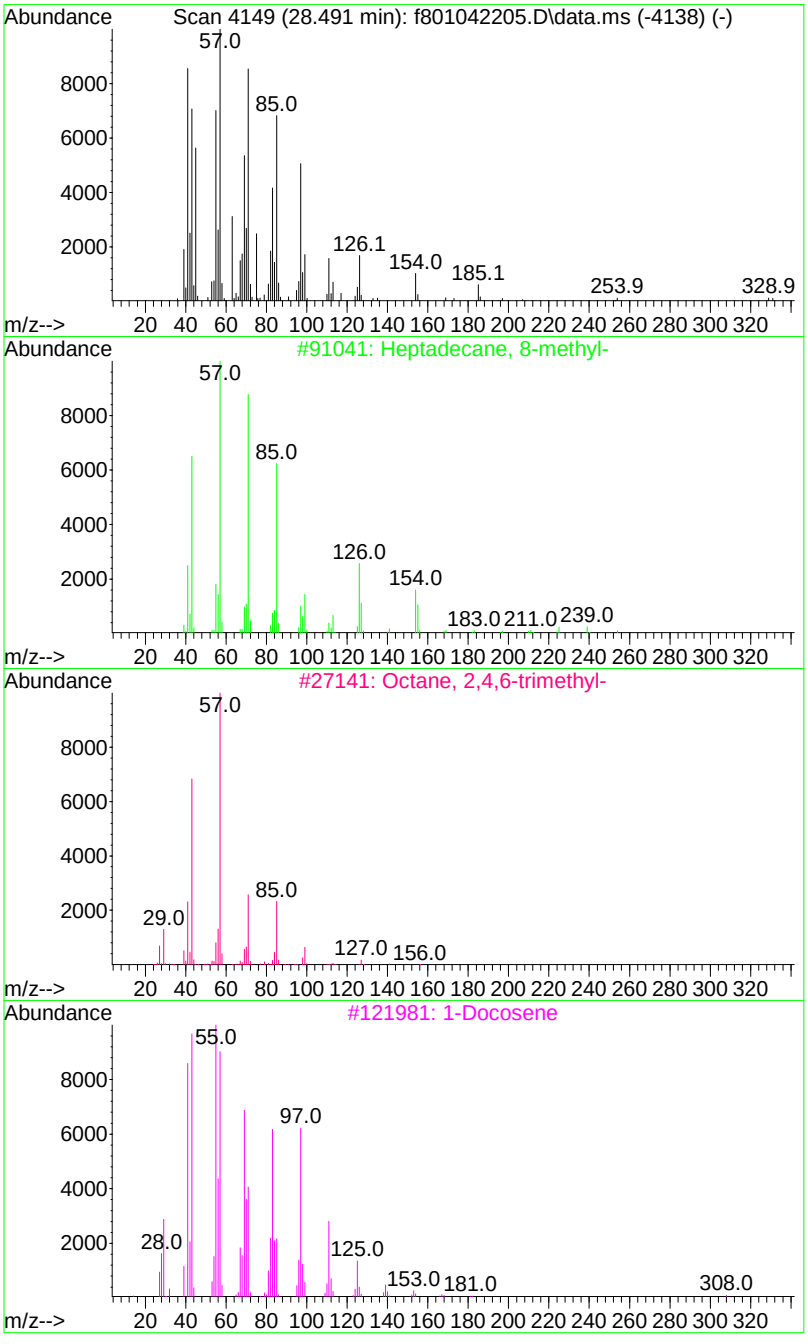
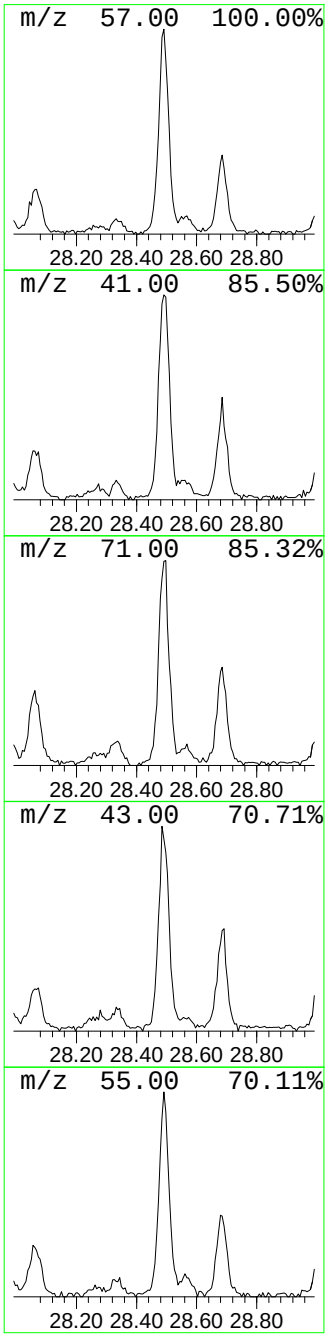
Peak Number 11 Heptadecane, 8-methyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.491	2477.70 ng/mL	462186	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptadecane, 8-methyl-	254	C18H38	013287-23-5	45
2	Octane, 2,4,6-trimethyl-	156	C11H24	062016-37-9	38
3	1-Docosene	308	C22H44	001599-67-3	30
4	Cyclohexane, 1,2-dimethyl-3-pent...	224	C16H32	062376-17-4	27
5	Cyclohexanone, 2,6-diethyl-	154	C10H18O	016519-68-9	25





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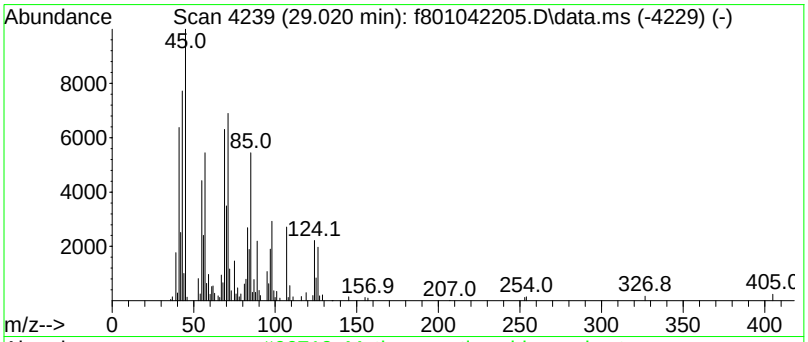
Quant Title  : Decalins & Alkylated PAH's

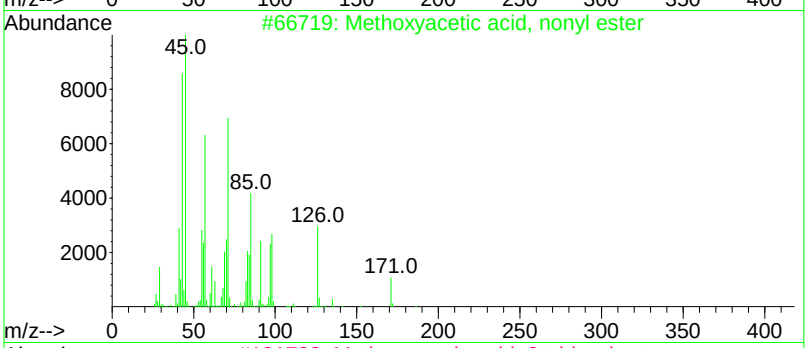
TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

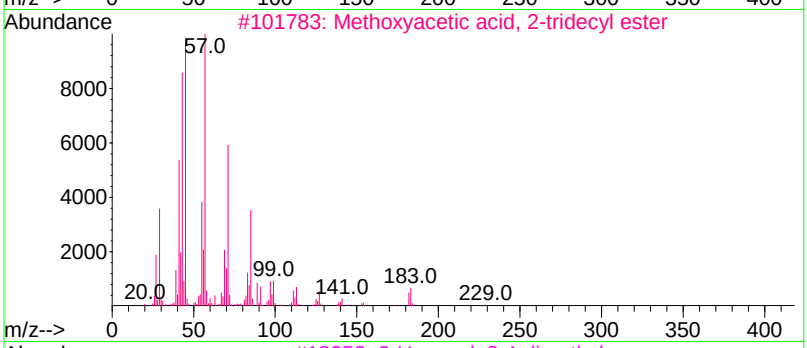
*********************************************************************
Peak Number 12  Methoxyacetic acid, nonyl e...  Concentration Rank  7
```

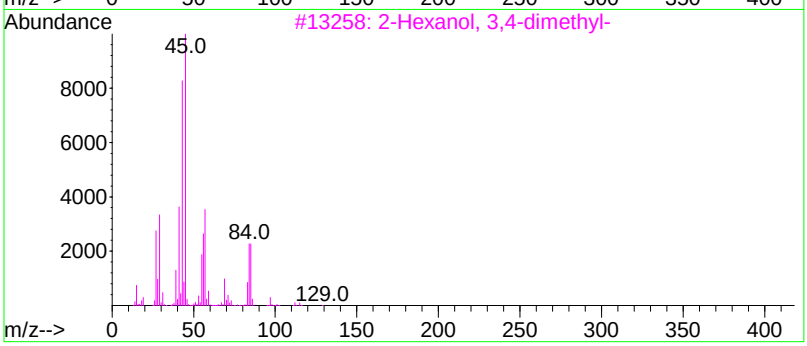
R.T.	EstConc	Area	Relative to ISTD	R.T.
29.020	2698.59 ng/mL	503389	Acenaphthene-d10	26.238

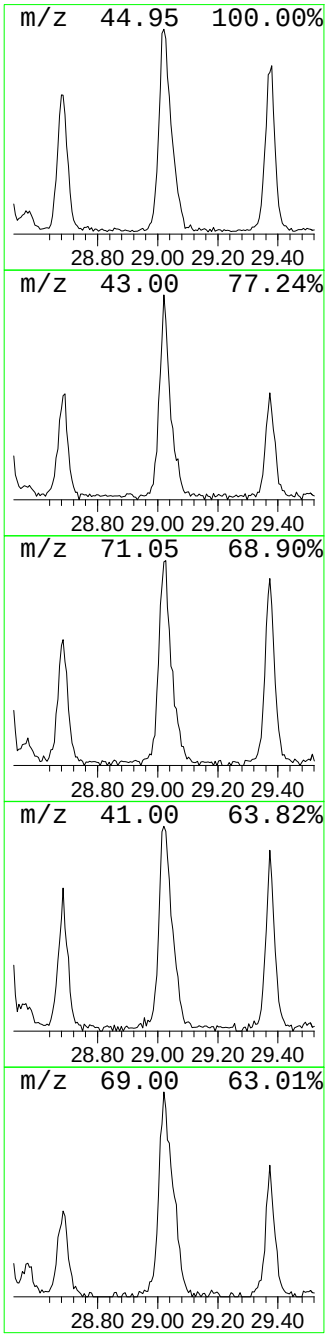
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Methoxyacetic acid, nonyl ester	216	C12H24O3	1000282-98-4	53
2	Methoxyacetic acid, 2-tridecyl e...	272	C16H32O3	1000282-04-5	40
3	2-Hexanol, 3,4-dimethyl-	130	C8H18O	019550-05-1	35
4	Methyl 4,6-decadienyl ether	168	C11H20O	1000130-99-8	22
5	Hexagol	282	C12H26O7	002615-15-8	22











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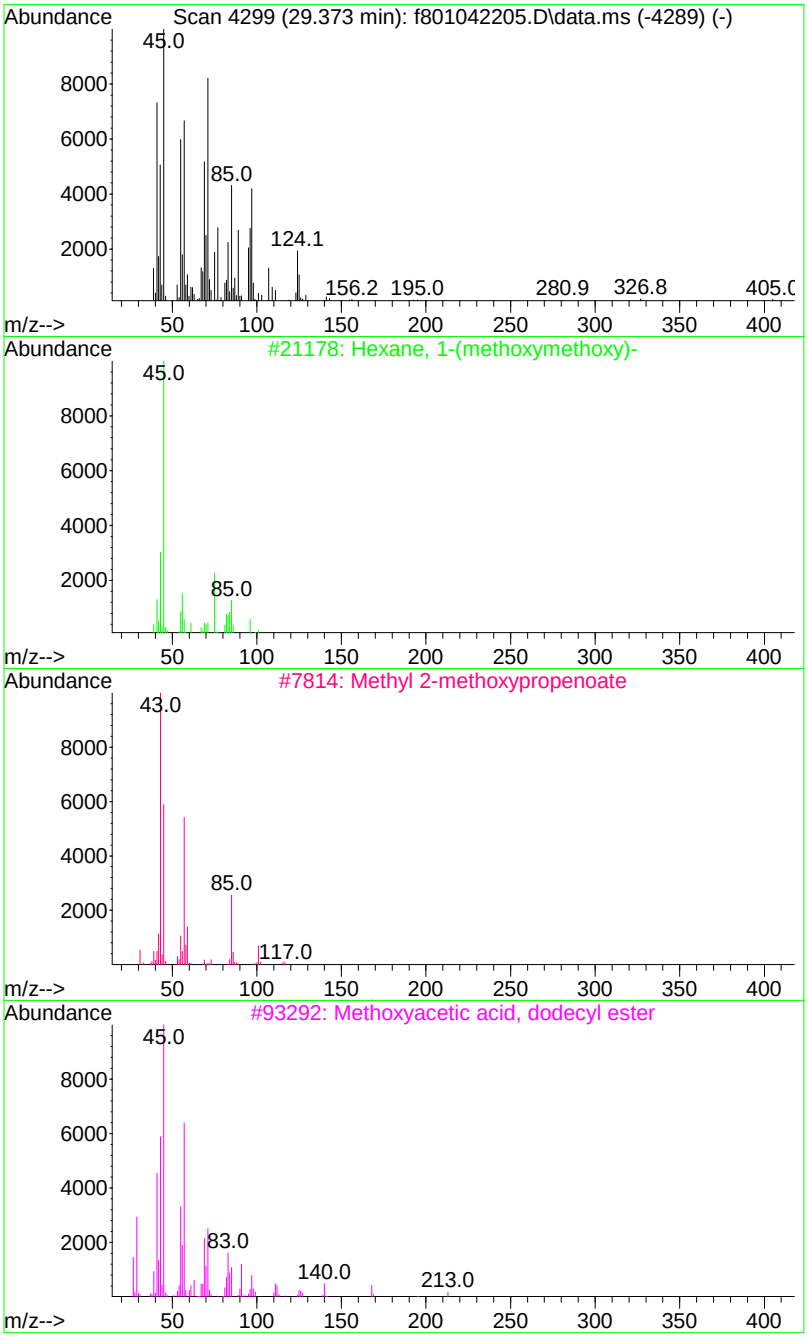
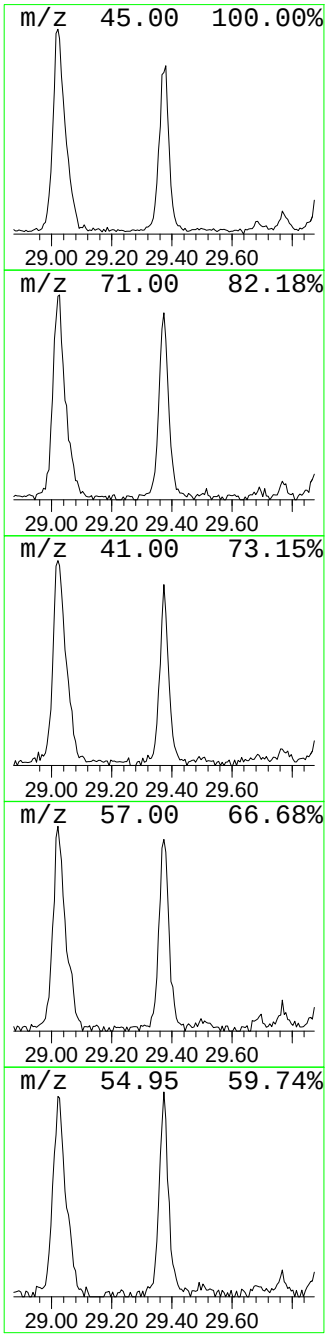
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number 13  Hexane, 1-(methoxymethoxy)-     Concentration Rank 17
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.373	1617.64 ng/mL	301751	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexane, 1-(methoxymethoxy)-	146	C8H18O2	066675-06-7	27
2	Methyl 2-methoxypropenoate	116	C5H8O3	007001-18-5	22
3	Methoxyacetic acid, dodecyl ester	258	C15H30O3	1000281-81-9	22
4	Dichloroacetic acid, 4-methylpen...	212	C8H14Cl2O2	1000282-43-7	22
5	Decane, 3-methyl-	156	C11H24	013151-34-3	22





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Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

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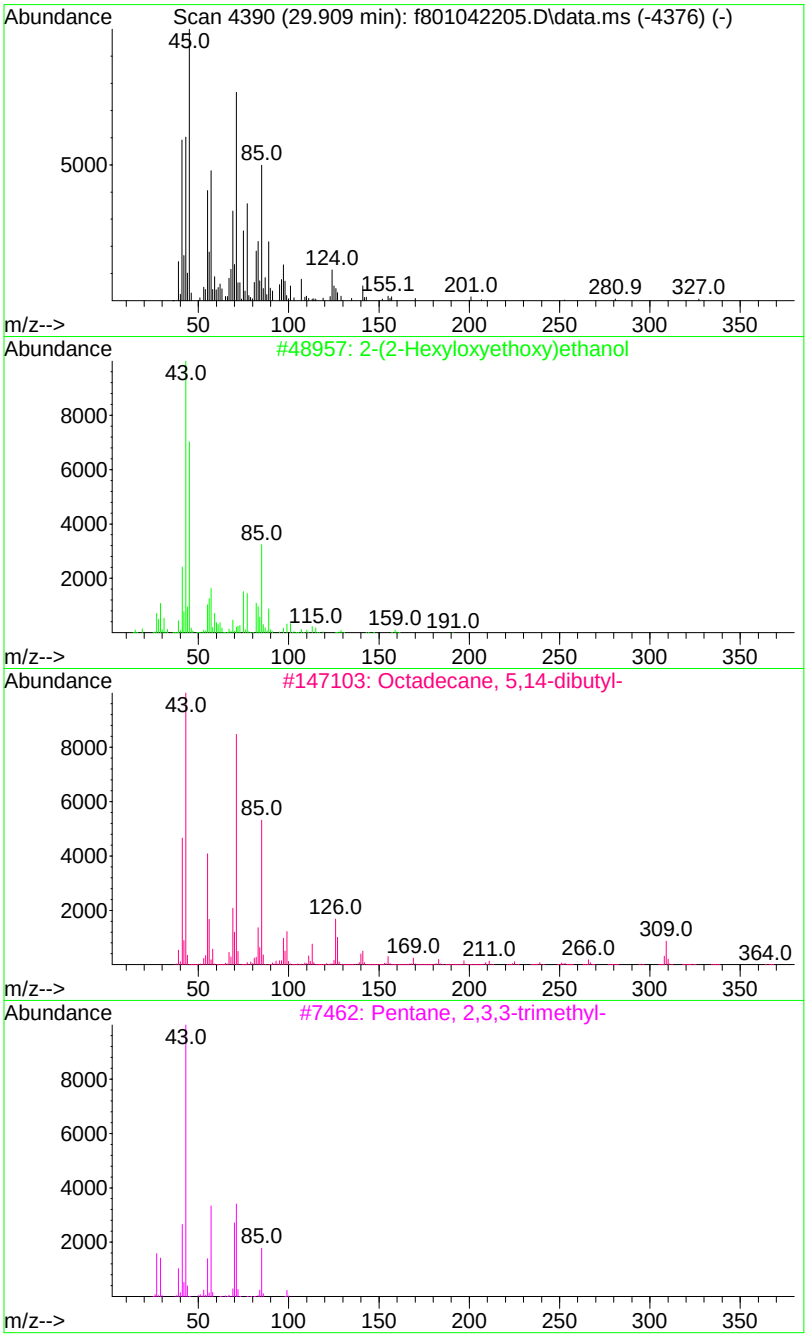
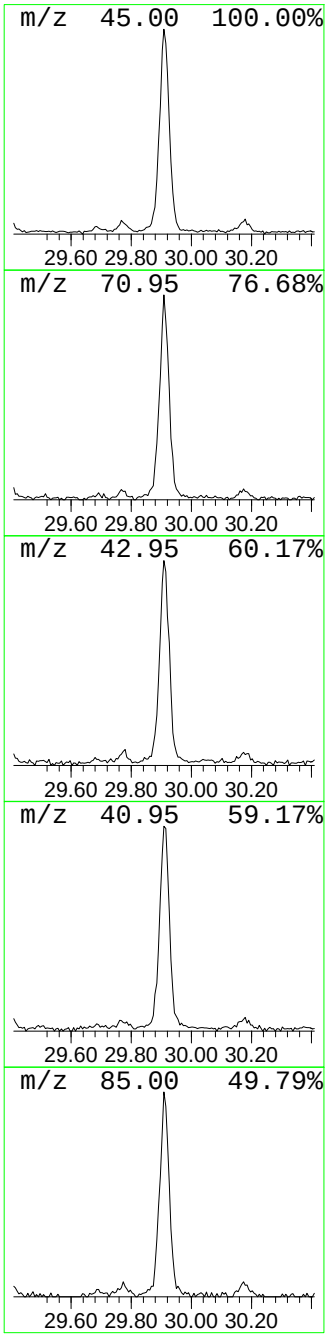
Peak Number 14 2-(2-Hexyloxyethoxy)ethanol Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.909	3109.76 ng/mL	580088	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-(2-Hexyloxyethoxy)ethanol	190	C10H22O3	000112-59-4	43
2	Octadecane, 5,14-dibutyl-	366	C26H54	055282-13-8	35
3	Pentane, 2,3,3-trimethyl-	114	C8H18	000560-21-4	27
4	Methoxyacetic acid, decyl ester	230	C13H26O3	259141-02-1	27
5	2-Tetradecanol	214	C14H30O	004706-81-4	22





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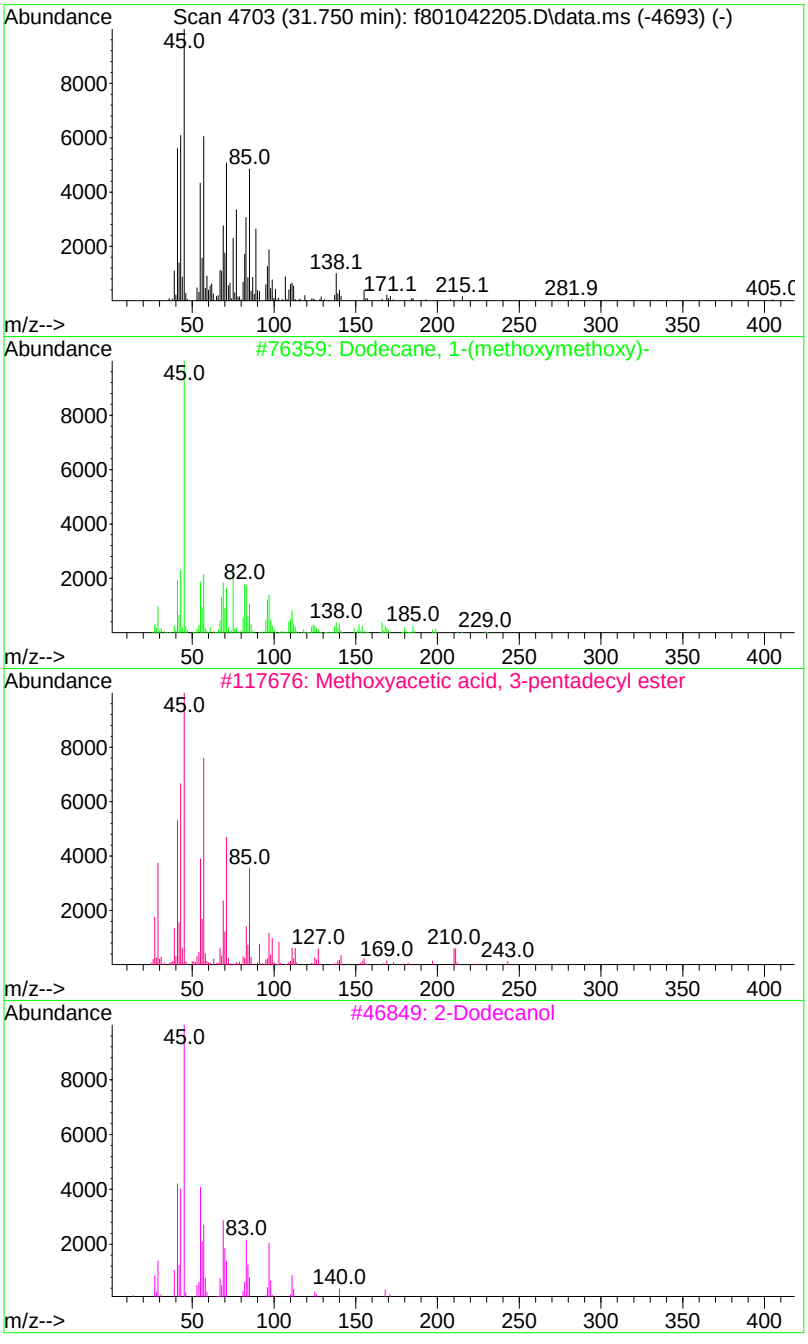
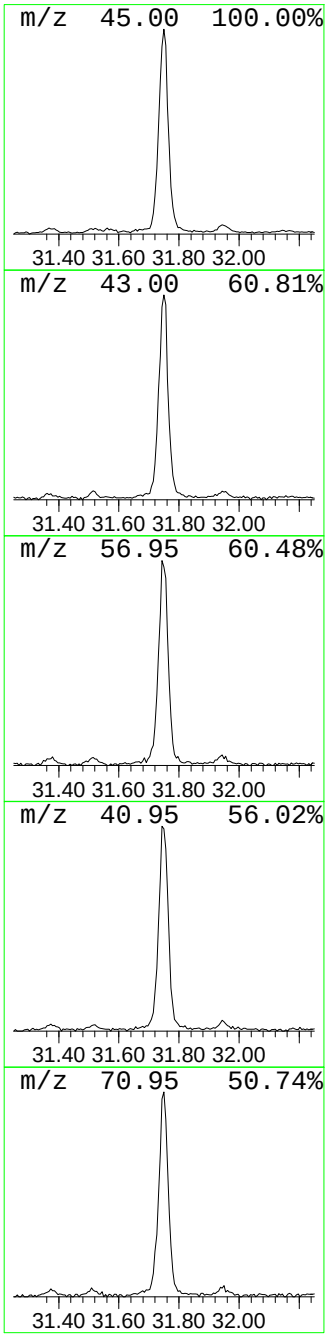
*********************************************************************
Peak Number 15  Dodecane, 1-(methoxymethoxy)-   Concentration Rank  2

  R.T.     EstConc          Area       Relative to ISTD         R.T.
-------------------------------------------------------------------
 31.750 4821.81 ng/mL      899450   Acenaphthene-d10           26.238

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
-------------------------------------------------------------------
 1 Dodecane, 1-(methoxymethoxy)-        230 C14H30O2       034458-41-8 43
 2 Methoxyacetic acid, 3-pentadecyl...  300 C18H36O3       1000282-05-2 35
 3 2-Dodecanol                          186 C12H26O        010203-28-8 27
 4 Methoxyacetic acid, 4-tridecyl e...  272 C16H32O3       1000282-04-7 22
 5 2-Dodecanol                          186 C12H26O        010203-28-8 22
```





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Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

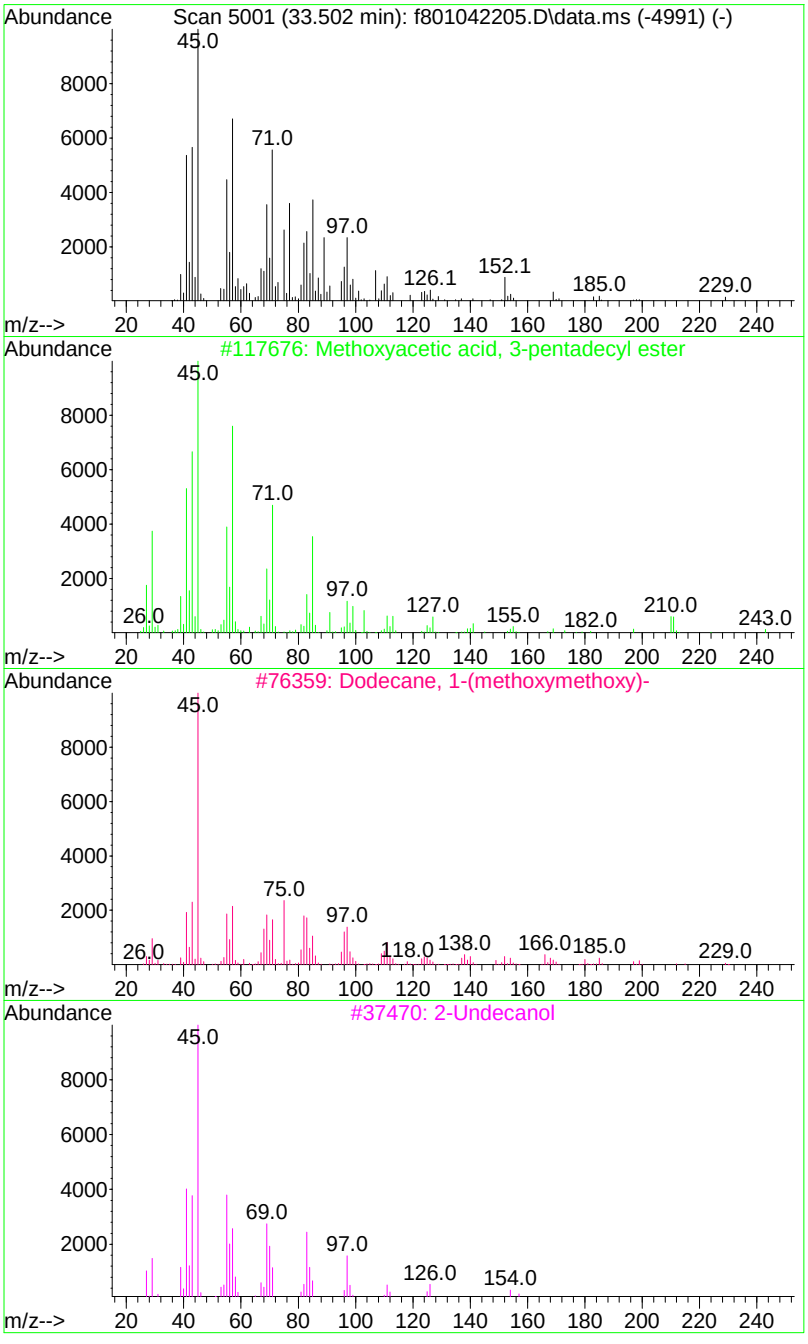
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

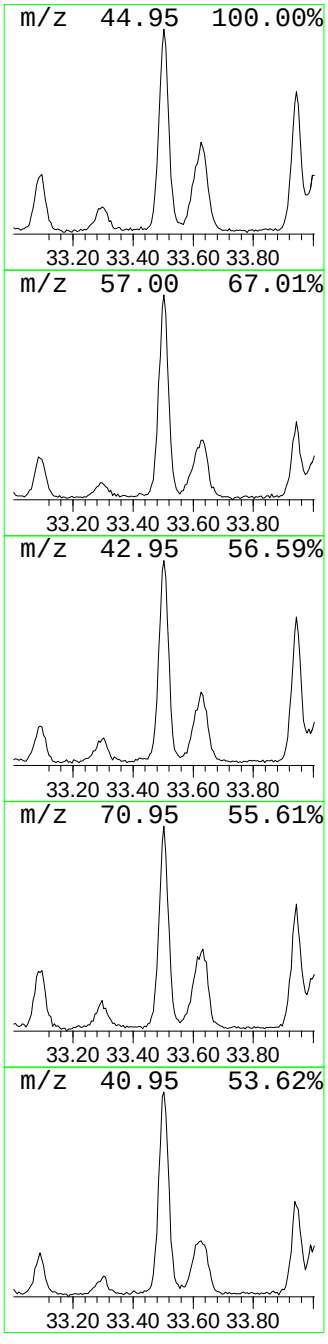
****

Peak Number 16 Methoxyacetic acid, 3-penta... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
33.502	4454.44 ng/mL	830923	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Methoxyacetic acid, 3-pentadecyl...	300	C18H36O3	1000282-05-2	64
2	Dodecane, 1-(methoxymethoxy)-	230	C14H30O2	034458-41-8	49
3	2-Undecanol	172	C11H24O	001653-30-1	43
4	Heptafluorobutyric acid, n-penta...	424	C19H31F7O2	1000216-79-3	25
5	Cyclododecyl methyl ether	198	C13H26O	002986-54-1	25





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Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

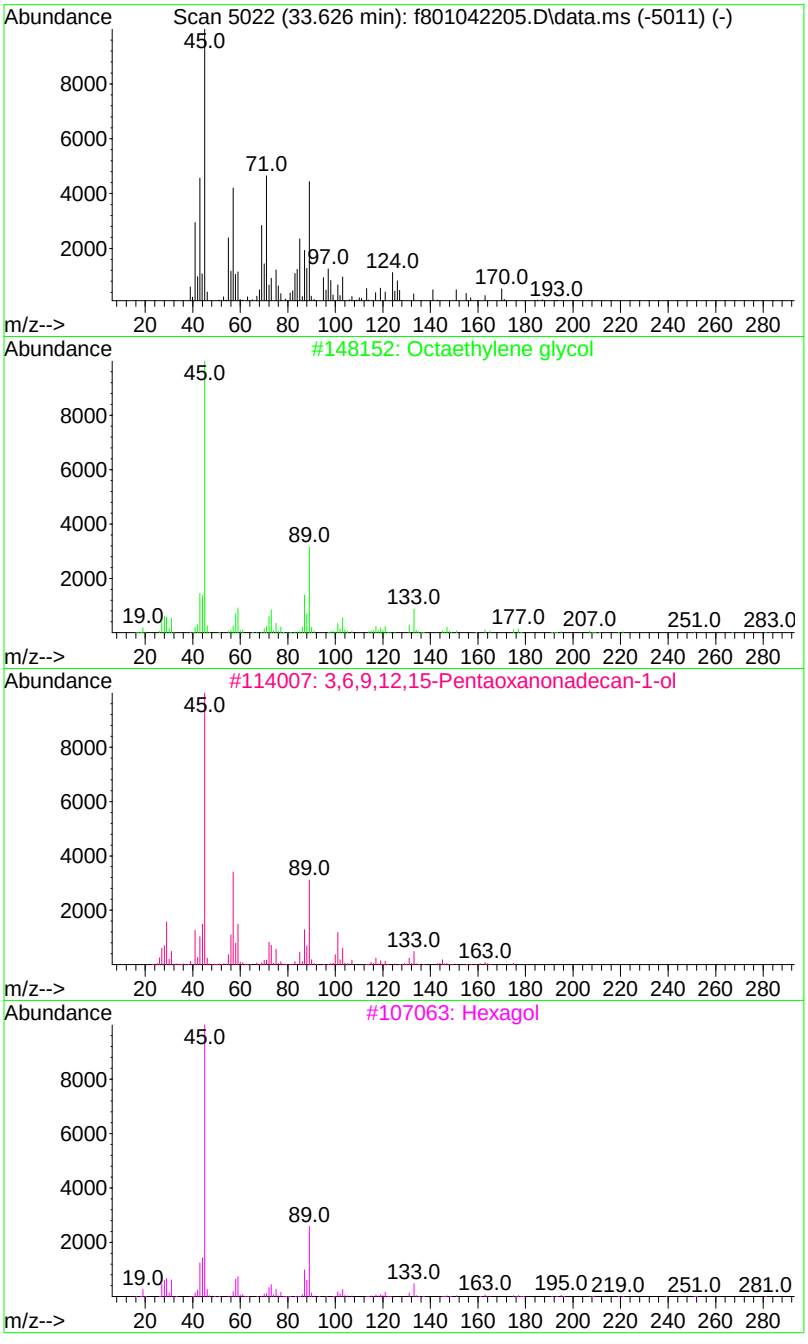
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

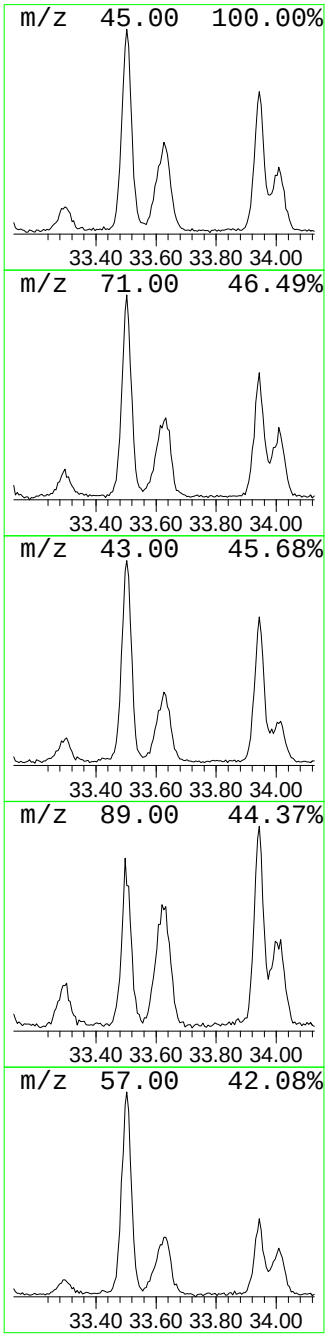
****

Peak Number 17 Octaethylene glycol Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
33.626	2274.48 ng/mL	424277	Acenaphthene-d10	26.238

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octaethylene glycol	370	C16H34O9	1000289-34-2	49
2	3,6,9,12,15-Pentaoxanonadecan-1-ol	294	C14H30O6	001786-94-3	47
3	Hexagol	282	C12H26O7	002615-15-8	47
4	Pentaethylene glycol	238	C10H22O6	004792-15-8	46
5	1,3,3-Trimethoxybutane	148	C7H16O3	006607-66-5	43





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Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On    :  4 Jan 2022   5:07 pm
Operator  :
Sample    : l2166503-06,42,,100
Misc      :
ALS Vial  : 5   Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title  : Decalins & Alkylated PAH's

TIC Library    : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

*********************************************************************
Peak Number 18  3-Methyl-5-methoxy-1-pentanol   Concentration Rank 13

  R.T.     EstConc          Area       Relative to ISTD         R.T.
---------------------------------------------------------------------
 33.944 2379.08 ng/mL      443788   Acenaphthene-d10           26.238

 Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
---------------------------------------------------------------------
 1 3-Methyl-5-methoxy-1-pentanol        132 C7H16O2        070928-41-5 47
 2 Heptaethylene glycol                 326 C14H30O8       005617-32-3 43
 3 Hexagol                              282 C12H26O7       002615-15-8 38
 4 Pentaethylene glycol monododecyl...  406 C22H46O6       003055-95-6 38
 5 3,6,9,12-Tetraoxahexadecan-1-ol      250 C12H26O5       001559-34-8 38
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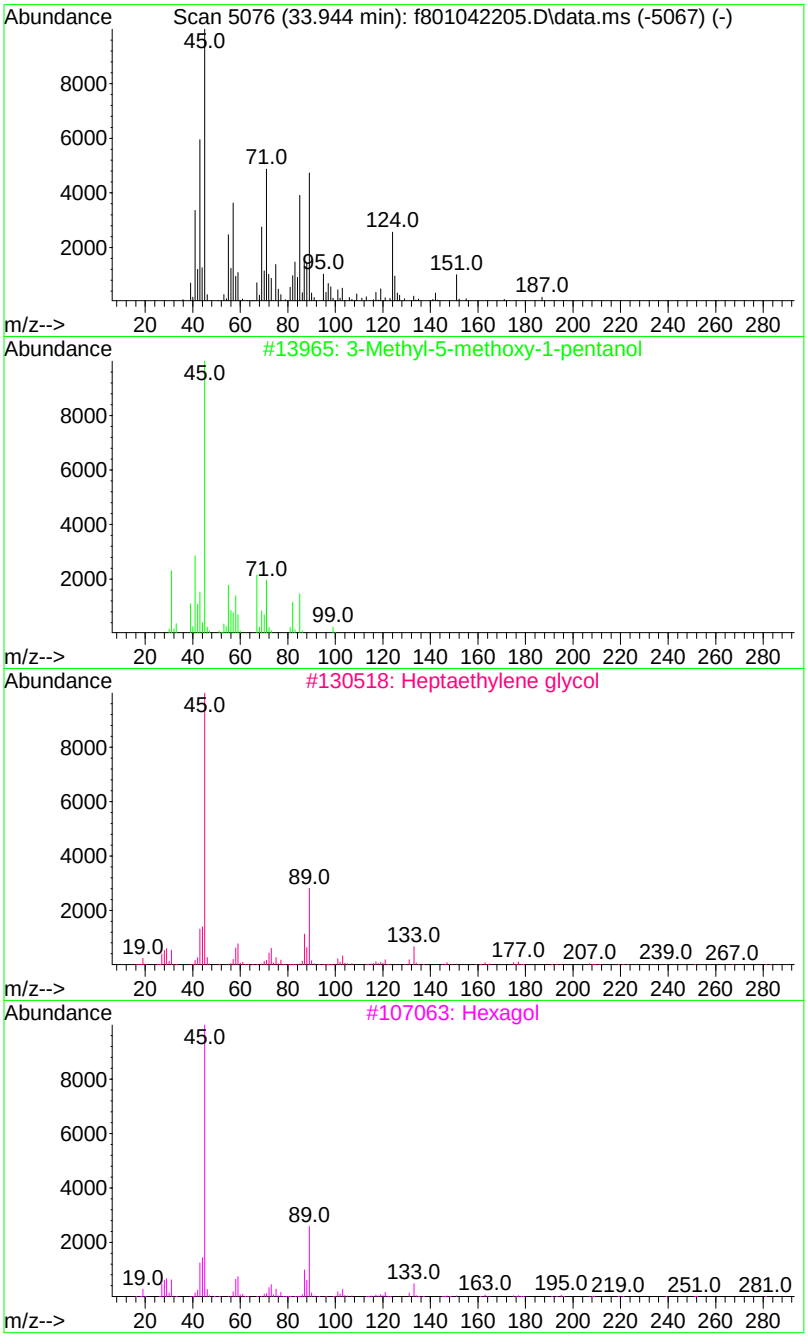
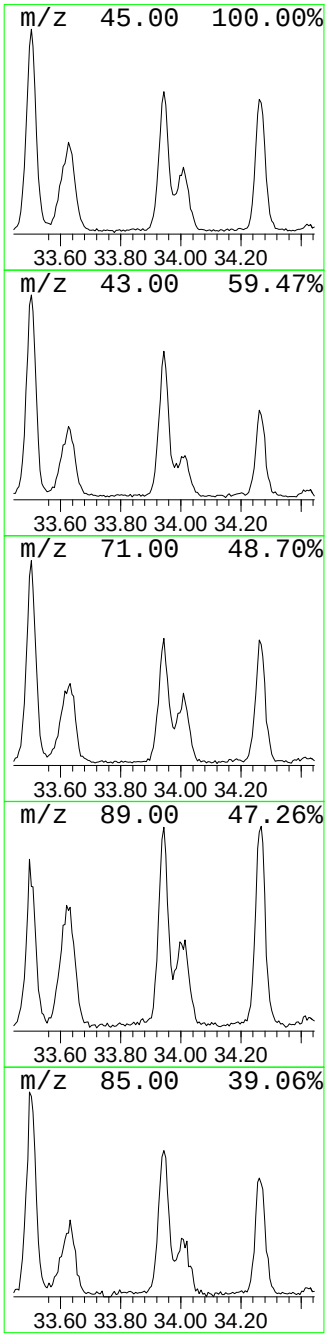




Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

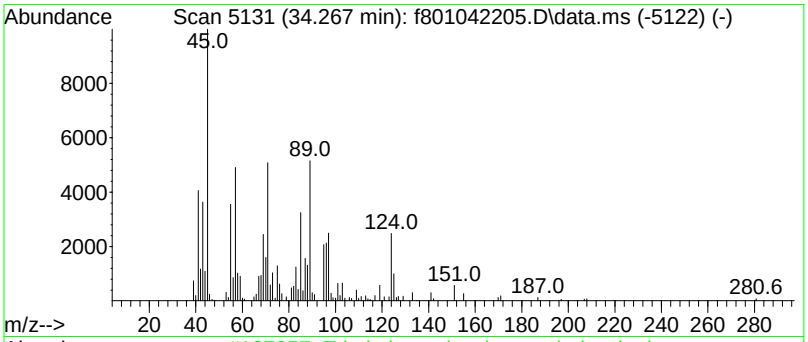
TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

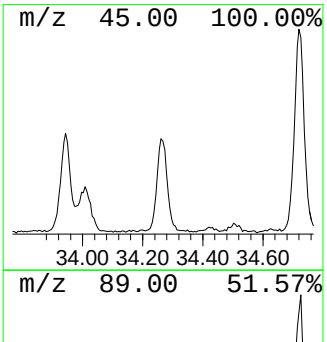
****

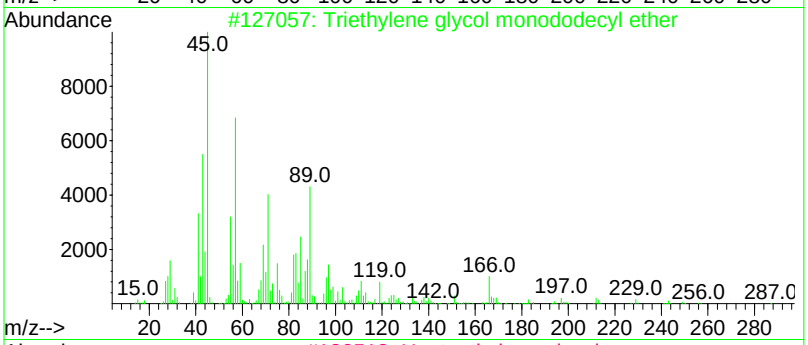
Peak Number 19 Triethylene glycol monodode... Concentration Rank 9

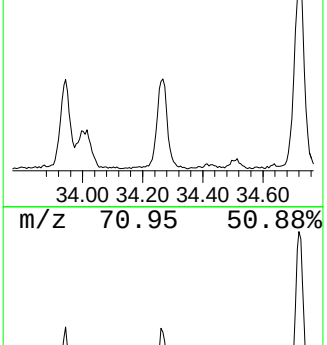
R.T.	EstConc	Area	Relative to ISTD	R.T.
34.267	2556.39 ng/mL	476864	Acenaphthene-d10	26.238

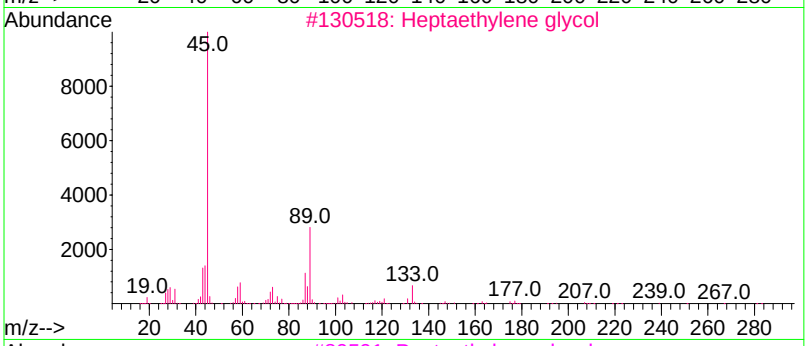
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Triethylene glycol monododecyl e...	318	C18H38O4	003055-94-5	53
2	Heptaethylene glycol	326	C14H30O8	005617-32-3	38
3	Pentaethylene glycol	238	C10H22O6	004792-15-8	38
4	Hexagol	282	C12H26O7	002615-15-8	35
5	Ethanol, 2,2'-[oxybis(2,1-ethane...	194	C8H18O5	000112-60-7	35

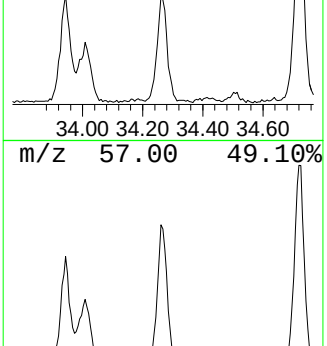


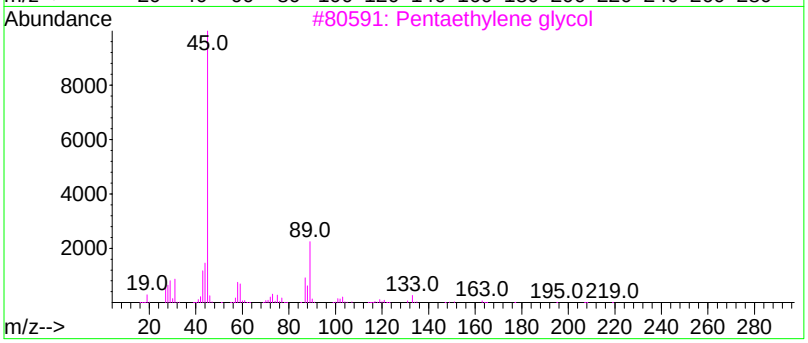


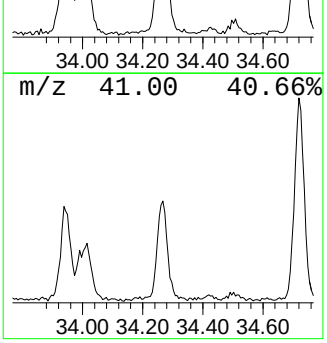












Data Path : O:\Forensics\Data\PAH8\2022\jAN22\JAN04\
Data File : f801042205.D
Acq On : 4 Jan 2022 5:07 pm
Operator :
Sample : l2166503-06,42,,100
Misc :
ALS Vial : 5 Sample Multiplier: 1

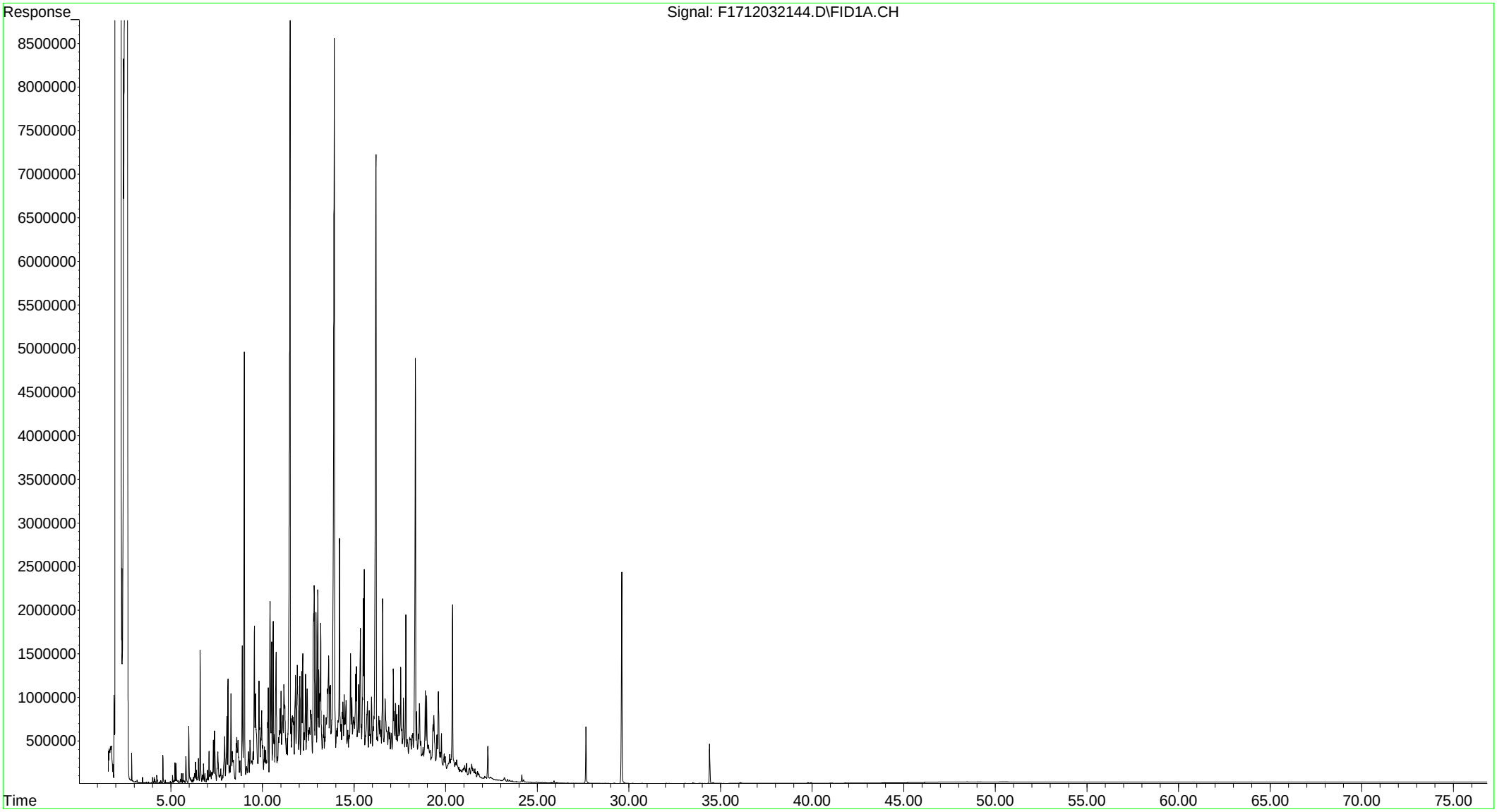
Quant Method : O:\Forensics\Data\PAH8\2022\jAN22\JAN03\PAH8111821.M
Quant Title : Decalins & Alkylated PAH's

TIC Library : O:\Organics\DATABASE\NIST02.L
TIC Integration Parameters: RTEINT.P

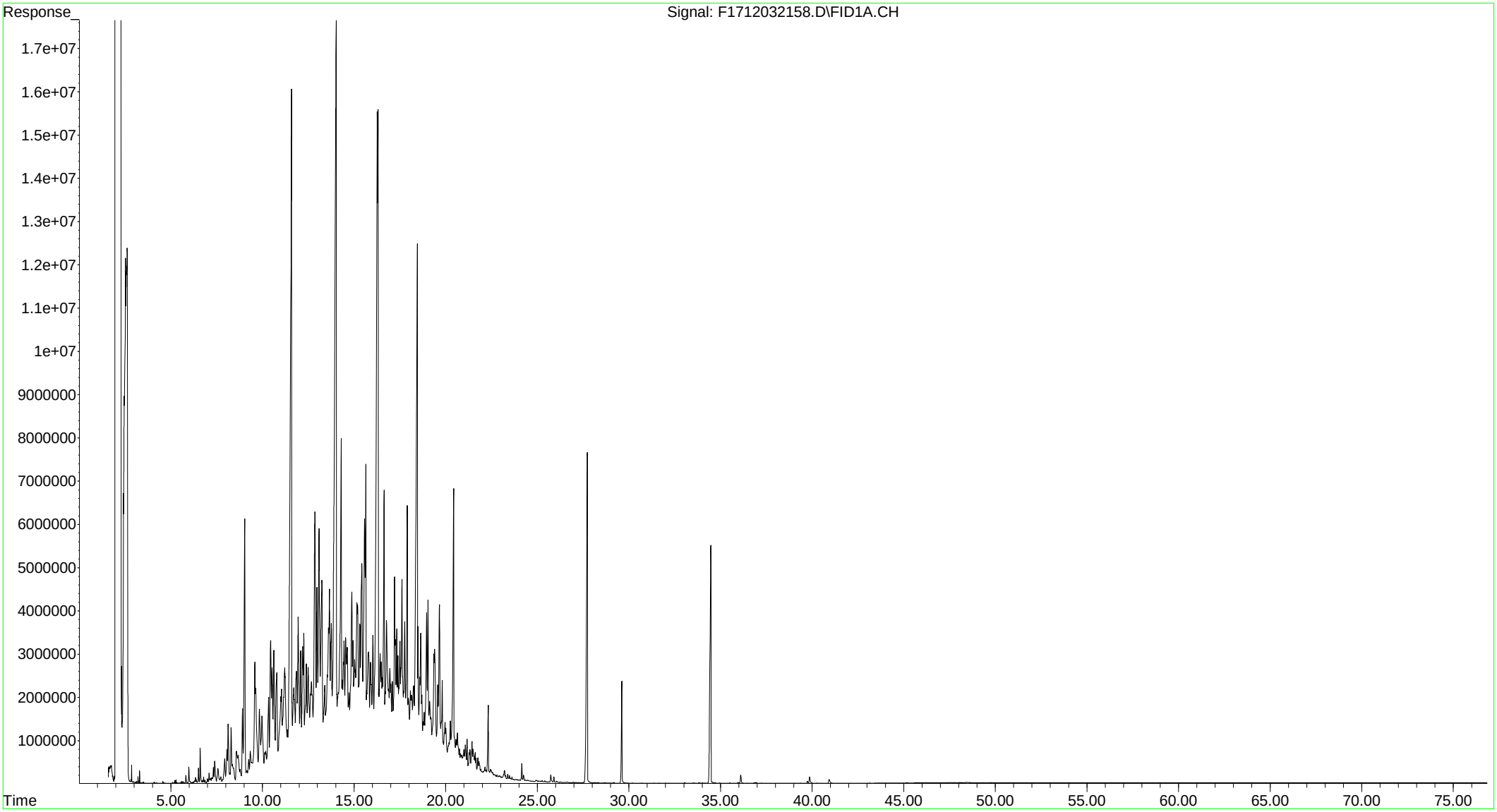
					Internal Standard			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Eucalyptol	15.174	2567.8	ng/mL	478993	1	26.238	93269	500.0
Bicyclo[2.2.1]h...	18.292	1447.3	ng/mL	269981	1	26.238	93269	500.0
1-Decene	18.674	1426.6	ng/mL	266121	1	26.238	93269	500.0
Benzene, 1-meth...	19.668	2275.4	ng/mL	424450	1	26.238	93269	500.0
Cyclobutane, 1-...	21.127	2476.3	ng/mL	461929	1	26.238	93269	500.0
Benzene, 1-meth...	21.644	4367.0	ng/mL	814609	1	26.238	93269	500.0
Phenol, 2-metho...	23.321	1581.3	ng/mL	294971	1	26.238	93269	500.0
1-Undecanol	23.438	2455.4	ng/mL	458027	1	26.238	93269	500.0
4,4-Dimethyl-1-...	24.315	1694.2	ng/mL	316023	1	26.238	93269	500.0
Hexyl octyl ether	26.462	2814.1	ng/mL	524940	1	26.238	93269	500.0
Heptadecane, 8-...	28.491	2477.7	ng/mL	462186	1	26.238	93269	500.0
Methoxyacetic a...	29.020	2698.6	ng/mL	503389	1	26.238	93269	500.0
Hexane, 1-(meth...	29.373	1617.6	ng/mL	301751	1	26.238	93269	500.0
2-(2-Hexyloxyet...	29.909	3109.8	ng/mL	580088	1	26.238	93269	500.0
Dodecane, 1-(me...	31.750	4821.8	ng/mL	899450	1	26.238	93269	500.0
Methoxyacetic a...	33.502	4454.4	ng/mL	830923	1	26.238	93269	500.0
Octaethylene gl...	33.626	2274.5	ng/mL	424277	1	26.238	93269	500.0
3-Methyl-5-meth...	33.944	2379.1	ng/mL	443788	1	26.238	93269	500.0
Triethylene gly...	34.267	2556.4	ng/mL	476864	1	26.238	93269	500.0

GC-FID Chromatogram

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032144.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 5:38 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: l2166503-01,42,,,r2a
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 22



File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032158.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 3:55 am using AcqMethod FID17A.M
Instrument : FID17
Sample Name: l2166503-02,42,,,r2a
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 29



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Instrument : FID17
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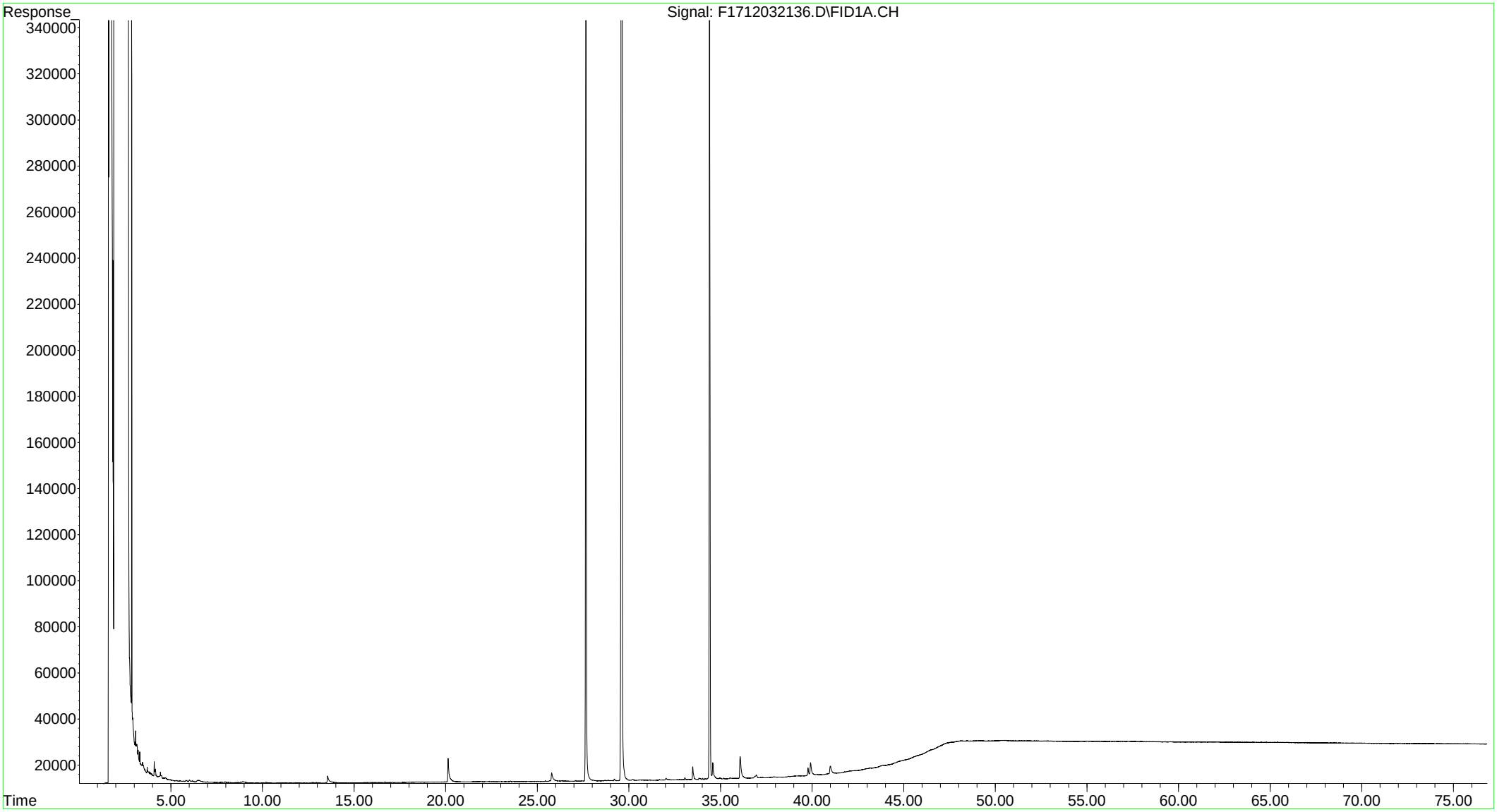
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 18



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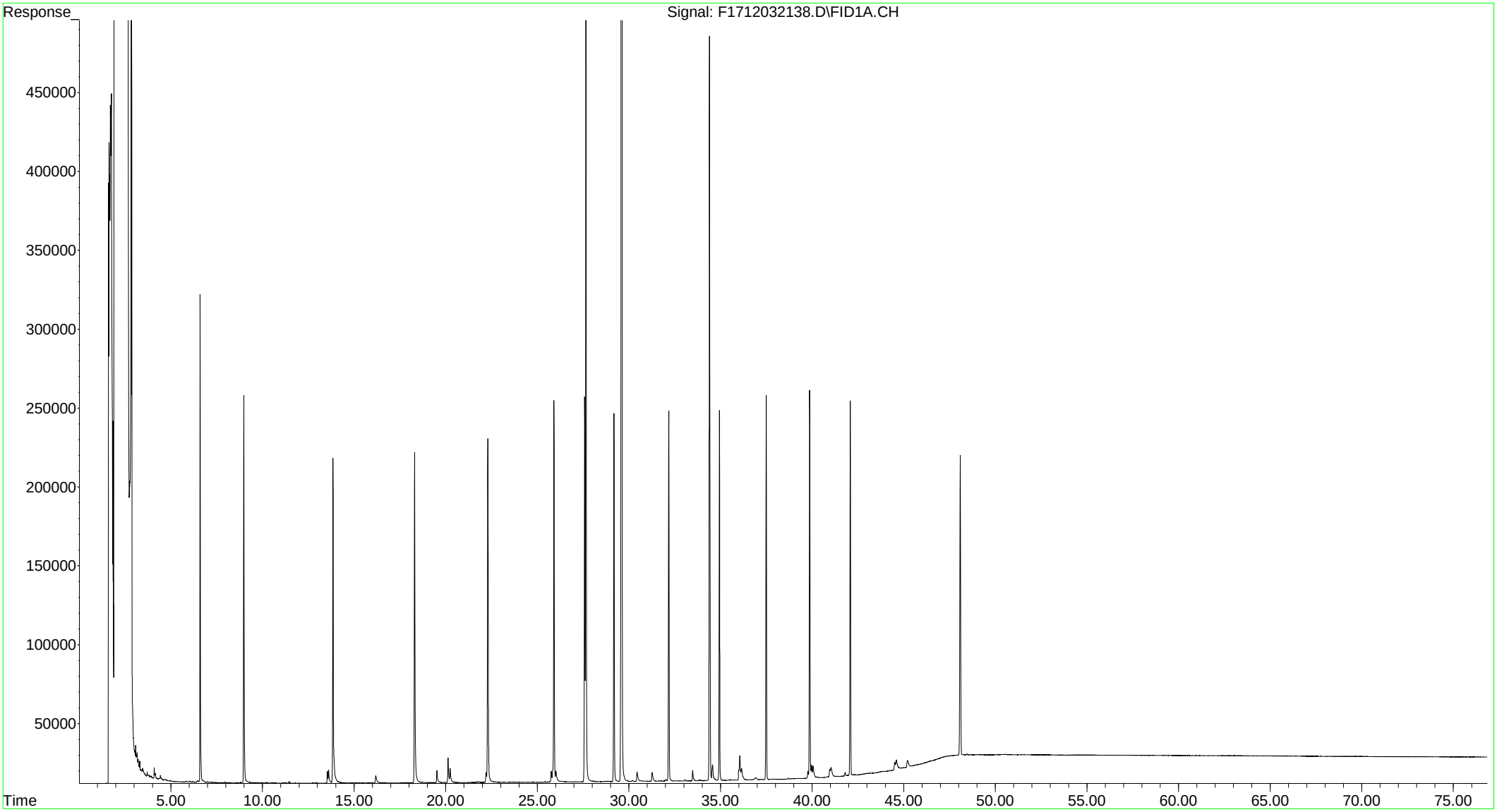
Operator : FID17:MJS
Acquired : 04 Dec 2021 1:13 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: wG1579102-2,42,,
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 19



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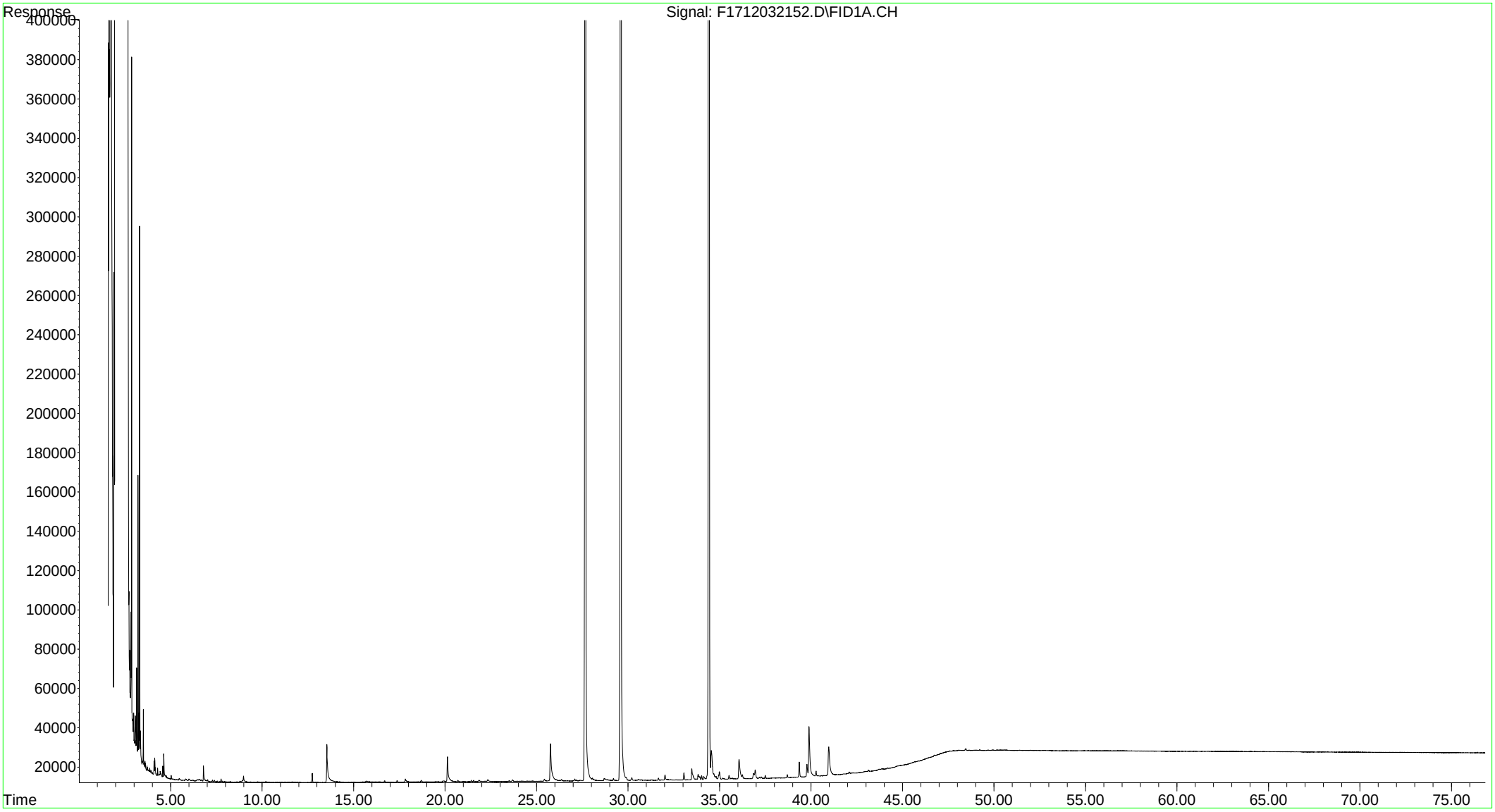
Acquired : 04 Dec 2021 11:30 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: wG1579126-1,42,,
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 26



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Operator : FID17:MJS
Acquired : 05 Dec 2021 12:59 am using AcqMethod FID17A.M
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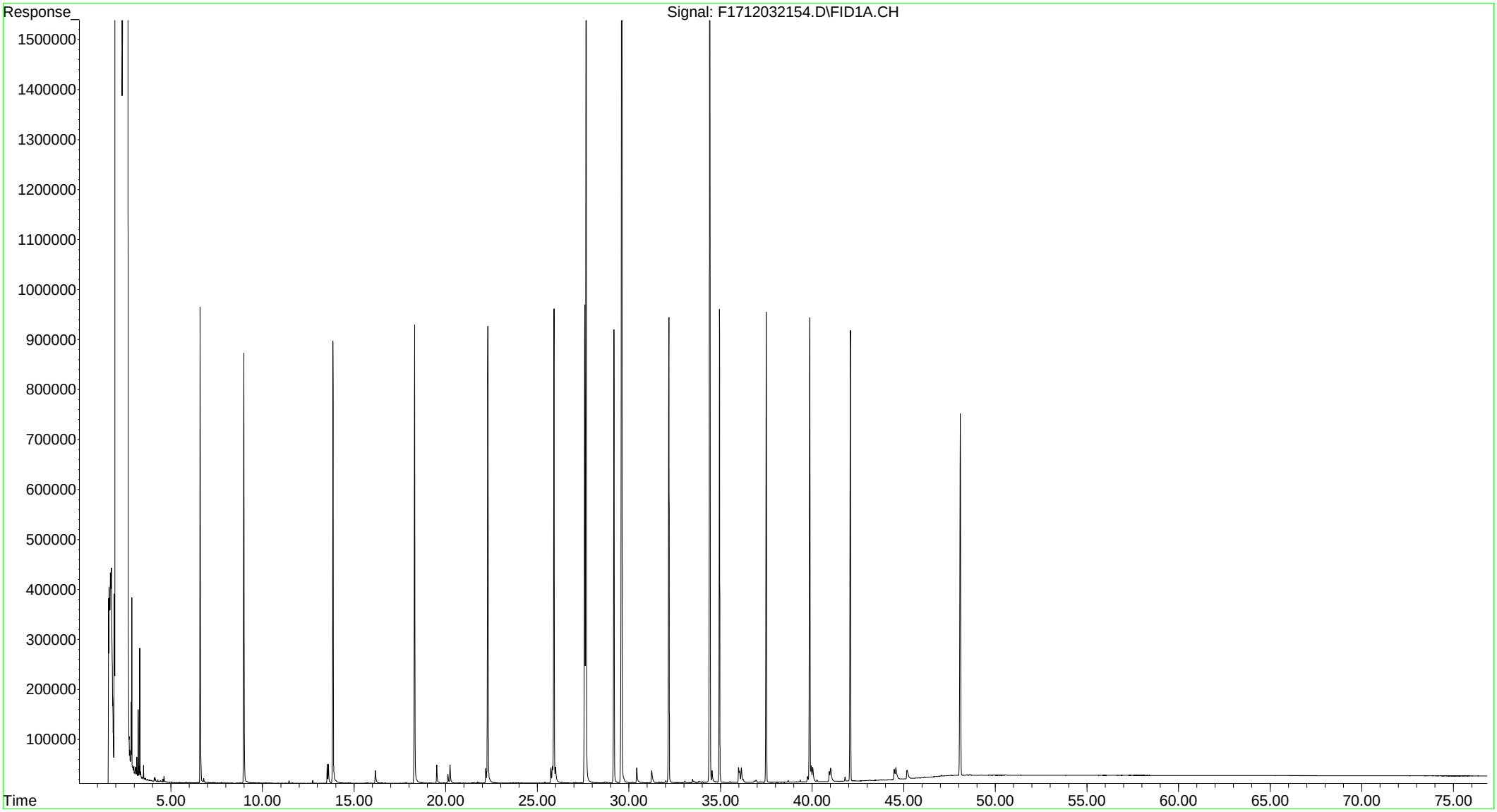
Vial Number: 27



Petroleum Reference Standards

```
File       :O:\Forensics\LIBRARY\Hydrocarbon Reference Standards\JP-5 Fu
...         el.D
Operator  : PAH2:AC
Instrument :   PAH 2
Acquired  : 19 Nov 2011   4:22 pm using AcqMethod FRNC2AF.M
Sample    : JP-5 FUEL
Misc Info : F042710P
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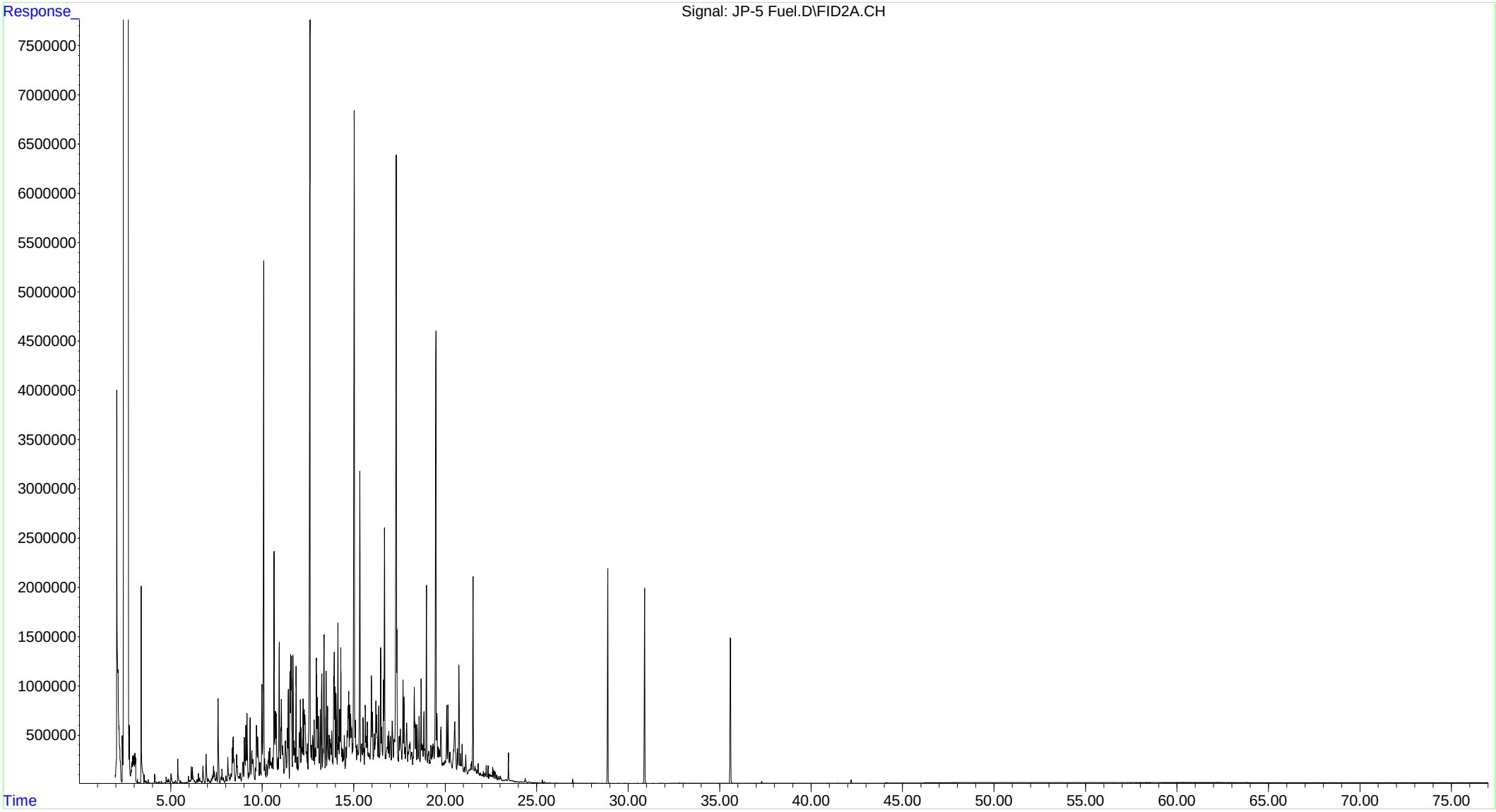
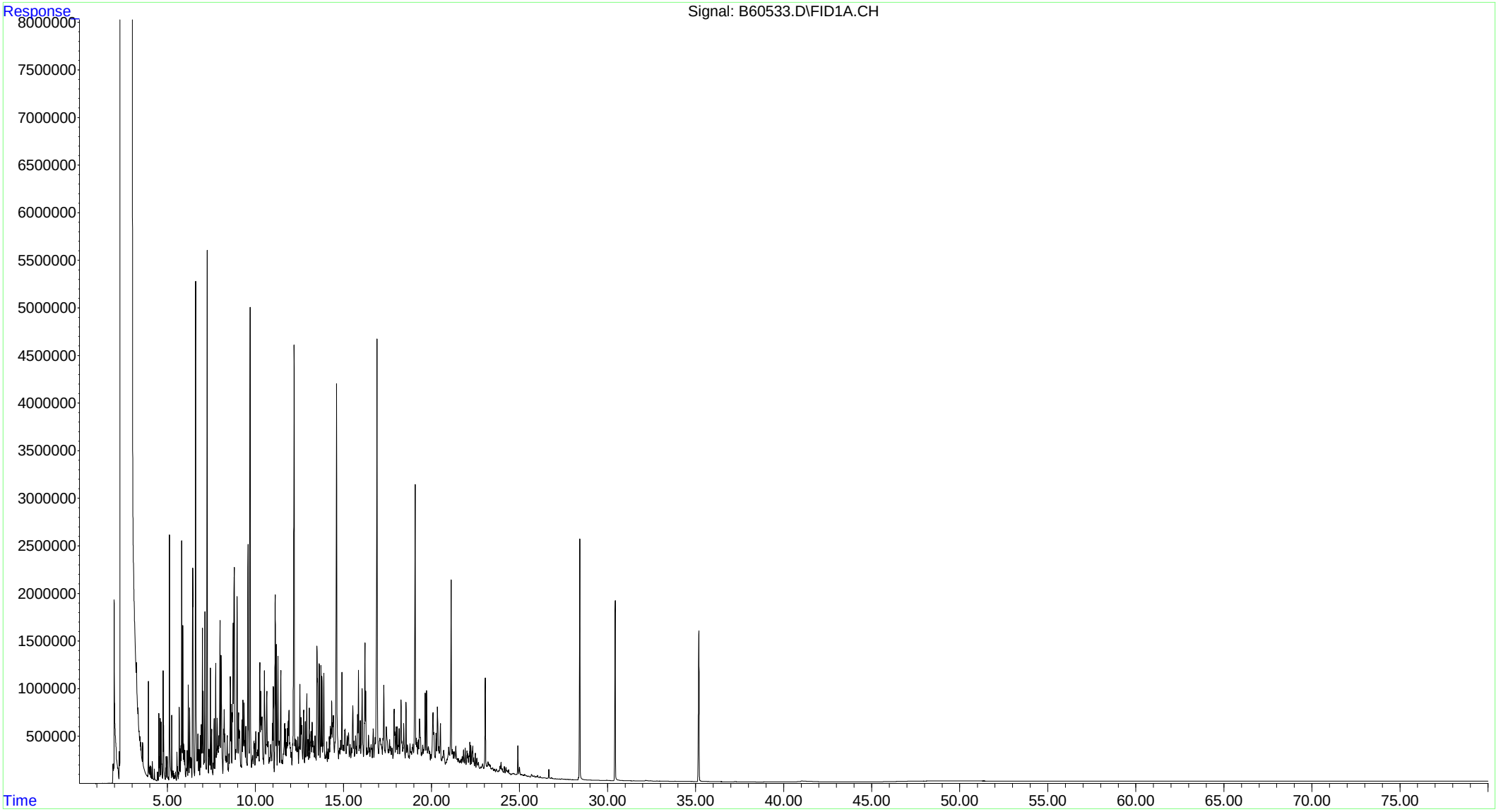


File :O:\Forensics\Data\FID6\2009\AUG09\AUG06\B60533.D
Operator : DMP
Acquired : 07 Aug 2009 2:00 am using AcqMethod FID6A.M
Instrument : FID6
Sample : R6080604F
Misc Info : JP-8 GASOLINE
ALS Vial : 6



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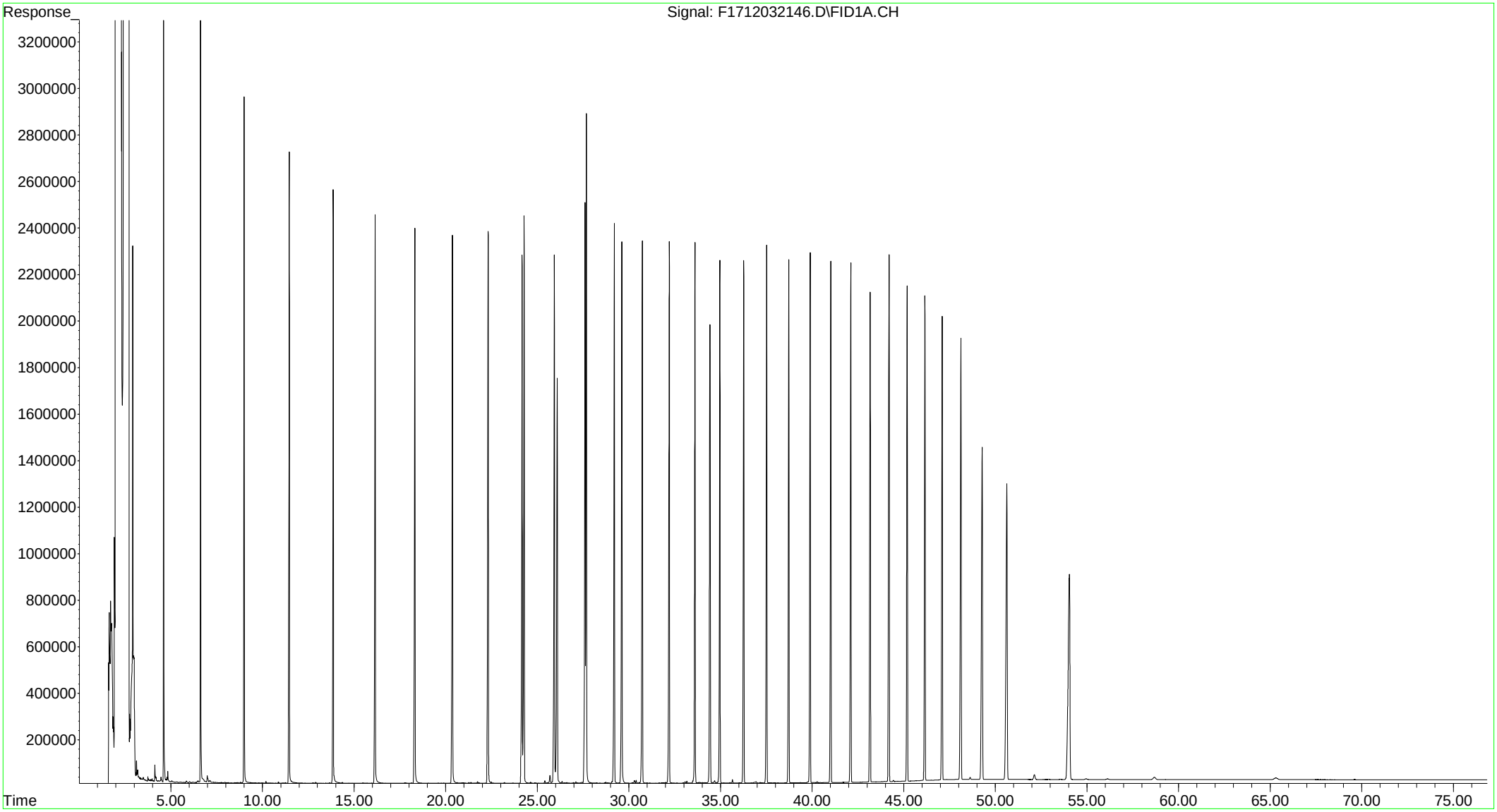
Operator : FID17:CC
Acquired : 04 Dec 2021 7:06 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1579117-3
Misc Info : WG1579117,FRBE18,ICAL18012
Vial Number: 23



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032144.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 5:38 pm
Operator : FID17:MJS
Sample : l2166503-01,42,,,r2a
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 22 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:36:02 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.614	60931884	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.656	15593654	11.806	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.61%#		
24) s	d50-Tetracosane	34.404	12051854	11.500	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.00%#		
	Target Compounds					
2) t	n-Octane (C8)	4.565	4587348	4.355	ug/mL	M4
3) t	n-Nonane (C9)	6.599	26561651	23.629	ug/mL	M4
4) t	n-Decane (C10)	9.014	122909758	106.808	ug/mL	M4
5) t	n-Undecane (C11)	11.515	275139602	244.725	ug/mL	M4
6) t	n-Dodecane (C12)	13.919	299348595	265.527	ug/mL	M4
7) t	n-Tridecane (C13)	16.198	247539518	218.980	ug/mL	M4
8) t	1380	17.829	36235776	31.112	ug/mL	M4
9) t	n-Tetradecane (C14)	18.351	130597457	112.129	ug/mL	M4
10) t	1470	19.600	29103098	24.959	ug/mL	M4
11) t	n-Pentadecane (C15)	20.377	47432255	40.678	ug/mL	M4
12) t	n-Hexadecane (C16)	22.303	9261287	7.957	ug/mL	M4
13) t	1650	23.205	1304384	1.122	ug/mL	M4
14) t	n-Heptadecane (C17)	24.153	2179286	1.874	ug/mL	M4
15) t	Pristane	24.247	949044	0.787	ug/mL	M4
16) t	n-Octadecane (C18)	25.909	668770	0.566	ug/mL	M4
17) t	Phytane	26.064	206411	0.187	ug/mL	M4
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.200	94341	0.079	ug/mL	M4
21) t	n-Heneicosane (C21)	30.730	38991	0.033	ug/mL	M4
22) t	n-Docosane (C22)	32.190	21633	0.018	ug/mL	M4
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	37.500	6614	0.006	ug/mL	M4
28) t	n-Heptacosane (C27)	38.709	12241	0.010	ug/mL	M4
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	40.995	232620	0.190	ug/mL	M4
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032144.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 5:38 pm
Operator : FID17:MJS
Sample : l2166503-01,42,,,r2a
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 22 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:36:02 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : Default - All compounds listed

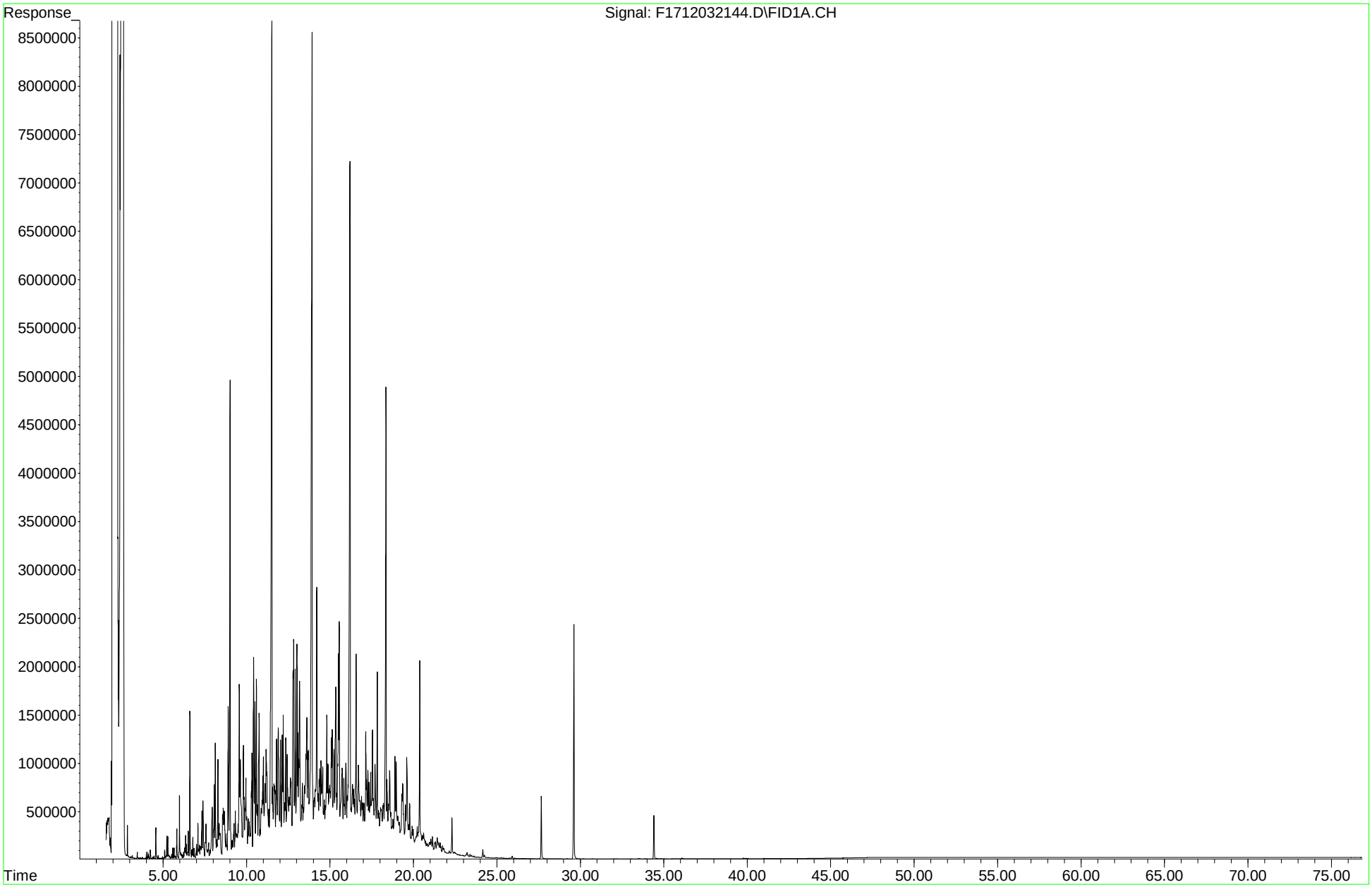
	Compound	R.T.	Response	Conc	Units
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	36.038	6238003047	5235.037	ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	5953690343	4996.437	ug/mLm
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml d
43) h	C9-C40 Total Petroleu BS	0.000	-131461981	N.D.	ug/mld
44) h	C10-C28 DRO	24.454	5726955816	4863.504	ug/mL m
44) h	C10-C28 DRO BS	24.454	5698901035	4839.679	ug/mLm
45) h	C28-C40 ORO	46.963	88256295	71.739	ug/mL m
45) h	C28-C40 ORO BS	46.963	-7791701	N.D.	ug/mLm
46) h	Total Resolved Hydroc...	36.038	4368579723	3666.185	ug/mL m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032144.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 5:38 pm using AcqMethod FID17A.M
Sample Name: l2166503-01,42,,,r2a
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 22
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032168.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 12:50 pm
Operator : FID17:MJS
Sample : l2166503-01d,42,2
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 34 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 11:13:09 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032104
Blank File : F1712032166.D

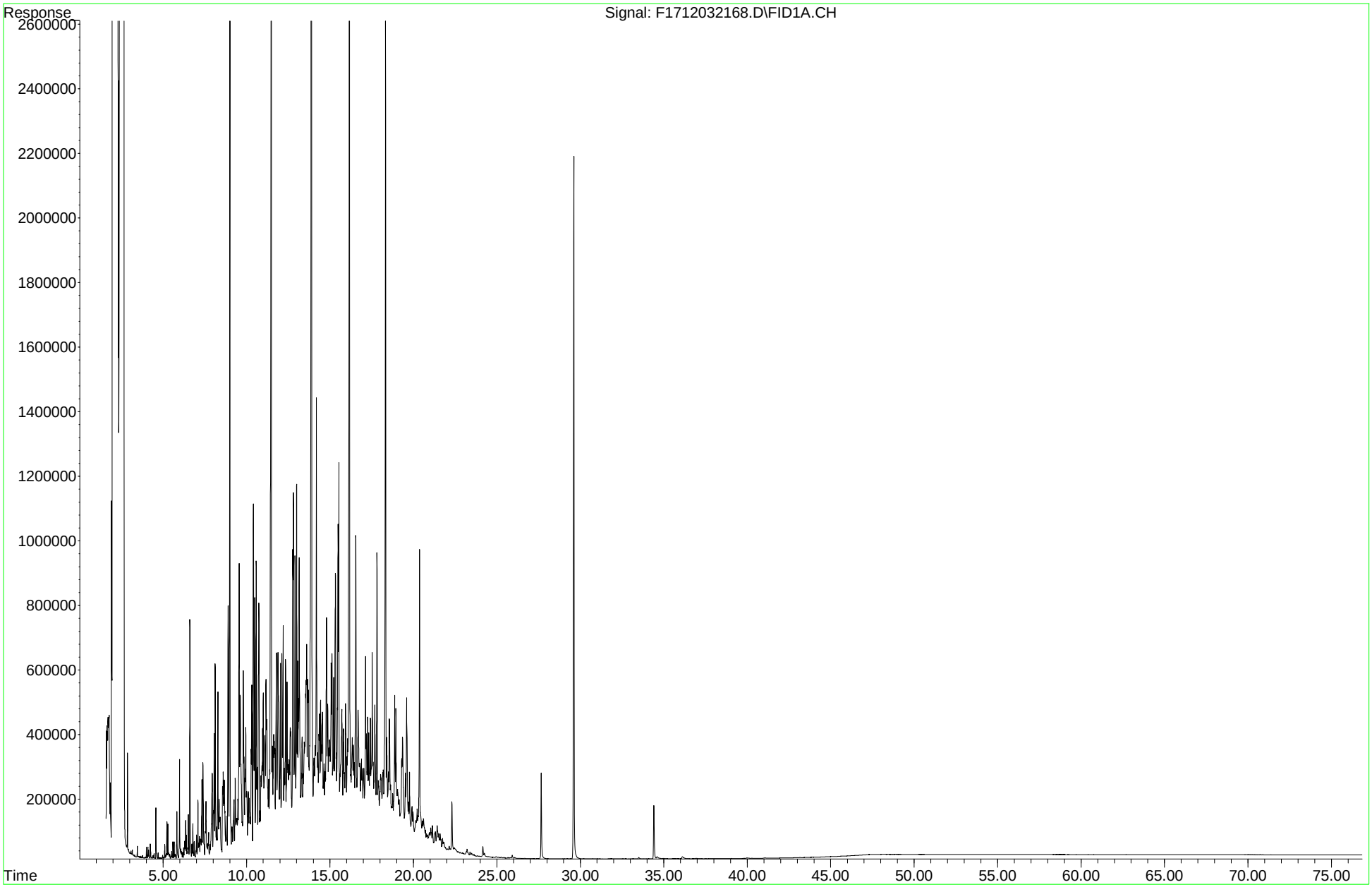
Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.608	56879843	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.649	7446140	6.039 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	12.08%#
24) s	d50-Tetracosane	34.401	5263549	5.380 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	10.76%#
	Target Compounds			
5) t	n-Undecane (C11)	11.484	125925015	119.984 ug/mL M4
6) t	n-Dodecane (C12)	13.886	136494315	129.698 ug/mL M4
7) t	n-Tridecane (C13)	16.167	116944618	110.822 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	3171255948	2850.963 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	2925322191	2629.869 ug/mLm
44) h	C10-C28 DRO	24.454	2799592011	2546.868 ug/mL m
44) h	C10-C28 DRO BS	24.454	2775217023	2524.693 ug/mLm
45) h	C28-C40 ORO	46.963	90409063	78.724 ug/mL m
45) h	C28-C40 ORO BS	46.963	12679496	11.041 ug/mLm
46) h	Total Resolved Hydroc...	36.038	2085527669	1874.892 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032168.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 12:50 pm using AcqMethod FID17A.M
Sample Name: l2166503-01d,42,2
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 34
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032158.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 3:55 am
Operator : FID17:MJS
Sample : l2166503-02,42,,,r2a
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 29 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:54:35 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.613	60863386	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.734	293436171	222.405	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 444.81%#			
24) s	d50-Tetracosane	34.473	230711024	220.401	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 440.80%#			
	Target Compounds					
2) t	n-Octane (C8)	4.563	655928	0.623	ug/mL	M4
3) t	n-Nonane (C9)	6.600	18452137	16.434	ug/mL	M4
4) t	n-Decane (C10)	9.034	218133923	189.771	ug/mL	M4
5) t	n-Undecane (C11)	11.592f	769707744	685.393	ug/mL	M4
6) t	n-Dodecane (C12)	14.022f	1001308806	889.176	ug/mL	M4
7) t	n-Tridecane (C13)	16.314f	985948442	873.177	ug/mL	M4
8) t	1380	17.907	133339158	114.612	ug/mL	M4
9) t	n-Tetradecane (C14)	18.454f	529727848	455.330	ug/mL	M4
10) t	1470	19.658	121517895	104.331	ug/mL	M4
11) t	n-Pentadecane (C15)	20.436	207364649	178.036	ug/mL	M4
12) t	n-Hexadecane (C16)	22.321	38627938	33.224	ug/mL	M4
13) t	1650	23.211	5762709	4.961	ug/mL	M4
14) t	n-Heptadecane (C17)	24.151	9247940	7.962	ug/mL	M4
15) t	Pristane	24.247	4271315	3.546	ug/mL	M4
16) t	n-Octadecane (C18)	25.905	2996969	2.538	ug/mL	M4
17) t	Phytane	26.059	1040200	0.942	ug/mL	M4
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	29.182	415156	0.348	ug/mL	M4
21) t	n-Heneicosane (C21)	30.707	225520	0.189	ug/mL	M4
22) t	n-Docosane (C22)	32.175	127091	0.106	ug/mL	M4
23) t	n-Tricosane (C23)	33.577	226551	0.189	ug/mL	M4
25) t	n-Tetracosane (C24)	34.942	195637	0.164	ug/mL	M4
26) t	n-Pentacosane (C25)	36.235	184130	0.157	ug/mL	M4
27) t	n-Hexacosane (C26)	37.487	86413	0.072	ug/mL	M4
28) t	n-Heptacosane (C27)	38.694	95313	0.079	ug/mL	M4
29) t	n-Octacosane (C28)	39.864	5878335C	4.709	ug/mL	M4
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	d
31) t	n-Triacontane (C30)	42.085	81323	0.066	ug/mL	M4
32) t	n-Hentriacontane (C31)	43.141	47514	0.040	ug/mL	M4
33) t	n-Dotriacontane (C32)	44.164	40292	0.032	ug/mL	M4
34) t	n-Tritriacontane (C33)	45.152	339299	0.279	ug/mL	M4
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032158.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 3:55 am
Operator : FID17:MJS
Sample : l2166503-02,42,,,r2a
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 29 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:54:35 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

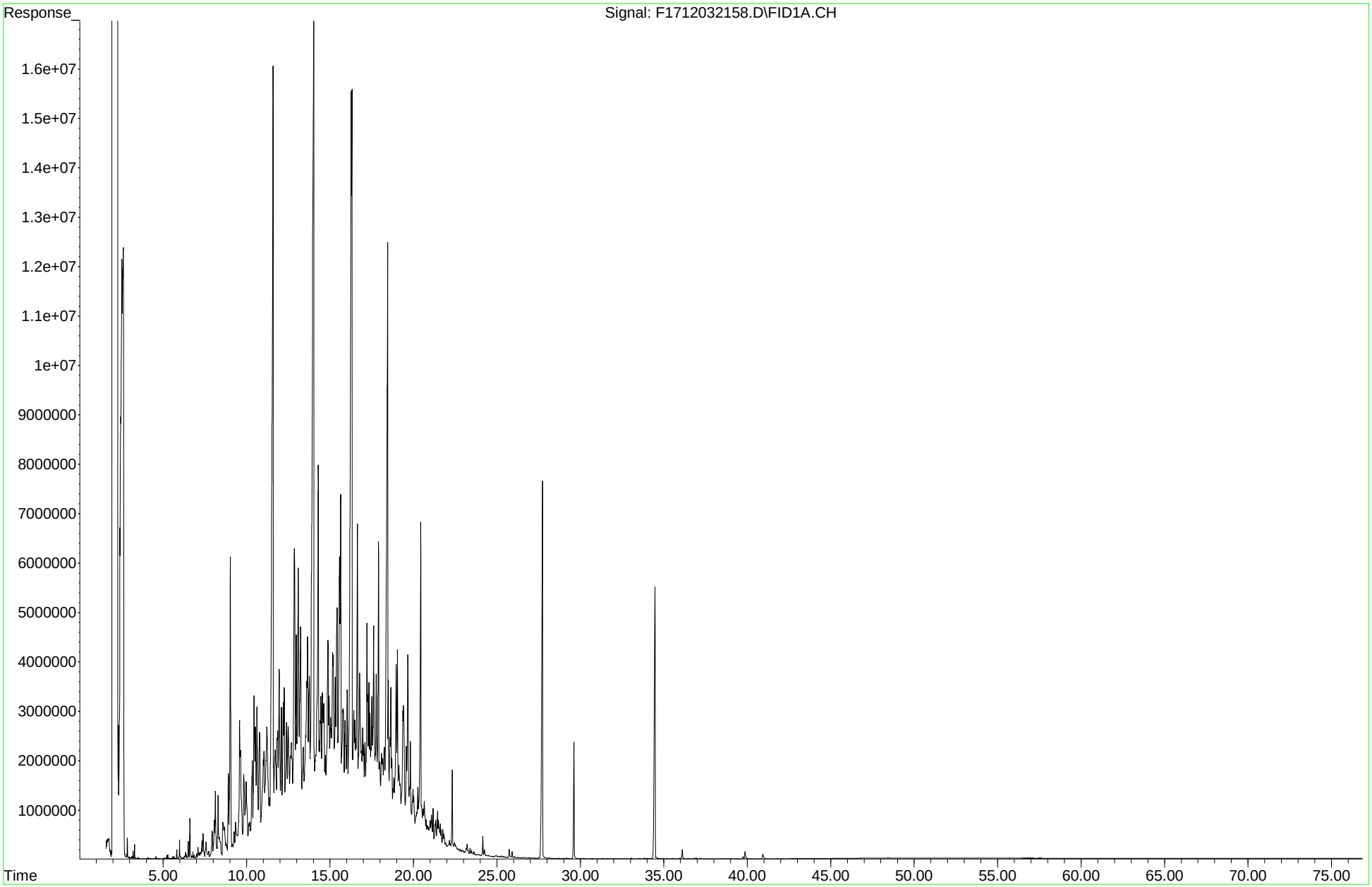
	Compound	R.T.	Response	Conc	Units
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	36.038	20115859000	16900.565	ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	19870000936	16694.004	ug/mLm
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml d
43) h	C9-C40 Total Petroleu BS	0.000	-115033617	N.D.	ug/mld
44) h	C10-C28 DRO	24.454	19560967233	16630.461	ug/mL m
44) h	C10-C28 DRO BS	24.454	19541014487	16613.497	ug/mLm
45) h	C28-C40 ORO	46.963	113376439	92.262	ug/mL m
45) h	C28-C40 ORO BS	46.963	31772562	25.855	ug/mLm
46) h	Total Resolved Hydroc...	36.038	13556360518	11389.528	ug/mL m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032158.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 3:55 am using AcqMethod FID17A.M
Sample Name: l2166503-02,42,,,r2a
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 29
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032170.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 2:18 pm
Operator : FID17:MJS
Sample : l2166503-02d,42,10
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 35 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 06 11:14:40 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032104
Blank File : F1712032166.D

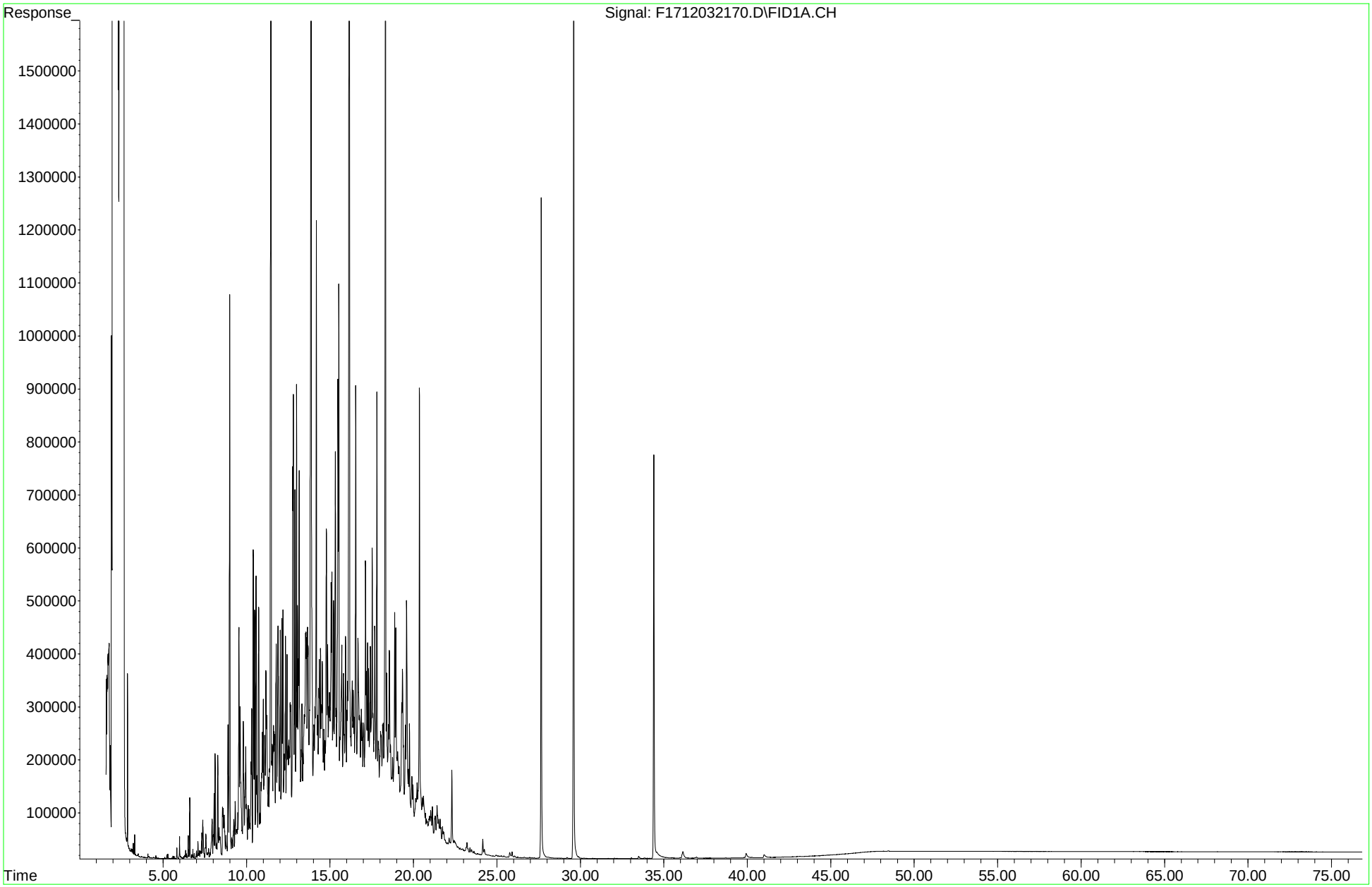
Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.601	56895765	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.652	31863869	25.835 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	51.67%
24) s	d50-Tetracosane	34.400	23230533	23.740 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	47.48%#
	Target Compounds			
5) t	n-Undecane (C11)	11.466	81726027	77.848 ug/mL M4
6) t	n-Dodecane (C12)	13.874	110066790	104.557 ug/mL M4
7) t	n-Tridecane (C13)	16.158	102061734	96.691 ug/mL M4
9) t	n-Tetradecane (C14)	18.318	56228840	51.702 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	2436395714	2189.710 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	2190461957	1968.677 ug/mLm
44) h	C10-C28 DRO	24.454	2181803529	1984.293 ug/mL m
44) h	C10-C28 DRO BS	24.454	2157428541	1962.124 ug/mLm
45) h	C28-C40 ORO	46.963	79445219	69.158 ug/mL m
45) h	C28-C40 ORO BS	46.963	1715652	1.493 ug/mLm
46) h	Total Resolved Hydroc...	36.038	1523028535	1368.822 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032170.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 2:18 pm using AcqMethod FID17A.M
Sample Name: l2166503-02d,42,10
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 35
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032136.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 11:44 am
Operator : FID17:MJS
Sample : wG1579102-1,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 18 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:23:30 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:42 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.611	58826906	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.654	14950494	11.724	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.45%#		
24) s	d50-Tetracosane	34.400	11635797	11.501	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.00%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.205	17454	0.015	ug/mL	M2
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	40.992	229049	0.194	ug/mL	M4
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032136.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 11:44 am
Operator : FID17:MJS
Sample : wG1579102-1,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 18 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:23:30 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Dec 01 17:12:42 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

Sub List : Default - All compounds listed

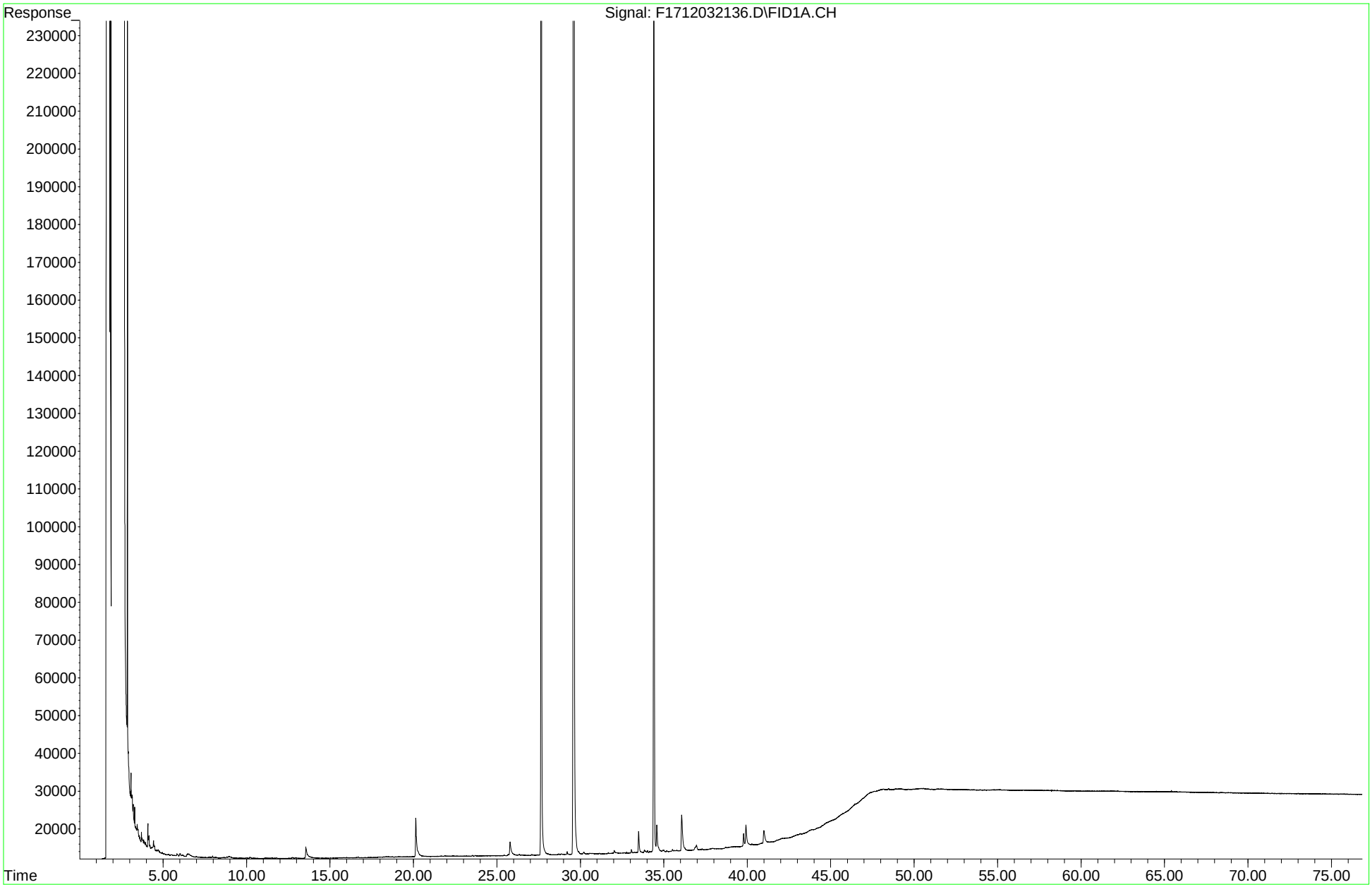
	Compound	R.T.	Response	Conc	Units
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	36.038	283115060	246.097	ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	-1197644	N.D.	ug/mLm
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml d
43) h	C9-C40 Total Petroleu BS	0.000	-131461981	N.D.	ug/mld
44) h	C10-C28 DRO	24.454	31258877	27.496	ug/mL m
44) h	C10-C28 DRO BS	24.454	3204096	2.818	ug/mLm
45) h	C28-C40 ORO	46.963	94388830	79.469	ug/mL m
45) h	C28-C40 ORO BS	46.963	-1659166	N.D.	ug/mLm
46) h	Total Resolved Hydroc...	36.038	4888119	4.249	ug/mL m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032136.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 11:44 am using AcqMethod FID17A.M
Sample Name: wG1579102-1,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 18
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032138.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 1:13 pm
Operator : FID17:MJS
Sample : wG1579102-2,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 19 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:26:35 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

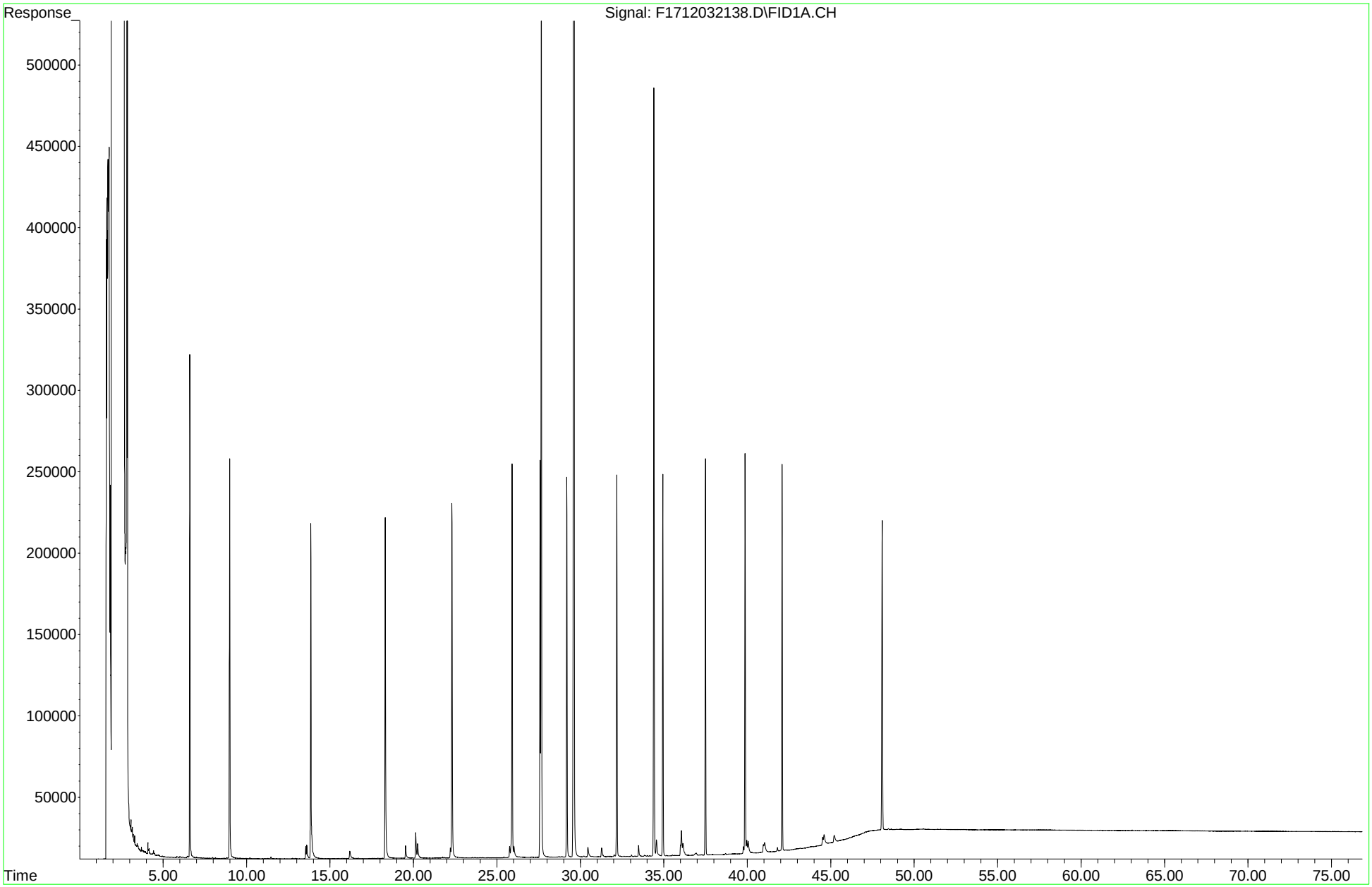
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.615	60950214	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.654	15515102	11.743 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.49%#
24) s	d50-Tetracosane	34.401	12149721	11.590 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.18%#
	Target Compounds			
3) t	n-Nonane (C9)	6.597	4957692	4.409 ug/mL M4
4) t	n-Decane (C10)	8.984	5123006	4.451 ug/mL M4
6) t	n-Dodecane (C12)	13.846	5269066	4.672 ug/mL M4
9) t	n-Tetradecane (C14)	18.304	5439719	4.669 ug/mL M4
12) t	n-Hexadecane (C16)	22.303	5555775	4.772 ug/mL M4
16) t	n-Octadecane (C18)	25.907	5834258	4.933 ug/mL M4
18) t	n-Nonadecane (C19)	27.584	5633879	4.749 ug/mL M4
20) t	n-Eicosane (C20)	29.184	5660815	4.745 ug/mL M4
22) t	n-Docosane (C22)	32.182	5670831	4.731 ug/mL M4
25) t	n-Tetracosane (C24)	34.939	5786715	4.833 ug/mL M4
27) t	n-Hexacosane (C26)	37.494	5779347	4.805 ug/mL M4
29) t	n-Octacosane (C28)	39.867	6041312	4.832 ug/mL M4
31) t	n-Triacontane (C30)	42.084	5810330	4.720 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.083	5766407	4.244 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	362292584	303.951 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	77979880	65.422 ug/mLm
46) h	Total Resolved Hydroc...	36.038	88278340	74.062 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032138.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 1:13 pm using AcqMethod FID17A.M
Sample Name: wG1579102-2,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 19
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032140.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 2:41 pm
Operator : FID17:MJS
Sample : wG1579102-3,42,,
Misc : WG1579117,WG1579102,ICAL18012
ALS Vial : 20 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:29:52 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032102
Blank File : F1712032134.D

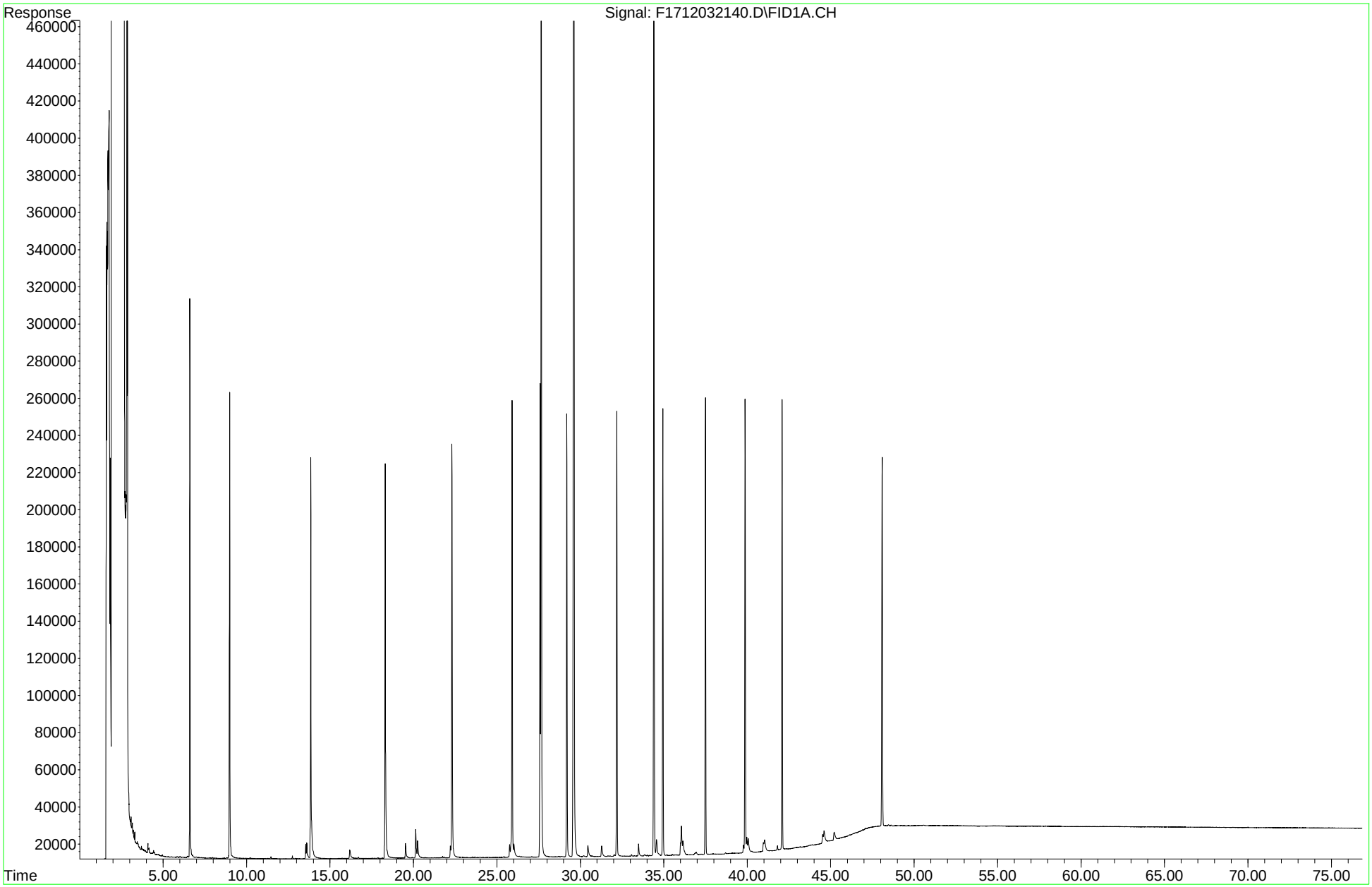
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.614	60851340	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.656	15700464	11.902 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.80%#
24) s	d50-Tetracosane	34.402	12400466	11.849 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	23.70%#
	Target Compounds			
3) t	n-Nonane (C9)	6.597	5013979	4.466 ug/mL M4
4) t	n-Decane (C10)	8.983	5153116	4.484 ug/mL M4
6) t	n-Dodecane (C12)	13.845	5415850	4.810 ug/mL M4
9) t	n-Tetradecane (C14)	18.303	5556241	4.777 ug/mL M4
12) t	n-Hexadecane (C16)	22.301	5754460	4.950 ug/mL M4
16) t	n-Octadecane (C18)	25.906	6033426	5.110 ug/mL M4
18) t	n-Nonadecane (C19)	27.584	5809068	4.905 ug/mL M4
20) t	n-Eicosane (C20)	29.184	5793934	4.864 ug/mL M4
22) t	n-Docosane (C22)	32.181	5815150	4.859 ug/mL M4
25) t	n-Tetracosane (C24)	34.941	5942122	4.971 ug/mL M4
27) t	n-Hexacosane (C26)	37.492	5920632	4.931 ug/mL M4
29) t	n-Octacosane (C28)	39.871	6200443	4.968 ug/mL M4
31) t	n-Triacontane (C30)	42.086	5970366	4.858 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.082	5965127	4.397 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	359592102	302.175 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	75279398	63.259 ug/mLm
46) h	Total Resolved Hydroc...	36.038	88459159	74.335 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032140.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 2:41 pm using AcqMethod FID17A.M
Sample Name: wG1579102-3,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579102,ICAL18012
Vial Number: 20
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032152.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 11:30 pm
Operator : FID17:MJS
Sample : wG1579126-1,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 26 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:40:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.611	60523900	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.671	60603052	46.191	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	92.38%		
24) s	d50-Tetracosane	34.417	47594249	45.722	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	91.44%		
	Target Compounds					
2) t	n-Octane (C8)	4.571	73685	0.070	ug/mL	M4
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	8.984	94731	0.083	ug/mL	M4
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	22.333	49232	0.043	ug/mL	M4
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.203	25429	0.021	ug/mL	M2
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	
25) t	n-Tetracosane (C24)	34.942	40568	0.034	ug/mL	M4
26) t	n-Pentacosane (C25)	36.246	64179	0.055	ug/mL	M4
27) t	n-Hexacosane (C26)	37.495	40942	0.034	ug/mL	M4
28) t	n-Heptacosane (C27)	38.703	42931	0.036	ug/mL	M4
29) t	n-Octacosane (C28)	39.887	1235914C	0.996	ug/mL	M4
30) t	n-Nonacosane (C29)	40.967	905285C	0.743	ug/mL	M4
31) t	n-Triacontane (C30)	42.091	21737	0.018	ug/mL	M4
32) t	n-Hentriacontane (C31)	43.147	18045	0.015	ug/mL	M4
33) t	n-Dotriacontane (C32)	44.167	13874	0.011	ug/mL	M4
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032152.D
Signal(s) : FID1A.CH
Acq On : 04 Dec 2021 11:30 pm
Operator : FID17:MJS
Sample : wG1579126-1,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 26 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:40:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

Sub List : Default - All compounds listed

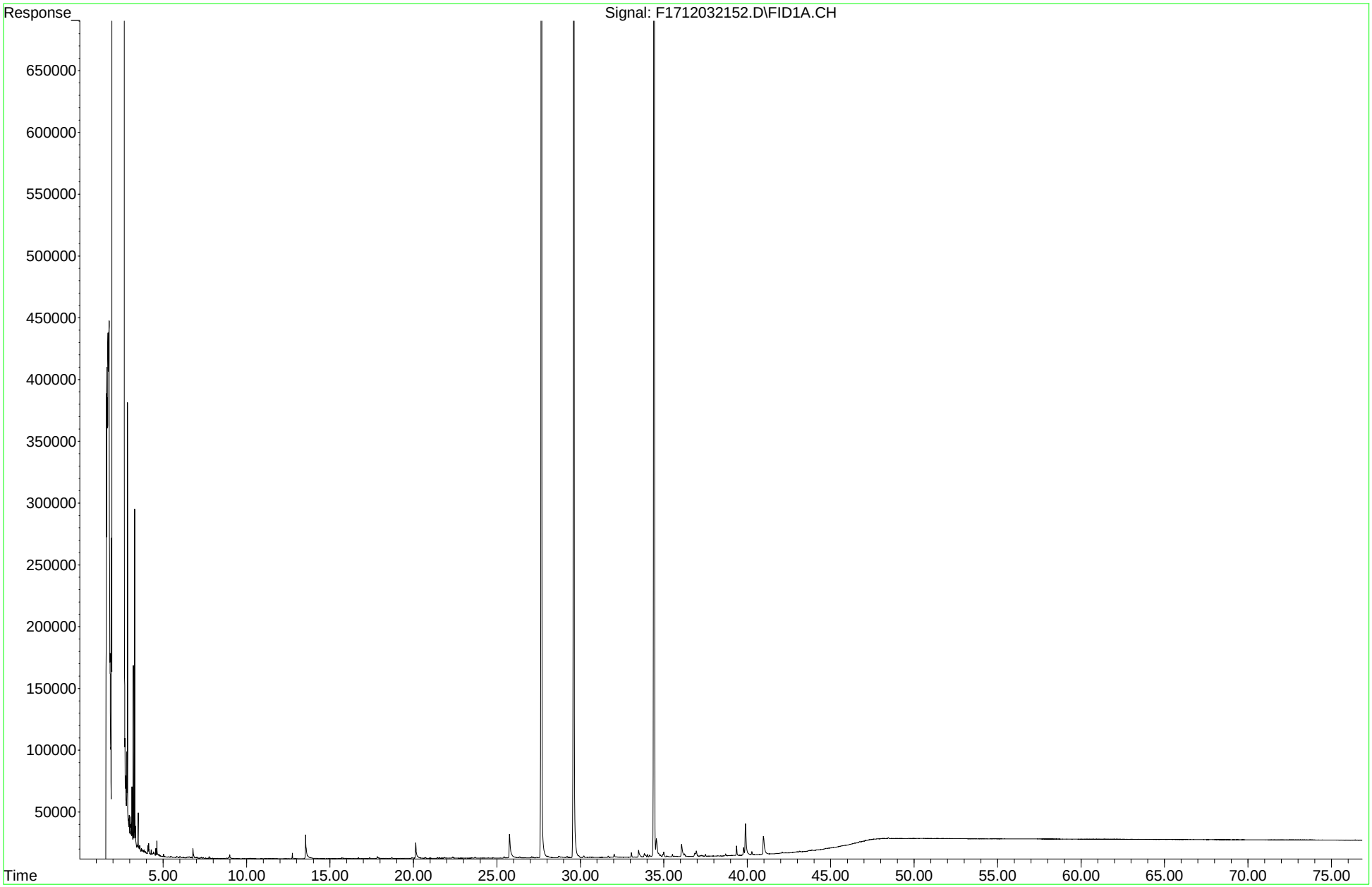
	Compound	R.T.	Response	Conc	Units
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	36.038	261891732	221.265	ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	16033668	13.546	ug/mLm
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml d
43) h	C9-C40 Total Petroleu BS	0.000	-115033617	N.D.	ug/mld
44) h	C10-C28 DRO	24.454	34753742	29.713	ug/mL m
44) h	C10-C28 DRO BS	24.454	14800996	12.654	ug/mLm
45) h	C28-C40 ORO	46.963	84608981	69.238	ug/mL m
45) h	C28-C40 ORO BS	46.963	3005104	2.459	ug/mLm
46) h	Total Resolved Hydroc...	36.038	11702874	9.887	ug/mL m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032152.D
Operator : FID17:MJS
Acquired : 04 Dec 2021 11:30 pm using AcqMethod FID17A.M
Sample Name: wG1579126-1,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 26
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032154.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 12:59 am
Operator : FID17:MJS
Sample : wg1579126-2,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 27 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:43:44 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

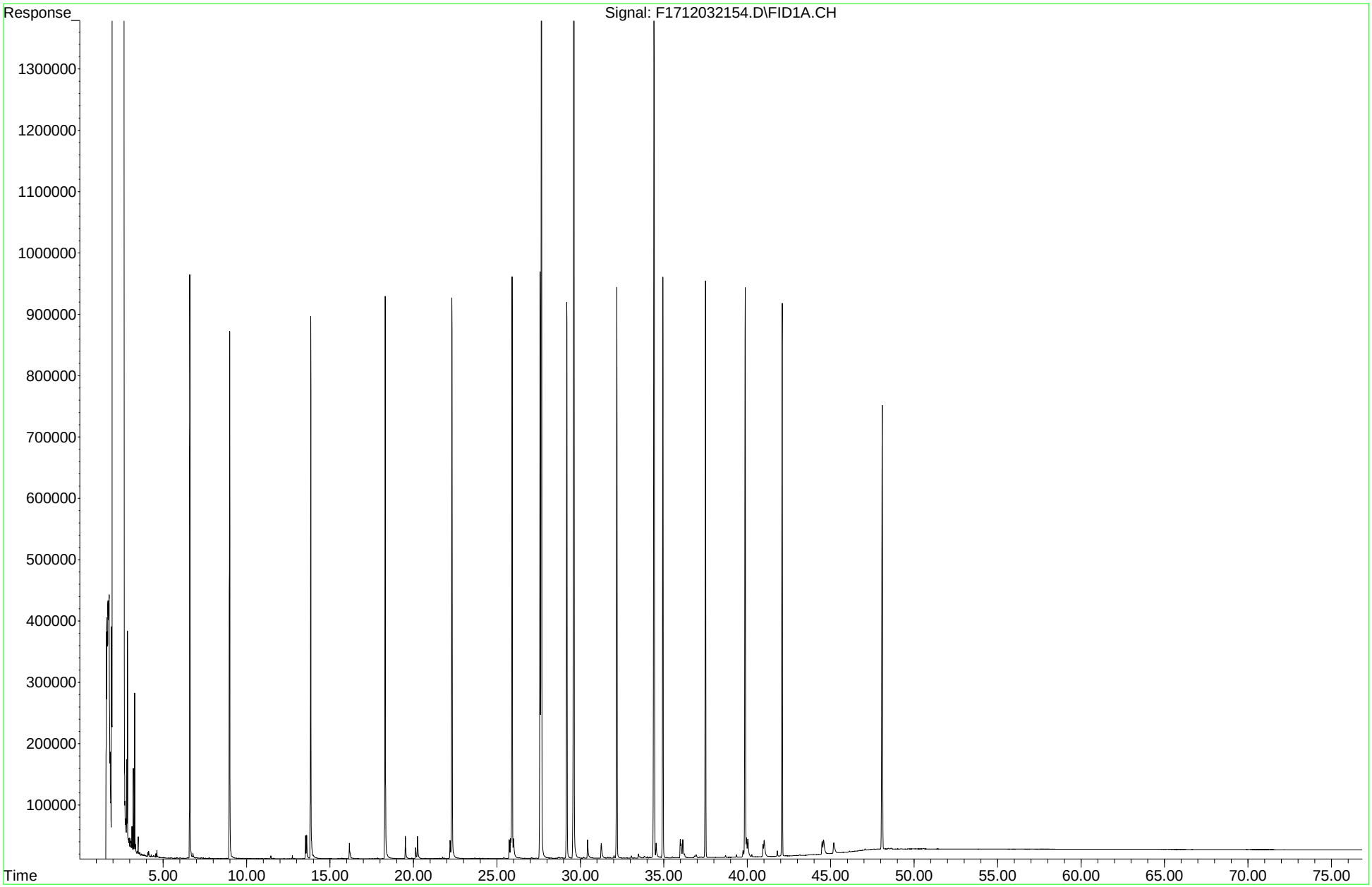
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.611	61217856	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.670	57984710	43.694 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	87.39%
24) s	d50-Tetracosane	34.413	46737945	44.391 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	88.78%
	Target Compounds			
3) t	n-Nonane (C9)	6.595	15177263	13.439 ug/mL M4
4) t	n-Decane (C10)	8.983	17561975	15.190 ug/mL M4
6) t	n-Dodecane (C12)	13.846	19264680	17.008 ug/mL M4
9) t	n-Tetradecane (C14)	18.304	20137210	17.209 ug/mL M4
12) t	n-Hexadecane (C16)	22.302	21000025	17.957 ug/mL M4
16) t	n-Octadecane (C18)	25.909	21783411	18.338 ug/mL M4
18) t	n-Nonadecane (C19)	27.588	22673942	19.030 ug/mL M4
20) t	n-Eicosane (C20)	29.185	21862068	18.244 ug/mL M4
22) t	n-Docosane (C22)	32.184	22004130	18.276 ug/mL M4
25) t	n-Tetracosane (C24)	34.945	22557306	18.757 ug/mL M4
27) t	n-Hexacosane (C26)	37.493	22473552	18.604 ug/mL M4
29) t	n-Octacosane (C28)	39.872	23619570	18.810 ug/mL M4
31) t	n-Triacontane (C30)	42.092	22568098	18.253 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.087	22403900	16.417 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	578631755	483.329 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	332773691	277.965 ug/mLm
46) h	Total Resolved Hydroc...	36.038	321695453	268.711 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032154.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 12:59 am using AcqMethod FID17A.M
Sample Name: wg1579126-2,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 27
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC03\
Data File : F1712032156.D
Signal(s) : FID1A.CH
Acq On : 05 Dec 2021 2:27 am
Operator : FID17:MJS
Sample : wg1579126-3,42,,
Misc : WG1579117,WG1579126,ICAL18012
ALS Vial : 28 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 05 13:46:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M
Quant Title : FID Forensics
QLast Update : Sat Dec 04 10:07:37 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1712032103
Blank File : F1712032150.D

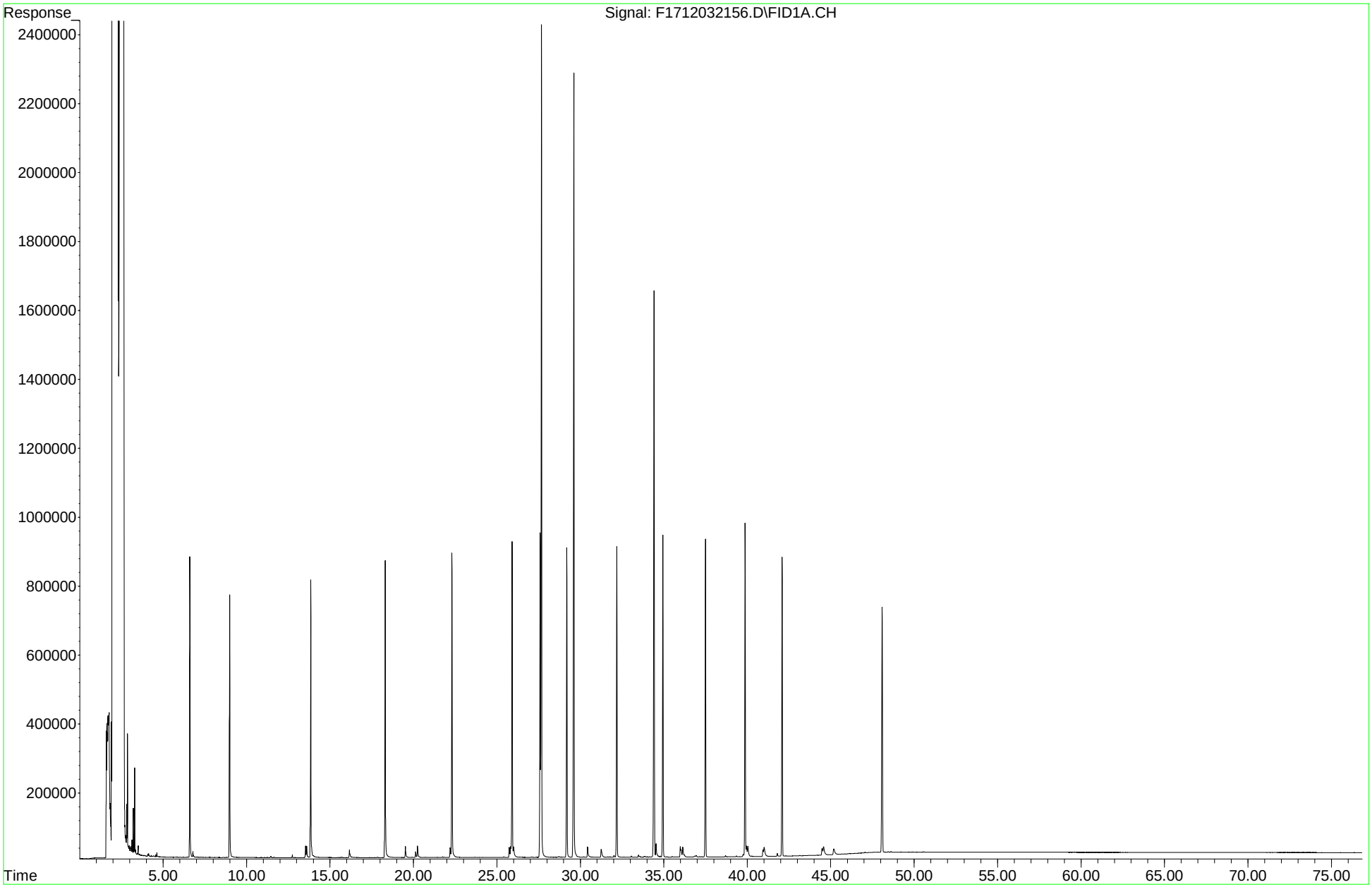
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	29.609	57860408	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	27.668	56830018	45.309 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	90.62%
24) s	d50-Tetracosane	34.411	46139946	46.366 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	92.73%
	Target Compounds			
3) t	n-Nonane (C9)	6.596	13962381	13.080 ug/mL M4
4) t	n-Decane (C10)	8.984	16094924	14.729 ug/mL M4
6) t	n-Dodecane (C12)	13.846	17865514	16.688 ug/mL M4
9) t	n-Tetradecane (C14)	18.303	19225259	17.383 ug/mL M4
12) t	n-Hexadecane (C16)	22.302	20576030	18.616 ug/mL M4
16) t	n-Octadecane (C18)	25.909	21581458	19.222 ug/mL M4
18) t	n-Nonadecane (C19)	27.588	22824616	20.268 ug/mL M4
20) t	n-Eicosane (C20)	29.186	21654004	19.119 ug/mL M4
22) t	n-Docosane (C22)	32.182	21809413	19.165 ug/mL M4
25) t	n-Tetracosane (C24)	34.943	22392725	19.700 ug/mL M4
27) t	n-Hexacosane (C26)	37.495	22365951	19.589 ug/mL M4
29) t	n-Octacosane (C28)	39.870	23526720	19.823 ug/mL M4
31) t	n-Triacontane (C30)	42.088	22539269	19.287 ug/mL M4
37) t	n-Hexatriacontane (C36)	48.081	22470973	17.422 ug/mL M4
42) h	C9-C44 Total Petroleu...	36.038	570095694	503.831 ug/mL m
42) h	C9-C44 Total Petroleu BS	36.038	324237630	286.550 ug/mLm
46) h	Total Resolved Hydroc...	36.038	321109793	283.786 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC03\F1712032156.D
Operator : FID17:MJS
Acquired : 05 Dec 2021 2:27 am using AcqMethod FID17A.M
Sample Name: wg1579126-3,42,,
Instrument: FID17
Misc Info : WG1579117,WG1579126,ICAL18012
Vial Number: 28
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC03\HC17052021F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421025.D
Signal(s) : FID2B.ch
Acq On : 15 Dec 2021 03:07 am
Operator : FID18:WR
Sample : L2166503-03,42,,,R2A
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 63 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 15:15:33 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	29.650	63815155	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	27.706	55341489	38.910	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	77.82%		
24) s	d50-Tetracosane	34.437	44503874	38.769	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	77.54%		
	Target Compounds					
2) t	n-Octane (C8)	4.671	712264	0.701	ug/mL	M4
3) t	n-Nonane (C9)	6.698	5756869	5.251	ug/mL	M4
4) t	n-Decane (C10)	9.091	75646577	64.141	ug/mL	M4
5) t	n-Undecane (C11)	11.538	25274903	21.419	ug/mL	M4
6) t	n-Dodecane (C12)	13.949	58284554	48.715	ug/mL	M4
7) t	n-Tridecane (C13)	16.270	1857277107	1549.356	ug/mL	M4
8) t	1380	17.937	272513314	221.110	ug/mL	M4
9) t	n-Tetradecane (C14)	18.373	898009	0.729	ug/mL	M4
10) t	1470	19.684	5421779	4.383	ug/mL	M4
11) t	n-Pentadecane (C15)	20.407	44872	0.036	ug/mL	M4
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	d
13) t	1650	23.198	1869858G	1.513	ug/mL	M4
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	24.323	369243	0.288	ug/mL	M4
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	d
17) t	Phytane	0.000	0	N.D.	ug/mL	d
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	29.205	2225480	1.760	ug/mL	M4
21) t	n-Heneicosane (C21)	30.786	2585913	2.021	ug/mL	M4
22) t	n-Docosane (C22)	32.250	1556093	1.204	ug/mL	M4
23) t	n-Tricosane (C23)	33.639	482003	0.375	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\
Data File : f18121421025.D
Signal(s) : FID2B.ch
Acq On : 15 Dec 2021 03:07 am
Operator : FID18:WR
Sample : L2166503-03,42,,,R2A
Misc : WG1583234,WG1582496,ICAL17763
ALS Vial : 63 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 03 15:15:33 2022
Quant Method : O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M
Quant Title : FID Forensics
QLast Update : Mon Jan 03 14:08:47 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1812142101R
Blank File : f18121421009.D

Sub List : SHC - SHC

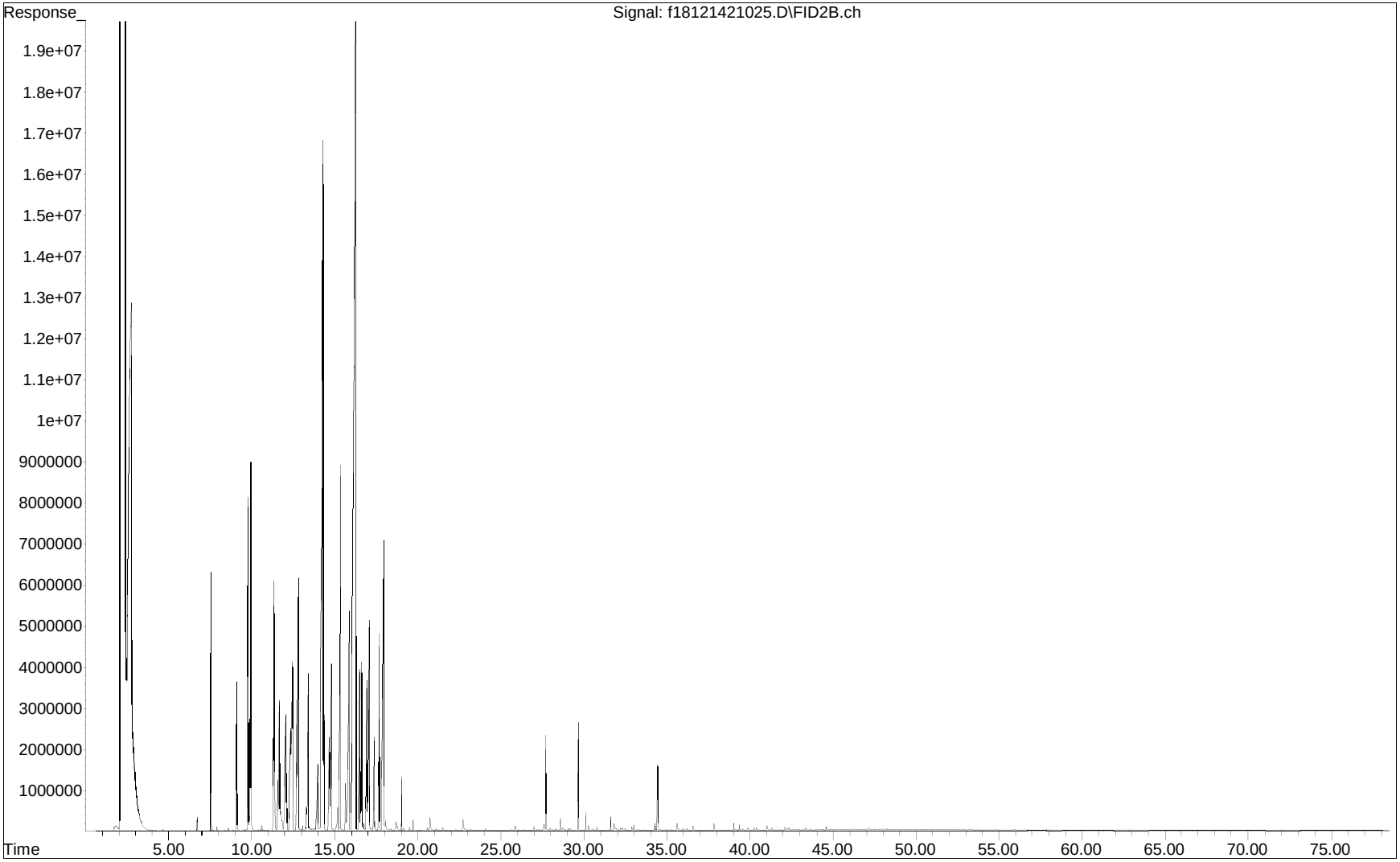
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	34.998	866898	0.676	ug/mL	M4
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	d
27) t	n-Hexacosane (C26)	37.494	283372	0.217	ug/mL	M4
28) t	n-Heptacosane (C27)	38.719	692228	0.526	ug/mL	M4
29) t	n-Octacosane (C28)	39.889	3691622	2.754	ug/mL	M4
30) t	n-Nonacosane (C29)	41.020	4059069	3.048	ug/mL	M4
31) t	n-Triacontane (C30)	42.116	2122044	1.581	ug/mL	M4
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	d
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	d
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	d
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	d
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	d
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	d
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	d
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	33.118	7763133459	6066.600	ug/mL	m
42) h	C9-C44 Total Petroleu BS	33.118	7431538918	5807.472	ug/mLm	
46) h	Total Resolved Hydroc...	37.870	7091870107	5542.033	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\f18121421025.D
Operator : FID18:WR
Acquired : 15 Dec 2021 03:07 am using AcqMethod FID18.M
Sample Name: L2166503-03,42,,,R2A
Instrument: FID 18
Misc Info : WG1583234,WG1582496,ICAL17763
Vial Number: 63
CurrentMeth: O:\Forensics\Data\FID18\2021\DEC\DEC14.SEC\HC18031921R_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422020.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 12:32 am
Operator : FID18:WR
Sample : L2166503-03D,42,20
Misc : WG1590500,WG1582496,ICAL18548
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:47:25 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.106	51022137	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.082	2160453	1.899	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	3.80%#		
24) s	d50-Tetracosane	35.729	1597643	1.722	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	3.44%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	d
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	d
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	d
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422020.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 12:32 am
Operator : FID18:WR
Sample : L2166503-03D,42,20
Misc : WG1590500,WG1582496,ICAL18548
ALS Vial : 10 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:47:25 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

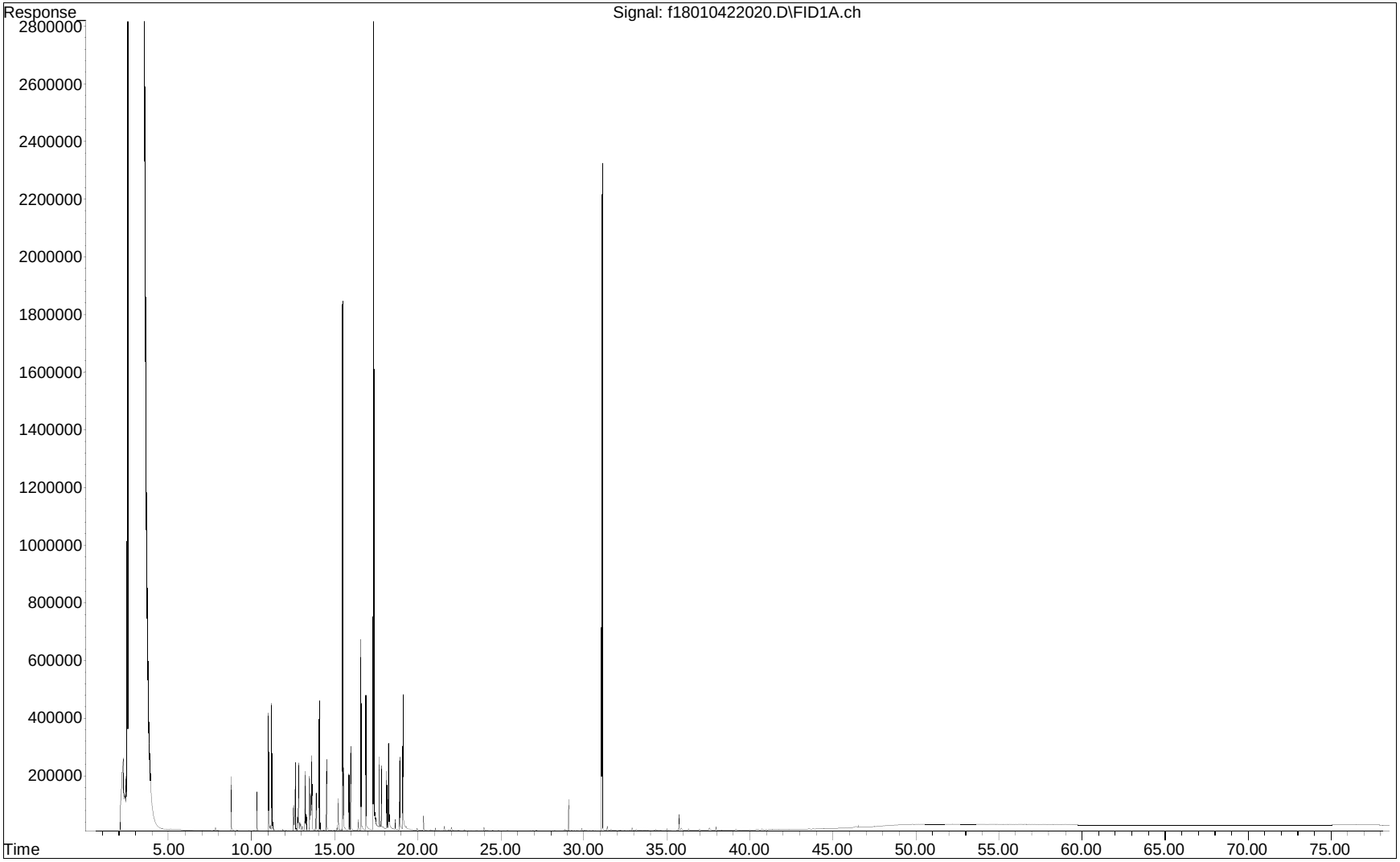
	Compound	R.T.	Response	Conc	Units
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	36.047	621748868	634.489	ug/mL m
42) h	C9-C44 Total Petroleu BS	36.047	241429362	246.377	ug/mLm
46) h	Total Resolved Hydroc...	38.937	276250369	281.911	ug/mL m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422020.D
Operator : FID18:WR
Acquired : 05 Jan 2022 12:32 am using AcqMethod FID18.M
Sample Name: L2166503-03D,42,20
Instrument: FID 18
Misc Info : WG1590500,WG1582496,ICAL18548
Vial Number: 10
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422022.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 01:58 am
Operator : FID18:WR
Sample : L2166503-06D,42,20
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:46:59 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.111	59207847	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.087	656094	0.497	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.99%#		
24) s	d50-Tetracosane	35.728	780263	0.725	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	1.45%#		
	Target Compounds					
2) t	n-Octane (C8)	5.613	48553	0.051	ug/mL	M4
3) t	n-Nonane (C9)	7.817	176945	0.181	ug/mL	M4
4) t	n-Decane (C10)	10.283	1259187	1.306	ug/mL	M4
5) t	n-Undecane (C11)	12.773	281826	0.281	ug/mL	M4
6) t	n-Dodecane (C12)	15.180	758488	0.729	ug/mL	M4
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	d
8) t	1380	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	19.667	65896	0.060	ug/mL	M4
10) t	1470	20.937	83418	0.075	ug/mL	M4
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	23.617	239668	0.214	ug/mL	M4
13) t	1650	0.000	0	N.D.	ug/mL	d
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	25.611	1819734	1.517	ug/mL	M4
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	d
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	d
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	d
22) t	n-Docosane (C22)	33.543	20515983G	17.334	ug/mL	M4
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID18\2022\JAN\JAN04\
Data File : f18010422022.D
Signal(s) : FID1A.ch
Acq On : 05 Jan 2022 01:58 am
Operator : FID18:WR
Sample : L2166503-06D,42,20
Misc : WG1590500,WG1590340,ICAL18548
ALS Vial : 11 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 05 12:46:59 2022
Quant Method : O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M
Quant Title : FID Forensics
QLast Update : Wed Jan 05 11:23:52 2022
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1801042101F
Blank File : f18010422010.D

Sub List : SHC - SHC

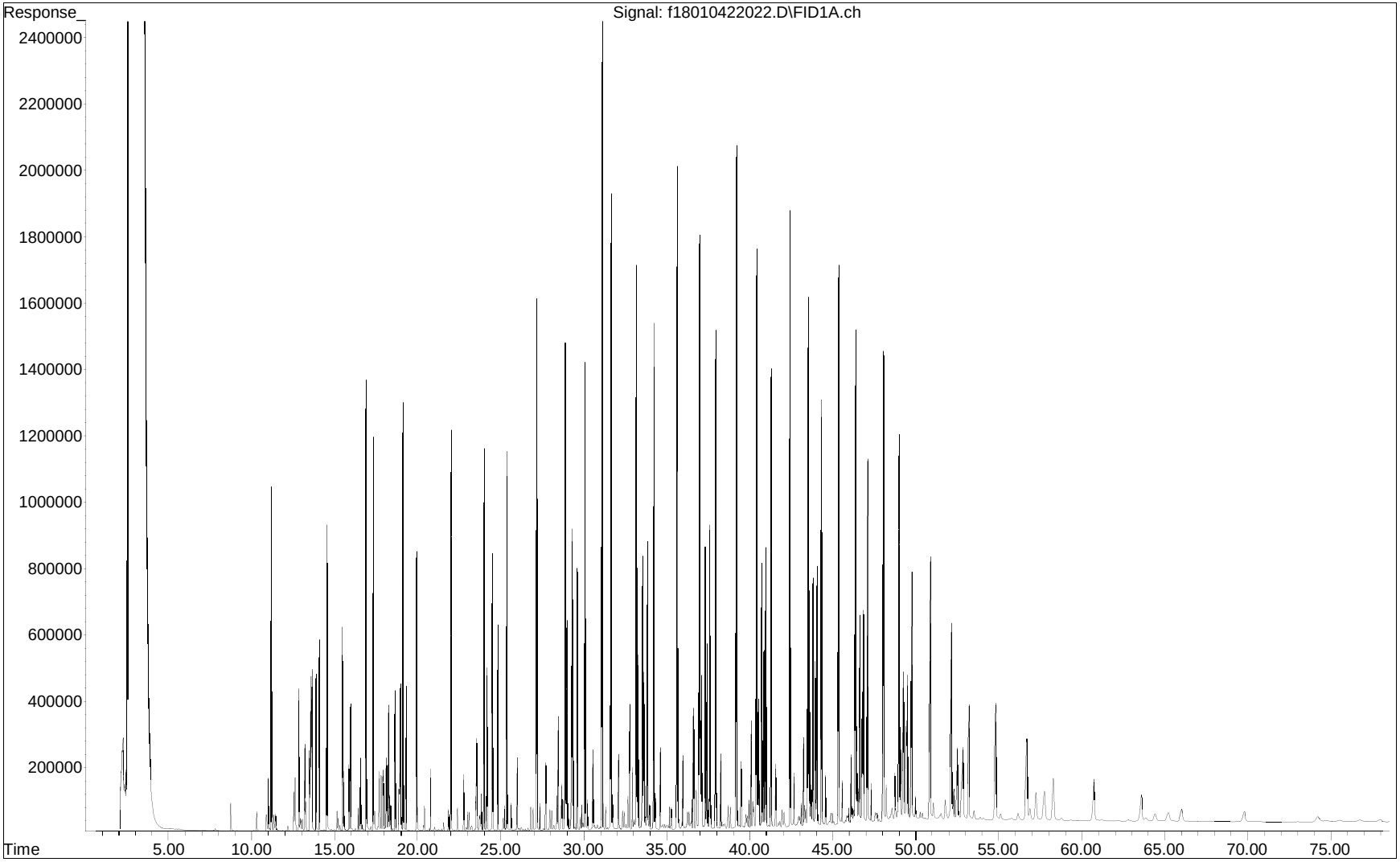
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	37.588	21670619	18.542	ug/mL	M4
27) t	n-Hexacosane (C26)	38.822	1696148	1.414	ug/mL	M4
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	d
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	d
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	d
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	d
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	d
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	d
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	d
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	36.047	2858649115	2513.908	ug/mL	m
42) h	C9-C44 Total Petroleu BS	36.047	2478329609	2179.454	ug/mL	m
46) h	Total Resolved Hydroc...	38.937	2237503461	1967.670	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID18\2022\JAN\JAN04\f18010422022.D
Operator : FID18:WR
Acquired : 05 Jan 2022 01:58 am using AcqMethod FID18.M
Sample Name: L2166503-06D,42,20
Instrument: FID 18
Misc Info : WG1590500,WG1590340,ICAL18548
Vial Number: 11
CurrentMeth: O:\Forensics\Data\FID18\2022\JAN\JAN04\HC18110521F_DRO.M



Alpha
Summary Forms

Organic Summary Forms

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01D	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/13/21 19:28
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000780	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	88.1	13.1	U
78-78-4	Isopentane	ND	88.1	16.1	U
109-67-1	1-Pentene	ND	88.1	16.1	U
563-46-2	2-Methyl-1-Butene	ND	88.1	13.7	U
109-66-0	Pentane	ND	88.1	27.5	U
646-04-8	trans-2-Pentene	ND	88.1	11.9	U
78-79-5	Isoprene	ND	88.1	15.7	U
627-20-3	cis-2-Pentene	ND	88.1	14.2	U
75-65-0	Tertiary Butanol	ND	1100	143.	U
75-83-2	2,2-Dimethylbutane	ND	88.1	27.2	U
691-37-2	4-Methyl-1-pentene	ND	88.1	13.7	U
287-92-3	Cyclopentane	ND	88.1	22.9	U
79-29-8	2,3-Dimethylbutane	ND	88.1	36.4	U
107-83-5	2-Methylpentane	ND	88.1	23.9	U
1634-04-4	Methyl tert butyl ether	ND	88.1	18.1	U
96-14-0	3-Methylpentane	ND	88.1	14.0	U
592-41-6	1-Hexene	ND	88.1	12.4	U
110-54-3	n-Hexane	ND	88.1	14.5	U
108-20-3	Isopropyl Ether	ND	88.1	10.7	U
4050-45-7	trans-2-Hexene	ND	88.1	11.5	U
625-27-4	2-Methyl-2-pentene	ND	88.1	13.5	U
7688-21-3	cis-2-Hexene	ND	88.1	11.9	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	88.1	13.3	U
590-35-2	2,2-Dimethylpentane	ND	88.1	11.8	U
96-37-7	Methylcyclopentane	ND	88.1	11.8	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01D	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/13/21 19:28
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000780	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	88.1	10.9	U
464-06-2	2,2,3-Trimethylbutane	ND	88.1	11.9	U
107-06-2	1,2-Dichloroethane	ND	88.1	13.0	U
562-49-2	3,3-Dimethylpentane	ND	88.1	16.4	U
110-82-7	Cyclohexane	ND	88.1	10.9	U
591-76-4	2-Methylhexane	ND	88.1	13.9	U
71-43-2	Benzene	ND	88.1	13.4	U
565-59-3	2,3-Dimethylpentane	ND	88.1	11.7	U
110-02-1	Thiophene	ND	88.1	12.5	U
1638-26-2	1,1-Dimethylcyclopentane	ND	88.1	10.6	U
589-34-4	3-Methylhexane	ND	88.1	14.1	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	88.1	10.8	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	88.1	13.2	U
617-78-7	3-Ethylpentane	ND	88.1	12.7	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	176	25.8	U
540-84-1	Isooctane	ND	88.1	9.60	U
14686-14-7	trans-3-Heptene	ND	88.1	13.7	U
142-82-5	Heptane	58.1	88.1	15.3	J
14686-13-6	trans-2-Heptene	ND	88.1	11.3	U
6443-92-1	cis-2-Heptene	ND	88.1	17.0	U
590-73-8	2,2-Dimethylhexane	ND	88.1	12.8	U
108-87-2	Methylcyclohexane	133	88.1	11.9	
592-13-2	2,5-Dimethylhexane	ND	88.1	15.3	U
589-43-5	2,4-Dimethylhexane	ND	88.1	10.7	U
1640-89-7	Ethylcyclopentane	14.4	88.1	11.7	J

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01D	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/13/21 19:28
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000780	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
564-02-3	2,2,3-Trimethylpentane	ND	88.1	15.3	U
565-75-3	2,3,4-Trimethylpentane	ND	88.1	11.5	U
1330-20-7	Xylene (Total)	2250	88.1	9.21	
560-21-4	2,3,3-Trimethylpentane	ND	88.1	17.5	U
584-94-1	2,3-Dimethylhexane	ND	88.1	21.4	U
592-27-8	2-Methylheptane	148	88.1	14.9	
589-53-7	4-Methylheptane	42.6	88.1	15.2	J
589-81-1	3-Methylheptane	123	88.1	12.6	
619-99-8	3-Ethylhexane	ND	88.1	15.8	U
108-88-3	Toluene	126	88.1	11.9	
554-14-3	2-Methylthiophene	ND	88.1	7.49	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	97.3	88.1	11.4	
616-44-4	3-Methylthiophene	ND	88.1	10.3	U
111-66-0	1-Octene	ND	220	13.5	U
111-65-9	Octane	681	88.1	10.4	
6876-23-9	1,2-Dimethylcyclohexane (trans)	190	88.1	13.0	
106-93-4	1,2-Dibromoethane	ND	88.1	14.1	U
7642-04-8	cis-2-Octene	ND	88.1	10.1	U
3875-51-2	Isopropylcyclopentane	19.8	88.1	12.9	J
2207-01-4	1,2-Dimethylcyclohexane (cis)	121	88.1	25.6	
2216-30-0	2,5-Dimethylheptane	191	88.1	14.8	
926-82-9	3,5-Dimethylheptane	53.0	88.1	12.4	J
4032-86-4	3,3-Dimethylheptane	21.6	88.1	10.7	J
7094-27-1	1,1,4-Trimethylcyclohexane	ND	88.1	8.77	U
3074-71-3	2,3-Dimethylheptane	360	88.1	10.0	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01D	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/13/21 19:28
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000780	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
922-28-1	3,4-Dimethylheptane	164	88.1	15.0	
2216-34-4	4-Methyloctane	410	88.1	14.7	
3221-61-2	2-Methyloctane	561	88.1	22.6	
100-41-4	Ethylbenzene	300	88.1	9.52	
872-55-9	2-Ethylthiophene	ND	88.1	7.75	U
2216-33-3	3-Methyloctane	781	88.1	9.87	
1067-20-5	3,3-Diethylpentane	ND	88.1	10.3	U
179601-23-1	p/m-Xylene	1450	176	16.8	
124-11-8	1-Nonene	ND	220	11.9	U
20063-92-7	trans-3-Nonene	ND	88.1	10.4	U
20237-46-1	cis-3-Nonene	ND	88.1	16.5	U
111-84-2	Nonane (C9)	4780	88.1	13.7	
100-42-5	Styrene	ND	88.1	8.90	U
95-47-6	o-Xylene	803	88.1	9.21	
6434-77-1	2-Nonene	ND	220	11.2	U
696-29-7	Isopropylcyclohexane	531	88.1	9.34	
98-82-8	Isopropylbenzene	243	88.1	8.24	
4110-44-5	3,3-Dimethyloctane	196	88.1	8.90	
103-65-1	n-Propylbenzene	719	88.1	7.80	
871-83-0	2-Methylnonane	2490	88.1	12.5	
5911-04-6	3-Methylnonane	2520	88.1	12.3	
620-14-4	1-Methyl-3-Ethylbenzene	1820	88.1	13.9	
622-96-8	1-Methyl-4-Ethylbenzene	970	88.1	12.4	
108-67-8	1,3,5-Trimethylbenzene	1520	88.1	10.1	
872-05-9	1-Decene	ND	88.1	11.4	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01D	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/13/21 19:28
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000780	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1678-98-4	Isobutylcyclohexane	ND	88.1	7.18	U
611-14-3	1-Methyl-2-Ethylbenzene	1260	88.1	7.49	
124-18-5	Decane (C10)	21900	88.1	11.9	E
98-06-6	tert-Butylbenzene	34.6	88.1	9.30	J
95-63-6	1,2,4-Trimethylbenzene	5210	88.1	9.12	
538-93-2	Isobutylbenzene	257	88.1	11.9	
135-98-8	sec-Butylbenzene	675	88.1	11.4	
535-77-3	1-Methyl-3-Isopropylbenzene	899	88.1	11.4	
99-87-6	1-Methyl-4-Isopropylbenzene	724	88.1	9.34	
526-73-8	1,2,3-Trimethylbenzene	2820	88.1	9.82	
527-84-4	1-Methyl-2-Isopropylbenzene	170	88.1	9.56	
496-11-7	Indane	457	88.1	5.42	
141-93-5	1,3-Diethylbenzene	848	88.1	11.0	
1074-43-7	1-Methyl-3-N-Propylbenzene	2610	88.1	8.90	
95-13-6	Indene	97.4	88.1	5.11	
1074-55-1	1-Methyl-4-N-Propylbenzene	1270	88.1	11.0	
104-51-8	n-Butylbenzene	1240	88.1	8.68	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	2120	88.1	10.8	
135-01-3	1,2-Diethylbenzene	509	88.1	13.0	
1074-17-5	1-Methyl-2-N-Propylbenzene	2220	88.1	11.0	
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	2010	88.1	8.24	
1120-21-4	Undecane	44000	88.1	9.78	E
874-41-9	1,3-Dimethyl-4-Ethylbenzene	2500	88.1	8.55	
934-74-7	1,3-Dimethyl-5-Ethylbenzene	2650	88.1	10.4	
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	366	88.1	6.56	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01D	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/13/21 19:28
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000780	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
933-98-2	1,2-Dimethyl-3-Ethylbenzene	1390	88.1	5.59	
95-93-2	1,2,4,5-Tetramethylbenzene	1590	88.1	6.83	
527-53-7	1,2,3,5-Tetramethylbenzene	2930	88.1	6.70	
538-68-1	N-Pentylbenzene	760	88.1	11.0	
488-23-3	1,2,3,4-Tetramethylbenzene	2320	88.1	9.43	
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	88.1	12.6	U
112-40-3	Dodecane (C12)	37200	220	28.9	E
102-25-0	1,3,5-Triethylbenzene	ND	88.1	16.7	U
91-20-3	Naphthalene	3070	88.1	36.8	
95-15-8	Benzothiophene	ND	88.1	46.6	U
877-44-1	1,2,4-Triethylbenzene	276	88.1	15.0	
1077-16-3	Hexylbenzene	708	88.1	17.0	
12108-13-3	MMT	ND	220	56.6	U
629-50-5	Tridecane	19100	220	61.4	E
91-57-6	2-Methylnaphthalene	5070	220	58.2	
90-12-0	1-Methylnaphthalene	3360	220	64.7	
629-59-4	Tetradecane (C14)	3830	220	27.0	
629-62-9	Pentadecane	411	220	49.1	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01D2	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/14/21 00:15
Sample Matrix	: OIL	**Dilution Factor**	: 200
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000784	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
124-18-5	Decane (C10)	21500	1760	239.	
1120-21-4	Undecane	48800	1760	196.	
112-40-3	Dodecane (C12)	45800	4400	579.	
629-50-5	Tridecane	31400	4400	1230	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/08/21 10:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000737	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	ND	25.0	3.24	U
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/08/21 10:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000737	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	ND	2.00	0.270	U
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/08/21 10:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000737	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	ND	2.00	0.271	U
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/08/21 10:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000737	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	ND	2.00	0.187	U
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	ND	2.00	0.177	U
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U
872-05-9	1-Decene	ND	2.00	0.260	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/08/21 10:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000737	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	ND	2.00	0.211	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	ND	2.00	0.270	U
135-98-8	sec-Butylbenzene	ND	2.00	0.259	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	0.245	2.00	0.212	J
526-73-8	1,2,3-Trimethylbenzene	0.869	2.00	0.223	J
527-84-4	1-Methyl-2-Isopropylbenzene	ND	2.00	0.217	U
496-11-7	Indane	ND	2.00	0.123	U
141-93-5	1,3-Diethylbenzene	0.290	2.00	0.249	J
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	ND	2.00	0.116	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	2.00	0.250	U
104-51-8	n-Butylbenzene	ND	2.00	0.197	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	0.578	2.00	0.296	J
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	0.756	2.00	0.222	J
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	0.372	2.00	0.236	J
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	1.39	2.00	0.149	J

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/08/21 10:30
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000737	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
933-98-2	1,2-Dimethyl-3-Ethylbenzene	0.954	2.00	0.127	J
95-93-2	1,2,4,5-Tetramethylbenzene	0.305	2.00	0.155	J
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	1.17	2.00	0.214	J
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	1.73	5.00	0.657	J
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	2.32	5.00	1.39	J
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	ND	5.00	1.47	U
629-59-4	Tetradecane (C14)	2.34	5.00	0.612	J
629-62-9	Pentadecane	ND	5.00	1.12	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1581735-5	**Date Collected**	: NA
Client ID	: WG1581735-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/07/21 23:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000736	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	2.00	0.297	U
78-78-4	Isopentane	ND	2.00	0.366	U
109-67-1	1-Pentene	ND	2.00	0.365	U
563-46-2	2-Methyl-1-Butene	ND	2.00	0.311	U
109-66-0	Pentane	ND	2.00	0.624	U
646-04-8	trans-2-Pentene	ND	2.00	0.270	U
78-79-5	Isoprene	ND	2.00	0.357	U
627-20-3	cis-2-Pentene	ND	2.00	0.322	U
75-65-0	Tertiary Butanol	5.46	25.0	3.24	J
75-83-2	2,2-Dimethylbutane	ND	2.00	0.617	U
691-37-2	4-Methyl-1-pentene	ND	2.00	0.311	U
287-92-3	Cyclopentane	ND	2.00	0.519	U
79-29-8	2,3-Dimethylbutane	ND	2.00	0.826	U
107-83-5	2-Methylpentane	ND	2.00	0.542	U
1634-04-4	Methyl tert butyl ether	ND	2.00	0.412	U
96-14-0	3-Methylpentane	ND	2.00	0.317	U
592-41-6	1-Hexene	ND	2.00	0.281	U
110-54-3	n-Hexane	ND	2.00	0.329	U
108-20-3	Isopropyl Ether	ND	2.00	0.242	U
4050-45-7	trans-2-Hexene	ND	2.00	0.261	U
625-27-4	2-Methyl-2-pentene	ND	2.00	0.306	U
7688-21-3	cis-2-Hexene	ND	2.00	0.271	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	2.00	0.303	U
590-35-2	2,2-Dimethylpentane	ND	2.00	0.269	U
96-37-7	Methylcyclopentane	ND	2.00	0.268	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1581735-5	**Date Collected**	: NA
Client ID	: WG1581735-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/07/21 23:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000736	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	2.00	0.247	U
464-06-2	2,2,3-Trimethylbutane	ND	2.00	0.270	U
107-06-2	1,2-Dichloroethane	ND	2.00	0.295	U
562-49-2	3,3-Dimethylpentane	ND	2.00	0.372	U
110-82-7	Cyclohexane	ND	2.00	0.247	U
591-76-4	2-Methylhexane	ND	2.00	0.315	U
71-43-2	Benzene	ND	2.00	0.305	U
565-59-3	2,3-Dimethylpentane	ND	2.00	0.265	U
110-02-1	Thiophene	ND	2.00	0.284	U
1638-26-2	1,1-Dimethylcyclopentane	ND	2.00	0.240	U
589-34-4	3-Methylhexane	ND	2.00	0.320	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	2.00	0.246	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	2.00	0.301	U
617-78-7	3-Ethylpentane	ND	2.00	0.289	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	4.00	0.585	U
540-84-1	Isooctane	ND	2.00	0.218	U
14686-14-7	trans-3-Heptene	ND	2.00	0.311	U
142-82-5	Heptane	ND	2.00	0.348	U
14686-13-6	trans-2-Heptene	ND	2.00	0.256	U
6443-92-1	cis-2-Heptene	ND	2.00	0.387	U
590-73-8	2,2-Dimethylhexane	ND	2.00	0.290	U
108-87-2	Methylcyclohexane	ND	2.00	0.270	U
592-13-2	2,5-Dimethylhexane	ND	2.00	0.348	U
589-43-5	2,4-Dimethylhexane	ND	2.00	0.243	U
1640-89-7	Ethylcyclopentane	ND	2.00	0.265	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1581735-5	**Date Collected**	: NA
Client ID	: WG1581735-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/07/21 23:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000736	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
564-02-3	2,2,3-Trimethylpentane	ND	2.00	0.347	U
565-75-3	2,3,4-Trimethylpentane	ND	2.00	0.261	U
560-21-4	2,3,3-Trimethylpentane	ND	2.00	0.397	U
1330-20-7	Xylene (Total)	ND	2.00	0.209	U
584-94-1	2,3-Dimethylhexane	ND	2.00	0.485	U
592-27-8	2-Methylheptane	ND	2.00	0.338	U
589-53-7	4-Methylheptane	ND	2.00	0.344	U
589-81-1	3-Methylheptane	ND	2.00	0.385	U
619-99-8	3-Ethylhexane	ND	2.00	0.358	U
108-88-3	Toluene	ND	2.00	0.271	U
554-14-3	2-Methylthiophene	ND	2.00	0.170	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	2.00	0.260	U
616-44-4	3-Methylthiophene	ND	2.00	0.234	U
111-66-0	1-Octene	ND	5.00	0.307	U
111-65-9	Octane	ND	2.00	0.235	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	2.00	0.294	U
106-93-4	1,2-Dibromoethane	ND	2.00	0.320	U
7642-04-8	cis-2-Octene	ND	2.00	0.229	U
3875-51-2	Isopropylcyclopentane	ND	2.00	0.293	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	2.00	0.581	U
2216-30-0	2,5-Dimethylheptane	ND	2.00	0.335	U
926-82-9	3,5-Dimethylheptane	ND	2.00	0.282	U
4032-86-4	3,3-Dimethylheptane	ND	2.00	0.242	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	2.00	0.199	U
3074-71-3	2,3-Dimethylheptane	ND	2.00	0.228	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1581735-5	**Date Collected**	: NA
Client ID	: WG1581735-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/07/21 23:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000736	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
922-28-1	3,4-Dimethylheptane	ND	2.00	0.340	U
2216-34-4	4-Methyloctane	ND	2.00	0.334	U
3221-61-2	2-Methyloctane	ND	2.00	0.512	U
100-41-4	Ethylbenzene	ND	2.00	0.216	U
872-55-9	2-Ethylthiophene	ND	2.00	0.176	U
2216-33-3	3-Methyloctane	ND	2.00	0.224	U
1067-20-5	3,3-Diethylpentane	ND	2.00	0.233	U
179601-23-1	p/m-Xylene	ND	4.00	0.381	U
124-11-8	1-Nonene	ND	5.00	0.270	U
20063-92-7	trans-3-Nonene	ND	2.00	0.237	U
20237-46-1	cis-3-Nonene	ND	2.00	0.374	U
111-84-2	Nonane (C9)	ND	2.00	0.311	U
100-42-5	Styrene	ND	2.00	0.202	U
95-47-6	o-Xylene	ND	2.00	0.209	U
6434-77-1	2-Nonene	ND	5.00	0.254	U
696-29-7	Isopropylcyclohexane	ND	2.00	0.212	U
98-82-8	Isopropylbenzene	ND	2.00	0.187	U
4110-44-5	3,3-Dimethyloctane	ND	2.00	0.202	U
103-65-1	n-Propylbenzene	ND	2.00	0.177	U
871-83-0	2-Methylnonane	ND	2.00	0.283	U
5911-04-6	3-Methylnonane	ND	2.00	0.279	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	2.00	0.316	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	2.00	0.282	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.00	0.230	U
872-05-9	1-Decene	ND	2.00	0.260	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1581735-5	**Date Collected**	: NA
Client ID	: WG1581735-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/07/21 23:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000736	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1678-98-4	Isobutylcyclohexane	ND	2.00	0.163	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	2.00	0.170	U
124-18-5	Decane (C10)	ND	2.00	0.271	U
98-06-6	tert-Butylbenzene	ND	2.00	0.211	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.00	0.207	U
538-93-2	Isobutylbenzene	ND	2.00	0.270	U
135-98-8	sec-Butylbenzene	ND	2.00	0.259	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	2.00	0.258	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	2.00	0.212	U
526-73-8	1,2,3-Trimethylbenzene	ND	2.00	0.223	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	2.00	0.217	U
496-11-7	Indane	ND	2.00	0.123	U
141-93-5	1,3-Diethylbenzene	ND	2.00	0.249	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	2.00	0.202	U
95-13-6	Indene	ND	2.00	0.116	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	2.00	0.250	U
104-51-8	n-Butylbenzene	ND	2.00	0.197	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	2.00	0.245	U
135-01-3	1,2-Diethylbenzene	ND	2.00	0.296	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	2.00	0.249	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	2.00	0.187	U
1120-21-4	Undecane	ND	2.00	0.222	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	2.00	0.194	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	2.00	0.236	U
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	2.00	0.149	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1581735-5	**Date Collected**	: NA
Client ID	: WG1581735-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/07/21 23:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000736	**Instrument ID**	: VOA9
Sample Amount	: 5 ml	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	2.00	0.127	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.00	0.155	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	2.00	0.152	U
538-68-1	N-Pentylbenzene	ND	2.00	0.249	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	2.00	0.214	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	2.00	0.285	U
112-40-3	Dodecane (C12)	ND	5.00	0.657	U
102-25-0	1,3,5-Triethylbenzene	ND	2.00	0.380	U
91-20-3	Naphthalene	ND	2.00	0.835	U
95-15-8	Benzothiophene	ND	2.00	1.06	U
877-44-1	1,2,4-Triethylbenzene	ND	2.00	0.340	U
1077-16-3	Hexylbenzene	ND	2.00	0.385	U
12108-13-3	MMT	ND	5.00	1.29	U
629-50-5	Tridecane	ND	5.00	1.39	U
91-57-6	2-Methylnaphthalene	ND	5.00	1.32	U
90-12-0	1-Methylnaphthalene	ND	5.00	1.47	U
629-59-4	Tetradecane (C14)	ND	5.00	0.612	U
629-62-9	Pentadecane	ND	5.00	1.12	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1582700-5	**Date Collected**	: NA
Client ID	: WG1582700-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/13/21 14:42
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000776	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	10.0	1.48	U
78-78-4	Isopentane	ND	10.0	1.83	U
109-67-1	1-Pentene	ND	10.0	1.82	U
563-46-2	2-Methyl-1-Butene	ND	10.0	1.56	U
109-66-0	Pentane	ND	10.0	3.12	U
646-04-8	trans-2-Pentene	ND	10.0	1.35	U
78-79-5	Isoprene	ND	10.0	1.78	U
627-20-3	cis-2-Pentene	ND	10.0	1.61	U
75-65-0	Tertiary Butanol	ND	125	16.2	U
75-83-2	2,2-Dimethylbutane	ND	10.0	3.08	U
691-37-2	4-Methyl-1-pentene	ND	10.0	1.56	U
287-92-3	Cyclopentane	ND	10.0	2.60	U
79-29-8	2,3-Dimethylbutane	ND	10.0	4.13	U
107-83-5	2-Methylpentane	ND	10.0	2.71	U
1634-04-4	Methyl tert butyl ether	ND	10.0	2.06	U
96-14-0	3-Methylpentane	ND	10.0	1.58	U
592-41-6	1-Hexene	ND	10.0	1.40	U
110-54-3	n-Hexane	ND	10.0	1.64	U
108-20-3	Isopropyl Ether	ND	10.0	1.21	U
4050-45-7	trans-2-Hexene	ND	10.0	1.30	U
625-27-4	2-Methyl-2-pentene	ND	10.0	1.53	U
7688-21-3	cis-2-Hexene	ND	10.0	1.36	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	10.0	1.52	U
590-35-2	2,2-Dimethylpentane	ND	10.0	1.34	U
96-37-7	Methylcyclopentane	ND	10.0	1.34	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1582700-5	**Date Collected**	: NA
Client ID	: WG1582700-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/13/21 14:42
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000776	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

CAS NO.	Parameter	mg/kg Results	RL	MDL	Qualifier
108-08-7	2,4-Dimethylpentane	ND	10.0	1.24	U
464-06-2	2,2,3-Trimethylbutane	ND	10.0	1.35	U
107-06-2	1,2-Dichloroethane	ND	10.0	1.48	U
562-49-2	3,3-Dimethylpentane	ND	10.0	1.86	U
110-82-7	Cyclohexane	ND	10.0	1.24	U
591-76-4	2-Methylhexane	ND	10.0	1.58	U
71-43-2	Benzene	ND	10.0	1.52	U
565-59-3	2,3-Dimethylpentane	ND	10.0	1.32	U
110-02-1	Thiophene	ND	10.0	1.42	U
1638-26-2	1,1-Dimethylcyclopentane	ND	10.0	1.20	U
589-34-4	3-Methylhexane	ND	10.0	1.60	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	10.0	1.23	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	10.0	1.50	U
617-78-7	3-Ethylpentane	ND	10.0	1.44	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	20.0	2.92	U
540-84-1	Isooctane	ND	10.0	1.09	U
14686-14-7	trans-3-Heptene	ND	10.0	1.56	U
142-82-5	Heptane	ND	10.0	1.74	U
14686-13-6	trans-2-Heptene	ND	10.0	1.28	U
6443-92-1	cis-2-Heptene	ND	10.0	1.94	U
590-73-8	2,2-Dimethylhexane	ND	10.0	1.45	U
108-87-2	Methylcyclohexane	ND	10.0	1.35	U
592-13-2	2,5-Dimethylhexane	ND	10.0	1.74	U
589-43-5	2,4-Dimethylhexane	ND	10.0	1.22	U
1640-89-7	Ethylcyclopentane	ND	10.0	1.32	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1582700-5	**Date Collected**	: NA
Client ID	: WG1582700-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/13/21 14:42
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000776	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
564-02-3	2,2,3-Trimethylpentane	ND	10.0	1.74	U
565-75-3	2,3,4-Trimethylpentane	ND	10.0	1.30	U
1330-20-7	Xylene (Total)	ND	10.0	1.04	U
560-21-4	2,3,3-Trimethylpentane	ND	10.0	1.98	U
584-94-1	2,3-Dimethylhexane	ND	10.0	2.42	U
592-27-8	2-Methylheptane	ND	10.0	1.69	U
589-53-7	4-Methylheptane	ND	10.0	1.72	U
589-81-1	3-Methylheptane	ND	10.0	1.42	U
619-99-8	3-Ethylhexane	ND	10.0	1.79	U
108-88-3	Toluene	ND	10.0	1.36	U
554-14-3	2-Methylthiophene	ND	10.0	0.850	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	10.0	1.30	U
616-44-4	3-Methylthiophene	ND	10.0	1.17	U
111-66-0	1-Octene	ND	25.0	1.54	U
111-65-9	Octane	ND	10.0	1.18	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	10.0	1.47	U
106-93-4	1,2-Dibromoethane	ND	10.0	1.60	U
7642-04-8	cis-2-Octene	ND	10.0	1.14	U
3875-51-2	Isopropylcyclopentane	ND	10.0	1.46	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	10.0	2.90	U
2216-30-0	2,5-Dimethylheptane	ND	10.0	1.68	U
926-82-9	3,5-Dimethylheptane	ND	10.0	1.41	U
4032-86-4	3,3-Dimethylheptane	ND	10.0	1.21	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	10.0	0.995	U
3074-71-3	2,3-Dimethylheptane	ND	10.0	1.14	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1582700-5	**Date Collected**	: NA
Client ID	: WG1582700-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/13/21 14:42
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000776	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
922-28-1	3,4-Dimethylheptane	ND	10.0	1.70	U
2216-34-4	4-Methyloctane	ND	10.0	1.67	U
3221-61-2	2-Methyloctane	ND	10.0	2.56	U
100-41-4	Ethylbenzene	ND	10.0	1.08	U
872-55-9	2-Ethylthiophene	ND	10.0	0.880	U
2216-33-3	3-Methyloctane	ND	10.0	1.12	U
1067-20-5	3,3-Diethylpentane	ND	10.0	1.16	U
179601-23-1	p/m-Xylene	ND	20.0	1.90	U
124-11-8	1-Nonene	ND	25.0	1.35	U
20063-92-7	trans-3-Nonene	ND	10.0	1.18	U
20237-46-1	cis-3-Nonene	ND	10.0	1.87	U
111-84-2	Nonane (C9)	ND	10.0	1.56	U
100-42-5	Styrene	ND	10.0	1.01	U
95-47-6	o-Xylene	ND	10.0	1.04	U
6434-77-1	2-Nonene	ND	25.0	1.27	U
696-29-7	Isopropylcyclohexane	ND	10.0	1.06	U
98-82-8	Isopropylbenzene	ND	10.0	0.935	U
4110-44-5	3,3-Dimethyloctane	ND	10.0	1.01	U
103-65-1	n-Propylbenzene	ND	10.0	0.885	U
871-83-0	2-Methylnonane	ND	10.0	1.42	U
5911-04-6	3-Methylnonane	ND	10.0	1.40	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	10.0	1.58	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	10.0	1.41	U
108-67-8	1,3,5-Trimethylbenzene	ND	10.0	1.15	U
872-05-9	1-Decene	ND	10.0	1.30	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1582700-5	**Date Collected**	: NA
Client ID	: WG1582700-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/13/21 14:42
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000776	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1678-98-4	Isobutylcyclohexane	ND	10.0	0.815	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	10.0	0.850	U
124-18-5	Decane (C10)	ND	10.0	1.36	U
98-06-6	tert-Butylbenzene	ND	10.0	1.06	U
95-63-6	1,2,4-Trimethylbenzene	ND	10.0	1.04	U
538-93-2	Isobutylbenzene	ND	10.0	1.35	U
135-98-8	sec-Butylbenzene	ND	10.0	1.30	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	10.0	1.29	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	10.0	1.06	U
526-73-8	1,2,3-Trimethylbenzene	ND	10.0	1.12	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	10.0	1.08	U
496-11-7	Indane	ND	10.0	0.615	U
141-93-5	1,3-Diethylbenzene	ND	10.0	1.24	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	10.0	1.01	U
95-13-6	Indene	ND	10.0	0.580	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	10.0	1.25	U
104-51-8	n-Butylbenzene	ND	10.0	0.985	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	10.0	1.22	U
135-01-3	1,2-Diethylbenzene	ND	10.0	1.48	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	10.0	1.24	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	10.0	0.935	U
1120-21-4	Undecane	ND	10.0	1.11	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	10.0	0.970	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	10.0	1.18	U
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	10.0	0.745	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1582700-5	**Date Collected**	: NA
Client ID	: WG1582700-5BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/13/21 14:42
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9000776	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	10.0	0.635	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	10.0	0.775	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	10.0	0.760	U
538-68-1	N-Pentylbenzene	ND	10.0	1.24	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	10.0	1.07	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	10.0	1.42	U
112-40-3	Dodecane (C12)	ND	25.0	3.28	U
102-25-0	1,3,5-Triethylbenzene	ND	10.0	1.90	U
91-20-3	Naphthalene	ND	10.0	4.18	U
95-15-8	Benzothiophene	ND	10.0	5.28	U
877-44-1	1,2,4-Triethylbenzene	ND	10.0	1.70	U
1077-16-3	Hexylbenzene	ND	10.0	1.92	U
12108-13-3	MMT	ND	25.0	6.43	U
629-50-5	Tridecane	ND	25.0	6.96	U
91-57-6	2-Methylnaphthalene	ND	25.0	6.61	U
90-12-0	1-Methylnaphthalene	ND	25.0	7.34	U
629-59-4	Tetradecane (C14)	ND	25.0	3.06	U
629-62-9	Pentadecane	ND	25.0	5.58	U

Surrogate Recovery Summary
Form 2
Volatiles

Client: GSI Environmental Inc.
Project Name: RED HILL

Lab Number: L2166503
Project Number:
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S1 (DBFM)	S2 (TOL)	S3 (BFB)	S4 ()	S5 ()	S6 ()	TOT OUT
ERH2051 (L2166503-02)	117	113	93	--	--	--	0
WG1581735-3LCS	106	113	93	--	--	--	0
WG1581735-4LCSD	101	113	94	--	--	--	0
WG1581735-5BLANK	116	112	93	--	--	--	0

QC LIMITS
(70-130) DBFM = DIBROMOFLUOROMETHANE
(70-130) TOL = TOLUENE-D8
(70-130) BFB = 4-BROMOFLUOROBENZENE

*** Values outside of QC limits**

FORM II A2-PIANO8260

Surrogate Recovery Summary
Form 2
Volatiles

Client: GSI Environmental Inc.
Project Name: RED HILL

Lab Number: L2166503
Project Number:
Matrix: Oil

CLIENT ID (LAB SAMPLE NO.)	S1 (DBFM)	S2 (TOL)	S3 (BFB)	S4 ()	S5 ()	S6 ()	TOT OUT
ERH1967 (L2166503-01D)	102	98	102	--	--	--	0
ERH1967 (L2166503-01D2)	98	100	98	--	--	--	0
WG1582700-3LCS	100	101	99	--	--	--	0
WG1582700-4LCSD	92	95	105	--	--	--	0
WG1582700-5BLANK	106	99	100	--	--	--	0

QC LIMITS
(70-130) DBFM = DIBROMOFLUOROMETHANE
(70-130) TOL = TOLUENE-D8
(70-130) BFB = 4-BROMOFLUOROBENZENE

*** Values outside of QC limits**

FORM II A2-PIANO8260

Laboratory Control Sample Summary
Form 3
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Matrix	: WATER		
LCS Sample ID	: WG1581735-3	**Analysis Date** : 12/07/21 18:30	**File ID** : V9000732
LCSD Sample ID	: WG1581735-4	**Analysis Date** : 12/07/21 19:42	**File ID** : V9000733

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
1-Pentene	20	19.6	98	20	19.3	96	2	50-130	30
Pentane	20	17.4	87	20	16.9	84	4	50-130	30
Tertiary Butanol	100	122	122	100	117	117	4	50-130	30
Cyclopentane	20	18.0	90	20	17.9	90	0	50-130	30
2-Methylpentane	20	19.6	98	20	19.3	96	2	50-130	30
Methyl tert butyl ether	20	19.1	96	20	18.4	92	4	50-130	30
3-Methylpentane	20	20.0	100	20	19.6	98	2	50-130	30
1-Hexene	20	20.3	102	20	19.3	96	6	50-130	30
n-Hexane	20	19.1	96	20	18.4	92	4	50-130	30
Isopropyl Ether	20	19.8	99	20	19.6	98	1	50-130	30
Ethyl-Tert-Butyl-Ether	20	19.2	96	20	18.6	93	3	50-130	30
Methylcyclopentane	20	20.2	101	20	20.1	100	1	50-130	30
2,4-Dimethylpentane	20	21.0	105	20	21.2	106	1	50-130	30
Cyclohexane	20	21.1	106	20	21.0	105	1	50-130	30
2-Methylhexane	20	21.0	105	20	20.6	103	2	50-130	30
Benzene	20	19.8	99	20	19.1	96	3	50-130	30
2,3-Dimethylpentane	20	21.2	106	20	20.7	104	2	50-130	30
3-Methylhexane	20	19.7	98	20	19.8	99	1	50-130	30
Tertiary-Amyl Methyl Ether	20	17.6	88	20	18.2	91	3	50-130	30
Isooctane	20	21.2	106	20	21.5	108	2	50-130	30
Heptane	20	22.7	114	20	22.8	114	0	50-130	30
Methylcyclohexane	20	19.7	98	20	19.8	99	1	50-130	30
2-Methylheptane	20	19.9	100	20	20.0	100	0	50-130	30
3-Methylheptane	20	20.8	104	20	21.2	106	2	50-130	30
Toluene	20	19.1	96	20	19.4	97	1	50-130	30
Octane	20	22.3	112	20	21.5	108	4	50-130	30

Laboratory Control Sample Summary
Form 3
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Matrix	: WATER		
LCS Sample ID	: WG1581735-3	**Analysis Date** : 12/07/21 18:30	**File ID** : V9000732
LCSD Sample ID	: WG1581735-4	**Analysis Date** : 12/07/21 19:42	**File ID** : V9000733

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Ethylbenzene	20	18.8	94	20	18.5	92	2	50-130	30
p/m-Xylene	40	38.3	96	40	37.3	93	3	50-130	30
Nonane (C9)	20	19.7	98	20	18.9	94	4	50-130	30
o-Xylene	20	19.3	96	20	19.0	95	1	50-130	30
Isopropylbenzene	20	18.8	94	20	18.3	92	2	50-130	30
n-Propylbenzene	20	18.7	94	20	18.5	92	2	50-130	30
1-Methyl-3-Ethylbenzene	20	18.2	91	20	18.2	91	0	50-130	30
1-Methyl-4-Ethylbenzene	20	19.0	95	20	18.7	94	1	50-130	30
1,3,5-Trimethylbenzene	20	18.4	92	20	18.5	92	0	50-130	30
1-Decene	20	17.1	86	20	17.0	85	1	50-130	30
1-Methyl-2-Ethylbenzene	20	18.7	94	20	18.8	94	0	50-130	30
Decane (C10)	20	23.0	115	20	22.6	113	2	50-130	30
1,2,4-Trimethylbenzene	20	17.8	89	20	17.8	89	0	50-130	30
sec-Butylbenzene	20	19.2	96	20	19.4	97	1	50-130	30
1-Methyl-4-N-Propylbenzene	20	18.2	91	20	18.7	94	3	50-130	30
n-Butylbenzene	20	18.9	94	20	19.3	96	2	50-130	30
1,2-Diethylbenzene	20	18.2	91	20	18.6	93	2	50-130	30
Undecane	20	21.4	107	20	21.6	108	1	50-130	30
N-Pentylbenzene	20	19.2	96	20	19.9	100	4	50-130	30
Dodecane (C12)	20	26.1	130	20	27.7	138 Q	6	50-130	30

Laboratory Control Sample Summary
Form 3
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Matrix	: OIL		
LCS Sample ID	: WG1582700-3	**Analysis Date**	: 12/13/21 11:08
LCSD Sample ID	: WG1582700-4	**Analysis Date**	: 12/13/21 12:19

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/kg)	Found (mg/kg)	%R	True (mg/kg)	Found (mg/kg)	%R	RPD	Recovery Limits	RPD Limit
1-Pentene	100	104	104	100	90.5	90	14	50-130	30
Pentane	100	93.5	94	100	79.6	80	16	50-130	30
Tertiary Butanol	500	474	95	500	492	98	3	50-130	30
Cyclopentane	100	99.5	100	100	89.7	90	11	50-130	30
2-Methylpentane	100	99.8	100	100	86.3	86	15	50-130	30
Methyl tert butyl ether	100	98.1	98	100	91.9	92	6	50-130	30
3-Methylpentane	100	107	107	100	93.6	94	13	50-130	30
1-Hexene	100	108	108	100	93.5	94	14	50-130	30
n-Hexane	100	101	101	100	87.5	88	14	50-130	30
Isopropyl Ether	100	96.6	97	100	87.9	88	10	50-130	30
Ethyl-Tert-Butyl-Ether	100	94.8	95	100	86.7	87	9	50-130	30
Methylcyclopentane	100	107	107	100	92.7	93	14	50-130	30
2,4-Dimethylpentane	100	105	105	100	91.7	92	13	50-130	30
Cyclohexane	100	109	109	100	95.5	96	13	50-130	30
2-Methylhexane	100	104	104	100	90.9	91	13	50-130	30
Benzene	100	100	100	100	95.8	96	4	50-130	30
2,3-Dimethylpentane	100	106	106	100	92.4	92	14	50-130	30
3-Methylhexane	100	95.2	95	100	78.7	79	18	50-130	30
Tertiary-Amyl Methyl Ether	100	88.7	89	100	86.7	87	2	50-130	30
Isooctane	100	110	110	100	95.0	95	15	50-130	30
Heptane	100	115	115	100	98.2	98	16	50-130	30
Methylcyclohexane	100	106	106	100	91.4	91	15	50-130	30
2-Methylheptane	100	104	104	100	90.4	90	14	50-130	30
3-Methylheptane	100	104	104	100	91.5	92	12	50-130	30
Toluene	100	102	102	100	96.2	96	6	50-130	30
Octane	100	106	106	100	95.6	96	10	50-130	30

Laboratory Control Sample Summary
Form 3
Volatiles

Client : GSI Environmental Inc. **Lab Number** : L2166503
Project Name : RED HILL **Project Number** :
Matrix : OIL
LCS Sample ID : WG1582700-3 **Analysis Date** : 12/13/21 11:08 **File ID** : V9000773
LCSD Sample ID : WG1582700-4 **Analysis Date** : 12/13/21 12:19 **File ID** : V9000774

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/kg)	Found (mg/kg)	%R	True (mg/kg)	Found (mg/kg)	%R	RPD	Recovery Limits	RPD Limit
Ethylbenzene	100	99.2	99	100	96.2	96	3	50-130	30
p/m-Xylene	200	200	100	200	197	99	1	50-130	30
Nonane (C9)	100	92.0	92	100	83.9	84	9	50-130	30
o-Xylene	100	102	102	100	101	101	1	50-130	30
Isopropylbenzene	100	100	100	100	100	100	0	50-130	30
n-Propylbenzene	100	99.3	99	100	102	102	3	50-130	30
1-Methyl-3-Ethylbenzene	100	98.2	98	100	102	102	4	50-130	30
1-Methyl-4-Ethylbenzene	100	103	103	100	107	107	4	50-130	30
1,3,5-Trimethylbenzene	100	100	100	100	107	107	7	50-130	30
1-Decene	100	85.8	86	100	85.4	85	1	50-130	30
1-Methyl-2-Ethylbenzene	100	102	102	100	108	108	6	50-130	30
Decane (C10)	100	105	105	100	105	105	0	50-130	30
1,2,4-Trimethylbenzene	100	97.6	98	100	105	105	7	50-130	30
sec-Butylbenzene	100	105	105	100	112	112	6	50-130	30
1-Methyl-4-N-Propylbenzene	100	101	101	100	110	110	9	50-130	30
n-Butylbenzene	100	102	102	100	113	113	10	50-130	30
1,2-Diethylbenzene	100	102	102	100	113	113	10	50-130	30
Undecane	100	103	103	100	114	114	10	50-130	30
N-Pentylbenzene	100	104	104	100	115	115	10	50-130	30
Dodecane (C12)	100	120	120	100	130	130	8	50-130	30

Method Blank Summary
Form 4
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab Sample ID	: WG1581735-5	**Lab File ID**	: V9000736
Instrument ID	: VOA9		
Matrix	: WATER	**Analysis Date**	: 12/07/21 23:16

Client Sample No.	Lab Sample ID	Analysis Date
WG1581735-3LCS	WG1581735-3	12/07/21 18:30
WG1581735-4LCSD	WG1581735-4	12/07/21 19:42
ERH2051	L2166503-02	12/08/21 10:30

Method Blank Summary
Form 4
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab Sample ID	: WG1582700-5	**Lab File ID**	: V9000776
Instrument ID	: VOA9		
Matrix	: OIL	**Analysis Date**	: 12/13/21 14:42

Client Sample No.	Lab Sample ID	Analysis Date
WG1582700-3LCS	WG1582700-3	12/13/21 11:08
WG1582700-4LCSD	WG1582700-4	12/13/21 12:19
ERH1967	L2166503-01D	12/13/21 19:28
ERH1967	L2166503-01D2	12/14/21 00:15

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 10/29/21 20:56
Tune Standard	: WG1565572-1	**Tune File ID**	: V9000492_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	16.8
75	30.0 - 60.0% of mass 95	45.8
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.3 (.4)1
174	Greater than 50.0 of mass 95	88.1
175	5.0 - 9.0% of mass 174	6.7 (7.6)1
176	95.0 - 101% of mass 174	86 (97.6)1
177	5.0 - 9.0% of mass 176	6.1 (7.1)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
2	R1496193-1	V9000493	10/29/21 21:26
5	R1496193-2	V9000494	10/29/21 22:38
20	R1496193-3	V9000495	10/29/21 23:49
50	R1496193-4	V9000496	10/30/21 01:01
100	R1496193-5	V9000497	10/30/21 02:12
200	R1496193-6	V9000498	10/30/21 03:23
ICV QUANT	R1496193-7	V9000500	10/30/21 05:46

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 12/07/21 16:49
Tune Standard	: WG1581735-1	**Tune File ID**	: V9000730_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	19.3
75	30.0 - 60.0% of mass 95	50.5
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	1.1 (1.3)1
174	Greater than 50.0 of mass 95	82.2
175	5.0 - 9.0% of mass 174	6.5 (7.9)1
176	95.0 - 101% of mass 174	80.3 (97.7)1
177	5.0 - 9.0% of mass 176	5.5 (6.9)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1581735-2CCAL	WG1581735-2	V9000731	12/07/21 17:19
WG1581735-3LCS	WG1581735-3	V9000732	12/07/21 18:30
WG1581735-4LCSD	WG1581735-4	V9000733	12/07/21 19:42
WG1581735-5BLANK	WG1581735-5	V9000736	12/07/21 23:16
ERH2051	L2166503-02	V9000737	12/08/21 10:30
WG1581735-7CCAL	WG1581735-7	V9000739	12/08/21 13:55

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 12/11/21 19:49
Tune Standard	: WG1582211-1	**Tune File ID**	: V9000760_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	18.8
75	30.0 - 60.0% of mass 95	48.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.9 (1.1)1
174	Greater than 50.0 of mass 95	78.9
175	5.0 - 9.0% of mass 174	6.2 (7.8)1
176	95.0 - 101% of mass 174	76.9 (97.5)1
177	5.0 - 9.0% of mass 176	5.1 (6.7)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
2	R1511856-1	V9000761	12/11/21 20:20
5	R1511856-2	V9000762	12/11/21 21:32
20	R1511856-3	V9000763	12/11/21 22:43
50	R1511856-4	V9000764	12/11/21 23:54
100	R1511856-5	V9000765	12/12/21 01:06
200	R1511856-6	V9000766	12/12/21 02:17
ICV QUANT	R1511856-7	V9000768	12/12/21 04:39

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 12/13/21 09:26
Tune Standard	: WG1582700-1	**Tune File ID**	: V9000771_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	18.2
75	30.0 - 60.0% of mass 95	47.9
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.9 (1.1)1
174	Greater than 50.0 of mass 95	83.4
175	5.0 - 9.0% of mass 174	6.4 (7.7)1
176	95.0 - 101% of mass 174	82.6 (99.1)1
177	5.0 - 9.0% of mass 176	6 (7.2)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1582700-2CCAL	WG1582700-2	V9000772	12/13/21 09:57
WG1582700-3LCS	WG1582700-3	V9000773	12/13/21 11:08
WG1582700-4LCSD	WG1582700-4	V9000774	12/13/21 12:19
WG1582700-5BLANK	WG1582700-5	V9000776	12/13/21 14:42
ERH1967	L2166503-01D	V9000780	12/13/21 19:28
ERH1967	L2166503-01D2	V9000784	12/14/21 00:15

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18423**
Calibration dates	**: 10/29/21 21:26 10/30/21 03:23**		

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	----------ISTD----------							
2)		3-Methyl-1-butene	0.310	0.337	0.379	0.306	0.327	0.365	0.3375	8.71
3)		Isopentane	0.174	0.200	0.210	0.168	0.176	0.198	0.1878	9.08
4)		1-Pentene	0.198	0.220	0.242	0.198	0.211	0.232	0.2169	8.29
5)		2-Methyl-1-butene	0.300	0.351	0.389	0.326	0.341	0.368	0.3458	9.06
6)		Pentane	0.303	0.346	0.348	0.280	0.298	0.335	0.3183	8.89
7)		trans-2-Pentene	0.347	0.372	0.422	0.355	0.378	0.404	0.3797	7.56
8)		2-Methyl-1,3-butadiene	0.218	0.245	0.295	0.254	0.263	0.276	0.2584	10.24
9)		cis-2-Pentene	0.315	0.361	0.388	0.333	0.345	0.377	0.3532	7.78
10)		Tertiary butanol		0.051	0.065	0.063	0.060	0.058	0.0594#	8.64
11)		2,2-Dimethylbutane	0.210	0.236	0.238	0.204	0.211	0.229	0.2215	6.68
12)		4-Methyl-1-pentene	0.260	0.276	0.314	0.270	0.275	0.297	0.2821	7.06
13)		Cyclopentane	0.133	0.156	0.177	0.151	0.154	0.166	0.1561	9.46
14)		2,3-Dimethylbutane	0.110	0.108	0.129	0.110	0.112	0.122	0.1152	7.41
15)		2-Methylpentane	0.358	0.373	0.434	0.374	0.371	0.412	0.3868	7.62
16)		MTBE	0.538	0.588	0.688	0.659	0.642	0.640	0.6256	8.63
17)		3-Methylpentane	0.314	0.354	0.407	0.354	0.355	0.385	0.3613	8.80
18)		1-Hexene	0.197	0.205	0.254	0.214	0.213	0.224	0.2179	9.18
19)		Hexane	0.287	0.312	0.355	0.313	0.314	0.338	0.3198	7.44
20)		Diisopropyl ether	0.540	0.566	0.686	0.652	0.627	0.636	0.6179	8.87
21)		trans-2-Hexene	0.320	0.344	0.406	0.362	0.360	0.382	0.3623	8.15
22)		2-Methyl-2-pentene	0.335	0.364	0.428	0.386	0.377	0.402	0.3819	8.36
23)		cis-2-Hexene	0.288	0.314	0.364	0.329	0.321	0.342	0.3262	7.91
24)	S	Dibromofluoromethane (surr)	0.259	0.259	0.259	0.260	0.252	0.254	0.2573	1.19
25)		Ethyl tertiary butyl ether	0.570	0.608	0.718	0.688	0.656	0.667	0.6511	8.28
26)		2,2-Dimethylpentane	0.379	0.445	0.510	0.454	0.451	0.493	0.4552	9.98
27)		Methylcyclopentane	0.361	0.406	0.453	0.405	0.403	0.433	0.4101	7.68
28)		2,4-Dimethylpentane	0.337	0.327	0.407	0.353	0.350	0.379	0.3588	8.17
29)		2,2,3-Trimethylbutane	0.359	0.403	0.462	0.419	0.407	0.442	0.4154	8.53
30)		1,2-Dichloroethane	0.234	0.267	0.310	0.299	0.280	0.286	0.2793	9.62
31)		3,3-Dimethylpentane	0.420	0.451	0.520	0.472	0.451	0.490	0.4674	7.49
32)		Cyclohexane	0.305	0.327	0.383	0.346	0.332	0.362	0.3425	8.03
33)		2-Methylhexane	0.359	0.387	0.453	0.408	0.384	0.425	0.4027	8.24
34)	M	Benzene	0.839	0.833	0.964	0.909	0.870	0.906	0.8868	5.60
35)		2,3-Dimethylpentane	0.292	0.321	0.382	0.342	0.333	0.362	0.3386	9.33
36)		Thiophene	0.396	0.439	0.526	0.504	0.484	0.492	0.4736	10.06

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18423**
Calibration dates	**: 10/29/21 21:26 10/30/21 03:23**		

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

		Compound	2	5	50	100	200	20	Avg	%RSD
37)		1,1-Dimethylcyclopentane	0.186	0.201	0.263	0.245	0.225	0.247	0.2279	12.93
38)		3-Methylhexane	0.314	0.307	0.387	0.354	0.326	0.380	0.3446	9.96
39)		TAME	0.852	0.703	0.714	0.689	0.657	0.702	0.7197	9.41
40)		cis-1,3-Dimethylcyclopentane	0.231	0.281	0.335	0.315	0.296	0.311	0.2948	12.34
41)		3-Ethylpentane	0.422	0.446	0.520	0.472	0.443	0.489	0.4653	7.61
43)		1-Heptene/trans-1,2-DMCP	0.156	0.164	0.197	0.184	0.165	0.187	0.1752	9.23
44)		Isooctane	0.745	0.845	0.962	0.909	0.820	0.936	0.8697	9.34
45)		trans-3-Heptene	0.276	0.261	0.297	0.278	0.255	0.292	0.2764	5.97
46)		Heptane	0.268	0.300	0.339	0.313	0.282	0.323	0.3039	8.60
48)		trans-2-Heptene	0.223	0.246	0.291	0.279	0.256	0.278	0.2624	9.66
49)		cis-2-Heptene	0.203	0.232	0.266	0.255	0.233	0.252	0.2403	9.36
50)		2,2-Dimethylhexane	0.727	0.843	0.943	0.899	0.820	0.916	0.8580	9.20
51)		Methylcyclohexane	0.352	0.381	0.441	0.420	0.385	0.420	0.3997	8.20
52)		2,5-Dimethylhexane	0.365	0.424	0.478	0.459	0.417	0.459	0.4337	9.43
53)		2,4-Dimethylhexane	0.318	0.319	0.391	0.362	0.316	0.367	0.3454	9.29
54)		Ethylcyclopentane	0.277	0.315	0.360	0.345	0.314	0.343	0.3256	9.16
55)		2,2,3-Trimethylpentane	0.597	0.652	0.759	0.742	0.639	0.748	0.6894	9.96
57)		2,3,4-Trimethylpentane	0.436	0.461	0.522	0.508	0.461	0.508	0.4825	7.17
58)		2,3,3-Trimethylpentane	0.359	0.381	0.435	0.424	0.386	0.425	0.4016	7.54
59)		2,3-Dimethylhexane	0.404	0.404	0.449	0.466	0.457	0.460	0.4400	6.45
60)		2-Methylheptane	0.347	0.389	0.436	0.435	0.395	0.422	0.4039	8.51
61)		4-Methylheptane	0.425	0.445	0.476	0.505	0.512	0.502	0.4776	7.47
62)	S	Toluene-d8 (surr)	1.065	1.071	1.086	1.067	1.071	1.064	1.0706	0.77
63)		3-Methylheptane	0.431	0.355	0.375	0.380	0.331	0.363	0.3728	8.98
64)	S	2-Bromo-1-Chloropropane	0.283	0.291	0.347	0.357	0.353	0.343	0.3290	10.09
65)		3-Ethylhexane	0.462	0.479	0.594	0.534	0.560	0.532	0.5270	9.35
66)	M	Toluene	0.843	0.932	1.088	1.025	1.012	1.014	0.9855	8.68
67)		2-Methylthiophene	0.674	0.717	0.861	0.826	0.820	0.808	0.7843	9.18
68)		trans-1,4-Dimethylcyclohexane	0.416	0.461	0.514	0.509	0.495	0.490	0.4807	7.62
69)		3-Methylthiophene	0.667	0.708	0.862	0.842	0.834	0.825	0.7897	10.29
70)		1-Octene	0.152	0.184	0.215	0.207	0.200	0.198	0.1928	11.70
71)		Octane	0.376	0.399	0.464	0.441	0.429	0.422	0.4217	7.35
72)		trans-1,2-Dimethylcyclohexane	0.287	0.326	0.365	0.356	0.335	0.349	0.3364	8.36
73)		1,2-Dibromoethane	0.194	0.210	0.256	0.256	0.253	0.244	0.2355	11.45
75)		cis-2-Octene	0.236	0.268	0.315	0.320	0.292	0.294	0.2874	10.91
76)		Isopropylcyclopentane	0.337	0.381	0.454	0.433	0.419	0.400	0.4039	10.21

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18423**
Calibration dates	**: 10/29/21 21:26 10/30/21 03:23**		

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

	Compound	2	5	50	100	200	20	Avg	%RSD
77)	cis-1,2-Dimethylcyclohexane	0.310	0.322	0.381	0.367	0.356	0.348	0.3474	7.70
78)	2,5-Dimethylheptane	0.487	0.534	0.637	0.687	0.601	0.606	0.5920	12.10
79)	3,5-Dimethylheptane	0.697	0.639	0.847	0.801	0.770	0.679	0.7388	10.79
80)	3,3-Dimethylheptane	0.408	0.457	0.523	0.511	0.498	0.477	0.4791	8.73
81)	1,1,4-Trimethylcyclohexane	0.379	0.402	0.460	0.455	0.443	0.420	0.4266	7.52
82)	2,3-Dimethylheptane	0.455	0.490	0.577	0.568	0.550	0.516	0.5261	9.12
83)	3,4-Dimethylheptane	0.284	0.328	0.361	0.363	0.343	0.334	0.3355	8.59
84)	4-Methyloctane	0.457	0.435	0.509	0.557	0.520	0.485	0.4937	9.00
85)	2-Methyloctane	0.374	0.396	0.537	0.482	0.484	0.436	0.4514	13.54
86)	Ethylbenzene	0.993	1.073	1.265	1.236	1.200	1.172	1.1563	8.99
87) S	1-Chloro-2-Fluorobenzene	0.556	0.565	0.666	0.660	0.640	0.632	0.6199	7.69
88)	2-Ethylthiophene	0.721	0.782	0.940	0.923	0.897	0.881	0.8573	10.11
89)	3-Methyloctane	0.651	0.729	0.883	0.882	0.856	0.771	0.7954	11.89
90)	3,3-Diethylpentane	0.815	0.852	1.014	1.009	0.975	0.898	0.9272	9.08
91)	p/m-Xylene	0.780	0.818	0.964	0.950	0.919	0.895	0.8877	8.32
92)	1-Nonene	0.158	0.179	0.232	0.241	0.236	0.193	0.2064	16.91
93)	trans-3-Nonene	0.240	0.260	0.331	0.337	0.327	0.285	0.2968	13.77
94)	cis-3-Nonene	0.242	0.299	0.376	0.374	0.364	0.321	0.3293	16.03
95)	Nonane	0.366	0.399	0.489	0.487	0.479	0.421	0.4400	11.92
96)	Styrene	0.611	0.654	0.813	0.816	0.787	0.767	0.7413	11.74
97) S	1,4-Dichlorobutane (H/surr)	0.355	0.326	0.394	0.394	0.377	0.395	0.3732	7.53
98)	o-Xylene	0.791	0.833	0.980	0.967	0.930	0.933	0.9057	8.40
99)	2-Nonene	0.248	0.259	0.330	0.335	0.323	0.284	0.2964	12.84
100)	Isopropylcyclohexane	0.364	0.388	0.477	0.481	0.466	0.415	0.4318	11.59
101) S	4-Bromofluorobenzene (surr)	0.536	0.536	0.532	0.548	0.536	0.541	0.5382	1.06
102)	Isopropylbenzene	1.013	1.098	1.260	1.272	1.220	1.187	1.1749	8.61
103)	3,3-Dimethyloctane	0.532	0.585	0.747	0.766	0.730	0.612	0.6619	14.78
104)	n-Propylbenzene	1.137	1.244	1.501	1.538	1.465	1.410	1.3825	11.45
105)	2-Methylnonane	0.309	0.338	0.443	0.452	0.420	0.367	0.3882	15.24
106)	3-Methylnonane	0.390	0.424	0.565	0.585	0.542	0.457	0.4940	16.41
107)	1-Methyl-3-ethylbenzene	0.985	1.031	1.270	1.307	1.234	1.195	1.1702	11.27
108)	1-Methyl-4-ethylbenzene	0.947	0.997	1.211	1.248	1.183	1.132	1.1194	10.85
109)	1,3,5-Trimethylbenzene	0.818	0.857	1.058	1.109	1.043	0.986	0.9785	11.91
110)	1-Decene	0.171	0.183	0.250	0.260	0.244	0.207	0.2193	16.97
111)	Isobutylcyclohexane	0.383	0.407	0.521	0.539	0.513	0.442	0.4677	13.99
112)	1-Methyl-2-ethylbenzene	0.991	1.046	1.255	1.291	1.217	1.195	1.1656	10.29

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18423**
Calibration dates	**: 10/29/21 21:26 10/30/21 03:23**		

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

	Compound	2	5	50	100	200	20	Avg	%RSD
113)	Decane	0.303	0.331	0.427	0.435	0.391	0.360	0.3742	14.13
114)	tert-Butylbenzene	0.739	0.787	0.939	0.967	0.909	0.904	0.8740	10.33
115)	1,2,4-Trimethylbenzene	0.882	0.911	1.104	1.153	1.087	1.044	1.0302	10.65
116)	Isobutylbenzene	0.952	1.006	1.227	1.275	1.170	1.159	1.1315	11.20
117)	sec-Butylbenzene	1.099	1.136	1.368	1.419	1.324	1.309	1.2758	10.12
118)	1-Methyl-3-isopropylbenzene	0.910	0.953	1.175	1.241	1.159	1.110	1.0912	12.01
119)	1-Methyl-4-isopropylbenzene	0.910	0.961	1.177	1.244	1.155	1.111	1.0930	11.91
120)	1,2,3-Trimethylbenzene	0.886	0.921	1.110	1.172	1.084	1.080	1.0423	10.82
121)	1-Methyl-2-isopropylbenzene	0.916	0.960	1.175	1.240	1.143	1.126	1.0936	11.64
122)	Indan	0.849	0.879	1.052	1.097	1.014	1.022	0.9855	10.06
123)	1,3-Diethylbenzene	0.582	0.591	0.744	0.792	0.731	0.706	0.6909	12.41
124)	1-Methyl-3-propylbenzene	1.084	1.130	1.394	1.491	1.371	1.323	1.2989	12.24
125)	Indene	0.774	0.815	1.000	1.069	0.978	0.994	0.9385	12.40
126)	1-Methyl-4-propylbenzene	1.302	1.326	1.637	1.744	1.617	1.558	1.5307	11.66
127)	n-Butylbenzene	1.005	1.055	1.278	1.364	1.254	1.228	1.1973	11.55
128)	1,2-Dimethyl-4-ethylbenzene	0.956	0.980	1.212	1.294	1.190	1.174	1.1343	11.95
129)	1,2-Diethylbenzene	0.467	0.482	0.584	0.623	0.574	0.568	0.5498	11.17
130)	1-Methyl-2-propylbenzene	1.138	1.205	1.474	1.574	1.437	1.426	1.3759	12.20
131)	1,4-Dimethyl-2-ethylbenzene	0.894	0.919	1.142	1.229	1.118	1.107	1.0681	12.40
132)	Undecane	0.390	0.426	0.552	0.542	0.426	0.497	0.4722	14.34
133)	1,3-Dimethyl-4-ethylbenzene	1.073	1.128	1.363	1.463	1.331	1.335	1.2819	11.67
134)	1,3-Dimethyl-5-ethylbenzene	1.008	1.019	1.245	1.345	1.220	1.215	1.1750	11.39
135)	1,3-Dimethyl-2-ethylbenzene	1.083	1.115	1.347	1.452	1.314	1.335	1.2744	11.32
136)	1,2-Dimethyl-3-ethylbenzene	0.967	1.002	1.216	1.316	1.182	1.207	1.1482	11.79
137)	1,2,4,5-Tetramethylbenzene	1.026	1.049	1.302	1.416	1.266	1.297	1.2261	12.62
138)	1,2,3,5-Tetramethylbenzene	0.949	0.958	1.169	1.261	1.132	1.165	1.1059	11.33
139)	Pentylbenzene	0.837	0.873	1.117	1.212	1.084	1.082	1.0343	14.21
140)	1,2,3,4-Tetramethylbenzene	1.226	1.261	1.550	1.690	1.511	1.562	1.4669	12.51
141)	1,3-DM-5-tert-Butylbenzene	0.816	0.844	1.090	1.200	1.074	1.048	1.0119	14.89
142)	Dodecane	0.303	0.338	0.345	0.298	0.241	0.384	0.3182	15.42
143)	1,3,5-Triethylbenzene	0.492	0.535	0.698	0.772	0.692	0.673	0.6437	16.66
144)	Naphthalene	1.184	1.190	1.356	1.481	1.301	1.443	1.3257	9.42
145)	Benzothiophene	0.714	0.712	0.820	0.898	0.791	0.871	0.8009	9.70
146)	1,2,4-Triethylbenzene	0.565	0.492	0.640	0.707	0.636	0.627	0.6112	12.09
147)	Hexylbenzene	0.714	0.769	1.013	1.090	0.979	0.970	0.9227	15.98
148)	MMT	0.439	0.435	0.496	0.558	0.487	0.536	0.4918	10.13

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18423**
Calibration dates	**: 10/29/21 21:26 10/30/21 03:23**		

Calibration Files
2 =V9000493.D 5 =V9000494.D 50 =V9000496.D 100 =V9000497.D 200 =V9000498.D 20 =V9000495.D

	Compound	2	5	50	100	200	20	Avg	%RSD
149)	Tridecane	0.409	0.450	0.331	0.283	0.262	0.429	0.3607	22.05
150)	2-Methylnaphthalene	0.762	0.774	0.916	1.039	0.914	0.977	0.8968	12.28
151)	1-Methylnaphthalene	0.680	0.698	0.802	0.913	0.797	0.861	0.7919	11.40
152)	Tetradecane	0.363	0.410	0.234	0.217	0.224	0.293	0.2902	27.82#
153)	Pentadecane	0.294	0.288	0.153	0.139		0.183	0.2113	35.18#

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18554**
Calibration dates	**: 12/11/21 20:20 12/12/21 02:17**		

Calibration Files

2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	----------ISTD----------							
2)		3-Methyl-1-butene	0.288	0.379	0.400	0.373	0.418	0.394	0.3755	12.15
3)		Isopentane	0.208	0.223	0.229	0.195	0.222	0.232	0.2180	6.43
4)		1-Pentene	0.205	0.257	0.262	0.228	0.260	0.256	0.2447	9.44
5)		2-Methyl-1-butene	0.294	0.383	0.406	0.366	0.408	0.407	0.3776	11.69
6)		Pentane	0.364	0.411	0.386	0.336	0.374	0.388	0.3764	6.74
7)		trans-2-Pentene	0.304	0.417	0.438	0.385	0.450	0.431	0.4042	13.30
8)		2-Methyl-1,3-butadiene	0.195	0.257	0.293	0.264	0.308	0.279	0.2661	14.89
9)		cis-2-Pentene	0.282	0.386	0.410	0.379	0.416	0.408	0.3801	13.24
10)		Tertiary butanol		0.079	0.076	0.071	0.082	0.070	0.0757#	6.90
11)		2,2-Dimethylbutane	0.227	0.269	0.259	0.225	0.254	0.256	0.2483	7.27
12)		4-Methyl-1-pentene	0.240	0.296	0.327	0.292	0.332	0.316	0.3007	11.21
13)		Cyclopentane	0.136	0.163	0.177	0.161	0.184	0.172	0.1656	10.07
14)		2,3-Dimethylbutane	0.095	0.119	0.127	0.114	0.131	0.124	0.1184	10.85
15)		2-Methylpentane	0.370	0.416	0.460	0.427	0.470	0.452	0.4326	8.45
16)		MTBE	0.500	0.581	0.656	0.616	0.714	0.619	0.6144	11.68
17)		3-Methylpentane	0.279	0.379	0.412	0.373	0.429	0.404	0.3792	14.07
18)		1-Hexene	0.152	0.218	0.243	0.217	0.257	0.231	0.2198	16.63
19)		Hexane	0.260	0.333	0.368	0.328	0.382	0.357	0.3379	12.81
20)		Diisopropyl ether	0.486	0.584	0.716	0.668	0.764	0.644	0.6436	15.28
21)		trans-2-Hexene	0.269	0.364	0.411	0.371	0.423	0.401	0.3733	15.03
22)		2-Methyl-2-pentene	0.274	0.377	0.408	0.374	0.443	0.398	0.3789	15.11
23)		cis-2-Hexene	0.227	0.315	0.369	0.336	0.391	0.362	0.3333	17.51
24)	S	Dibromofluoromethane (surr)	0.237	0.259	0.258	0.250	0.281	0.257	0.2571	5.47
25)		Ethyl tertiary butyl ether	0.481	0.574	0.713	0.672	0.768	0.644	0.6419	15.94
26)		2,2-Dimethylpentane	0.388	0.481	0.514	0.460	0.529	0.513	0.4808	10.87
27)		Methylcyclopentane	0.320	0.424	0.456	0.413	0.460	0.443	0.4194	12.36
28)		2,4-Dimethylpentane	0.321	0.377	0.417	0.367	0.422	0.412	0.3860	10.14
29)		2,2,3-Trimethylbutane	0.337	0.421	0.467	0.427	0.481	0.453	0.4310	11.96
30)		1,2-Dichloroethane	0.244	0.244	0.323	0.303	0.341	0.288	0.2904	13.85
31)		3,3-Dimethylpentane	0.390	0.479	0.541	0.484	0.539	0.522	0.4924	11.55
32)		Cyclohexane	0.286	0.340	0.383	0.349	0.398	0.368	0.3540	11.11
33)		2-Methylhexane	0.331	0.413	0.465	0.426	0.468	0.461	0.4273	12.22
34)	M	Benzene	0.682	0.834	0.953	0.890	1.008	0.874	0.8736	12.83
35)		2,3-Dimethylpentane	0.297	0.348	0.382	0.346	0.384	0.378	0.3559	9.35
36)		Thiophene	0.363	0.430	0.512	0.481	0.546	0.448	0.4634	13.96

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18554**
Calibration dates	**: 12/11/21 20:20 12/12/21 02:17**		

Calibration Files
2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

		Compound	2	5	50	100	200	20	Avg	%RSD
37)		1,1-Dimethylcyclopentane	0.167	0.208	0.252	0.233	0.260	0.227	0.2244	15.05
38)		3-Methylhexane	0.311	0.365	0.393	0.362	0.400	0.383	0.3691	8.69
39)		TAME	0.829	0.702	0.696	0.665	0.745	0.683	0.7199	8.30
40)		cis-1,3-Dimethylcyclopentane	0.283	0.267	0.321	0.298	0.331	0.298	0.2997	7.83
41)		3-Ethylpentane	0.412	0.467	0.521	0.481	0.518	0.512	0.4853	8.60
43)		1-Heptene/trans-1,2-DMCP	0.141	0.174	0.184	0.174	0.187	0.177	0.1728	9.64
44)		Isooctane	0.705	0.896	0.959	0.894	0.958	0.945	0.8927	10.82
45)		trans-3-Heptene	0.275	0.296	0.304	0.279	0.302	0.310	0.2943	4.77
46)		Heptane	0.244	0.309	0.350	0.330	0.333	0.339	0.3175	12.13
48)		trans-2-Heptene	0.182	0.253	0.302	0.275	0.297	0.285	0.2655	16.72
49)		cis-2-Heptene	0.183	0.230	0.272	0.266	0.277	0.253	0.2469	14.37
50)		2,2-Dimethylhexane	0.697	0.856	0.949	0.959	0.969	0.934	0.8940	11.69
51)		Methylcyclohexane	0.312	0.372	0.423	0.417	0.432	0.407	0.3938	11.45
52)		2,5-Dimethylhexane	0.331	0.427	0.472	0.473	0.473	0.462	0.4396	12.72
53)		2,4-Dimethylhexane	0.291	0.353	0.367	0.323	0.319	0.368	0.3366	9.18
54)		Ethylcyclopentane	0.255	0.312	0.357	0.354	0.363	0.341	0.3302	12.43
55)		2,2,3-Trimethylpentane	0.571	0.684	0.777	0.775	0.773	0.734	0.7190	11.26
57)		2,3,4-Trimethylpentane	0.404	0.491	0.549	0.545	0.535	0.525	0.5081	10.82
58)		2,3,3-Trimethylpentane	0.308	0.407	0.454	0.452	0.437	0.440	0.4164	13.39
59)		2,3-Dimethylhexane	0.354	0.425	0.506	0.493	0.484	0.464	0.4544	12.47
60)		2-Methylheptane	0.293	0.382	0.437	0.440	0.422	0.422	0.3992	13.97
61)		4-Methylheptane	0.422	0.466	0.551	0.550	0.535	0.534	0.5098	10.42
62)	S	Toluene-d8 (surr)	1.143	1.210	1.200	1.168	1.244	1.192	1.1927	2.93
63)		3-Methylheptane	0.413	0.394	0.372	0.379	0.356	0.396	0.3849	5.28
64)	S	2-Bromo-1-Chloropropane	0.224	0.269	0.343	0.345	0.362	0.322	0.3110	17.16
65)		3-Ethylhexane	0.471	0.522	0.595	0.611	0.578	0.561	0.5562	9.33
66)	M	Toluene	0.776	0.931	1.026	1.004	1.053	0.980	0.9618	10.40
67)		2-Methylthiophene	0.594	0.693	0.812	0.800	0.855	0.771	0.7543	12.62
68)		1,4-Dimethylcyclohexane (trans)	0.357	0.434	0.485	0.492	0.484	0.476	0.4544	11.48
69)		3-Methylthiophene	0.585	0.705	0.828	0.813	0.862	0.775	0.7613	13.39
70)		1-Octene	0.128	0.171	0.204	0.213	0.204	0.192	0.1853	17.04
71)		Octane	0.344	0.407	0.463	0.473	0.445	0.451	0.4305	11.14
72)		1,2-Dimethylcyclohexane (trans)	0.279	0.318	0.367	0.368	0.346	0.354	0.3386	10.13
73)		1,2-Dibromoethane	0.183	0.203	0.251	0.255	0.269	0.237	0.2330	14.26
75)		cis-2-Octene	0.193	0.255	0.312	0.311	0.298	0.288	0.2762	16.55
76)		Isopropylcyclopentane	0.326	0.370	0.437	0.441	0.417	0.428	0.4034	11.34

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18554**
Calibration dates	**: 12/11/21 20:20 12/12/21 02:17**		

Calibration Files
2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

	Compound	2	5	50	100	200	20	Avg	%RSD
77)	cis-1,2-Dimethylcyclohexane	0.271	0.324	0.369	0.378	0.352	0.354	0.3412	11.44
78)	2,5-Dimethylheptane	0.445	0.505	0.646	0.664	0.613	0.608	0.5802	14.89
79)	3,5-Dimethylheptane	0.616	0.695	0.781	0.801	0.767	0.779	0.7397	9.58
80)	3,3-Dimethylheptane	0.381	0.415	0.502	0.520	0.475	0.491	0.4638	11.71
81)	1,1,4-Trimethylcyclohexane	0.332	0.379	0.437	0.450	0.419	0.421	0.4066	10.71
82)	2,3-Dimethylheptane	0.446	0.504	0.574	0.601	0.539	0.557	0.5369	10.32
83)	3,4-Dimethylheptane	0.310	0.334	0.363	0.383	0.336	0.353	0.3463	7.37
84)	4-Methyloctane	0.402	0.412	0.547	0.557	0.502	0.564	0.4972	14.74
85)	2-Methyloctane	0.407	0.494	0.503	0.546	0.475	0.450	0.4791	9.92
86)	Ethylbenzene	0.873	1.009	1.198	1.200	1.152	1.125	1.0927	11.76
87) S	1-Chloro-2-Fluorobenzene	0.466	0.527	0.616	0.617	0.615	0.587	0.5712	10.89
88)	2-Ethylthiophene	0.617	0.727	0.888	0.896	0.873	0.840	0.8069	13.86
89)	3-Methyloctane	0.619	0.724	0.855	0.905	0.806	0.818	0.7877	12.95
90)	3,3-Diethylpentane	0.747	0.844	0.973	1.018	0.912	0.941	0.9059	10.74
91)	p/m-Xylene	0.669	0.769	0.916	0.918	0.873	0.865	0.8352	11.69
92)	1-Nonene	0.141	0.163	0.219	0.238	0.215	0.197	0.1956	18.81
93)	trans-3-Nonene	0.211	0.254	0.321	0.339	0.302	0.303	0.2885	16.41
94)	cis-3-Nonene	0.227	0.298	0.366	0.380	0.339	0.338	0.3247	17.04
95)	Nonane	0.374	0.424	0.510	0.518	0.462	0.449	0.4563	11.80
96)	Styrene	0.452	0.573	0.757	0.769	0.742	0.702	0.6660	19.05
97) S	1,4-Dichlorobutane (H/surr)	0.327	0.352	0.448	0.428	0.425	0.420	0.4001	12.16
98)	o-Xylene	0.733	0.784	0.940	0.937	0.881	0.888	0.8603	9.78
99)	2-Nonene	0.219	0.248	0.316	0.339	0.298	0.300	0.2868	15.56
100)	Isopropylcyclohexane	0.331	0.368	0.442	0.467	0.413	0.423	0.4073	12.24
101) S	4-Bromofluorobenzene (surr)	0.511	0.492	0.511	0.506	0.490	0.514	0.5039	2.10
102)	Isopropylbenzene	0.937	0.983	1.189	1.198	1.101	1.136	1.0907	9.93
103)	3,3-Dimethyloctane	0.535	0.576	0.699	0.753	0.660	0.672	0.6494	12.37
104)	n-Propylbenzene	1.038	1.126	1.443	1.455	1.324	1.342	1.2880	13.20
105)	2-Methylnonane	0.321	0.363	0.459	0.477	0.413	0.439	0.4121	14.51
106)	3-Methylnonane	0.393	0.435	0.555	0.582	0.509	0.533	0.5011	14.56
107)	1-Methyl-3-ethylbenzene	0.881	0.926	1.200	1.200	1.096	1.133	1.0728	12.83
108)	1-Methyl-4-ethylbenzene	0.824	0.913	1.150	1.149	1.046	1.077	1.0265	12.86
109)	1,3,5-Trimethylbenzene	0.730	0.772	1.000	1.001	0.914	0.942	0.8932	12.99
110)	1-Decene	0.145	0.176	0.248	0.259	0.229	0.238	0.2157	20.92
111)	Isobutylcyclohexane	0.379	0.391	0.485	0.508	0.449	0.476	0.4478	11.75
112)	1-Methyl-2-ethylbenzene	0.905	0.953	1.204	1.180	1.084	1.144	1.0782	11.48

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18554**
Calibration dates	**: 12/11/21 20:20 12/12/21 02:17**		

Calibration Files
2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

	Compound	2	5	50	100	200	20	Avg	%RSD
113)	Decane	0.341	0.348	0.443	0.449	0.392	0.433	0.4011	12.02
114)	tert-Butylbenzene	0.668	0.696	0.874	0.862	0.781	0.850	0.7882	11.28
115)	1,2,4-Trimethylbenzene	0.780	0.809	1.052	1.038	0.954	1.005	0.9396	12.53
116)	Isobutylbenzene	0.885	0.921	1.200	1.174	1.052	1.140	1.0618	12.58
117)	sec-Butylbenzene	0.994	1.021	1.298	1.269	1.148	1.274	1.1673	11.53
118)	1-Methyl-3-isopropylbenzene	0.828	0.830	1.094	1.073	0.978	1.055	0.9763	12.37
119)	1-Methyl-4-isopropylbenzene	0.822	0.844	1.103	1.071	0.973	1.065	0.9799	12.43
120)	1,2,3-Trimethylbenzene	0.807	0.837	1.079	1.030	0.959	1.032	0.9574	11.69
121)	1-Methyl-2-isopropylbenzene	0.817	0.856	1.105	1.061	0.968	1.067	0.9790	12.23
122)	Indan	0.779	0.790	1.016	0.961	0.900	0.967	0.9022	10.91
123)	1,3-Diethylbenzene	0.508	0.543	0.704	0.677	0.619	0.690	0.6235	13.18
124)	1-Methyl-3-propylbenzene	0.984	1.031	1.338	1.271	1.157	1.315	1.1826	12.66
125)	Indene	0.711	0.777	1.008	0.957	0.919	0.954	0.8876	13.13
126)	1-Methyl-4-propylbenzene	1.170	1.224	1.567	1.503	1.374	1.553	1.3985	12.24
127)	n-Butylbenzene	0.927	0.981	1.249	1.201	1.095	1.237	1.1152	12.28
128)	1,2-Dimethyl-4-ethylbenzene	0.844	0.892	1.143	1.085	0.986	1.137	1.0145	12.59
129)	1,2-Diethylbenzene	0.434	0.431	0.553	0.520	0.478	0.542	0.4930	10.85
130)	1-Methyl-2-propylbenzene	1.061	1.111	1.416	1.339	1.221	1.412	1.2601	12.15
131)	1,4-Dimethyl-2-ethylbenzene	0.827	0.827	1.086	1.018	0.930	1.066	0.9591	12.05
132)	Undecane	0.403	0.426	0.561	0.530	0.444	0.576	0.4900	15.20
133)	1,3-Dimethyl-4-ethylbenzene	0.966	1.018	1.301	1.219	1.111	1.294	1.1516	12.36
134)	1,3-Dimethyl-5-ethylbenzene	0.892	0.923	1.187	1.110	1.012	1.175	1.0499	12.08
135)	1,3-Dimethyl-2-ethylbenzene	0.971	1.024	1.302	1.206	1.101	1.277	1.1467	11.87
136)	1,2-Dimethyl-3-ethylbenzene	0.881	0.902	1.166	1.082	0.983	1.150	1.0274	12.00
137)	1,2,4,5-Tetramethylbenzene	0.926	0.944	1.243	1.157	1.048	1.234	1.0919	12.88
138)	1,2,3,5-Tetramethylbenzene	0.828	0.874	1.125	1.041	0.937	1.117	0.9869	12.79
139)	Pentylbenzene	0.800	0.838	1.060	1.018	0.907	1.100	0.9539	12.95
140)	1,2,3,4-Tetramethylbenzene	1.136	1.179	1.483	1.384	1.239	1.492	1.3188	11.76
141)	1,3-DM-5-tert-Butylbenzene	0.770	0.792	0.967	0.942	0.836	1.006	0.8856	11.18
142)	Dodecane	0.327	0.359	0.407	0.317	0.267	0.461	0.3565	19.42
143)	1,3,5-Triethylbenzene	0.449	0.491	0.600	0.600	0.528	0.635	0.5504	13.23
144)	Naphthalene	1.153	1.223	1.457	1.284	1.219	1.425	1.2935	9.42
145)	Benzothiophene	0.694	0.754	0.904	0.791	0.774	0.874	0.7984	9.77
146)	1,2,4-Triethylbenzene	0.558	0.459	0.553	0.549	0.479	0.585	0.5305	9.36
147)	Hexylbenzene	0.697	0.781	0.902	0.913	0.798	0.971	0.8437	12.09
148)	MMT	0.385	0.420	0.511	0.454	0.419	0.518	0.4512	11.95

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18554**
Calibration dates	**: 12/11/21 20:20 12/12/21 02:17**		

Calibration Files

2 =V9000761.D 5 =V9000762.D 50 =V9000764.D 100 =V9000765.D 200 =V9000766.D 20 =V9000763.D

	Compound	2	5	50	100	200	20	Avg	%RSD
149)	Tridecane	0.407	0.438	0.390	0.292	0.268	0.513	0.3845	23.83
150)	2-Methylnaphthalene	0.749	0.777	0.924	0.850	0.795	0.934	0.8382	9.29
151)	1-Methylnaphthalene	0.654	0.696	0.822	0.758	0.703	0.849	0.7469	10.27
152)	Tetradecane	0.360	0.398	0.275	0.221	0.226	0.363	0.3070	24.86
153)	Pentadecane	0.286	0.277	0.175	0.152	0.146	0.219	0.2092	29.53#

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/07/21 17:19		
Lab File ID	: V9000731	**Init. Calib. Date(s)**	: 10/29/21	10/30/21	
Sample No	: WG1581735-2	**Init. Calib. Times**	: 21:26	03:23	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	77	0
3-Methyl-1-butene	0.337	0.317	.1	5.9	25	65	.01
Isopentane	0.188	0.169	.1	10.1	25	62	0
1-Pentene	0.217	0.215	.1	0.9	25	69	0
2-Methyl-1-butene	0.346	0.336	.1	2.9	25	67	0
Pentane	0.318	0.304	.1	4.4	25	67	0
trans-2-Pentene	0.38	0.374	.1	1.6	25	68	0
2-Methyl-1,3-butadiene	0.258	0.263	.1	-1.9	25	69	0
cis-2-Pentene	0.353	0.357	.1	-1.1	25	71	0
Tertiary butanol	0.059	0.072*	.1	-22	25	86	.09
2,2-Dimethylbutane	0.221	0.215	.1	2.7	25	70	0
4-Methyl-1-pentene	0.282	0.301	.1	-6.7	25	74	0
Cyclopentane	0.156	0.157	.1	-0.6	25	69	0
2,3-Dimethylbutane	0.115	0.113	.1	1.7	25	68	0
2-Methylpentane	0.387	0.406	.1	-4.9	25	72	0
MTBE	0.626	0.646	.1	-3.2	25	73	.04
3-Methylpentane	0.361	0.381	.1	-5.5	25	72	0
1-Hexene	0.218	0.228	.1	-4.6	25	69	0
Hexane	0.32	0.341	.1	-6.6	25	74	0
Diisopropyl ether	0.618	0.682	.1	-10.4	25	77	.03
trans-2-Hexene	0.362	0.395	.1	-9.1	25	75	0
2-Methyl-2-pentene	0.382	0.419	.1	-9.7	25	76	0
cis-2-Hexene	0.326	0.356	.1	-9.2	25	75	0
Dibromofluoromethane (surr	0.257	0.261	.1	-1.6	25	78	.02
Ethyl tertiary butyl ether	0.651	0.674	.1	-3.5	25	73	.03
2,2-Dimethylpentane	0.455	0.504	.1	-10.8	25	76	0
Methylcyclopentane	0.41	0.424	.1	-3.4	25	72	0
2,4-Dimethylpentane	0.359	0.424	.1	-18.1	25	80	0
2,2,3-Trimethylbutane	0.415	0.479	.1	-15.4	25	80	-.01
1,2-Dichloroethane	0.279	0.295	.1	-5.7	25	73	0
3,3-Dimethylpentane	0.467	0.547	.1	-17.1	25	81	0
Cyclohexane	0.343	0.386	.1	-12.5	25	78	-.01
2-Methylhexane	0.403	0.492	.1	-22.1	25	84	0
Benzene	0.887	0.914	.1	-3	25	73	-.01
2,3-Dimethylpentane	0.339	0.39	.1	-15	25	79	0
Thiophene	0.474	0.493	.1	-4	25	72	0
1,1-Dimethylcyclopentane	0.228	0.259	.1	-13.6	25	76	-.01
3-Methylhexane	0.345	0.416	.1	-20.6	25	83	-.02
TAME	0.72	0.67	.1	6.9	25	72	.01
cis-1,3-Dimethylcyclopenta	0.295	0.324	.1	-9.8	25	75	0
3-Ethylpentane	0.465	0.545	.1	-17.2	25	81	0
1-Heptene/trans-1,2-DMCP	0.175	0.199	.1	-13.7	25	78	-.01
Isooctane	0.87	1.039	.1	-19.4	25	83	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/07/21 17:19		
Lab File ID	: V9000731	**Init. Calib. Date(s)**	: 10/29/21	10/30/21	
Sample No	: WG1581735-2	**Init. Calib. Times**	: 21:26	03:23	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Heptene	0.276	0.317	.1	-14.9	25	82	-.01
Heptane	0.304	0.383	.1	-26*	25	87	-.01
trans-2-Heptene	0.262	0.319	.1	-21.8	25	85	-.02
cis-2-Heptene	0.24	0.286	.1	-19.2	25	83	0
2,2-Dimethylhexane	0.858	1.016	.1	-18.4	25	83	0
Methylcyclohexane	0.4	0.438	.1	-9.5	25	77	0
2,5-Dimethylhexane	0.434	0.506	.1	-16.6	25	82	0
2,4-Dimethylhexane	0.345	0.39	.1	-13	25	77	0
Ethylcyclopentane	0.326	0.374	.1	-14.7	25	80	0
2,2,3-Trimethylpentane	0.689	0.829	.1	-20.3	25	84	0
2,3,4-Trimethylpentane	0.483	0.581	.1	-20.3	25	86	0
2,3,3-Trimethylpentane	0.402	0.483	.1	-20.1	25	86	0
2,3-Dimethylhexane	0.44	0.531	.1	-20.7	25	91	0
2-Methylheptane	0.404	0.464	.1	-14.9	25	82	0
4-Methylheptane	0.478	0.577	.1	-20.7	25	94	0
Toluene-d8 (surr)	1.071	1.212	.1	-13.2	25	86	-.01
3-Methylheptane	0.373	0.42	.1	-12.6	25	86	0
3-Ethylhexane	0.527	0.616	.1	-16.9	25	80	0
Toluene	0.986	1.043	.1	-5.8	25	74	-.01
2-Methylthiophene	0.784	0.816	.1	-4.1	25	73	0
trans-1,4-Dimethylcyclohex	0.481	0.518	.1	-7.7	25	78	-.02
3-Methylthiophene	0.79	0.824	.1	-4.3	25	74	-.01
1-Octene	0.193	0.222	.1	-15	25	80	0
Octane	0.422	0.488	.1	-15.6	25	81	0
trans-1,2-Dimethylcyclohex	0.336	0.392	.1	-16.7	25	83	0
1,2-Dibromoethane	0.236	0.246	.1	-4.2	25	74	0
cis-2-Octene	0.287	0.328	.1	-14.3	25	81	-.01
Isopropylcyclopentane	0.404	0.449	.1	-11.1	25	76	0
cis-1,2-Dimethylcyclohexan	0.347	0.393	.1	-13.3	25	80	-.01
2,5-Dimethylheptane	0.592	0.685	.1	-15.7	25	83	-.01
3,5-Dimethylheptane	0.739	0.846	.1	-14.5	25	77	0
3,3-Dimethylheptane	0.479	0.535	.1	-11.7	25	79	0
1,1,4-Trimethylcyclohexane	0.427	0.47	.1	-10.1	25	79	0
2,3-Dimethylheptane	0.526	0.621	.1	-18.1	25	83	-.01
3,4-Dimethylheptane	0.335	0.395	.1	-17.9	25	84	-.02
4-Methyloctane	0.494	0.609	.1	-23.3	25	92	0
2-Methyloctane	0.451	0.507	.1	-12.4	25	73	0
Ethylbenzene	1.156	1.222	.1	-5.7	25	75	0
2-Ethylthiophene	0.857	0.905	.1	-5.6	25	74	0
3-Methyloctane	0.795	0.911	.1	-14.6	25	80	0
3,3-Diethylpentane	0.927	1.051	.1	-13.4	25	80	0
p/m-Xylene	0.888	0.916	.1	-3.2	25	73	0
1-Nonene	0.206	0.236	.1	-14.6	25	78	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/07/21 17:19		
Lab File ID	: V9000731	**Init. Calib. Date(s)**	: 10/29/21	10/30/21	
Sample No	: WG1581735-2	**Init. Calib. Times**	: 21:26	03:23	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Nonene	0.297	0.342	.1	-15.2	25	80	-.01
cis-3-Nonene	0.329	0.377	.1	-14.6	25	77	-.01
Nonane	0.44	0.52	.1	-18.2	25	82	-.02
Styrene	0.741	0.744	.1	-0.4	25	71	-.01
o-Xylene	0.906	0.929	.1	-2.5	25	73	-.01
2-Nonene	0.296	0.34	.1	-14.9	25	79	0
Isopropylcyclohexane	0.432	0.478	.1	-10.6	25	77	0
4-Bromofluorobenzene (surr	0.538	0.5	.1	7.1	25	73	-.02
Isopropylbenzene	1.175	1.209	.1	-2.9	25	74	0
3,3-Dimethyloctane	0.662	0.753	.1	-13.7	25	78	-.01
n-Propylbenzene	1.382	1.449	.1	-4.8	25	75	0
2-Methylnonane	0.388	0.487	.1	-25.5*	25	85	-.01
3-Methylnonane	0.494	0.592	.1	-19.8	25	81	0
1-Methyl-3-ethylbenzene	1.17	1.196	.1	-2.2	25	73	0
1-Methyl-4-ethylbenzene	1.119	1.157	.1	-3.4	25	74	0
1,3,5-Trimethylbenzene	0.979	1.003	.1	-2.5	25	73	0
1-Decene	0.219	0.266	.1	-21.5	25	82	0
Isobutylcyclohexane	0.468	0.52	.1	-11.1	25	77	0
1-Methyl-2-ethylbenzene	1.166	1.188	.1	-1.9	25	73	0
Decane	0.374	0.467	.1	-24.9	25	84	0
tert-Butylbenzene	0.874	0.884	.1	-1.1	25	73	0
1,2,4-Trimethylbenzene	1.03	1.052	.1	-2.1	25	74	0
Isobutylbenzene	1.132	1.22	.1	-7.8	25	77	0
sec-Butylbenzene	1.276	1.31	.1	-2.7	25	74	0
1-Methyl-3-isopropylbenzen	1.091	1.103	.1	-1.1	25	72	0
1-Methyl-4-isopropylbenzen	1.093	1.108	.1	-1.4	25	73	0
1,2,3-Trimethylbenzene	1.042	1.056	.1	-1.3	25	73	0
1-Methyl-2-isopropylbenzen	1.094	1.1	.1	-0.5	25	72	0
Indan	0.985	0.977	.1	0.8	25	72	0
1,3-Diethylbenzene	0.691	0.711	.1	-2.9	25	74	0
1-Methyl-3-propylbenzene	1.299	1.352	.1	-4.1	25	75	0
Indene	0.938	0.943	.1	-0.5	25	73	0
1-Methyl-4-propylbenzene	1.531	1.582	.1	-3.3	25	75	0
n-Butylbenzene	1.197	1.273	.1	-6.3	25	77	0
1,2-Dimethyl-4-ethylbenzen	1.134	1.138	.1	-0.4	25	73	0
1,2-Diethylbenzene	0.55	0.549	.1	0.2	25	73	0
1-Methyl-2-propylbenzene	1.376	1.415	.1	-2.8	25	74	0
1,4-Dimethyl-2-ethylbenzen	1.068	1.076	.1	-0.7	25	73	0
Undecane	0.472	0.603	.1	-27.8*	25	84	0
1,3-Dimethyl-4-ethylbenzen	1.282	1.294	.1	-0.9	25	73	0
1,3-Dimethyl-5-ethylbenzen	1.175	1.182	.1	-0.6	25	73	0
1,3-Dimethyl-2-ethylbenzen	1.274	1.269	.1	0.4	25	73	0
1,2-Dimethyl-3-ethylbenzen	1.148	1.133	.1	1.3	25	72	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.		**Lab Number**	: L2166503	
Project Name	: RED HILL		**Project Number**	:	
Instrument ID	: VOA9		**Calibration Date**	: 12/07/21 17:19	
Lab File ID	: V9000731		**Init. Calib. Date(s)**	: 10/29/21	10/30/21
Sample No	: WG1581735-2		**Init. Calib. Times**	: 21:26	03:23
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2,4,5-Tetramethylbenzene	1.226	1.206	.1	1.6	25	71	0
1,2,3,5-Tetramethylbenzene	1.106	1.087	.1	1.7	25	72	0
Pentylbenzene	1.034	1.081	.1	-4.5	25	75	0
1,2,3,4-Tetramethylbenzene	1.467	1.421	.1	3.1	25	71	0
1,3-DM-5-tert-Butylbenzene	1.012	0.978	.1	3.4	25	69	0
Dodecane	0.318	0.445	.1	-39.9*	25	100	0
1,3,5-Triethylbenzene	0.644	0.602	.1	6.5	25	67	0
Naphthalene	1.326	1.221	.1	7.9	25	70	0
Benzothiophene	0.801	0.748	.1	6.6	25	70	0
1,2,4-Triethylbenzene	0.611	0.549	.1	10.1	25	66	0
Hexylbenzene	0.923	0.9	.1	2.5	25	69	0
MMT	0.492	0.407	.1	17.3	25	63	0
Tridecane	0.361	0.436	.1	-20.8	25	102	0
2-Methylnaphthalene	0.897	0.733	.1	18.3	25	62	0
1-Methylnaphthalene	0.792	0.657	.1	17	25	63	0
Tetradecane	0.29	0.304	.1	-4.8	25	100	0
Pentadecane	0.211	0.21	.1	0.5	25	106	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/08/21 13:55		
Lab File ID	: V9000739	**Init. Calib. Date(s)**	: 10/29/21	10/30/21	
Sample No	: WG1581735-7	**Init. Calib. Times**	: 21:26	03:23	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	78	-.02
3-Methyl-1-butene	0.337	0.386	.1	-14.5	25	80	-.06
Isopentane	0.188	0.224	.1	-19.1	25	84	-.05
1-Pentene	0.217	0.261	.1	-20.3	25	85	-.07
2-Methyl-1-butene	0.346	0.39	.1	-12.7	25	79	-.06
Pentane	0.318	0.383	.1	-20.4	25	86	-.07
trans-2-Pentene	0.38	0.414	.1	-8.9	25	77	-.06
2-Methyl-1,3-butadiene	0.258	0.275	.1	-6.6	25	73	-.06
cis-2-Pentene	0.353	0.392	.1	-11	25	79	-.05
Tertiary butanol	0.059	0.071*	.1	-20.3	25	86	.04
2,2-Dimethylbutane	0.221	0.247	.1	-11.8	25	81	-.05
4-Methyl-1-pentene	0.282	0.317	.1	-12.4	25	79	-.06
Cyclopentane	0.156	0.167	.1	-7.1	25	74	-.05
2,3-Dimethylbutane	0.115	0.118	.1	-2.6	25	71	-.05
2-Methylpentane	0.387	0.444	.1	-14.7	25	80	-.06
MTBE	0.626	0.605	.1	3.4	25	69	-.02
3-Methylpentane	0.361	0.395	.1	-9.4	25	76	-.05
1-Hexene	0.218	0.247	.1	-13.3	25	76	-.05
Hexane	0.32	0.35	.1	-9.4	25	77	-.05
Diisopropyl ether	0.618	0.659	.1	-6.6	25	75	-.02
trans-2-Hexene	0.362	0.395	.1	-9.1	25	76	-.05
2-Methyl-2-pentene	0.382	0.386	.1	-1	25	71	-.05
cis-2-Hexene	0.326	0.348	.1	-6.7	25	75	-.05
Dibromofluoromethane (surr	0.257	0.234	.1	8.9	25	71	-.03
Ethyl tertiary butyl ether	0.651	0.635	.1	2.5	25	69	-.02
2,2-Dimethylpentane	0.455	0.487	.1	-7	25	75	-.05
Methylcyclopentane	0.41	0.431	.1	-5.1	25	75	-.05
2,4-Dimethylpentane	0.359	0.402	.1	-12	25	77	-.04
2,2,3-Trimethylbutane	0.415	0.449	.1	-8.2	25	76	-.04
1,2-Dichloroethane	0.279	0.304	.1	-9	25	77	-.04
3,3-Dimethylpentane	0.467	0.523	.1	-12	25	79	-.04
Cyclohexane	0.343	0.369	.1	-7.6	25	76	-.04
2-Methylhexane	0.403	0.465	.1	-15.4	25	80	-.04
Benzene	0.887	0.894	.1	-0.8	25	73	-.04
2,3-Dimethylpentane	0.339	0.377	.1	-11.2	25	77	-.04
Thiophene	0.474	0.479	.1	-1.1	25	71	-.04
1,1-Dimethylcyclopentane	0.228	0.234	.1	-2.6	25	70	-.06
3-Methylhexane	0.345	0.386	.1	-11.9	25	78	-.05
TAME	0.72	0.666	.1	7.5	25	73	-.03
cis-1,3-Dimethylcyclopenta	0.295	0.312	.1	-5.8	25	73	-.03
3-Ethylpentane	0.465	0.512	.1	-10.1	25	77	-.04
1-Heptene/trans-1,2-DMCP	0.175	0.178	.1	-1.7	25	71	-.05
Isooctane	0.87	0.93	.1	-6.9	25	76	-.04

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/08/21 13:55		
Lab File ID	: V9000739	**Init. Calib. Date(s)**	: 10/29/21	10/30/21	
Sample No	: WG1581735-7	**Init. Calib. Times**	: 21:26	03:23	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Heptene	0.276	0.303	.1	-9.8	25	80	-.03
Heptane	0.304	0.344	.1	-13.2	25	80	-.04
trans-2-Heptene	0.262	0.293	.1	-11.8	25	79	-.04
cis-2-Heptene	0.24	0.262	.1	-9.2	25	77	-.03
2,2-Dimethylhexane	0.858	0.929	.1	-8.3	25	77	-.02
Methylcyclohexane	0.4	0.405	.1	-1.3	25	72	-.02
2,5-Dimethylhexane	0.434	0.464	.1	-6.9	25	76	-.02
2,4-Dimethylhexane	0.345	0.367	.1	-6.4	25	74	-.03
Ethylcyclopentane	0.326	0.34	.1	-4.3	25	74	-.03
2,2,3-Trimethylpentane	0.689	0.731	.1	-6.1	25	75	-.03
2,3,4-Trimethylpentane	0.483	0.545	.1	-12.8	25	82	-.03
2,3,3-Trimethylpentane	0.402	0.454	.1	-12.9	25	82	-.03
2,3-Dimethylhexane	0.44	0.427	.1	3	25	74	-.03
2-Methylheptane	0.404	0.426	.1	-5.4	25	77	-.02
4-Methylheptane	0.478	0.472	.1	1.3	25	78	-.02
Toluene-d8 (surr)	1.071	1.162	.1	-8.5	25	84	-.03
3-Methylheptane	0.373	0.391	.1	-4.8	25	82	-.02
3-Ethylhexane	0.527	0.646	.1	-22.6	25	85	-.03
Toluene	0.986	1.009	.1	-2.3	25	73	-.03
2-Methylthiophene	0.784	0.791	.1	-0.9	25	72	-.03
trans-1,4-Dimethylcyclohex	0.481	0.495	.1	-2.9	25	76	-.03
3-Methylthiophene	0.79	0.81	.1	-2.5	25	74	-.03
1-Octene	0.193	0.214	.1	-10.9	25	78	-.02
Octane	0.422	0.481	.1	-14	25	81	-.02
trans-1,2-Dimethylcyclohex	0.336	0.37	.1	-10.1	25	79	-.02
1,2-Dibromoethane	0.236	0.246	.1	-4.2	25	76	-.02
cis-2-Octene	0.287	0.313	.1	-9.1	25	78	-.02
Isopropylcyclopentane	0.404	0.452	.1	-11.9	25	78	-.02
cis-1,2-Dimethylcyclohexan	0.347	0.392	.1	-13	25	81	-.02
2,5-Dimethylheptane	0.592	0.649	.1	-9.6	25	80	-.02
3,5-Dimethylheptane	0.739	0.852	.1	-15.3	25	79	-.02
3,3-Dimethylheptane	0.479	0.527	.1	-10	25	79	-.02
1,1,4-Trimethylcyclohexane	0.427	0.459	.1	-7.5	25	78	-.02
2,3-Dimethylheptane	0.526	0.611	.1	-16.2	25	83	-.02
3,4-Dimethylheptane	0.335	0.381	.1	-13.7	25	83	-.02
4-Methyloctane	0.494	0.574	.1	-16.2	25	88	-.01
2-Methyloctane	0.451	0.538	.1	-19.3	25	79	-.01
Ethylbenzene	1.156	1.221	.1	-5.6	25	76	-.02
2-Ethylthiophene	0.857	0.913	.1	-6.5	25	76	-.01
3-Methyloctane	0.795	0.899	.1	-13.1	25	80	-.02
3,3-Diethylpentane	0.927	1.038	.1	-12	25	80	-.02
p/m-Xylene	0.888	0.92	.1	-3.6	25	75	0
1-Nonene	0.206	0.234	.1	-13.6	25	79	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/08/21 13:55		
Lab File ID	: V9000739	**Init. Calib. Date(s)**	: 10/29/21	10/30/21	
Sample No	: WG1581735-7	**Init. Calib. Times**	: 21:26	03:23	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Nonene	0.297	0.339	.1	-14.1	25	80	-.02
cis-3-Nonene	0.329	0.392	.1	-19.1	25	82	-.02
Nonane	0.44	0.535	.1	-21.6	25	86	-.02
Styrene	0.741	0.758	.1	-2.3	25	73	-.01
o-Xylene	0.906	0.941	.1	-3.9	25	75	-.02
2-Nonene	0.296	0.339	.1	-14.5	25	81	-.01
Isopropylcyclohexane	0.432	0.473	.1	-9.5	25	78	-.01
4-Bromofluorobenzene (surr	0.538	0.515	.1	4.3	25	76	-.02
Isopropylbenzene	1.175	1.231	.1	-4.8	25	77	-.01
3,3-Dimethyloctane	0.662	0.751	.1	-13.4	25	79	-.02
n-Propylbenzene	1.382	1.484	.1	-7.4	25	78	-.01
2-Methylnonane	0.388	0.498	.1	-28.4*	25	88	-.01
3-Methylnonane	0.494	0.599	.1	-21.3	25	83	0
1-Methyl-3-ethylbenzene	1.17	1.232	.1	-5.3	25	76	0
1-Methyl-4-ethylbenzene	1.119	1.183	.1	-5.7	25	77	0
1,3,5-Trimethylbenzene	0.979	1.033	.1	-5.5	25	77	0
1-Decene	0.219	0.271	.1	-23.7	25	85	0
Isobutylcyclohexane	0.468	0.518	.1	-10.7	25	78	0
1-Methyl-2-ethylbenzene	1.166	1.221	.1	-4.7	25	76	-.01
Decane	0.374	0.474	.1	-26.7*	25	87	0
tert-Butylbenzene	0.874	0.904	.1	-3.4	25	76	0
1,2,4-Trimethylbenzene	1.03	1.081	.1	-5	25	77	0
Isobutylbenzene	1.132	1.191	.1	-5.2	25	76	0
sec-Butylbenzene	1.276	1.338	.1	-4.9	25	77	0
1-Methyl-3-isopropylbenzen	1.091	1.118	.1	-2.5	25	75	0
1-Methyl-4-isopropylbenzen	1.093	1.128	.1	-3.2	25	75	0
1,2,3-Trimethylbenzene	1.042	1.087	.1	-4.3	25	77	-.01
1-Methyl-2-isopropylbenzen	1.094	1.125	.1	-2.8	25	75	0
Indan	0.985	1.008	.1	-2.3	25	75	0
1,3-Diethylbenzene	0.691	0.719	.1	-4.1	25	76	0
1-Methyl-3-propylbenzene	1.299	1.362	.1	-4.8	25	77	0
Indene	0.938	0.977	.1	-4.2	25	77	0
1-Methyl-4-propylbenzene	1.531	1.604	.1	-4.8	25	77	0
n-Butylbenzene	1.197	1.276	.1	-6.6	25	78	0
1,2-Dimethyl-4-ethylbenzen	1.134	1.151	.1	-1.5	25	74	0
1,2-Diethylbenzene	0.55	0.557	.1	-1.3	25	75	0
1-Methyl-2-propylbenzene	1.376	1.436	.1	-4.4	25	76	0
1,4-Dimethyl-2-ethylbenzen	1.068	1.085	.1	-1.6	25	75	0
Undecane	0.472	0.585	.1	-23.9	25	83	0
1,3-Dimethyl-4-ethylbenzen	1.282	1.31	.1	-2.2	25	75	0
1,3-Dimethyl-5-ethylbenzen	1.175	1.192	.1	-1.4	25	75	0
1,3-Dimethyl-2-ethylbenzen	1.274	1.295	.1	-1.6	25	75	0
1,2-Dimethyl-3-ethylbenzen	1.148	1.16	.1	-1	25	75	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.		**Lab Number**	: L2166503	
Project Name	: RED HILL		**Project Number**	:	
Instrument ID	: VOA9		**Calibration Date**	: 12/08/21 13:55	
Lab File ID	: V9000739		**Init. Calib. Date(s)**	: 10/29/21	10/30/21
Sample No	: WG1581735-7		**Init. Calib. Times**	: 21:26	03:23
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2,4,5-Tetramethylbenzene	1.226	1.239	.1	-1.1	25	75	0
1,2,3,5-Tetramethylbenzene	1.106	1.114	.1	-0.7	25	75	0
Pentylbenzene	1.034	1.067	.1	-3.2	25	75	0
1,2,3,4-Tetramethylbenzene	1.467	1.465	.1	0.1	25	74	0
1,3-DM-5-tert-Butylbenzene	1.012	0.97	.1	4.2	25	70	0
Dodecane	0.318	0.421	.1	-32.4*	25	96	0
1,3,5-Triethylbenzene	0.644	0.6	.1	6.8	25	67	0
Naphthalene	1.326	1.365	.1	-2.9	25	79	0
Benzothiophene	0.801	0.841	.1	-5	25	80	0
1,2,4-Triethylbenzene	0.611	0.552	.1	9.7	25	68	0
Hexylbenzene	0.923	0.904	.1	2.1	25	70	0
MMT	0.492	0.488	.1	0.8	25	77	0
Tridecane	0.361	0.397	.1	-10	25	94	0
2-Methylnaphthalene	0.897	0.886	.1	1.2	25	76	0
1-Methylnaphthalene	0.792	0.794	.1	-0.3	25	78	0
Tetradecane	0.29	0.284	.1	2.1	25	95	0
Pentadecane	0.211	0.183	.1	13.3	25	93	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/13/21 09:57		
Lab File ID	: V9000772	**Init. Calib. Date(s)**	: 12/11/21	12/12/21	
Sample No	: WG1582700-2	**Init. Calib. Times**	: 20:20	02:17	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	104	-.02
3-Methyl-1-butene	0.375	0.372	.1	0.8	25	96	-.09
Isopentane	0.218	0.208	.1	4.6	25	94	-.09
1-Pentene	0.245	0.221	.1	9.8	25	87	-.09
2-Methyl-1-butene	0.378	0.342	.1	9.5	25	87	-.08
Pentane	0.376	0.323	.1	14.1	25	87	-.08
trans-2-Pentene	0.404	0.368	.1	8.9	25	87	-.09
2-Methyl-1,3-butadiene	0.266	0.252	.1	5.3	25	89	-.08
cis-2-Pentene	0.38	0.349	.1	8.2	25	88	-.08
Tertiary butanol	0.076	0.076*	.1	0	25	104	.03
2,2-Dimethylbutane	0.248	0.219	.1	11.7	25	88	-.07
4-Methyl-1-pentene	0.301	0.272	.1	9.6	25	86	-.06
Cyclopentane	0.166	0.157	.1	5.4	25	92	-.06
2,3-Dimethylbutane	0.118	0.109	.1	7.6	25	89	-.06
2-Methylpentane	0.433	0.385	.1	11.1	25	87	-.07
MTBE	0.614	0.606	.1	1.3	25	96	-.05
3-Methylpentane	0.379	0.352	.1	7.1	25	89	-.06
1-Hexene	0.22	0.208	.1	5.5	25	89	-.05
Hexane	0.338	0.313	.1	7.4	25	88	-.05
Diisopropyl ether	0.644	0.606	.1	5.9	25	88	-.04
trans-2-Hexene	0.373	0.352	.1	5.6	25	89	-.05
2-Methyl-2-pentene	0.379	0.352	.1	7.1	25	90	-.05
cis-2-Hexene	0.333	0.316	.1	5.1	25	89	-.05
Dibromofluoromethane (surr	0.257	0.229	.1	10.9	25	92	-.04
Ethyl tertiary butyl ether	0.642	0.617	.1	3.9	25	90	-.03
2,2-Dimethylpentane	0.481	0.458	.1	4.8	25	92	-.05
Methylcyclopentane	0.419	0.373	.1	11	25	85	-.04
2,4-Dimethylpentane	0.386	0.382	.1	1	25	95	-.05
2,2,3-Trimethylbutane	0.431	0.423	.1	1.9	25	94	-.04
1,2-Dichloroethane	0.29	0.29	.1	0	25	93	-.04
3,3-Dimethylpentane	0.492	0.49	.1	0.4	25	94	-.03
Cyclohexane	0.354	0.349	.1	1.4	25	95	-.04
2-Methylhexane	0.427	0.436	.1	-2.1	25	97	-.04
Benzene	0.874	0.814	.1	6.9	25	89	-.03
2,3-Dimethylpentane	0.356	0.348	.1	2.2	25	94	-.03
Thiophene	0.463	0.446	.1	3.7	25	90	-.02
1,1-Dimethylcyclopentane	0.224	0.232	.1	-3.6	25	95	-.04
3-Methylhexane	0.369	0.362	.1	1.9	25	95	-.04
TAME	0.72	0.618	.1	14.2	25	92	-.03
cis-1,3-Dimethylcyclopenta	0.3	0.284	.1	5.3	25	92	-.04
3-Ethylpentane	0.485	0.485	.1	0	25	97	-.03
1-Heptene/trans-1,2-DMCP	0.173	0.175	.1	-1.2	25	99	-.04
Isooctane	0.893	0.906	.1	-1.5	25	98	-.03

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/13/21 09:57		
Lab File ID	: V9000772	**Init. Calib. Date(s)**	: 12/11/21	12/12/21	
Sample No	: WG1582700-2	**Init. Calib. Times**	: 20:20	02:17	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Heptene	0.294	0.277	.1	5.8	25	95	-.03
Heptane	0.318	0.331	.1	-4.1	25	98	-.04
trans-2-Heptene	0.266	0.284	.1	-6.8	25	98	-.03
cis-2-Heptene	0.247	0.256	.1	-3.6	25	98	-.04
2,2-Dimethylhexane	0.894	0.916	.1	-2.5	25	100	-.02
Methylcyclohexane	0.394	0.405	.1	-2.8	25	99	-.03
2,5-Dimethylhexane	0.44	0.456	.1	-3.6	25	100	-.02
2,4-Dimethylhexane	0.337	0.339	.1	-0.6	25	96	-.03
Ethylcyclopentane	0.33	0.342	.1	-3.6	25	99	-.03
2,2,3-Trimethylpentane	0.719	0.743	.1	-3.3	25	99	-.02
2,3,4-Trimethylpentane	0.508	0.531	.1	-4.5	25	100	-.01
2,3,3-Trimethylpentane	0.416	0.438	.1	-5.3	25	100	-.02
2,3-Dimethylhexane	0.454	0.491	.1	-8.1	25	101	-.02
2-Methylheptane	0.399	0.428	.1	-7.3	25	102	-.02
4-Methylheptane	0.51	0.538	.1	-5.5	25	101	-.01
Toluene-d8 (surr)	1.193	1.135	.1	4.9	25	98	-.02
3-Methylheptane	0.385	0.371	.1	3.6	25	104	-.02
3-Ethylhexane	0.556	0.586	.1	-5.4	25	102	-.02
Toluene	0.962	0.998	.1	-3.7	25	101	-.02
2-Methylthiophene	0.754	0.796	.1	-5.6	25	102	-.02
trans-1,4-Dimethylcyclohex	0.454	0.484	.1	-6.6	25	104	-.01
3-Methylthiophene	0.761	0.81	.1	-6.4	25	102	-.01
1-Octene	0.185	0.206	.1	-11.4	25	104	-.02
Octane	0.43	0.46	.1	-7	25	103	-.01
trans-1,2-Dimethylcyclohex	0.339	0.365	.1	-7.7	25	103	-.02
1,2-Dibromoethane	0.233	0.257	.1	-10.3	25	106	-.01
cis-2-Octene	0.276	0.311	.1	-12.7	25	104	-.02
Isopropylcyclopentane	0.403	0.445	.1	-10.4	25	106	-.02
cis-1,2-Dimethylcyclohexan	0.341	0.379	.1	-11.1	25	106	-.02
2,5-Dimethylheptane	0.58	0.657	.1	-13.3	25	106	0
3,5-Dimethylheptane	0.74	0.812	.1	-9.7	25	108	0
3,3-Dimethylheptane	0.464	0.521	.1	-12.3	25	108	-.01
1,1,4-Trimethylcyclohexane	0.407	0.454	.1	-11.5	25	108	-.02
2,3-Dimethylheptane	0.537	0.6	.1	-11.7	25	108	0
3,4-Dimethylheptane	0.346	0.393	.1	-13.6	25	112	-.02
4-Methyloctane	0.497	0.586	.1	-17.9	25	111	-.01
2-Methyloctane	0.479	0.507	.1	-5.8	25	105	0
Ethylbenzene	1.093	1.236	.1	-13.1	25	107	0
2-Ethylthiophene	0.807	0.926	.1	-14.7	25	108	0
3-Methyloctane	0.788	0.901	.1	-14.3	25	109	-.01
3,3-Diethylpentane	0.906	1.039	.1	-14.7	25	111	-.01
p/m-Xylene	0.835	0.937	.1	-12.2	25	106	0
1-Nonene	0.196	0.234	.1	-19.4	25	111	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/13/21 09:57		
Lab File ID	: V9000772	**Init. Calib. Date(s)**	: 12/11/21	12/12/21	
Sample No	: WG1582700-2	**Init. Calib. Times**	: 20:20	02:17	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Nonene	0.288	0.342	.1	-18.8	25	111	-.01
cis-3-Nonene	0.325	0.391	.1	-20.3	25	111	-.01
Nonane	0.456	0.53	.1	-16.2	25	108	0
Styrene	0.666	0.779	.1	-17	25	107	-.01
o-Xylene	0.86	0.963	.1	-12	25	106	-.01
2-Nonene	0.287	0.346	.1	-20.6	25	113	0
Isopropylcyclohexane	0.407	0.49	.1	-20.4	25	115	-.01
4-Bromofluorobenzene (surr	0.504	0.517	.1	-2.6	25	105	0
Isopropylbenzene	1.091	1.258	.1	-15.3	25	110	0
3,3-Dimethyloctane	0.649	0.769	.1	-18.5	25	114	-.01
n-Propylbenzene	1.288	1.521	.1	-18.1	25	109	0
2-Methylnonane	0.412	0.496	.1	-20.4	25	112	0
3-Methylnonane	0.501	0.6	.1	-19.8	25	112	0
1-Methyl-3-ethylbenzene	1.073	1.251	.1	-16.6	25	108	0
1-Methyl-4-ethylbenzene	1.026	1.202	.1	-17.2	25	108	0
1,3,5-Trimethylbenzene	0.893	1.043	.1	-16.8	25	108	0
1-Decene	0.216	0.272	.1	-25.9*	25	114	0
Isobutylcyclohexane	0.448	0.534	.1	-19.2	25	114	0
1-Methyl-2-ethylbenzene	1.078	1.246	.1	-15.6	25	107	0
Decane	0.401	0.474	.1	-18.2	25	111	0
tert-Butylbenzene	0.788	0.919	.1	-16.6	25	109	0
1,2,4-Trimethylbenzene	0.94	1.088	.1	-15.7	25	107	0
Isobutylbenzene	1.062	1.227	.1	-15.5	25	106	0
sec-Butylbenzene	1.167	1.357	.1	-16.3	25	108	0
1-Methyl-3-isopropylbenzen	0.976	1.134	.1	-16.2	25	108	0
1-Methyl-4-isopropylbenzen	0.98	1.133	.1	-15.6	25	107	0
1,2,3-Trimethylbenzene	0.957	1.087	.1	-13.6	25	105	0
1-Methyl-2-isopropylbenzen	0.979	1.125	.1	-14.9	25	106	0
Indan	0.902	1.017	.1	-12.7	25	104	0
1,3-Diethylbenzene	0.624	0.722	.1	-15.7	25	107	0
1-Methyl-3-propylbenzene	1.183	1.361	.1	-15	25	106	0
Indene	0.888	0.98	.1	-10.4	25	101	0
1-Methyl-4-propylbenzene	1.398	1.601	.1	-14.5	25	106	0
n-Butylbenzene	1.115	1.277	.1	-14.5	25	106	0
1,2-Dimethyl-4-ethylbenzen	1.014	1.154	.1	-13.8	25	105	0
1,2-Diethylbenzene	0.493	0.557	.1	-13	25	105	0
1-Methyl-2-propylbenzene	1.26	1.426	.1	-13.2	25	104	0
1,4-Dimethyl-2-ethylbenzen	0.959	1.082	.1	-12.8	25	103	0
Undecane	0.49	0.587	.1	-19.8	25	109	0
1,3-Dimethyl-4-ethylbenzen	1.152	1.299	.1	-12.8	25	104	0
1,3-Dimethyl-5-ethylbenzen	1.05	1.181	.1	-12.5	25	103	0
1,3-Dimethyl-2-ethylbenzen	1.147	1.28	.1	-11.6	25	102	0
1,2-Dimethyl-3-ethylbenzen	1.027	1.141	.1	-11.1	25	102	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/13/21 09:57		
Lab File ID	: V9000772	**Init. Calib. Date(s)**	: 12/11/21	12/12/21	
Sample No	: WG1582700-2	**Init. Calib. Times**	: 20:20	02:17	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2,4,5-Tetramethylbenzene	1.092	1.211	.1	-10.9	25	101	0
1,2,3,5-Tetramethylbenzene	0.987	1.091	.1	-10.5	25	101	0
Pentylbenzene	0.954	1.055	.1	-10.6	25	103	0
1,2,3,4-Tetramethylbenzene	1.319	1.427	.1	-8.2	25	100	0
1,3-DM-5-tert-Butylbenzene	0.886	0.973	.1	-9.8	25	104	0
Dodecane	0.356	0.414	.1	-16.3	25	106	0
1,3,5-Triethylbenzene	0.55	0.599	.1	-8.9	25	104	0
Naphthalene	1.293	1.261	.1	2.5	25	90	0
Benzothiophene	0.798	0.771	.1	3.4	25	88	0
1,2,4-Triethylbenzene	0.531	0.543	.1	-2.3	25	102	0
Hexylbenzene	0.844	0.902	.1	-6.9	25	104	0
MMT	0.451	0.42	.1	6.9	25	85	0
Tridecane	0.385	0.391	.1	-1.6	25	104	0
2-Methylnaphthalene	0.838	0.758	.1	9.5	25	85	0
1-Methylnaphthalene	0.747	0.672	.1	10	25	85	0
Tetradecane	0.307	0.272	.1	11.4	25	102	0
Pentadecane	0.209	0.181	.1	13.4	25	107	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/14/21 12:37		
Lab File ID	: V9000789	**Init. Calib. Date(s)**	: 12/11/21	12/12/21	
Sample No	: WG1582700-7	**Init. Calib. Times**	: 20:20	02:17	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	106	-.02
3-Methyl-1-butene	0.375	0.436	.1	-16.3	25	115	-.1
Isopentane	0.218	0.233	.1	-6.9	25	107	-.1
1-Pentene	0.245	0.272	.1	-11	25	109	-.09
2-Methyl-1-butene	0.378	0.43	.1	-13.8	25	112	-.09
Pentane	0.376	0.401	.1	-6.6	25	110	-.08
trans-2-Pentene	0.404	0.466	.1	-15.3	25	113	-.09
2-Methyl-1,3-butadiene	0.266	0.31	.1	-16.5	25	112	-.08
cis-2-Pentene	0.38	0.437	.1	-15	25	113	-.08
Tertiary butanol	0.076	0.078*	.1	-2.6	25	108	.02
2,2-Dimethylbutane	0.248	0.271	.1	-9.3	25	111	-.09
4-Methyl-1-pentene	0.301	0.337	.1	-12	25	109	-.07
Cyclopentane	0.166	0.184	.1	-10.8	25	110	-.07
2,3-Dimethylbutane	0.118	0.133	.1	-12.7	25	111	-.07
2-Methylpentane	0.433	0.479	.1	-10.6	25	110	-.08
MTBE	0.614	0.643	.1	-4.7	25	103	-.06
3-Methylpentane	0.379	0.43	.1	-13.5	25	110	-.07
1-Hexene	0.22	0.25	.1	-13.6	25	109	-.05
Hexane	0.338	0.385	.1	-13.9	25	111	-.07
Diisopropyl ether	0.644	0.664	.1	-3.1	25	98	-.05
trans-2-Hexene	0.373	0.432	.1	-15.8	25	111	-.06
2-Methyl-2-pentene	0.379	0.438	.1	-15.6	25	113	-.06
cis-2-Hexene	0.333	0.387	.1	-16.2	25	111	-.06
Dibromofluoromethane (surr	0.257	0.25	.1	2.7	25	102	-.04
Ethyl tertiary butyl ether	0.642	0.656	.1	-2.2	25	97	-.05
2,2-Dimethylpentane	0.481	0.541	.1	-12.5	25	111	-.05
Methylcyclopentane	0.419	0.471	.1	-12.4	25	109	-.05
2,4-Dimethylpentane	0.386	0.423	.1	-9.6	25	107	-.06
2,2,3-Trimethylbutane	0.431	0.486	.1	-12.8	25	110	-.05
1,2-Dichloroethane	0.29	0.289	.1	0.3	25	95	-.04
3,3-Dimethylpentane	0.492	0.545	.1	-10.8	25	107	-.04
Cyclohexane	0.354	0.389	.1	-9.9	25	107	-.05
2-Methylhexane	0.427	0.481	.1	-12.6	25	109	-.05
Benzene	0.874	0.919	.1	-5.1	25	102	-.05
2,3-Dimethylpentane	0.356	0.393	.1	-10.4	25	109	-.04
Thiophene	0.463	0.466	.1	-0.6	25	96	-.04
1,1-Dimethylcyclopentane	0.224	0.257	.1	-14.7	25	108	-.05
3-Methylhexane	0.369	0.409	.1	-10.8	25	110	-.05
TAME	0.72	0.66	.1	8.3	25	100	-.04
cis-1,3-Dimethylcyclopenta	0.3	0.331	.1	-10.3	25	109	-.05
3-Ethylpentane	0.485	0.536	.1	-10.5	25	109	-.04
1-Heptene/trans-1,2-DMCP	0.173	0.199	.1	-15	25	114	-.04
Isooctane	0.893	1.022	.1	-14.4	25	113	-.04

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/14/21 12:37		
Lab File ID	: V9000789	**Init. Calib. Date(s)**	: 12/11/21	12/12/21	
Sample No	: WG1582700-7	**Init. Calib. Times**	: 20:20	02:17	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Heptene	0.294	0.313	.1	-6.5	25	109	-.04
Heptane	0.318	0.355	.1	-11.6	25	107	-.04
trans-2-Heptene	0.266	0.312	.1	-17.3	25	109	-.04
cis-2-Heptene	0.247	0.279	.1	-13	25	109	-.04
2,2-Dimethylhexane	0.894	0.987	.1	-10.4	25	110	-.03
Methylcyclohexane	0.394	0.441	.1	-11.9	25	110	-.04
2,5-Dimethylhexane	0.44	0.49	.1	-11.4	25	110	-.03
2,4-Dimethylhexane	0.337	0.382	.1	-13.4	25	110	-.03
Ethylcyclopentane	0.33	0.367	.1	-11.2	25	108	-.04
2,2,3-Trimethylpentane	0.719	0.802	.1	-11.5	25	109	-.03
2,3,4-Trimethylpentane	0.508	0.547	.1	-7.7	25	105	-.02
2,3,3-Trimethylpentane	0.416	0.451	.1	-8.4	25	105	-.03
2,3-Dimethylhexane	0.454	0.495	.1	-9	25	103	-.04
2-Methylheptane	0.399	0.44	.1	-10.3	25	106	-.03
4-Methylheptane	0.51	0.543	.1	-6.5	25	104	-.03
Toluene-d8 (surr)	1.193	1.213	.1	-1.7	25	107	-.02
3-Methylheptane	0.385	0.388	.1	-0.8	25	110	-.04
3-Ethylhexane	0.556	0.592	.1	-6.5	25	105	-.02
Toluene	0.962	1.06	.1	-10.2	25	109	-.03
2-Methylthiophene	0.754	0.838	.1	-11.1	25	109	-.02
trans-1,4-Dimethylcyclohex	0.454	0.494	.1	-8.8	25	108	-.02
3-Methylthiophene	0.761	0.841	.1	-10.5	25	107	-.02
1-Octene	0.185	0.205	.1	-10.8	25	106	-.03
Octane	0.43	0.443	.1	-3	25	101	-.02
trans-1,2-Dimethylcyclohex	0.339	0.364	.1	-7.4	25	105	-.03
1,2-Dibromoethane	0.233	0.249	.1	-6.9	25	105	-.02
cis-2-Octene	0.276	0.309	.1	-12	25	105	-.02
Isopropylcyclopentane	0.403	0.431	.1	-6.9	25	104	-.03
cis-1,2-Dimethylcyclohexan	0.341	0.361	.1	-5.9	25	103	-.03
2,5-Dimethylheptane	0.58	0.607	.1	-4.7	25	99	-.01
3,5-Dimethylheptane	0.74	0.758	.1	-2.4	25	102	-.01
3,3-Dimethylheptane	0.464	0.47	.1	-1.3	25	99	-.02
1,1,4-Trimethylcyclohexane	0.407	0.417	.1	-2.5	25	101	-.02
2,3-Dimethylheptane	0.537	0.521	.1	3	25	96	-.02
3,4-Dimethylheptane	0.346	0.332	.1	4	25	97	-.02
4-Methyloctane	0.497	0.51	.1	-2.6	25	98	-.02
2-Methyloctane	0.479	0.43	.1	10.2	25	90	0
Ethylbenzene	1.093	1.197	.1	-9.5	25	106	-.01
2-Ethylthiophene	0.807	0.899	.1	-11.4	25	107	-.02
3-Methyloctane	0.788	0.772	.1	2	25	95	-.02
3,3-Diethylpentane	0.906	0.893	.1	1.4	25	97	-.01
p/m-Xylene	0.835	0.898	.1	-7.5	25	103	0
1-Nonene	0.196	0.193	.1	1.5	25	93	-.02

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 12/14/21 12:37		
Lab File ID	: V9000789	**Init. Calib. Date(s)**	: 12/11/21	12/12/21	
Sample No	: WG1582700-7	**Init. Calib. Times**	: 20:20	02:17	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Nonene	0.288	0.282	.1	2.1	25	93	-.01
cis-3-Nonene	0.325	0.317	.1	2.5	25	92	0
Nonane	0.456	0.431	.1	5.5	25	89	-.01
Styrene	0.666	0.736	.1	-10.5	25	103	-.01
o-Xylene	0.86	0.913	.1	-6.2	25	103	-.02
2-Nonene	0.287	0.277	.1	3.5	25	93	0
Isopropylcyclohexane	0.407	0.392	.1	3.7	25	94	-.02
4-Bromofluorobenzene (surr	0.504	0.493	.1	2.2	25	102	-.01
Isopropylbenzene	1.091	1.134	.1	-3.9	25	101	-.02
3,3-Dimethyloctane	0.649	0.594	.1	8.5	25	90	-.01
n-Propylbenzene	1.288	1.329	.1	-3.2	25	97	0
2-Methylnonane	0.412	0.37	.1	10.2	25	85	0
3-Methylnonane	0.501	0.45	.1	10.2	25	86	0
1-Methyl-3-ethylbenzene	1.073	1.108	.1	-3.3	25	98	0
1-Methyl-4-ethylbenzene	1.026	1.066	.1	-3.9	25	98	0
1,3,5-Trimethylbenzene	0.893	0.927	.1	-3.8	25	98	0
1-Decene	0.216	0.2	.1	7.4	25	85	0
Isobutylcyclohexane	0.448	0.403	.1	10	25	88	0
1-Methyl-2-ethylbenzene	1.078	1.114	.1	-3.3	25	98	0
Decane	0.401	0.352	.1	12.2	25	84	0
tert-Butylbenzene	0.788	0.788	.1	0	25	95	0
1,2,4-Trimethylbenzene	0.94	0.977	.1	-3.9	25	98	0
Isobutylbenzene	1.062	1.037	.1	2.4	25	91	0
sec-Butylbenzene	1.167	1.141	.1	2.2	25	93	0
1-Methyl-3-isopropylbenzen	0.976	0.957	.1	1.9	25	92	0
1-Methyl-4-isopropylbenzen	0.98	0.957	.1	2.3	25	92	0
1,2,3-Trimethylbenzene	0.957	1.002	.1	-4.7	25	98	0
1-Methyl-2-isopropylbenzen	0.979	0.972	.1	0.7	25	93	0
Indan	0.902	0.948	.1	-5.1	25	99	0
1,3-Diethylbenzene	0.624	0.614	.1	1.6	25	92	0
1-Methyl-3-propylbenzene	1.183	1.146	.1	3.1	25	90	0
Indene	0.888	0.939	.1	-5.7	25	98	0
1-Methyl-4-propylbenzene	1.398	1.339	.1	4.2	25	90	0
n-Butylbenzene	1.115	1.07	.1	4	25	90	0
1,2-Dimethyl-4-ethylbenzen	1.014	0.978	.1	3.6	25	90	0
1,2-Diethylbenzene	0.493	0.483	.1	2	25	92	0
1-Methyl-2-propylbenzene	1.26	1.234	.1	2.1	25	92	0
1,4-Dimethyl-2-ethylbenzen	0.959	0.932	.1	2.8	25	91	0
Undecane	0.49	0.446	.1	9	25	84	0
1,3-Dimethyl-4-ethylbenzen	1.152	1.122	.1	2.6	25	91	0
1,3-Dimethyl-5-ethylbenzen	1.05	1.017	.1	3.1	25	90	0
1,3-Dimethyl-2-ethylbenzen	1.147	1.136	.1	1	25	92	0
1,2-Dimethyl-3-ethylbenzen	1.027	1.011	.1	1.6	25	92	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.		**Lab Number**	: L2166503	
Project Name	: RED HILL		**Project Number**	:	
Instrument ID	: VOA9		**Calibration Date**	: 12/14/21 12:37	
Lab File ID	: V9000789		**Init. Calib. Date(s)**	: 12/11/21	12/12/21
Sample No	: WG1582700-7		**Init. Calib. Times**	: 20:20	02:17
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2,4,5-Tetramethylbenzene	1.092	1.064	.1	2.6	25	90	0
1,2,3,5-Tetramethylbenzene	0.987	0.952	.1	3.5	25	89	0
Pentylbenzene	0.954	0.852	.1	10.7	25	85	0
1,2,3,4-Tetramethylbenzene	1.319	1.253	.1	5	25	89	0
1,3-DM-5-tert-Butylbenzene	0.886	0.77	.1	13.1	25	84	0
Dodecane	0.356	0.317	.1	11	25	82	0
1,3,5-Triethylbenzene	0.55	0.476	.1	13.5	25	84	0
Naphthalene	1.293	1.345	.1	-4	25	97	0
Benzothiophene	0.798	0.852	.1	-6.8	25	99	0
1,2,4-Triethylbenzene	0.531	0.442	.1	16.8	25	84	0
Hexylbenzene	0.844	0.709	.1	16	25	83	0
MMT	0.451	0.454	.1	-0.7	25	94	0
Tridecane	0.385	0.306	.1	20.5	25	83	0
2-Methylnaphthalene	0.838	0.808	.1	3.6	25	92	0
1-Methylnaphthalene	0.747	0.728	.1	2.5	25	94	0
Tetradecane	0.307	0.215	.1	30*	25	82	0
Pentadecane	0.209	0.135	.1	35.4*	25	81	0

*** Value outside of QC limits.**

Internal Standard Area and RT Summary
Form 8a
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 12/07/21 17:19:00
Sample No	: WG1581735-2	**Lab File ID**	: V9000731

	Chlorobenzene-d5					
	Area	RT	Area	RT	Area	RT
WG1581735-2	266772	39.09				
Upper Limit	533544	39.59				
Lower Limit	133386	38.59				
Sample ID						
WG1581735-3 LCS	269330	39.09				
WG1581735-4 LCSD	257192	39.09				
WG1581735-5 BLANK	269594	39.08				
ERH2051	267367	39.07				
WG1581735-7 CCAL	270867	39.08				

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Internal Standard Area and RT Summary
Form 8a
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 12/13/21 09:57:00
Sample No	: WG1582700-2	**Lab File ID**	: V9000772

	Chlorobenzene-d5					
	Area	RT	Area	RT	Area	RT
WG1582700-2	272223	39.07				
Upper Limit	544446	39.57				
Lower Limit	136112	38.57				
Sample ID						
WG1582700-3 LCS	258118	39.09				
WG1582700-4 LCSD	249896	39.09				
WG1582700-5 BLANK	246272	39.08				
ERH1967	273195	39.08				
ERH1967	272839	39.08				
WG1582700-7 CCAL	277055	39.07				

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/04/21 17:38
Sample Matrix	: OIL	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032144	**Analyst**	: MJS
Sample Amount	: 0.1112 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	4250	180	--	
124-18-5	n-Decane (C10)	19200	180	--	
1120-21-4	n-Undecane (C11)	44000	180	--	E
112-40-3	n-Dodecane (C12)	47800	180	--	E
629-50-5	n-Tridecane (C13)	39400	180	--	E
3891-98-3	2,6,10-Trimethyldodecane (1380)	5600	180	--	
629-59-4	n-Tetradecane (C14)	20200	180	--	
TMTD1470	2,6,10-Trimethyltridecane (1470)	4490	180	--	
629-62-9	n-Pentadecane (C15)	7320	180	--	
544-76-3	n-Hexadecane (C16)	1430	180	--	
3892-00-0	Norpristane (1650)	202	180	--	
629-78-7	n-Heptadecane (C17)	337	180	--	
1921-70-6	Pristane	ND	180	--	U
593-45-3	n-Octadecane (C18)	ND	180	--	U
638-36-8	Phytane	ND	180	--	U
629-92-5	n-Nonadecane (C19)	ND	180	--	U
112-95-8	n-Eicosane (C20)	ND	180	--	U
629-94-7	n-Heneicosane (C21)	ND	180	--	U
629-97-0	n-Docosane (C22)	ND	180	--	U
638-67-5	n-Tricosane (C23)	ND	180	--	U
646-31-1	n-Tetracosane (C24)	ND	180	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/04/21 17:38
Sample Matrix	: OIL	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032144	**Analyst**	: MJS
Sample Amount	: 0.1112 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	180	--	U
630-01-3	n-Hexacosane (C26)	ND	180	--	U
593-49-7	n-Heptacosane (C27)	ND	180	--	U
630-02-4	n-Octacosane (C28)	ND	180	--	U
630-03-5	n-Nonacosane (C29)	ND	180	--	U
638-68-6	n-Triacontane (C30)	ND	180	--	U
630-04-6	n-Hentriacontane (C31)	ND	180	--	U
544-85-4	n-Dotriacontane (C32)	ND	180	--	U
630-05-7	n-Tritriacontane (C33)	ND	180	--	U
14167-59-0	n-Tetratriacontane (C34)	ND	180	--	U
630-07-9	n-Pentatriacontane (C35)	ND	180	--	U
630-06-8	n-Hexatriacontane (C36)	ND	180	--	U
7194-84-5	n-Heptatriacontane (C37)	ND	180	--	U
7194-85-6	n-Octatriacontane (C38)	ND	180	--	U
7194-86-7	n-Nonatriacontane (C39)	ND	180	--	U
4181-95-7	n-Tetracontane (C40)	ND	180	--	U
NONE	C9-C44 Total Petroleu	899000	5940	--	
NONE	C10-C28 DRO	870000	3780	--	
NONE	C28-C40 ORO	ND	1980	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-01D	**Date Collected**	: 11/24/21 00:00
Client ID	: ERH1967	**Date Received**	: 11/29/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/05/21 12:50
Sample Matrix	: OIL	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 2
Lab File ID	: F1712032168	**Analyst**	: MJS
Sample Amount	: 0.1112 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1120-21-4	n-Undecane (C11)	43200	360	--	
112-40-3	n-Dodecane (C12)	46600	360	--	
629-50-5	n-Tridecane (C13)	39900	360	--	

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/05/21 03:55
Sample Matrix	: WATER	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032158	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	0.016	0.001	--	
124-18-5	n-Decane (C10)	0.190	0.001	--	
1120-21-4	n-Undecane (C11)	0.685	0.001	--	E
112-40-3	n-Dodecane (C12)	0.889	0.001	--	E
629-50-5	n-Tridecane (C13)	0.873	0.005	--	E
3891-98-3	2,6,10-Trimethyldodecane (1380)	0.115	0.001	--	
629-59-4	n-Tetradecane (C14)	0.455	0.001	--	E
TMTD1470	2,6,10-Trimethyltridecane (1470)	0.104	0.001	--	
629-62-9	n-Pentadecane (C15)	0.178	0.001	--	
544-76-3	n-Hexadecane (C16)	0.033	0.001	--	
3892-00-0	Norpristane (1650)	0.005	0.001	--	
629-78-7	n-Heptadecane (C17)	0.008	0.001	--	
1921-70-6	Pristane	0.004	0.001	--	
593-45-3	n-Octadecane (C18)	0.002	0.001	--	
638-36-8	Phytane	ND	0.001	--	U
629-92-5	n-Nonadecane (C19)	ND	0.001	--	U
112-95-8	n-Eicosane (C20)	ND	0.0010	--	U
629-94-7	n-Heneicosane (C21)	ND	0.0010	--	U
629-97-0	n-Docosane (C22)	ND	0.0010	--	U
638-67-5	n-Tricosane (C23)	ND	0.0010	--	U
646-31-1	n-Tetracosane (C24)	ND	0.0010	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/05/21 03:55
Sample Matrix	: WATER	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032158	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	0.005	--	U
630-01-3	n-Hexacosane (C26)	ND	0.001	--	U
593-49-7	n-Heptacosane (C27)	ND	0.001	--	U
630-02-4	n-Octacosane (C28)	0.005	0.001	--	C
630-03-5	n-Nonacosane (C29)	ND	0.001	--	U
638-68-6	n-Triacontane (C30)	ND	0.001	--	U
630-04-6	n-Hentriacontane (C31)	ND	0.001	--	U
544-85-4	n-Dotriacontane (C32)	ND	0.001	--	U
630-05-7	n-Tritriacontane (C33)	ND	0.0010	--	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.001	--	U
630-07-9	n-Pentatriacontane (C35)	ND	0.001	--	U
630-06-8	n-Hexatriacontane (C36)	ND	0.001	--	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.001	--	U
7194-85-6	n-Octatriacontane (C38)	ND	0.001	--	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.001	--	U
4181-95-7	n-Tetracontane (C40)	ND	0.001	--	U
NONE	C9-C44 Total Petroleu	16.7	0.033	--	
NONE	C10-C28 DRO	16.6	0.021	--	
NONE	C28-C40 ORO	0.026	0.011	--	

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-02D	**Date Collected**	: 12/02/21 17:00
Client ID	: ERH2051	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/05/21 14:18
Sample Matrix	: WATER	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 10
Lab File ID	: F1712032170	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1120-21-4	n-Undecane (C11)	0.778	0.010	--	
112-40-3	n-Dodecane (C12)	1.04	0.010	--	
629-50-5	n-Tridecane (C13)	0.967	0.050	--	
629-59-4	n-Tetradecane (C14)	0.517	0.010	--	

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-03	**Date Collected**	: 12/03/21 13:15
Client ID	: ERH2052	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/15/21 03:07
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F18121421025	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	0.210	0.040	--	
124-18-5	n-Decane (C10)	2.56	0.040	--	
1120-21-4	n-Undecane (C11)	0.857	0.040	--	
112-40-3	n-Dodecane (C12)	1.95	0.040	--	
629-50-5	n-Tridecane (C13)	62.0	0.200	--	E
3891-98-3	2,6,10-Trimethyldodecane (1380)	8.84	0.040	--	E
629-59-4	n-Tetradecane (C14)	ND	0.040	--	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	0.175	0.040	--	
629-62-9	n-Pentadecane (C15)	ND	0.040	--	U
544-76-3	n-Hexadecane (C16)	ND	0.040	--	U
3892-00-0	Norpristane (1650)	0.061	0.040	--	G
629-78-7	n-Heptadecane (C17)	ND	0.040	--	U
1921-70-6	Pristane	ND	0.040	--	U
593-45-3	n-Octadecane (C18)	ND	0.040	--	U
638-36-8	Phytane	ND	0.040	--	U
629-92-5	n-Nonadecane (C19)	ND	0.040	--	U
112-95-8	n-Eicosane (C20)	0.070	0.040	--	
629-94-7	n-Heneicosane (C21)	0.081	0.040	--	
629-97-0	n-Docosane (C22)	0.048	0.040	--	
638-67-5	n-Tricosane (C23)	ND	0.040	--	U
646-31-1	n-Tetracosane (C24)	ND	0.040	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-03	**Date Collected**	: 12/03/21 13:15
Client ID	: ERH2052	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 12/15/21 03:07
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F18121421025	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	0.200	--	U
630-01-3	n-Hexacosane (C26)	ND	0.040	--	U
593-49-7	n-Heptacosane (C27)	ND	0.040	--	U
630-02-4	n-Octacosane (C28)	0.110	0.040	--	
630-03-5	n-Nonacosane (C29)	0.122	0.040	--	
638-68-6	n-Triacontane (C30)	0.063	0.040	--	
630-04-6	n-Hentriacontane (C31)	ND	0.040	--	U
544-85-4	n-Dotriacontane (C32)	ND	0.040	--	U
630-05-7	n-Tritriacontane (C33)	ND	0.040	--	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.040	--	U
630-07-9	n-Pentatriacontane (C35)	ND	0.040	--	U
630-06-8	n-Hexatriacontane (C36)	ND	0.040	--	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.040	--	U
7194-85-6	n-Octatriacontane (C38)	ND	0.040	--	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.040	--	U
4181-95-7	n-Tetracontane (C40)	ND	0.040	--	U
NONE	Total Petroleum Hydrocarbons (C9-C44)	232	1.32	--	
TSATHC	Total Saturated Hydrocarbons	5.51	0.040	--	

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-03D	**Date Collected**	: 12/03/21 13:15
Client ID	: ERH2052	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 01/05/22 00:32
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 20
Lab File ID	: F18010422020	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-50-5	n-Tridecane (C13)	ND	4.00	--	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	0.800	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-06D	**Date Collected**	: 12/03/21 13:15
Client ID	: ERH2052 PRE SILICA	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 01/05/22 01:58
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 20
Lab File ID	: F18010422022	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	3.20	--	U
124-18-5	n-Decane (C10)	4.18	3.20	--	
1120-21-4	n-Undecane (C11)	ND	3.20	--	U
112-40-3	n-Dodecane (C12)	ND	3.20	--	U
629-50-5	n-Tridecane (C13)	ND	16.0	--	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	3.20	--	U
629-59-4	n-Tetradecane (C14)	ND	3.20	--	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	3.20	--	U
629-62-9	n-Pentadecane (C15)	ND	3.20	--	U
544-76-3	n-Hexadecane (C16)	ND	3.20	--	U
3892-00-0	Norpristane (1650)	ND	3.20	--	U
629-78-7	n-Heptadecane (C17)	ND	3.20	--	U
1921-70-6	Pristane	4.85	3.20	--	
593-45-3	n-Octadecane (C18)	ND	3.20	--	U
638-36-8	Phytane	ND	3.20	--	U
629-92-5	n-Nonadecane (C19)	ND	3.20	--	U
112-95-8	n-Eicosane (C20)	ND	3.20	--	U
629-94-7	n-Heneicosane (C21)	ND	3.20	--	U
629-97-0	n-Docosane (C22)	55.5	3.20	--	G
638-67-5	n-Tricosane (C23)	ND	3.20	--	U
646-31-1	n-Tetracosane (C24)	ND	3.20	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: L2166503-06D	**Date Collected**	: 12/03/21 13:15
Client ID	: ERH2052 PRE SILICA	**Date Received**	: 12/04/21
Sample Location	: HAWAII	**Date Analyzed**	: 01/05/22 01:58
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 20
Lab File ID	: F18010422022	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	59.3	16.0	--	
630-01-3	n-Hexacosane (C26)	4.52	3.20	--	
593-49-7	n-Heptacosane (C27)	ND	3.20	--	U
630-02-4	n-Octacosane (C28)	ND	3.20	--	U
630-03-5	n-Nonacosane (C29)	ND	3.20	--	U
638-68-6	n-Triacontane (C30)	ND	3.20	--	U
630-04-6	n-Hentriacontane (C31)	ND	3.20	--	U
544-85-4	n-Dotriacontane (C32)	ND	3.20	--	U
630-05-7	n-Tritriacontane (C33)	ND	3.20	--	U
14167-59-0	n-Tetratriacontane (C34)	ND	3.20	--	U
630-07-9	n-Pentatriacontane (C35)	ND	3.20	--	U
630-06-8	n-Hexatriacontane (C36)	ND	3.20	--	U
7194-84-5	n-Heptatriacontane (C37)	ND	3.20	--	U
7194-85-6	n-Octatriacontane (C38)	ND	3.20	--	U
7194-86-7	n-Nonatriacontane (C39)	ND	3.20	--	U
4181-95-7	n-Tetracontane (C40)	ND	3.20	--	U
NONE	Total Petroleum Hydrocarbons (C9-C44)	6970	106	--	
TSATHC	Total Saturated Hydrocarbons	128	3.20	--	

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1579102-1	**Date Collected**	: NA
Client ID	: WG1579102-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/04/21 11:44
Sample Matrix	: OIL	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032136	**Analyst**	: MJS
Sample Amount	: 0.1 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: NA
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	200	--	U
124-18-5	n-Decane (C10)	ND	200	--	U
1120-21-4	n-Undecane (C11)	ND	200	--	U
112-40-3	n-Dodecane (C12)	ND	200	--	U
629-50-5	n-Tridecane (C13)	ND	200	--	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	200	--	U
629-59-4	n-Tetradecane (C14)	ND	200	--	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	200	--	U
629-62-9	n-Pentadecane (C15)	ND	200	--	U
544-76-3	n-Hexadecane (C16)	ND	200	--	U
3892-00-0	Norpristane (1650)	ND	200	--	U
629-78-7	n-Heptadecane (C17)	ND	200	--	U
1921-70-6	Pristane	ND	200	--	U
593-45-3	n-Octadecane (C18)	ND	200	--	U
638-36-8	Phytane	ND	200	--	U
629-92-5	n-Nonadecane (C19)	ND	200	--	U
112-95-8	n-Eicosane (C20)	ND	200	--	U
629-94-7	n-Heneicosane (C21)	ND	200	--	U
629-97-0	n-Docosane (C22)	ND	200	--	U
638-67-5	n-Tricosane (C23)	ND	200	--	U
646-31-1	n-Tetracosane (C24)	ND	200	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1579102-1	**Date Collected**	: NA
Client ID	: WG1579102-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/04/21 11:44
Sample Matrix	: OIL	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032136	**Analyst**	: MJS
Sample Amount	: 0.1 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: NA
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	200	--	U
630-01-3	n-Hexacosane (C26)	ND	200	--	U
593-49-7	n-Heptacosane (C27)	ND	200	--	U
630-02-4	n-Octacosane (C28)	ND	200	--	U
630-03-5	n-Nonacosane (C29)	ND	200	--	U
638-68-6	n-Triacontane (C30)	ND	200	--	U
630-04-6	n-Hentriacontane (C31)	ND	200	--	U
544-85-4	n-Dotriacontane (C32)	ND	200	--	U
630-05-7	n-Tritriacontane (C33)	ND	200	--	U
14167-59-0	n-Tetratriacontane (C34)	ND	200	--	U
630-07-9	n-Pentatriacontane (C35)	ND	200	--	U
630-06-8	n-Hexatriacontane (C36)	ND	200	--	U
7194-84-5	n-Heptatriacontane (C37)	ND	200	--	U
7194-85-6	n-Octatriacontane (C38)	ND	200	--	U
7194-86-7	n-Nonatriacontane (C39)	ND	200	--	U
4181-95-7	n-Tetracontane (C40)	ND	200	--	U
NONE	C9-C44 Total Petroleu	ND	6600	--	U
NONE	C10-C28 DRO	ND	4200	--	U
NONE	C28-C40 ORO	ND	2200	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1579126-1	**Date Collected**	: NA
Client ID	: WG1579126-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/04/21 23:30
Sample Matrix	: WATER	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032152	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	0.001	--	U
124-18-5	n-Decane (C10)	ND	0.001	--	U
1120-21-4	n-Undecane (C11)	ND	0.001	--	U
112-40-3	n-Dodecane (C12)	ND	0.001	--	U
629-50-5	n-Tridecane (C13)	ND	0.005	--	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	0.001	--	U
629-59-4	n-Tetradecane (C14)	ND	0.001	--	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	0.001	--	U
629-62-9	n-Pentadecane (C15)	ND	0.001	--	U
544-76-3	n-Hexadecane (C16)	ND	0.001	--	U
3892-00-0	Norpristane (1650)	ND	0.001	--	U
629-78-7	n-Heptadecane (C17)	ND	0.001	--	U
1921-70-6	Pristane	ND	0.001	--	U
593-45-3	n-Octadecane (C18)	ND	0.001	--	U
638-36-8	Phytane	ND	0.001	--	U
629-92-5	n-Nonadecane (C19)	ND	0.001	--	U
112-95-8	n-Eicosane (C20)	ND	0.001	--	U
629-94-7	n-Heneicosane (C21)	ND	0.001	--	U
629-97-0	n-Docosane (C22)	ND	0.001	--	U
638-67-5	n-Tricosane (C23)	ND	0.001	--	U
646-31-1	n-Tetracosane (C24)	ND	0.001	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1579126-1	**Date Collected**	: NA
Client ID	: WG1579126-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/04/21 23:30
Sample Matrix	: WATER	**Date Extracted**	: 12/04/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1712032152	**Analyst**	: MJS
Sample Amount	: 1000 ml	**Instrument ID**	: FID17
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	0.005	--	U
630-01-3	n-Hexacosane (C26)	ND	0.001	--	U
593-49-7	n-Heptacosane (C27)	ND	0.001	--	U
630-02-4	n-Octacosane (C28)	ND	0.001	--	
630-03-5	n-Nonacosane (C29)	ND	0.001	--	
638-68-6	n-Triacontane (C30)	ND	0.001	--	U
630-04-6	n-Hentriacontane (C31)	ND	0.001	--	U
544-85-4	n-Dotriacontane (C32)	ND	0.001	--	U
630-05-7	n-Tritriacontane (C33)	ND	0.001	--	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.001	--	U
630-07-9	n-Pentatriacontane (C35)	ND	0.001	--	U
630-06-8	n-Hexatriacontane (C36)	ND	0.001	--	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.001	--	U
7194-85-6	n-Octatriacontane (C38)	ND	0.001	--	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.001	--	U
4181-95-7	n-Tetracontane (C40)	ND	0.001	--	U
NONE	C9-C44 Total Petroleu	ND	0.033	--	U
NONE	C10-C28 DRO	ND	0.021	--	U
NONE	C28-C40 ORO	ND	0.011	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1582496-1	**Date Collected**	: NA
Client ID	: WG1582496-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/14/21 17:05
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F18121421011	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	0.040	--	U
124-18-5	n-Decane (C10)	ND	0.040	--	U
1120-21-4	n-Undecane (C11)	ND	0.040	--	U
112-40-3	n-Dodecane (C12)	ND	0.040	--	U
629-50-5	n-Tridecane (C13)	ND	0.200	--	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	0.040	--	U
629-59-4	n-Tetradecane (C14)	ND	0.040	--	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	0.040	--	U
629-62-9	n-Pentadecane (C15)	ND	0.040	--	U
544-76-3	n-Hexadecane (C16)	ND	0.040	--	U
3892-00-0	Norpristane (1650)	ND	0.040	--	U
629-78-7	n-Heptadecane (C17)	ND	0.040	--	U
1921-70-6	Pristane	ND	0.040	--	U
593-45-3	n-Octadecane (C18)	ND	0.040	--	
638-36-8	Phytane	ND	0.040	--	U
629-92-5	n-Nonadecane (C19)	ND	0.040	--	U
112-95-8	n-Eicosane (C20)	ND	0.040	--	U
629-94-7	n-Heneicosane (C21)	ND	0.040	--	U
629-97-0	n-Docosane (C22)	ND	0.040	--	U
638-67-5	n-Tricosane (C23)	ND	0.040	--	U
646-31-1	n-Tetracosane (C24)	ND	0.040	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1582496-1	**Date Collected**	: NA
Client ID	: WG1582496-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 12/14/21 17:05
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F18121421011	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	0.200	--	U
630-01-3	n-Hexacosane (C26)	ND	0.040	--	U
593-49-7	n-Heptacosane (C27)	ND	0.040	--	U
630-02-4	n-Octacosane (C28)	ND	0.040	--	U
630-03-5	n-Nonacosane (C29)	ND	0.040	--	U
638-68-6	n-Triacontane (C30)	ND	0.040	--	U
630-04-6	n-Hentriacontane (C31)	ND	0.040	--	U
544-85-4	n-Dotriacontane (C32)	ND	0.040	--	U
630-05-7	n-Tritriacontane (C33)	ND	0.040	--	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.040	--	U
630-07-9	n-Pentatriacontane (C35)	ND	0.040	--	U
630-06-8	n-Hexatriacontane (C36)	ND	0.040	--	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.040	--	U
7194-85-6	n-Octatriacontane (C38)	ND	0.040	--	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.040	--	U
4181-95-7	n-Tetracontane (C40)	ND	0.040	--	U
NONE	Total Petroleum Hydrocarbons (C9-C44)	ND	1.32	--	U
TSATHC	Total Saturated Hydrocarbons	ND	0.040	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1590340-1	**Date Collected**	: NA
Client ID	: WG1590340-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/04/22 18:47
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F18010422012	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	0.160	--	U
124-18-5	n-Decane (C10)	ND	0.160	--	U
1120-21-4	n-Undecane (C11)	ND	0.160	--	U
112-40-3	n-Dodecane (C12)	ND	0.160	--	U
629-50-5	n-Tridecane (C13)	ND	0.800	--	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	0.160	--	U
629-59-4	n-Tetradecane (C14)	ND	0.160	--	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	0.160	--	U
629-62-9	n-Pentadecane (C15)	ND	0.160	--	U
544-76-3	n-Hexadecane (C16)	ND	0.160	--	U
3892-00-0	Norpristane (1650)	ND	0.160	--	U
629-78-7	n-Heptadecane (C17)	ND	0.160	--	U
1921-70-6	Pristane	ND	0.160	--	U
593-45-3	n-Octadecane (C18)	ND	0.160	--	U
638-36-8	Phytane	ND	0.160	--	U
629-92-5	n-Nonadecane (C19)	ND	0.160	--	U
112-95-8	n-Eicosane (C20)	ND	0.160	--	U
629-94-7	n-Heneicosane (C21)	ND	0.160	--	U
629-97-0	n-Docosane (C22)	ND	0.160	--	U
638-67-5	n-Tricosane (C23)	ND	0.160	--	U
646-31-1	n-Tetracosane (C24)	ND	0.160	--	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab ID	: WG1590340-1	**Date Collected**	: NA
Client ID	: WG1590340-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/04/22 18:47
Sample Matrix	: LIQUID	**Date Extracted**	: 12/13/21
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F18010422012	**Analyst**	: WR
Sample Amount	: 25 ml	**Instrument ID**	: FID18
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	ND	0.800	--	U
630-01-3	n-Hexacosane (C26)	ND	0.160	--	U
593-49-7	n-Heptacosane (C27)	ND	0.160	--	U
630-02-4	n-Octacosane (C28)	ND	0.160	--	U
630-03-5	n-Nonacosane (C29)	ND	0.160	--	U
638-68-6	n-Triacontane (C30)	ND	0.160	--	U
630-04-6	n-Hentriacontane (C31)	ND	0.160	--	U
544-85-4	n-Dotriacontane (C32)	ND	0.160	--	U
630-05-7	n-Tritriacontane (C33)	ND	0.160	--	U
14167-59-0	n-Tetratriacontane (C34)	ND	0.160	--	U
630-07-9	n-Pentatriacontane (C35)	ND	0.160	--	U
630-06-8	n-Hexatriacontane (C36)	ND	0.160	--	U
7194-84-5	n-Heptatriacontane (C37)	ND	0.160	--	U
7194-85-6	n-Octatriacontane (C38)	ND	0.160	--	U
7194-86-7	n-Nonatriacontane (C39)	ND	0.160	--	U
4181-95-7	n-Tetracontane (C40)	ND	0.160	--	U
NONE	Total Petroleum Hydrocarbons (C9-C44)	ND	5.28	--	U
TSATHC	Total Saturated Hydrocarbons	ND	0.160	--	U

Surrogate Recovery Summary
Form 2
Petroleum

Client: GSI Environmental Inc.
Project Name: RED HILL

Lab Number: L2166503
Project Number:
Matrix: Water/Liquid

GC Column 1: RTX-5

CLIENT ID (LAB SAMPLE NO.)	d50 %REC	OTP %REC	%REC	%REC	OTHER (1)	OTHER (2)	TOT OUT
ERH2051 (L2166503-02)	88	89	--	--			0
ERH2051 (L2166503-02D)	95	103	--	--			0
ERH2052 (L2166503-03)	78	78	--	--			0
ERH2052 (L2166503-03D)	69	76	--	--			0
ERH2052 PRE SILICA (L2166503-06D)	116	80	--	--			0
WG1579126-1BLANK	91	92	--	--			0
WG1579126-2LCS	89	87	--	--			0
WG1579126-3LCSD	93	91	--	--			0
WG1582496-1BLANK	80	81	--	--			0
WG1582496-2LCS	82	82	--	--			0
WG1582496-3LCSD	84	86	--	--			0
WG1590340-1BLANK	76	82	--	--			0
WG1590340-2LCS	76	81	--	--			0
WG1590340-3LCSD	76	81	--	--			0

QC LIMITS
(50-130) d50- = D50-TETRACOSANE
(50-130) OTP = O-TERPHENYL

*** Values outside of QC limits**

FORM II A2-SHC

Surrogate Recovery Summary
Form 2
Petroleum

Client: GSI Environmental Inc.
Project Name: RED HILL

Lab Number: L2166503
Project Number:
Matrix: Oil

GC Column 1: RTX-5

CLIENT ID (LAB SAMPLE NO.)	d50 %REC	OTP %REC	%REC	%REC	OTHER (1)	OTHER (2)	TOT OUT
ERH1967 (L2166503-01)	92	94	--	--			0
ERH1967 (L2166503-01D)	86	97	--	--			0
WG1579102-1BLANK	92	94	--	--			0
WG1579102-2LCS	93	94	--	--			0
WG1579102-3LCSD	95	95	--	--			0

QC LIMITS
(50-130) d50- = D50-TETRACOSANE
(50-130) OTP = O-TERPHENYL

*** Values outside of QC limits**

FORM II A2-SHC

Laboratory Control Sample Summary
Form 3
Petroleum

Client : GSI Environmental Inc. **Lab Number** : L2166503
Project Name : RED HILL **Project Number** :
Matrix : OIL
LCS Sample ID : WG1579102-2 **Analysis Date** : 12/04/21 13:13 **File ID** : F1712032138
LCSD Sample ID : WG1579102-3 **Analysis Date** : 12/04/21 14:41 **File ID** : F1712032140

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/kg)	Found (mg/kg)	%R	True (mg/kg)	Found (mg/kg)	%R	RPD	Recovery Limits	RPD Limit
Nonane (C9)	1000	882	88	1000	893	89	1	50-130	30
n-Decane (C10)	1000	890	89	1000	897	90	1	50-130	30
n-Dodecane (C12)	1000	934	93	1000	962	96	3	50-130	30
n-Tetradecane (C14)	1000	934	93	1000	955	96	3	50-130	30
n-Hexadecane (C16)	1000	954	95	1000	990	99	4	50-130	30
n-Octadecane (C18)	1000	987	99	1000	1020	102	3	50-130	30
n-Nonadecane (C19)	1000	950	95	1000	981	98	3	50-130	30
n-Eicosane (C20)	1000	949	95	1000	973	97	2	50-130	30
n-Docosane (C22)	1000	946	95	1000	972	97	2	50-130	30
n-Tetracosane (C24)	1000	967	97	1000	994	99	2	50-130	30
n-Hexacosane (C26)	1000	961	96	1000	986	99	3	50-130	30
n-Octacosane (C28)	1000	966	97	1000	994	99	2	50-130	30
n-Triacontane (C30)	1000	944	94	1000	972	97	3	50-130	30
n-Hexatriacontane (C36)	1000	849	85	1000	879	88	3	50-130	30

Laboratory Control Sample Summary
Form 3
Petroleum

Client : GSI Environmental Inc. **Lab Number** : L2166503
Project Name : RED HILL **Project Number** :
Matrix : WATER
LCS Sample ID : WG1579126-2 **Analysis Date** : 12/05/21 00:59 **File ID** : F1712032154
LCSD Sample ID : WG1579126-3 **Analysis Date** : 12/05/21 02:27 **File ID** : F1712032156

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/l)	Found (mg/l)	%R	True (mg/l)	Found (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Nonane (C9)	0.02	0.013	67	0.02	0.013	65	3	50-130	30
n-Decane (C10)	0.02	0.015	76	0.02	0.015	74	3	50-130	30
n-Dodecane (C12)	0.02	0.017	85	0.02	0.017	83	2	50-130	30
n-Tetradecane (C14)	0.02	0.017	86	0.02	0.017	87	1	50-130	30
n-Hexadecane (C16)	0.02	0.018	90	0.02	0.019	93	3	50-130	30
n-Octadecane (C18)	0.02	0.018	92	0.02	0.019	96	4	50-130	30
n-Nonadecane (C19)	0.02	0.019	95	0.02	0.020	101	6	50-130	30
n-Eicosane (C20)	0.02	0.018	91	0.02	0.019	96	5	50-130	30
n-Docosane (C22)	0.02	0.018	91	0.02	0.019	96	5	50-130	30
n-Tetracosane (C24)	0.02	0.019	94	0.02	0.020	98	4	50-130	30
n-Hexacosane (C26)	0.02	0.019	93	0.02	0.020	98	5	50-130	30
n-Octacosane (C28)	0.02	0.019	94	0.02	0.020	99	5	50-130	30
n-Triacontane (C30)	0.02	0.018	91	0.02	0.019	96	5	50-130	30
n-Hexatriacontane (C36)	0.02	0.016	82	0.02	0.017	87	6	50-130	30

Laboratory Control Sample Summary
Form 3
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Matrix	: LIQUID		
LCS Sample ID	: WG1582496-2	**Analysis Date** : 12/14/21 19:57	**File ID** : f18121421015
LCSD Sample ID	: WG1582496-3	**Analysis Date** : 12/14/21 21:23	**File ID** : f18121421017

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/l)	Found (mg/l)	%R	True (mg/l)	Found (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Nonane (C9)	0.8	0.470	59	0.8	0.501	62	5	50-130	30
n-Decane (C10)	0.8	0.509	64	0.8	0.536	67	5	50-130	30
n-Dodecane (C12)	0.8	0.554	69	0.8	0.599	75	8	50-130	30
n-Tetradecane (C14)	0.8	0.573	72	0.8	0.624	78	8	50-130	30
n-Hexadecane (C16)	0.8	0.665	83	0.8	0.710	89	7	50-130	30
n-Octadecane (C18)	0.8	0.691	86	0.8	0.719	90	5	50-130	30
n-Nonadecane (C19)	0.8	0.686	86	0.8	0.674	84	2	50-130	30
n-Eicosane (C20)	0.8	0.680	85	0.8	0.704	88	3	50-130	30
n-Docosane (C22)	0.8	0.673	84	0.8	0.699	87	4	50-130	30
n-Tetracosane (C24)	0.8	0.700	87	0.8	0.727	91	4	50-130	30
n-Hexacosane (C26)	0.8	0.681	85	0.8	0.712	89	5	50-130	30
n-Octacosane (C28)	0.8	0.684	86	0.8	0.730	91	6	50-130	30
n-Triacontane (C30)	0.8	0.665	83	0.8	0.700	88	6	50-130	30
n-Hexatriacontane (C36)	0.8	0.584	73	0.8	0.619	77	5	50-130	30

Laboratory Control Sample Summary
Form 3
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Matrix	: LIQUID		
LCS Sample ID	: WG1590340-2	**Analysis Date** : 01/04/22 20:14	**File ID** : f18010422014
LCSD Sample ID	: WG1590340-3	**Analysis Date** : 01/04/22 21:40	**File ID** : f18010422016

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/l)	Found (mg/l)	%R	True (mg/l)	Found (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Nonane (C9)	0.8	0.707	88	0.8	0.656	82	7	50-130	30
n-Decane (C10)	0.8	0.706	88	0.8	0.668	84	5	50-130	30
n-Dodecane (C12)	0.8	0.642	80	0.8	0.620	78	3	50-130	30
n-Tetradecane (C14)	0.8	0.626	78	0.8	0.614	77	1	50-130	30
n-Hexadecane (C16)	0.8	0.685	86	0.8	0.677	85	1	50-130	30
n-Octadecane (C18)	0.8	0.701	88	0.8	0.704	88	0	50-130	30
n-Nonadecane (C19)	0.8	0.644	80	0.8	0.646	81	1	50-130	30
n-Eicosane (C20)	0.8	0.633	79	0.8	0.642	80	1	50-130	30
n-Docosane (C22)	0.8	0.639	80	0.8	0.645	81	1	50-130	30
n-Tetracosane (C24)	0.8	0.682	85	0.8	0.692	86	1	50-130	30
n-Hexacosane (C26)	0.8	0.642	80	0.8	0.647	81	1	50-130	30
n-Octacosane (C28)	0.8	0.623	78	0.8	0.626	78	0	50-130	30
n-Triacontane (C30)	0.8	0.629	79	0.8	0.630	79	0	50-130	30
n-Hexatriacontane (C36)	0.8	0.606	76	0.8	0.554	69	10	50-130	30

Method Blank Summary
Form 4
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab Sample ID	: WG1579102-1	**Lab File ID**	: F1712032136
Instrument ID	: FID17	**Extraction Date**	: 12/04/21
Matrix	: OIL	**Analysis Date**	: 12/04/21 11:44
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1579102-2LCS	WG1579102-2	12/04/21 13:13
WG1579102-3LCSD	WG1579102-3	12/04/21 14:41
ERH1967	L2166503-01	12/04/21 17:38
ERH1967	L2166503-01D	12/05/21 12:50

Method Blank Summary
Form 4
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab Sample ID	: WG1579126-1	**Lab File ID**	: F1712032152
Instrument ID	: FID17	**Extraction Date**	: 12/04/21
Matrix	: WATER	**Analysis Date**	: 12/04/21 23:30
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1579126-2LCS	WG1579126-2	12/05/21 00:59
WG1579126-3LCSD	WG1579126-3	12/05/21 02:27
ERH2051	L2166503-02	12/05/21 03:55
ERH2051	L2166503-02D	12/05/21 14:18

Method Blank Summary
Form 4
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab Sample ID	: WG1582496-1	**Lab File ID**	: f18121421011
Instrument ID	: FID18	**Extraction Date**	: 12/13/21
Matrix	: LIQUID	**Analysis Date**	: 12/14/21 17:05
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1582496-2LCS	WG1582496-2	12/14/21 19:57
WG1582496-3LCSD	WG1582496-3	12/14/21 21:23
ERH2052	L2166503-03	12/15/21 03:07
ERH2052	L2166503-03D	01/05/22 00:32

Method Blank Summary
Form 4
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Lab Sample ID	: WG1590340-1	**Lab File ID**	: f18010422012
Instrument ID	: FID18	**Extraction Date**	: 12/13/21
Matrix	: LIQUID	**Analysis Date**	: 01/04/22 18:47
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1590340-2LCS	WG1590340-2	01/04/22 20:14
WG1590340-3LCSD	WG1590340-3	01/04/22 21:40
ERH2052 PRE SILICA	L2166503-06D	01/05/22 01:58

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: FID18**	**Ical Ref**	**: ICAL17763**
Calibration dates	**: 03/20/21 01:25 03/20/21 08:37**		

Calibration Files
1 =f18031921013.D 10 =f18031921015.D 50 =f18031921017.D 100 =f18031921019.D 200 =f18031921021.D
500 =f18031921023.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.827	0.792	0.792	0.783	0.786		0.796	2.24
3)	t	n-Nonane (C9)	0.912	0.855	0.862	0.826	0.840		0.859	3.79
4)	t	n-Decane (C10)	0.963	0.931	0.937	0.884	0.906		0.924	3.30
5)	t	n-Undecane (C11)	0.943	0.928	0.946	0.889	0.917		0.925	2.50
6)	t	n-Dodecane (C12)	0.950	0.943	0.959	0.902	0.932		0.937	2.35
7)	t	n-Tridecane (C13)	0.957	0.943	0.959	0.903	0.935		0.939	2.41
8)	t	1380	0.984	0.971	0.985	0.927	0.961		0.966	2.44
9)	t	n-Tetradecane (C14)	0.984	0.971	0.985	0.927	0.961		0.966	2.44
10)	t	1470	0.988	0.971	0.988	0.931	0.968		0.969	2.38
11)	t	n-Pentadecane (C15)	0.988	0.971	0.988	0.931	0.968		0.969	2.38
12)	t	n-Hexadecane (C16)	0.965	0.958	0.978	0.925	0.962		0.957	2.06
13)	t	1650	0.967	0.969	0.991	0.936	0.978		0.968	2.10
14)	t	n-Heptadecane (C17)	0.967	0.969	0.991	0.936	0.978		0.968	2.10
15)	t	Pristane	1.050	1.012	1.018	0.958	0.991		1.006	3.36
16)	t	n-Octadecane (C18)	0.969	0.979	1.001	0.946	0.986		0.976	2.09
17)	t	Phytane	0.948	0.923	0.933	0.879	0.910		0.919	2.85
18)	t	n-Nonadecane (C19)	0.985	0.993	1.010	0.950	0.984		0.984	2.24
19)	s	ortho-terphenyl	1.192	1.101	1.154	1.026	1.089	1.124	1.114	5.14
20)	t	n-Eicosane (C20)	0.991	1.000	1.016	0.957	0.990		0.991	2.17
21)	t	n-Heneicosane (C21)	1.016	1.010	1.025	0.964	0.997		1.002	2.36
22)	t	n-Docosane (C22)	1.058	1.015	1.026	0.965	1.001		1.013	3.38
23)	t	n-Tricosane (C23)	1.018	1.014	1.029	0.967	1.004		1.006	2.35
24)	s	d50-Tetracosane	0.949	0.890	0.936	0.832	0.879	0.911	0.899	4.74
25)	t	n-Tetracosane (C24)	1.008	1.013	1.030	0.966	1.005		1.004	2.36
26)	t	n-Pentacosane (C25)	1.022	1.001	1.014	0.951	0.990		0.995	2.77
27)	t	n-Hexacosane (C26)	1.051	1.029	1.042	0.979	1.018		1.024	2.76
28)	t	n-Heptacosane (C27)	1.082	1.034	1.044	0.981	1.018		1.032	3.57
29)	t	n-Octacosane (C28)	1.086	1.052	1.068	1.004	1.042		1.050	2.94
30)	t	n-Nonacosane (C29)	1.064	1.048	1.065	1.001	1.039		1.043	2.49
31)	t	n-Triacontane (C30)	1.083	1.052	1.071	1.007	1.045		1.052	2.76
32)	t	n-Hentriacontane (C31)	1.062	1.020	1.034	0.973	1.009		1.020	3.19
33)	t	n-Dotriacontane (C32)	1.098	1.068	1.088	1.024	1.061		1.068	2.66
34)	t	n-Tritriacontane (C33)	1.071	1.040	1.059	0.996	1.034		1.040	2.75
35)	t	n-tetratriacontane (C34	1.083	1.039	1.055	0.994	1.032		1.041	3.13
36)	t	n-Pentatriacontane (C35	1.027	0.976	0.987	0.930	0.968		0.978	3.57

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: FID18**	**Ical Ref**	**: ICAL17763**
Calibration dates	**: 03/20/21 01:25 03/20/21 08:37**		

Calibration Files
1 =f18031921013.D 10 =f18031921015.D 50 =f18031921017.D 100 =f18031921019.D 200 =f18031921021.D
500 =f18031921023.D

		Compound	1	10	50	100	200	500	Avg	%RSD
37)	t	n-Hexatriacontane (C36)	1.213	1.183	1.190	1.123	1.169		1.176	2.83
38)	t	n-Heptatriacontane (C37	1.101	1.077	1.085	1.024	1.067		1.071	2.70
39)	t	n-Octatriacontane (C38)	1.114	1.090	1.098	1.037	1.080		1.084	2.67
40)	t	n-Nonatriacon	1.104	1.074	1.080	1.021	1.061		1.068	2.87
41)	t	n-Tetracontane (C40)	1.104	1.074	1.080	1.021	1.061		1.068	2.87
42)	h	C9-C44 Total	1.028	1.006	1.020	0.961	0.997		1.003	2.60
43)	h	C9-C40 Total	1.028	1.006	1.020	0.961	0.997		1.003	2.60
44)	h	C10-C28 DRO	1.000	0.987	1.002	0.944	0.979		0.982	2.42
45)	h	C28-C40 ORO	1.093	1.061	1.074	1.012	1.051		1.058	2.85
46)	h	Total Resolve	1.028	1.006	1.020	0.961	0.997		1.003	2.60

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: FID17**	**Ical Ref**	**: ICAL18012**
Calibration dates	**: 05/20/21 20:50 05/21/21 04:13**		

Calibration Files
1 =F1705202112.D 10 =F1705202114.D 50 =F1705202116.D 100 =F1705202118.D 200 =F1705202120.D
500 =F1705202122.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.919	0.879	0.879	0.852	0.792		0.864	5.42
3)	t	n-Nonane (C9)	1.068	0.920	0.915	0.880	0.829		0.922	9.67
4)	t	n-Decane (C10)	1.011	0.959	0.958	0.923	0.870		0.944	5.53
5)	t	n-Undecane (C11)	0.934	0.945	0.951	0.917	0.867		0.923	3.64
6)	t	n-Dodecane (C12)	0.921	0.950	0.956	0.924	0.875		0.925	3.47
7)	t	n-Tridecane (C13)	0.936	0.949	0.954	0.924	0.875		0.928	3.39
8)	t	1380	0.984	0.973	0.977	0.947	0.898		0.956	3.70
9)	t	n-Tetradecane (C14)	0.984	0.973	0.977	0.947	0.898		0.956	3.70
10)	t	1470	0.975	0.976	0.980	0.951	0.902		0.957	3.40
11)	t	n-Pentadecane (C15)	0.975	0.976	0.980	0.951	0.902		0.957	3.40
12)	t	n-Hexadecane (C16)	1.001	0.968	0.971	0.943	0.893		0.955	4.21
13)	t	1650	0.951	0.975	0.981	0.953	0.911		0.954	2.87
14)	t	n-Heptadecane (C17)	0.951	0.975	0.981	0.953	0.911		0.954	2.87
15)	t	Pristane	1.054	1.003	1.003	0.973	0.915		0.990	5.13
16)	t	n-Octadecane (C18)	0.999	0.985	0.989	0.962	0.915		0.970	3.45
17)	t	Phytane	0.941	0.925	0.923	0.894	0.854		0.908	3.79
18)	t	n-Nonadecane (C19)	1.000	0.988	0.994	0.966	0.918		0.973	3.44
19)	s	ortho-terphenyl	1.120	1.096	1.100	1.069	1.025	1.093	1.084	3.03
20)	t	n-Eicosane (C20)	1.009	0.993	0.999	0.971	0.922		0.979	3.53
21)	t	n-Heneicosane (C21)	1.009	0.996	1.002	0.976	0.926		0.982	3.43
22)	t	n-Docosane (C22)	1.019	0.997	1.001	0.975	0.925		0.983	3.68
23)	t	n-Tricosane (C23)	1.025	0.998	1.001	0.977	0.926		0.985	3.79
24)	s	d50-Tetracosane	0.879	0.860	0.888	0.854	0.819	0.860	0.860	2.80
25)	t	n-Tetracosane (C24)	1.025	0.990	0.998	0.976	0.923		0.982	3.84
26)	t	n-Pentacosane (C25)	0.990	0.970	0.977	0.960	0.908		0.961	3.32
27)	t	n-Hexacosane (C26)	1.013	0.996	1.002	0.989	0.933		0.987	3.17
28)	t	n-Heptacosane (C27)	1.023	0.995	1.001	0.992	0.934		0.989	3.34
29)	t	n-Octacosane (C28)	1.105	1.026	1.022	1.018	0.957		1.026	5.13
30)	t	n-Nonacosane (C29)	1.030	1.010	1.016	1.019	0.955		1.006	2.95
31)	t	n-Triacontane (C30)	1.033	1.012	1.018	1.027	0.960		1.010	2.90
32)	t	n-Hentriacontane (C31)	1.005	0.975	0.981	0.996	0.927		0.977	3.10
33)	t	n-Dotriacontane (C32)	1.052	1.022	1.028	1.050	0.974		1.025	3.09
34)	t	n-Tritriacontane (C33)	1.030	0.993	0.998	1.024	0.945		0.998	3.39
35)	t	n-tetratriacontane (C34	1.013	0.986	0.993	1.023	0.940		0.991	3.26
36)	t	n-Pentatriacontane (C35	0.951	0.919	0.927	0.958	0.875		0.926	3.55

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: FID17**	**Ical Ref**	**: ICAL18012**
Calibration dates	**: 05/20/21 20:50 05/21/21 04:13**		

Calibration Files
1 =F1705202112.D 10 =F1705202114.D 50 =F1705202116.D 100 =F1705202118.D 200 =F1705202120.D
500 =F1705202122.D

		Compound	1	10	50	100	200	500	Avg	%RSD
37)	t	n-Hexatriacontane (C36)	1.140	1.107	1.117	1.158	1.051		1.115	3.63
38)	t	n-Heptatriacontane (C37	1.023	1.004	1.018	1.056	0.953		1.011	3.71
39)	t	n-Octatriacontane (C38)	1.032	1.019	1.030	1.069	0.960		1.022	3.88
40)	t	n-Nonatriacon	1.026	1.003	1.018	1.058	0.939		1.009	4.35
41)	t	n-Tetracontane (C40)	1.026	1.003	1.018	1.058	0.939		1.009	4.35
42)	h	C9-C44 Total	1.010	0.986	0.991	0.983	0.920		0.978	3.49
43)	h	C9-C40 Total	1.010	0.986	0.991	0.983	0.920		0.978	3.49
44)	h	C10-C28 DRO	0.996	0.981	0.985	0.960	0.909		0.966	3.56
45)	h	C28-C40 ORO	1.037	1.006	1.014	1.038	0.953		1.010	3.43
46)	h	Total Resolve	1.010	0.986	0.991	0.983	0.920		0.978	3.49

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: FID18**	**Ical Ref**	**: ICAL18548**
Calibration dates	**: 11/05/21 19:59 11/06/21 03:06**		

Calibration Files
1 =f18110521012.D 10 =f18110521014.D 50 =f18110521016.D 100 =f18110521018.D 200 =f18110521020.D
500 =f18110521022.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.843	0.810	0.831	0.812	0.758		0.811	3.99
3)	t	n-Nonane (C9)	0.817	0.811	0.860	0.843	0.792		0.825	3.24
4)	t	n-Decane (C10)	0.757	0.765	0.848	0.869	0.832		0.814	6.17
5)	t	n-Undecane (C11)	0.763	0.830	0.914	0.897	0.837		0.848	7.09
6)	t	n-Dodecane (C12)	0.865	0.851	0.919	0.908	0.851		0.879	3.71
7)	t	n-Tridecane (C13)	0.897	0.873	0.933	0.914	0.858		0.895	3.39
8)	t	1380	0.957	0.898	0.953	0.939	0.884		0.926	3.60
9)	t	n-Tetradecane (C14)	0.957	0.898	0.953	0.939	0.884		0.926	3.60
10)	t	1470	0.935	0.933	0.952	0.953	0.894		0.933	2.56
11)	t	n-Pentadecane (C15)	0.935	0.933	0.952	0.953	0.894		0.933	2.56
12)	t	n-Hexadecane (C16)	0.971	0.948	0.978	0.945	0.890		0.946	3.65
13)	t	1650	0.807	0.914	0.984	0.955	0.912		0.914	7.33
14)	t	n-Heptadecane (C17)	0.807	0.914	0.984	0.955	0.912		0.914	7.33
15)	t	Pristane	1.118	1.040	1.011	0.980	0.915		1.013	7.40
16)	t	n-Octadecane (C18)	0.939	0.974	1.021	0.968	0.923		0.965	3.90
17)	t	Phytane	0.943	0.931	0.939	0.906	0.854		0.915	4.00
18)	t	n-Nonadecane (C19)	0.967	0.983	1.008	0.979	0.921		0.972	3.30
19)	s	ortho-terphenyl	1.102	1.074	1.221	1.079	1.029	1.184	1.115	6.54
20)	t	n-Eicosane (C20)	0.996	0.995	1.023	0.983	0.929		0.985	3.51
21)	t	n-Heneicosane (C21)	1.001	1.010	1.021	0.986	0.934		0.990	3.46
22)	t	n-Docosane (C22)	1.026	1.014	1.041	0.983	0.933		1.000	4.26
23)	t	n-Tricosane (C23)	1.054	1.021	1.047	0.983	0.935		1.008	4.90
24)	s	d50-Tetracosane	0.883	0.886	1.009	0.862	0.831	0.985	0.909	7.82
25)	t	n-Tetracosane (C24)	0.981	1.067	1.001	0.980	0.934		0.993	4.85
26)	t	n-Pentacosane (C25)	1.020	1.004	1.033	0.960	0.918		0.987	4.80
27)	t	n-Hexacosane (C26)	1.036	1.033	1.067	0.985	0.943		1.013	4.84
28)	t	n-Heptacosane (C27)	1.032	1.037	1.034	0.986	0.944		1.006	4.05
29)	t	n-Octacosane (C28)	1.053	1.059	1.079	1.007	0.964		1.032	4.51
30)	t	n-Nonacosane (C29)	1.029	1.056	1.077	1.001	0.959		1.024	4.52
31)	t	n-Triacontane (C30)	1.013	1.063	1.079	1.003	0.960		1.023	4.70
32)	t	n-Hentriacontane (C31)	0.969	1.025	1.045	0.964	0.923		0.985	4.99
33)	t	n-Dotriacontane (C32)	0.992	1.069	1.077	1.006	0.960		1.021	4.96
34)	t	n-Tritriacontane (C33)	0.947	1.036	1.042	0.973	0.925		0.984	5.35
35)	t	n-tetratriacontane (C34	0.932	1.017	1.027	0.961	0.902		0.968	5.56
36)	t	n-Pentatriacontane (C35	0.858	0.953	1.043	0.896	0.824		0.915	9.42

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: FID18**	**Ical Ref**	**: ICAL18548**
Calibration dates	**: 11/05/21 19:59 11/06/21 03:06**		

Calibration Files
1 =f18110521012.D 10 =f18110521014.D 50 =f18110521016.D 100 =f18110521018.D 200 =f18110521020.D
500 =f18110521022.D

		Compound	1	10	50	100	200	500	Avg	%RSD
37)	t	n-Hexatriacontane (C36)	1.019	1.124	1.112	1.066	0.954		1.055	6.63
38)	t	n-Heptatriacontane (C37	0.928	1.017	1.017	0.969	0.843		0.955	7.65
39)	t	n-Octatriacontane (C38)	0.924	1.030	1.049	0.973	0.819		0.959	9.62
40)	t	n-Nonatriacon	0.927	1.022	1.049	0.944	0.759		0.940	12.09
41)	t	n-Tetracontane (C40)	0.927	1.022	1.049	0.944	0.759		0.940	12.09
42)	h	C9-C44 Total	0.954	0.982	1.009	0.960	0.898		0.960	4.28
43)	h	C9-C40 Total	0.954	0.982	1.009	0.960	0.898		0.960	4.28
44)	h	C10-C28 DRO	0.950	0.958	0.992	0.957	0.907		0.953	3.20
45)	h	C28-C40 ORO	0.966	1.039	1.058	0.980	0.899		0.989	6.39
46)	h	Total Resolve	0.954	0.982	1.009	0.960	0.898		0.960	4.28

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2166503	
Project Name	: RED HILL		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/04/21 07:20	
Lab File ID	: F1712032130		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1579117-2		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	112	-.01
n-Octane (C8)	0.864	0.837	.05	3.1	25	107	-.01
n-Nonane (C9)	0.922	0.866	.05	6.1	25	106	0
n-Decane (C10)	0.944	0.932	.05	1.3	25	109	0
n-Undecane (C11)	0.923	0.945	.05	-2.4	25	112	-.01
n-Dodecane (C12)	0.925	0.949	.05	-2.6	25	112	-.01
n-Tridecane (C13)	0.928	0.959	.05	-3.3	25	113	-.01
n-Tetradecane (C14)	0.956	0.977	.05	-2.2	25	113	0
n-Pentadecane (C15)	0.957	0.971	.05	-1.5	25	111	-.01
n-Hexadecane (C16)	0.955	0.984	.05	-3	25	114	0
n-Heptadecane (C17)	0.954	0.987	.05	-3.5	25	113	-.01
Pristane	0.99	1.014	.05	-2.4	25	114	-.01
n-Octadecane (C18)	0.97	1.001	.05	-3.2	25	114	0
Phytane	0.908	0.945	.05	-4.1	25	115	-.01
n-Nonadecane (C19)	0.973	1.069	.05	-9.9	25	121	0
ortho-terphenyl	1.084	1.155	.05	-6.5	25	118	-.01
n-Eicosane (C20)	0.979	1.008	.05	-3	25	114	-.01
n-Heneicosane (C21)	0.982	1.004	.05	-2.2	25	113	0
n-Docosane (C22)	0.983	1.016	.05	-3.4	25	114	0
n-Tricosane (C23)	0.985	1.017	.05	-3.2	25	114	-.01
d50-Tetracosane	0.86	0.973	.05	-13.1	25	123	0
n-Tetracosane (C24)	0.982	0.959	.05	2.3	25	108	0
n-Pentacosane (C25)	0.961	0.992	.05	-3.2	25	114	0
n-Hexacosane (C26)	0.987	1.02	.05	-3.3	25	114	0
n-Heptacosane (C27)	0.989	0.984	.05	0.5	25	111	0
n-Octacosane (C28)	1.026	1.024	.05	0.2	25	113	0
n-Nonacosane (C29)	1.006	1.017	.05	-1.1	25	113	0
n-Triacontane (C30)	1.01	1.018	.05	-0.8	25	113	0
n-Hentriacontane (C31)	0.977	0.986	.05	-0.9	25	113	0
n-Dotriacontane (C32)	1.025	1.032	.05	-0.7	25	113	0
n-Tritriacontane (C33)	0.998	0.993	.05	0.5	25	112	0
n-tetratriacontane (C34)	0.991	0.986	.05	0.5	25	112	0
n-Pentatriacontane (C35)	0.926	0.992	.05	-7.1	25	120	0
n-Hexatriacontane (C36)	1.115	1.06	.05	4.9	25	107	-.01
n-Heptatriacontane (C37)	1.011	0.971	.05	4	25	107	0
n-Octatriacontane (C38)	1.022	0.997	.05	2.4	25	109	-.01
n-Tetracontane (C40)	1.009	0.99	.05	1.9	25	109	-.02

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2166503	
Project Name	: RED HILL		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/04/21 19:06	
Lab File ID	: F1712032146		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1579117-3		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	110	-.02
n-Octane (C8)	0.864	0.847	.05	2	25	106	0
n-Nonane (C9)	0.922	0.866	.05	6.1	25	105	-.01
n-Decane (C10)	0.944	0.938	.05	0.6	25	108	-.01
n-Undecane (C11)	0.923	0.955	.05	-3.5	25	111	-.01
n-Dodecane (C12)	0.925	0.953	.05	-3	25	110	-.01
n-Tridecane (C13)	0.928	0.966	.05	-4.1	25	112	-.01
n-Tetradecane (C14)	0.956	0.984	.05	-2.9	25	111	-.01
n-Pentadecane (C15)	0.957	0.976	.05	-2	25	110	-.01
n-Hexadecane (C16)	0.955	0.988	.05	-3.5	25	112	-.01
n-Heptadecane (C17)	0.954	0.992	.05	-4	25	112	-.01
Pristane	0.99	1.019	.05	-2.9	25	112	-.01
n-Octadecane (C18)	0.97	1.004	.05	-3.5	25	112	-.01
Phytane	0.908	0.945	.05	-4.1	25	113	-.01
n-Nonadecane (C19)	0.973	1.055	.05	-8.4	25	117	-.01
ortho-terphenyl	1.084	1.162	.05	-7.2	25	117	-.01
n-Eicosane (C20)	0.979	1.007	.05	-2.9	25	111	-.02
n-Heneicosane (C21)	0.982	1.002	.05	-2	25	110	-.01
n-Docosane (C22)	0.983	1.014	.05	-3.2	25	112	0
n-Tricosane (C23)	0.985	1.014	.05	-2.9	25	112	-.01
d50-Tetracosane	0.86	0.969	.05	-12.7	25	121	-.01
n-Tetracosane (C24)	0.982	0.957	.05	2.5	25	106	0
n-Pentacosane (C25)	0.961	0.99	.05	-3	25	112	-.01
n-Hexacosane (C26)	0.987	1.017	.05	-3	25	112	0
n-Heptacosane (C27)	0.989	0.98	.05	0.9	25	108	-.01
n-Octacosane (C28)	1.026	1.021	.05	0.5	25	110	0
n-Nonacosane (C29)	1.006	1.014	.05	-0.8	25	110	0
n-Triacontane (C30)	1.01	1.015	.05	-0.5	25	110	-.01
n-Hentriacontane (C31)	0.977	0.983	.05	-0.6	25	111	0
n-Dotriacontane (C32)	1.025	1.029	.05	-0.4	25	111	-.01
n-Tritriacontane (C33)	0.998	0.991	.05	0.7	25	110	0
n-tetratriacontane (C34)	0.991	0.986	.05	0.5	25	110	-.01
n-Pentatriacontane (C35)	0.926	0.995	.05	-7.5	25	119	-.01
n-Hexatriacontane (C36)	1.115	1.067	.05	4.3	25	106	-.02
n-Heptatriacontane (C37)	1.011	0.981	.05	3	25	106	-.01
n-Octatriacontane (C38)	1.022	1.011	.05	1.1	25	108	-.01
n-Tetracontane (C40)	1.009	1.007	.05	0.2	25	109	-.02

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2166503	
Project Name	: RED HILL		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 12/05/21 08:19	
Lab File ID	: F1712032164		**Init. Calib. Date(s)**	: 05/20/21	05/21/21
Sample No	: WG1579117-4		**Init. Calib. Times**	: 20:50	04:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	110	-.02
n-Octane (C8)	0.864	0.845	.05	2.2	25	105	0
n-Nonane (C9)	0.922	0.878	.05	4.8	25	105	-.01
n-Decane (C10)	0.944	0.926	.05	1.9	25	106	-.01
n-Undecane (C11)	0.923	0.943	.05	-2.2	25	109	-.01
n-Dodecane (C12)	0.925	0.948	.05	-2.5	25	109	-.02
n-Tridecane (C13)	0.928	0.955	.05	-2.9	25	110	-.02
n-Tetradecane (C14)	0.956	0.972	.05	-1.7	25	109	-.02
n-Pentadecane (C15)	0.957	0.967	.05	-1	25	108	-.02
n-Hexadecane (C16)	0.955	0.979	.05	-2.5	25	111	-.02
n-Heptadecane (C17)	0.954	0.981	.05	-2.8	25	110	-.02
Pristane	0.99	1.02	.05	-3	25	112	-.02
n-Octadecane (C18)	0.97	0.998	.05	-2.9	25	111	-.02
Phytane	0.908	0.943	.05	-3.9	25	112	-.02
n-Nonadecane (C19)	0.973	1.063	.05	-9.2	25	117	-.02
ortho-terphenyl	1.084	1.139	.05	-5.1	25	114	-.02
n-Eicosane (C20)	0.979	1.004	.05	-2.6	25	110	-.02
n-Heneicosane (C21)	0.982	1.001	.05	-1.9	25	110	-.02
n-Docosane (C22)	0.983	1.013	.05	-3.1	25	111	-.02
n-Tricosane (C23)	0.985	1.014	.05	-2.9	25	111	-.02
d50-Tetracosane	0.86	0.97	.05	-12.8	25	120	-.02
n-Tetracosane (C24)	0.982	0.956	.05	2.6	25	105	-.02
n-Pentacosane (C25)	0.961	0.99	.05	-3	25	111	-.02
n-Hexacosane (C26)	0.987	1.019	.05	-3.2	25	112	-.02
n-Heptacosane (C27)	0.989	0.982	.05	0.7	25	108	-.02
n-Octacosane (C28)	1.026	1.023	.05	0.3	25	110	-.02
n-Nonacosane (C29)	1.006	1.016	.05	-1	25	110	-.02
n-Triacontane (C30)	1.01	1.018	.05	-0.8	25	110	-.02
n-Hentriacontane (C31)	0.977	0.986	.05	-0.9	25	110	-.02
n-Dotriacontane (C32)	1.025	1.032	.05	-0.7	25	110	-.02
n-Tritriacontane (C33)	0.998	0.994	.05	0.4	25	109	-.02
n-tetratriacontane (C34)	0.991	0.99	.05	0.1	25	109	-.02
n-Pentatriacontane (C35)	0.926	0.998	.05	-7.8	25	118	-.02
n-Hexatriacontane (C36)	1.115	1.071	.05	3.9	25	105	-.03
n-Heptatriacontane (C37)	1.011	0.985	.05	2.6	25	106	-.03
n-Octatriacontane (C38)	1.022	1.016	.05	0.6	25	108	-.03
n-Tetracontane (C40)	1.009	1.015	.05	-0.6	25	109	-.05

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: FID17	**Calibration Date**	: 12/05/21 15:46
Lab File ID	: F1712032172	**Init. Calib. Date(s)**	: 05/20/21 05/21/21
Sample No	: WG1579117-5	**Init. Calib. Times**	: 20:50 04:13
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	104	-.03
n-Octane (C8)	0.864	0.863	.05	0.1	25	102	0
n-Nonane (C9)	0.922	0.885	.05	4	25	100	-.01
n-Decane (C10)	0.944	0.932	.05	1.3	25	101	-.02
n-Undecane (C11)	0.923	0.951	.05	-3	25	104	-.02
n-Dodecane (C12)	0.925	0.951	.05	-2.8	25	103	-.02
n-Tridecane (C13)	0.928	0.962	.05	-3.7	25	104	-.02
n-Tetradecane (C14)	0.956	0.985	.05	-3	25	104	-.02
n-Pentadecane (C15)	0.957	0.971	.05	-1.5	25	103	-.02
n-Hexadecane (C16)	0.955	0.994	.05	-4.1	25	106	-.02
n-Heptadecane (C17)	0.954	0.952	.05	0.2	25	101	-.02
Pristane	0.99	1.053	.05	-6.4	25	109	-.02
n-Octadecane (C18)	0.97	0.996	.05	-2.7	25	104	-.02
Phytane	0.908	0.956	.05	-5.3	25	107	-.03
n-Nonadecane (C19)	0.973	1.048	.05	-7.7	25	109	-.02
ortho-terphenyl	1.084	1.184	.05	-9.2	25	111	-.03
n-Eicosane (C20)	0.979	1.011	.05	-3.3	25	105	-.02
n-Heneicosane (C21)	0.982	1.005	.05	-2.3	25	104	-.02
n-Docosane (C22)	0.983	1.017	.05	-3.5	25	105	-.02
n-Tricosane (C23)	0.985	1.017	.05	-3.2	25	105	-.02
d50-Tetracosane	0.86	0.972	.05	-13	25	113	-.02
n-Tetracosane (C24)	0.982	0.959	.05	2.3	25	100	-.02
n-Pentacosane (C25)	0.961	0.993	.05	-3.3	25	105	-.02
n-Hexacosane (C26)	0.987	1.02	.05	-3.3	25	105	-.02
n-Heptacosane (C27)	0.989	0.983	.05	0.6	25	102	-.02
n-Octacosane (C28)	1.026	1.024	.05	0.2	25	104	-.02
n-Nonacosane (C29)	1.006	1.015	.05	-0.9	25	104	-.02
n-Triacontane (C30)	1.01	1.014	.05	-0.4	25	103	-.02
n-Hentriacontane (C31)	0.977	0.98	.05	-0.3	25	103	-.02
n-Dotriacontane (C32)	1.025	1.019	.05	0.6	25	103	-.02
n-Tritriacontane (C33)	0.998	0.979	.05	1.9	25	102	-.03
n-tetratriacontane (C34)	0.991	0.961	.05	3	25	100	-.03
n-Pentatriacontane (C35)	0.926	0.962	.05	-3.9	25	108	-.03
n-Hexatriacontane (C36)	1.115	1.024	.05	8.2	25	95	-.04
n-Heptatriacontane (C37)	1.011	0.934	.05	7.6	25	95	-.04
n-Octatriacontane (C38)	1.022	0.956	.05	6.5	25	96	-.04
n-Tetracontane (C40)	1.009	0.941	.05	6.7	25	96	-.08

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2166503	
Project Name	: RED HILL		**Project Number**	:	
Instrument ID	: FID18		**Calibration Date**	: 12/14/21 12:46	
Lab File ID	: F18121421005		**Init. Calib. Date(s)**	: 03/20/21	03/20/21
Sample No	: WG1583234-1		**Init. Calib. Times**	: 01:25	08:37
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	106	0
n-Octane (C8)	0.796	0.883	.05	-10.9	25	119	0
n-Nonane (C9)	0.859	0.896	.05	-4.3	25	110	0
n-Decane (C10)	0.924	0.935	.05	-1.2	25	106	0
n-Undecane (C11)	0.925	0.948	.05	-2.5	25	106	0
n-Dodecane (C12)	0.937	0.951	.05	-1.5	25	105	0
n-Tridecane (C13)	0.939	0.962	.05	-2.4	25	107	0
n-Tetradecane (C14)	0.966	0.983	.05	-1.8	25	106	0
n-Pentadecane (C15)	0.969	0.974	.05	-0.5	25	105	0
n-Hexadecane (C16)	0.957	0.985	.05	-2.9	25	107	0
n-Heptadecane (C17)	0.968	0.988	.05	-2.1	25	106	0
Pristane	1.006	1.032	.05	-2.6	25	108	0
n-Octadecane (C18)	0.976	1.017	.05	-4.2	25	108	0
Phytane	0.919	0.947	.05	-3	25	108	0
n-Nonadecane (C19)	0.984	1.021	.05	-3.8	25	107	0
ortho-terphenyl	1.114	1.214	.05	-9	25	112	0
n-Eicosane (C20)	0.991	1.018	.05	-2.7	25	106	0
n-Heneicosane (C21)	1.002	1.013	.05	-1.1	25	105	0
n-Docosane (C22)	1.013	1.032	.05	-1.9	25	107	0
n-Tricosane (C23)	1.006	1.031	.05	-2.5	25	106	0
d50-Tetracosane	0.899	0.993	.05	-10.5	25	113	0
n-Tetracosane (C24)	1.004	0.984	.05	2	25	102	0
n-Pentacosane (C25)	0.995	1.018	.05	-2.3	25	107	0
n-Hexacosane (C26)	1.024	1.05	.05	-2.5	25	107	0
n-Heptacosane (C27)	1.032	1.017	.05	1.5	25	104	0
n-Octacosane (C28)	1.05	1.066	.05	-1.5	25	106	0
n-Nonacosane (C29)	1.043	1.064	.05	-2	25	106	0
n-Triacontane (C30)	1.052	1.072	.05	-1.9	25	106	0
n-Hentriacontane (C31)	1.02	1.047	.05	-2.6	25	108	0
n-Dotriacontane (C32)	1.068	1.102	.05	-3.2	25	108	0
n-Tritriacontane (C33)	1.04	1.071	.05	-3	25	107	0
n-tetratriacontane (C34)	1.041	1.073	.05	-3.1	25	108	0
n-Pentatriacontane (C35)	0.978	1.089	.05	-11.3	25	117	0
n-Hexatriacontane (C36)	1.176	1.176	.05	0	25	105	0
n-Heptatriacontane (C37)	1.071	1.089	.05	-1.7	25	107	0
n-Octatriacontane (C38)	1.084	1.127	.05	-4	25	109	0
n-Tetracontane (C40)	1.068	1.133	.05	-6.1	25	111	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: FID18	**Calibration Date**	: 12/15/21 07:25
Lab File ID	: F18121421031	**Init. Calib. Date(s)**	: 03/20/21 03/20/21
Sample No	: WG1583234-2	**Init. Calib. Times**	: 01:25 08:37
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	116	-.01
n-Octane (C8)	0.796	0.867	.05	-8.9	25	127	.01
n-Nonane (C9)	0.859	0.906	.05	-5.5	25	122	0
n-Decane (C10)	0.924	0.937	.05	-1.4	25	116	0
n-Undecane (C11)	0.925	0.952	.05	-2.9	25	116	0
n-Dodecane (C12)	0.937	0.949	.05	-1.3	25	114	0
n-Tridecane (C13)	0.939	0.96	.05	-2.2	25	116	0
n-Tetradecane (C14)	0.966	0.979	.05	-1.3	25	115	0
n-Pentadecane (C15)	0.969	0.969	.05	0	25	113	0
n-Hexadecane (C16)	0.957	0.979	.05	-2.3	25	116	0
n-Heptadecane (C17)	0.968	0.98	.05	-1.2	25	114	0
Pristane	1.006	1.027	.05	-2.1	25	117	0
n-Octadecane (C18)	0.976	1.009	.05	-3.4	25	117	0
Phytane	0.919	0.948	.05	-3.2	25	118	-.01
n-Nonadecane (C19)	0.984	1.057	.05	-7.4	25	121	0
ortho-terphenyl	1.114	1.161	.05	-4.2	25	116	0
n-Eicosane (C20)	0.991	1.007	.05	-1.6	25	115	0
n-Heneicosane (C21)	1.002	1.003	.05	-0.1	25	113	0
n-Docosane (C22)	1.013	1.018	.05	-0.5	25	115	-.01
n-Tricosane (C23)	1.006	1.017	.05	-1.1	25	114	0
d50-Tetracosane	0.899	0.977	.05	-8.7	25	121	0
n-Tetracosane (C24)	1.004	0.965	.05	3.9	25	108	-.01
n-Pentacosane (C25)	0.995	0.998	.05	-0.3	25	114	-.01
n-Hexacosane (C26)	1.024	1.026	.05	-0.2	25	114	-.01
n-Heptacosane (C27)	1.032	0.99	.05	4.1	25	110	-.01
n-Octacosane (C28)	1.05	1.04	.05	1	25	113	-.01
n-Nonacosane (C29)	1.043	1.03	.05	1.2	25	112	-.01
n-Triacontane (C30)	1.052	1.035	.05	1.6	25	112	0
n-Hentriacontane (C31)	1.02	1.007	.05	1.3	25	113	-.01
n-Dotriacontane (C32)	1.068	1.059	.05	0.8	25	113	-.01
n-Tritriacontane (C33)	1.04	1.024	.05	1.5	25	112	-.01
n-tetratriacontane (C34)	1.041	1.023	.05	1.7	25	112	-.01
n-Pentatriacontane (C35)	0.978	1.037	.05	-6	25	121	-.01
n-Hexatriacontane (C36)	1.176	1.116	.05	5.1	25	108	-.01
n-Heptatriacontane (C37)	1.071	1.029	.05	3.9	25	110	-.01
n-Octatriacontane (C38)	1.084	1.062	.05	2	25	112	-.02
n-Tetracontane (C40)	1.068	1.058	.05	0.9	25	113	-.02

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2166503	
Project Name	: RED HILL		**Project Number**	:	
Instrument ID	: FID18		**Calibration Date**	: 01/04/22 14:29	
Lab File ID	: F18010422006		**Init. Calib. Date(s)**	: 11/05/21	11/06/21
Sample No	: WG1590500-1		**Init. Calib. Times**	: 19:59	03:06
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	88	0
n-Octane (C8)	0.811	0.763	.05	5.9	25	81	0
n-Nonane (C9)	0.825	0.813	.05	1.5	25	83	0
n-Decane (C10)	0.814	0.914	.05	-12.3	25	95	0
n-Undecane (C11)	0.848	0.928	.05	-9.4	25	89	0
n-Dodecane (C12)	0.879	0.935	.05	-6.4	25	89	0
n-Tridecane (C13)	0.895	0.945	.05	-5.6	25	89	0
n-Tetradecane (C14)	0.926	0.962	.05	-3.9	25	89	0
n-Pentadecane (C15)	0.933	0.953	.05	-2.1	25	88	0
n-Hexadecane (C16)	0.946	0.965	.05	-2	25	87	0
n-Heptadecane (C17)	0.914	0.966	.05	-5.7	25	86	0
Pristane	1.013	1.005	.05	0.8	25	87	0
n-Octadecane (C18)	0.965	0.971	.05	-0.6	25	84	0
Phytane	0.915	0.928	.05	-1.4	25	87	0
n-Nonadecane (C19)	0.972	0.975	.05	-0.3	25	85	0
ortho-terphenyl	1.115	1.076	.05	3.5	25	77	0
n-Eicosane (C20)	0.985	0.995	.05	-1	25	85	0
n-Heneicosane (C21)	0.99	0.994	.05	-0.4	25	85	0
n-Docosane (C22)	1	1.008	.05	-0.8	25	85	0
n-Tricosane (C23)	1.008	1.012	.05	-0.4	25	85	0
d50-Tetracosane	0.909	0.865	.05	4.8	25	75	0
n-Tetracosane (C24)	0.993	0.96	.05	3.3	25	84	0
n-Pentacosane (C25)	0.987	0.995	.05	-0.8	25	85	0
n-Hexacosane (C26)	1.013	1.024	.05	-1.1	25	84	0
n-Heptacosane (C27)	1.006	0.991	.05	1.5	25	84	0
n-Octacosane (C28)	1.032	1.034	.05	-0.2	25	84	0
n-Nonacosane (C29)	1.024	1.028	.05	-0.4	25	84	0
n-Triacontane (C30)	1.023	1.028	.05	-0.5	25	84	0
n-Hentriacontane (C31)	0.985	0.994	.05	-0.9	25	84	0
n-Dotriacontane (C32)	1.021	1.036	.05	-1.5	25	85	0
n-Tritriacontane (C33)	0.984	1.002	.05	-1.8	25	85	0
n-tetratriacontane (C34)	0.968	0.991	.05	-2.4	25	85	0
n-Pentatriacontane (C35)	0.915	1.006	.05	-9.9	25	85	0
n-Hexatriacontane (C36)	1.055	1.081	.05	-2.5	25	85	0
n-Heptatriacontane (C37)	0.955	0.996	.05	-4.3	25	86	0
n-Octatriacontane (C38)	0.959	1.036	.05	-8	25	87	0
n-Tetracontane (C40)	0.94	1.044	.05	-11.1	25	87	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503		
Project Name	: RED HILL	**Project Number**	:		
Instrument ID	: FID18	**Calibration Date**	: 01/05/22 03:24		
Lab File ID	: F18010422024	**Init. Calib. Date(s)**	: 11/05/21	11/06/21	
Sample No	: WG1590500-2	**Init. Calib. Times**	: 19:59	03:06	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	92	0
n-Octane (C8)	0.811	0.752	.05	7.3	25	83	0
n-Nonane (C9)	0.825	0.797	.05	3.4	25	86	0
n-Decane (C10)	0.814	0.904	.05	-11.1	25	98	0
n-Undecane (C11)	0.848	0.918	.05	-8.3	25	93	0
n-Dodecane (C12)	0.879	0.925	.05	-5.2	25	93	0
n-Tridecane (C13)	0.895	0.936	.05	-4.6	25	93	0
n-Tetradecane (C14)	0.926	0.956	.05	-3.2	25	92	0
n-Pentadecane (C15)	0.933	0.95	.05	-1.8	25	92	0
n-Hexadecane (C16)	0.946	0.966	.05	-2.1	25	91	0
n-Heptadecane (C17)	0.914	0.972	.05	-6.3	25	91	0
Pristane	1.013	0.994	.05	1.9	25	91	0
n-Octadecane (C18)	0.965	0.98	.05	-1.6	25	89	0
Phytane	0.915	0.922	.05	-0.8	25	91	0
n-Nonadecane (C19)	0.972	0.979	.05	-0.7	25	90	0
ortho-terphenyl	1.115	1.078	.05	3.3	25	82	0
n-Eicosane (C20)	0.985	0.999	.05	-1.4	25	90	0
n-Heneicosane (C21)	0.99	0.987	.05	0.3	25	89	0
n-Docosane (C22)	1	1.007	.05	-0.7	25	89	0
n-Tricosane (C23)	1.008	1.007	.05	0.1	25	89	0
d50-Tetracosane	0.909	0.859	.05	5.5	25	79	0
n-Tetracosane (C24)	0.993	0.951	.05	4.2	25	88	0
n-Pentacosane (C25)	0.987	0.983	.05	0.4	25	88	0
n-Hexacosane (C26)	1.013	1.011	.05	0.2	25	87	0
n-Heptacosane (C27)	1.006	0.972	.05	3.4	25	87	0
n-Octacosane (C28)	1.032	1.011	.05	2	25	86	0
n-Nonacosane (C29)	1.024	1	.05	2.3	25	86	0
n-Triacontane (C30)	1.023	0.998	.05	2.4	25	85	0
n-Hentriacontane (C31)	0.985	0.958	.05	2.7	25	85	0
n-Dotriacontane (C32)	1.021	0.992	.05	2.8	25	85	0
n-Tritriacontane (C33)	0.984	0.962	.05	2.2	25	85	0
n-tetratriacontane (C34)	0.968	0.938	.05	3.1	25	84	0
n-Pentatriacontane (C35)	0.915	0.94	.05	-2.7	25	83	0
n-Hexatriacontane (C36)	1.055	1.004	.05	4.8	25	83	0
n-Heptatriacontane (C37)	0.955	0.92	.05	3.7	25	83	0
n-Octatriacontane (C38)	0.959	0.941	.05	1.9	25	83	0
n-Tetracontane (C40)	0.94	0.938	.05	0.2	25	83	-.02

* Value outside of QC limits.

Analytical Sequence
Form 8b
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: FID17	**Initial Calib. Date(s)**	: 05/20/21 05/21/21

Client ID	Lab ID	Date/Time Analyzed
STD1	R1439434-1	05/20/21 20:50
STD10	R1439434-3	05/20/21 22:19
STD50	R1439434-2	05/20/21 23:47
STD100	R1439434-4	05/21/21 01:16
STD200	R1439434-5	05/21/21 02:44
STD500	R1439434-6	05/21/21 04:13
R1439434-7 ICV	R1439434-7	05/21/21 07:10
WG1505003-1 ANS	WG1505003-1	05/21/21 10:07
WG1579117-2 CCAL	WG1579117-2	12/04/21 07:20
WG1579102-1 BLANK	WG1579102-1	12/04/21 11:44
WG1579102-2 LCS	WG1579102-2	12/04/21 13:13
WG1579102-3 LCSD	WG1579102-3	12/04/21 14:41
ERH1967	L2166503-01	12/04/21 17:38
WG1579117-3 CCAL	WG1579117-3	12/04/21 19:06
WG1579126-1 BLANK	WG1579126-1	12/04/21 23:30
WG1579126-2 LCS	WG1579126-2	12/05/21 00:59
WG1579126-3 LCSD	WG1579126-3	12/05/21 02:27
ERH2051	L2166503-02	12/05/21 03:55
WG1579117-4 CCAL	WG1579117-4	12/05/21 08:19
ERH1967	L2166503-01 D	12/05/21 12:50
ERH2051	L2166503-02 D	12/05/21 14:18
WG1579117-5 CCAL	WG1579117-5	12/05/21 15:46

Analytical Sequence
Form 8b
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2166503
Project Name	: RED HILL	**Project Number**	:
Instrument ID	: FID18	**Initial Calib. Date(s)**	: 03/20/21 03/20/21

Client ID	Lab ID	Date/Time Analyzed
STD1	R1415315-1	03/20/21 01:25
STD10	R1415315-3	03/20/21 02:51
STD50	R1415315-2	03/20/21 04:18
STD100	R1415315-4	03/20/21 05:44
STD200	R1415315-5	03/20/21 07:10
STD500	R1415315-6	03/20/21 08:37
R1415315-7 ICV	R1415315-7	03/20/21 11:29
WG1479204-1 ANS	WG1479204-1	03/24/21 15:51
WG1583234-1 CCAL	WG1583234-1	12/14/21 12:46
WG1582496-1 BLANK	WG1582496-1	12/14/21 17:05
WG1582496-2 LCS	WG1582496-2	12/14/21 19:57
WG1582496-3 LCSD	WG1582496-3	12/14/21 21:23
ERH2052	L2166503-03	12/15/21 03:07
WG1583234-2 CCAL	WG1583234-2	12/15/21 07:25

Analytical Sequence
Form 8b
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2166503**
Project Name	**: RED HILL**	**Project Number**	**:**
Instrument ID	**: FID18**	**Initial Calib. Date(s)**	**: 11/05/21 11/06/21**

Client ID	Lab ID	Date/Time Analyzed
STD1	R1510917-1	11/05/21 19:59
STD10	R1510917-3	11/05/21 21:25
STD50	R1510917-2	11/05/21 22:50
STD100	R1510917-4	11/06/21 00:16
STD200	R1510917-5	11/06/21 01:41
STD500	R1510917-6	11/06/21 03:06
R1510917-7 ICV	R1510917-7	11/06/21 05:57
WG1581201-1 ANS	WG1581201-1	11/06/21 08:48
WG1590500-1 CCAL	WG1590500-1	01/04/22 14:29
WG1590340-1 BLANK	WG1590340-1	01/04/22 18:47
WG1590340-2 LCS	WG1590340-2	01/04/22 20:14
WG1590340-3 LCSD	WG1590340-3	01/04/22 21:40
ERH2052	L2166503-03 D	01/05/22 00:32
ERH2052 PRE SILICA	L2166503-06 D	01/05/22 01:58
WG1590500-2 CCAL	WG1590500-2	01/05/22 03:24

ALPHA ANALYTICAL

World Class Chemistry

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Lab Number: L2200971

Client: GSI Environmental Inc.

ATTN: Ileana Rhodes

Project Name:

Project Number:

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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Sample Delivery Group Information

Sample Delivery Group Summary

Alpha Job Number : L2200971

Received : 07-JAN-2022
Reviewer : Sam Oldrid

Account Name : GSI Environmental Inc.
Project Number :
Project Name :

Delivery Information

Samples Delivered By : Express Ship
FedEx (288522691047)

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	1.2	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between sample labels & COC?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NO**

LIMS Chain of Custody

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Jan 18 2022, 04:42 pm

Login Number: L2200971
Account: GSI GSI Environmental Inc.
Received: 10JAN22 Due Date: 18JAN22

Sample #	Client ID	Mat	PR	Collected
L2200971-01	ERH2371	6	2E	06JAN22 11:00

include manual sum of c10 to c24 and c25 to c40 in the narrative SHC and TPH DRO/ORO no clean up - report list made - include PHI narration - include SHC quant report this sample is from an AFFF drain - potential non-target PFAS present - the clinet says PFAS should not be an issue this sample should be the same as L2165245-01 A2-DPKG-FULL Package Due Date: 01/18/22

A2-DPKG-FULL,A2-PIANO8260,A2-SHC,TS100

Logged By: Sue ONeil

Container Tracking

ALPHA ANALYTICAL LABORATORIES
Container Tracking Report

Container ID	Type	Status	Transaction Date	From Response	From Location	From Operator	To Response	To Location	To Operator
L2200971-01A	Vial-A-20	INTACT	14-JAN-22	CUSTODY	A2-ORGANIC PREP	Brian Anderson	A2-CUSTODY-REFRIG-E1-S1	A2-CUSTODY-REFRIG-E1-S1	Brian Anderson
L2200971-01A	Vial-A-20	INTACT	14-JAN-22	CUSTODY	A2-CUSTODY-REFRIG-E1-S1	Brian Anderson	A2-ORGANIC PREP	A2-ORGANIC PREP	Brian Anderson
L2200971-01A	Vial-A-20	INTACT	11-JAN-22	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-E1-S1	A2-CUSTODY-REFRIG-E1-S1	Dylan Snook
L2200971-01A	Vial-A-20	INTACT	11-JAN-22	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2200971-01B	Vial-A-20	INTACT	11-JAN-22	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-E1-S1	A2-CUSTODY-REFRIG-E1-S1	Dylan Snook
L2200971-01B	Vial-A-20	INTACT	11-JAN-22	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2200971-01C	Vial-A-20	INTACT	11-JAN-22	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-E1-S1	A2-CUSTODY-REFRIG-E1-S1	Dylan Snook
L2200971-01C	Vial-A-20	INTACT	11-JAN-22	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2200971-01D	Vial-A-20	INTACT	11-JAN-22	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-E1-S1	A2-CUSTODY-REFRIG-E1-S1	Dylan Snook
L2200971-01D	Vial-A-20	INTACT	11-JAN-22	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2200971-01E	Vial-A-20	INTACT	11-JAN-22	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-E1-S1	A2-CUSTODY-REFRIG-E1-S1	Dylan Snook
L2200971-01E	Vial-A-20	INTACT	11-JAN-22	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil
L2200971-01F	Vial-A-20	INTACT	11-JAN-22	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Dylan Snook	A2-CUSTODY-REFRIG-E1-S1	A2-CUSTODY-REFRIG-E1-S1	Dylan Snook
L2200971-01F	Vial-A-20	INTACT	11-JAN-22	A2-LOGIN	A2-LOGIN	Sue ONeil	A2-CUSTODY-REFRIDGE	A2-CUSTODY-REFRIDGE	Sue ONeil

Chain of Custody

CHAIN OF CUSTODY

PAGE 1 OF 1

CoC# 202201-24 NOI

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 1/10/22

ALPHA Job #: L2200971

Client Information

Client: Ileana Rhodes GSI Environmental Inc.

Address: 2211 Norfolk Suite 1000

Houston, TX 77098-5669

Phone: 281-703-5669

Fax:

Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:

Project Location:

Project #:

Project Manager: Susan O'Neil

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C10 to C24, C24 to C40. Include carbon marker and sample surrogate for TPH-d/o and w/ SGC. Analyze same as L2165245, ERH1967 excluding EPA 8270D.

ANALYSIS

SAMPLE HANDLING

Filtration
☐ Done
☐ Not Needed
☐ Lab to do

Preservation
☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	EPA 8015D(M) SHC	PHI w/ Qualitative Narrative	EPA 8015D(M) SHC+SGC	Sample Specific Comments	TOTAL # BOTTLES
00971-01	ERH2371	01/06/21	1100	Product	~~GD~~ NL	☒	☒	☒		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		
Container Type						V	V	V		
Preservative						A	A	A		

Relinquished By:	Date/Time	Received By:	Date/Time
CHRIS WOMACK	01/06/22 1500	FEDEX	01/06/22 1500
FEDEX	1/10/22 10:01		1/10/22 10:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.


ORIGIN ID:HOUA (346) 342-8444
BEA LI ,JOB # 4902-120
GSI ENVIRONMENTAL INC
2211 NORFOLK ST STE 1000
HOUSTON, TX 77098
UNITED STATES US
SHIP DATE: 08JAN22
ACTWGT: 19.45 LB
CAD: 8996029/SSF02220
DIMS: 15x12x11 IN
BILL THIRD PARTY
TO ATTN: SUSAN O NEIL
ALPHA LAB
320 FORBES BLVD
JOB # 4902-120
MANSFIELD MA 02048
(508) 822-9300
INV:
PO:
REF:
DEPT:
FedEx
Express
TRK# 0201 2885 2269 1047
MON - 10 JAN 9:00A
FIRST OVERNIGHT
DSR AHS
02048
MA-US BOS
X1 PYMA

Organics

GC/MS 8260
Analysis

Initial Calibration

Response Factor Report VOA9

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211220\
Method File : P9122021W.M
Title : PIANO VOLATILES
Last Update : Tue Dec 21 13:01:08 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000824.D 5 =V9000825.D 50 =V9000827.D 100 =V9000828.D 200 =V9000833.D 20 =V9000826.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	----------ISTD----------							
2)		3-Methyl-1-butene	0.328	0.366	0.377	0.370	0.494	0.395	0.3885	14.45
3)		Isopentane	0.227	0.222	0.214	0.200	0.254	0.228	0.2242	7.88
4)		1-Pentene	0.224	0.242	0.248	0.226	0.283	0.252	0.2459	8.85
5)		2-Methyl-1-butene	0.365	0.365	0.394	0.357	0.442	0.397	0.3867	8.18
6)		Pentane	0.381	0.409	0.366	0.334	0.408	0.395	0.3821	7.48
7)		trans-2-Pentene	0.374	0.391	0.426	0.389	0.484	0.427	0.4153	9.66
8)		2-Methyl-1,3-butadiene	0.224	0.238	0.284	0.260	0.321	0.279	0.2675	13.04
9)		cis-2-Pentene	0.347	0.372	0.404	0.362	0.456	0.401	0.3905	9.93
10)		Tertiary butanol		0.071	0.074	0.078	0.120	0.078	0.0841#	24.31
11)		2,2-Dimethylbutane	0.206	0.243	0.247	0.219	0.266	0.254	0.2392	9.38
12)		4-Methyl-1-pentene	0.269	0.267	0.319	0.290	0.331	0.313	0.2983	8.92
13)		Cyclopentane	0.138	0.153	0.176	0.159	0.207	0.172	0.1676	14.24
14)		2,3-Dimethylbutane	0.101	0.109	0.124	0.113	0.125	0.123	0.1159	8.43
15)		2-Methylpentane	0.420	0.394	0.452	0.405	0.465	0.445	0.4302	6.51
16)		MTBE	0.557	0.543	0.640	0.620	0.784	0.621	0.6275	13.68
17)		3-Methylpentane	0.337	0.362	0.408	0.366	0.388	0.398	0.3763	6.98
18)		1-Hexene	0.204	0.193	0.234	0.218	0.250	0.224	0.2206	9.41
19)		Hexane	0.323	0.321	0.357	0.328	0.340	0.351	0.3367	4.50
20)		Diisopropyl ether	0.533	0.549	0.669	0.637	0.709	0.629	0.6210	10.95
21)		trans-2-Hexene	0.311	0.335	0.407	0.372	0.385	0.392	0.3670	10.02
22)		2-Methyl-2-pentene	0.336	0.362	0.405	0.376	0.386	0.392	0.3764	6.48
23)		cis-2-Hexene	0.287	0.309	0.367	0.344	0.344	0.352	0.3338	8.91
24)	S	Dibromofluoromethane (surr)	0.259	0.259	0.244	0.257	0.273	0.257	0.2581	3.56
25)		Ethyl tertiary butyl ether	0.538	0.565	0.661	0.640	0.703	0.634	0.6235	9.85
26)		2,2-Dimethylpentane	0.441	0.455	0.513	0.466	0.449	0.512	0.4727	6.73
27)		Methylcyclopentane	0.386	0.394	0.446	0.405	0.406	0.434	0.4117	5.63
28)		2,4-Dimethylpentane	0.357	0.358	0.402	0.381	0.384	0.407	0.3817	5.49
29)		2,2,3-Trimethylbutane	0.365	0.399	0.464	0.428	0.381	0.446	0.4140	9.33
30)		1,2-Dichloroethane	0.286	0.281	0.302	0.290	0.348	0.273	0.2966	9.14
31)		3,3-Dimethylpentane	0.443	0.465	0.523	0.484	0.435	0.513	0.4774	7.55
32)		Cyclohexane	0.321	0.331	0.371	0.349	0.322	0.364	0.3432	6.29

Response Factor Report VOA9

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211220\
Method File : P9122021W.M
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Last Update : Tue Dec 21 13:01:08 2021
Response Via : Initial Calibration

Calibration Files
2 =V9000824.D 5 =V9000825.D 50 =V9000827.D 100 =V9000828.D 200 =V9000833.D 20 =V9000826.D

		Compound	2	5	50	100	200	20	Avg	%RSD
33)		2-Methylhexane	0.398	0.396	0.462	0.428	0.379	0.454	0.4195	8.04
34)	M	Benzene	0.843	0.821	0.897	0.886	0.897	0.870	0.8692	3.57
35)		2,3-Dimethylpentane	0.331	0.326	0.377	0.349	0.321	0.371	0.3457	6.90
36)		Thiophene	0.364	0.391	0.477	0.479	0.497	0.461	0.4448	12.14
37)		1,1-Dimethylcyclopentane	0.187	0.202	0.252	0.235	0.212	0.245	0.2222	11.52
38)		3-Methylhexane	0.384	0.331	0.392	0.364	0.308	0.375	0.3589	9.17
39)		TAME	0.866	0.706	0.702	0.659	0.719	0.632	0.7139	11.40
40)		cis-1,3-Dimethylcyclopentane	0.286	0.276	0.317	0.299	0.250	0.292	0.2866	7.87
41)		3-Ethylpentane	0.423	0.447	0.514	0.476	0.402	0.504	0.4610	9.76
43)		1-Heptene/trans-1,2-DMCP	0.159	0.169	0.183	0.176	0.167	0.180	0.1724	5.16
44)		Isooctane	0.824	0.837	0.967	0.904	0.714	0.955	0.8668	10.98
45)		trans-3-Heptene	0.289	0.273	0.303	0.290	0.236	0.292	0.2805	8.47
46)		Heptane	0.283	0.304	0.348	0.325	0.261	0.345	0.3112	11.20
48)		trans-2-Heptene	0.218	0.244	0.298	0.279	0.229	0.282	0.2584	12.67
49)		cis-2-Heptene	0.186	0.214	0.262	0.254	0.204	0.252	0.2285	13.75
50)		2,2-Dimethylhexane	0.770	0.811	0.940	0.894	0.672	0.926	0.8355	12.45
51)		Methylcyclohexane	0.343	0.358	0.425	0.399	0.310	0.410	0.3741	11.87
52)		2,5-Dimethylhexane	0.394	0.420	0.467	0.445	0.338	0.465	0.4215	11.79
53)		2,4-Dimethylhexane	0.321	0.325	0.361	0.337	0.322	0.362	0.3381	5.68
54)		Ethylcyclopentane	0.286	0.307	0.350	0.337	0.256	0.344	0.3133	11.85
55)		2,2,3-Trimethylpentane	0.643	0.663	0.761	0.730	0.564	0.774	0.6890	11.67
57)		2,3,4-Trimethylpentane	0.438	0.473	0.531	0.512	0.365	0.531	0.4751	13.68
58)		2,3,3-Trimethylpentane	0.357	0.388	0.441	0.425	0.301	0.436	0.3914	13.96
59)		2,3-Dimethylhexane	0.402	0.420	0.488	0.464	0.352	0.488	0.4356	12.38
60)		2-Methylheptane	0.322	0.373	0.422	0.410	0.300	0.423	0.3751	14.18
61)		4-Methylheptane	0.418	0.475	0.530	0.509	0.369	0.519	0.4699	13.58
62)	S	Toluene-d8 (surr)	1.193	1.163	1.179	1.198	1.108	1.182	1.1705	2.82
63)		3-Methylheptane	0.470	0.382	0.367	0.365	0.269	0.387	0.3732	17.18
64)	S	2-Bromo-1-chloropropane (...	0.243	0.254	0.349	0.338	0.385	0.322	0.3152	17.70
65)		3-Ethylhexane	0.488	0.537	0.572	0.548	0.427	0.595	0.5280	11.57
66)	M	Toluene	0.831	0.888	1.036	0.993	1.072	0.993	0.9687	9.43
67)		2-Methylthiophene	0.614	0.677	0.822	0.796	0.897	0.774	0.7634	13.41
68)		trans-1,4-Dimethylcyclohe...	0.382	0.415	0.476	0.466	0.318	0.472	0.4216	14.90

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211220\
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Response Via : Initial Calibration

Calibration Files
2 =V9000824.D 5 =V9000825.D 50 =V9000827.D 100 =V9000828.D 200 =V9000833.D 20 =V9000826.D

		Compound	2	5	50	100	200	20	Avg	%RSD
69)		3-Methylthiophene	0.633	0.673	0.836	0.807	0.879	0.769	0.7661	12.51
70)		1-Octene	0.129	0.163	0.196	0.199	0.142	0.197	0.1711	18.10
71)		Octane	0.321	0.391	0.441	0.444	0.321	0.441	0.3931	15.12
72)		trans-1,2-Dimethylcyclohe...	0.302	0.315	0.355	0.347	0.223	0.355	0.3163	15.97
73)		1,2-Dibromoethane	0.179	0.193	0.257	0.250	0.305	0.235	0.2367	19.37
75)		cis-2-Octene	0.223	0.236	0.298	0.300	0.208	0.290	0.2592	15.99
76)		Isopropylcyclopentane	0.322	0.369	0.411	0.418	0.254	0.430	0.3674	18.56
77)		cis-1,2-Dimethylcyclohexane	0.305	0.317	0.353	0.357	0.282	0.351	0.3274	9.41
78)		2,5-Dimethylheptane	0.439	0.562	0.605	0.624	0.409	0.620	0.5430	17.57
79)		3,5-Dimethylheptane	0.643	0.673	0.738	0.768	0.675	0.764	0.7100	7.51
80)		3,3-Dimethylheptane	0.384	0.435	0.473	0.488	0.376	0.490	0.4409	11.58
81)		1,1,4-Trimethylcyclohexane	0.353	0.367	0.413	0.425	0.327	0.422	0.3846	10.69
82)		2,3-Dimethylheptane	0.463	0.494	0.531	0.557	0.431	0.549	0.5043	10.00
83)		3,4-Dimethylheptane	0.313	0.334	0.335	0.349	0.251	0.358	0.3233	11.86
84)		4-Methyloctane	0.425	0.454	0.500	0.519	0.339	0.517	0.4590	15.18
85)		2-Methyloctane	0.457	0.457	0.464	0.499	0.433	0.497	0.4679	5.49
86)		Ethylbenzene	0.917	1.012	1.201	1.165	1.032	1.135	1.0771	10.04
87)	S	1-Chloro-2-fluorobenzene ...	0.489	0.527	0.622	0.606	0.599	0.586	0.5716	9.06
88)		2-Ethylthiophene	0.617	0.721	0.899	0.869	0.803	0.834	0.7904	13.26
89)		3-Methyloctane	0.667	0.714	0.790	0.837	0.635	0.825	0.7447	11.39
90)		3,3-Diethylpentane	0.769	0.844	0.900	0.945	0.700	0.941	0.8498	11.66
91)		p/m-Xylene	0.681	0.769	0.921	0.885	0.768	0.862	0.8144	11.05
92)		1-Nonene	0.142	0.164	0.197	0.220	0.161	0.199	0.1805	16.31
93)		trans-3-Nonene	0.217	0.248	0.291	0.316	0.228	0.298	0.2662	15.44
94)		cis-3-Nonene	0.251	0.284	0.326	0.354	0.260	0.346	0.3036	14.61
95)		Nonane	0.380	0.428	0.438	0.480	0.354	0.476	0.4260	11.93
96)		Styrene	0.491	0.585	0.767	0.738	0.670	0.702	0.6587	15.69
97)	S	1,4-Dichlorobutane (H/surr)	0.340	0.363	0.445	0.419	0.443	0.420	0.4050	10.66
98)		o-Xylene	0.714	0.800	0.944	0.898	0.769	0.881	0.8342	10.49
99)		2-Nonene	0.223	0.247	0.289	0.316	0.223	0.303	0.2667	15.33
100)		Isopropylcyclohexane	0.345	0.381	0.404	0.428	0.299	0.426	0.3807	13.32
101)	S	4-Bromofluorobenzene (surr)	0.492	0.515	0.516	0.496	0.427	0.505	0.4918	6.71
102)		Isopropylbenzene	0.937	1.032	1.181	1.136	0.837	1.133	1.0424	12.85

Method Path : O:\Organics\DATA\VOA9\2021\12-DEC\211220\
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Calibration Files
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	Compound	2	5	50	100	200	20	Avg	%RSD
103)	3,3-Dimethyloctane	0.530	0.597	0.629	0.689	0.456	0.665	0.5944	14.75
104)	n-Propylbenzene	1.007	1.145	1.405	1.365	0.952	1.339	1.2021	16.22
105)	2-Methylnonane	0.310	0.373	0.408	0.442	0.284	0.433	0.3749	17.50
106)	3-Methylnonane	0.371	0.453	0.489	0.535	0.341	0.517	0.4509	17.63
107)	1-Methyl-3-ethylbenzene	0.845	0.979	1.176	1.135	0.785	1.127	1.0078	16.33
108)	1-Methyl-4-ethylbenzene	0.827	0.928	1.123	1.089	0.751	1.079	0.9663	16.03
109)	1,3,5-Trimethylbenzene	0.695	0.808	0.975	0.945	0.638	0.938	0.8334	17.06
110)	1-Decene	0.155	0.192	0.222	0.243	0.151	0.234	0.1994	20.04
111)	Isobutylcyclohexane	0.370	0.423	0.433	0.471	0.288	0.477	0.4104	17.42
112)	1-Methyl-2-ethylbenzene	0.890	1.006	1.183	1.124	0.781	1.136	1.0201	15.50
113)	Decane	0.302	0.371	0.393	0.422	0.260	0.423	0.3620	18.46
114)	tert-Butylbenzene	0.647	0.758	0.838	0.819	0.518	0.845	0.7375	17.71
115)	1,2,4-Trimethylbenzene	0.749	0.882	1.039	0.985	0.663	1.001	0.8866	17.11
116)	Isobutylbenzene	0.860	1.049	1.099	1.095	0.667	1.141	0.9853	18.75
117)	sec-Butylbenzene	0.951	1.125	1.220	1.203	0.734	1.270	1.0838	18.87
118)	1-Methyl-3-isopropylbenzene	0.769	0.917	1.025	1.013	0.616	1.046	0.8977	19.15
119)	1-Methyl-4-isopropylbenzene	0.776	0.933	1.017	1.021	0.610	1.059	0.9027	19.46
120)	1,2,3-Trimethylbenzene	0.747	0.907	1.063	0.991	0.666	1.024	0.8999	17.81
121)	1-Methyl-2-isopropylbenzene	0.791	0.948	1.039	1.013	0.620	1.064	0.9123	19.04
122)	Indan	0.710	0.861	1.017	0.928	0.646	0.961	0.8541	17.15
123)	1,3-Diethylbenzene	0.490	0.597	0.657	0.647	0.384	0.691	0.5777	20.38
124)	1-Methyl-3-propylbenzene	0.931	1.162	1.228	1.215	0.709	1.305	1.0919	20.75
125)	Indene	0.659	0.818	1.005	0.924	0.731	0.942	0.8465	15.81
126)	1-Methyl-4-propylbenzene	1.117	1.372	1.445	1.437	0.831	1.555	1.2928	20.84
127)	n-Butylbenzene	0.908	1.118	1.140	1.144	0.661	1.243	1.0357	20.65
128)	1,2-Dimethyl-4-ethylbenzene	0.795	0.994	1.056	1.032	0.611	1.127	0.9359	20.78
129)	1,2-Diethylbenzene	0.423	0.490	0.518	0.502	0.303	0.547	0.4640	19.17
130)	1-Methyl-2-propylbenzene	1.017	1.242	1.317	1.279	0.761	1.399	1.1693	20.29
131)	1,4-Dimethyl-2-ethylbenzene	0.744	0.920	1.007	0.973	0.576	1.058	0.8797	20.88
132)	Undecane	0.380	0.488	0.487	0.521	0.268	0.545	0.4481	23.40
133)	1,3-Dimethyl-4-ethylbenzene	0.916	1.159	1.206	1.161	0.684	1.294	1.0702	21.20
134)	1,3-Dimethyl-5-ethylbenzene	0.822	1.052	1.094	1.056	0.619	1.185	0.9714	21.62
135)	1,3-Dimethyl-2-ethylbenzene	0.925	1.134	1.220	1.157	0.694	1.293	1.0704	20.74

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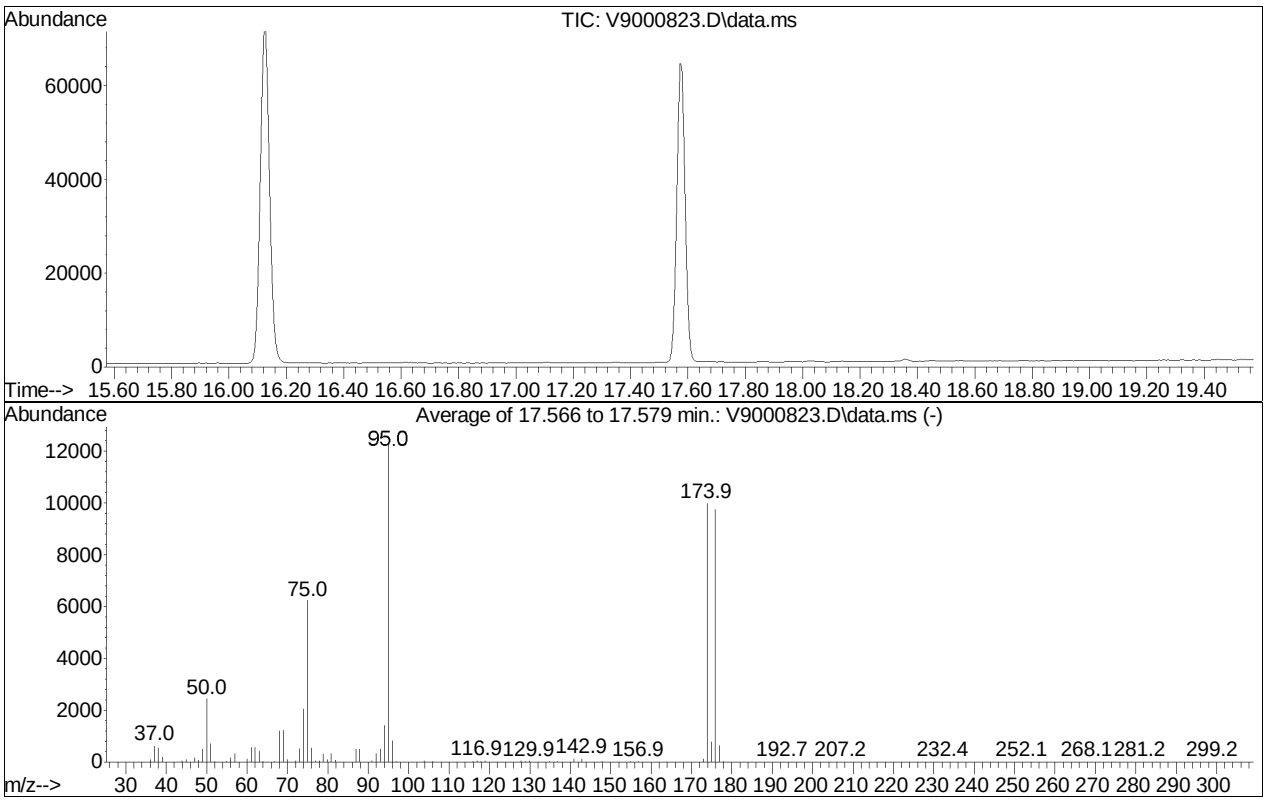
	Compound	2	5	50	100	200	20	Avg	%RSD
136)	1,2-Dimethyl-3-ethylbenzene	0.821	1.014	1.085	1.026	0.610	1.162	0.9530	21.27
137)	1,2,4,5-Tetramethylbenzene	0.863	1.062	1.145	1.090	0.631	1.243	1.0056	22.10
138)	1,2,3,5-Tetramethylbenzene	0.798	0.963	1.038	0.979	0.562	1.124	0.9105	22.13
139)	Pentylbenzene	0.734	0.955	0.921	0.958	0.497	1.101	0.8611	24.81
140)	1,2,3,4-Tetramethylbenzene	1.065	1.283	1.359	1.296	0.730	1.514	1.2076	22.79
141)	1,3-DM-5-tert-Butylbenzene	0.698	0.870	0.837	0.875	0.444	1.002	0.7877	24.69
142)	Dodecane	0.297	0.404	0.336	0.340		0.439	0.3631	15.72
143)	1,3,5-Triethylbenzene	0.432	0.529	0.514	0.556	0.274	0.632	0.4897	25.29#
144)	Naphthalene	1.079	1.201	1.448	1.251	0.934	1.438	1.2252	16.42
145)	Benzothiophene	0.665	0.732	0.912	0.785	0.637	0.886	0.7696	14.68
146)	1,2,4-Triethylbenzene	0.466	0.484	0.478	0.507	0.250	0.573	0.4596	23.82
147)	Hexylbenzene	0.633	0.818	0.780	0.851	0.436	0.950	0.7448	24.57
148)	MMT	0.368	0.397	0.505	0.439	0.277	0.511	0.4162	21.40
149)	Tridecane	0.330	0.462	0.309	0.329		0.511	0.3880	23.62
150)	2-Methylnaphthalene	0.678	0.736	0.900	0.819	0.540	0.932	0.7674	19.10
151)	1-Methylnaphthalene	0.622	0.673	0.811	0.731	0.479	0.836	0.6921	19.03
152)	Tetradecane	0.301	0.377	0.210	0.254		0.374	0.3033	24.18
153)	Pentadecane	0.233	0.237	0.128	0.167		0.219	0.1970	24.10

(#) = Out of Range

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000823.D
Acq On : 20 Dec 2021 10:16 am
Operator : VOA9:RY
Sample : WG1586099-1,31
Misc : WG1586099
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Title : PIANO VOLATILES
Last Update : Tue Dec 21 13:01:08 2021



Spectrum Information: Average of 17.566 to 17.579 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.8	2441	PASS
75	95	30	60	50.6	6232	PASS
95	95	100	100	100.0	12326	PASS
96	95	5	9	6.6	816	PASS
173	174	0.00	2	1.2	118	PASS
174	95	50	100	81.0	9983	PASS
175	174	5	9	7.8	781	PASS
176	174	95	101	97.7	9753	PASS
177	176	5	9	6.6	642	PASS

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000824.D
Acq On : 20 Dec 2021 10:46 am
Operator : VOA9:RY
Sample : I921122001
Misc : WG1586099
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 16:33:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	271510	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.14	113	70249	53.053	ug/L	-0.03
Spiked Amount 50.000	Range 78 - 118		Recovery = 106.11%			
62) Toluene-d8 (surr)	31.23	98	323887	50.592	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 101.18%			
64) 2-Bromo-1-chloropropan...	31.45	77	2635	1.391	ug/L	-0.02
Spiked Amount 50.000	Range 70 - 130		Recovery = 2.78%#			
87) 1-Chloro-2-fluorobenze...	40.73	130	5316M4	1.573	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.15%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	3696M4	1.531	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 3.06%#			
101) 4-Bromofluorobenzene (...	46.53	95	133628	47.723	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 95.45%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.65	55	3567	1.742	ug/L	94
3) Isopentane	8.19	43	2463M4	2.115	ug/L	
4) 1-Pentene	8.87	42	2431	1.808	ug/L	91
5) 2-Methyl-1-butene	9.18	55	3966	1.854	ug/L	94
6) Pentane	9.24	43	4135	2.082	ug/L	80
7) trans-2-Pentene	9.71	55	4059	1.754	ug/L	95
8) 2-Methyl-1,3-butadiene	9.88	67	2433	1.578	ug/L	95
9) cis-2-Pentene	10.09	55	3772	1.719	ug/L	95
10) Tertiary butanol	10.84	59	4010M4	10.034	ug/L	
11) 2,2-Dimethylbutane	11.14	43	2237	1.667	ug/L	87
12) 4-Methyl-1-pentene	12.48	43	2926	1.689	ug/L	93
13) Cyclopentane	12.96	70	1496M4	1.563	ug/L	
14) 2,3-Dimethylbutane	12.97	71	1098	1.626	ug/L #	72
15) 2-Methylpentane	13.19	43	4564	1.860	ug/L	99
16) MTBE	13.55	73	6051	1.741	ug/L	96
17) 3-Methylpentane	14.18	57	3658	1.652	ug/L	92
18) 1-Hexene	14.77	56	2211	1.738	ug/L	93
19) Hexane	15.38	57	3504	1.807	ug/L	94
20) Diisopropyl ether	15.72	45	5789	1.594	ug/L	94
21) trans-2-Hexene	15.88	55	3376	1.528	ug/L	92
22) 2-Methyl-2-pentene	16.06	69	3654	1.660	ug/L	95

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000824.D
Acq On : 20 Dec 2021 10:46 am
Operator : VOA9:RY
Sample : I921122001
Misc : WG1586099
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 16:33:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
23) cis-2-Hexene	16.63	55	3119	1.565	ug/L		94
25) Ethyl tertiary butyl e...	17.19	59	5843	1.627	ug/L		91
26) 2,2-Dimethylpentane	17.44	57	4791	1.720	ug/L		90
27) Methylcyclopentane	17.72	56	4192	1.732	ug/L		94
28) 2,4-Dimethylpentane	17.89	43	3881	1.778	ug/L		97
29) 2,2,3-Trimethylbutane	18.50	57	3967	1.573	ug/L		92
30) 1,2-Dichloroethane	19.22	62	3107	1.897	ug/L		98
31) 3,3-Dimethylpentane	20.17	43	4814M4	1.695	ug/L		
32) Cyclohexane	20.65	56	3485M4	1.729	ug/L		
33) 2-Methylhexane	21.08	43	4325M4	1.724	ug/L		
34) Benzene	21.27	78	9158	1.879	ug/L		95
35) 2,3-Dimethylpentane	21.38	56	3594M4	1.756	ug/L		
36) Thiophene	21.74	84	3958	1.527	ug/L		95
37) 1,1-Dimethylcyclopentane	21.85	83	2036	1.486	ug/L	#	86
38) 3-Methylhexane	21.92	43	4167M4	1.957	ug/L		
39) TAME	22.30	73	9406	2.466	ug/L		80
40) cis-1,3-Dimethylcyclop...	22.68	70	3102M4	1.804	ug/L		
41) 3-Ethylpentane	22.85	43	4589	1.644	ug/L		95
43) 1-Heptene/trans-1,2-DMCP	23.25	70	3457M4	3.479	ug/L		
44) Isooctane	23.34	57	8948	1.705	ug/L		98
45) trans-3-Heptene	23.96	41	3139M4	1.907	ug/L		
46) Heptane	24.10	43	3077	1.626	ug/L		88
48) trans-2-Heptene	24.73	56	2363M4	1.458	ug/L		
49) cis-2-Heptene	25.54	56	2017	1.419	ug/L		89
50) 2,2-Dimethylhexane	26.29	57	8365	1.639	ug/L		98
51) Methylcyclohexane	26.53	83	3720M4	1.613	ug/L		
52) 2,5-Dimethylhexane	27.20	57	4279	1.687	ug/L		94
53) 2,4-Dimethylhexane	27.45	57	3482	1.776	ug/L		89
54) Ethylcyclopentane	27.49	69	3101M4	1.631	ug/L		
55) 2,2,3-Trimethylpentane	27.70	57	6981	1.690	ug/L		98
57) 2,3,4-Trimethylpentane	29.25	43	4761	1.651	ug/L		87
58) 2,3,3-Trimethylpentane	29.82	43	3880	1.619	ug/L		91
59) 2,3-Dimethylhexane	30.09	43	4368	1.650	ug/L		94
60) 2-Methylheptane	30.53	57	3497	1.525	ug/L		93
61) 4-Methylheptane	30.71	43	4539	1.578	ug/L		99
63) 3-Methylheptane	31.25	43	5100M4	2.562	ug/L		
65) 3-Ethylhexane	31.41	43	5297	1.705	ug/L		75
66) Toluene	31.59	91	9027	1.605	ug/L		87
67) 2-Methylthiophene	31.77	97	6669	1.494	ug/L		96
68) trans-1,4-Dimethylcycl...	32.24	97	4151	1.607	ug/L		98
69) 3-Methylthiophene	32.54	97	6870M4	1.513	ug/L		

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000824.D
Acq On : 20 Dec 2021 10:46 am
Operator : VOA9:RY
Sample : I921122001
Misc : WG1586099
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 16:33:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
70) 1-Octene	32.97	55	1404	1.318	ug/L	#	83
71) Octane	33.79	43	3482	1.454	ug/L		88
72) trans-1,2-Dimethylcycl...	34.06	55	3280M4	1.703	ug/L		
73) 1,2-Dibromoethane	34.30	107	1945M4	1.393	ug/L		
75) cis-2-Octene	35.16	55	2420M4	1.495	ug/L		
76) Isopropylcyclopentane	35.29	68	3500	1.567	ug/L		88
77) cis-1,2-Dimethylcycloh...	37.06	55	3315M4	1.731	ug/L		
78) 2,5-Dimethylheptane	37.41	57	4766	1.451	ug/L		94
79) 3,5-Dimethylheptane	37.54	57	6981M4	1.742	ug/L		
80) 3,3-Dimethylheptane	37.81	57	4171	1.626	ug/L		95
81) 1,1,4-Trimethylcyclohe...	38.32	69	3831	1.706	ug/L		96
82) 2,3-Dimethylheptane	39.49	43	5030	1.744	ug/L		90
83) 3,4-Dimethylheptane	39.81	43	3404M4	1.870	ug/L		
84) 4-Methyloctane	40.09	43	4611M4	1.699	ug/L		
85) 2-Methyloctane	40.17	43	4965M4	1.968	ug/L		
86) Ethylbenzene	40.70	91	9958	1.526	ug/L		97
88) 2-Ethylthiophene	40.85	97	6698	1.373	ug/L		93
89) 3-Methyloctane	40.84	57	7246	1.689	ug/L		93
90) 3,3-Diethylpentane	41.83	57	8350	1.709	ug/L		95
91) p/m-Xylene	41.96	91	14802	2.960	ug/L		91
92) 1-Nonene	42.62	56	1539M4	1.442	ug/L		
93) trans-3-Nonene	43.04	55	2353	1.491	ug/L		98
94) cis-3-Nonene	43.33	55	2730M6	1.541	ug/L		
95) Nonane	43.38	43	4130M6	1.737	ug/L		
96) Styrene	43.83	104	5335	1.282	ug/L		87
98) o-Xylene	44.24	91	7749	1.512	ug/L		99
99) 2-Nonene	44.66	55	2427	1.548	ug/L		88
100) Isopropylcyclohexane	45.95	83	3747	1.706	ug/L		89
102) Isopropylbenzene	46.56	105	10171	1.586	ug/L		99
103) 3,3-Dimethyloctane	47.05	71	5758	1.685	ug/L		98
104) n-Propylbenzene	49.00	91	10941	1.434	ug/L		100
105) 2-Methylnonane	49.04	43	3363	1.519	ug/L		92
106) 3-Methylnonane	49.43	57	4024	1.515	ug/L		92
107) 1-Methyl-3-ethylbenzene	49.57	105	9179	1.438	ug/L		98
108) 1-Methyl-4-ethylbenzene	49.74	105	8979	1.472	ug/L		95
109) 1,3,5-Trimethylbenzene	50.28	105	7553	1.427	ug/L		98
110) 1-Decene	50.43	41	1686	1.398	ug/L		84
111) Isobutylcyclohexane	50.57	83	4019	1.709	ug/L		97
112) 1-Methyl-2-ethylbenzene	50.60	105	9669	1.505	ug/L		97
113) Decane	50.78	43	3283	1.537	ug/L		97
114) tert-Butylbenzene	51.04	119	7030	1.544	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000824.D
Acq On : 20 Dec 2021 10:46 am
Operator : VOA9:RY
Sample : I921122001
Misc : WG1586099
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 16:33:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) 1,2,4-Trimethylbenzene	51.44	105	8133	1.441	ug/L	100
116) Isobutylbenzene	51.63	91	9342M6	1.565	ug/L	
117) sec-Butylbenzene	51.69	105	10330	1.559	ug/L	97
118) 1-Methyl-3-isopropylbe...	52.07	119	8348	1.500	ug/L	98
119) 1-Methyl-4-isopropylbe...	52.26	119	8429	1.526	ug/L	99
120) 1,2,3-Trimethylbenzene	52.52	105	8118	1.406	ug/L	93
121) 1-Methyl-2-isopropylbe...	52.72	119	8586	1.522	ug/L	100
122) Indan	52.82	117	7715	1.397	ug/L	99
123) 1,3-Diethylbenzene	52.96	105	5324	1.493	ug/L	93
124) 1-Methyl-3-propylbenzene	53.08	105	10113	1.516	ug/L	97
125) Indene	53.25	115	7162	1.312	ug/L	97
126) 1-Methyl-4-propylbenzene	53.23	105	12127	1.546	ug/L	96
127) n-Butylbenzene	53.22	91	9866	1.594	ug/L	93
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	8630	1.505	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	4599	1.635	ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	11048	1.545	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	8083	1.478	ug/L	98
132) Undecane	53.97	57	4125	1.560	ug/L	89
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	9953	1.520	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	8932	1.503	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	10041	1.516	ug/L	98
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	8916	1.514	ug/L	95
137) 1,2,4,5-Tetramethylben...	55.14	119	9369	1.507	ug/L	96
138) 1,2,3,5-Tetramethylben...	55.24	119	8662	1.537	ug/L	99
139) Pentylbenzene	55.72	91	7969	1.594	ug/L	98
140) 1,2,3,4-Tetramethylben...	56.05	119	11567	1.568	ug/L	93
141) 1,3-DM-5-tert-Butylben...	56.03	147	7585	1.669	ug/L	98
142) Dodecane	56.21	43	3225	1.765	ug/L	86
143) 1,3,5-Triethylbenzene	56.92	147	4697	1.682	ug/L	93
144) Naphthalene	57.08	128	11720	1.491	ug/L	98
145) Benzothiophene	57.18	134	7223	1.458	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	5062	1.950	ug/L	97
147) Hexylbenzene	58.00	91	6880	1.624	ug/L	97
148) MMT	58.26	134	3998	1.457	ug/L	96
149) Tridecane	58.31	57	3586	2.138	ug/L	95
150) 2-Methylnaphthalene	59.88	142	7367	1.508	ug/L	90
151) 1-Methylnaphthalene	60.36	142	6757	1.535	ug/L	90
152) Tetradecane	60.64	57	3272	2.863	ug/L	93
153) Pentadecane	63.48	57	2532M4	3.633	ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000824.D
Acq On : 20 Dec 2021 10:46 am
Operator : VOA9:RY
Sample : I921122001
Misc : WG1586099
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 16:33:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

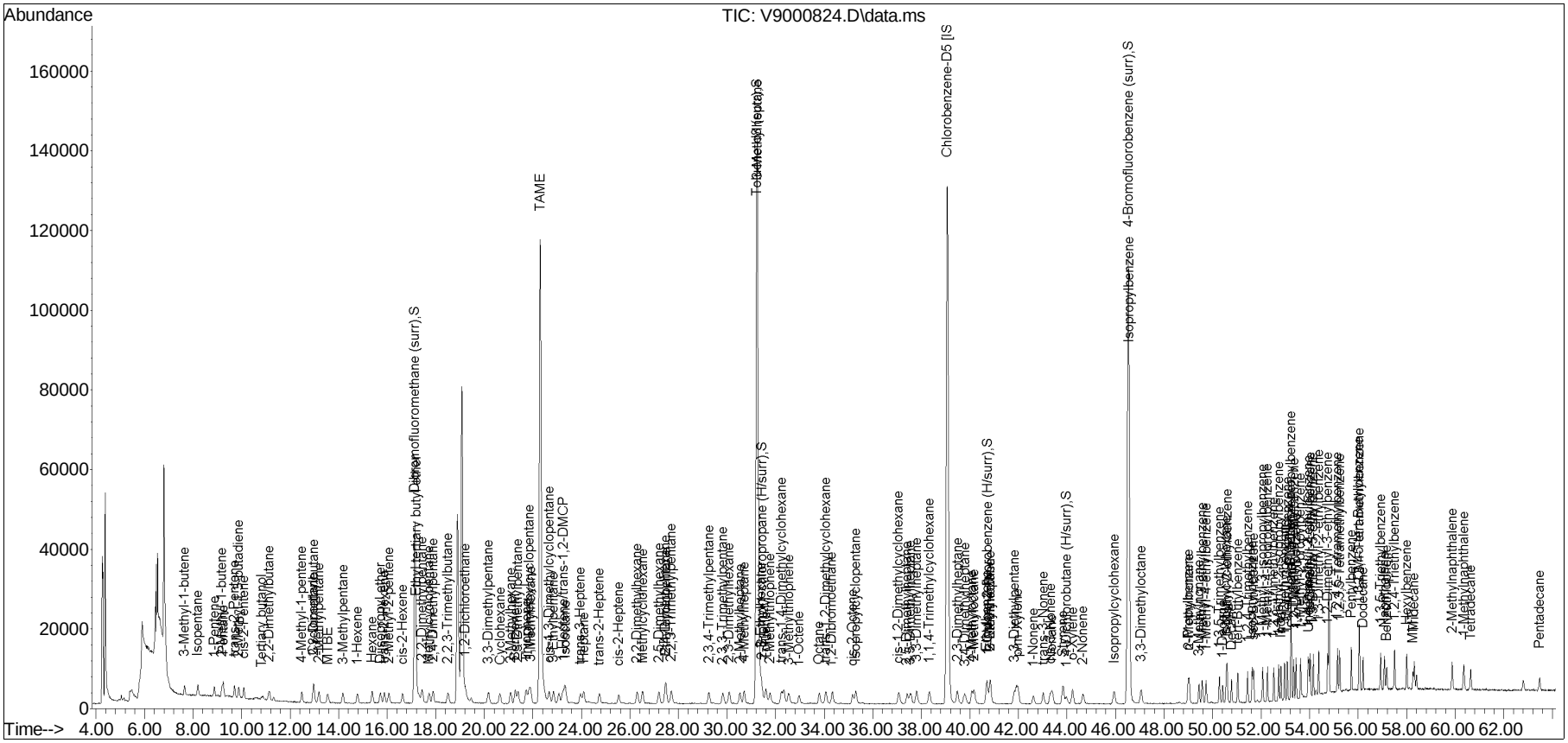
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000824.D
Acq On : 20 Dec 2021 10:46 am
Operator : VOA9:RY
Sample : I921122001
Misc : WG1586099
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 20 16:33:57 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000825.D
Acq On : 20 Dec 2021 11:57 am
Operator : VOA9:RY
Sample : I921122002
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 16:28:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	238912	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.21	113	61919	53.142	ug/L	0.04
Spiked Amount 50.000	Range 78 - 118		Recovery = 106.28%			
62) Toluene-d8 (surr)	31.26	98	277877	49.328	ug/L	0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.66%			
64) 2-Bromo-1-chloropropan...	31.49	77	6070	3.641	ug/L	0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 7.28%#			
87) 1-Chloro-2-fluorobenze...	40.72	130	12601	4.237	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.47%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	8684	4.087	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 8.17%#			
101) 4-Bromofluorobenzene (...	46.53	95	123002	49.922	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.84%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.81	55	8747	4.854	ug/L	96
3) Isopentane	8.34	43	5311	5.184	ug/L	93
4) 1-Pentene	9.01	42	5790	4.894	ug/L	89
5) 2-Methyl-1-butene	9.32	55	8726	4.637	ug/L	98
6) Pentane	9.39	43	9769	5.589	ug/L	95
7) trans-2-Pentene	9.84	55	9340	4.586	ug/L	96
8) 2-Methyl-1,3-butadiene	10.01	67	5688	4.193	ug/L	94
9) cis-2-Pentene	10.21	55	8899	4.608	ug/L	97
10) Tertiary butanol	10.82	59	8499M4	24.168	ug/L	
11) 2,2-Dimethylbutane	11.25	43	5814	4.923	ug/L	86
12) 4-Methyl-1-pentene	12.59	43	6388	4.191	ug/L	100
13) Cyclopentane	13.07	70	3659	4.344	ug/L	95
14) 2,3-Dimethylbutane	13.07	71	2607M4	4.388	ug/L	
15) 2-Methylpentane	13.29	43	9420	4.363	ug/L	94
16) MTBE	13.63	73	12972	4.242	ug/L	99
17) 3-Methylpentane	14.28	57	8639	4.434	ug/L	92
18) 1-Hexene	14.86	56	4612	4.119	ug/L	97
19) Hexane	15.47	57	7679	4.499	ug/L	93
20) Diisopropyl ether	15.78	45	13125	4.108	ug/L	96
21) trans-2-Hexene	15.97	55	8002	4.116	ug/L	92
22) 2-Methyl-2-pentene	16.16	69	8658	4.469	ug/L	99
23) cis-2-Hexene	16.71	55	7386	4.212	ug/L	97
25) Ethyl tertiary butyl e...	17.25	59	13501	4.273	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000825.D
Acq On : 20 Dec 2021 11:57 am
Operator : VOA9:RY
Sample : I921122002
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 16:28:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.51	57	10867	4.433	ug/L	97
27) Methylcyclopentane	17.80	56	9420	4.423	ug/L	97
28) 2,4-Dimethylpentane	17.95	43	8562	4.457	ug/L	86
29) 2,2,3-Trimethylbutane	18.58	57	9542	4.301	ug/L	94
30) 1,2-Dichloroethane	19.28	62	6723M4	4.664	ug/L	
31) 3,3-Dimethylpentane	20.23	43	11111	4.445	ug/L	92
32) Cyclohexane	20.70	56	7917	4.465	ug/L	92
33) 2-Methylhexane	21.15	43	9464	4.288	ug/L	98
34) Benzene	21.33	78	19623	4.576	ug/L	97
35) 2,3-Dimethylpentane	21.45	56	7790	4.326	ug/L	95
36) Thiophene	21.79	84	9330	4.092	ug/L	92
37) 1,1-Dimethylcyclopentane	21.91	83	4833M4	4.009	ug/L	
38) 3-Methylhexane	21.97	43	7903	4.219	ug/L	94
39) TAME	22.34	73	16857	5.023	ug/L	95
40) cis-1,3-Dimethylcyclop...	22.74	70	6596	4.359	ug/L	92
41) 3-Ethylpentane	22.91	43	10677	4.347	ug/L	98
43) 1-Heptene/trans-1,2-DMCP	23.28	70	8098M4	9.262	ug/L	
44) Isooctane	23.40	57	20007	4.332	ug/L	96
45) trans-3-Heptene	24.00	41	6514	4.498	ug/L	88
46) Heptane	24.14	43	7253	4.357	ug/L	96
48) trans-2-Heptene	24.78	56	5833	4.090	ug/L	94
49) cis-2-Heptene	25.58	56	5110	4.085	ug/L	92
50) 2,2-Dimethylhexane	26.35	57	19373	4.315	ug/L	98
51) Methylcyclohexane	26.56	83	8561	4.220	ug/L	97
52) 2,5-Dimethylhexane	27.22	57	10037	4.497	ug/L	99
53) 2,4-Dimethylhexane	27.49	57	7763	4.501	ug/L	90
54) Ethylcyclopentane	27.52	69	7337	4.387	ug/L	99
55) 2,2,3-Trimethylpentane	27.75	57	15833	4.355	ug/L	97
57) 2,3,4-Trimethylpentane	29.28	43	11305M4	4.454	ug/L	
58) 2,3,3-Trimethylpentane	29.86	43	9266	4.393	ug/L	93
59) 2,3-Dimethylhexane	30.11	43	10026	4.304	ug/L	95
60) 2-Methylheptane	30.55	57	8906	4.412	ug/L	93
61) 4-Methylheptane	30.73	43	11337	4.479	ug/L	97
63) 3-Methylheptane	31.31	43	9132	5.213	ug/L	90
65) 3-Ethylhexane	31.44	43	12840	4.697	ug/L	95
66) Toluene	31.62	91	21206	4.284	ug/L	98
67) 2-Methylthiophene	31.81	97	16169	4.115	ug/L	98
68) trans-1,4-Dimethylcycl...	32.27	97	9903	4.357	ug/L	96
69) 3-Methylthiophene	32.56	97	16067	4.021	ug/L	95
70) 1-Octene	33.00	55	3897	4.156	ug/L	91
71) Octane	33.82	43	9353	4.438	ug/L	95

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000825.D
Acq On : 20 Dec 2021 11:57 am
Operator : VOA9:RY
Sample : I921122002
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 16:28:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.09	55	7535	4.446	ug/L	94
73) 1,2-Dibromoethane	34.33	107	4616	3.756	ug/L	95
75) cis-2-Octene	35.19	55	5641	3.960	ug/L	97
76) Isopropylcyclopentane	35.34	68	8807	4.480	ug/L	93
77) cis-1,2-Dimethylcycloh...	37.10	55	7565M4	4.490	ug/L	
78) 2,5-Dimethylheptane	37.44	57	13419	4.642	ug/L	97
79) 3,5-Dimethylheptane	37.59	57	16073M4	4.559	ug/L	
80) 3,3-Dimethylheptane	37.83	57	10403	4.608	ug/L	93
81) 1,1,4-Trimethylcyclohe...	38.36	69	8777	4.442	ug/L	96
82) 2,3-Dimethylheptane	39.50	43	11810	4.654	ug/L	95
83) 3,4-Dimethylheptane	39.82	43	7970M4	4.976	ug/L	
84) 4-Methyloctane	40.09	43	10848	4.542	ug/L	91
85) 2-Methyloctane	40.19	43	10913M3	4.917	ug/L	
86) Ethylbenzene	40.71	91	24180	4.212	ug/L	100
88) 2-Ethylthiophene	40.85	97	17220	4.011	ug/L	96
89) 3-Methyloctane	40.85	57	17050	4.516	ug/L	98
90) 3,3-Diethylpentane	41.84	57	20153	4.686	ug/L	98
91) p/m-Xylene	41.96	91	36756M4	8.354	ug/L	
92) 1-Nonene	42.63	56	3918	4.173	ug/L	89
93) trans-3-Nonene	43.04	55	5917	4.261	ug/L	98
94) cis-3-Nonene	43.32	55	6797M6	4.361	ug/L	
95) Nonane	43.40	43	10232M6	4.889	ug/L	
96) Styrene	43.82	104	13972	3.814	ug/L	95
98) o-Xylene	44.24	91	19108	4.237	ug/L	94
99) 2-Nonene	44.67	55	5908	4.281	ug/L	93
100) Isopropylcyclohexane	45.94	83	9114M4	4.717	ug/L	
102) Isopropylbenzene	46.57	105	24648	4.368	ug/L	91
103) 3,3-Dimethyloctane	47.06	71	14254	4.739	ug/L	96
104) n-Propylbenzene	49.00	91	27346	4.074	ug/L	95
105) 2-Methylnonane	49.04	43	8904	4.569	ug/L	98
106) 3-Methylnonane	49.44	57	10813	4.628	ug/L	96
107) 1-Methyl-3-ethylbenzene	49.58	105	23397	4.164	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.74	105	22174	4.132	ug/L	95
109) 1,3,5-Trimethylbenzene	50.29	105	19315	4.148	ug/L	98
110) 1-Decene	50.43	41	4580	4.317	ug/L	98
111) Isobutylcyclohexane	50.57	83	10117	4.889	ug/L	95
112) 1-Methyl-2-ethylbenzene	50.61	105	24032	4.252	ug/L	97
113) Decane	50.78	43	8866	4.716	ug/L	95
114) tert-Butylbenzene	51.04	119	18099	4.518	ug/L	98
115) 1,2,4-Trimethylbenzene	51.44	105	21072	4.243	ug/L	98
116) Isobutylbenzene	51.63	91	25070M6	4.774	ug/L	

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000825.D
Acq On : 20 Dec 2021 11:57 am
Operator : VOA9:RY
Sample : I921122002
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 16:28:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	26882	4.611	ug/L	99
118) 1-Methyl-3-isopropylbe...	52.07	119	21909	4.474	ug/L	94
119) 1-Methyl-4-isopropylbe...	52.26	119	22287	4.586	ug/L	99
120) 1,2,3-Trimethylbenzene	52.53	105	21671	4.266	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.72	119	22643	4.563	ug/L	99
122) Indan	52.82	117	20571	4.234	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	14266	4.546	ug/L	96
124) 1-Methyl-3-propylbenzene	53.08	105	27772	4.732	ug/L	99
125) Indene	53.24	115	19539	4.069	ug/L	98
126) 1-Methyl-4-propylbenzene	53.23	105	32774	4.748	ug/L	97
127) n-Butylbenzene	53.22	91	26716	4.905	ug/L	95
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	23747	4.705	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	11709	4.730	ug/L	100
130) 1-Methyl-2-propylbenzene	53.63	105	29676	4.717	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	21975	4.565	ug/L	97
132) Undecane	53.97	57	11661	5.013	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	27681	4.803	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	25129	4.806	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	27097	4.649	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	24235	4.676	ug/L	97
137) 1,2,4,5-Tetramethylben...	55.15	119	25379	4.638	ug/L	98
138) 1,2,3,5-Tetramethylben...	55.24	119	23007	4.639	ug/L	99
139) Pentylbenzene	55.72	91	22828	5.190	ug/L	98
140) 1,2,3,4-Tetramethylben...	56.05	119	30649	4.721	ug/L	98
141) 1,3-DM-5-tert-Butylben...	56.04	147	20778	5.196	ug/L	95
142) Dodecane	56.21	43	9641	5.997	ug/L	98
143) 1,3,5-Triethylbenzene	56.93	147	12643	5.145	ug/L	98
144) Naphthalene	57.08	128	28688	4.147	ug/L	100
145) Benzothiophene	57.18	134	17495	4.013	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	11552	5.058	ug/L	99
147) Hexylbenzene	58.00	91	19534	5.240	ug/L	99
148) MMT	58.26	134	9480	3.925	ug/L	98
149) Tridecane	58.32	57	11034	7.475	ug/L	98
150) 2-Methylnaphthalene	59.88	142	17583	4.091	ug/L	93
151) 1-Methylnaphthalene	60.35	142	16081	4.151	ug/L	93
152) Tetradecane	60.64	57	9007	8.956	ug/L	92
153) Pentadecane	63.47	57	5673	9.250	ug/L	92

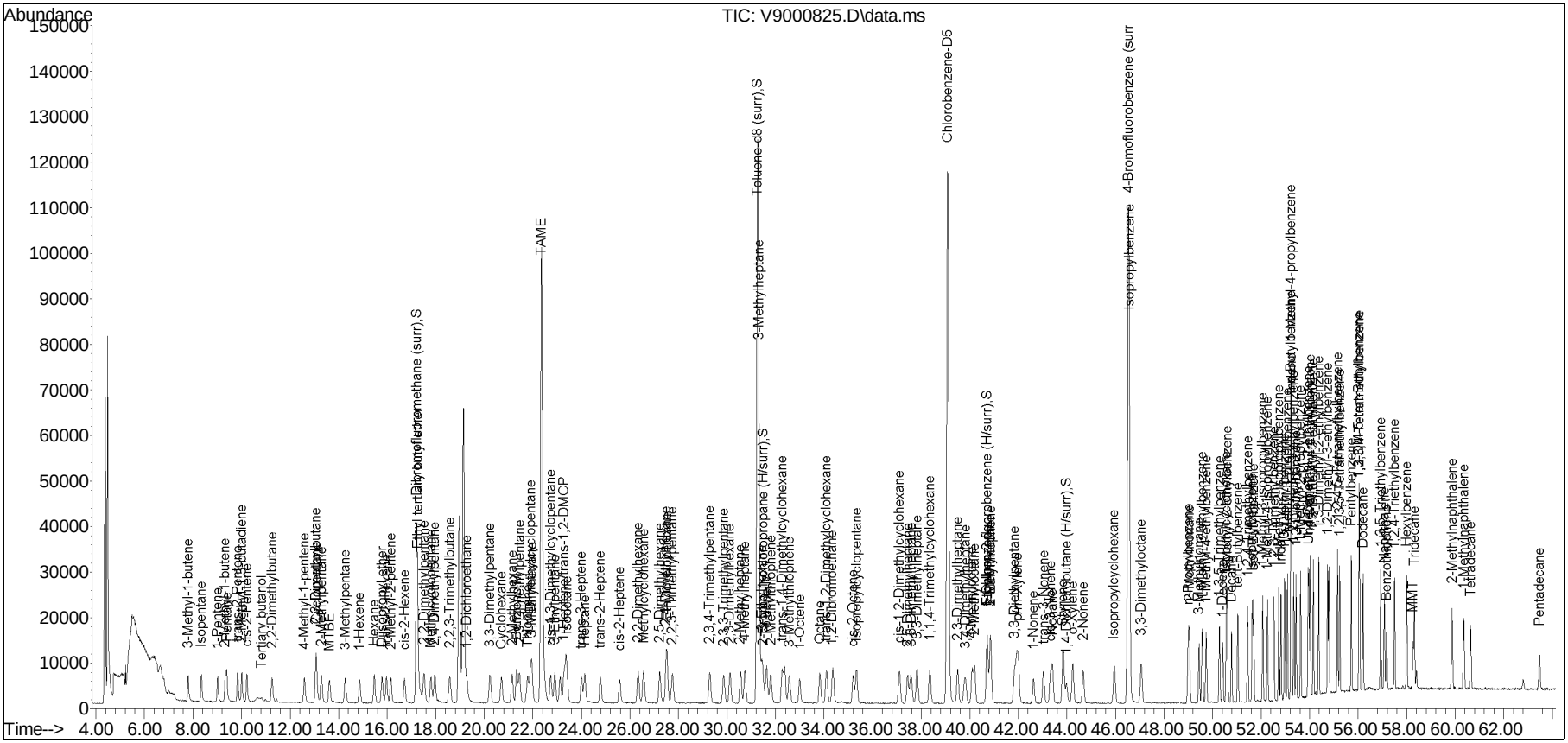
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000825.D
Acq On : 20 Dec 2021 11:57 am
Operator : VOA9:RY
Sample : I921122002
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 16:28:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000826.D
Acq On : 20 Dec 2021 01:09 pm
Operator : VOA9:RY
Sample : I921122003
Misc : WG1586099
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 20 16:21:09 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.09	117	237807	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.19	113	61124	52.704	ug/L	0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 105.41%			
62) Toluene-d8 (surr)	31.25	98	281160	50.142	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 100.28%			
64) 2-Bromo-1-chloropropan...	31.47	77	30675	18.486	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 36.97%#			
87) 1-Chloro-2-fluorobenze...	40.72	130	55716	18.822	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 37.64%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	39974	18.902	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 37.80%#			
101) 4-Bromofluorobenzene (...	46.54	95	120054	48.952	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.90%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.75	55	37608	20.965	ug/L	100
3) Isopentane	8.29	43	21651	21.231	ug/L	95
4) 1-Pentene	8.96	42	24013	20.390	ug/L	96
5) 2-Methyl-1-butene	9.28	55	37767	20.160	ug/L	98
6) Pentane	9.34	43	37571	21.597	ug/L	98
7) trans-2-Pentene	9.79	55	40658	20.056	ug/L	96
8) 2-Methyl-1,3-butadiene	9.96	67	26494	19.619	ug/L	94
9) cis-2-Pentene	10.18	55	38121	19.830	ug/L	97
10) Tertiary butanol	10.81	59	36872M4	105.339	ug/L	
11) 2,2-Dimethylbutane	11.21	43	24137	20.532	ug/L	99
12) 4-Methyl-1-pentene	12.56	43	29738	19.600	ug/L	99
13) Cyclopentane	13.04	70	16333	19.480	ug/L	99
14) 2,3-Dimethylbutane	13.04	71	11678	19.747	ug/L	99
15) 2-Methylpentane	13.26	43	42351	19.707	ug/L	97
16) MTBE	13.59	73	59088	19.411	ug/L	100
17) 3-Methylpentane	14.24	57	37815	19.499	ug/L	96
18) 1-Hexene	14.84	56	21349	19.155	ug/L	96
19) Hexane	15.44	57	33409	19.666	ug/L	99
20) Diisopropyl ether	15.76	45	59838	18.815	ug/L	98
21) trans-2-Hexene	15.94	55	37296	19.271	ug/L	96
22) 2-Methyl-2-pentene	16.12	69	37284	19.333	ug/L	95
23) cis-2-Hexene	16.68	55	33529	19.207	ug/L	99
25) Ethyl tertiary butyl e...	17.23	59	60263	19.162	ug/L	97

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000826.D
Acq On : 20 Dec 2021 01:09 pm
Operator : VOA9:RY
Sample : I921122003
Misc : WG1586099
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 20 16:21:09 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.49	57	48666	19.943	ug/L	98
27) Methylcyclopentane	17.77	56	41246	19.454	ug/L	98
28) 2,4-Dimethylpentane	17.94	43	38716	20.246	ug/L	97
29) 2,2,3-Trimethylbutane	18.55	57	42466	19.229	ug/L	95
30) 1,2-Dichloroethane	19.25	62	25921	18.068	ug/L	99
31) 3,3-Dimethylpentane	20.21	43	48812	19.620	ug/L	95
32) Cyclohexane	20.68	56	34626	19.617	ug/L	99
33) 2-Methylhexane	21.13	43	43181	19.655	ug/L	95
34) Benzene	21.31	78	82728	19.381	ug/L	98
35) 2,3-Dimethylpentane	21.43	56	35285	19.685	ug/L	94
36) Thiophene	21.78	84	43869	19.329	ug/L	97
37) 1,1-Dimethylcyclopentane	21.88	83	23289	19.408	ug/L	97
38) 3-Methylhexane	21.94	43	35645	19.115	ug/L	98
39) TAME	22.32	73	60116	17.995	ug/L	99
40) cis-1,3-Dimethylcyclop...	22.71	70	27775	18.441	ug/L	94
41) 3-Ethylpentane	22.88	43	47971	19.622	ug/L	95
43) 1-Heptene/trans-1,2-DMCP	23.27	70	34225	39.328	ug/L	91
44) Isooctane	23.38	57	90885	19.768	ug/L	97
45) trans-3-Heptene	23.99	41	27803	19.286	ug/L	93
46) Heptane	24.12	43	32825	19.809	ug/L	99
48) trans-2-Heptene	24.77	56	26836	18.904	ug/L	95
49) cis-2-Heptene	25.56	56	23961	19.242	ug/L	97
50) 2,2-Dimethylhexane	26.33	57	88128	19.720	ug/L	99
51) Methylcyclohexane	26.55	83	39040	19.332	ug/L	99
52) 2,5-Dimethylhexane	27.22	57	44232	19.908	ug/L	99
53) 2,4-Dimethylhexane	27.49	57	34479	20.083	ug/L	99
54) Ethylcyclopentane	27.51	69	32686	19.634	ug/L	97
55) 2,2,3-Trimethylpentane	27.72	57	73594	20.339	ug/L	98
57) 2,3,4-Trimethylpentane	29.28	43	50536	20.005	ug/L	98
58) 2,3,3-Trimethylpentane	29.86	43	41426	19.733	ug/L	98
59) 2,3-Dimethylhexane	30.11	43	46407	20.014	ug/L	99
60) 2-Methylheptane	30.56	57	40232	20.026	ug/L	98
61) 4-Methylheptane	30.72	43	49341	19.584	ug/L	98
63) 3-Methylheptane	31.29	43	36836	21.127	ug/L	96
65) 3-Ethylhexane	31.42	43	56589M4	20.795	ug/L	
66) Toluene	31.61	91	94449	19.167	ug/L	100
67) 2-Methylthiophene	31.78	97	73647	18.831	ug/L	99
68) trans-1,4-Dimethylcycl...	32.25	97	44932	19.858	ug/L	98
69) 3-Methylthiophene	32.56	97	73171	18.397	ug/L	98
70) 1-Octene	32.97	55	18766	20.107	ug/L	95
71) Octane	33.81	43	41923	19.986	ug/L	99

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000826.D
Acq On : 20 Dec 2021 01:09 pm
Operator : VOA9:RY
Sample : I921122003
Misc : WG1586099
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 20 16:21:09 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.09	55	33751	20.007	ug/L	97
73) 1,2-Dibromoethane	34.33	107	22347	18.269	ug/L	97
75) cis-2-Octene	35.19	55	27578	19.450	ug/L	98
76) Isopropylcyclopentane	35.33	68	40861	20.881	ug/L	99
77) cis-1,2-Dimethylcycloh...	37.09	55	33360	19.894	ug/L	97
78) 2,5-Dimethylheptane	37.43	57	58931	20.482	ug/L	100
79) 3,5-Dimethylheptane	37.56	57	72643M4	20.700	ug/L	
80) 3,3-Dimethylheptane	37.82	57	46591	20.731	ug/L	99
81) 1,1,4-Trimethylcyclohe...	38.36	69	40168	20.425	ug/L	96
82) 2,3-Dimethylheptane	39.50	43	52254	20.687	ug/L	99
83) 3,4-Dimethylheptane	39.80	43	34037	21.348	ug/L	98
84) 4-Methyloctane	40.10	43	49170	20.684	ug/L	98
85) 2-Methyloctane	40.18	43	47269M3	21.397	ug/L	
86) Ethylbenzene	40.70	91	107967	18.894	ug/L	99
88) 2-Ethylthiophene	40.85	97	79317	18.559	ug/L	96
89) 3-Methyloctane	40.85	57	78456	20.876	ug/L	97
90) 3,3-Diethylpentane	41.84	57	89553	20.921	ug/L	97
91) p/m-Xylene	41.97	91	164075	37.466	ug/L	99
92) 1-Nonene	42.62	56	18938	20.262	ug/L	96
93) trans-3-Nonene	43.03	55	28386	20.535	ug/L	99
94) cis-3-Nonene	43.32	55	32891M6	21.201	ug/L	
95) Nonane	43.40	43	45304M6	21.748	ug/L	
96) Styrene	43.84	104	66802	18.321	ug/L	97
98) o-Xylene	44.24	91	83822	18.672	ug/L	97
99) 2-Nonene	44.67	55	28784	20.956	ug/L	98
100) Isopropylcyclohexane	45.95	83	40556	21.087	ug/L	98
102) Isopropylbenzene	46.57	105	107780	19.191	ug/L	98
103) 3,3-Dimethyloctane	47.06	71	63251	21.129	ug/L	98
104) n-Propylbenzene	49.00	91	127350	19.059	ug/L	98
105) 2-Methylnonane	49.04	43	41224	21.253	ug/L	98
106) 3-Methylnonane	49.44	57	49215	21.161	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.57	105	107172	19.163	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.74	105	102680	19.224	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	89253	19.257	ug/L	98
110) 1-Decene	50.42	41	22285	21.101	ug/L	99
111) Isobutylcyclohexane	50.57	83	45353	22.018	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.60	105	108095	19.212	ug/L	100
113) Decane	50.78	43	40267	21.519	ug/L	98
114) tert-Butylbenzene	51.04	119	80386	20.158	ug/L	98
115) 1,2,4-Trimethylbenzene	51.44	105	95249	19.269	ug/L	100
116) Isobutylbenzene	51.63	91	108570M6	20.771	ug/L	

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000826.D
Acq On : 20 Dec 2021 01:09 pm
Operator : VOA9:RY
Sample : I921122003
Misc : WG1586099
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 20 16:21:09 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	120783	20.814	ug/L	98
118) 1-Methyl-3-isopropylbe...	52.07	119	99506	20.413	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	100744	20.825	ug/L	98
120) 1,2,3-Trimethylbenzene	52.53	105	97401	19.261	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.72	119	101250	20.497	ug/L	99
122) Indan	52.82	117	91454	18.909	ug/L	98
123) 1,3-Diethylbenzene	52.97	105	65731	21.044	ug/L	99
124) 1-Methyl-3-propylbenzene	53.08	105	124181	21.256	ug/L	99
125) Indene	53.24	115	89600	18.747	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	147947	21.532	ug/L	98
127) n-Butylbenzene	53.23	91	118217	21.807	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	107241	21.346	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	52050	21.125	ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	133071	21.251	ug/L	98
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	100610	20.999	ug/L	100
132) Undecane	53.97	57	51853	22.396	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	123118	21.460	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	112752	21.666	ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	122952	21.191	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	110540	21.426	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	118221	21.704	ug/L	100
138) 1,2,3,5-Tetramethylben...	55.24	119	106879	21.650	ug/L	99
139) Pentylbenzene	55.72	91	104772	23.931	ug/L	100
140) 1,2,3,4-Tetramethylben...	56.05	119	144011	22.288	ug/L	98
141) 1,3-DM-5-tert-Butylben...	56.04	147	95319	23.949	ug/L	99
142) Dodecane	56.20	43	41757	26.096	ug/L	99
143) 1,3,5-Triethylbenzene	56.93	147	60133	24.587	ug/L	100
144) Naphthalene	57.08	128	136777	19.862	ug/L	98
145) Benzothiophene	57.18	134	84235	19.413	ug/L	100
146) 1,2,4-Triethylbenzene	57.50	147	54486	23.965	ug/L	99
147) Hexylbenzene	58.00	91	90360	24.350	ug/L	100
148) MMT	58.26	134	48648	20.236	ug/L	99
149) Tridecane	58.32	57	48569	33.056	ug/L	98
150) 2-Methylnaphthalene	59.87	142	88611	20.711	ug/L	97
151) 1-Methylnaphthalene	60.35	142	79494	20.615	ug/L	95
152) Tetradecane	60.64	57	35590	35.553	ug/L	98
153) Pentadecane	63.47	57	20816	34.100	ug/L	95

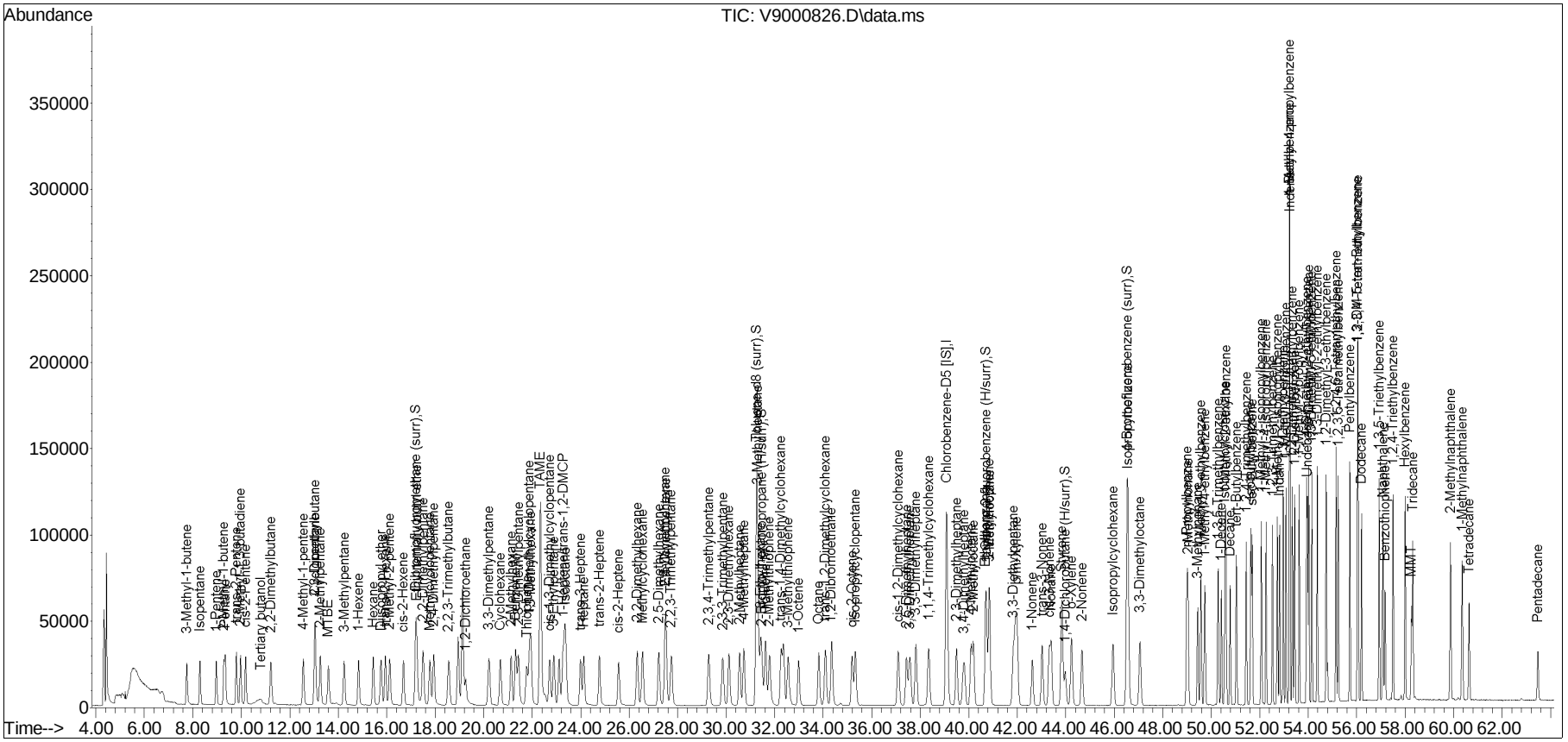
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000826.D
Acq On : 20 Dec 2021 01:09 pm
Operator : VOA9:RY
Sample : I921122003
Misc : WG1586099
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Dec 20 16:21:09 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:18:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000827.D
Acq On : 20 Dec 2021 02:20 pm
Operator : VOA9:RY
Sample : I921122004
Misc : WG1586099
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 16:15:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 08:01:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.08	117	244190	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.17	113	59545	51.000	ug/L	-0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 102.00%			
62) Toluene-d8 (surr)	31.25	98	287887	49.956	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.91%			
64) 2-Bromo-1-chloropropan...	31.48	77	85193	50.702	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 101.40%			
87) 1-Chloro-2-fluorobenze...	40.72	130	151982	50.368	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 100.74%			
97) 1,4-Dichlorobutane (H/...	43.98	55	108576	47.735	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 95.47%			
101) 4-Bromofluorobenzene (...	46.54	95	125915	49.669	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 99.34%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.73	55	92100	50.128	ug/L	99
3) Isopentane	8.27	43	52357	51.078	ug/L	98
4) 1-Pentene	8.94	42	60466	50.872	ug/L	97
5) 2-Methyl-1-butene	9.25	55	96180	50.897	ug/L	98
6) Pentane	9.31	43	89318	51.711	ug/L	100
7) trans-2-Pentene	9.77	55	104081	50.877	ug/L	99
8) 2-Methyl-1,3-butadiene	9.94	67	69334	51.463	ug/L	100
9) cis-2-Pentene	10.15	55	98698	51.349	ug/L	99
10) Tertiary butanol	10.76	59	89857M4	237.763	ug/L	
11) 2,2-Dimethylbutane	11.19	43	60356	51.088	ug/L	96
12) 4-Methyl-1-pentene	12.53	43	77899	51.499	ug/L	97
13) Cyclopentane	13.02	70	43047	51.411	ug/L	100
14) 2,3-Dimethylbutane	13.02	71	30363	51.740	ug/L #	88
15) 2-Methylpentane	13.23	43	110334	52.148	ug/L	100
16) MTBE	13.56	73	156286	51.175	ug/L	98
17) 3-Methylpentane	14.22	57	99571	52.441	ug/L	99
18) 1-Hexene	14.82	56	57223	51.418	ug/L	96
19) Hexane	15.43	57	87222	51.673	ug/L	100
20) Diisopropyl ether	15.74	45	163285	52.160	ug/L	98
21) trans-2-Hexene	15.92	55	99362	51.840	ug/L	99
22) 2-Methyl-2-pentene	16.10	69	99012	50.762	ug/L	98
23) cis-2-Hexene	16.66	55	89625	51.807	ug/L	99
25) Ethyl tertiary butyl e...	17.21	59	161469	52.344	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000827.D
Acq On : 20 Dec 2021 02:20 pm
Operator : VOA9:RY
Sample : I921122004
Misc : WG1586099
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 16:15:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 08:01:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.48	57	125285	51.576	ug/L	97
27) Methylcyclopentane	17.76	56	108853	51.898	ug/L	98
28) 2,4-Dimethylpentane	17.92	43	98180	51.504	ug/L	96
29) 2,2,3-Trimethylbutane	18.53	57	113387	51.832	ug/L	97
30) 1,2-Dichloroethane	19.23	62	73659	52.642	ug/L	96
31) 3,3-Dimethylpentane	20.19	43	127730	51.874	ug/L	99
32) Cyclohexane	20.67	56	90622	51.254	ug/L	98
33) 2-Methylhexane	21.12	43	112796	51.991	ug/L	97
34) Benzene	21.30	78	219152	51.957	ug/L	99
35) 2,3-Dimethylpentane	21.41	56	92028	51.849	ug/L	98
36) Thiophene	21.75	84	116528	53.836	ug/L	99
37) 1,1-Dimethylcyclopentane	21.88	83	61610	51.869	ug/L	95
38) 3-Methylhexane	21.93	43	95739	51.757	ug/L	97
39) TAME	22.31	73	171520	55.629	ug/L	99
40) cis-1,3-Dimethylcyclop...	22.71	70	77330	52.802	ug/L	97
41) 3-Ethylpentane	22.88	43	125519	51.949	ug/L	97
43) 1-Heptene/trans-1,2-DMCP	23.27	70	89361	97.904	ug/L	84
44) Isooctane	23.36	57	236045	51.900	ug/L	96
45) trans-3-Heptene	23.98	41	74017	52.637	ug/L	96
46) Heptane	24.11	43	85079	52.331	ug/L	97
48) trans-2-Heptene	24.75	56	72884	52.883	ug/L	99
49) cis-2-Heptene	25.55	56	63934	51.050	ug/L	99
50) 2,2-Dimethylhexane	26.32	57	229445	51.827	ug/L	98
51) Methylcyclohexane	26.54	83	103682	53.205	ug/L	97
52) 2,5-Dimethylhexane	27.21	57	114071	52.285	ug/L	97
53) 2,4-Dimethylhexane	27.48	57	88146	51.453	ug/L	98
54) Ethylcyclopentane	27.51	69	85473	52.163	ug/L	96
55) 2,2,3-Trimethylpentane	27.73	57	185778	54.048	ug/L	99
57) 2,3,4-Trimethylpentane	29.27	43	129700	51.956	ug/L	98
58) 2,3,3-Trimethylpentane	29.84	43	107784	52.114	ug/L	99
59) 2,3-Dimethylhexane	30.10	43	119048	52.435	ug/L	97
60) 2-Methylheptane	30.54	57	103148	52.061	ug/L	99
61) 4-Methylheptane	30.72	43	129353	51.879	ug/L	97
63) 3-Methylheptane	31.29	43	89519	51.918	ug/L	98
65) 3-Ethylhexane	31.42	43	139717	53.227	ug/L	98
66) Toluene	31.61	91	252993	51.357	ug/L	99
67) 2-Methylthiophene	31.78	97	200796	50.863	ug/L	98
68) trans-1,4-Dimethylcycl...	32.26	97	116167	52.115	ug/L	99
69) 3-Methylthiophene	32.55	97	204209	51.769	ug/L	98
70) 1-Octene	32.98	55	47917	50.311	ug/L	99
71) Octane	33.81	43	107697	51.485	ug/L	99

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000827.D
Acq On : 20 Dec 2021 02:20 pm
Operator : VOA9:RY
Sample : I921122004
Misc : WG1586099
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 16:15:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 08:01:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.09	55	86612	52.137	ug/L	98
73) 1,2-Dibromoethane	34.33	107	62803	50.177	ug/L	99
75) cis-2-Octene	35.18	55	72798	51.291	ug/L	98
76) Isopropylcyclopentane	35.33	68	100468	50.432	ug/L	100
77) cis-1,2-Dimethylcycloh...	37.09	55	86096	51.476	ug/L	98
78) 2,5-Dimethylheptane	37.43	57	147722	50.969	ug/L	100
79) 3,5-Dimethylheptane	37.57	57	180178M4	49.812	ug/L	
80) 3,3-Dimethylheptane	37.81	57	115386	52.076	ug/L	98
81) 1,1,4-Trimethylcyclohe...	38.34	69	100972	51.715	ug/L	98
82) 2,3-Dimethylheptane	39.50	43	129689	51.472	ug/L	98
83) 3,4-Dimethylheptane	39.80	43	81858	51.427	ug/L	99
84) 4-Methyloctane	40.09	43	122050	49.623	ug/L	98
85) 2-Methyloctane	40.19	43	113424M3	53.895	ug/L	
86) Ethylbenzene	40.70	91	293382	50.798	ug/L	99
88) 2-Ethylthiophene	40.85	97	219427	50.582	ug/L	98
89) 3-Methyloctane	40.85	57	192949	51.888	ug/L	99
90) 3,3-Diethylpentane	41.84	57	219776	51.999	ug/L	99
91) p/m-Xylene	41.96	91	449683	101.529	ug/L	98
92) 1-Nonene	42.62	56	47987	51.499	ug/L	98
93) trans-3-Nonene	43.03	55	70970	52.237	ug/L	98
94) cis-3-Nonene	43.32	55	79650M6	50.528	ug/L	
95) Nonane	43.40	43	106950M6	51.129	ug/L	
96) Styrene	43.83	104	187203	50.316	ug/L	99
98) o-Xylene	44.24	91	230479	50.589	ug/L	99
99) 2-Nonene	44.66	55	70519	51.909	ug/L	97
100) Isopropylcyclohexane	45.95	83	98745	51.724	ug/L	96
102) Isopropylbenzene	46.57	105	288343	51.676	ug/L	99
103) 3,3-Dimethyloctane	47.06	71	153697	53.242	ug/L	97
104) n-Propylbenzene	48.99	91	343067	51.605	ug/L	99
105) 2-Methylnonane	49.04	43	99589	53.434	ug/L	98
106) 3-Methylnonane	49.44	57	119407	53.551	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.57	105	287139	51.645	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.74	105	274230	51.759	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	237965	51.876	ug/L	99
110) 1-Decene	50.42	41	54224	53.241	ug/L	99
111) Isobutylcyclohexane	50.57	83	105756	53.373	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.60	105	288869	51.485	ug/L	99
113) Decane	50.78	43	96074	53.582	ug/L	97
114) tert-Butylbenzene	51.04	119	204745	52.022	ug/L	99
115) 1,2,4-Trimethylbenzene	51.44	105	253796	51.488	ug/L	99
116) Isobutylbenzene	51.63	91	268367M6	52.860	ug/L	

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000827.D
Acq On : 20 Dec 2021 02:20 pm
Operator : VOA9:RY
Sample : I921122004
Misc : WG1586099
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 16:15:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 08:01:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	297930	52.402	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	250275	52.274	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	248372	52.182	ug/L	97
120) 1,2,3-Trimethylbenzene	52.53	105	259636	51.460	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.73	119	253616	52.445	ug/L	100
122) Indan	52.82	117	248311	51.069	ug/L	100
123) 1,3-Diethylbenzene	52.97	105	160365	52.897	ug/L	99
124) 1-Methyl-3-propylbenzene	53.08	105	299942	52.822	ug/L	100
125) Indene	53.24	115	245387	50.199	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	352772	53.158	ug/L	100
127) n-Butylbenzene	53.23	91	278324	52.817	ug/L	100
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	257940	53.130	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	126501	51.957	ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	321490	52.820	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	245991	53.196	ug/L	100
132) Undecane	53.97	57	118871	53.362	ug/L	98
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	294549	53.425	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	267186	53.064	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	297892	52.995	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	264879	53.180	ug/L	100
137) 1,2,4,5-Tetramethylben...	55.15	119	279659	53.715	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	253459	53.654	ug/L	99
139) Pentylbenzene	55.72	91	224778	55.183	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	331743	54.282	ug/L	99
141) 1,3-DM-5-tert-Butylben...	56.03	147	204346	56.141	ug/L	99
142) Dodecane	56.20	43	82154	55.358	ug/L	99
143) 1,3,5-Triethylbenzene	56.92	147	125571	56.262	ug/L	99
144) Naphthalene	57.08	128	353564	52.090	ug/L	99
145) Benzothiophene	57.17	134	222777	52.141	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	116728	56.363	ug/L	97
147) Hexylbenzene	58.00	91	190523	57.286	ug/L	99
148) MMT	58.26	134	123429	55.808	ug/L	98
149) Tridecane	58.31	57	75436	55.493	ug/L	97
150) 2-Methylnaphthalene	59.87	142	219665	56.254	ug/L	99
151) 1-Methylnaphthalene	60.35	142	197980	56.047	ug/L	100
152) Tetradecane	60.64	57	51396	57.002	ug/L	99
153) Pentadecane	63.47	57	31341	57.968	ug/L	98

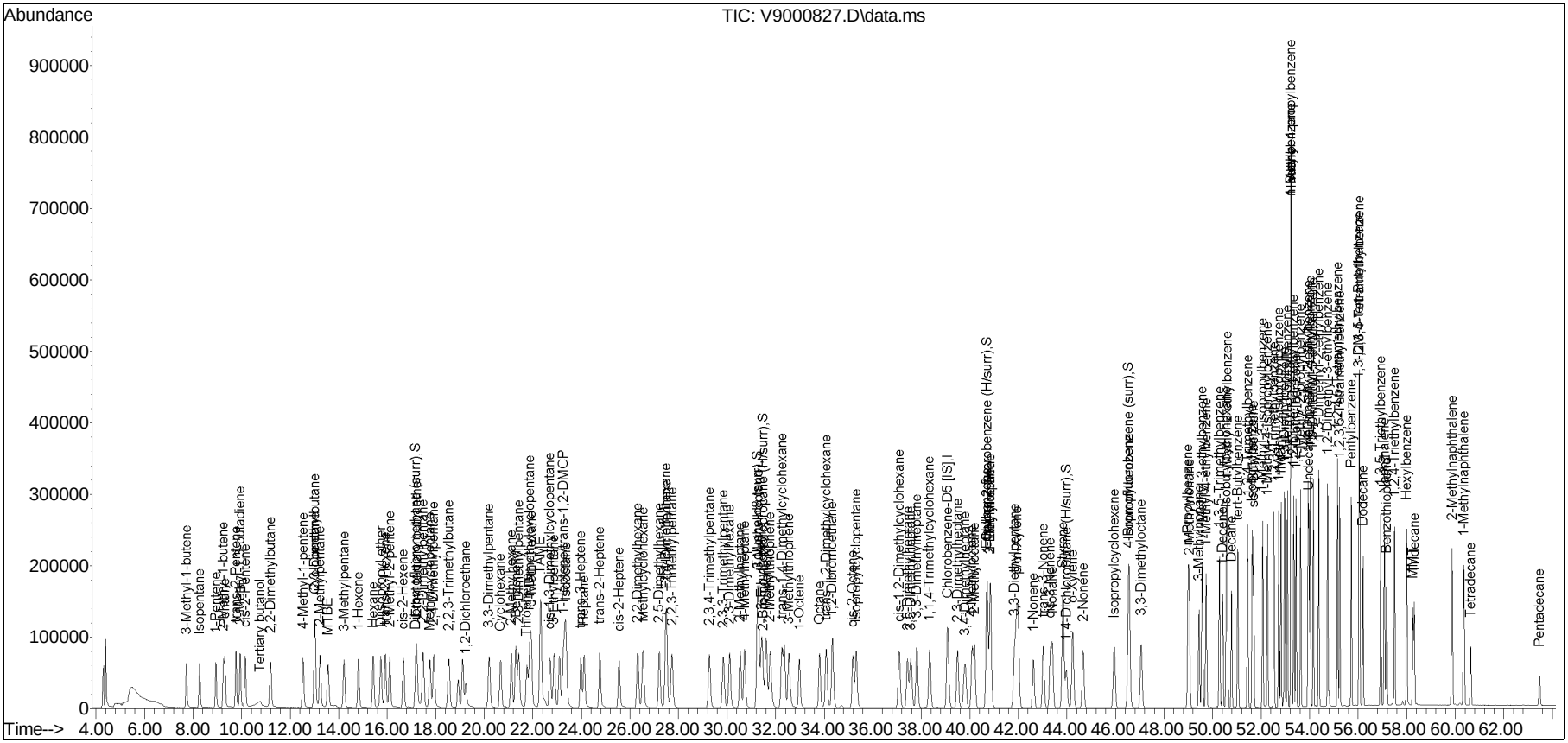
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000827.D
Acq On : 20 Dec 2021 02:20 pm
Operator : VOA9:RY
Sample : I921122004
Misc : WG1586099
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 16:15:27 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 08:01:14 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000828.D
Acq On : 20 Dec 2021 03:31 pm
Operator : VOA9:RY
Sample : I921122005
Misc : WG1586099
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 20 17:07:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:34:11 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	245101	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.16	113	62981	50.444	ug/L	-0.01
Spiked Amount 50.000	Range 78 - 118		Recovery = 100.89%			
62) Toluene-d8 (surr)	31.24	98	293573	50.782	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 101.56%			
64) 2-Bromo-1-chloropropan...	31.47	77	165910	115.903	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 231.81%#			
87) 1-Chloro-2-fluorobenze...	40.72	130	297220	109.000	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 218.00%#			
97) 1,4-Dichlorobutane (H/...	43.98	55	205281	106.783	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 213.57%#			
101) 4-Bromofluorobenzene (...	46.54	95	121545	48.917	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.83%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.68	55	181410	100.900	ug/L	99
3) Isopentane	8.22	43	98145	89.872	ug/L	99
4) 1-Pentene	8.90	42	110643	93.437	ug/L	99
5) 2-Methyl-1-butene	9.21	55	175010	93.870	ug/L	99
6) Pentane	9.28	43	163891	86.258	ug/L	98
7) trans-2-Pentene	9.73	55	190747	96.177	ug/L	98
8) 2-Methyl-1,3-butadiene	9.91	67	127237	101.335	ug/L	98
9) cis-2-Pentene	10.12	55	177653	95.074	ug/L	99
10) Tertiary butanol	10.80	59	191356M4	526.878	ug/L	
11) 2,2-Dimethylbutane	11.15	43	107378	92.207	ug/L	100
12) 4-Methyl-1-pentene	12.50	43	142398	99.445	ug/L	98
13) Cyclopentane	12.99	70	77987	99.605	ug/L	95
14) 2,3-Dimethylbutane	12.99	71	55283	98.639	ug/L	100
15) 2-Methylpentane	13.21	43	198406	94.589	ug/L	100
16) MTBE	13.55	73	303867	105.006	ug/L	100
17) 3-Methylpentane	14.19	57	179540	97.427	ug/L	96
18) 1-Hexene	14.79	56	106783	101.863	ug/L	98
19) Hexane	15.40	57	160763	96.994	ug/L	99
20) Diisopropyl ether	15.73	45	312283	107.061	ug/L	98
21) trans-2-Hexene	15.90	55	182356	102.992	ug/L	98
22) 2-Methyl-2-pentene	16.08	69	184302	100.509	ug/L	95
23) cis-2-Hexene	16.65	55	168406	104.432	ug/L	98
25) Ethyl tertiary butyl e...	17.21	59	313622	106.724	ug/L	99

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000828.D
Acq On : 20 Dec 2021 03:31 pm
Operator : VOA9:RY
Sample : I921122005
Misc : WG1586099
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 20 17:07:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:34:11 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
26) 2,2-Dimethylpentane	17.46	57	228639	97.136	ug/L	97
27) Methylcyclopentane	17.74	56	198330	97.511	ug/L	99
28) 2,4-Dimethylpentane	17.90	43	186791	99.960	ug/L	99
29) 2,2,3-Trimethylbutane	18.52	57	209651	102.106	ug/L	96
30) 1,2-Dichloroethane	19.22	62	142016	101.507	ug/L	100
31) 3,3-Dimethylpentane	20.18	43	237471	99.650	ug/L	99
32) Cyclohexane	20.65	56	171325	100.764	ug/L	100
33) 2-Methylhexane	21.10	43	209654	100.031	ug/L	99
34) Benzene	21.29	78	434559	103.328	ug/L	100
35) 2,3-Dimethylpentane	21.40	56	170844	99.236	ug/L	100
36) Thiophene	21.74	84	234754	113.123	ug/L	98
37) 1,1-Dimethylcyclopentane	21.86	83	114998	105.804	ug/L	99
38) 3-Methylhexane	21.92	43	178639	98.407	ug/L	100
39) TAME	22.30	73	323052	90.710	ug/L	99
40) cis-1,3-Dimethylcyclop...	22.69	70	146695	102.276	ug/L	99
41) 3-Ethylpentane	22.86	43	233546	100.950	ug/L	99
43) 1-Heptene/trans-1,2-DMCP	23.25	70	172593	203.663	ug/L	91
44) Isooctane	23.35	57	443059	100.890	ug/L	98
45) trans-3-Heptene	23.97	41	141988	100.132	ug/L	97
46) Heptane	24.10	43	159492	101.643	ug/L	98
48) trans-2-Heptene	24.74	56	136932	107.199	ug/L	99
49) cis-2-Heptene	25.54	56	124320	111.071	ug/L	99
50) 2,2-Dimethylhexane	26.31	57	438161	103.718	ug/L	100
51) Methylcyclohexane	26.53	83	195538	103.887	ug/L	98
52) 2,5-Dimethylhexane	27.20	57	218236	101.977	ug/L	99
53) 2,4-Dimethylhexane	27.47	57	165417	98.597	ug/L	99
54) Ethylcyclopentane	27.50	69	165275	104.847	ug/L	98
55) 2,2,3-Trimethylpentane	27.72	57	357651	102.761	ug/L	99
57) 2,3,4-Trimethylpentane	29.27	43	250857	103.697	ug/L	98
58) 2,3,3-Trimethylpentane	29.84	43	208446	104.864	ug/L	98
59) 2,3-Dimethylhexane	30.10	43	227530	103.304	ug/L	99
60) 2-Methylheptane	30.53	57	200912	106.447	ug/L	98
61) 4-Methylheptane	30.72	43	249707	104.982	ug/L	99
63) 3-Methylheptane	31.30	43	178844	90.887	ug/L	98
65) 3-Ethylhexane	31.42	43	268835	100.065	ug/L	97
66) Toluene	31.61	91	486638	105.954	ug/L	98
67) 2-Methylthiophene	31.77	97	390069	110.236	ug/L	97
68) trans-1,4-Dimethylcycl...	32.25	97	228583	106.901	ug/L	99
69) 3-Methylthiophene	32.54	97	395561	110.897	ug/L	99
70) 1-Octene	32.97	55	97724	116.258	ug/L	97
71) Octane	33.81	43	217625	111.415	ug/L	99

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000828.D
Acq On : 20 Dec 2021 03:31 pm
Operator : VOA9:RY
Sample : I921122005
Misc : WG1586099
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 20 17:07:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:34:11 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.08	55	170228	104.683 ug/L	100
73) 1,2-Dibromoethane	34.31	107	122753	115.876 ug/L	100
75) cis-2-Octene	35.18	55	147124	114.665 ug/L	97
76) Isopropylcyclopentane	35.31	68	204998	109.196 ug/L	98
77) cis-1,2-Dimethylcycloh...	37.08	55	175209	107.888 ug/L	100
78) 2,5-Dimethylheptane	37.43	57	305965	112.209 ug/L	100
79) 3,5-Dimethylheptane	37.56	57	376720M4	109.120 ug/L	
80) 3,3-Dimethylheptane	37.82	57	239003	109.453 ug/L	98
81) 1,1,4-Trimethylcyclohe...	38.34	69	208093	109.134 ug/L	99
82) 2,3-Dimethylheptane	39.50	43	273172	109.380 ug/L	97
83) 3,4-Dimethylheptane	39.81	43	170898	104.062 ug/L	97
84) 4-Methyloctane	40.10	43	254640	109.628 ug/L	98
85) 2-Methyloctane	40.18	43	244688M3	106.466 ug/L	
86) Ethylbenzene	40.70	91	571140	109.260 ug/L	99
88) 2-Ethylthiophene	40.84	97	426022	113.237 ug/L	98
89) 3-Methyloctane	40.85	57	410261	111.746 ug/L	99
90) 3,3-Diethylpentane	41.84	57	463225	109.439 ug/L	100
91) p/m-Xylene	41.96	91	867359	218.855 ug/L	99
92) 1-Nonene	42.62	56	108014	125.677 ug/L	99
93) trans-3-Nonene	43.03	55	155111	120.156 ug/L	99
94) cis-3-Nonene	43.32	55	173452M6	117.182 ug/L	
95) Nonane	43.40	43	235185M6	111.393 ug/L	
96) Styrene	43.83	104	361652	115.957 ug/L	98
98) o-Xylene	44.24	91	440119	107.578 ug/L	99
99) 2-Nonene	44.67	55	154663	118.819 ug/L	98
100) Isopropylcyclohexane	45.95	83	209868	109.971 ug/L	99
102) Isopropylbenzene	46.57	105	556720	106.088 ug/L	100
103) 3,3-Dimethyloctane	47.07	71	337877	113.873 ug/L	97
104) n-Propylbenzene	48.99	91	669222	111.542 ug/L	99
105) 2-Methylnonane	49.04	43	216537	115.973 ug/L	96
106) 3-Methylnonane	49.44	57	262427	117.048 ug/L	100
107) 1-Methyl-3-ethylbenzene	49.57	105	556319	109.994 ug/L	99
108) 1-Methyl-4-ethylbenzene	49.74	105	534024	110.114 ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	463383	110.666 ug/L	99
110) 1-Decene	50.42	41	118977	120.860 ug/L	96
111) Isobutylcyclohexane	50.57	83	231122	110.716 ug/L	98
112) 1-Methyl-2-ethylbenzene	50.61	105	551015	106.659 ug/L	98
113) Decane	50.79	43	206685	113.179 ug/L	97
114) tert-Butylbenzene	51.04	119	401419	106.059 ug/L	98
115) 1,2,4-Trimethylbenzene	51.44	105	482866	107.316 ug/L	99
116) Isobutylbenzene	51.63	91	536968M6	105.583 ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000828.D
Acq On : 20 Dec 2021 03:31 pm
Operator : VOA9:RY
Sample : I921122005
Misc : WG1586099
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 20 17:07:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:34:11 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	589608	105.365	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	496719	107.892	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	500578	107.912	ug/L	99
120) 1,2,3-Trimethylbenzene	52.52	105	485999	105.985	ug/L	100
121) 1-Methyl-2-isopropylbe...	52.72	119	496446	105.456	ug/L	99
122) Indan	52.82	117	454973	104.587	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	317200	106.293	ug/L	100
124) 1-Methyl-3-propylbenzene	53.08	105	595516	105.012	ug/L	99
125) Indene	53.24	115	453173	107.994	ug/L	98
126) 1-Methyl-4-propylbenzene	53.23	105	704363	104.721	ug/L	99
127) n-Butylbenzene	53.23	91	560777	103.779	ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	505755	103.892	ug/L	99
129) 1,2-Diethylbenzene	53.44	119	246083	101.477	ug/L	98
130) 1-Methyl-2-propylbenzene	53.63	105	627180	102.871	ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	477000	104.375	ug/L	99
132) Undecane	53.97	57	255338	109.670	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	569255	101.518	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	517412	101.644	ug/L	99
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	567303	101.267	ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	503072	100.560	ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	534377	101.100	ug/L	100
138) 1,2,3,5-Tetramethylben...	55.24	119	479724	99.806	ug/L	99
139) Pentylbenzene	55.72	91	469712	103.276	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	635176	99.283	ug/L	100
141) 1,3-DM-5-tert-Butylben...	56.03	147	429106	102.773	ug/L	99
142) Dodecane	56.20	43	166498	92.053	ug/L	98
143) 1,3,5-Triethylbenzene	56.93	147	272688	105.552	ug/L	99
144) Naphthalene	57.08	128	613386	96.892	ug/L	100
145) Benzothiophene	57.18	134	384733	98.253	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	248695	101.444	ug/L	100
147) Hexylbenzene	58.00	91	417097	106.985	ug/L	98
148) MMT	58.26	134	214966	98.445	ug/L	99
149) Tridecane	58.32	57	161101	81.572	ug/L	97
150) 2-Methylnaphthalene	59.86	142	401325	100.905	ug/L	100
151) 1-Methylnaphthalene	60.35	142	358499	99.442	ug/L	100
152) Tetradecane	60.64	57	124420	80.391	ug/L	99
153) Pentadecane	63.47	57	82012	81.833	ug/L	97

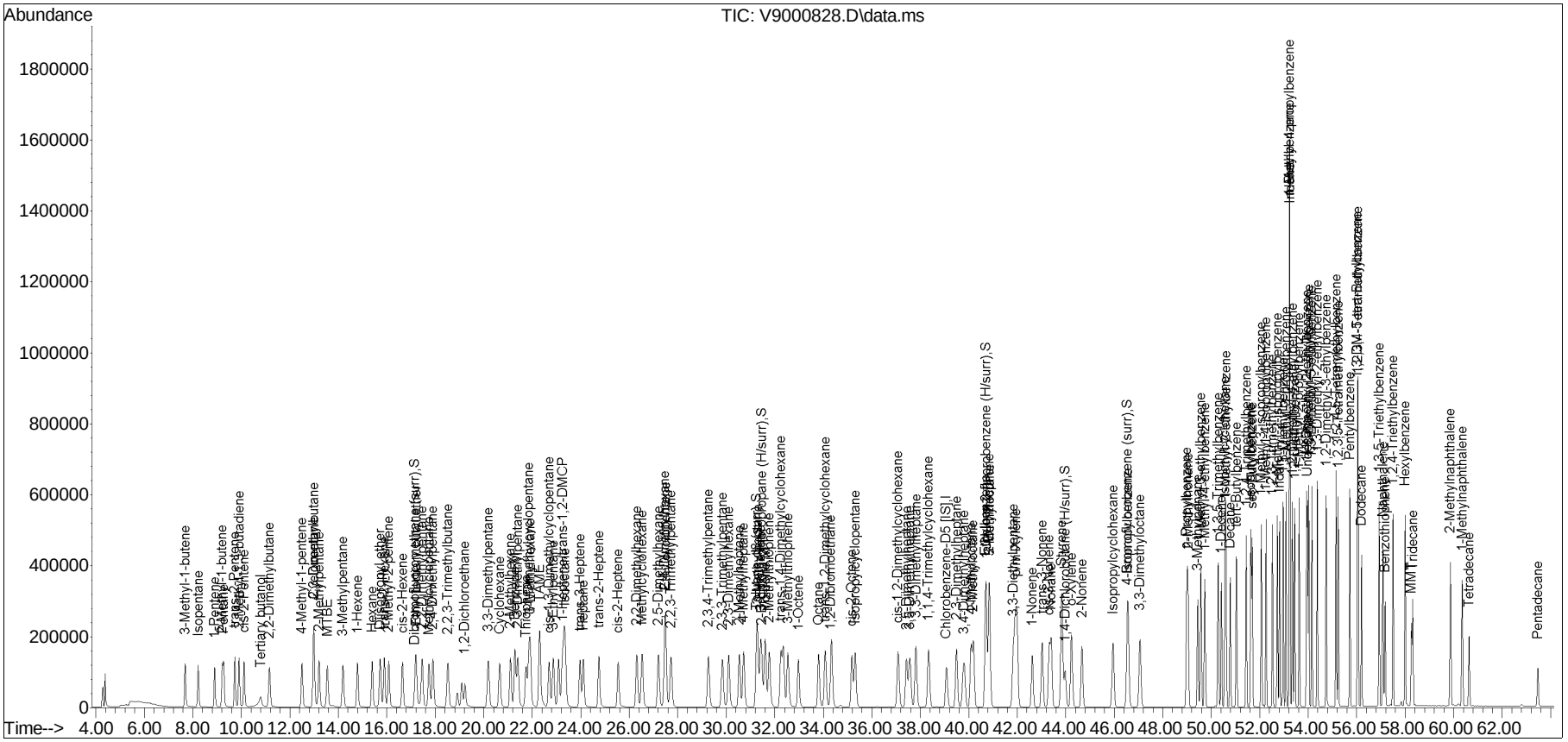
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000828.D
Acq On : 20 Dec 2021 03:31 pm
Operator : VOA9:RY
Sample : I921122005
Misc : WG1586099
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Dec 20 17:07:08 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Mon Dec 20 16:34:11 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000833.D
Acq On : 21 Dec 2021 10:15 am
Operator : VOA9:RY
Sample : I921122006
Misc : WG1586099
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 21 11:53:35 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 08:10:02 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	184468	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.16	113	50311	55.448	ug/L	-0.01
Spiked Amount 50.000	Range 78 - 118		Recovery = 110.90%			
62) Toluene-d8 (surr)	31.24	98	204366	49.478	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.96%			
64) 2-Bromo-1-chloropropan...	31.47	77	283817	263.040	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 526.08%#			
87) 1-Chloro-2-fluorobenze...	40.71	130	441627	208.613	ug/L	-0.01
Spiked Amount 50.000	Range 70 - 130		Recovery = 417.23%#			
97) 1,4-Dichlorobutane (H/...	43.97	55	326588	218.871	ug/L	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 437.74%#			
101) 4-Bromofluorobenzene (...	46.53	95	78819	42.587	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 85.17%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.70	55	364566	277.155	ug/L	99
3) Isopentane	8.24	43	187163	244.144	ug/L	99
4) 1-Pentene	8.92	42	209184	245.658	ug/L	97
5) 2-Methyl-1-butene	9.23	55	326052	244.575	ug/L	98
6) Pentane	9.29	43	300817	227.730	ug/L	99
7) trans-2-Pentene	9.75	55	357466	248.206	ug/L	98
8) 2-Methyl-1,3-butadiene	9.92	67	236926	257.492	ug/L	97
9) cis-2-Pentene	10.13	55	336175	251.513	ug/L	98
10) Tertiary butanol	10.79	59	444133M4	1587.320	ug/L	
11) 2,2-Dimethylbutane	11.17	43	196269	237.953	ug/L	97
12) 4-Methyl-1-pentene	12.51	43	244065	236.413	ug/L	99
13) Cyclopentane	13.00	70	153034	267.639	ug/L	99
14) 2,3-Dimethylbutane	12.99	71	92273	228.845	ug/L #	89
15) 2-Methylpentane	13.21	43	342891	231.231	ug/L	96
16) MTBE	13.55	73	578548	268.418	ug/L	99
17) 3-Methylpentane	14.19	57	286176	217.488	ug/L	96
18) 1-Hexene	14.79	56	184832	244.528	ug/L	93
19) Hexane	15.40	57	250914	213.244	ug/L	96
20) Diisopropyl ether	15.73	45	522817	242.046	ug/L	98
21) trans-2-Hexene	15.90	55	284200	221.105	ug/L	99
22) 2-Methyl-2-pentene	16.08	69	284842	216.646	ug/L	96
23) cis-2-Hexene	16.65	55	253460	217.971	ug/L	91
25) Ethyl tertiary butyl e...	17.20	59	518823	234.601	ug/L	99

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000833.D
Acq On : 21 Dec 2021 10:15 am
Operator : VOA9:RY
Sample : I921122006
Misc : WG1586099
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 21 11:53:35 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 08:10:02 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
26) 2,2-Dimethylpentane	17.46	57	331199	197.141 ug/L	100
27) Methylcyclopentane	17.74	56	299436	204.676 ug/L	98
28) 2,4-Dimethylpentane	17.90	43	283493	207.166 ug/L	97
29) 2,2,3-Trimethylbutane	18.52	57	281023	192.284 ug/L	96
30) 1,2-Dichloroethane	19.22	62	257027	249.666 ug/L	98
31) 3,3-Dimethylpentane	20.19	43	321212	190.744 ug/L	99
32) Cyclohexane	20.65	56	237785	197.241 ug/L	96
33) 2-Methylhexane	21.10	43	279742	189.773 ug/L	99
34) Benzene	21.29	78	661750	215.138 ug/L	99
35) 2,3-Dimethylpentane	21.40	56	236628	191.623 ug/L	96
36) Thiophene	21.74	84	366507	232.990 ug/L	99
37) 1,1-Dimethylcyclopentane	21.85	83	156395	199.689 ug/L	94
38) 3-Methylhexane	21.91	43	226962	179.272 ug/L	98
39) TAME	22.29	73	530178	209.628 ug/L	90
40) cis-1,3-Dimethylcyclop...	22.69	70	184459	183.183 ug/L	98
41) 3-Ethylpentane	22.86	43	296371	181.174 ug/L	96
43) 1-Heptene/trans-1,2-DMCP	23.24	70	246220	414.006 ug/L	89
44) Isooctane	23.36	57	526698	170.486 ug/L	97
45) trans-3-Heptene	23.96	41	174355	175.580 ug/L	98
46) Heptane	24.10	43	192692	175.985 ug/L	97
48) trans-2-Heptene	24.75	56	168777	185.054 ug/L	98
49) cis-2-Heptene	25.54	56	150496	186.394 ug/L	99
50) 2,2-Dimethylhexane	26.31	57	495804	166.755 ug/L	98
51) Methylcyclohexane	26.52	83	228657	172.094 ug/L	99
52) 2,5-Dimethylhexane	27.20	57	249032	166.087 ug/L	99
53) 2,4-Dimethylhexane	27.45	57	237927	200.026 ug/L	85
54) Ethylcyclopentane	27.50	69	189127	169.629 ug/L	99
55) 2,2,3-Trimethylpentane	27.71	57	416522	168.084 ug/L	95
57) 2,3,4-Trimethylpentane	29.25	43	269282	158.786 ug/L	100
58) 2,3,3-Trimethylpentane	29.83	43	222181	159.265 ug/L	99
59) 2,3-Dimethylhexane	30.09	43	259966	168.256 ug/L	96
60) 2-Methylheptane	30.53	57	221666	166.101 ug/L	99
61) 4-Methylheptane	30.70	43	272508	152.653 ug/L	78
63) 3-Methylheptane	31.28	43	198465	149.938 ug/L	98
65) 3-Ethylhexane	31.41	43	315408	158.667 ug/L	98
66) Toluene	31.60	91	790639	237.453 ug/L	99
67) 2-Methylthiophene	31.77	97	662182	252.963 ug/L	97
68) trans-1,4-Dimethylcycl...	32.24	97	234987	155.988 ug/L	99
69) 3-Methylthiophene	32.53	97	648641	244.907 ug/L	100
70) 1-Octene	32.96	55	104476	171.823 ug/L	99
71) Octane	33.80	43	236552	170.030 ug/L	99

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000833.D
Acq On : 21 Dec 2021 10:15 am
Operator : VOA9:RY
Sample : I921122006
Misc : WG1586099
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 21 11:53:35 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 08:10:02 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) trans-1,2-Dimethylcycl...	34.07	55	164831	146.001	ug/L	98
73) 1,2-Dibromoethane	34.31	107	225152	265.558	ug/L	100
75) cis-2-Octene	35.17	55	153602	167.898	ug/L	95
76) Isopropylcyclopentane	35.31	68	187527	140.155	ug/L	94
77) cis-1,2-Dimethylcycloh...	37.08	55	208052	166.268	ug/L	99
78) 2,5-Dimethylheptane	37.42	57	301625	141.725	ug/L	100
79) 3,5-Dimethylheptane	37.54	57	497803M4	185.424	ug/L	
80) 3,3-Dimethylheptane	37.81	57	277455	164.670	ug/L	96
81) 1,1,4-Trimethylcyclohe...	38.33	69	241453	163.664	ug/L	99
82) 2,3-Dimethylheptane	39.48	43	317958	164.528	ug/L	98
83) 3,4-Dimethylheptane	39.81	43	185448	149.693	ug/L	97
84) 4-Methyloctane	40.09	43	250165	140.795	ug/L	99
85) 2-Methyloctane	40.17	43	319410M3	180.661	ug/L	
86) Ethylbenzene	40.70	91	761546	188.261	ug/L	99
88) 2-Ethylthiophene	40.85	97	592790	200.527	ug/L	97
89) 3-Methyloctane	40.84	57	468707	163.809	ug/L	99
90) 3,3-Diethylpentane	41.83	57	516418	157.529	ug/L	99
91) p/m-Xylene	41.96	91	1132871	369.152	ug/L	100
92) 1-Nonene	42.62	56	119060	170.056	ug/L	97
93) trans-3-Nonene	43.02	55	167906	162.795	ug/L	100
94) cis-3-Nonene	43.31	55	191639M6	163.568	ug/L	
95) Nonane	43.39	43	260840M6	159.357	ug/L	
96) Styrene	43.82	104	494122	199.768	ug/L	98
98) o-Xylene	44.23	91	567247	180.301	ug/L	97
99) 2-Nonene	44.66	55	164205	158.883	ug/L	99
100) Isopropylcyclohexane	45.95	83	220563	149.214	ug/L	99
102) Isopropylbenzene	46.57	105	617437	154.289	ug/L	100
103) 3,3-Dimethyloctane	47.05	71	336533	145.364	ug/L	98
104) n-Propylbenzene	48.99	91	702404	151.378	ug/L	100
105) 2-Methylnonane	49.04	43	209466	144.248	ug/L	99
106) 3-Methylnonane	49.44	57	251413	143.449	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.57	105	579172	149.043	ug/L	100
108) 1-Methyl-4-ethylbenzene	49.73	105	553957	148.706	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	471127	146.453	ug/L	99
110) 1-Decene	50.41	41	111194	143.408	ug/L	96
111) Isobutylcyclohexane	50.57	83	212143	132.459	ug/L	97
112) 1-Methyl-2-ethylbenzene	50.60	105	576463	147.148	ug/L	99
113) Decane	50.78	43	191987	137.378	ug/L	96
114) tert-Butylbenzene	51.04	119	381882	133.693	ug/L	99
115) 1,2,4-Trimethylbenzene	51.44	105	489416	143.297	ug/L	99
116) Isobutylbenzene	51.63	91	491900M6	128.582	ug/L	

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000833.D
Acq On : 21 Dec 2021 10:15 am
Operator : VOA9:RY
Sample : I921122006
Misc : WG1586099
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 21 11:53:35 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 08:10:02 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
117) sec-Butylbenzene	51.69	105	541393	128.830	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	454846	130.588	ug/L	100
119) 1-Methyl-4-isopropylbe...	52.26	119	449919	128.407	ug/L	99
120) 1,2,3-Trimethylbenzene	52.52	105	491379	142.141	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.72	119	457325	129.731	ug/L	99
122) Indan	52.82	117	477032	145.969	ug/L	99
123) 1,3-Diethylbenzene	52.97	105	283532	126.801	ug/L	99
124) 1-Methyl-3-propylbenzene	53.08	105	523257	123.803	ug/L	99
125) Indene	53.24	115	539093	168.222	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	613406	122.423	ug/L	99
127) n-Butylbenzene	53.22	91	487816	121.565	ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	451042	125.010	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	223549	125.086	ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	561740	124.577	ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.93	119	425193	125.407	ug/L	99
132) Undecane	53.97	57	197589	116.149	ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	504989	122.514	ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	456942	122.198	ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	511982	124.514	ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	449871	123.025	ug/L	100
137) 1,2,4,5-Tetramethylben...	55.15	119	465410	120.514	ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	415026	118.794	ug/L	99
139) Pentylbenzene	55.72	91	366952	111.131	ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	538381	116.706	ug/L	98
141) 1,3-DM-5-tert-Butylben...	56.04	147	327433	108.551	ug/L	98
142) Dodecane	56.20	43	127641	104.228	ug/L	97
143) 1,3,5-Triethylbenzene	56.93	147	202147	108.751	ug/L	99
144) Naphthalene	57.08	128	689126	150.759	ug/L	100
145) Benzothiophene	57.17	134	470361	164.992	ug/L	99
146) 1,2,4-Triethylbenzene	57.50	147	184524	105.990	ug/L	99
147) Hexylbenzene	58.00	91	321981	114.640	ug/L	100
148) MMT	58.26	134	204255	131.488	ug/L	99
149) Tridecane	58.32	57	112345	87.643	ug/L	98
150) 2-Methylnaphthalene	59.86	142	398813	139.896	ug/L	98
151) 1-Methylnaphthalene	60.35	142	353735	137.883	ug/L	100
152) Tetradecane	60.63	57	85584	85.857	ug/L	99
153) Pentadecane	63.47	57	63934	98.314	ug/L	95

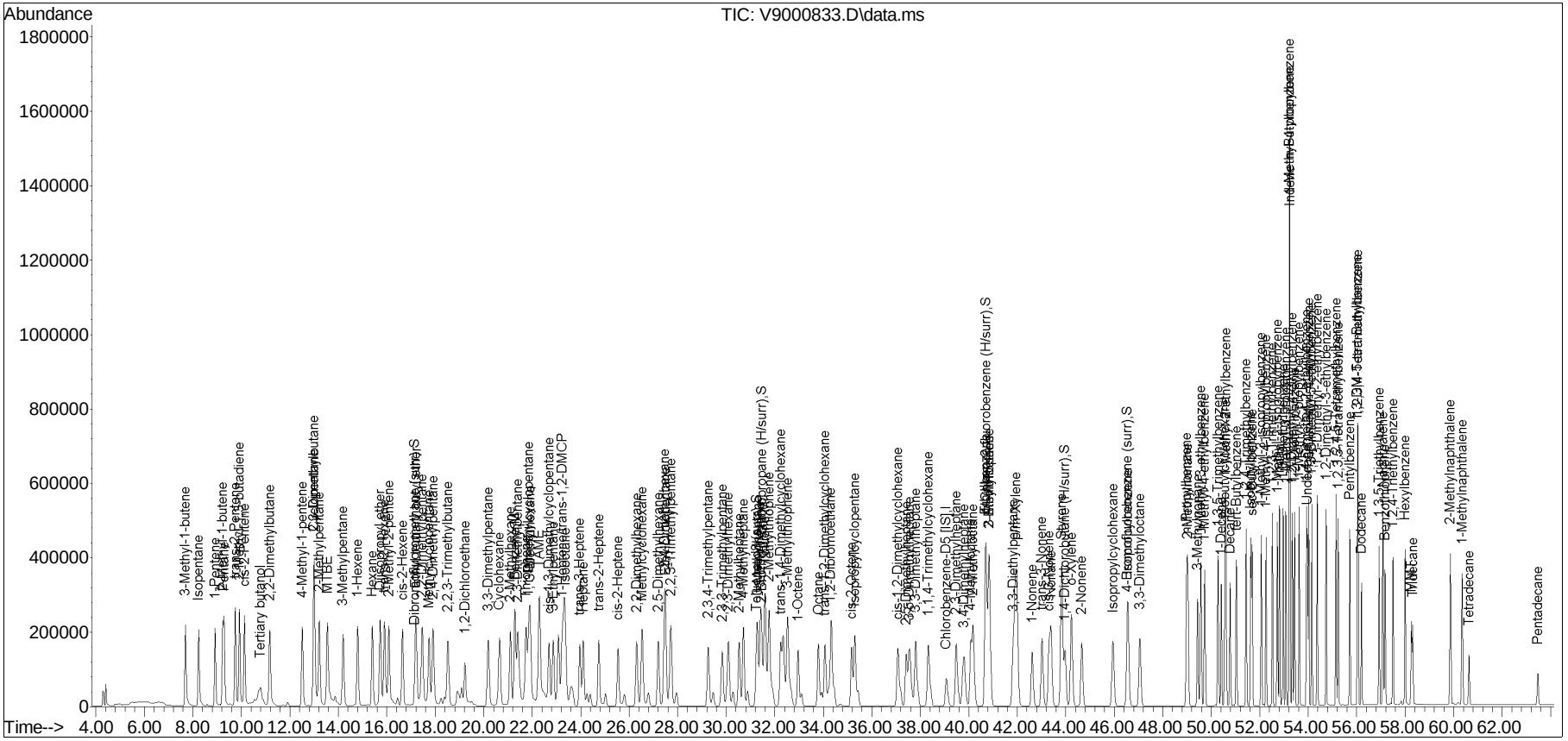
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000833.D
Acq On : 21 Dec 2021 10:15 am
Operator : VOA9:RY
Sample : I921122006
Misc : WG1586099
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 21 11:53:35 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 08:10:02 2021
Response via : Initial Calibration

Sub List : PIANO_NEW - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000835.D
Acq On : 21 Dec 2021 11:54 am
Operator : VOA9:RY
Sample : CQ921122001
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 21 13:03:40 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	103	0.00
4		1-Pentene	0.246	0.238	3.3	97	-0.01
6		Pentane	0.382	0.322	15.7	84	-0.01
10		Tertiary butanol	0.084	0.073#	13.1	96	0.02
13		Cyclopentane	0.168	0.153	8.9	91	-0.01
15		2-Methylpentane	0.430	0.408	5.1	94	0.00
16		MTBE	0.628	0.566	9.9	93	0.00
17		3-Methylpentane	0.376	0.383	-1.9	99	-0.01
18		1-Hexene	0.221	0.225	-1.8	103	0.00
19		Hexane	0.337	0.320	5.0	93	-0.01
20		Diisopropyl ether	0.621	0.589	5.2	96	0.00
24	S	Dibromofluoromethane (surr)	0.258	0.248	3.9	99	0.00
25		Ethyl tertiary butyl ether	0.623	0.580	6.9	94	0.00
27		Methylcyclopentane	0.412	0.424	-2.9	100	0.00
28		2,4-Dimethylpentane	0.382	0.388	-1.6	98	-0.01
32		Cyclohexane	0.343	0.363	-5.8	102	0.00
33		2-Methylhexane	0.420	0.429	-2.1	97	-0.01
34	M	Benzene	0.869	0.841	3.2	99	0.00
35		2,3-Dimethylpentane	0.346	0.363	-4.9	100	0.00
38		3-Methylhexane	0.359	0.344	4.2	94	0.00
39		TAME	0.714	0.657	8.0	107	0.00
44		Isooctane	0.867	0.935	-7.8	100	0.00
46		Heptane	0.311	0.351	-12.9	104	0.00
51		Methylcyclohexane	0.374	0.396	-5.9	99	0.00
60		2-Methylheptane	0.375	0.391	-4.3	95	0.00
62	S	Toluene-d8 (surr)	1.170	1.189	-1.6	103	0.00
63		3-Methylheptane	0.373	0.384	-2.9	102	0.00
66	M	Toluene	0.969	0.955	1.4	99	0.00
71		Octane	0.393	0.430	-9.4	100	0.00
86		Ethylbenzene	1.077	1.030	4.4	93	0.00
91		p/m-Xylene	0.814	0.795	2.3	95	0.00
95		Nonane	0.426	0.387	9.2	83	0.00
98		o-Xylene	0.834	0.828	0.7	96	0.00
101	S	4-Bromofluorobenzene (surr)	0.492	0.506	-2.8	103	0.00
102		Isopropylbenzene	1.042	1.036	0.6	94	0.00
104		n-Propylbenzene	1.202	1.215	-1.1	93	0.00
107		1-Methyl-3-ethylbenzene	1.008	1.018	-1.0	93	0.00
108		1-Methyl-4-ethylbenzene	0.966	1.022	-5.8	97	0.00
109		1,3,5-Trimethylbenzene	0.833	0.871	-4.6	95	0.00

Evaluate Continuing Calibration Report

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000835.D
Acq On : 21 Dec 2021 11:54 am
Operator : VOA9:RY
Sample : CQ921122001
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 21 13:03:40 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
110	1-Decene	0.199	0.169	15.1	74	0.00
112	1-Methyl-2-ethylbenzene	1.020	1.082	-6.1	98	0.00
113	Decane	0.362	0.388	-7.2	94	0.00
115	1,2,4-Trimethylbenzene	0.887	0.904	-1.9	93	0.00
117	sec-Butylbenzene	1.084	1.196	-10.3	97	0.00
126	1-Methyl-4-propylbenzene	1.293	1.428	-10.4	94	0.00
127	n-Butylbenzene	1.036	1.152	-11.2	95	0.00
129	1,2-Diethylbenzene	0.464	0.514	-10.8	96	0.00
132	Undecane	0.448	0.491	-9.6	92	0.00
134	1,3-Dimethyl-5-ethylbenzene	0.971	1.173	-20.8	102	0.00
139	Pentylbenzene	0.861	1.039	-20.7	97	0.00
142	Dodecane	0.363	0.433	-19.3	101	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000835.D
Acq On : 21 Dec 2021 11:54 am
Operator : VOA9:RY
Sample : CQ921122001
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 21 13:03:40 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.08	117	243855	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.17	113	60483	48.053	ug/L	0.00
Spiked Amount 50.000	Range 78 - 118		Recovery = 96.11%			
62) Toluene-d8 (surr)	31.24	98	289935	50.790	ug/L	0.00
Spiked Amount 50.000	Range 87 - 113		Recovery = 101.58%			
101) 4-Bromofluorobenzene (...	46.54	95	123288	51.403	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 102.81%			
Target Compounds						Qvalue
4) 1-Pentene	8.93	42	23202	19.346	ug/L	98
6) Pentane	9.30	43	31395	16.848	ug/L	96
10) Tertiary butanol	10.77	59	35451M4	86.385	ug/L	
13) Cyclopentane	13.01	70	14911	18.246	ug/L #	35
15) 2-Methylpentane	13.23	43	39806	18.973	ug/L	97
16) MTBE	13.56	73	55174	18.027	ug/L	97
17) 3-Methylpentane	14.21	57	37398	20.377	ug/L	94
18) 1-Hexene	14.81	56	21989	20.436	ug/L	95
19) Hexane	15.41	57	31210	19.003	ug/L	98
20) Diisopropyl ether	15.74	45	57479	18.980	ug/L	97
25) Ethyl tertiary butyl e...	17.22	59	56598	18.613	ug/L	99
27) Methylcyclopentane	17.75	56	41340	20.590	ug/L	99
28) 2,4-Dimethylpentane	17.91	43	37806	20.310	ug/L	97
32) Cyclohexane	20.67	56	35367	21.130	ug/L	99
33) 2-Methylhexane	21.11	43	41865	20.462	ug/L	100
34) Benzene	21.30	78	82062	19.358	ug/L	99
35) 2,3-Dimethylpentane	21.41	56	35409	21.004	ug/L	98
38) 3-Methylhexane	21.93	43	33598	19.196	ug/L	99
39) TAME	22.30	73	64070	18.401	ug/L	98
44) Isooctane	23.36	57	91172	21.565	ug/L	97
46) Heptane	24.11	43	34234	22.559	ug/L	99
51) Methylcyclohexane	26.53	83	38579	21.144	ug/L	97
60) 2-Methylheptane	30.54	57	38113	20.836	ug/L	97
63) 3-Methylheptane	31.29	43	37486	20.593	ug/L	93
66) Toluene	31.60	91	93128	19.713	ug/L	98
71) Octane	33.81	43	41916	21.865	ug/L	98
86) Ethylbenzene	40.70	91	100422	19.116	ug/L	99
91) p/m-Xylene	41.96	91	155109	39.053	ug/L	98
95) Nonane	43.40	43	37779	18.183	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000835.D
Acq On : 21 Dec 2021 11:54 am
Operator : VOA9:RY
Sample : CQ921122001
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 21 13:03:40 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) o-Xylene	44.23	91	80770	19.854	ug/L	92
102) Isopropylbenzene	46.56	105	101026	19.871	ug/L	99
104) n-Propylbenzene	48.99	91	118497	20.211	ug/L	98
107) 1-Methyl-3-ethylbenzene	49.57	105	99275	20.198	ug/L	100
108) 1-Methyl-4-ethylbenzene	49.73	105	99653	21.147	ug/L	99
109) 1,3,5-Trimethylbenzene	50.29	105	84923	20.893	ug/L	99
110) 1-Decene	50.41	41	16517	16.980	ug/L	96
112) 1-Methyl-2-ethylbenzene	50.60	105	105523	21.209	ug/L	98
113) Decane	50.78	43	37863	21.446	ug/L	96
115) 1,2,4-Trimethylbenzene	51.44	105	88203	20.397	ug/L	100
117) sec-Butylbenzene	51.69	105	116708	22.080	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	139322	22.097	ug/L	100
127) n-Butylbenzene	53.23	91	112346	22.241	ug/L	100
129) 1,2-Diethylbenzene	53.44	119	50105	22.143	ug/L	98
132) Undecane	53.97	57	47938	21.936	ug/L	98
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	114453	24.158	ug/L	99
139) Pentylbenzene	55.72	91	101375	24.138	ug/L	98
142) Dodecane	56.20	43	42201	23.830	ug/L	99

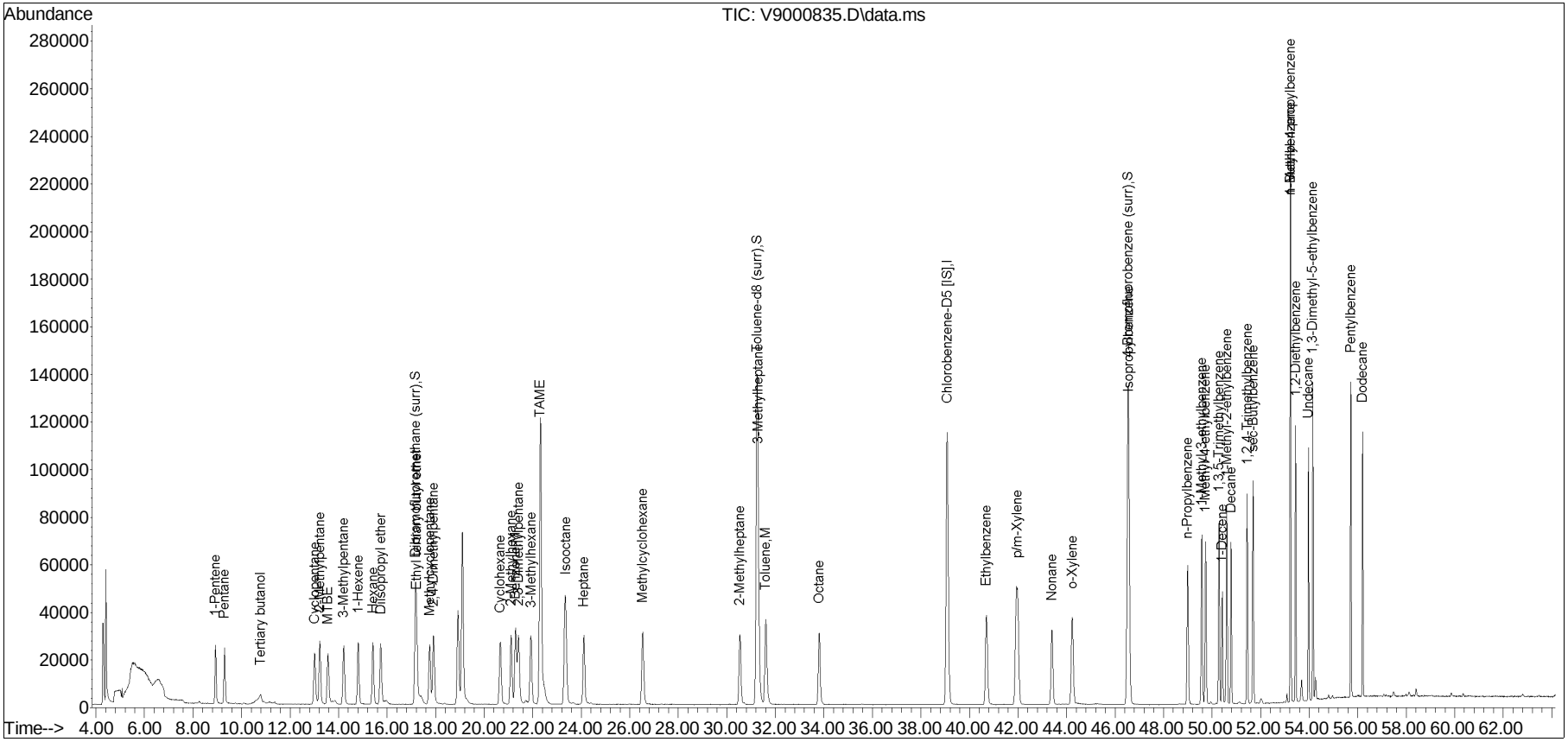
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\ORGANICS\DATA\VOA9\2021\12-DEC\211220\
Data File : V9000835.D
Acq On : 21 Dec 2021 11:54 am
Operator : VOA9:RY
Sample : CQ921122001
Misc : WG1586099
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 21 13:03:40 2021
Quant Method : O:\Organics\DATA\VOA9\2021\12-DEC\211220\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO



Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Jan 17 2022, 04:19 pm

Work Group: WG1593474 for Department: 31 GC/MS - Volatiles

Created: 13-JAN-22 Due: Operator: JT

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2171258-02	MW-9	S	A2-PIANO8260	OIL	SENT	U	1202	0127	S0	Vial-A-20
L2171258-04	RW-1 LIGHT	S	A2-PIANO8260	OIL	SENT	U	1220	0127	S0	Vial-A-20
L2171258-05	RW-2	S	A2-PIANO8260	OIL	SENT	U	1220	0127	S0	Vial-A-20
L2171258-10	RW-1 DARK	S	A2-PIANO8260	OIL	SENT	U	1220	0127	S0	Vial-A-20
L2200170-01	MW-5 PRODUCT	S	A2-PIANO8260	OIL	SENT	U	1229	0121	S0	Vial-A-20
L2200170-03	MW-6 PRODUCT	S	A2-PIANO8260	OIL	DACQ	U	1229	0121	S0	Vial-A-20
L2200170-05	DISPENSER	S	A2-PIANO8260	OIL	DACQ	U	1229	0121	S0	Vial-A-20
L2200971-01	ERH2371	S	A2-PIANO8260	OIL	DONE	U	0106	0124	S0	Vial-A-20
WG1593474-1	MS BFB Tune Standard	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-10	Continuing Calibrati	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-11	MS BFB Tune Standard	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-12	Continuing Calibrati	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-2	Continuing Calibrati	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-3	Laboratory Control S	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-4	LCS Duplicate	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-5	Forensics Standard	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-6	Laboratory Method Bl	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-7	MS BFB Tune Standard	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-8	Continuing Calibrati	S	A2-PIANO8260	OIL	DONE	U				
WG1593474-9	MS BFB Tune Standard	S	A2-PIANO8260	OIL	DONE	U				

Comments:

WG1593474-4 WG1593474-3

Sequence Logs

Alpha Analytical
Instrument Run Log

Instrument ID: VOA9

Internal Standard/Surrogate IDs: VW101621L

Date: 12/20/21

CCV/ LCS MIX ID's VW101621G/ VW101621C

Analyst Initials: JT

Sequence File Name: 211220.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
1	T921122001	TUNE.M	V9000823.D	WG,ICAL	TUNE	12/20/21 10:16 AM	
2	I921122001	TUNE.M	V9000824.D	WG,ICAL		12/20/21 10:46 AM	
3	I921122002	PIANO.M	V9000825.D	WG,ICAL		12/20/21 11:57 AM	
4	I921122003	PIANO.M	V9000826.D	WG,ICAL		12/20/21 01:09 PM	
5	I921122004	PIANO.M	V9000827.D	WG,ICAL		12/20/21 02:20 PM	
6	I921122005	PIANO.M	V9000828.D	WG,ICAL		12/20/21 03:31 PM	
7	I921122006	PIANO.M	V9000829.D	WG,ICAL	RR Bad purge	12/20/21 04:43 PM	
8	BLANK	PIANO.M	V9000830.D	WG,ICAL		12/20/21 05:54 PM	
9	CQ921122001	PIANO.M	V9000831.D	WG,ICAL	Do not use	12/20/21 07:05 PM	
10	BLANK	PIANO.M	V9000832.D	WG,ICAL		12/20/21 08:16 PM	
11	I921122006	PIANO.M	V9000833.D	WG,ICAL		12/21/21 10:15 AM	
12	BLANK	PIANO.M	V9000834.D	WG,ICAL		12/21/21 11:24 AM	
13	CQ921122001	PIANO.M	V9000835.D	WG,ICAL	ICV	12/21/21 11:54 AM	

Alpha Analytical
Instrument Run Log

Instrument ID: VOA9

Internal Standard/Surrogate IDs: VW101621L

Date: 01/11/22

CCV/ LCS MIX ID's VW101621G/ VW101621C

Analyst Initials: JB/JT

Sequence File Name: 220111.S

AS Position #	Sample ID	Acquisition Method	Data File ID	Standard ID or Batch ID #, ICAL Ref #	Comment (s)	Date Injected/ TIME	ph
1	BLANK	TUNE.M	V9001003.D	WG,ICAL		01/11/22 07:25 PM	
2	TUNE	TUNE.M	V9001004.D	WG,ICAL		01/11/22 07:56 PM	
3	CCV	PIANO.M	V9001005.D	WG,ICAL		01/11/22 08:27 PM	
4	LCS	PIANO.M	V9001006.D	WG,ICAL		01/11/22 09:38 PM	
5	LCSD	PIANO.M	V9001007.D	WG,ICAL		01/11/22 10:49 PM	
6	LD7	PIANO.M	V9001008.D	WG,ICAL		01/12/22 12:01 PM	
7	BLANK	PIANO.M	V9001009.D	WG,ICAL		01/12/22 01:12 AM	
8	WBLANK	PIANO.M	V9001010.D	WG,ICAL		01/12/22 02:24 AM	
9	L2200971-01D,31,0.1071,10,0.010	PIANO.M	V9001011.D	WG,ICAL		01/12/22 01:17 PM	
10	BLANK	PIANO.M	V9001012.D	WG,ICAL		01/12/22 02:29 PM	
11	L2200971-01D2,31,0.1071,10,0.0005	PIANO.M	V9001013.D	WG,ICAL		01/12/22 03:40 PM	
12	BLANK	PIANO.M	V9001014.D	WG,ICAL		01/12/22 04:51 PM	
13	TUNE	TUNE.M	V9001015.D	WG,ICAL		01/12/22 07:37 PM	
14	CCV	PIANO.M	V9001016.D	WG,ICAL		01/12/22 08:07 PM	
15	L2171258-02D,31,0.1096,10,0.010	PIANO.M	V9001017.D	WG,ICAL		01/12/22 09:18 PM	

Alpha Analytical
Instrument Run Log

16	L2171258-04D,31,0.1165,10,0.010	PIANO.M	V9001018.D	WG,ICAL		01/12/22 10:30 PM	
17	L2171258-05D,31,0.1064,10,0.010	PIANO.M	V9001019.D	WG,ICAL		01/12/22 11:42 PM	
18	L2171258-10D,31,0.1444,10,0.010	PIANO.M	V9001020.D	WG,ICAL		01/13/22 12:53 PM	
19	BLANK	PIANO.M	V9001021.D	WG,ICAL		01/13/22 02:05 AM	
20	L2171258-02D2,31,0.1096,10,0.0005	PIANO.M	V9001022.D	WG,ICAL		01/13/22 03:17 AM	
21	L2171258-04D2,31,0.1165,10,0.0005	PIANO.M	V9001023.D	WG,ICAL		01/13/22 04:29 AM	
22	L2171258-05D2,31,0.1064,10,0.0005	PIANO.M	V9001024.D	WG,ICAL		01/13/22 05:40 AM	
23	L2171258-10D2,31,0.1444,10,0.0005	PIANO.M	V9001025.D	WG,ICAL		01/13/22 06:52 AM	
24	BLANK	PIANO.M	V9001026.D	WG,ICAL		01/13/22 08:04 AM	
25	TUNE	TUNE.M	V9001027.D	WG,ICAL		01/13/22 09:13 AM	
26	CCV	PIANO.M	V9001028.D	WG,ICAL		01/13/22 01:30 PM	
27	L2200170-01D,31,0.0978,10,0.010	PIANO.M	V9001029.D	WG,ICAL		01/13/22 04:57 PM	
28	L2200170-03D,31,0.1134,10,0.010	PIANO.M	V9001030.D	WG,ICAL		01/13/22 06:09 PM	
29	L2200170-05D,31,0.0987,10,0.010	PIANO.M	V9001031.D	WG,ICAL		01/13/22 07:21 PM	
30	BLANK	PIANO.M	V9001032.D	WG,ICAL		01/13/22 08:32 PM	
31	L2200170-01D2,31,0.0978,10,0.0005	PIANO.M	V9001033.D	WG,ICAL		01/13/22 09:44 PM	
32	L2200170-03D2,31,0.1134,10,0.0005	PIANO.M	V9001034.D	WG,ICAL		01/13/22 10:56 PM	
33	L2200170-05D2,31,0.0987,10,0.0005	PIANO.M	V9001035.D	WG,ICAL		01/14/22 12:08 PM	
34	BLANK	PIANO.M	V9001036.D	WG,ICAL		01/14/22 01:19 AM	
35	TUNE	TUNE.M	V9001037.D	WG,ICAL		01/14/22 02:29 AM	
36	CCV	PIANO.M	V9001038.D	WG,ICAL		01/14/22 09:26 AM	

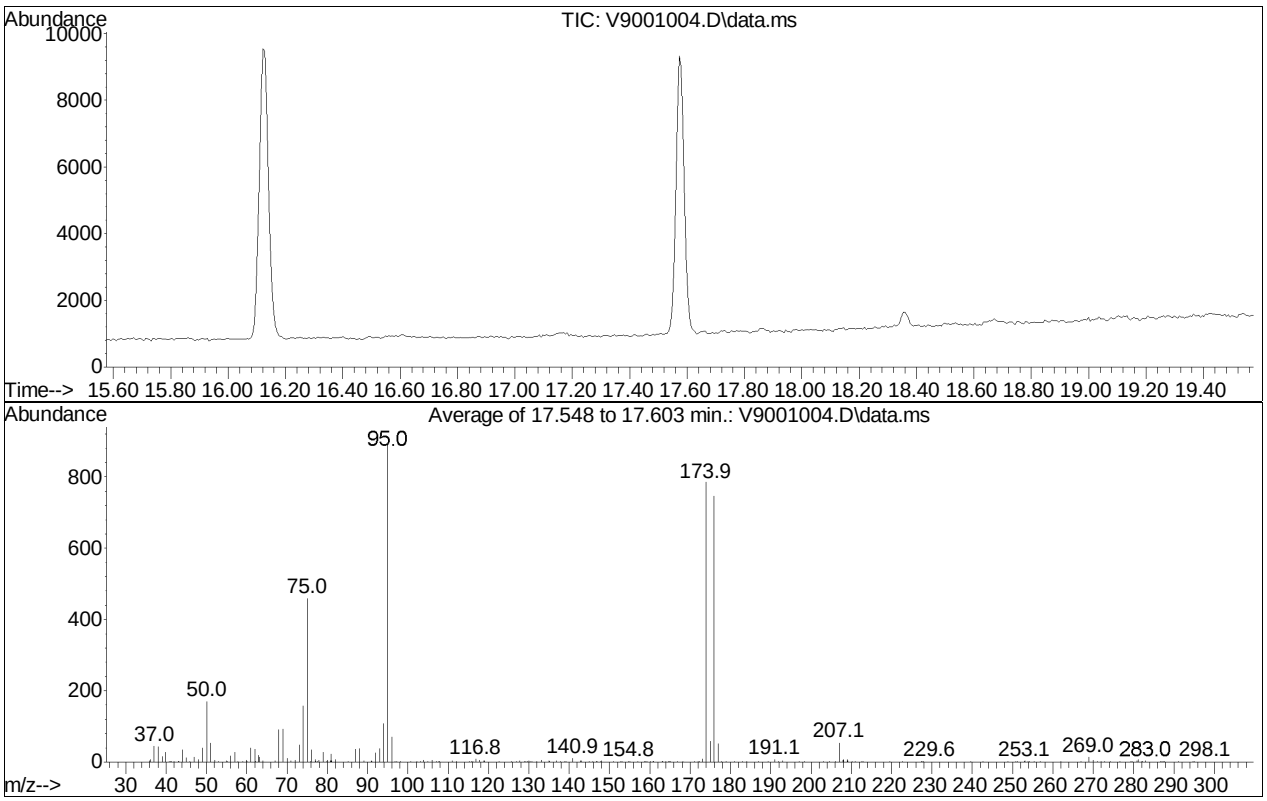
Analytical Event

Continuing Calibration
BFB Tune

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001004.D
Acq On : 11 Jan 2022 07:56 pm
Operator : VOA9:RY
Sample : WG1593474-1,31
Misc : WG1593474,ICAL18591
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Title : PIANO VOLATILES
Last Update : Tue Dec 21 13:01:08 2021



Spectrum Information: Average of 17.548 to 17.603 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.0	170	PASS
75	95	30	60	51.3	459	PASS
95	95	100	100	100.0	896	PASS
96	95	5	9	7.9	71	PASS
173	174	0.00	2	1.0	8	PASS
174	95	50	100	87.6	785	PASS
175	174	5	9	7.4	58	PASS
176	174	95	101	95.1	747	PASS
177	176	5	9	6.8	51	PASS

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	88	0.00
2		3-Methyl-1-butene	0.389	0.422	-8.5	99	-0.12
3		Isopentane	0.224	0.233	-4.0	96	-0.12
4		1-Pentene	0.246	0.268	-8.9	96	-0.10
5		2-Methyl-1-butene	0.387	0.368	4.9	83	-0.10
6		Pentane	0.382	0.329	13.9	80	-0.10
7		trans-2-Pentene	0.415	0.401	3.4	83	-0.10
8		2-Methyl-1,3-butadiene	0.268	0.270	-0.7	84	-0.09
9		cis-2-Pentene	0.390	0.382	2.1	84	-0.10
10		Tertiary butanol	0.084	0.067#	20.2	80	0.06
11		2,2-Dimethylbutane	0.239	0.229	4.2	82	-0.08
12		4-Methyl-1-pentene	0.298	0.296	0.7	82	-0.08
13		Cyclopentane	0.168	0.160	4.8	80	-0.08
14		2,3-Dimethylbutane	0.116	0.117	-0.9	83	-0.08
15		2-Methylpentane	0.430	0.415	3.5	81	-0.07
16		MTBE	0.628	0.596	5.1	82	-0.04
17		3-Methylpentane	0.376	0.385	-2.4	84	-0.07
18		1-Hexene	0.221	0.222	-0.5	84	-0.07
19		Hexane	0.337	0.338	-0.3	84	-0.07
20		Diisopropyl ether	0.621	0.648	-4.3	86	-0.04
21		trans-2-Hexene	0.367	0.386	-5.2	84	-0.06
22		2-Methyl-2-pentene	0.376	0.391	-4.0	85	-0.06
23		cis-2-Hexene	0.334	0.353	-5.7	85	-0.06
24	S	Dibromofluoromethane (surr)	0.258	0.235	8.9	85	-0.05
25		Ethyl tertiary butyl ether	0.623	0.647	-3.9	87	-0.02
26		2,2-Dimethylpentane	0.473	0.499	-5.5	86	-0.06
27		Methylcyclopentane	0.412	0.425	-3.2	84	-0.05
28		2,4-Dimethylpentane	0.382	0.392	-2.6	86	-0.05
29		2,2,3-Trimethylbutane	0.414	0.442	-6.8	84	-0.04
30		1,2-Dichloroethane	0.297	0.285	4.0	83	-0.03
31		3,3-Dimethylpentane	0.477	0.499	-4.6	84	-0.05
32		Cyclohexane	0.343	0.354	-3.2	84	-0.04
33		2-Methylhexane	0.420	0.443	-5.5	85	-0.05
34	M	Benzene	0.869	0.867	0.2	85	-0.04
35		2,3-Dimethylpentane	0.346	0.365	-5.5	86	-0.04
36		Thiophene	0.445	0.442	0.7	82	-0.04
37		1,1-Dimethylcyclopentane	0.222	0.235	-5.9	82	-0.04
38		3-Methylhexane	0.359	0.382	-6.4	86	-0.04
39		TAME	0.714	0.675	5.5	85	-0.02

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.287	0.306	-6.6	85	-0.04
41		3-Ethylpentane	0.461	0.501	-8.7	86	-0.04
43		1-Heptene/trans-1,2-DMCP	0.172	0.184	-7.0	89	-0.04
44		Isooctane	0.867	0.935	-7.8	86	-0.03
45		trans-3-Heptene	0.281	0.301	-7.1	88	-0.04
46		Heptane	0.311	0.341	-9.6	86	-0.04
48		trans-2-Heptene	0.258	0.286	-10.9	85	-0.03
49		cis-2-Heptene	0.228	0.263	-15.4	89	-0.02
50		2,2-Dimethylhexane	0.835	0.926	-10.9	87	-0.02
51		Methylcyclohexane	0.374	0.416	-11.2	87	-0.03
52		2,5-Dimethylhexane	0.421	0.456	-8.3	86	-0.03
53		2,4-Dimethylhexane	0.338	0.361	-6.8	88	-0.04
54		Ethylcyclopentane	0.313	0.348	-11.2	88	-0.04
55		2,2,3-Trimethylpentane	0.689	0.742	-7.7	86	-0.04
57		2,3,4-Trimethylpentane	0.475	0.526	-10.7	87	-0.02
58		2,3,3-Trimethylpentane	0.391	0.433	-10.7	87	-0.02
59		2,3-Dimethylhexane	0.436	0.481	-10.3	87	-0.02
60		2-Methylheptane	0.375	0.409	-9.1	86	-0.02
61		4-Methylheptane	0.470	0.524	-11.5	88	-0.02
62	S	Toluene-d8 (surr)	1.170	1.142	2.4	86	-0.01
63		3-Methylheptane	0.373	0.372	0.3	90	-0.02
65		3-Ethylhexane	0.528	0.538	-1.9	83	-0.02
66	M	Toluene	0.969	1.016	-4.9	87	-0.01
67		2-Methylthiophene	0.763	0.807	-5.8	87	-0.02
68		trans-1,4-Dimethylcyclohexa	0.422	0.482	-14.2	90	-0.02
69		3-Methylthiophene	0.766	0.820	-7.0	87	-0.02
70		1-Octene	0.171	0.201	-17.5	91	-0.01
71		Octane	0.393	0.437	-11.2	88	-0.02
72		trans-1,2-Dimethylcyclohexa	0.316	0.359	-13.6	89	-0.02
73		1,2-Dibromoethane	0.237	0.242	-2.1	83	-0.02
75		cis-2-Octene	0.259	0.303	-17.0	90	-0.01
76		Isopropylcyclopentane	0.367	0.435	-18.5	94	-0.02
77		cis-1,2-Dimethylcyclohexane	0.327	0.366	-11.9	92	-0.02
78		2,5-Dimethylheptane	0.543	0.592	-9.0	87	-0.02
79		3,5-Dimethylheptane	0.710	0.749	-5.5	90	-0.02
80		3,3-Dimethylheptane	0.441	0.478	-8.4	89	-0.01
81		1,1,4-Trimethylcyclohexane	0.385	0.428	-11.2	91	0.00
82		2,3-Dimethylheptane	0.504	0.544	-7.9	91	-0.02
83		3,4-Dimethylheptane	0.323	0.345	-6.8	91	-0.01

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
84		4-Methyloctane	0.459	0.508	-10.7	90	-0.01
85		2-Methyloctane	0.468	0.483	-3.2	92	-0.02
86		Ethylbenzene	1.077	1.188	-10.3	87	0.00
88		2-Ethylthiophene	0.790	0.899	-13.8	88	-0.01
89		3-Methyloctane	0.745	0.811	-8.9	91	-0.01
90		3,3-Diethylpentane	0.850	0.943	-10.9	93	-0.02
91		p/m-Xylene	0.814	0.897	-10.2	86	0.00
92		1-Nonene	0.181	0.208	-14.9	94	-0.01
93		trans-3-Nonene	0.266	0.307	-15.4	93	0.00
94		cis-3-Nonene	0.304	0.353	-16.1	96	-0.01
95		Nonane	0.426	0.470	-10.3	95	-0.01
96		Styrene	0.659	0.743	-12.7	86	-0.01
98		o-Xylene	0.834	0.928	-11.3	87	-0.01
99		2-Nonene	0.267	0.309	-15.7	95	-0.01
100		Isopropylcyclohexane	0.381	0.441	-15.7	96	0.00
101	S	4-Bromofluorobenzene (surr)	0.492	0.515	-4.7	88	0.00
102		Isopropylbenzene	1.042	1.195	-14.7	89	0.00
103		3,3-Dimethyloctane	0.594	0.679	-14.3	95	0.00
104		n-Propylbenzene	1.202	1.411	-17.4	89	0.00
105		2-Methylnonane	0.375	0.442	-17.9	96	0.00
106		3-Methylnonane	0.451	0.533	-18.2	96	0.00
107		1-Methyl-3-ethylbenzene	1.008	1.178	-16.9	89	0.00
108		1-Methyl-4-ethylbenzene	0.966	1.132	-17.2	89	0.00
109		1,3,5-Trimethylbenzene	0.833	0.996	-19.6	90	0.00
110		1-Decene	0.199	0.247	-24.1	98	0.00
111		Isobutylcyclohexane	0.410	0.479	-16.8	98	0.00
112		1-Methyl-2-ethylbenzene	1.020	1.186	-16.3	89	0.00
113		Decane	0.362	0.431	-19.1	97	0.00
114		tert-Butylbenzene	0.737	0.870	-18.0	92	0.00
115		1,2,4-Trimethylbenzene	0.887	1.055	-18.9	90	0.00
116		Isobutylbenzene	0.985	1.157	-17.5	93	0.00
117		sec-Butylbenzene	1.084	1.283	-18.4	93	0.00
118		1-Methyl-3-isopropylbenzene	0.898	1.080	-20.3	93	0.00
119		1-Methyl-4-isopropylbenzene	0.903	1.089	-20.6	95	0.00
120		1,2,3-Trimethylbenzene	0.900	1.074	-19.3	89	0.00
121		1-Methyl-2-isopropylbenzene	0.912	1.089	-19.4	93	0.00
122		Indan	0.854	1.001	-17.2	87	0.00
123		1,3-Diethylbenzene	0.578	0.701	-21.3	94	0.00
124		1-Methyl-3-propylbenzene	1.092	1.333	-22.1	96	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
125	Indene	0.847	0.967	-14.2	85	0.00
126	1-Methyl-4-propylbenzene	1.293	1.567	-21.2	96	0.00
127	n-Butylbenzene	1.036	1.252	-20.8	97	0.00
128	1,2-Dimethyl-4-ethylbenzene	0.936	1.139	-21.7	95	0.00
129	1,2-Diethylbenzene	0.464	0.555	-19.6	95	0.00
130	1-Methyl-2-propylbenzene	1.169	1.423	-21.7	96	0.00
131	1,4-Dimethyl-2-ethylbenzene	0.880	1.087	-23.5	95	0.00
132	Undecane	0.448	0.538	-20.1	98	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.070	1.307	-22.1	96	0.00
134	1,3-Dimethyl-5-ethylbenzene	0.971	1.187	-22.2	96	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.070	1.299	-21.4	94	0.00
136	1,2-Dimethyl-3-ethylbenzene	0.953	1.167	-22.5	95	0.00
137	1,2,4,5-Tetramethylbenzene	1.006	1.253	-24.6	97	0.00
138	1,2,3,5-Tetramethylbenzene	0.911	1.120	-22.9	95	0.00
139	Pentylbenzene	0.861	1.061	-23.2	102	0.00
140	1,2,3,4-Tetramethylbenzene	1.208	1.492	-23.5	97	0.00
141	1,3-DM-5-tert-Butylbenzene	0.788	0.973	-23.5	103	0.00
142	Dodecane	0.363	0.387	-6.6	102	0.00
143	1,3,5-Triethylbenzene	0.490	0.610	-24.5	105	0.00
144	Naphthalene	1.225	1.389	-13.4	85	0.00
145	Benzothiophene	0.770	0.841	-9.2	82	0.00
146	1,2,4-Triethylbenzene	0.460	0.569	-23.7	105	0.00
147	Hexylbenzene	0.745	0.931	-25.0	106	0.00
148	MMT	0.416	0.508	-22.1	89	0.00
149	Tridecane	0.388	0.380	2.1	109	0.00
150	2-Methylnaphthalene	0.767	0.913	-19.0	90	0.00
151	1-Methylnaphthalene	0.692	0.805	-16.3	88	0.00
152	Tetradecane	0.303	0.286	5.6	120	0.00
153	Pentadecane	0.197	0.206	-4.6	142	-0.01

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Chlorobenzene-D5 [IS]	39.07	117	215896	50.000	ug/L		0.00
System Monitoring Compounds							
24) Dibromofluoromethane (...	17.12	113	50825	45.609	ug/L		-0.05
Spiked Amount 50.000	Range 78 - 118		Recovery = 91.22%				
62) Toluene-d8 (surr)	31.23	98	246623	48.797	ug/L		-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.59%				
101) 4-Bromofluorobenzene (...	46.53	95	111094	52.318	ug/L		0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 104.64%				
Target Compounds							Qvalue
2) 3-Methyl-1-butene	7.60	55	91020	54.253	ug/L		99
3) Isopentane	8.15	43	50372	52.042	ug/L		98
4) 1-Pentene	8.84	42	57933	54.560	ug/L		98
5) 2-Methyl-1-butene	9.15	55	79501	47.612	ug/L		97
6) Pentane	9.21	43	71088	43.091	ug/L		99
7) trans-2-Pentene	9.67	55	86678	48.334	ug/L		99
8) 2-Methyl-1,3-butadiene	9.85	67	58276	50.447	ug/L		99
9) cis-2-Pentene	10.06	55	82462	48.911	ug/L		99
10) Tertiary butanol	10.81	59	72114M4	198.481	ug/L		
11) 2,2-Dimethylbutane	11.10	43	49388	47.814	ug/L		97
12) 4-Methyl-1-pentene	12.45	43	63891	49.606	ug/L		96
13) Cyclopentane	12.94	70	34516	47.705	ug/L		99
14) 2,3-Dimethylbutane	12.93	71	25185	50.342	ug/L	#	93
15) 2-Methylpentane	13.16	43	89596	48.236	ug/L		99
16) MTBE	13.52	73	128622	47.467	ug/L		99
17) 3-Methylpentane	14.15	57	83210	51.211	ug/L		95
18) 1-Hexene	14.74	56	47986	50.372	ug/L		97
19) Hexane	15.36	57	73046	50.237	ug/L		99
20) Diisopropyl ether	15.70	45	139869	52.166	ug/L		96
21) trans-2-Hexene	15.86	55	83351	52.600	ug/L		98
22) 2-Methyl-2-pentene	16.04	69	84390	51.927	ug/L		96
23) cis-2-Hexene	16.60	55	76111	52.804	ug/L		96
25) Ethyl tertiary butyl e...	17.19	59	139758	51.915	ug/L		99
26) 2,2-Dimethylpentane	17.42	57	107786	52.813	ug/L		97
27) Methylcyclopentane	17.70	56	91677	51.574	ug/L		99
28) 2,4-Dimethylpentane	17.87	43	84734	51.415	ug/L		98
29) 2,2,3-Trimethylbutane	18.49	57	95435	53.387	ug/L		98
30) 1,2-Dichloroethane	19.20	62	61426	47.961	ug/L		98
31) 3,3-Dimethylpentane	20.15	43	107691	52.244	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	20.63	56	76432	51.578	ug/L	97
33) 2-Methylhexane	21.07	43	95611	52.783	ug/L	98
34) Benzene	21.26	78	187176	49.873	ug/L	100
35) 2,3-Dimethylpentane	21.37	56	78746	52.759	ug/L	97
36) Thiophene	21.72	84	95349	49.642	ug/L	97
37) 1,1-Dimethylcyclopentane	21.83	83	50806	52.944	ug/L	96
38) 3-Methylhexane	21.89	43	82385	53.165	ug/L	99
39) TAME	22.29	73	145660	47.251	ug/L	99
40) cis-1,3-Dimethylcyclop...	22.66	70	66004	53.335	ug/L	99
41) 3-Ethylpentane	22.84	43	108252	54.385	ug/L	96
43) 1-Heptene/trans-1,2-DMCP	23.23	70	79320	106.555	ug/L	99
44) Isooctane	23.33	57	201901	53.942	ug/L	97
45) trans-3-Heptene	23.94	41	65075	53.728	ug/L	98
46) Heptane	24.07	43	73537	54.734	ug/L	97
48) trans-2-Heptene	24.72	56	61795	55.385	ug/L	96
49) cis-2-Heptene	25.52	56	56751	57.524	ug/L	97
50) 2,2-Dimethylhexane	26.30	57	199960	55.427	ug/L	100
51) Methylcyclohexane	26.51	83	89825	55.606	ug/L	98
52) 2,5-Dimethylhexane	27.18	57	98459	54.099	ug/L	98
53) 2,4-Dimethylhexane	27.44	57	77934	53.376	ug/L	96
54) Ethylcyclopentane	27.47	69	75036	55.468	ug/L	98
55) 2,2,3-Trimethylpentane	27.70	57	160275	53.872	ug/L	99
57) 2,3,4-Trimethylpentane	29.25	43	113470	55.311	ug/L	99
58) 2,3,3-Trimethylpentane	29.82	43	93521	55.338	ug/L	98
59) 2,3-Dimethylhexane	30.08	43	103740	55.153	ug/L	99
60) 2-Methylheptane	30.52	57	88357	54.558	ug/L	97
61) 4-Methylheptane	30.70	43	113228	55.801	ug/L	99
63) 3-Methylheptane	31.27	43	80364	49.864	ug/L	98
65) 3-Ethylhexane	31.40	43	116217	50.974	ug/L	97
66) Toluene	31.59	91	219413	52.458	ug/L	99
67) 2-Methylthiophene	31.76	97	174331	52.885	ug/L	98
68) trans-1,4-Dimethylcycl...	32.24	97	104030	57.146	ug/L	100
69) 3-Methylthiophene	32.53	97	177049	53.522	ug/L	100
70) 1-Octene	32.97	55	43433	58.775	ug/L	98
71) Octane	33.79	43	94247	55.530	ug/L	98
72) trans-1,2-Dimethylcycl...	34.06	55	77454	56.719	ug/L	98
73) 1,2-Dibromoethane	34.31	107	52349	51.228	ug/L	96
75) cis-2-Octene	35.17	55	65524	58.542	ug/L	97
76) Isopropylcyclopentane	35.30	68	93956	59.230	ug/L	97
77) cis-1,2-Dimethylcycloh...	37.07	55	79018	55.891	ug/L	100
78) 2,5-Dimethylheptane	37.42	57	127856	54.533	ug/L	97

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79)	3,5-Dimethylheptane	37.54	57	161675M4	52.733	ug/L	
80)	3,3-Dimethylheptane	37.80	57	103102	54.157	ug/L	96
81)	1,1,4-Trimethylcyclohe...	38.33	69	92360	55.615	ug/L	98
82)	2,3-Dimethylheptane	39.48	43	117534	53.971	ug/L	98
83)	3,4-Dimethylheptane	39.79	43	74454	53.328	ug/L	99
84)	4-Methyloctane	40.08	43	109733	55.370	ug/L	99
85)	2-Methyloctane	40.17	43	104252M3	51.601	ug/L	
86)	Ethylbenzene	40.70	91	256408	55.131	ug/L	100
88)	2-Ethylthiophene	40.84	97	194074	56.865	ug/L	97
89)	3-Methyloctane	40.84	57	175015	54.431	ug/L	100
90)	3,3-Diethylpentane	41.82	57	203557	55.476	ug/L	98
91)	p/m-Xylene	41.95	91	387326	110.148	ug/L	99
92)	1-Nonene	42.61	56	44897	57.605	ug/L	96
93)	trans-3-Nonene	43.03	55	66203	57.591	ug/L	97
94)	cis-3-Nonene	43.31	55	76187M6	58.124	ug/L	
95)	Nonane	43.38	43	101425M6	55.138	ug/L	
96)	Styrene	43.82	104	160323	56.366	ug/L	99
98)	o-Xylene	44.23	91	200330	55.619	ug/L	98
99)	2-Nonene	44.65	55	66718	57.936	ug/L	98
100)	Isopropylcyclohexane	45.94	83	95260	57.948	ug/L	97
102)	Isopropylbenzene	46.56	105	258028	57.325	ug/L	100
103)	3,3-Dimethyloctane	47.06	71	146627	57.128	ug/L	99
104)	n-Propylbenzene	48.99	91	304617	58.684	ug/L	98
105)	2-Methylnonane	49.04	43	95532	59.021	ug/L	98
106)	3-Methylnonane	49.44	57	115134	59.132	ug/L	98
107)	1-Methyl-3-ethylbenzene	49.57	105	254350	58.449	ug/L	99
108)	1-Methyl-4-ethylbenzene	49.73	105	244298	58.554	ug/L	99
109)	1,3,5-Trimethylbenzene	50.28	105	214945	59.730	ug/L	98
110)	1-Decene	50.41	41	53353	61.952	ug/L	99
111)	Isobutylcyclohexane	50.57	83	103506	58.410	ug/L	98
112)	1-Methyl-2-ethylbenzene	50.60	105	256118	58.144	ug/L	100
113)	Decane	50.78	43	92958	59.472	ug/L	98
114)	tert-Butylbenzene	51.04	119	187824	58.983	ug/L	99
115)	1,2,4-Trimethylbenzene	51.44	105	227794	59.500	ug/L	99
116)	Isobutylbenzene	51.63	91	249803M6	58.714	ug/L	
117)	sec-Butylbenzene	51.69	105	277089	59.211	ug/L	100
118)	1-Methyl-3-isopropylbe...	52.07	119	233183	60.155	ug/L	100
119)	1-Methyl-4-isopropylbe...	52.26	119	235116	60.321	ug/L	98
120)	1,2,3-Trimethylbenzene	52.52	105	231883	59.679	ug/L	100
121)	1-Methyl-2-isopropylbe...	52.72	119	235177	59.700	ug/L	99
122)	Indan	52.82	117	216189	58.624	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
123) 1,3-Diethylbenzene	52.96	105	151396	60.689 ug/L	99
124) 1-Methyl-3-propylbenzene	53.08	105	287836	61.050 ug/L	100
125) Indene	53.24	115	208676	57.089 ug/L	97
126) 1-Methyl-4-propylbenzene	53.22	105	338409	60.624 ug/L	99
127) n-Butylbenzene	53.22	91	270339	60.449 ug/L	98
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	245932	60.858 ug/L	100
129) 1,2-Diethylbenzene	53.44	119	119809	59.805 ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	307324	60.870 ug/L	100
131) 1,4-Dimethyl-2-ethylbe...	53.93	119	234752	61.799 ug/L	99
132) Undecane	53.97	57	116245	60.082 ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	282119	61.050 ug/L	100
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	256282	61.099 ug/L	100
135) 1,3-Dimethyl-2-ethylbe...	54.37	119	280475	60.684 ug/L	100
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	251934	61.223 ug/L	99
137) 1,2,4,5-Tetramethylben...	55.15	119	270592	62.315 ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	241813	61.505 ug/L	99
139) Pentylbenzene	55.71	91	229064	61.605 ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	322083	61.767 ug/L	97
141) 1,3-DM-5-tert-Butylben...	56.04	147	209994	61.742 ug/L	100
142) Dodecane	56.20	43	83509	53.262 ug/L	98
143) 1,3,5-Triethylbenzene	56.93	147	131774	62.317 ug/L	99
144) Naphthalene	57.08	128	299972	56.704 ug/L	99
145) Benzothiophene	57.17	134	181583	54.644 ug/L	98
146) 1,2,4-Triethylbenzene	57.49	147	122932	61.940 ug/L	99
147) Hexylbenzene	57.99	91	201059	62.523 ug/L	99
148) MMT	58.26	134	109774	61.084 ug/L	98
149) Tridecane	58.31	57	82020	48.952 ug/L	99
150) 2-Methylnaphthalene	59.86	142	197212	59.514 ug/L	98
151) 1-Methylnaphthalene	60.35	142	173794	58.158 ug/L	97
152) Tetradecane	60.63	57	61800	47.182 ug/L	98
153) Pentadecane	63.46	57	44568	52.390 ug/L	97

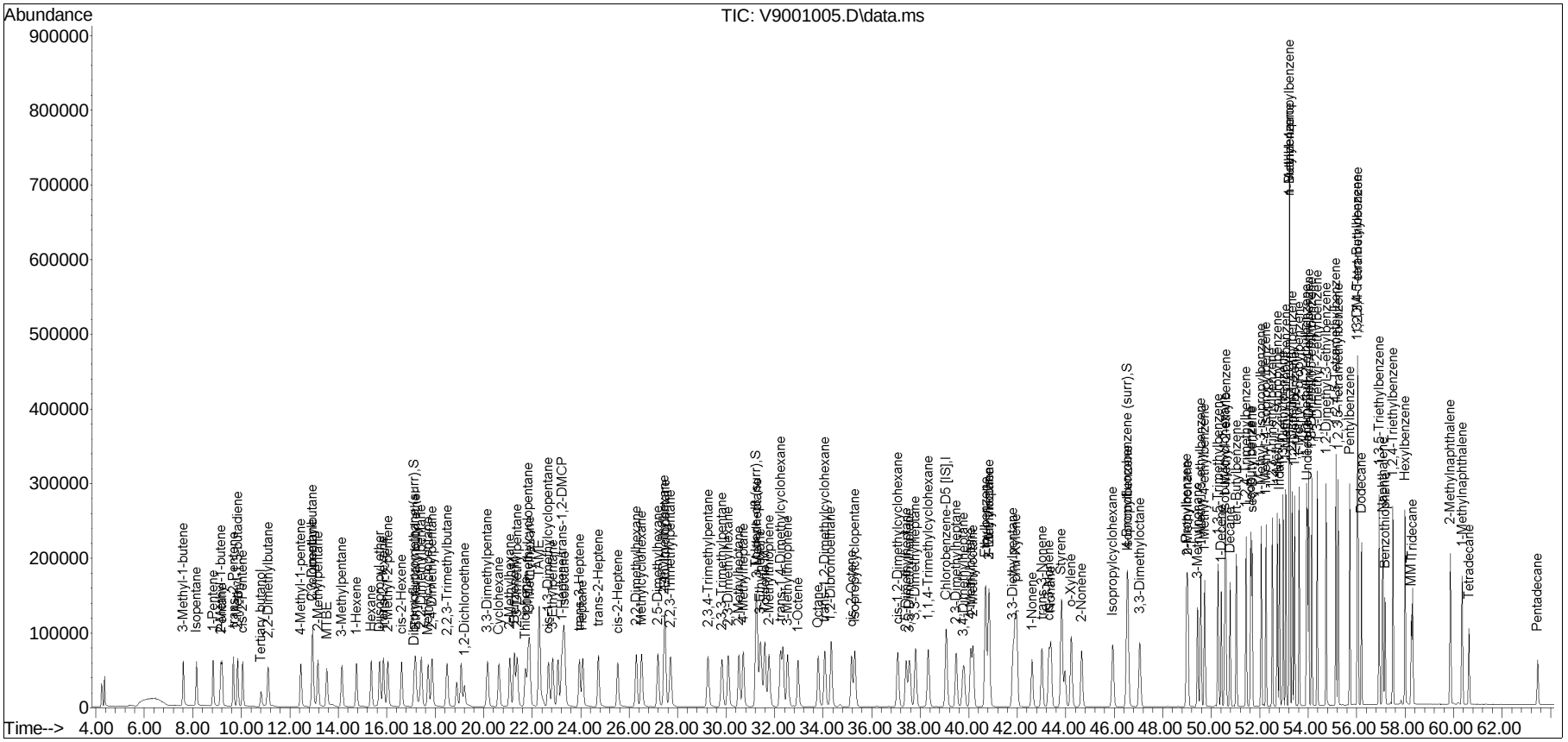
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001005.D
Acq On : 11 Jan 2022 08:27 pm
Operator : VOA9:RY
Sample : WG1593474-2,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 12 08:09:55 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO



Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Chlorobenzene-D5 [IS]	1.000	1.000	0.0	98	-0.01
2		3-Methyl-1-butene	0.389	0.355	8.7	92	-0.07
3		Isopentane	0.224	0.175	21.9	80	-0.07
4		1-Pentene	0.246	0.205	16.7	81	-0.05
5		2-Methyl-1-butene	0.387	0.335	13.4	83	-0.05
6		Pentane	0.382	0.296	22.5	79	-0.05
7		trans-2-Pentene	0.415	0.367	11.6	84	-0.05
8		2-Methyl-1,3-butadiene	0.268	0.248	7.5	85	-0.05
9		cis-2-Pentene	0.390	0.347	11.0	84	-0.05
10		Tertiary butanol	0.084	0.063#	25.0#	84	0.04
11		2,2-Dimethylbutane	0.239	0.206	13.8	82	-0.04
12		4-Methyl-1-pentene	0.298	0.272	8.7	83	-0.05
13		Cyclopentane	0.168	0.150	10.7	83	-0.05
14		2,3-Dimethylbutane	0.116	0.109	6.0	85	-0.05
15		2-Methylpentane	0.430	0.384	10.7	83	-0.04
16		MTBE	0.628	0.579	7.8	88	-0.02
17		3-Methylpentane	0.376	0.354	5.9	85	-0.04
18		1-Hexene	0.221	0.208	5.9	87	-0.04
19		Hexane	0.337	0.317	5.9	87	-0.04
20		Diisopropyl ether	0.621	0.610	1.8	89	-0.02
21		trans-2-Hexene	0.367	0.362	1.4	87	-0.03
22		2-Methyl-2-pentene	0.376	0.362	3.7	87	-0.03
23		cis-2-Hexene	0.334	0.327	2.1	87	-0.03
24	S	Dibromofluoromethane (surr)	0.258	0.233	9.7	93	-0.02
25		Ethyl tertiary butyl ether	0.623	0.643	-3.2	95	-0.02
26		2,2-Dimethylpentane	0.473	0.470	0.6	90	-0.04
27		Methylcyclopentane	0.412	0.394	4.4	86	-0.03
28		2,4-Dimethylpentane	0.382	0.367	3.9	89	-0.03
29		2,2,3-Trimethylbutane	0.414	0.414	0.0	87	-0.02
30		1,2-Dichloroethane	0.297	0.299	-0.7	97	-0.02
31		3,3-Dimethylpentane	0.477	0.466	2.3	87	-0.02
32		Cyclohexane	0.343	0.337	1.7	89	-0.02
33		2-Methylhexane	0.420	0.416	1.0	88	-0.04
34	M	Benzene	0.869	0.867	0.2	94	-0.03
35		2,3-Dimethylpentane	0.346	0.344	0.6	89	-0.02
36		Thiophene	0.445	0.472	-6.1	97	-0.02
37		1,1-Dimethylcyclopentane	0.222	0.233	-5.0	90	-0.04
38		3-Methylhexane	0.359	0.351	2.2	88	-0.02
39		TAME	0.714	0.658	7.8	92	-0.02

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40		cis-1,3-Dimethylcyclopentan	0.287	0.299	-4.2	92	-0.02
41		3-Ethylpentane	0.461	0.462	-0.2	88	-0.02
43		1-Heptene/trans-1,2-DMCP	0.172	0.177	-2.9	94	-0.02
44		Isooctane	0.867	0.890	-2.7	90	-0.02
45		trans-3-Heptene	0.281	0.283	-0.7	91	-0.02
46		Heptane	0.311	0.321	-3.2	90	-0.02
48		trans-2-Heptene	0.258	0.278	-7.8	91	-0.02
49		cis-2-Heptene	0.228	0.249	-9.2	93	-0.01
50		2,2-Dimethylhexane	0.835	0.880	-5.4	92	-0.02
51		Methylcyclohexane	0.374	0.400	-7.0	92	-0.02
52		2,5-Dimethylhexane	0.421	0.437	-3.8	92	-0.02
53		2,4-Dimethylhexane	0.338	0.344	-1.8	93	-0.02
54		Ethylcyclopentane	0.313	0.332	-6.1	93	-0.02
55		2,2,3-Trimethylpentane	0.689	0.694	-0.7	89	-0.02
57		2,3,4-Trimethylpentane	0.475	0.500	-5.3	92	-0.02
58		2,3,3-Trimethylpentane	0.391	0.413	-5.6	91	-0.02
59		2,3-Dimethylhexane	0.436	0.432	0.9	87	-0.01
60		2-Methylheptane	0.375	0.396	-5.6	92	-0.01
61		4-Methylheptane	0.470	0.493	-4.9	91	-0.02
62	S	Toluene-d8 (surr)	1.170	1.143	2.3	95	-0.01
63		3-Methylheptane	0.373	0.354	5.1	94	-0.01
65		3-Ethylhexane	0.528	0.520	1.5	89	0.00
66	M	Toluene	0.969	0.993	-2.5	94	-0.01
67		2-Methylthiophene	0.763	0.790	-3.5	94	-0.01
68		trans-1,4-Dimethylcyclohexa	0.422	0.470	-11.4	97	-0.02
69		3-Methylthiophene	0.766	0.808	-5.5	94	0.00
70		1-Octene	0.171	0.194	-13.5	97	-0.01
71		Octane	0.393	0.420	-6.9	93	0.00
72		trans-1,2-Dimethylcyclohexa	0.316	0.346	-9.5	95	-0.02
73		1,2-Dibromoethane	0.237	0.240	-1.3	91	-0.01
75		cis-2-Octene	0.259	0.287	-10.8	94	0.00
76		Isopropylcyclopentane	0.367	0.416	-13.4	99	-0.03
77		cis-1,2-Dimethylcyclohexane	0.327	0.346	-5.8	96	-0.01
78		2,5-Dimethylheptane	0.543	0.563	-3.7	91	-0.02
79		3,5-Dimethylheptane	0.710	0.740	-4.2	98	0.00
80		3,3-Dimethylheptane	0.441	0.459	-4.1	95	0.00
81		1,1,4-Trimethylcyclohexane	0.385	0.410	-6.5	97	0.00
82		2,3-Dimethylheptane	0.504	0.520	-3.2	96	-0.01
83		3,4-Dimethylheptane	0.323	0.328	-1.5	96	0.00

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
84		4-Methyloctane	0.459	0.481	-4.8	94	0.00
85		2-Methyloctane	0.468	0.470	-0.4	99	-0.01
86		Ethylbenzene	1.077	1.166	-8.3	95	-0.01
88		2-Ethylthiophene	0.790	0.885	-12.0	96	0.00
89		3-Methyloctane	0.745	0.789	-5.9	98	-0.01
90		3,3-Diethylpentane	0.850	0.890	-4.7	97	-0.01
91		p/m-Xylene	0.814	0.886	-8.8	94	0.00
92		1-Nonene	0.181	0.203	-12.2	101	0.00
93		trans-3-Nonene	0.266	0.295	-10.9	99	0.00
94		cis-3-Nonene	0.304	0.335	-10.2	100	-0.01
95		Nonane	0.426	0.450	-5.6	100	-0.01
96		Styrene	0.659	0.739	-12.1	94	0.00
98		o-Xylene	0.834	0.916	-9.8	95	0.00
99		2-Nonene	0.267	0.299	-12.0	101	0.00
100		Isopropylcyclohexane	0.381	0.417	-9.4	101	0.00
101	S	4-Bromofluorobenzene (surr)	0.492	0.515	-4.7	98	-0.01
102		Isopropylbenzene	1.042	1.160	-11.3	96	0.00
103		3,3-Dimethyloctane	0.594	0.648	-9.1	101	-0.01
104		n-Propylbenzene	1.202	1.368	-13.8	95	0.00
105		2-Methylnonane	0.375	0.412	-9.9	99	0.00
106		3-Methylnonane	0.451	0.495	-9.8	99	0.00
107		1-Methyl-3-ethylbenzene	1.008	1.148	-13.9	95	0.00
108		1-Methyl-4-ethylbenzene	0.966	1.109	-14.8	97	0.00
109		1,3,5-Trimethylbenzene	0.833	0.970	-16.4	97	0.00
110		1-Decene	0.199	0.227	-14.1	100	0.00
111		Isobutylcyclohexane	0.410	0.448	-9.3	101	0.00
112		1-Methyl-2-ethylbenzene	1.020	1.160	-13.7	96	0.00
113		Decane	0.362	0.396	-9.4	98	0.00
114		tert-Butylbenzene	0.737	0.841	-14.1	98	0.00
115		1,2,4-Trimethylbenzene	0.887	1.025	-15.6	96	0.00
116		Isobutylbenzene	0.985	1.123	-14.0	100	0.00
117		sec-Butylbenzene	1.084	1.227	-13.2	98	0.00
118		1-Methyl-3-isopropylbenzene	0.898	1.035	-15.3	99	0.00
119		1-Methyl-4-isopropylbenzene	0.903	1.039	-15.1	100	0.00
120		1,2,3-Trimethylbenzene	0.900	1.043	-15.9	96	0.00
121		1-Methyl-2-isopropylbenzene	0.912	1.039	-13.9	98	0.00
122		Indan	0.854	0.971	-13.7	93	0.00
123		1,3-Diethylbenzene	0.578	0.663	-14.7	99	0.00
124		1-Methyl-3-propylbenzene	1.092	1.243	-13.8	99	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
125	Indene	0.847	0.940	-11.0	91	0.00
126	1-Methyl-4-propylbenzene	1.293	1.469	-13.6	99	0.00
127	n-Butylbenzene	1.036	1.166	-12.5	100	0.00
128	1,2-Dimethyl-4-ethylbenzene	0.936	1.071	-14.4	99	0.00
129	1,2-Diethylbenzene	0.464	0.522	-12.5	99	0.00
130	1-Methyl-2-propylbenzene	1.169	1.334	-14.1	99	0.00
131	1,4-Dimethyl-2-ethylbenzene	0.880	1.018	-15.7	99	0.00
132	Undecane	0.448	0.500	-11.6	100	0.00
133	1,3-Dimethyl-4-ethylbenzene	1.070	1.210	-13.1	98	0.00
134	1,3-Dimethyl-5-ethylbenzene	0.971	1.105	-13.8	99	0.00
135	1,3-Dimethyl-2-ethylbenzene	1.070	1.221	-14.1	98	0.00
136	1,2-Dimethyl-3-ethylbenzene	0.953	1.082	-13.5	98	0.00
137	1,2,4,5-Tetramethylbenzene	1.006	1.165	-15.8	99	0.00
138	1,2,3,5-Tetramethylbenzene	0.911	1.047	-14.9	99	0.00
139	Pentylbenzene	0.861	0.969	-12.5	103	0.00
140	1,2,3,4-Tetramethylbenzene	1.208	1.376	-13.9	99	0.00
141	1,3-DM-5-tert-Butylbenzene	0.788	0.891	-13.1	104	0.00
142	Dodecane	0.363	0.360	0.8	105	0.00
143	1,3,5-Triethylbenzene	0.490	0.558	-13.9	106	0.00
144	Naphthalene	1.225	1.319	-7.7	89	0.00
145	Benzothiophene	0.770	0.803	-4.3	86	0.00
146	1,2,4-Triethylbenzene	0.460	0.519	-12.8	106	0.00
147	Hexylbenzene	0.745	0.843	-13.2	106	0.00
148	MMT	0.416	0.482	-15.9	93	0.00
149	Tridecane	0.388	0.365	5.9	115	0.00
150	2-Methylnaphthalene	0.767	0.856	-11.6	93	0.00
151	1-Methylnaphthalene	0.692	0.762	-10.1	92	0.00
152	Tetradecane	0.303	0.276	8.9	128	0.00
153	Pentadecane	0.197	0.205	-4.1	156	0.00

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	238727	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.15	113	55671	45.180	ug/L	-0.02
Spiked Amount 50.000	Range 78 - 118		Recovery = 90.36%			
62) Toluene-d8 (surr)	31.23	98	272961	48.843	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.69%			
101) 4-Bromofluorobenzene (...	46.52	95	122895	52.340	ug/L	-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 104.68%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	7.66	55	84686	45.650	ug/L	98
3) Isopentane	8.20	43	41747	39.006	ug/L	97
4) 1-Pentene	8.88	42	48918	41.664	ug/L	96
5) 2-Methyl-1-butene	9.20	55	80002	43.330	ug/L	98
6) Pentane	9.26	43	70719	38.767	ug/L	99
7) trans-2-Pentene	9.72	55	87695	44.224	ug/L	98
8) 2-Methyl-1,3-butadiene	9.89	67	59199	46.345	ug/L	97
9) cis-2-Pentene	10.10	55	82918	44.478	ug/L	98
10) Tertiary butanol	10.80	59	75782M4	188.629	ug/L	
11) 2,2-Dimethylbutane	11.15	43	49297	43.162	ug/L	97
12) 4-Methyl-1-pentene	12.48	43	64872	45.551	ug/L	97
13) Cyclopentane	12.97	70	35871	44.837	ug/L	99
14) 2,3-Dimethylbutane	12.97	71	25946	46.904	ug/L #	92
15) 2-Methylpentane	13.20	43	91610	44.603	ug/L	99
16) MTBE	13.54	73	138110	46.094	ug/L	99
17) 3-Methylpentane	14.18	57	84561	47.065	ug/L	96
18) 1-Hexene	14.77	56	49643	47.128	ug/L	98
19) Hexane	15.38	57	75707	47.087	ug/L	100
20) Diisopropyl ether	15.71	45	145517	49.082	ug/L	97
21) trans-2-Hexene	15.89	55	86346	49.278	ug/L	99
22) 2-Methyl-2-pentene	16.07	69	86470	48.118	ug/L	95
23) cis-2-Hexene	16.63	55	78070	48.983	ug/L	92
25) Ethyl tertiary butyl e...	17.19	59	153467	51.555	ug/L	99
26) 2,2-Dimethylpentane	17.44	57	112299	49.762	ug/L	97
27) Methylcyclopentane	17.72	56	94113	47.881	ug/L	99
28) 2,4-Dimethylpentane	17.89	43	87555	48.046	ug/L	100
29) 2,2,3-Trimethylbutane	18.51	57	98780	49.974	ug/L	96
30) 1,2-Dichloroethane	19.21	62	71444	50.448	ug/L	98
31) 3,3-Dimethylpentane	20.17	43	111220	48.796	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Cyclohexane	20.65	56	80462	49.105	ug/L		100
33) 2-Methylhexane	21.08	43	99360	49.607	ug/L		98
34) Benzene	21.27	78	206952	49.869	ug/L		99
35) 2,3-Dimethylpentane	21.39	56	82127	49.762	ug/L		98
36) Thiophene	21.73	84	112628	53.031	ug/L		98
37) 1,1-Dimethylcyclopentane	21.83	83	55726	52.517	ug/L	#	89
38) 3-Methylhexane	21.91	43	83792	48.901	ug/L		97
39) TAME	22.28	73	157179	46.111	ug/L		98
40) cis-1,3-Dimethylcyclop...	22.68	70	71400	52.178	ug/L		98
41) 3-Ethylpentane	22.85	43	110200	50.069	ug/L		96
43) 1-Heptene/trans-1,2-DMCP	23.24	70	84290	102.402	ug/L		94
44) Isooctane	23.34	57	212545	51.355	ug/L		99
45) trans-3-Heptene	23.96	41	67500	50.400	ug/L		97
46) Heptane	24.09	43	76530	51.514	ug/L		100
48) trans-2-Heptene	24.74	56	66290	53.731	ug/L		99
49) cis-2-Heptene	25.53	56	59454	54.500	ug/L		99
50) 2,2-Dimethylhexane	26.30	57	210063	52.659	ug/L		98
51) Methylcyclohexane	26.52	83	95555	53.496	ug/L		97
52) 2,5-Dimethylhexane	27.19	57	104402	51.879	ug/L		98
53) 2,4-Dimethylhexane	27.46	57	82023	50.804	ug/L		98
54) Ethylcyclopentane	27.49	69	79282	53.002	ug/L		97
55) 2,2,3-Trimethylpentane	27.72	57	165729	50.378	ug/L		100
57) 2,3,4-Trimethylpentane	29.25	43	119375	52.624	ug/L		97
58) 2,3,3-Trimethylpentane	29.83	43	98509	52.715	ug/L		98
59) 2,3-Dimethylhexane	30.09	43	103155	49.597	ug/L		97
60) 2-Methylheptane	30.53	57	94613	52.834	ug/L		99
61) 4-Methylheptane	30.70	43	117647	52.434	ug/L		100
63) 3-Methylheptane	31.28	43	84565	47.453	ug/L		98
65) 3-Ethylhexane	31.41	43	124026	49.196	ug/L		98
66) Toluene	31.59	91	237166	51.280	ug/L		99
67) 2-Methylthiophene	31.76	97	188685	51.766	ug/L		97
68) trans-1,4-Dimethylcycl...	32.24	97	112181	55.730	ug/L		97
69) 3-Methylthiophene	32.54	97	192775	52.703	ug/L		100
70) 1-Octene	32.97	55	46364	56.741	ug/L		98
71) Octane	33.80	43	100283	53.436	ug/L		99
72) trans-1,2-Dimethylcycl...	34.07	55	82697	54.766	ug/L		99
73) 1,2-Dibromoethane	34.31	107	57266	50.680	ug/L		98
75) cis-2-Octene	35.17	55	68474	55.327	ug/L		97
76) Isopropylcyclopentane	35.29	68	99357	56.645	ug/L		99
77) cis-1,2-Dimethylcycloh...	37.07	55	82676	52.885	ug/L		97
78) 2,5-Dimethylheptane	37.42	57	134405	51.843	ug/L		99

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) 3,5-Dimethylheptane	37.56	57	176645M4	52.106	ug/L	
80) 3,3-Dimethylheptane	37.81	57	109656	52.091	ug/L	94
81) 1,1,4-Trimethylcyclohe...	38.34	69	97927	53.328	ug/L	97
82) 2,3-Dimethylheptane	39.49	43	124149	51.556	ug/L	94
83) 3,4-Dimethylheptane	39.79	43	78388	50.776	ug/L	99
84) 4-Methyloctane	40.09	43	114787	52.381	ug/L	98
85) 2-Methyloctane	40.18	43	112120M3	50.188	ug/L	
86) Ethylbenzene	40.69	91	278415	54.138	ug/L	99
88) 2-Ethylthiophene	40.84	97	211292	55.989	ug/L	100
89) 3-Methyloctane	40.84	57	188357	52.978	ug/L	100
90) 3,3-Diethylpentane	41.83	57	212569	52.392	ug/L	99
91) p/m-Xylene	41.96	91	422955	108.777	ug/L	99
92) 1-Nonene	42.62	56	48494	56.270	ug/L	99
93) trans-3-Nonene	43.03	55	70309	55.313	ug/L	98
94) cis-3-Nonene	43.31	55	79884M6	55.116	ug/L	
95) Nonane	43.38	43	107342M6	52.773	ug/L	
96) Styrene	43.82	104	176537	56.130	ug/L	98
98) o-Xylene	44.23	91	218779	54.932	ug/L	100
99) 2-Nonene	44.67	55	71383	56.059	ug/L	98
100) Isopropylcyclohexane	45.95	83	99446	54.709	ug/L	98
102) Isopropylbenzene	46.56	105	276960	55.647	ug/L	99
103) 3,3-Dimethyloctane	47.05	71	154594	54.471	ug/L	98
104) n-Propylbenzene	48.99	91	326580	56.899	ug/L	99
105) 2-Methylnonane	49.04	43	98279	54.911	ug/L	96
106) 3-Methylnonane	49.44	57	118062	54.837	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.57	105	274005	56.944	ug/L	99
108) 1-Methyl-4-ethylbenzene	49.73	105	264823	57.403	ug/L	100
109) 1,3,5-Trimethylbenzene	50.28	105	231453	58.166	ug/L	97
110) 1-Decene	50.41	41	54273	56.993	ug/L	96
111) Isobutylcyclohexane	50.57	83	106860	54.535	ug/L	98
112) 1-Methyl-2-ethylbenzene	50.60	105	276861	56.842	ug/L	99
113) Decane	50.78	43	94573	54.718	ug/L	99
114) tert-Butylbenzene	51.04	119	200719	57.005	ug/L	100
115) 1,2,4-Trimethylbenzene	51.44	105	244736	57.812	ug/L	100
116) Isobutylbenzene	51.63	91	268209M6	57.011	ug/L	
117) sec-Butylbenzene	51.69	105	292989	56.621	ug/L	100
118) 1-Methyl-3-isopropylbe...	52.07	119	247033	57.633	ug/L	99
119) 1-Methyl-4-isopropylbe...	52.26	119	247994	57.540	ug/L	99
120) 1,2,3-Trimethylbenzene	52.52	105	249102	57.979	ug/L	99
121) 1-Methyl-2-isopropylbe...	52.72	119	248077	56.952	ug/L	100
122) Indan	52.82	117	231844	56.856	ug/L	100

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
123) 1,3-Diethylbenzene	52.96	105	158386	57.419 ug/L	98
124) 1-Methyl-3-propylbenzene	53.08	105	296665	56.905 ug/L	99
125) Indene	53.24	115	224419	55.524 ug/L	99
126) 1-Methyl-4-propylbenzene	53.22	105	350747	56.825 ug/L	99
127) n-Butylbenzene	53.22	91	278425	56.303 ug/L	99
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	255672	57.218 ug/L	99
129) 1,2-Diethylbenzene	53.44	119	124673	56.281 ug/L	99
130) 1-Methyl-2-propylbenzene	53.63	105	318548	57.059 ug/L	99
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	242925	57.835 ug/L	99
132) Undecane	53.97	57	119336	55.781 ug/L	99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	288920	56.543 ug/L	99
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	263768	56.870 ug/L	98
135) 1,3-Dimethyl-2-ethylbe...	54.37	119	291466	57.031 ug/L	99
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	258366	56.781 ug/L	99
137) 1,2,4,5-Tetramethylben...	55.14	119	278026	57.904 ug/L	99
138) 1,2,3,5-Tetramethylben...	55.24	119	250060	57.520 ug/L	99
139) Pentylbenzene	55.71	91	231361	56.272 ug/L	99
140) 1,2,3,4-Tetramethylben...	56.05	119	328530	56.978 ug/L	99
141) 1,3-DM-5-tert-Butylben...	56.03	147	212746	56.569 ug/L	100
142) Dodecane	56.20	43	86043	49.630 ug/L	99
143) 1,3,5-Triethylbenzene	56.93	147	133134	56.939 ug/L	98
144) Naphthalene	57.08	128	314890	53.831 ug/L	99
145) Benzothiophene	57.17	134	191753	52.186 ug/L	98
146) 1,2,4-Triethylbenzene	57.50	147	123946	56.478 ug/L	100
147) Hexylbenzene	58.00	91	201293	56.609 ug/L	99
148) MMT	58.26	134	114998	57.872 ug/L	99
149) Tridecane	58.31	57	87061	46.991 ug/L	98
150) 2-Methylnaphthalene	59.86	142	204276	55.750 ug/L	99
151) 1-Methylnaphthalene	60.35	142	181946	55.063 ug/L	100
152) Tetradecane	60.63	57	65979	45.555 ug/L	98
153) Pentadecane	63.47	57	48862	51.945 ug/L	96

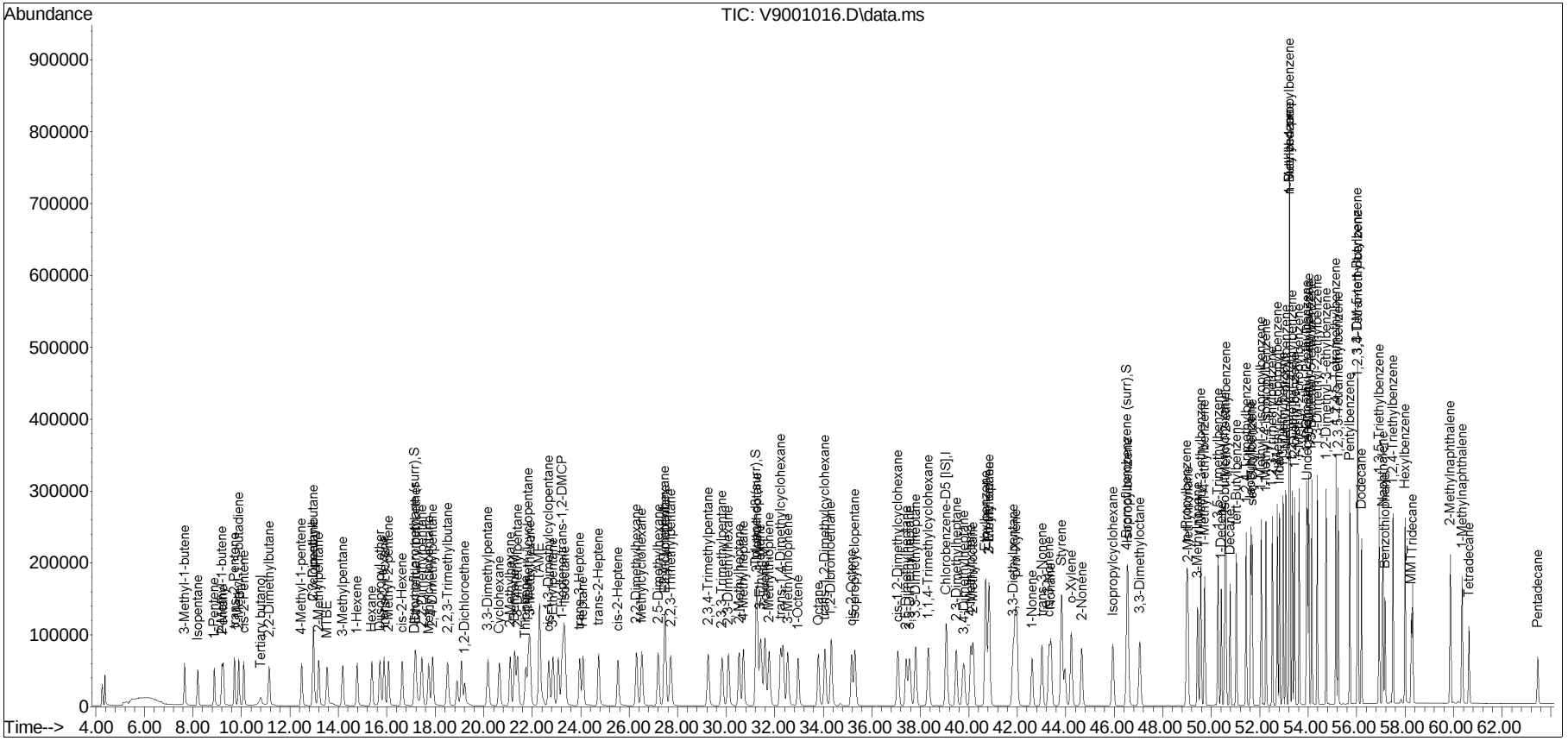
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001016.D
Acq On : 12 Jan 2022 08:07 pm
Operator : VOA9:RY
Sample : WG1593474-8,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 13 08:02:15 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001011.D
Acq On : 12 Jan 2022 01:17 pm
Operator : VOA9:RY
Sample : L2200971-01D,31,0.1071,10,0.010
Misc : WG1593474,ICAL18591
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 17 08:42:14 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	208748	50.000	ug/L	-0.01
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.12	113	51538	47.832	ug/L	-0.05
Spiked Amount 50.000	Range 78 - 118		Recovery = 95.66%			
62) Toluene-d8 (surr)	31.22	98	241342	49.387	ug/L	-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.77%			
101) 4-Bromofluorobenzene (...	46.52	95	103059	50.196	ug/L	-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 100.39%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.	d	
3) Isopentane	0.00		0	N.D.	d	
4) 1-Pentene	0.00		0	N.D.	d	
5) 2-Methyl-1-butene	0.00		0	N.D.	d	
6) Pentane	0.00		0	N.D.	d	
7) trans-2-Pentene	0.00		0	N.D.	d	
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.	d	
9) cis-2-Pentene	0.00		0	N.D.	d	
10) Tertiary butanol	0.00		0	N.D.	d	
11) 2,2-Dimethylbutane	0.00		0	N.D.	d	
12) 4-Methyl-1-pentene	0.00		0	N.D.	d	
13) Cyclopentane	0.00		0	N.D.	d	
14) 2,3-Dimethylbutane	0.00		0	N.D.	d	
15) 2-Methylpentane	0.00		0	N.D.	d	
16) MTBE	0.00		0	N.D.	d	
17) 3-Methylpentane	0.00		0	N.D.	d	
18) 1-Hexene	0.00		0	N.D.	d	
19) Hexane	15.36	57	902	0.642	ug/L	88
20) Diisopropyl ether	0.00		0	N.D.	d	
21) trans-2-Hexene	0.00		0	N.D.	d	
22) 2-Methyl-2-pentene	0.00		0	N.D.	d	
23) cis-2-Hexene	0.00		0	N.D.	d	
25) Ethyl tertiary butyl e...	0.00		0	N.D.	d	
26) 2,2-Dimethylpentane	0.00		0	N.D.	d	
27) Methylcyclopentane	0.00		0	N.D.	d	
28) 2,4-Dimethylpentane	0.00		0	N.D.	d	
29) 2,2,3-Trimethylbutane	0.00		0	N.D.	d	
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.	d	

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001011.D
Acq On : 12 Jan 2022 01:17 pm
Operator : VOA9:RY
Sample : L2200971-01D,31,0.1071,10,0.010
Misc : WG1593474,ICAL18591
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 17 08:42:14 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	0.00		0	N.D.	d	
33) 2-Methylhexane	0.00		0	N.D.	d	
34) Benzene	21.24	78	1041M4	0.287	ug/L	
35) 2,3-Dimethylpentane	0.00		0	N.D.	d	
36) Thiophene	0.00		0	N.D.	d	
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.	d	
38) 3-Methylhexane	0.00		0	N.D.	d	
39) TAME	0.00		0	N.D.	d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.	d	
41) 3-Ethylpentane	0.00		0	N.D.	d	
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d	
44) Isooctane	0.00		0	N.D.	d	
45) trans-3-Heptene	0.00		0	N.D.	d	
46) Heptane	24.07	43	1500	1.155	ug/L	97
48) trans-2-Heptene	0.00		0	N.D.	d	
49) cis-2-Heptene	0.00		0	N.D.	d	
50) 2,2-Dimethylhexane	0.00		0	N.D.	d	
51) Methylcyclohexane	26.49	83	4277	2.738	ug/L	92
52) 2,5-Dimethylhexane	0.00		0	N.D.	d	
53) 2,4-Dimethylhexane	0.00		0	N.D.	d	
54) Ethylcyclopentane	27.48	69	332M4	0.254	ug/L	
55) 2,2,3-Trimethylpentane	0.00		0	N.D.	d	
57) 2,3,4-Trimethylpentane	0.00		0	N.D.	d	
58) 2,3,3-Trimethylpentane	0.00		0	N.D.	d	
59) 2,3-Dimethylhexane	0.00		0	N.D.	d	
60) 2-Methylheptane	30.51	57	4899	3.129	ug/L	92
61) 4-Methylheptane	0.00		0	N.D.	d	
63) 3-Methylheptane	31.26	43	3505	2.249	ug/L	85
65) 3-Ethylhexane	0.00		0	N.D.	d	
66) Toluene	31.59	91	8968	2.218	ug/L	97
67) 2-Methylthiophene	0.00		0	N.D.	d	
68) trans-1,4-Dimethylcycl...	32.22	97	3334M6	1.894	ug/L	
69) 3-Methylthiophene	0.00		0	N.D.	d	
70) 1-Octene	0.00		0	N.D.	d	
71) Octane	33.78	43	25611	15.607	ug/L	95
72) trans-1,2-Dimethylcycl...	34.07	55	5618	4.255	ug/L	97
73) 1,2-Dibromoethane	0.00		0	N.D.	d	
75) cis-2-Octene	0.00		0	N.D.	d	
76) Isopropylcyclopentane	0.00		0	N.D.	d	
77) cis-1,2-Dimethylcycloh...	37.06	55	3553M4	2.599	ug/L	
78) 2,5-Dimethylheptane	37.40	57	9626	4.246	ug/L	98

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001011.D
Acq On : 12 Jan 2022 01:17 pm
Operator : VOA9:RY
Sample : L2200971-01D,31,0.1071,10,0.010
Misc : WG1593474,ICAL18591
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 17 08:42:14 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
79)	3,5-Dimethylheptane	37.51	57	2909M3	0.981	ug/L		
80)	3,3-Dimethylheptane	37.80	57	778M4	0.423	ug/L		
81)	1,1,4-Trimethylcyclohe...	0.00		0	N.D.	d		
82)	2,3-Dimethylheptane	39.48	43	17060	8.102	ug/L		96
83)	3,4-Dimethylheptane	39.80	43	4626M4	3.427	ug/L		
84)	4-Methyloctane	40.09	43	16749	8.741	ug/L		96
85)	2-Methyloctane	40.18	43	24323M3	12.451	ug/L		
86)	Ethylbenzene	40.68	91	26270	5.842	ug/L		96
88)	2-Ethylthiophene	0.00		0	N.D.	d		
89)	3-Methyloctane	40.84	57	49234M6	15.836	ug/L		
90)	3,3-Diethylpentane	0.00		0	N.D.	d		
91)	p/m-Xylene	41.91	91	100294	29.498	ug/L		99
92)	1-Nonene	0.00		0	N.D.	d		
93)	trans-3-Nonene	0.00		0	N.D.	d		
94)	cis-3-Nonene	0.00		0	N.D.	d		
95)	Nonane	43.40	43	168700	94.851	ug/L		98
96)	Styrene	0.00		0	N.D.	d		
98)	o-Xylene	44.23	91	58331	16.749	ug/L		95
99)	2-Nonene	0.00		0	N.D.	d		
100)	Isopropylcyclohexane	45.94	83	17749	11.167	ug/L	#	65
102)	Isopropylbenzene	46.55	105	21952	5.044	ug/L		98
103)	3,3-Dimethyloctane	47.07	71	8424	3.394	ug/L		75
104)	n-Propylbenzene	48.99	91	75006	14.945	ug/L		99
105)	2-Methylnonane	49.04	43	74241	47.437	ug/L		99
106)	3-Methylnonane	49.44	57	87220	46.329	ug/L		99
107)	1-Methyl-3-ethylbenzene	49.57	105	160181	38.070	ug/L		99
108)	1-Methyl-4-ethylbenzene	49.73	105	81508	20.205	ug/L		99
109)	1,3,5-Trimethylbenzene	50.28	105	110224	31.678	ug/L		100
110)	1-Decene	0.00		0	N.D.	d		
111)	Isobutylcyclohexane	0.00		0	N.D.	d		
112)	1-Methyl-2-ethylbenzene	50.60	105	114063	26.781	ug/L		99
113)	Decane	50.78	43	604838	400.207	ug/L		99
114)	tert-Butylbenzene	51.04	119	2295	0.745	ug/L		92
115)	1,2,4-Trimethylbenzene	51.44	105	395503	106.844	ug/L		100
116)	Isobutylbenzene	51.63	91	23484	5.709	ug/L		97
117)	sec-Butylbenzene	51.69	105	64103	14.167	ug/L		98
118)	1-Methyl-3-isopropylbe...	52.06	119	70740	18.874	ug/L		99
119)	1-Methyl-4-isopropylbe...	52.25	119	57102	15.152	ug/L		97
120)	1,2,3-Trimethylbenzene	52.52	105	222881	59.326	ug/L		100
121)	1-Methyl-2-isopropylbe...	52.72	119	13480	3.539	ug/L		93
122)	Indan	52.82	117	32878	9.221	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001011.D
Acq On : 12 Jan 2022 01:17 pm
Operator : VOA9:RY
Sample : L2200971-01D,31,0.1071,10,0.010
Misc : WG1593474,ICAL18591
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 17 08:42:14 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
123) 1,3-Diethylbenzene	52.96	105	42812	17.749	ug/L		97
124) 1-Methyl-3-propylbenzene	53.08	105	248077	54.419	ug/L		99
125) Indene	53.22	115	6962	1.970	ug/L	#	30
126) 1-Methyl-4-propylbenzene	53.22	105	142748	26.448	ug/L		94
127) n-Butylbenzene	53.22	91	112441	26.003	ug/L		99
128) 1,2-Dimethyl-4-ethylbe...	53.35	119	173259	44.343	ug/L		99
129) 1,2-Diethylbenzene	53.44	119	20369	10.516	ug/L		98
130) 1-Methyl-2-propylbenzene	53.63	105	227980	46.701	ug/L		99
131) 1,4-Dimethyl-2-ethylbe...	53.94	119	155887	42.443	ug/L		99
132) Undecane	53.97	57	1329830	710.865	ug/L		99
133) 1,3-Dimethyl-4-ethylbe...	54.02	119	233566	52.274	ug/L		98
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	224745	55.415	ug/L		100
135) 1,3-Dimethyl-2-ethylbe...	54.38	119	39033M6	8.734	ug/L		
136) 1,2-Dimethyl-3-ethylbe...	54.74	119	115100	28.928	ug/L		97
137) 1,2,4,5-Tetramethylben...	55.15	119	131296	31.272	ug/L		96
138) 1,2,3,5-Tetramethylben...	55.24	119	219540M4	57.752	ug/L		
139) Pentylbenzene	55.72	91	56987M6	15.851	ug/L		
140) 1,2,3,4-Tetramethylben...	56.05	119	266704M6	52.898	ug/L		
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d		
142) Dodecane	56.20	43	786858	519.045	ug/L		98
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d		
144) Naphthalene	57.08	128	312106	61.018	ug/L		99
145) Benzothiophene	0.00		0	N.D.	d		
146) 1,2,4-Triethylbenzene	57.49	147	10663	5.557	ug/L	#	1
147) Hexylbenzene	58.00	91	41996	13.507	ug/L		86
148) MMT	0.00		0	N.D.	d		
149) Tridecane	58.31	57	536380	331.090	ug/L		98
150) 2-Methylnaphthalene	59.86	142	361646	112.873	ug/L		100
151) 1-Methylnaphthalene	60.35	142	217484	75.270	ug/L		100
152) Tetradecane	60.63	57	228412	180.357	ug/L		99
153) Pentadecane	63.47	57	43032	52.317	ug/L		96

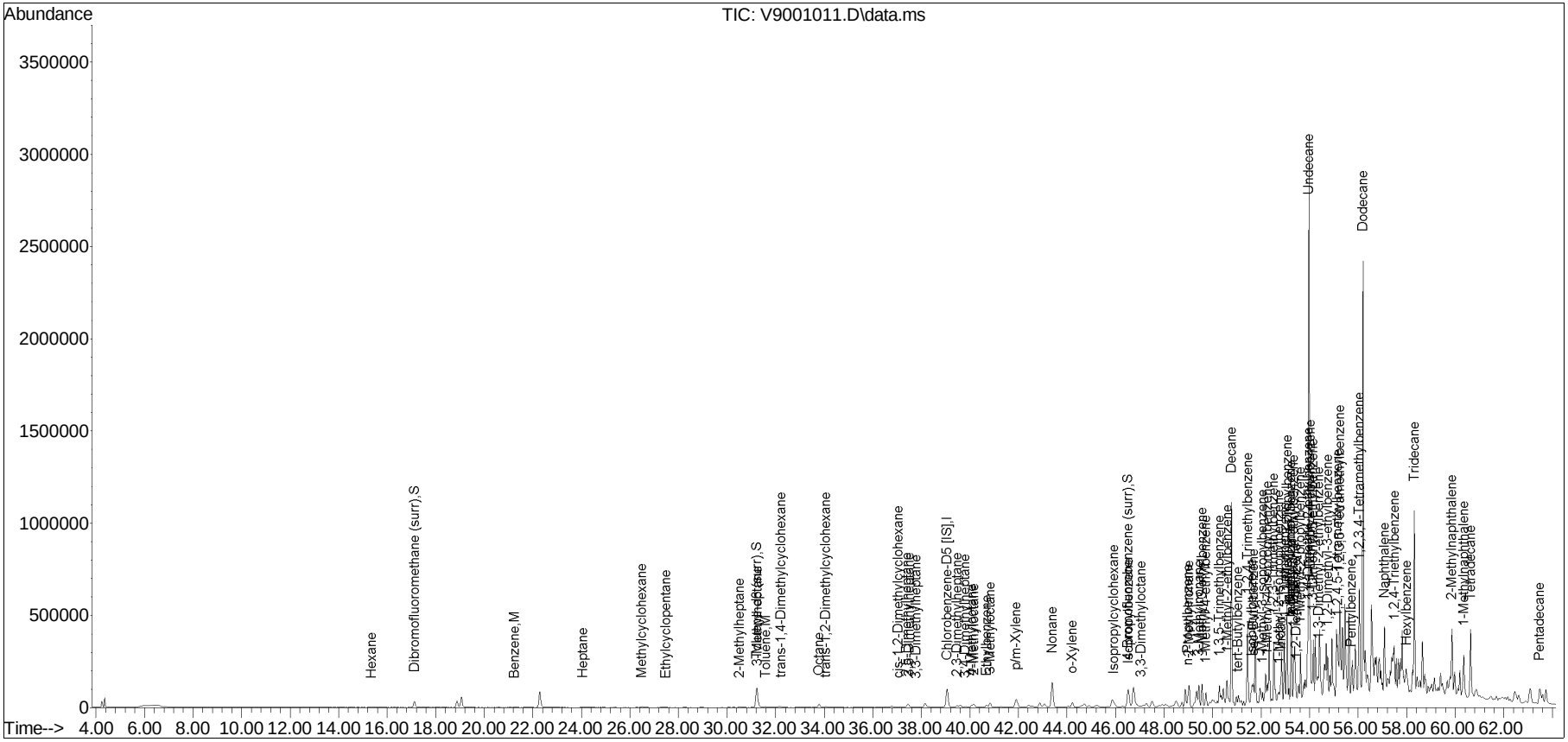
(#) = qualifier out of range (m) = manual integration (+) = signals summed

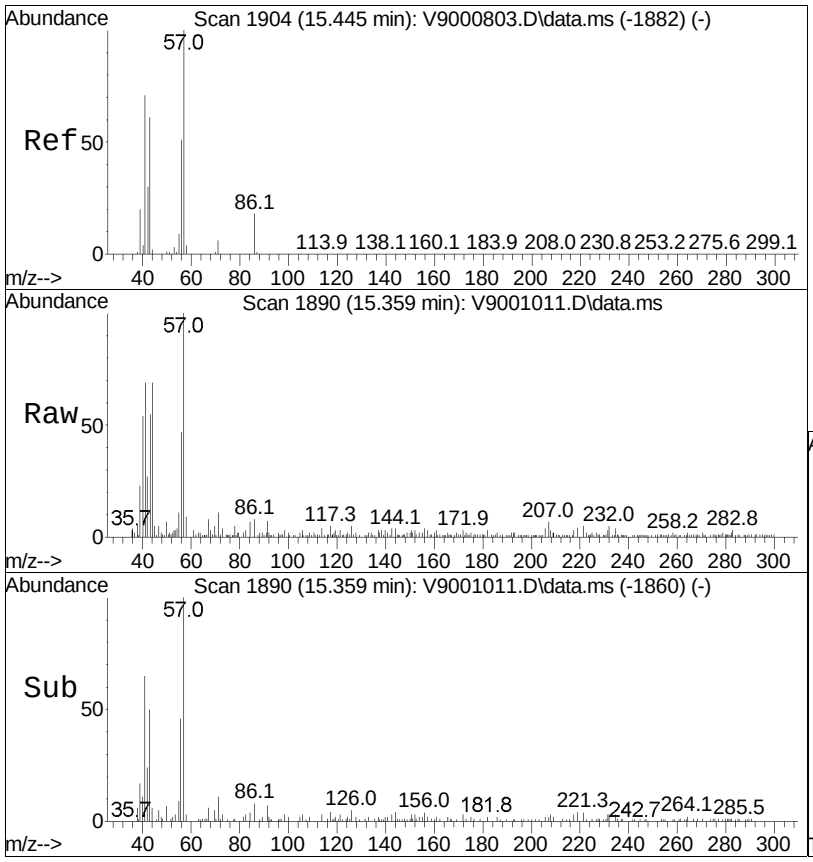
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001011.D
Acq On : 12 Jan 2022 01:17 pm
Operator : VOA9:RY
Sample : L2200971-01D,31,0.1071,10,0.010
Misc : WG1593474,ICAL18591
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 17 08:42:14 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

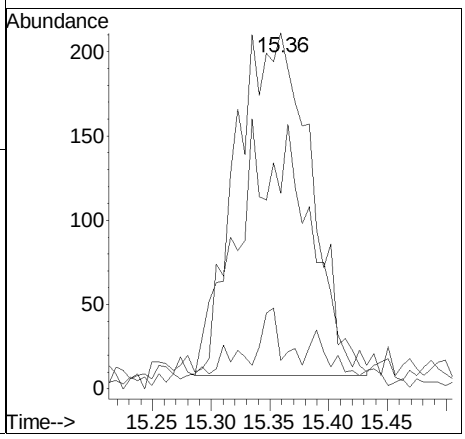


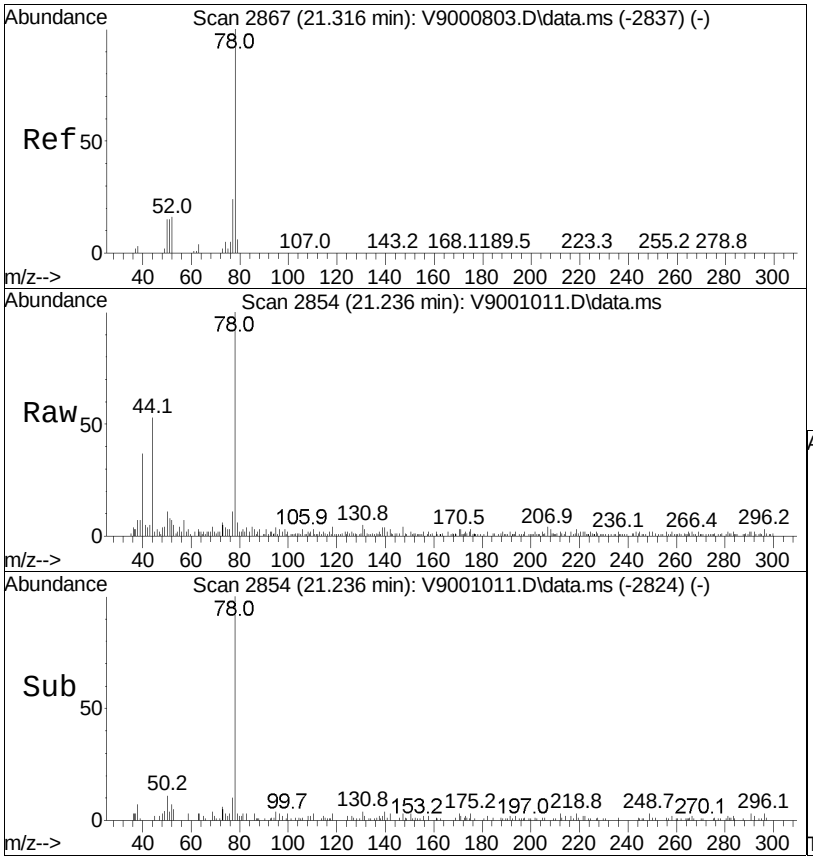


#19
Hexane
Concen: 0.64 ug/L
RT: 15.36 min Scan# 1890
Delta R.T. -0.067 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 902

Ion	Ratio	Lower	Upper
57	100		
43	55.0	41.5	81.5
86	8.1	0.0	39.1

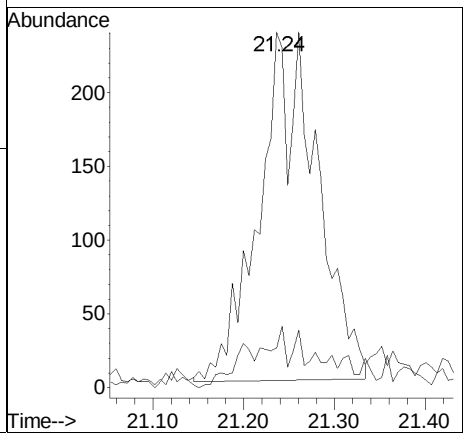


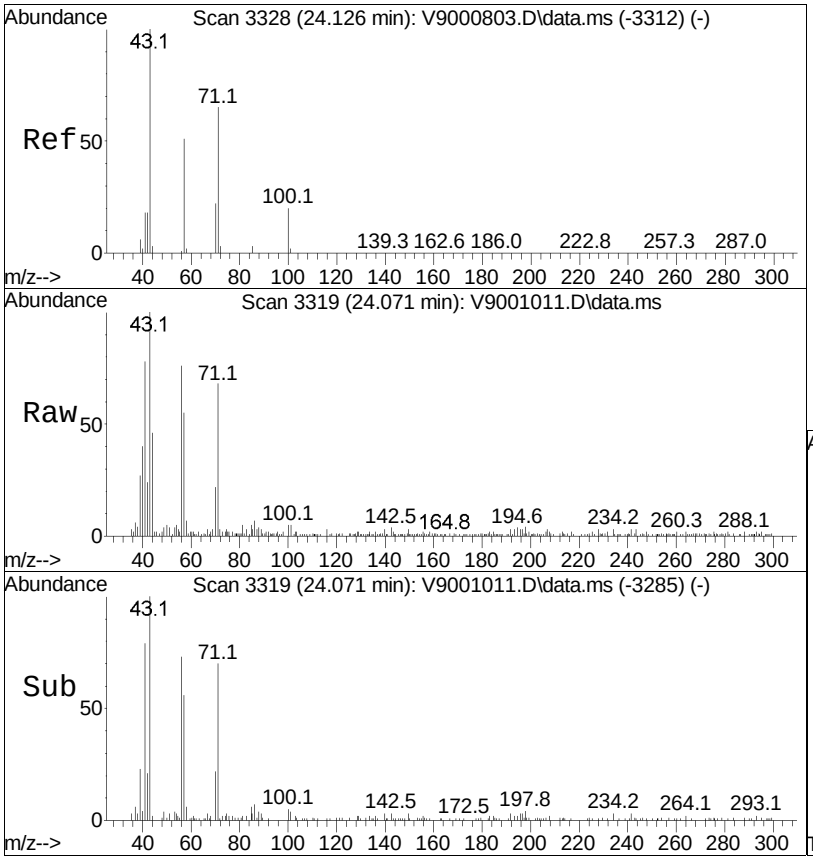


#34
Benzene
Concen: 0.29 ug/L m
RT: 21.24 min Scan# 2854
Delta R.T. -0.067 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 78 Resp: 1041

Ion	Ratio	Lower	Upper
78	100		
77	11.2	3.1	43.1

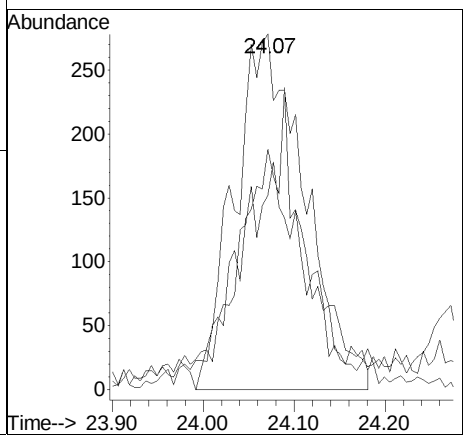


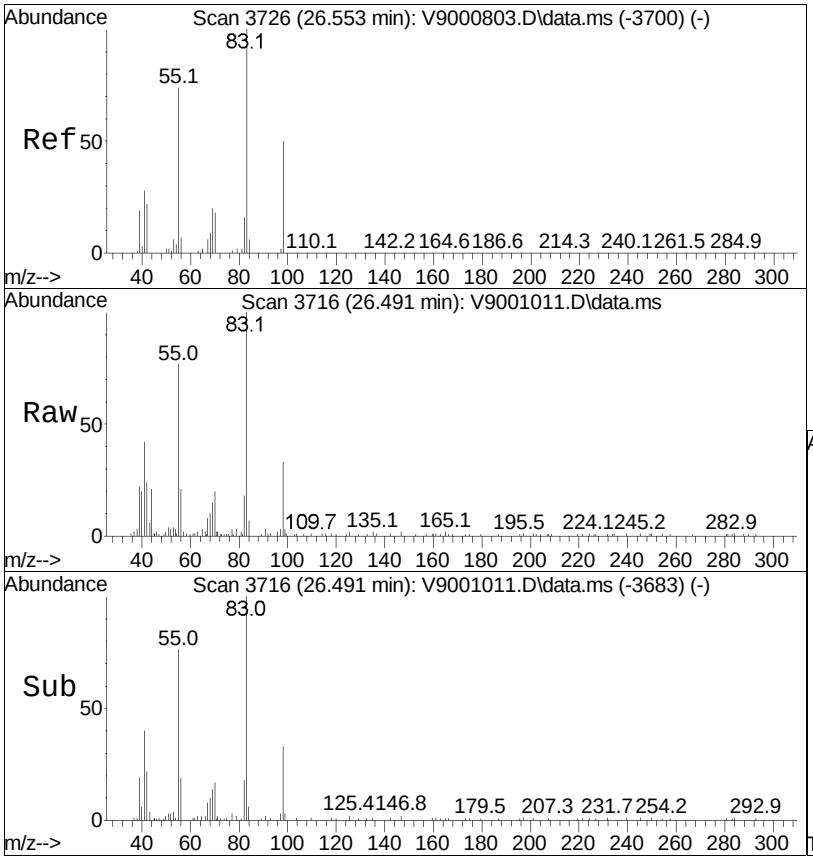


#46
Heptane
Concen: 1.15 ug/L
RT: 24.07 min Scan# 3319
Delta R.T. -0.043 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 1500

Ion	Ratio	Lower	Upper
43	100		
57	54.7	34.6	74.6
71	67.6	44.0	84.0

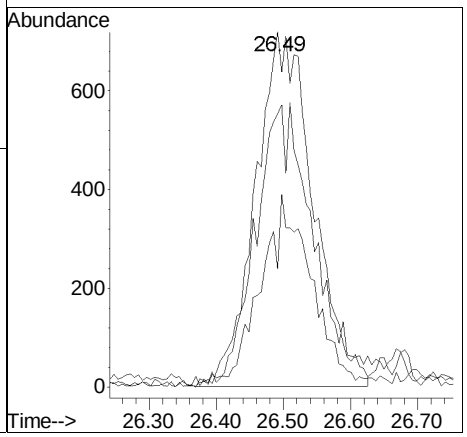


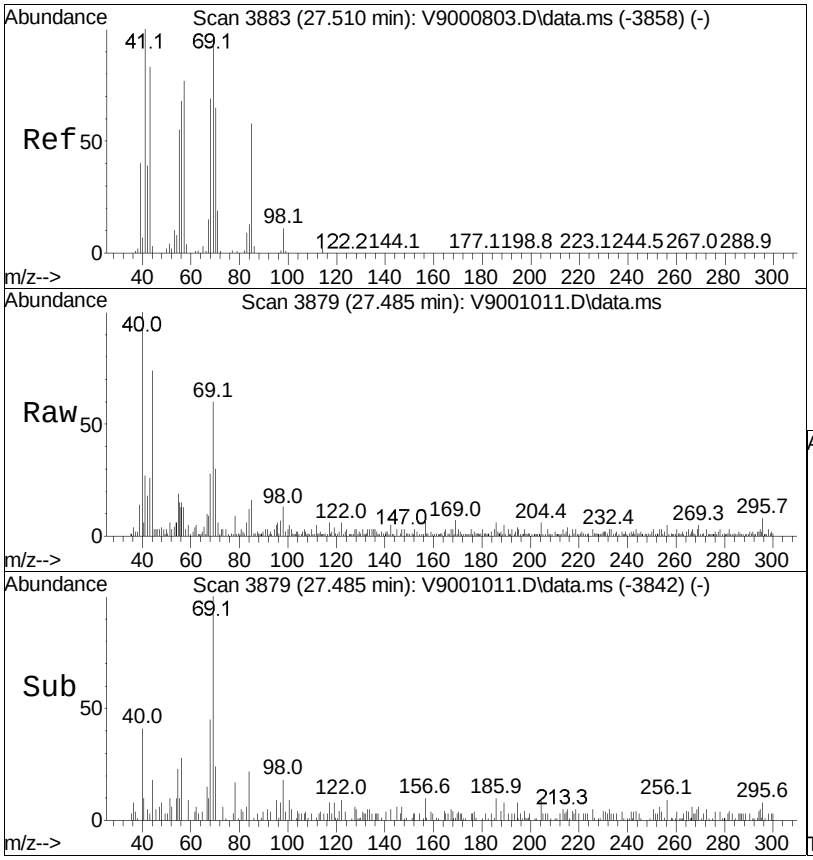


#51
Methylcyclohexane
Concen: 2.74 ug/L
RT: 26.49 min Scan# 3716
Delta R.T. -0.049 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 83 Resp: 4277

Ion	Ratio	Lower	Upper
83	100		
55	77.1	58.3	98.3
98	33.2	26.5	66.5

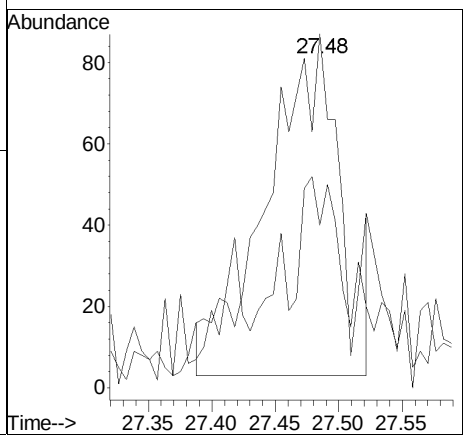


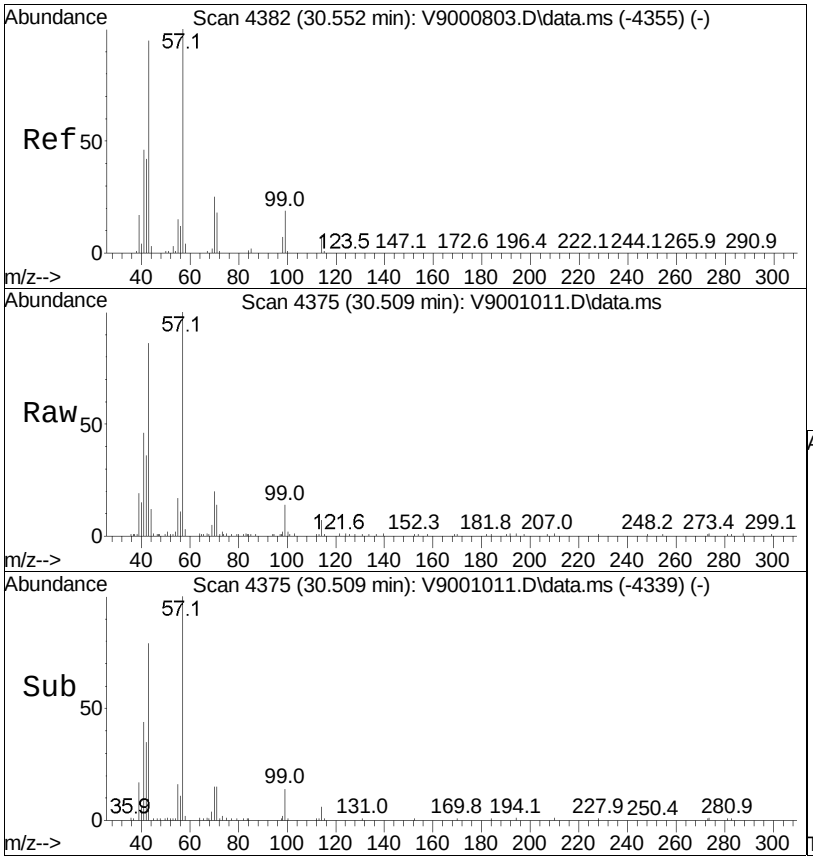


#54
Ethylcyclopentane
Concen: 0.25 ug/L m
RT: 27.48 min Scan# 3879
Delta R.T. -0.024 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 69 Resp: 332

Ion	Ratio	Lower	Upper
69	100		
68	46.0	50.6	90.6#

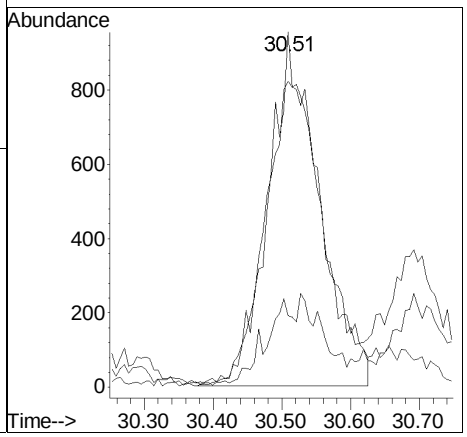


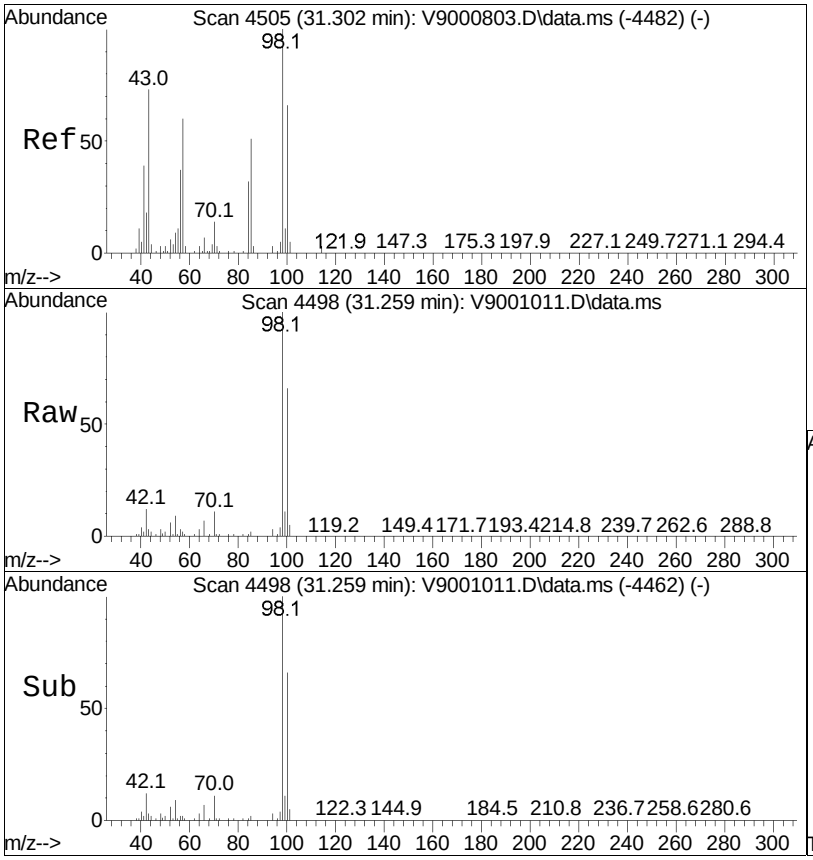


#60
2-Methylheptane
Concen: 3.13 ug/L
RT: 30.51 min Scan# 4375
Delta R.T. -0.031 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 4899

Ion	Ratio	Lower	Upper
57	100		
43	86.2	74.5	114.5
70	20.2	3.7	43.7

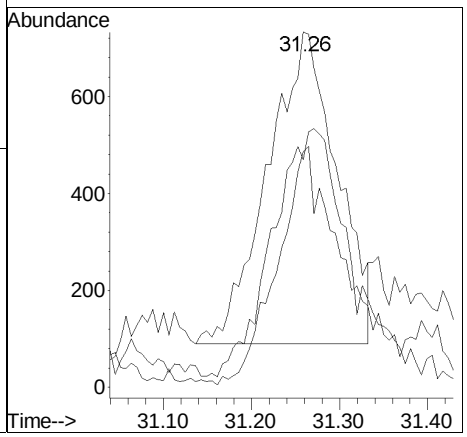


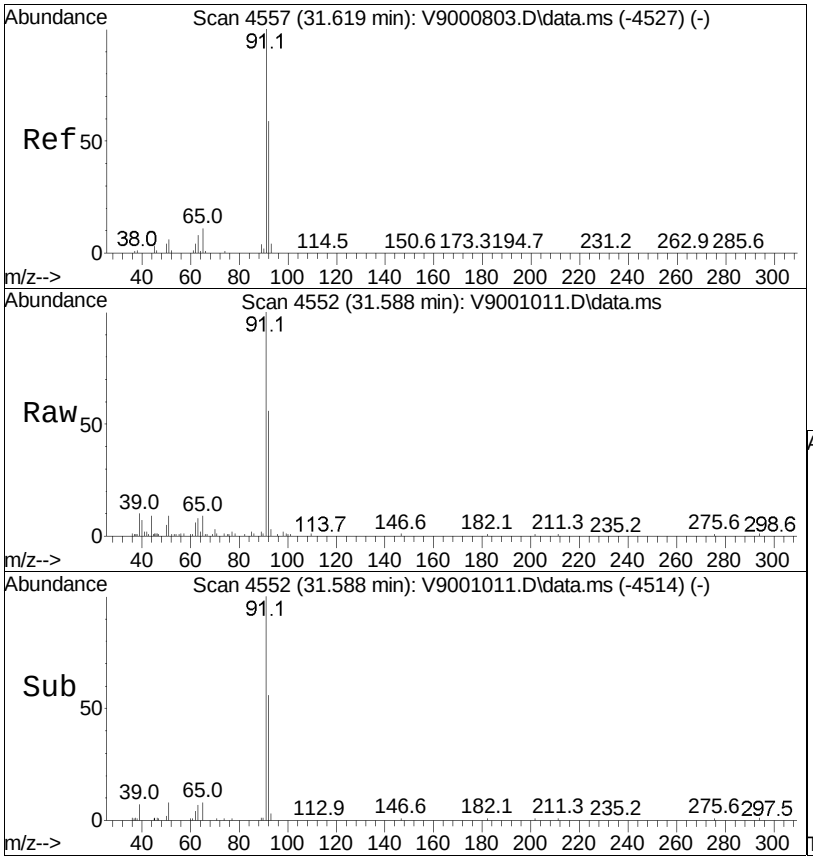


#63
3-Methylheptane
Concen: 2.25 ug/L
RT: 31.26 min Scan# 4498
Delta R.T. -0.031 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 3505

Ion	Ratio	Lower	Upper
43	100		
57	64.1	63.0	103.0
85	66.3	54.0	94.0

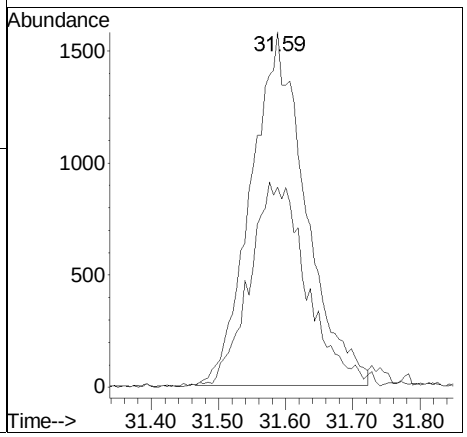


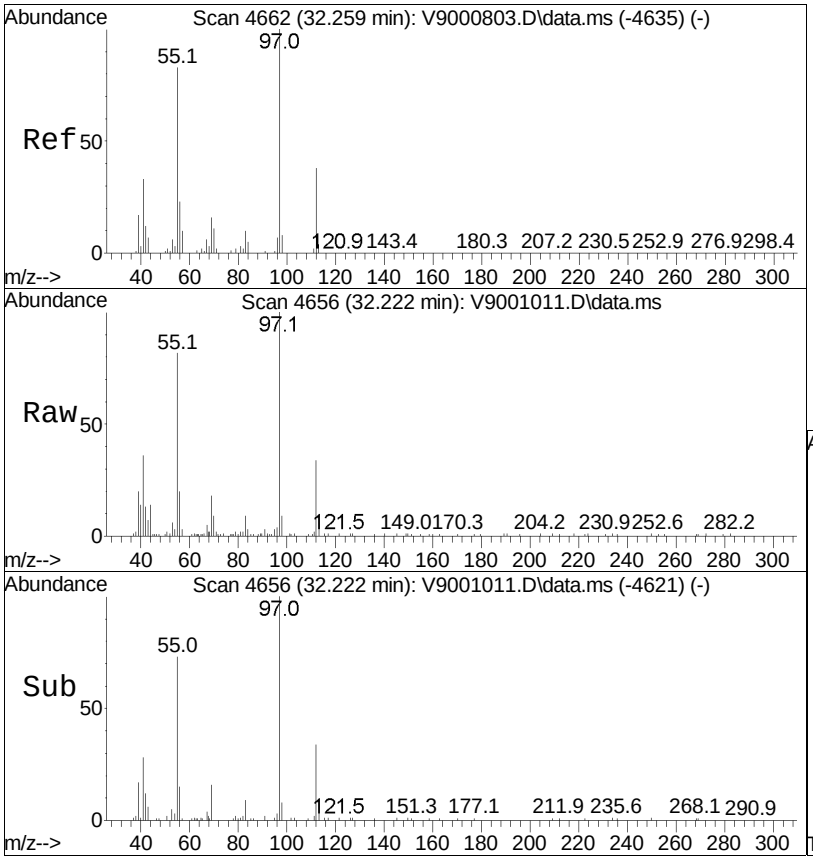


#66
Toluene
Concen: 2.22 ug/L
RT: 31.59 min Scan# 4552
Delta R.T. -0.018 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 8968

Ion	Ratio	Lower	Upper
91	100		
92	56.3	38.3	78.3

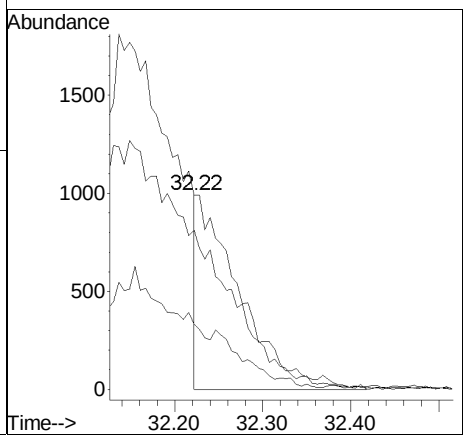


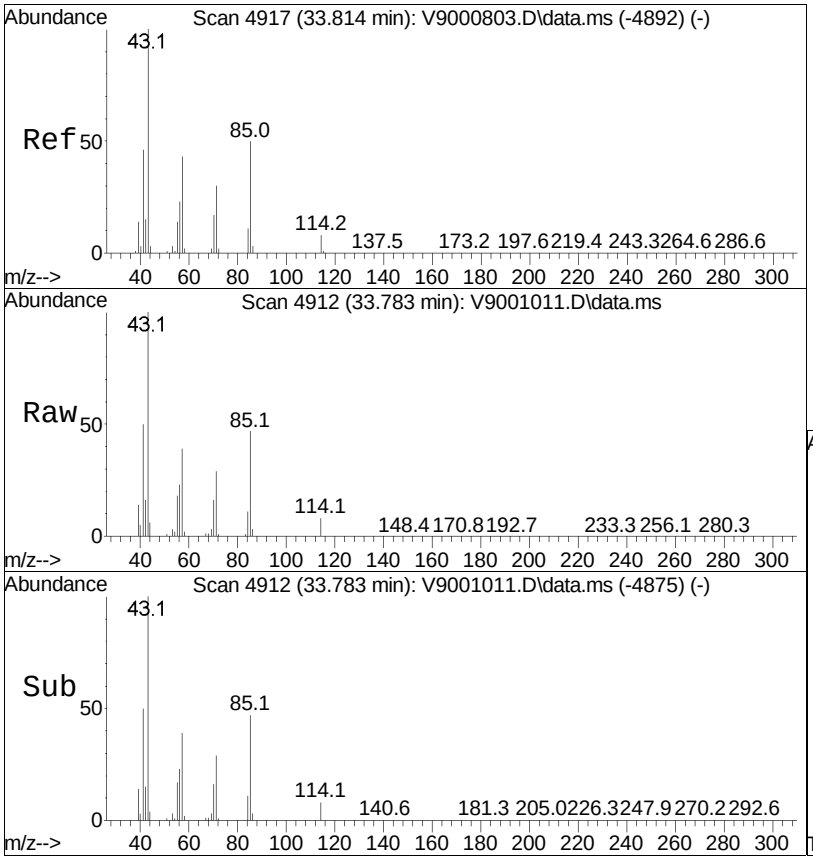


#68
trans-1,4-Dimethylcyclohexane
Concen: 1.89 ug/L m
RT: 32.22 min Scan# 4656
Delta R.T. -0.037 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 97 Resp: 3334

Ion	Ratio	Lower	Upper
97	100		
55	82.0	63.6	103.6
112	33.6	17.6	57.6

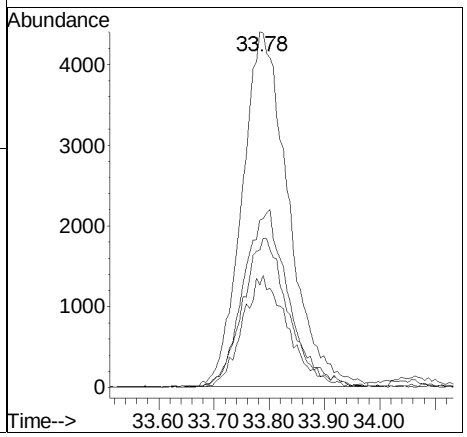


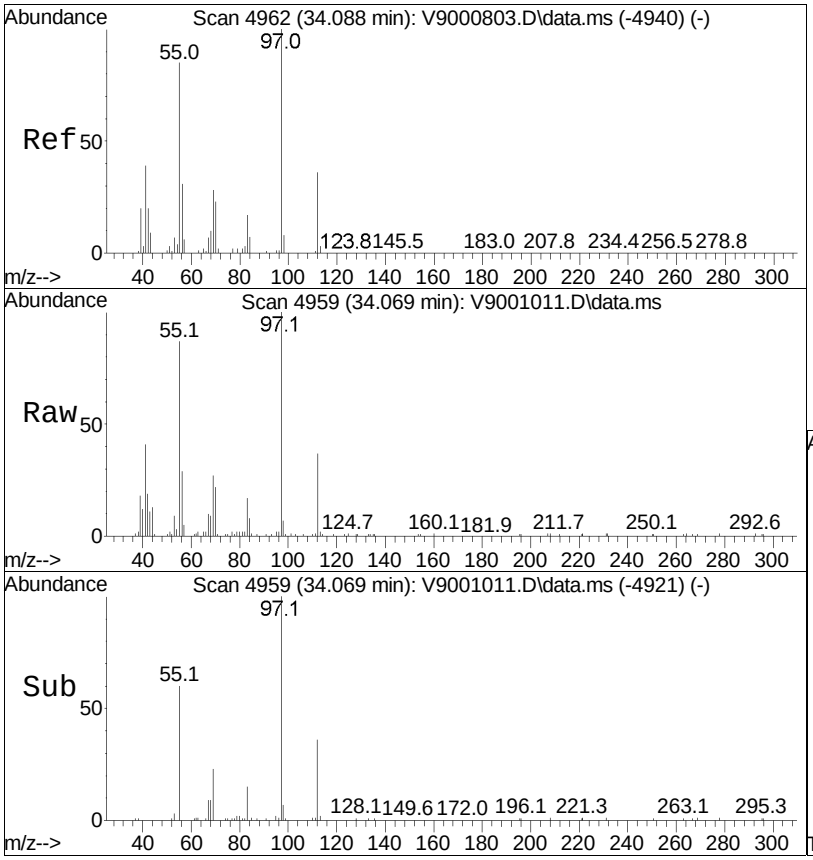


#71
Octane
Concen: 15.61 ug/L
RT: 33.78 min Scan# 4912
Delta R.T. -0.024 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 25611

Ion	Ratio	Lower	Upper
43	100		
57	38.7	23.0	63.0
85	47.1	29.3	69.3
71	28.9	10.8	50.8

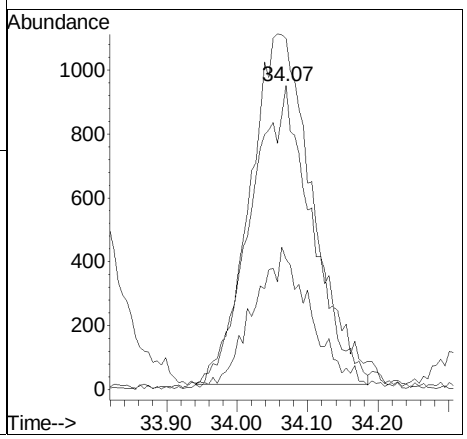


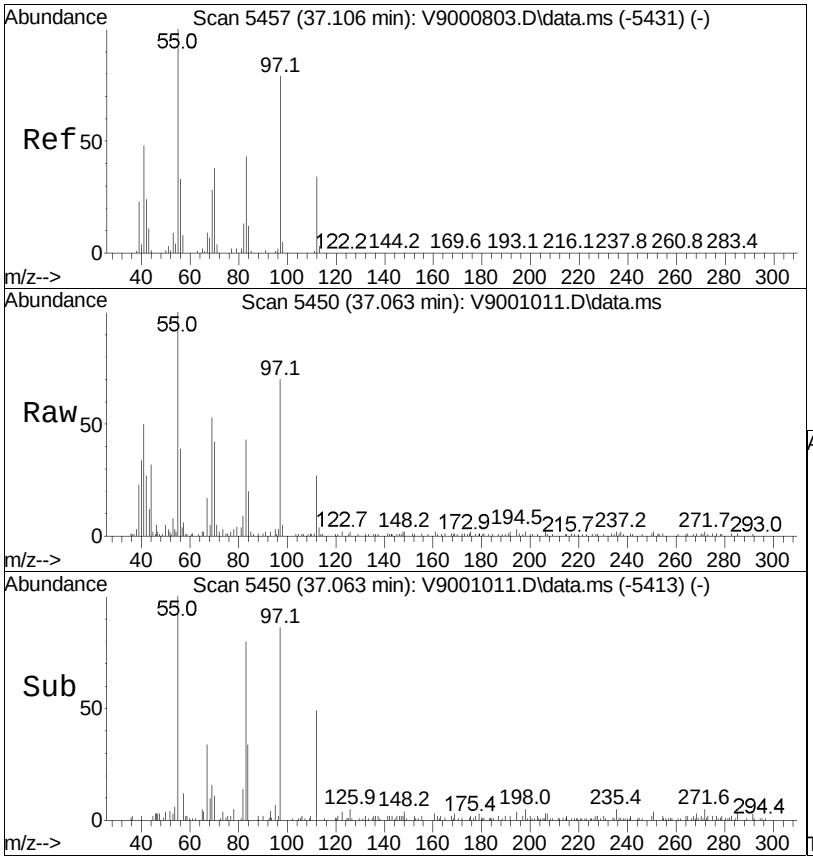


#72
trans-1,2-Dimethylcyclohexane
Concen: 4.25 ug/L
RT: 34.07 min Scan# 4959
Delta R.T. -0.018 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 55 Resp: 5618

Ion	Ratio	Lower	Upper
55	100		
97	115.4	99.6	139.6
112	42.9	23.1	63.1

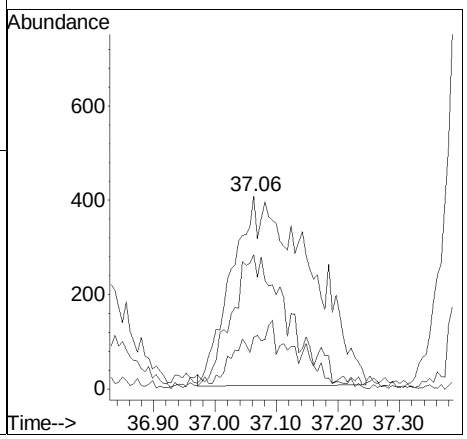


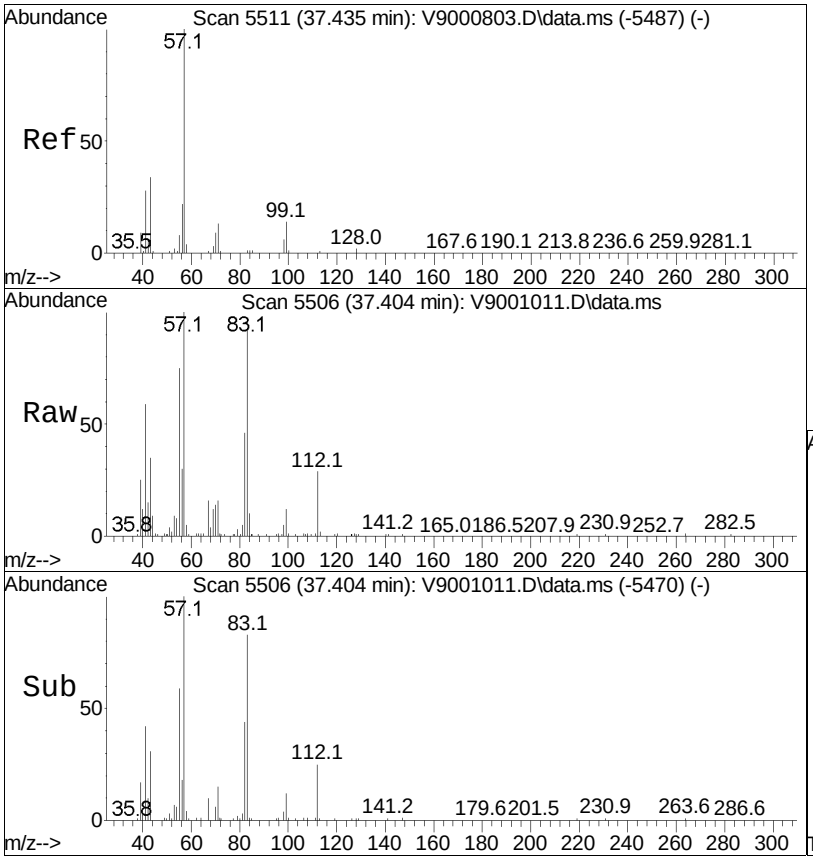


#77
cis-1,2-Dimethylcyclohexane
Concen: 2.60 ug/L m
RT: 37.06 min Scan# 5450
Delta R.T. -0.024 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 55 Resp: 3553

Ion	Ratio	Lower	Upper
55	100		
97	69.7	60.9	100.9
112	26.9	15.0	55.0

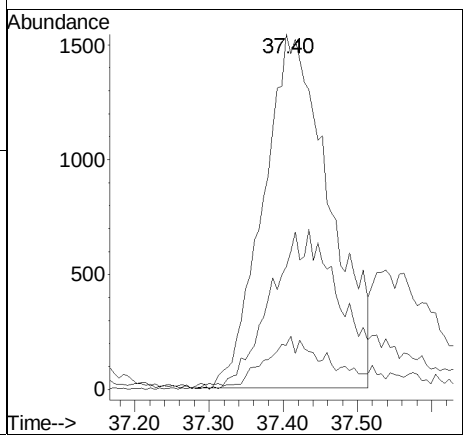


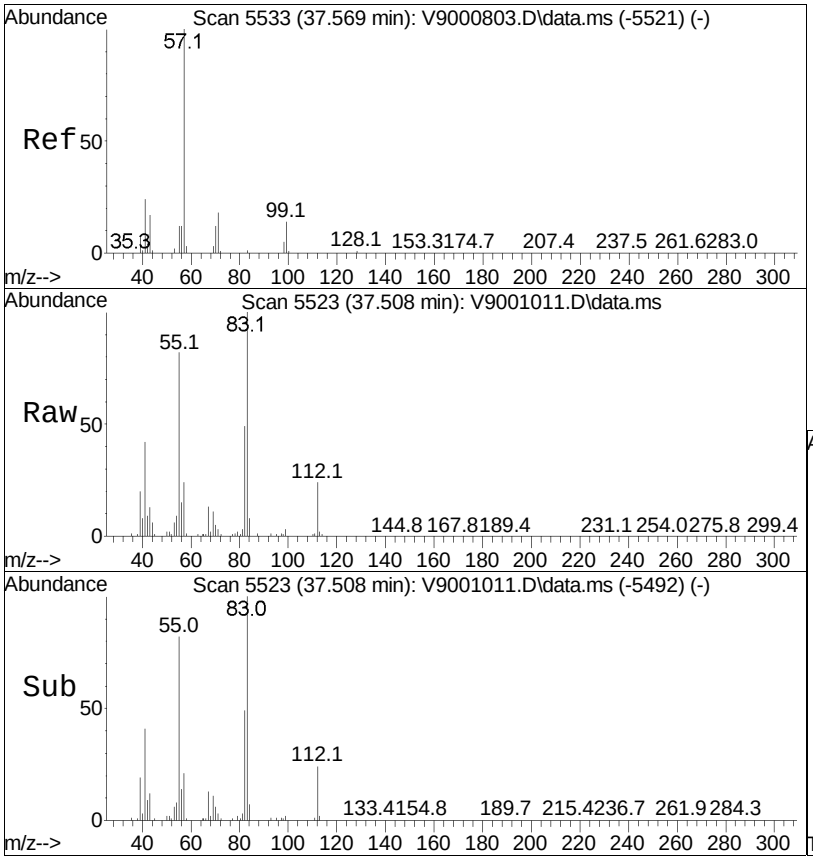


#78
2,5-Dimethylheptane
Concen: 4.25 ug/L
RT: 37.40 min Scan# 5506
Delta R.T. -0.031 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 9626

Ion	Ratio	Lower	Upper
57	100		
43	34.6	13.5	53.5
99	12.5	0.0	33.9

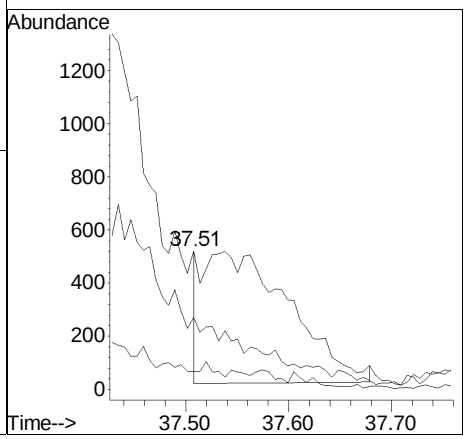


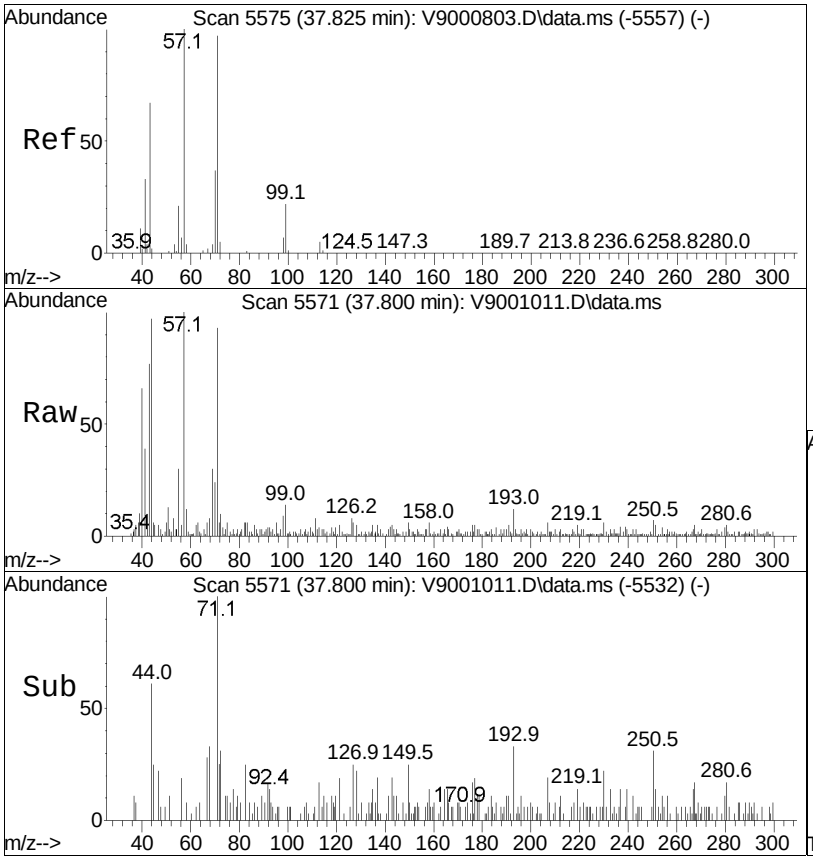


#79
3,5-Dimethylheptane
Concen: 0.98 ug/L m
RT: 37.51 min Scan# 5523
Delta R.T. -0.061 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 2909

Ion	Ratio	Lower	Upper
57	100		
43	52.1	2.1	42.1#
99	11.3	0.0	34.4

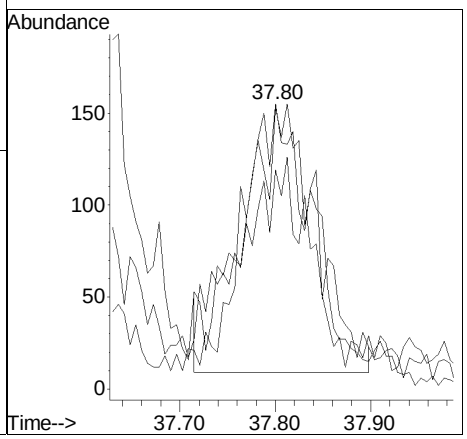


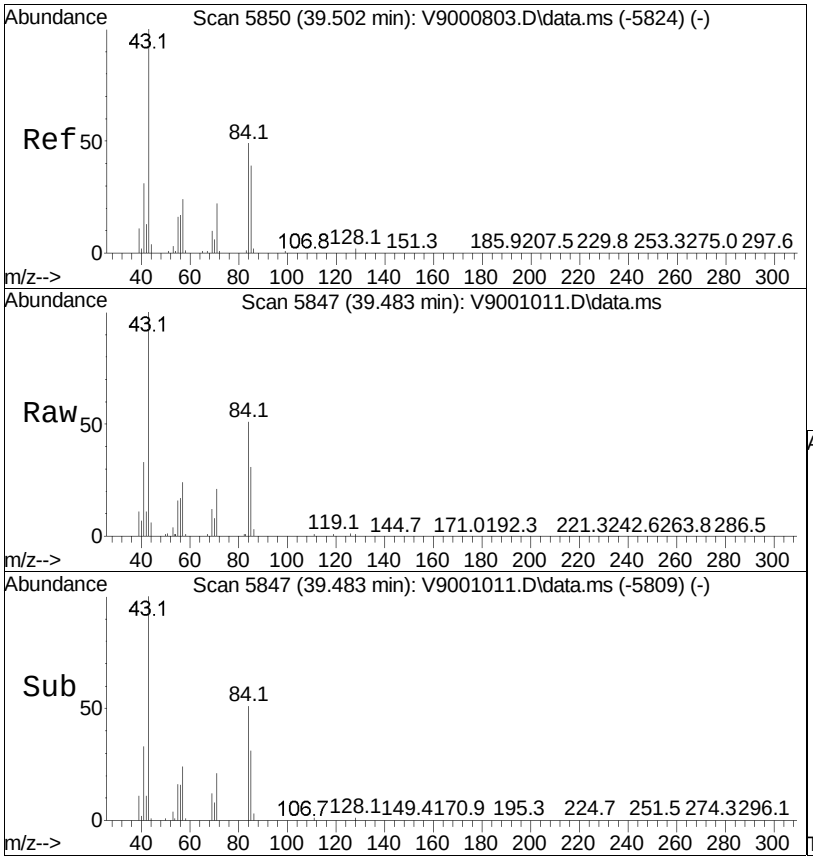


#80
3,3-Dimethylheptane
Concen: 0.42 ug/L m
RT: 37.80 min Scan# 5571
Delta R.T. -0.012 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 778

Ion	Ratio	Lower	Upper
57	100		
43	76.8	47.6	87.6
71	92.9	73.7	113.7

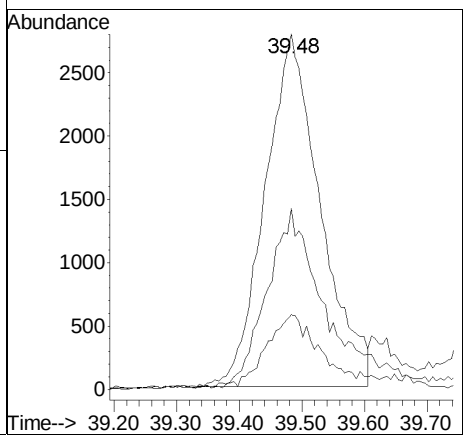


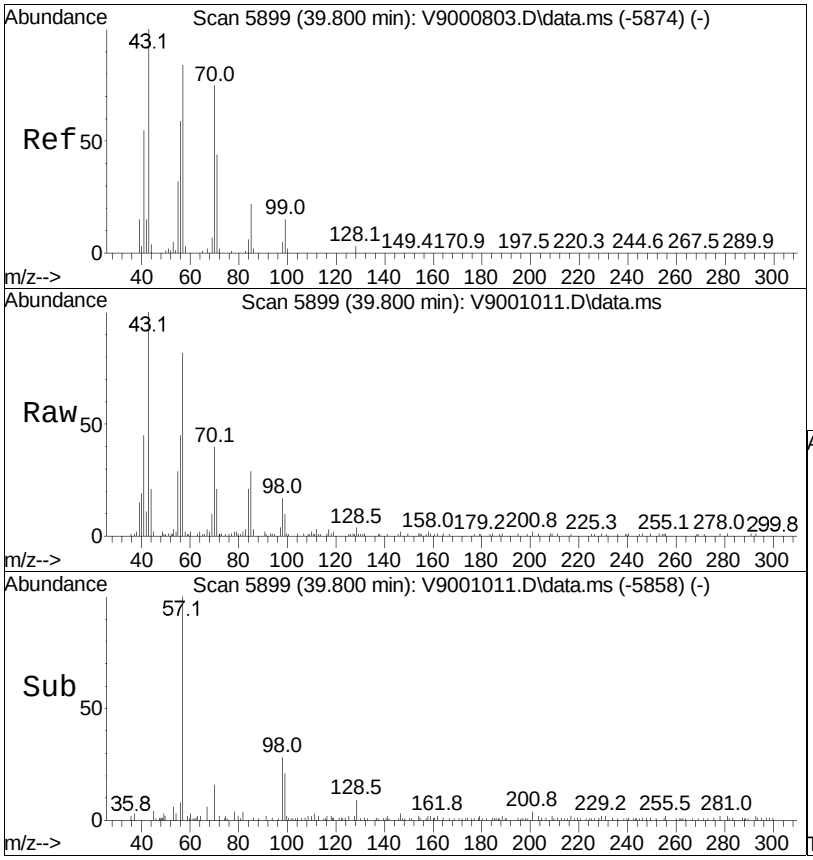


#82
2,3-Dimethylheptane
Concen: 8.10 ug/L
RT: 39.48 min Scan# 5847
Delta R.T. -0.018 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 17060

Ion	Ratio	Lower	Upper
43	100		
84	50.9	27.3	67.3
71	21.0	1.1	41.1

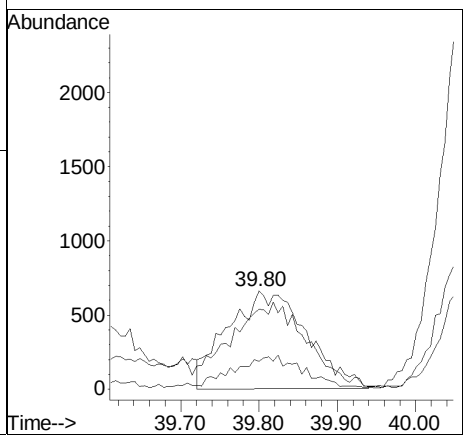


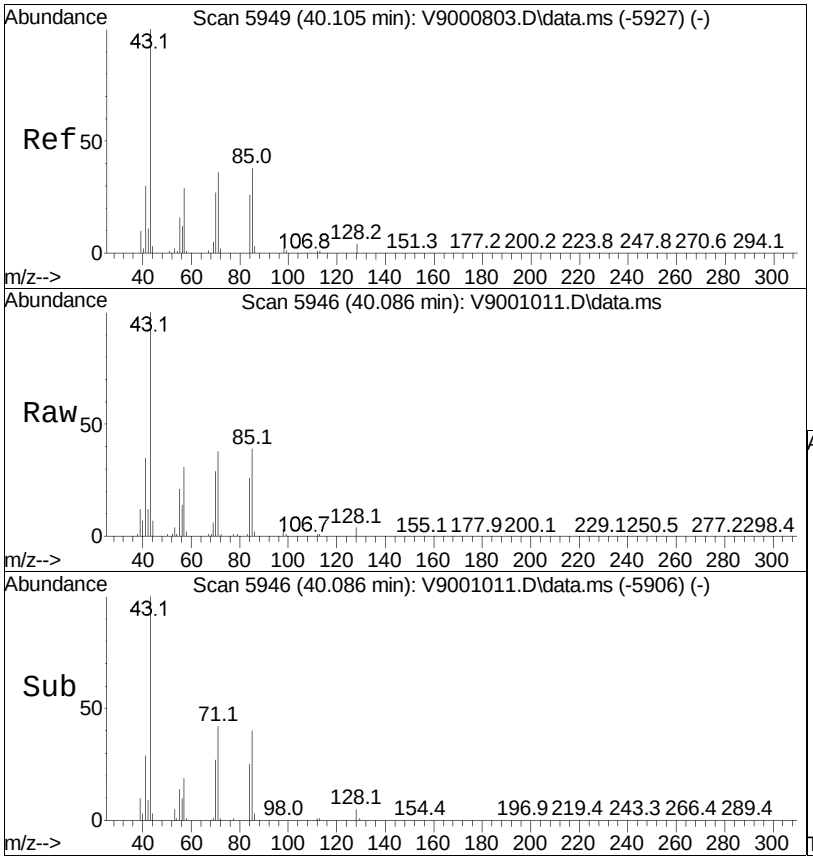


#83
3,4-Dimethylheptane
Concen: 3.43 ug/L m
RT: 39.80 min Scan# 5899
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 4626

Ion	Ratio	Lower	Upper
43	100		
57	81.6	62.5	102.5
85	28.5	3.0	43.0

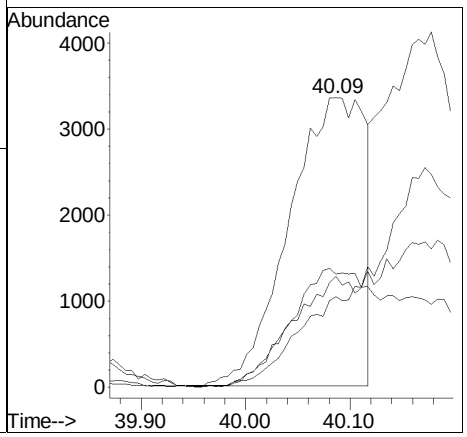


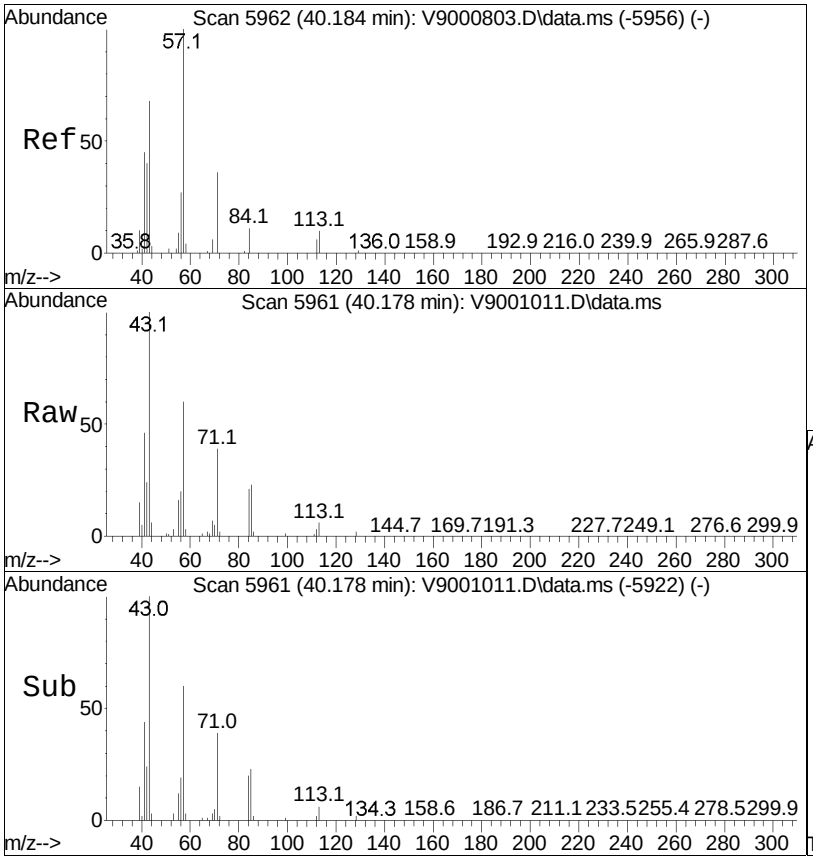


#84
4-Methyloctane
Concen: 8.74 ug/L
RT: 40.09 min Scan# 5946
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 16749

Ion	Ratio	Lower	Upper
43	100		
57	31.3	8.3	48.3
71	38.3	15.7	55.7
85	39.1	21.0	61.0

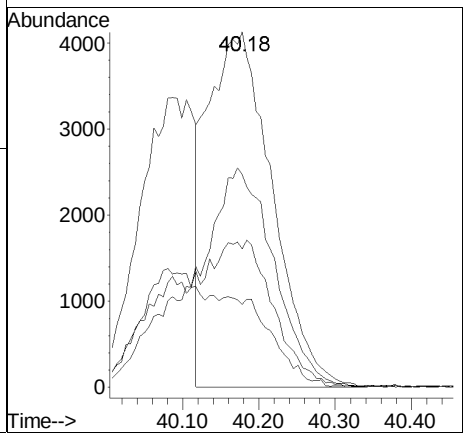


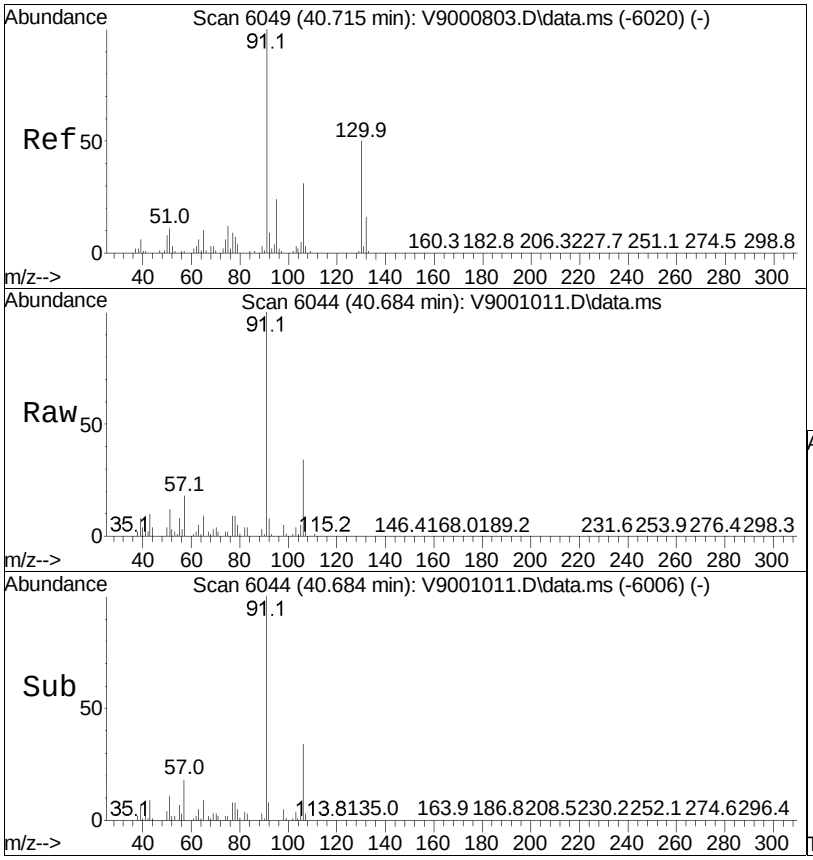


#85
2-Methyloctane
Concen: 12.45 ug/L m
RT: 40.18 min Scan# 5961
Delta R.T. -0.012 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 24323

Ion	Ratio	Lower	Upper
43	100		
57	59.9	42.9	82.9
71	39.0	23.6	63.6
85	23.4	5.9	45.9

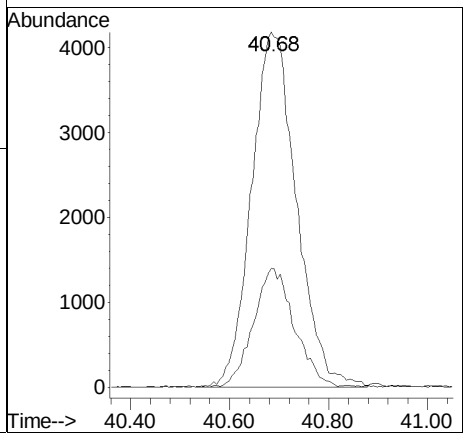


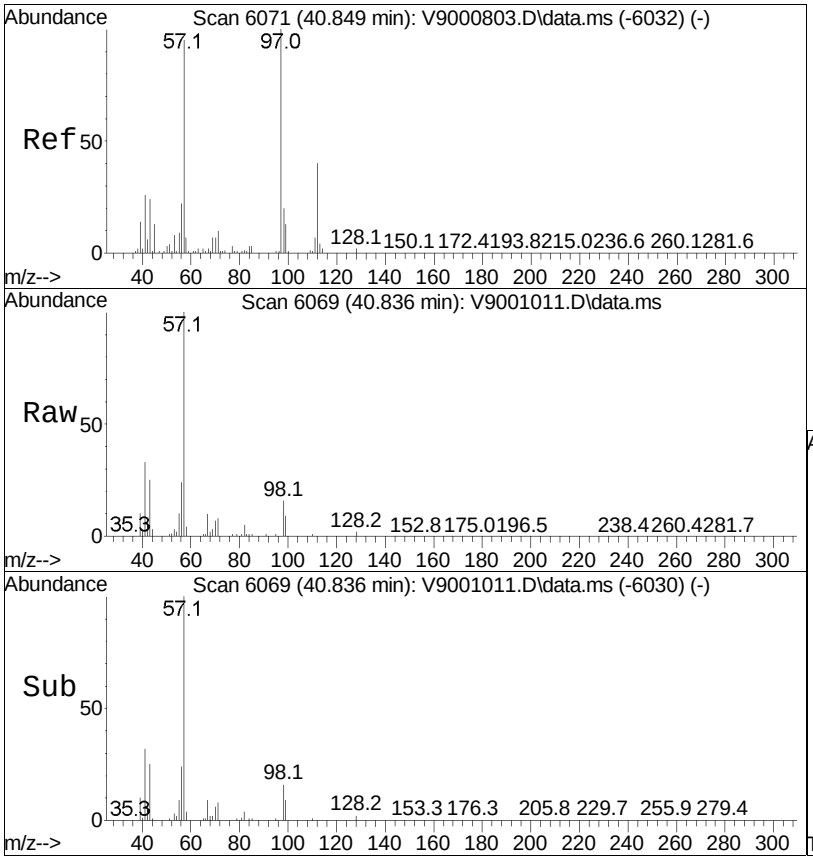


#86
Ethylbenzene
Concen: 5.84 ug/L
RT: 40.68 min Scan# 6044
Delta R.T. -0.018 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 26270

Ion	Ratio	Lower	Upper
91	100		
106	33.5	11.2	51.2

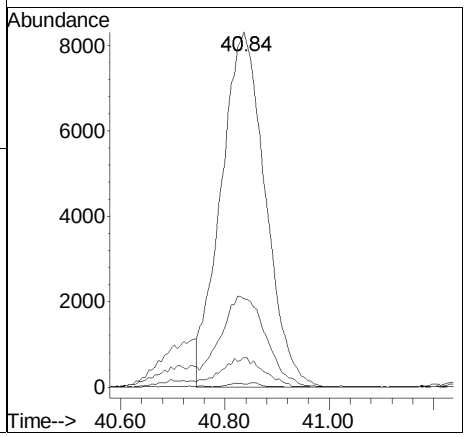


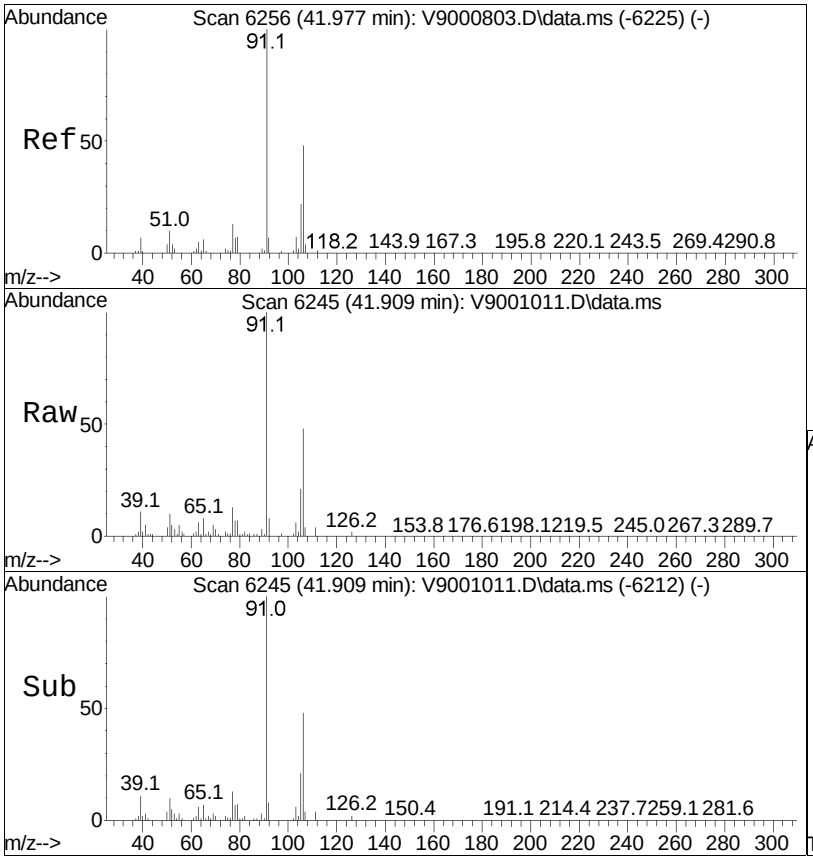


#89
3-Methyloctane
Concen: 15.84 ug/L m
RT: 40.84 min Scan# 6069
Delta R.T. -0.012 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 49234

Ion	Ratio	Lower	Upper
57	100		
43	25.0	5.5	45.5
71	8.4	0.0	29.8
85	0.9	0.0	23.0

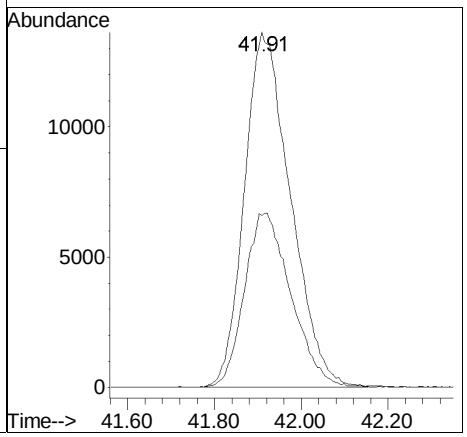


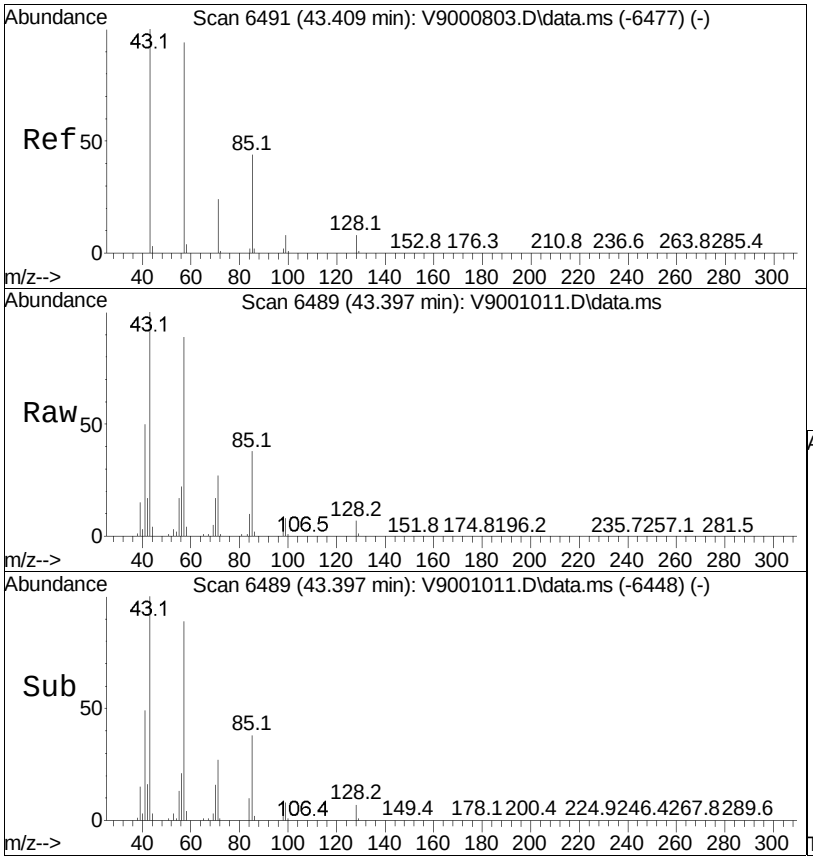


#91
p/m-Xylene
Concen: 29.50 ug/L
RT: 41.91 min Scan# 6245
Delta R.T. -0.049 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 100294

Ion	Ratio	Lower	Upper
91	100		
106	48.4	29.3	69.3

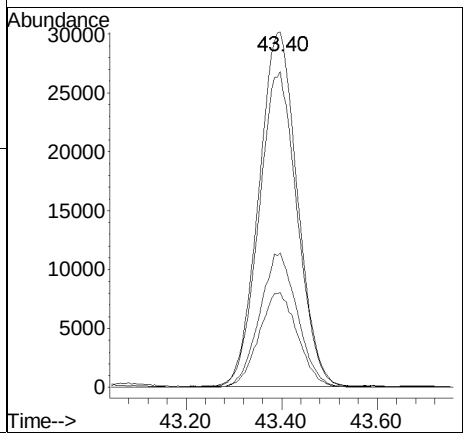


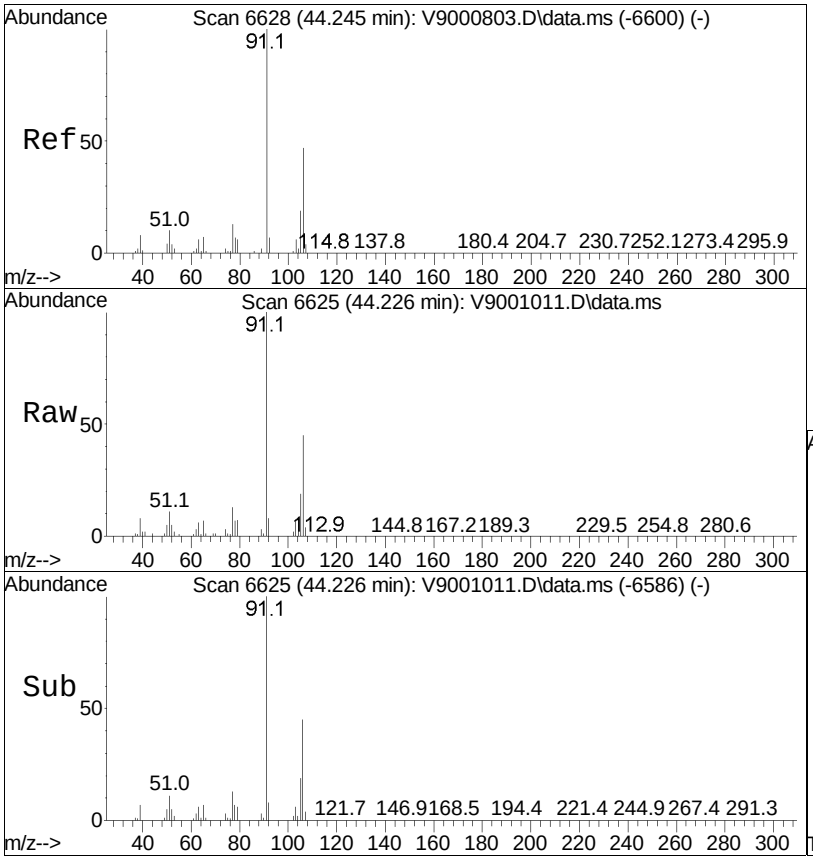


#95
Nonane
Concen: 94.85 ug/L
RT: 43.40 min Scan# 6489
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 168700

Ion	Ratio	Lower	Upper
43	100		
57	88.9	70.0	110.0
85	37.9	15.8	55.8
71	26.7	7.0	47.0

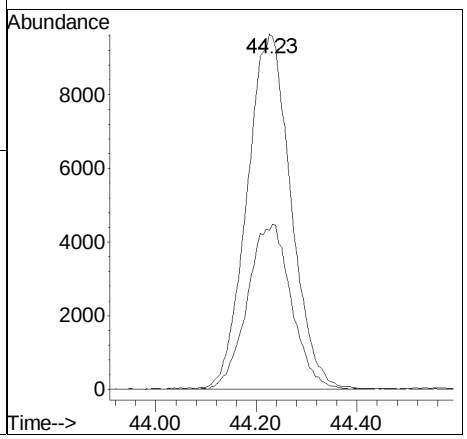


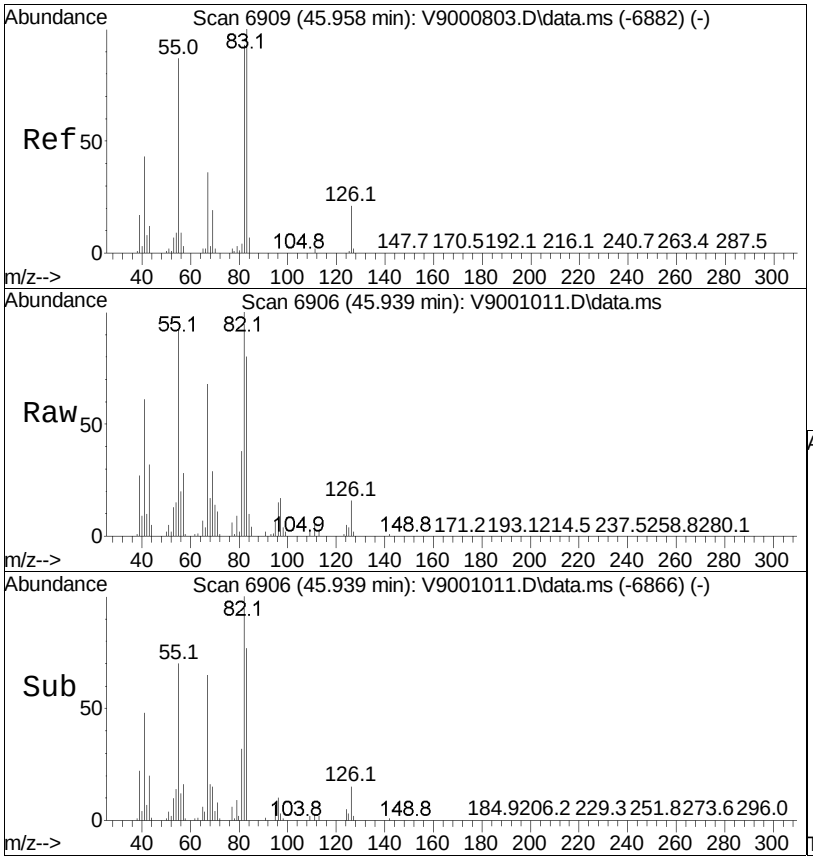


#98
o-Xylene
Concen: 16.75 ug/L
RT: 44.23 min Scan# 6625
Delta R.T. -0.012 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 58331

Ion	Ratio	Lower	Upper
91	100		
106	44.8	27.9	67.9

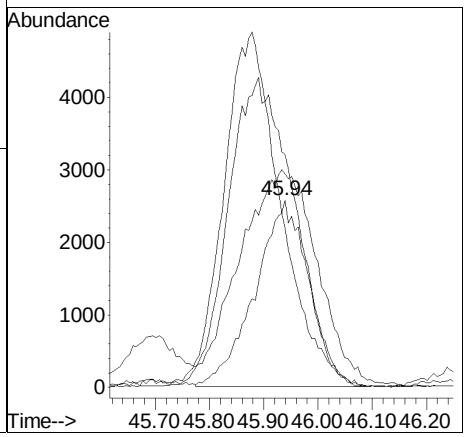


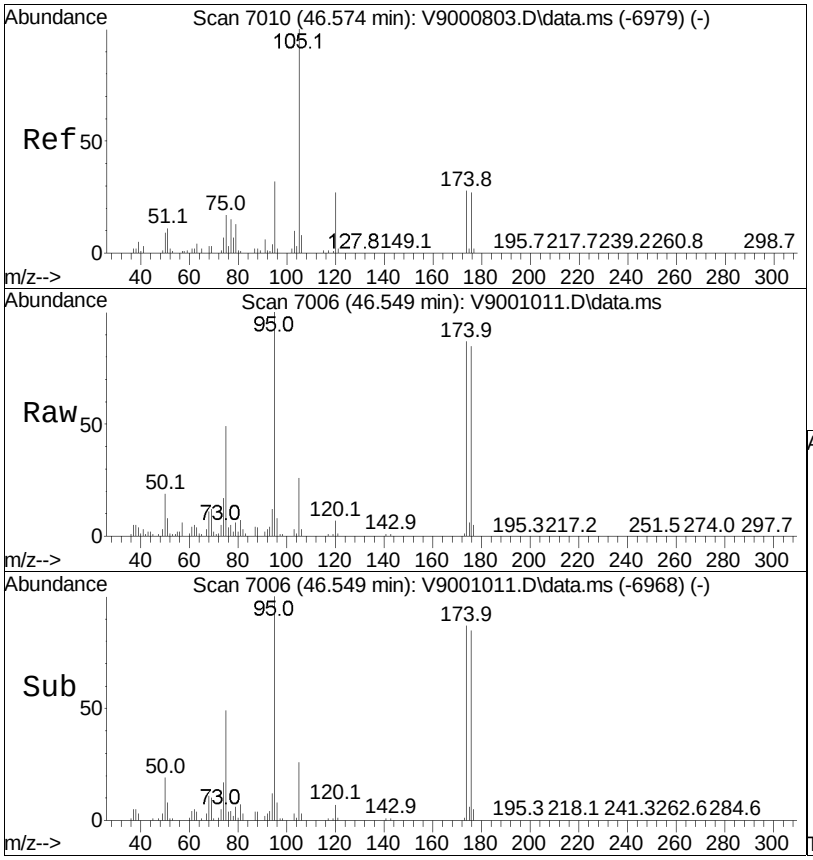


#100
Isopropylcyclohexane
Concen: 11.17 ug/L
RT: 45.94 min Scan# 6906
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 83 Resp: 17749

Ion	Ratio	Lower	Upper
83	100		
82	124.3	77.1	117.1#
55	113.9	70.4	110.4#
67	85.1	18.6	58.6#

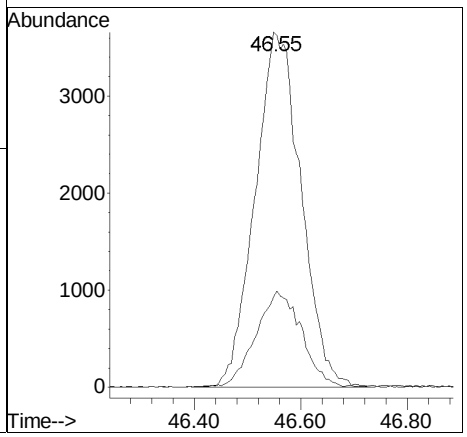


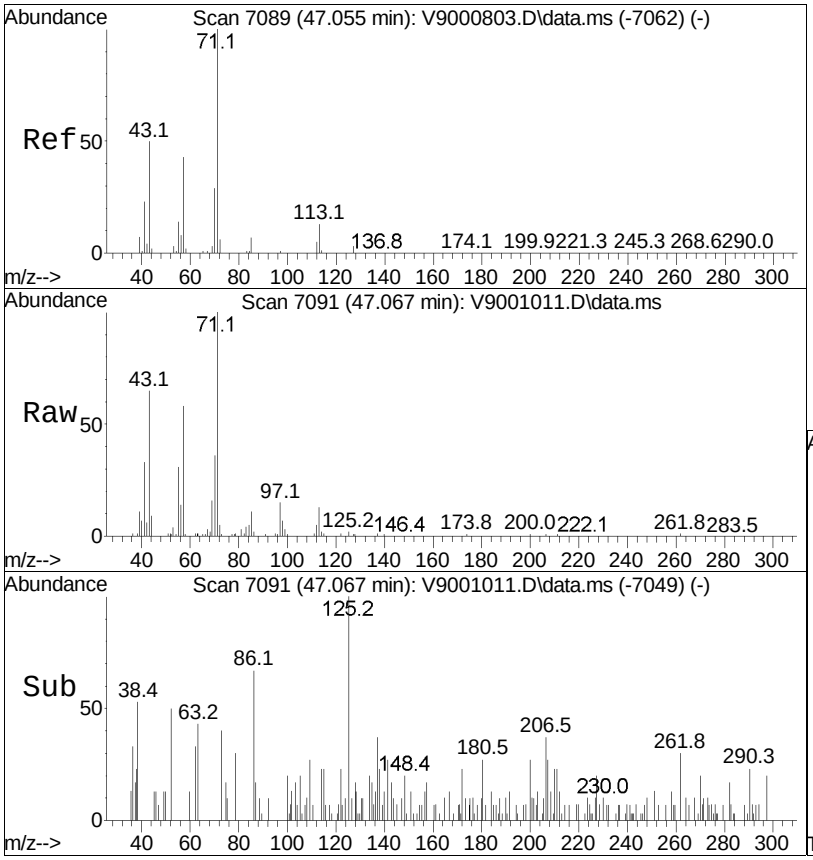


#102
Isopropylbenzene
Concen: 5.04 ug/L
RT: 46.55 min Scan# 7006
Delta R.T. -0.018 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 21952

Ion	Ratio	Lower	Upper
105	100		
120	25.5	6.5	46.5

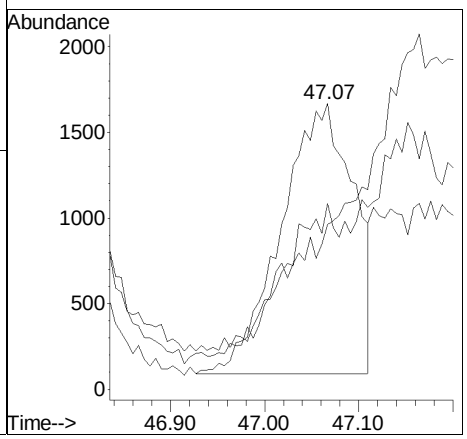


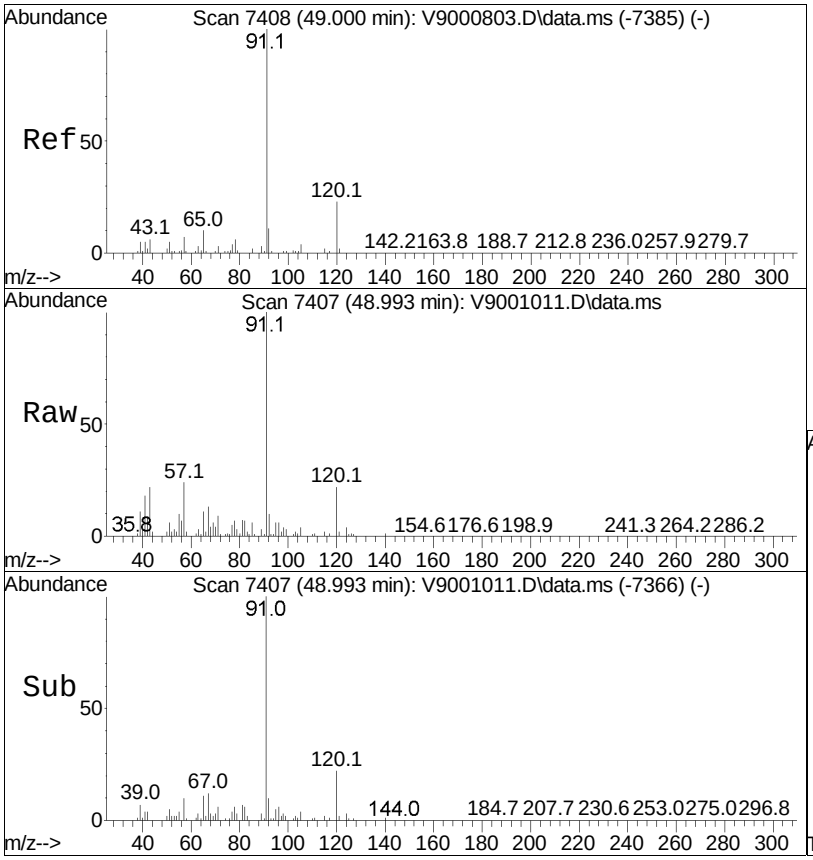


#103
3,3-Dimethyloctane
Concen: 3.39 ug/L
RT: 47.07 min Scan# 7091
Delta R.T. 0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 71 Resp: 8424

Ion	Ratio	Lower	Upper
71	100		
57	57.7	20.3	60.3
43	65.0	29.1	69.1

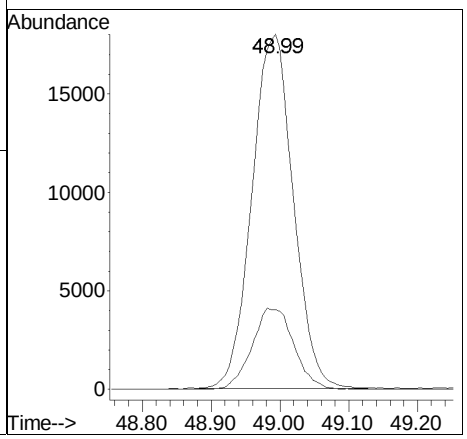


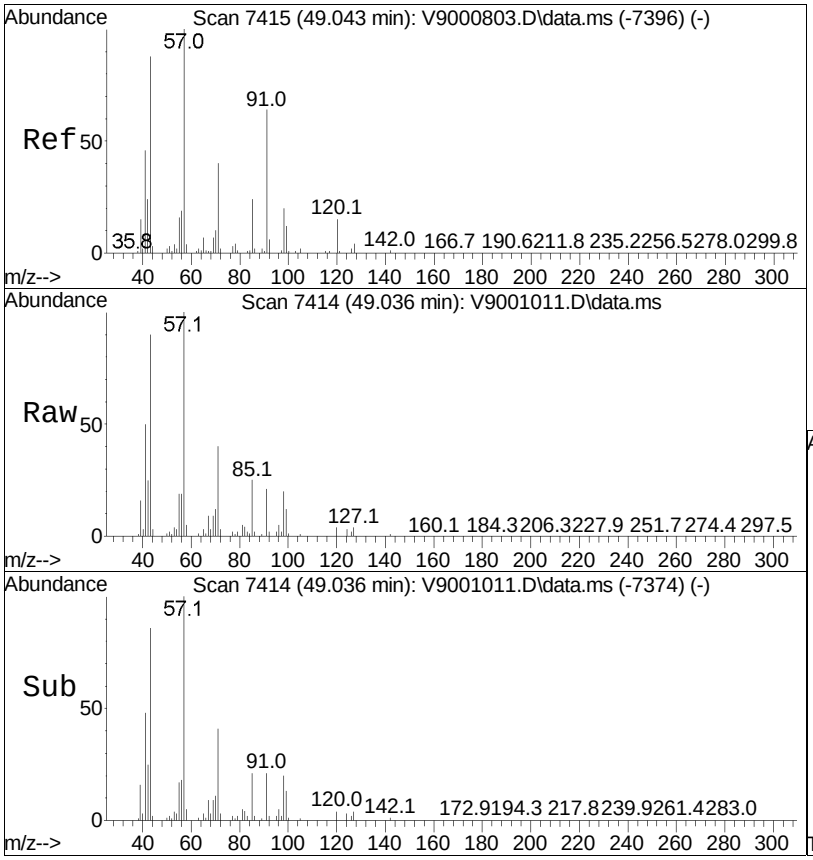


#104
n-Propylbenzene
Concen: 14.94 ug/L
RT: 48.99 min Scan# 7407
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 75006

Ion	Ratio	Lower	Upper
91	100		
120	22.5	3.1	43.1

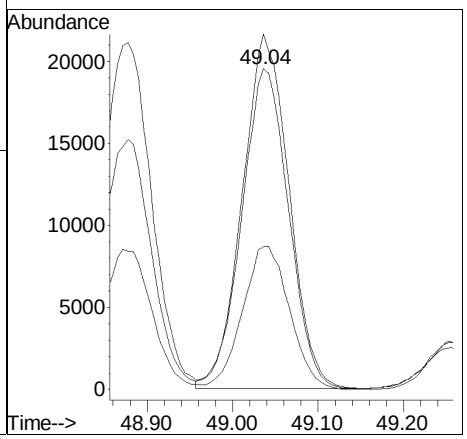


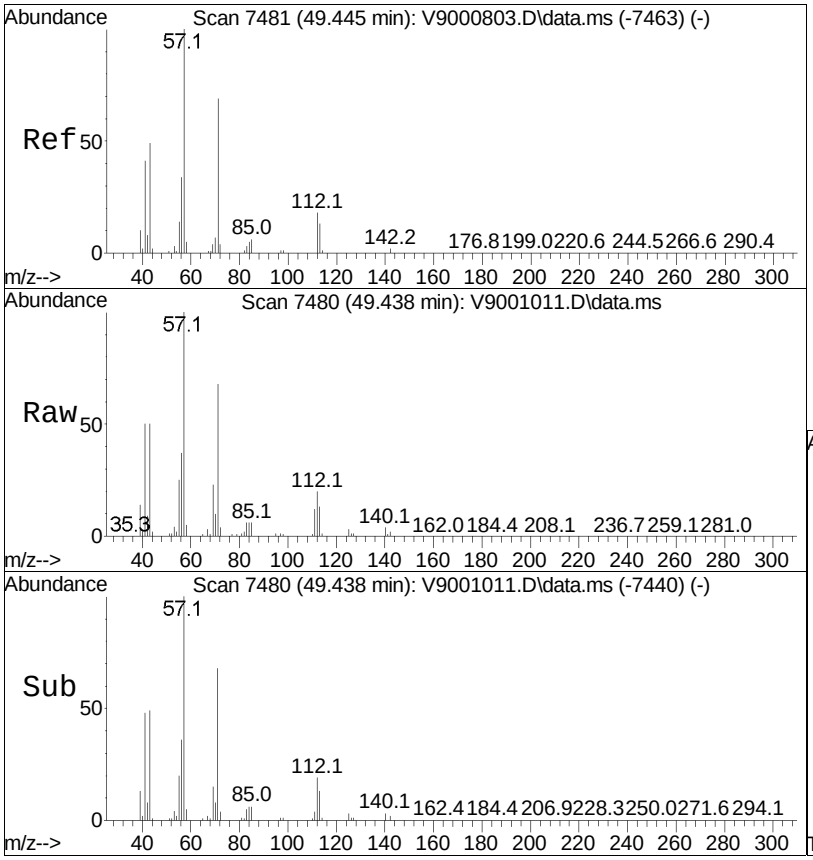


#105
2-Methylnonane
Concen: 47.44 ug/L
RT: 49.04 min Scan# 7414
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 74241

Ion	Ratio	Lower	Upper
43	100		
57	110.8	89.8	129.8
71	44.5	25.1	65.1

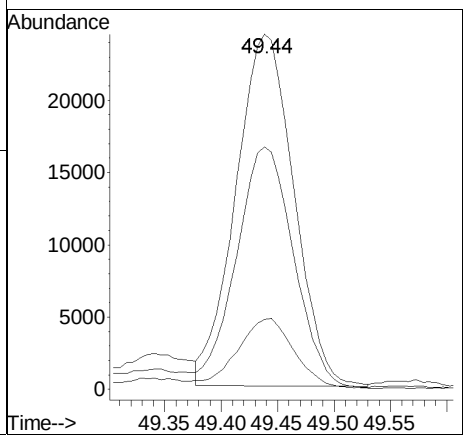


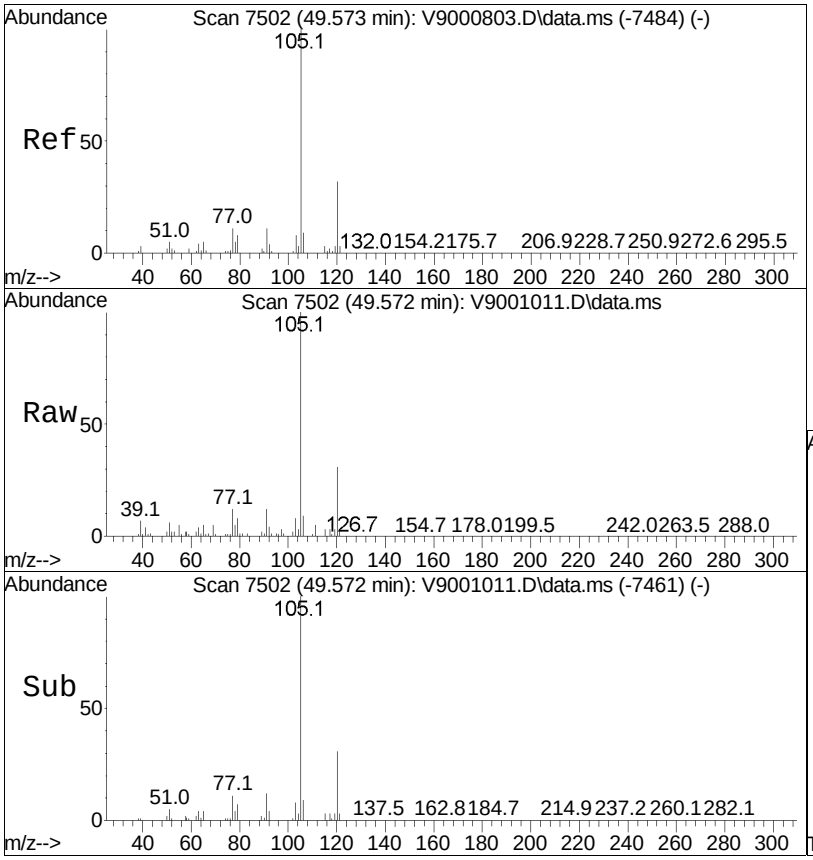


#106
3-Methylnonane
Concen: 46.33 ug/L
RT: 49.44 min Scan# 7480
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 87220

Ion	Ratio	Lower	Upper
57	100		
71	68.2	47.8	87.8
112	19.7	0.0	38.2

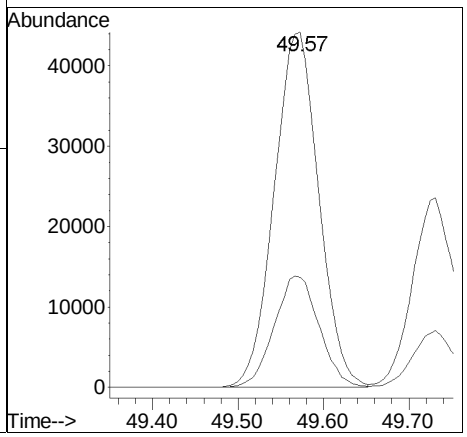


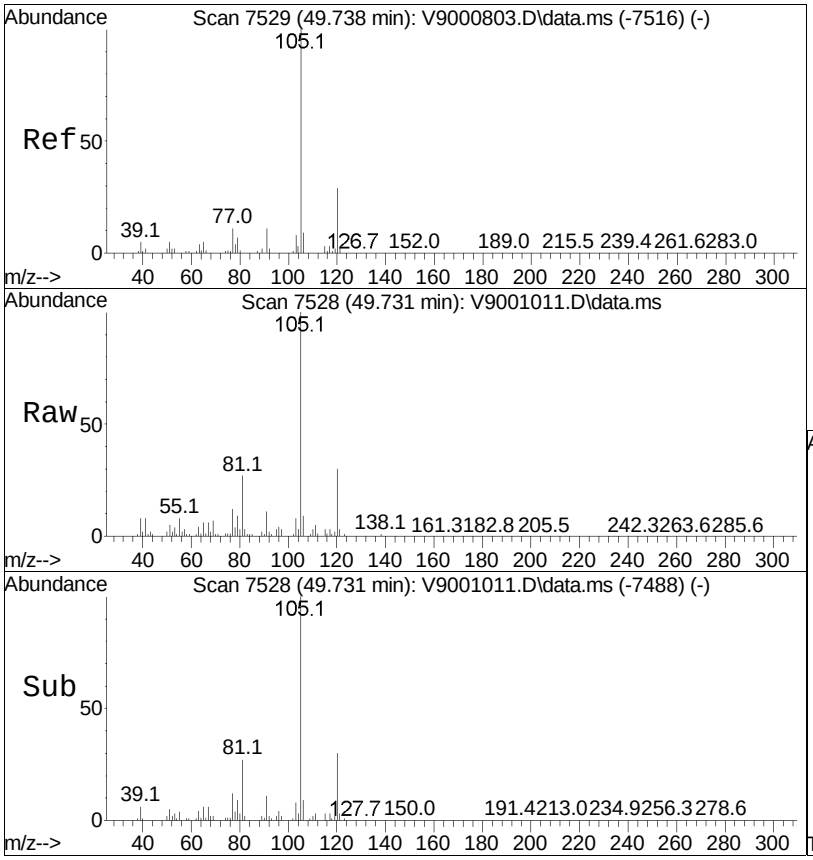


#107
1-Methyl-3-ethylbenzene
Concen: 38.07 ug/L
RT: 49.57 min Scan# 7502
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 160181

Ion	Ratio	Lower	Upper
105	100		
120	31.0	11.8	51.8

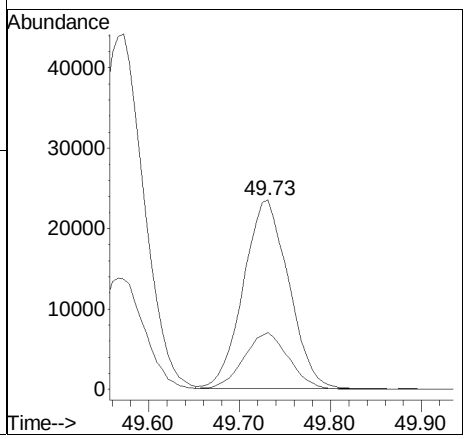


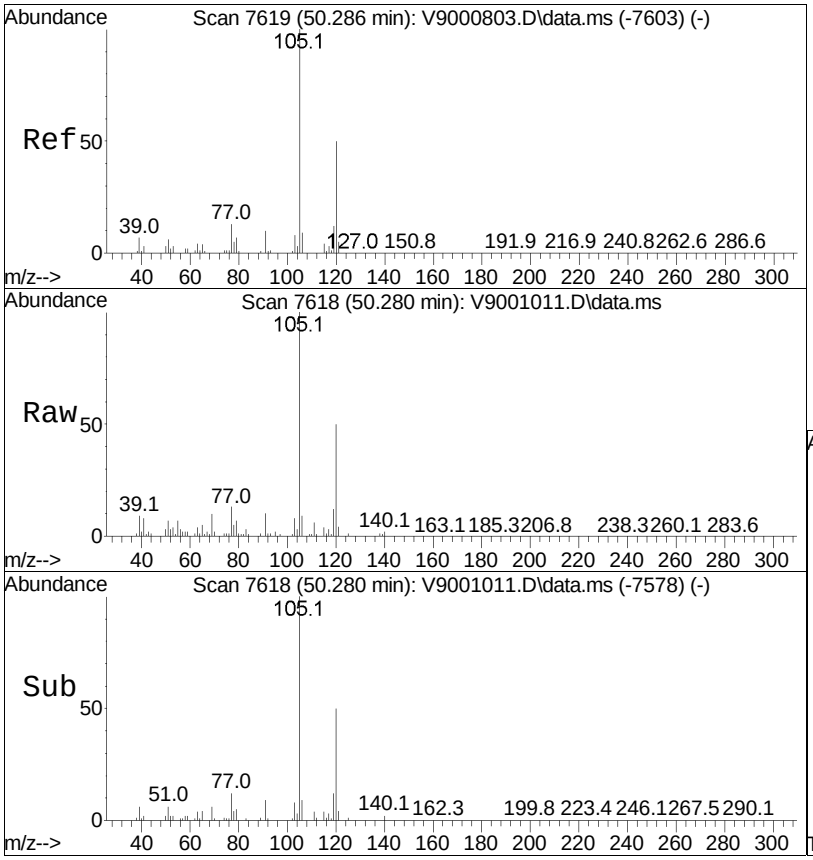


#108
1-Methyl-4-ethylbenzene
Concen: 20.20 ug/L
RT: 49.73 min Scan# 7528
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 81508

Ion	Ratio	Lower	Upper
105	100		
120	30.0	9.7	49.7

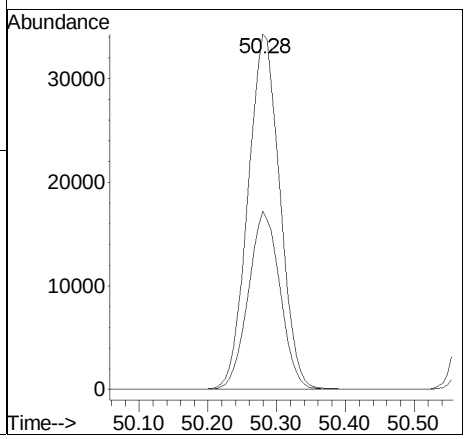


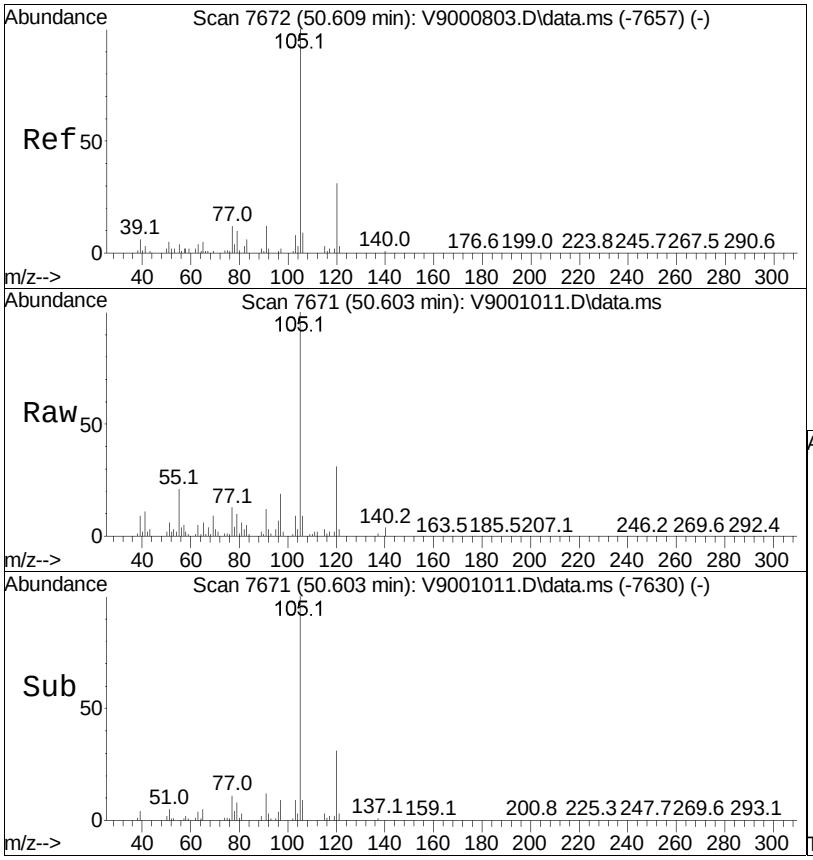


#109
1,3,5-Trimethylbenzene
Concen: 31.68 ug/L
RT: 50.28 min Scan# 7618
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 110224

Ion	Ratio	Lower	Upper
105	100		
120	50.1	30.3	70.3

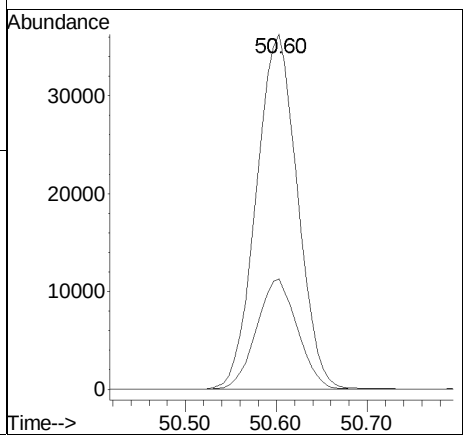


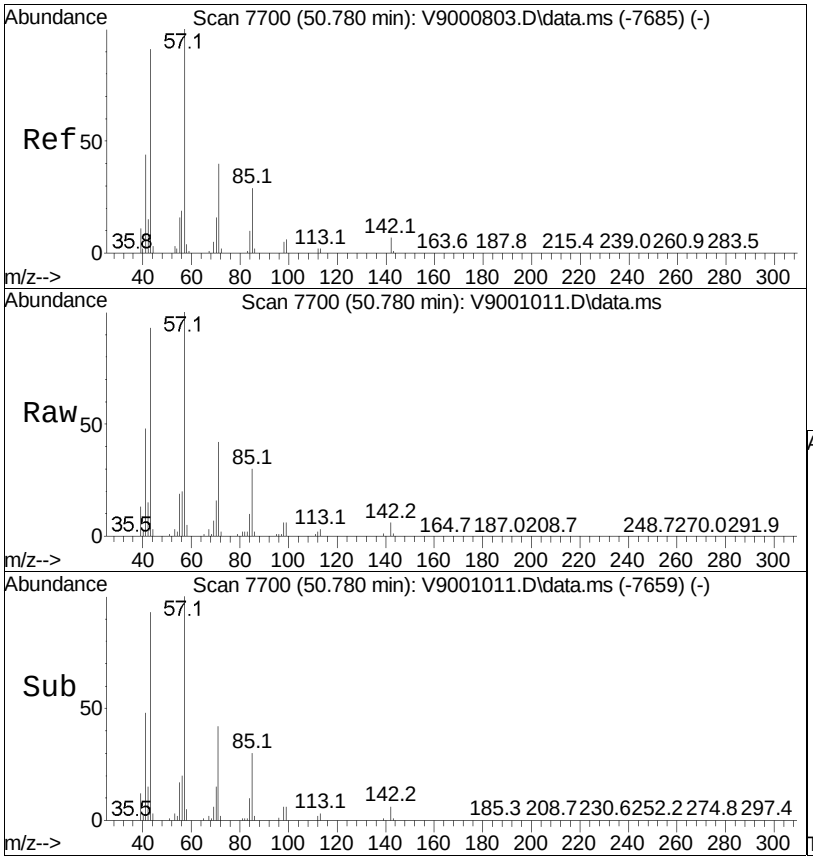


#112
1-Methyl-2-ethylbenzene
Concen: 26.78 ug/L
RT: 50.60 min Scan# 7671
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 114063

Ion	Ratio	Lower	Upper
105	100		
120	31.1	10.4	50.4

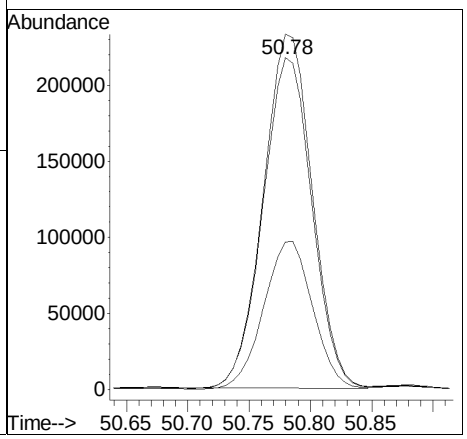


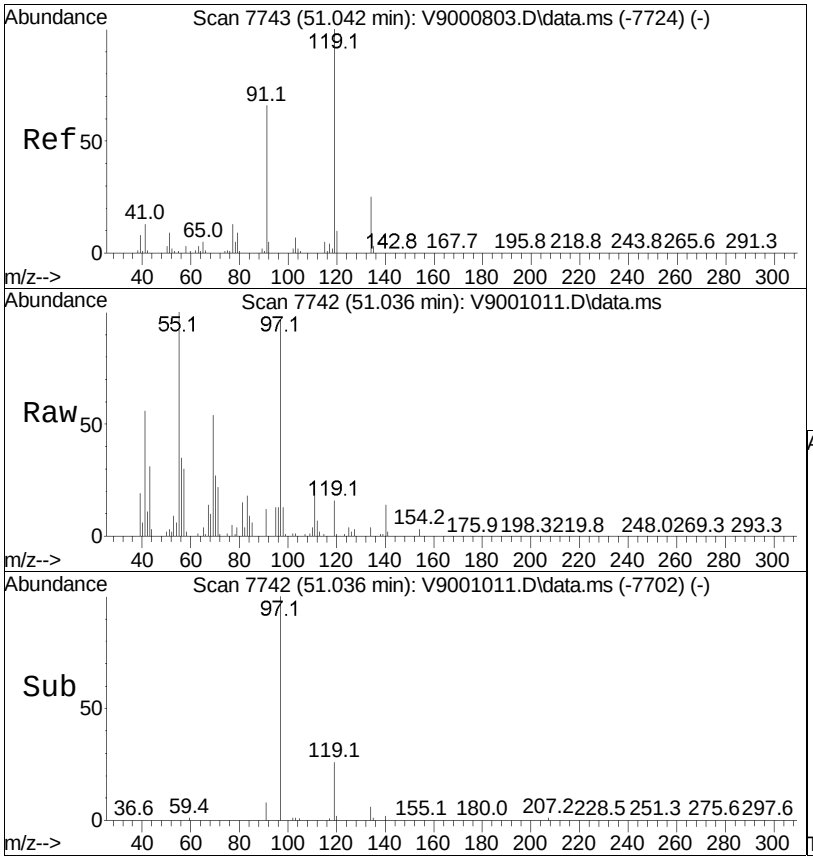


#113
Decane
Concen: 400.21 ug/L
RT: 50.78 min Scan# 7700
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 604838

Ion	Ratio	Lower	Upper
43	100		
57	107.1	85.6	125.6
71	44.5	23.5	63.5

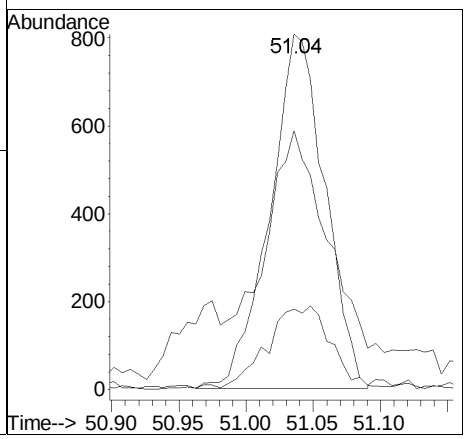


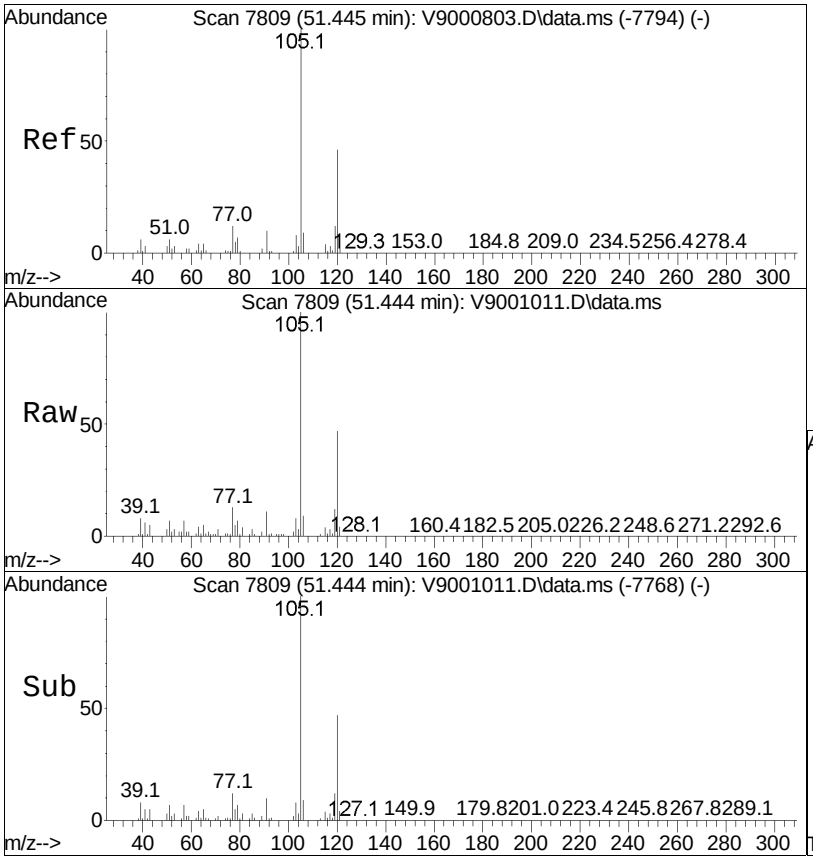


#114
tert-Butylbenzene
Concen: 0.75 ug/L
RT: 51.04 min Scan# 7742
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 2295

Ion	Ratio	Lower	Upper
119	100		
91	72.8	46.1	86.1
134	22.6	6.0	46.0

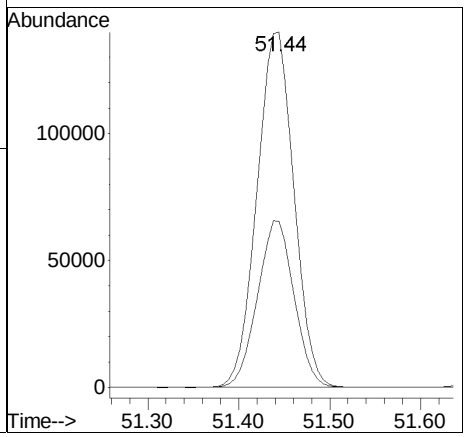


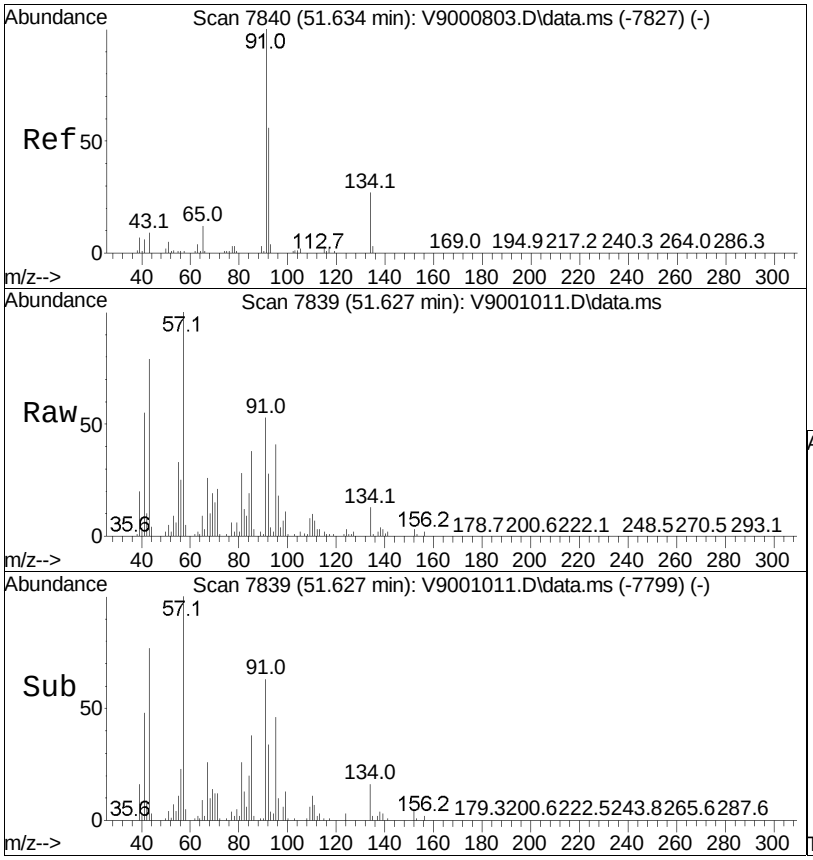


#115
1,2,4-Trimethylbenzene
Concen: 106.84 ug/L
RT: 51.44 min Scan# 7809
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 395503

Ion	Ratio	Lower	Upper
105	100		
120	46.8	26.6	66.6

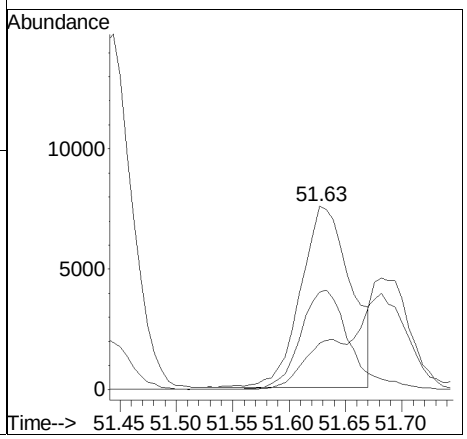


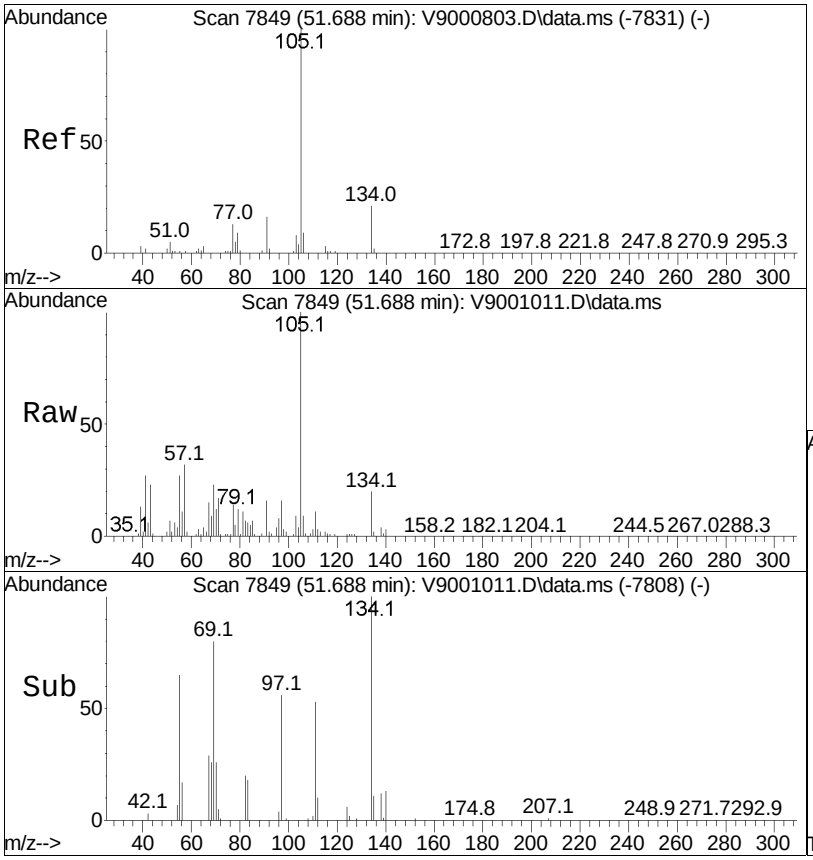


#116
Isobutylbenzene
Concen: 5.71 ug/L
RT: 51.63 min Scan# 7839
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 23484

Ion	Ratio	Lower	Upper
91	100		
92	53.1	35.5	75.5
134	25.2	7.1	47.1

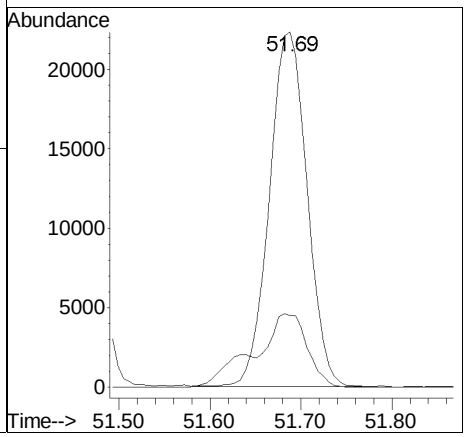


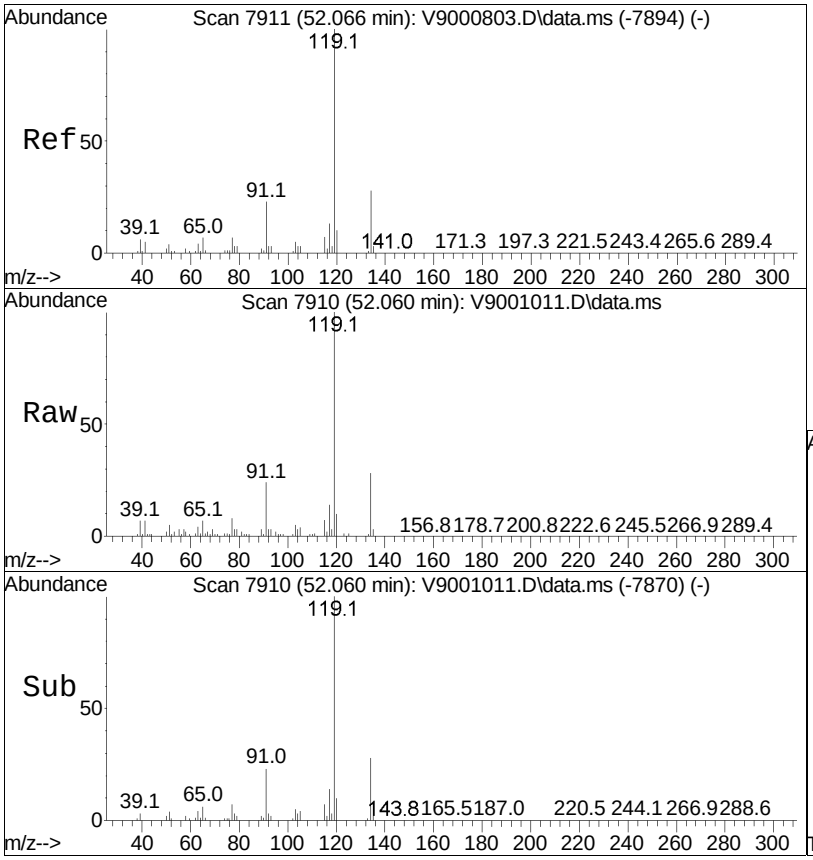


#117
sec-Butylbenzene
Concen: 14.17 ug/L
RT: 51.69 min Scan# 7849
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 64103

Ion	Ratio	Lower	Upper
105	100		
134	20.2	1.0	41.0

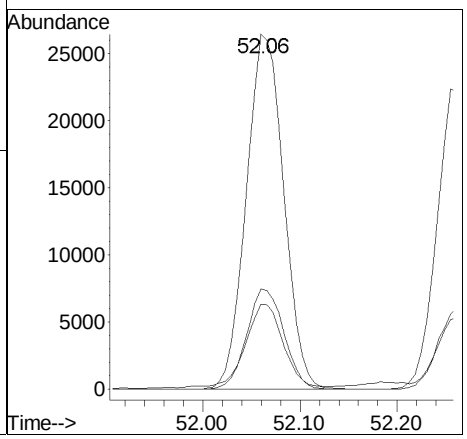


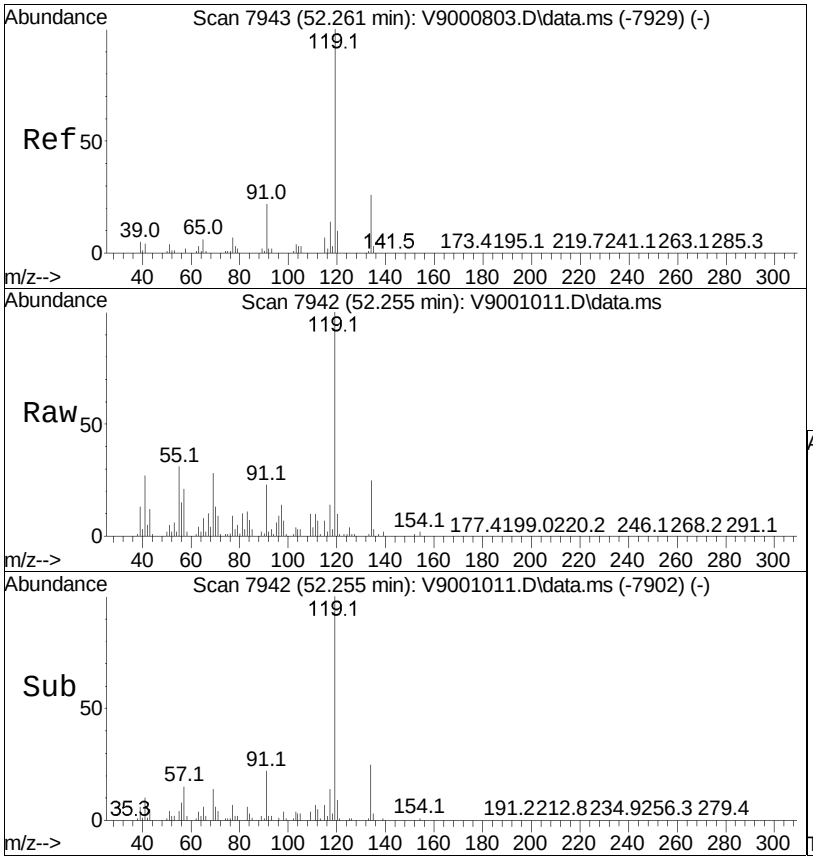


#118
1-Methyl-3-isopropylbenzene
Concen: 18.87 ug/L
RT: 52.06 min Scan# 7910
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 70740

Ion	Ratio	Lower	Upper
119	100		
134	28.2	8.6	48.6
91	24.0	3.4	43.4

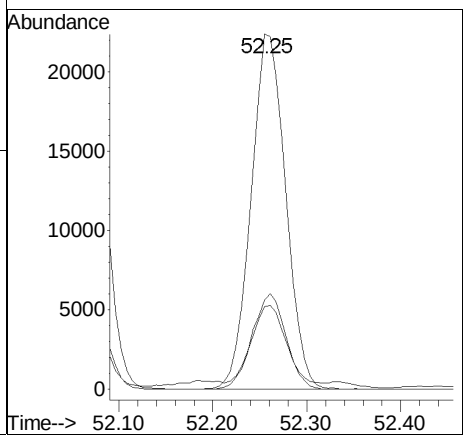


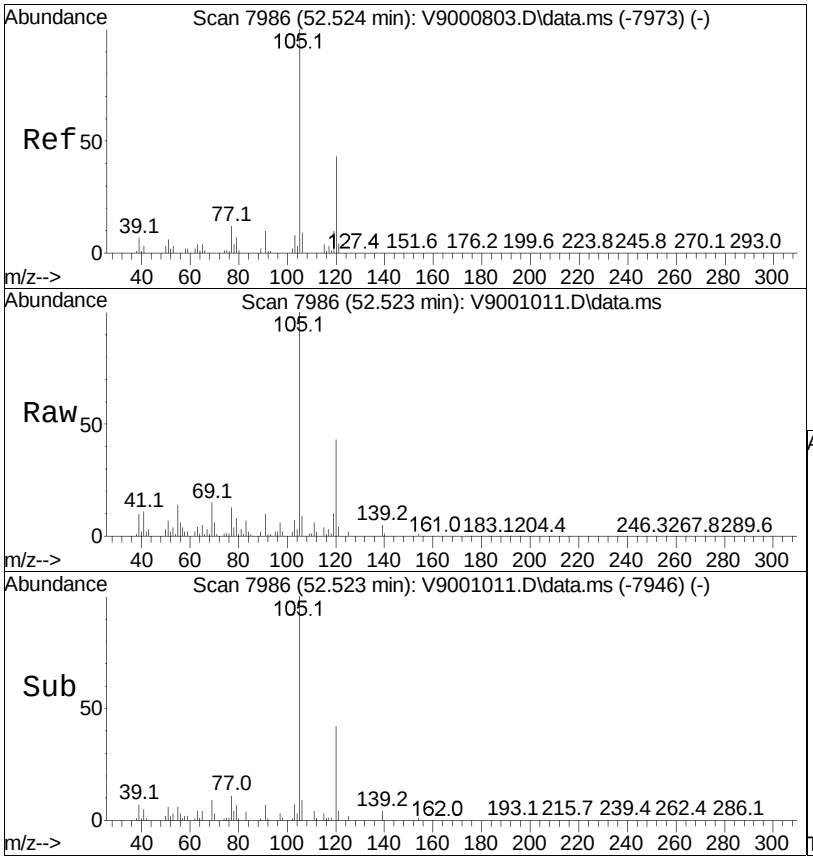


#119
1-Methyl-4-isopropylbenzene
Concen: 15.15 ug/L
RT: 52.25 min Scan# 7942
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 57102

Ion	Ratio	Lower	Upper
119	100		
134	25.1	7.3	47.3
91	23.3	3.0	43.0

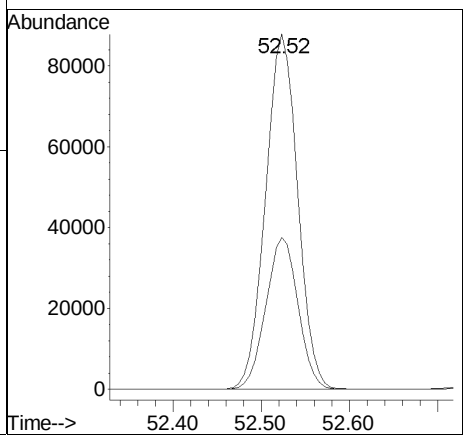


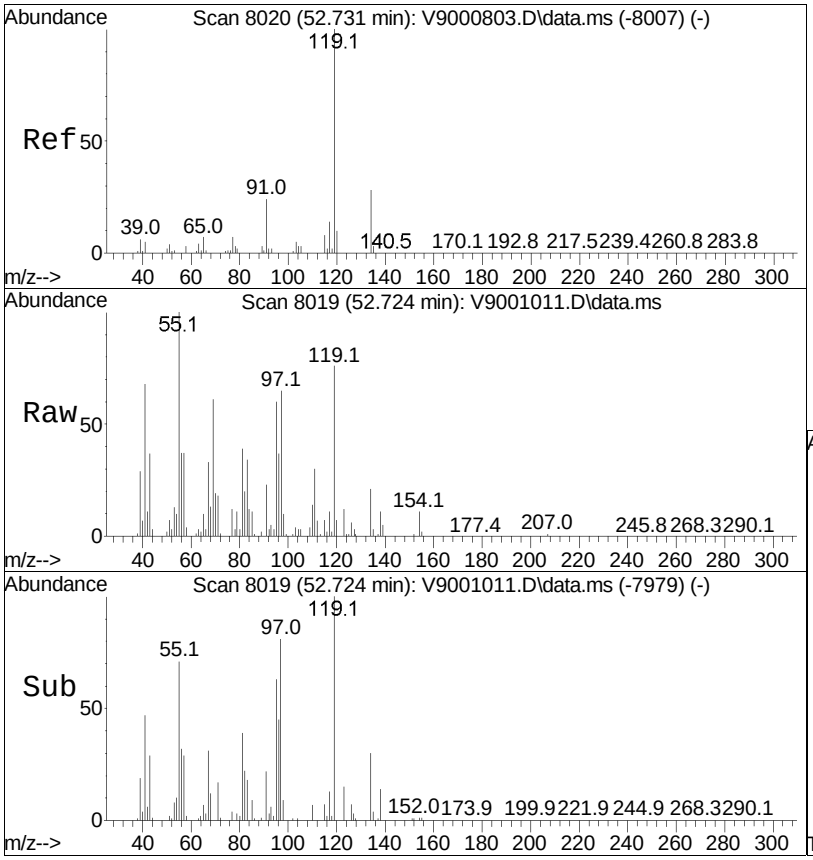


#120
1,2,3-Trimethylbenzene
Concen: 59.33 ug/L
RT: 52.52 min Scan# 7986
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 222881

Ion	Ratio	Lower	Upper
105	100		
120	42.8	23.0	63.0

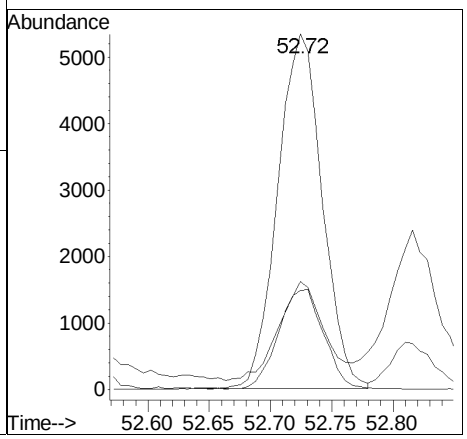


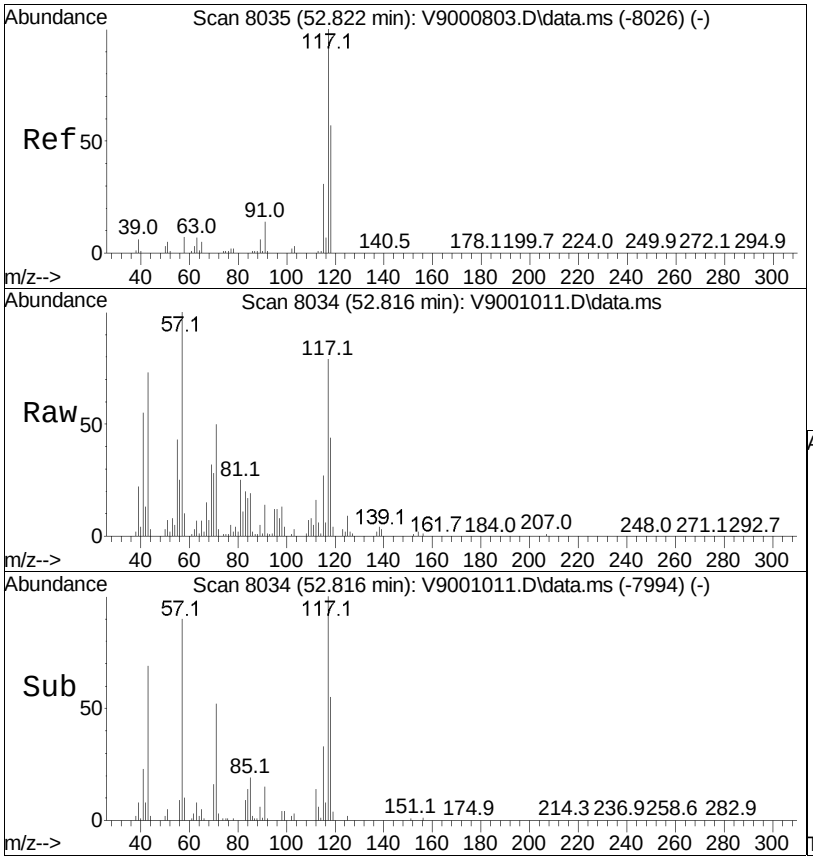


#121
1-Methyl-2-isopropylbenzene
Concen: 3.54 ug/L
RT: 52.72 min Scan# 8019
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 13480

Ion	Ratio	Lower	Upper
119	100		
134	27.9	8.2	48.2
91	30.3	3.5	43.5

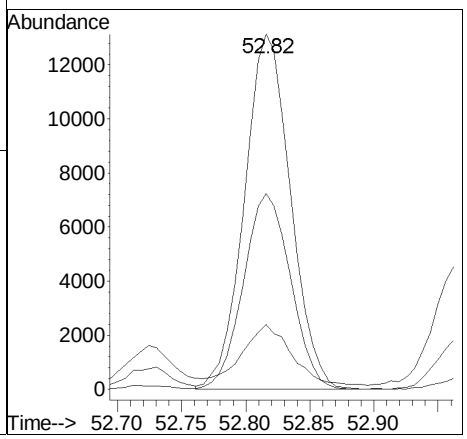


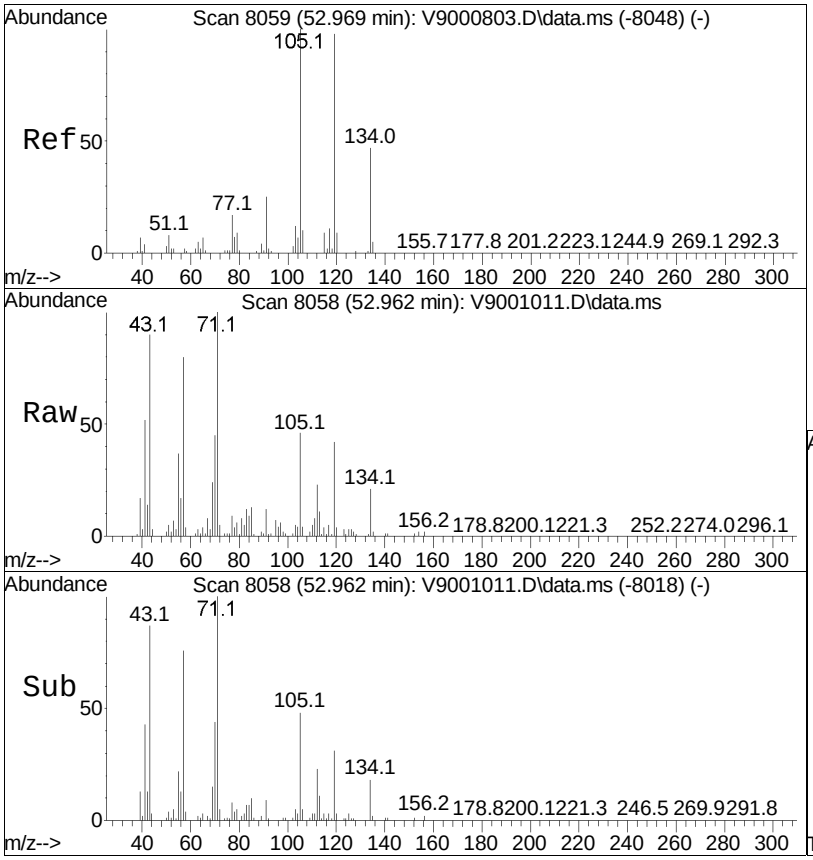


#122
Indan
Concen: 9.22 ug/L
RT: 52.82 min Scan# 8034
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:117 Resp: 32878

Ion	Ratio	Lower	Upper
117	100		
118	55.1	36.3	76.3
91	18.2	0.0	35.1

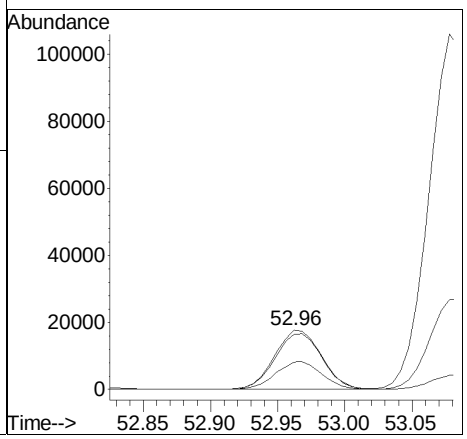


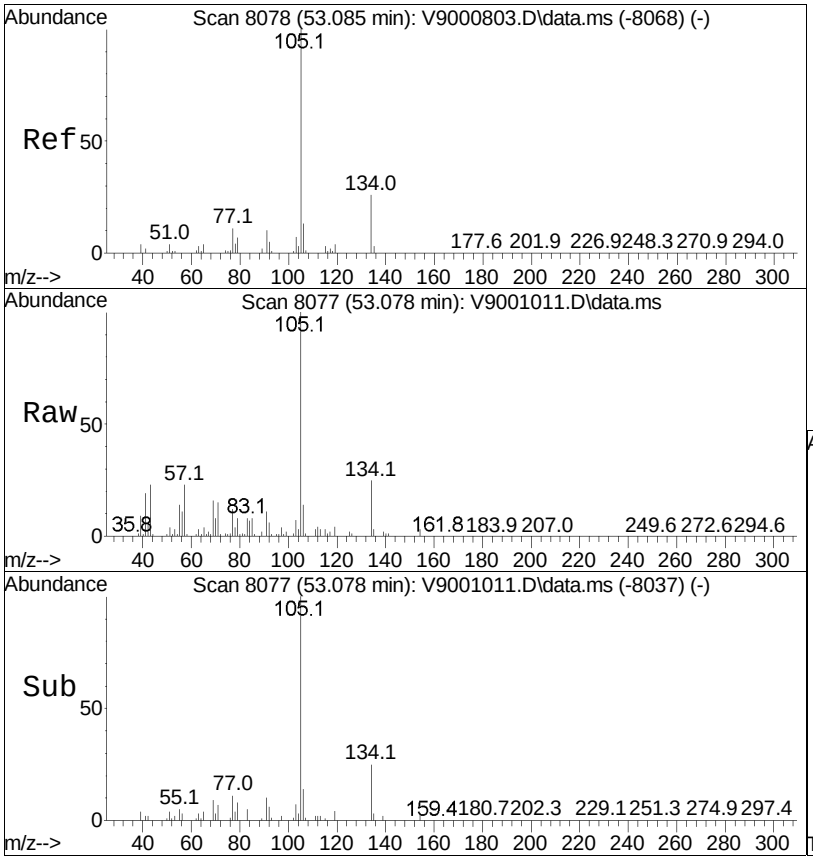


#123
1,3-Diethylbenzene
Concen: 17.75 ug/L
RT: 52.96 min Scan# 8058
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 42812

Ion	Ratio	Lower	Upper
105	100		
119	92.9	76.7	116.7
134	46.3	27.0	67.0

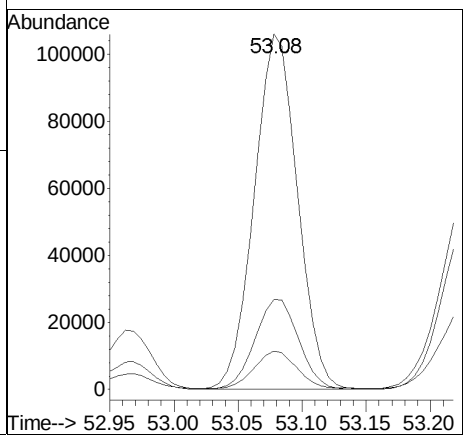


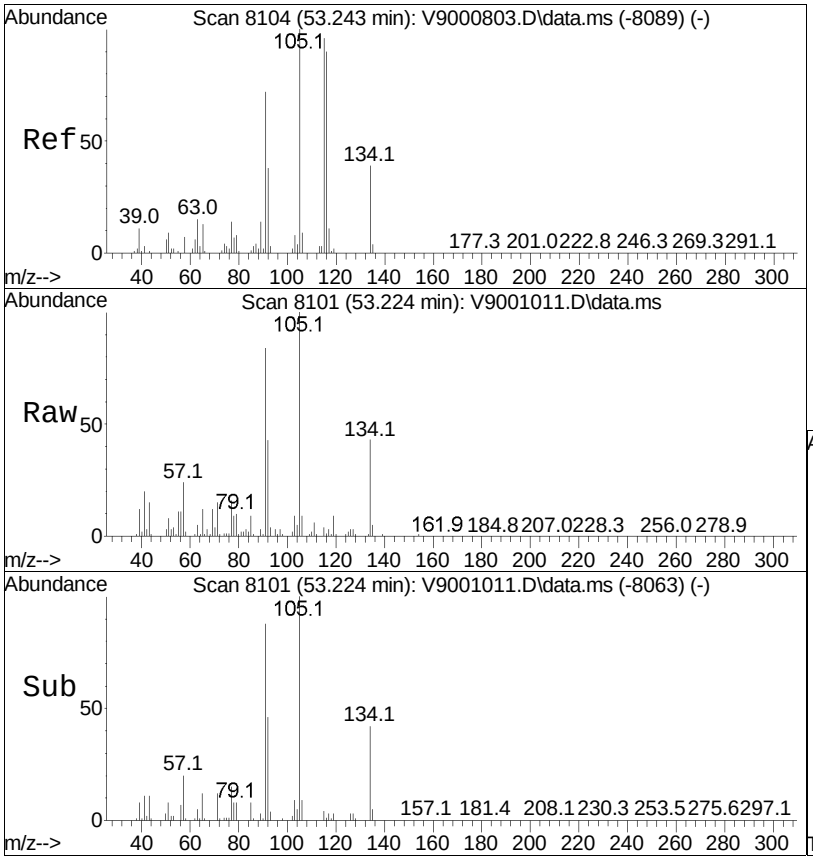


#124
1-Methyl-3-propylbenzene
Concen: 54.42 ug/L
RT: 53.08 min Scan# 8077
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 248077

Ion	Ratio	Lower	Upper
105	100		
134	25.3	5.7	45.7
91	10.8	0.0	30.1

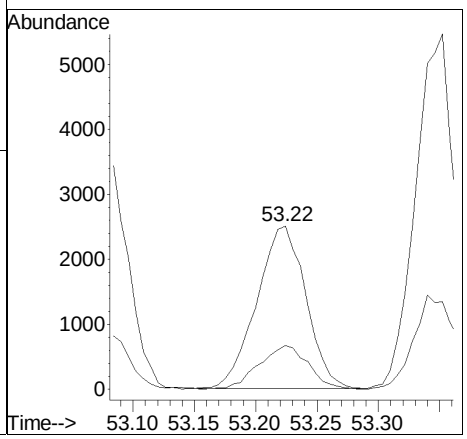


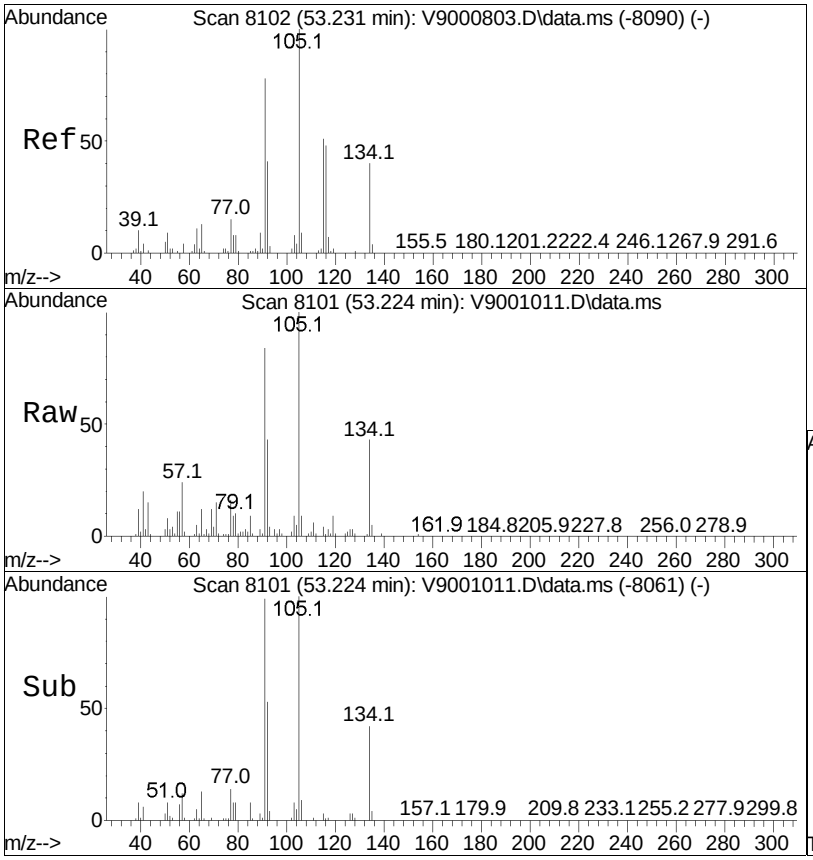


#125
Indene
Concen: 1.97 ug/L
RT: 53.22 min Scan# 8101
Delta R.T. -0.018 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:115 Resp: 6962

Ion	Ratio	Lower	Upper
115	100		
116	27.0	74.9	114.9#

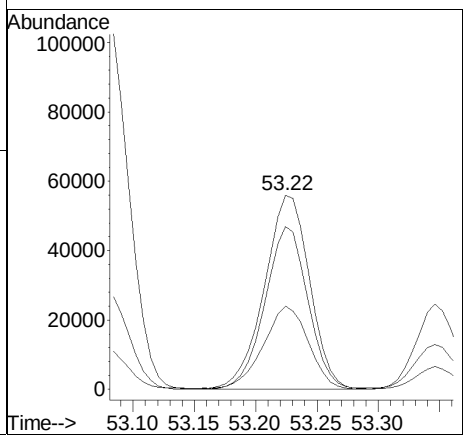


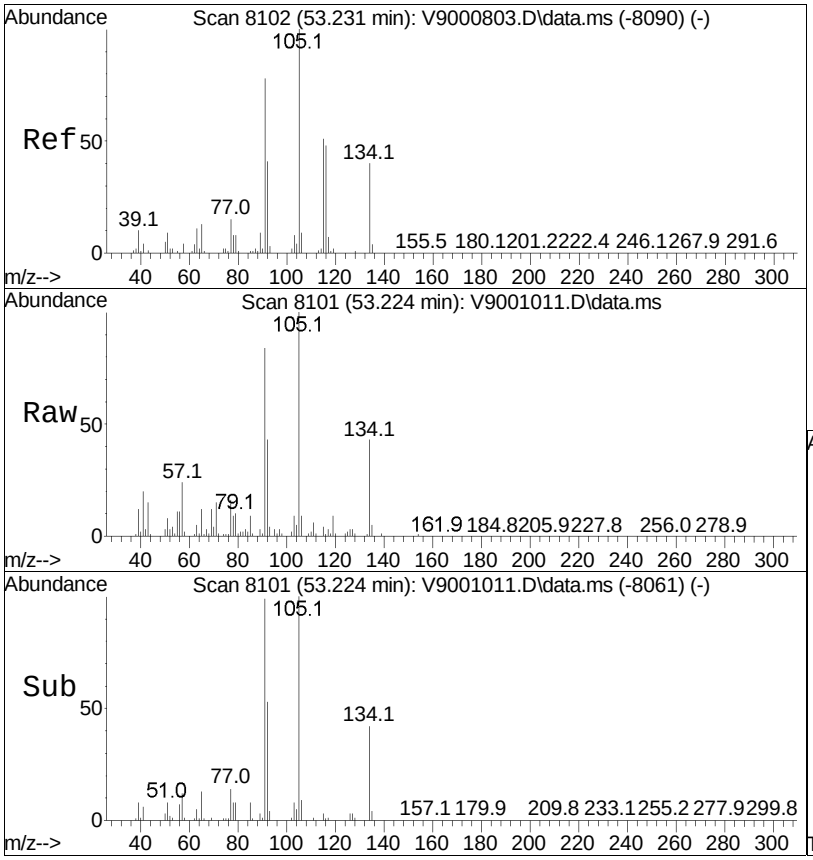


#126
1-Methyl-4-propylbenzene
Concen: 26.45 ug/L
RT: 53.22 min Scan# 8101
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 142748

Ion	Ratio	Lower	Upper
105	100		
134	43.0	20.2	60.2
91	83.9	58.2	98.2

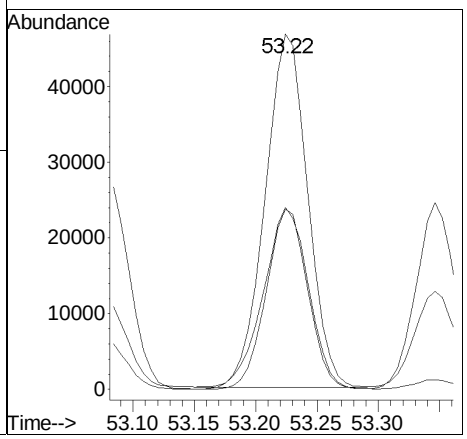


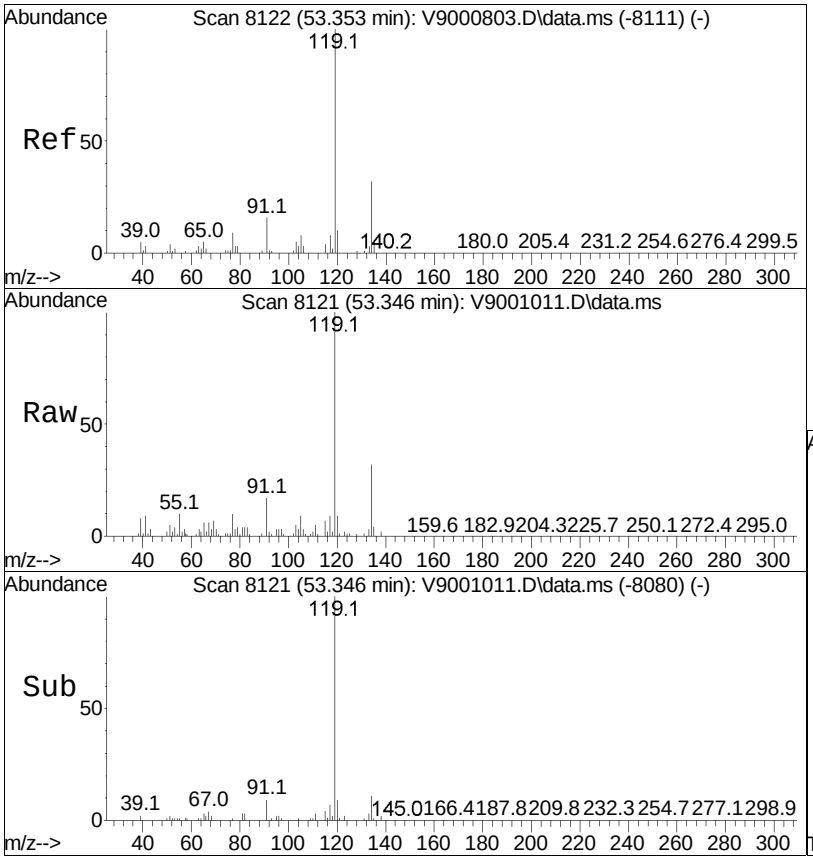


#127
n-Butylbenzene
Concen: 26.00 ug/L
RT: 53.22 min Scan# 8101
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 112441

Ion	Ratio	Lower	Upper
91	100		
92	50.8	32.2	72.2
134	51.2	31.4	71.4

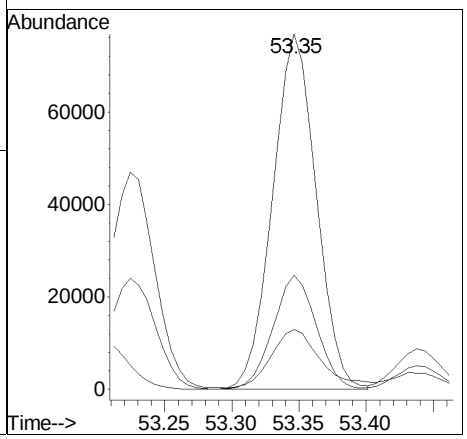


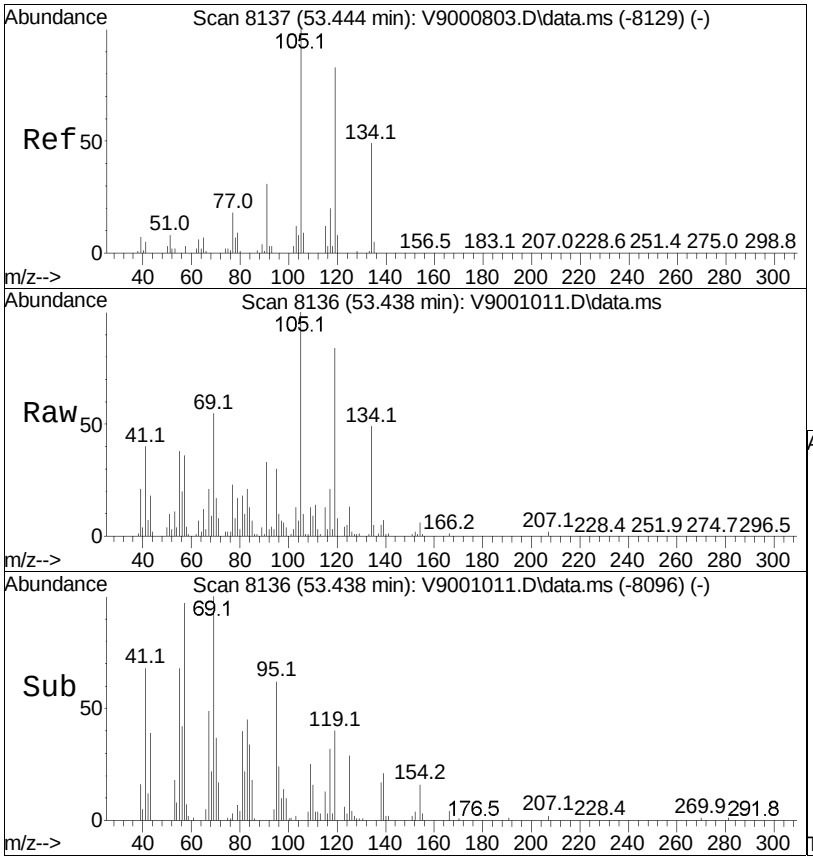


#128
1,2-Dimethyl-4-ethylbenzene
Concen: 44.34 ug/L
RT: 53.35 min Scan# 8121
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 173259

Ion	Ratio	Lower	Upper
119	100		
134	32.1	11.3	51.3
91	16.9	0.0	36.6

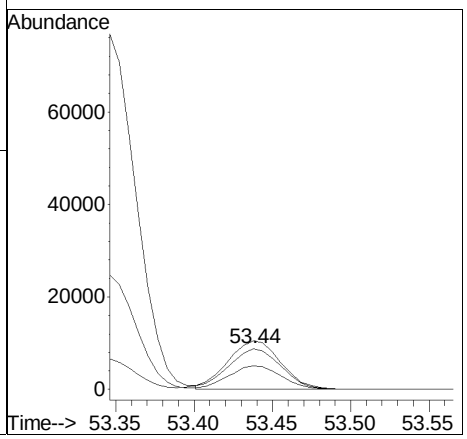


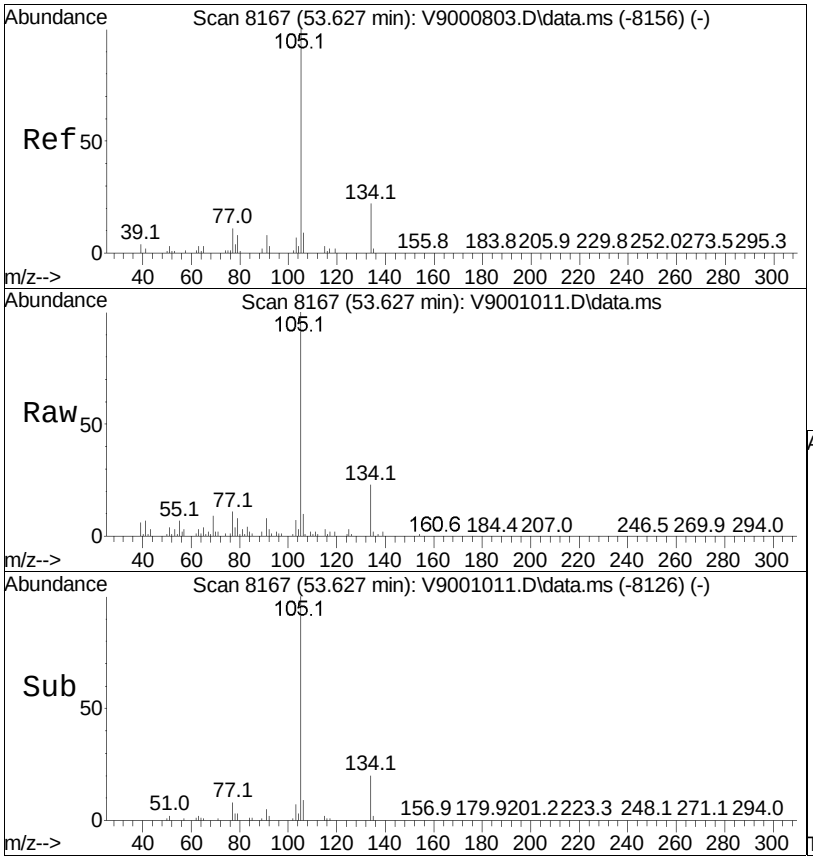


#129
1,2-Diethylbenzene
Concen: 10.52 ug/L
RT: 53.44 min Scan# 8136
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 20369

Ion	Ratio	Lower	Upper
119	100		
105	119.4	95.6	135.6
134	58.0	38.0	78.0

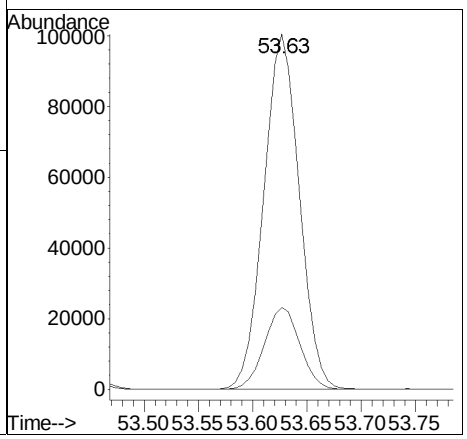


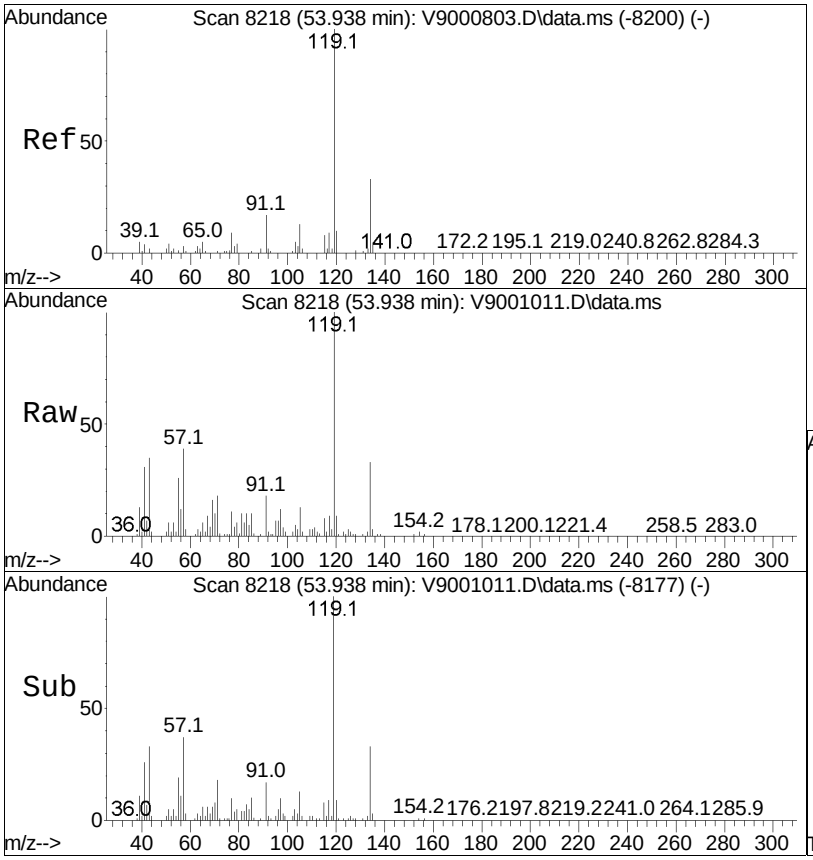


#130
1-Methyl-2-propylbenzene
Concen: 46.70 ug/L
RT: 53.63 min Scan# 8167
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:105 Resp: 227980

Ion	Ratio	Lower	Upper
105	100		
134	23.1	2.6	42.6

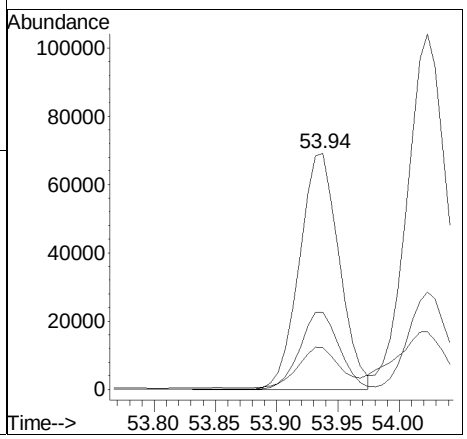


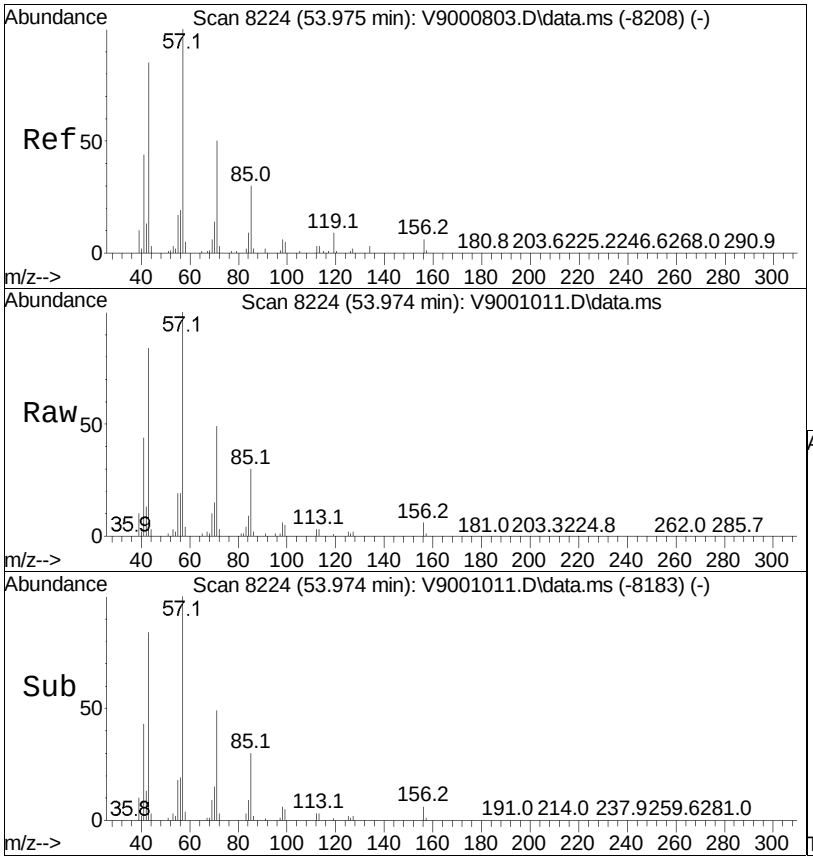


#131
1,4-Dimethyl-2-ethylbenzene
Concen: 42.44 ug/L
RT: 53.94 min Scan# 8218
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 155887

Ion	Ratio	Lower	Upper
119	100		
134	32.8	12.5	52.5
91	17.6	0.0	37.0

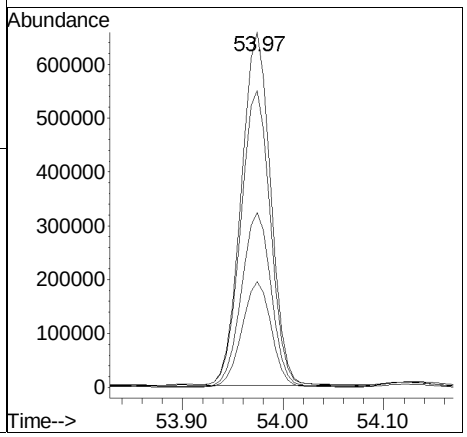


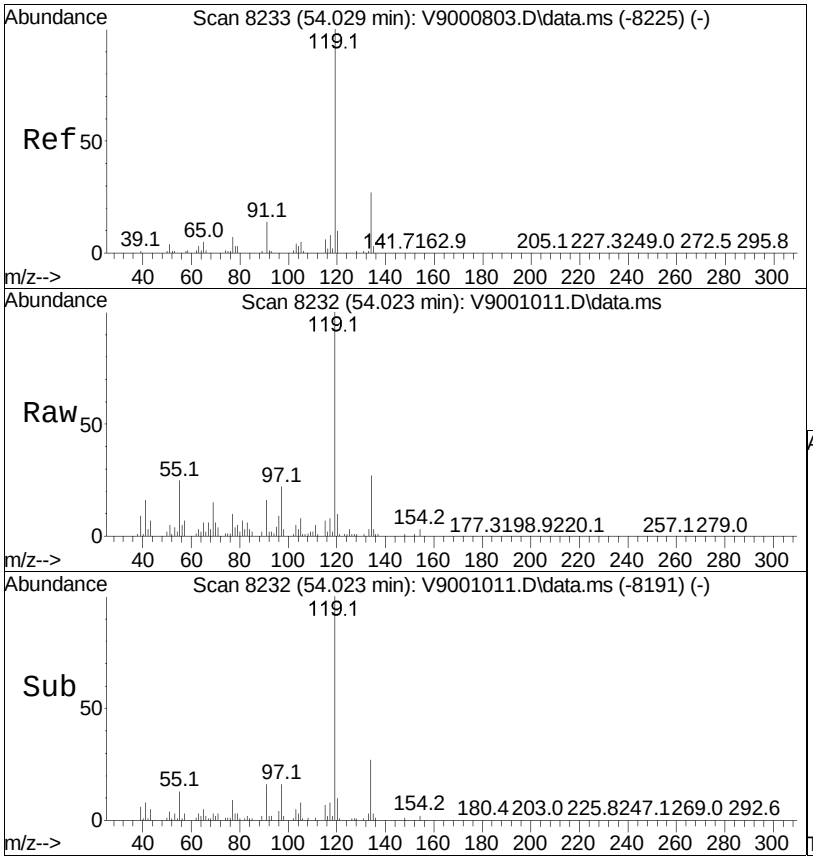


#132
Undecane
Concen: 710.86 ug/L
RT: 53.97 min Scan# 8224
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 1329830

Ion	Ratio	Lower	Upper
57	100		
43	83.6	62.9	102.9
71	49.2	30.0	70.0
85	29.8	10.9	50.9

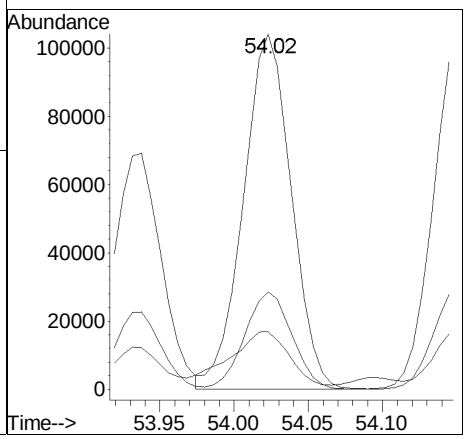


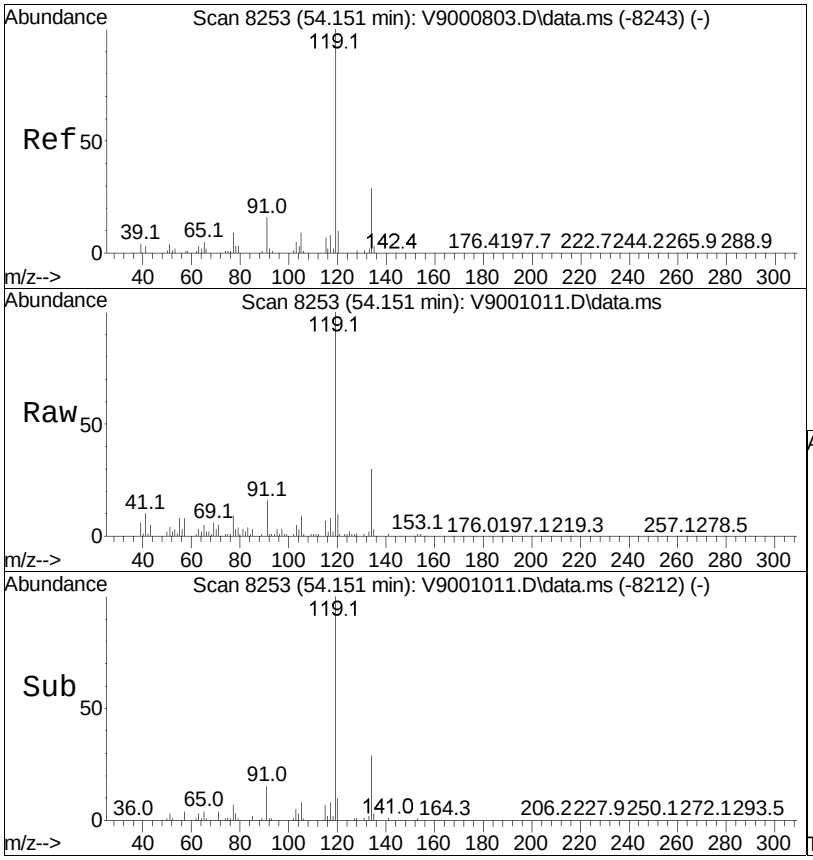


#133
1,3-Dimethyl-4-ethylbenzene
Concen: 52.27 ug/L
RT: 54.02 min Scan# 8232
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 233566

Ion	Ratio	Lower	Upper
119	100		
134	27.4	7.1	47.1
91	16.2	0.0	34.4

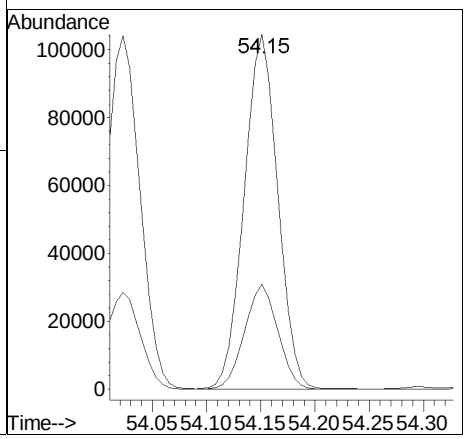


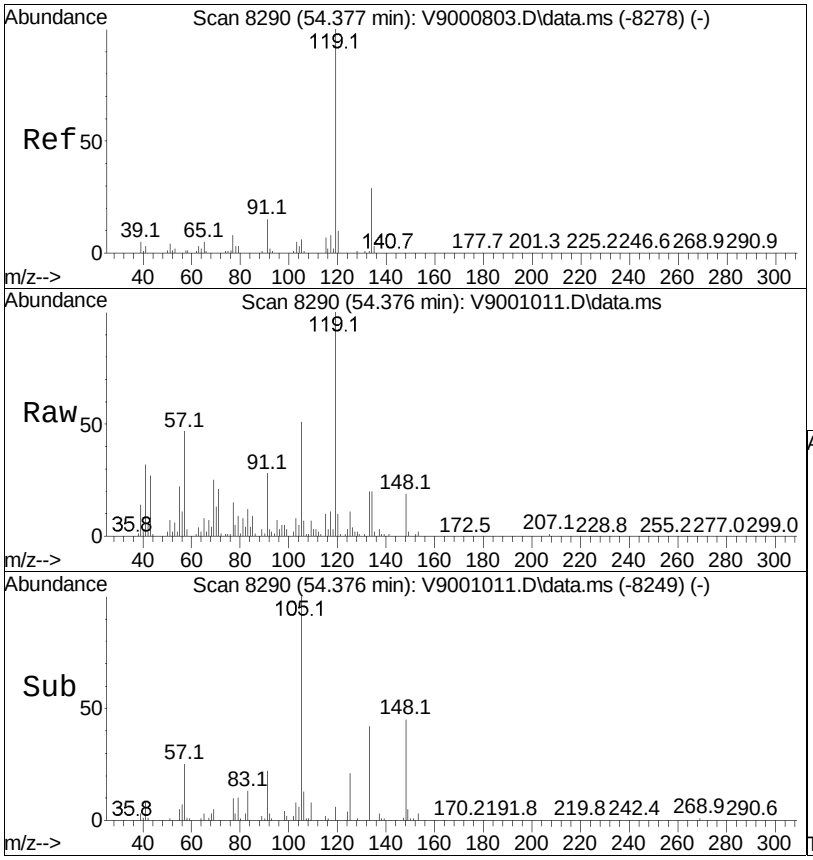


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 55.42 ug/L
RT: 54.15 min Scan# 8253
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 224745

Ion	Ratio	Lower	Upper
119	100		
134	29.6	9.7	49.7

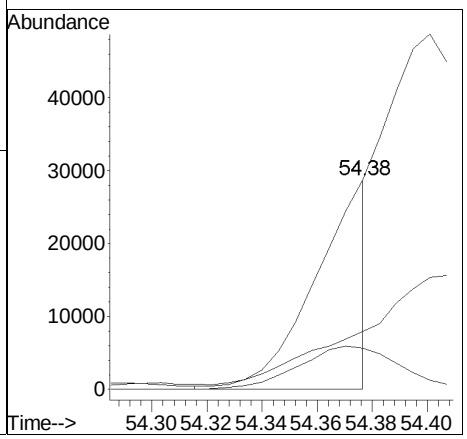


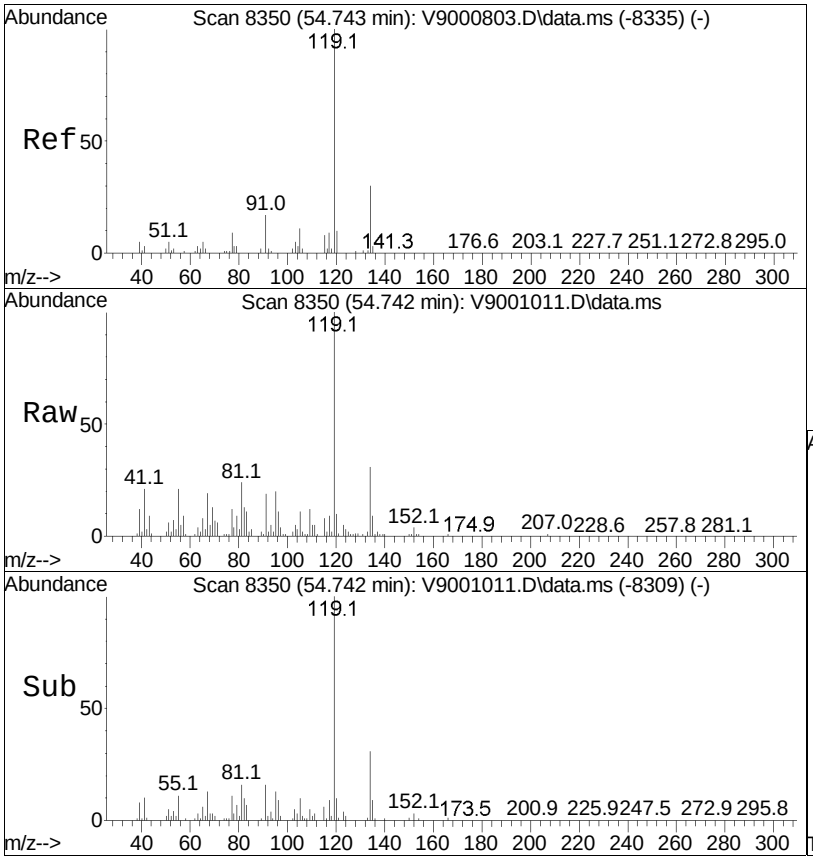


#135
1,3-Dimethyl-2-ethylbenzene
Concen: 8.73 ug/L m
RT: 54.38 min Scan# 8290
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 39033

Ion	Ratio	Lower	Upper
119	100		
134	19.7	8.2	48.2
91	27.7	0.0	35.3

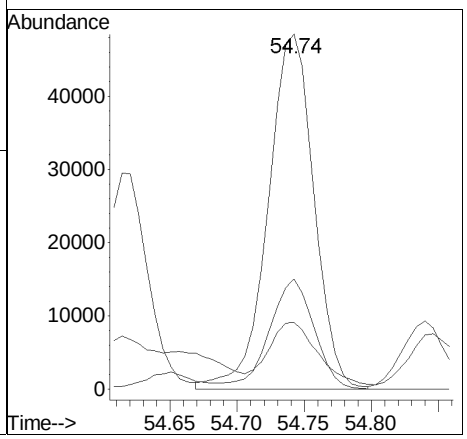


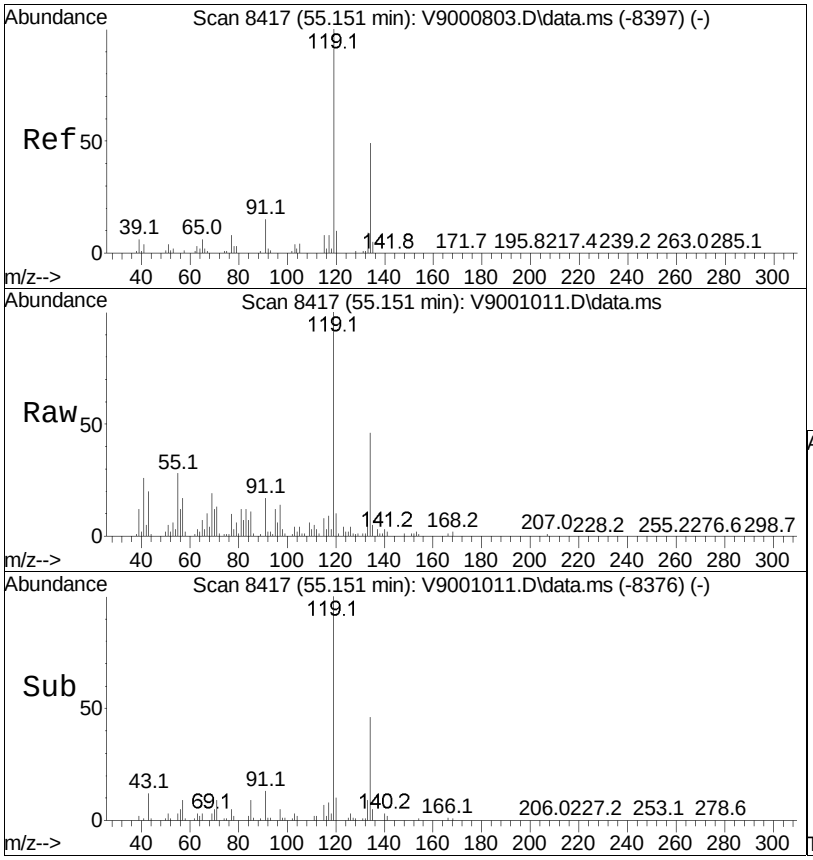


#136
1,2-Dimethyl-3-ethylbenzene
Concen: 28.93 ug/L
RT: 54.74 min Scan# 8350
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 115100

Ion	Ratio	Lower	Upper
119	100		
134	31.1	10.4	50.4
91	18.9	0.0	36.8

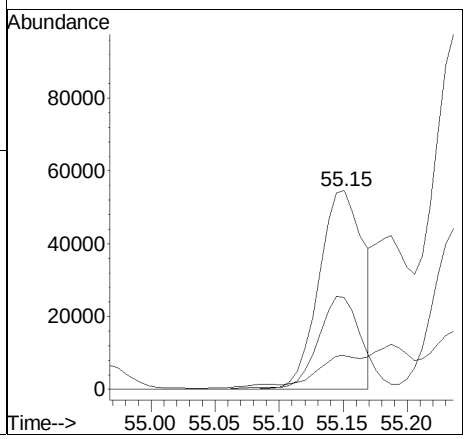


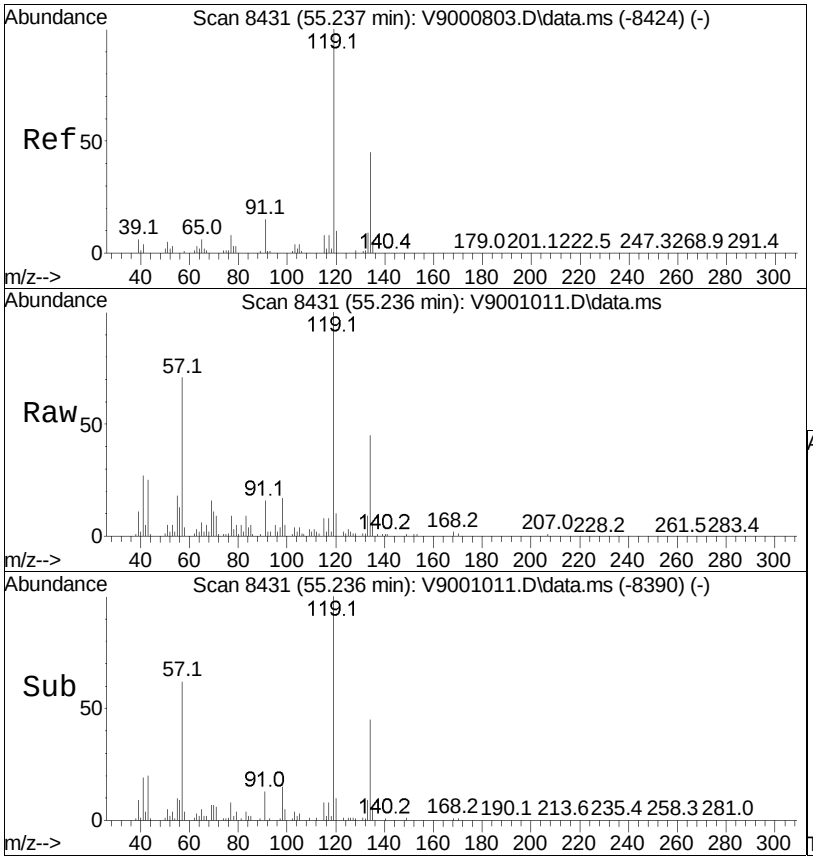


#137
1,2,4,5-Tetramethylbenzene
Concen: 31.27 ug/L
RT: 55.15 min Scan# 8417
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 131296

Ion	Ratio	Lower	Upper
119	100		
134	46.1	28.8	68.8
91	17.0	0.0	35.3

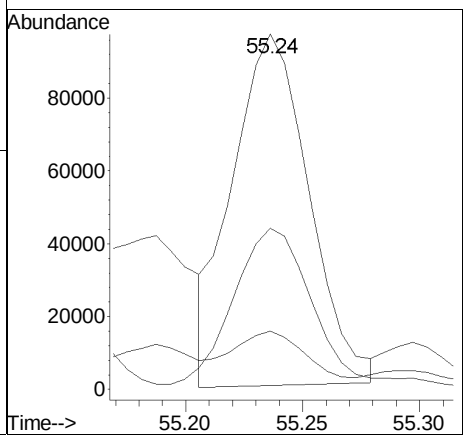


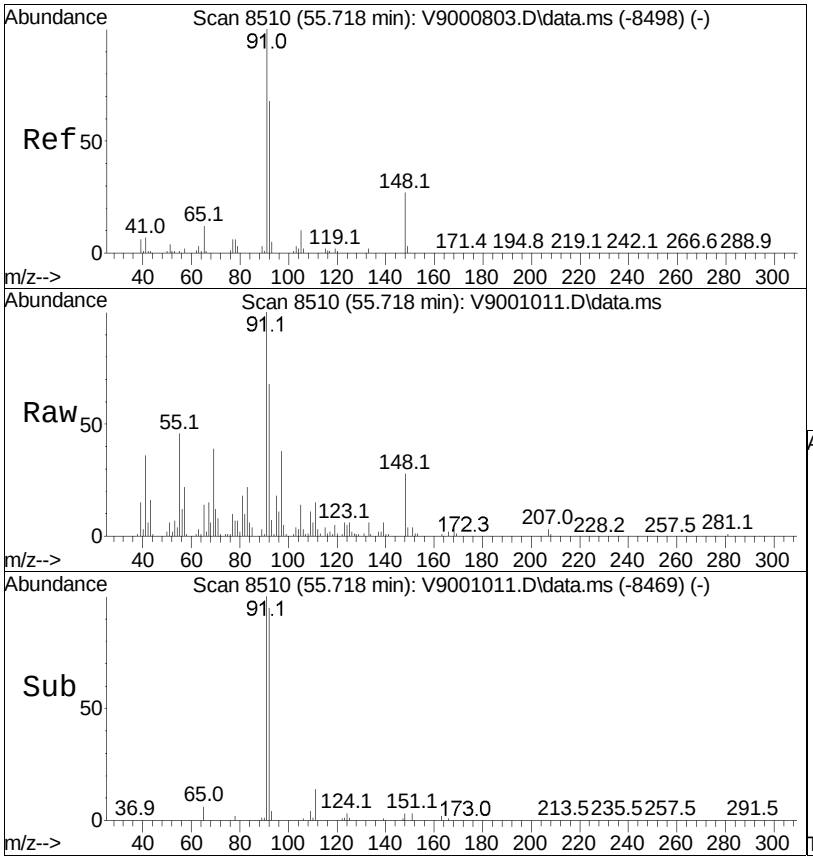


#138
1,2,3,5-Tetramethylbenzene
Concen: 57.75 ug/L m
RT: 55.24 min Scan# 8431
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 219540

Ion	Ratio	Lower	Upper
119	100		
134	45.4	25.4	65.4
91	16.4	0.0	35.6

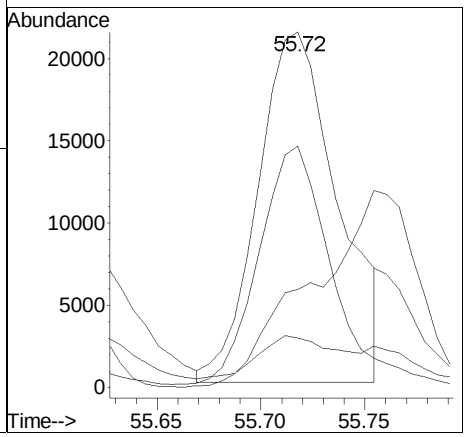


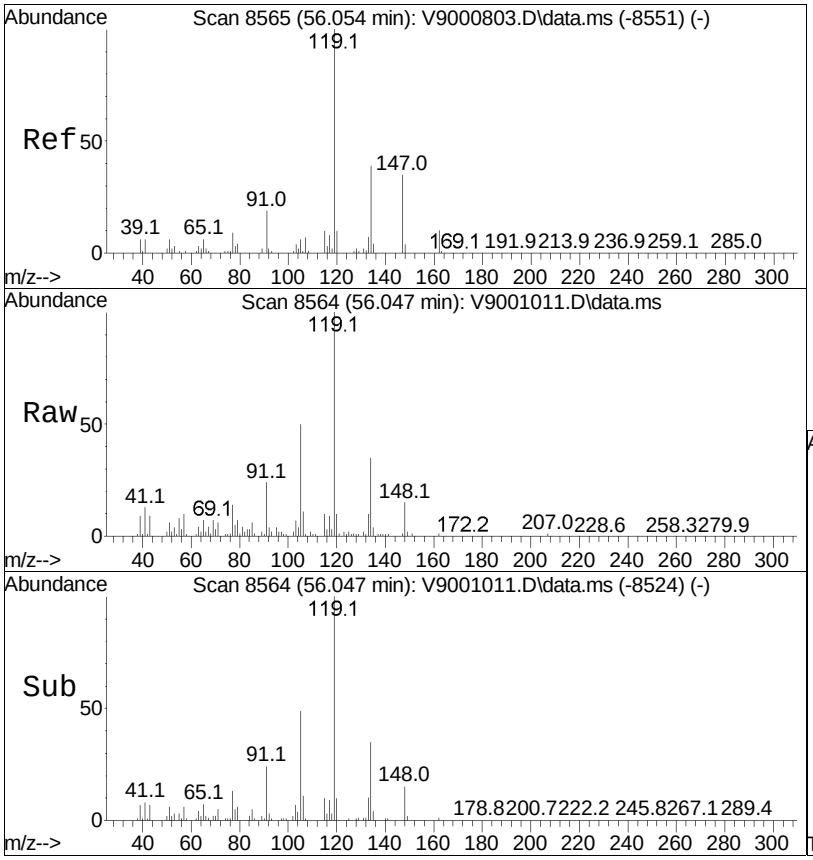


#139
Pentylbenzene
Concen: 15.85 ug/L m
RT: 55.72 min Scan# 8510
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 56987

Ion	Ratio	Lower	Upper
91	100		
92	67.9	47.3	87.3
65	13.9	0.0	31.8
148	27.6	6.4	46.4

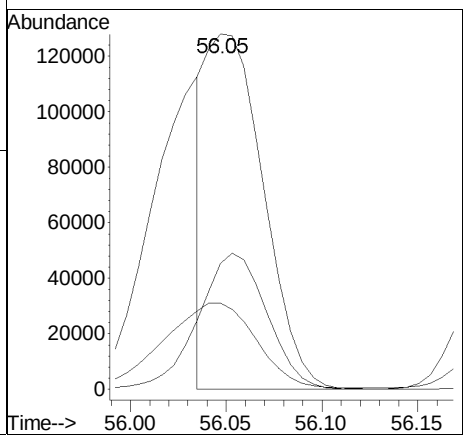


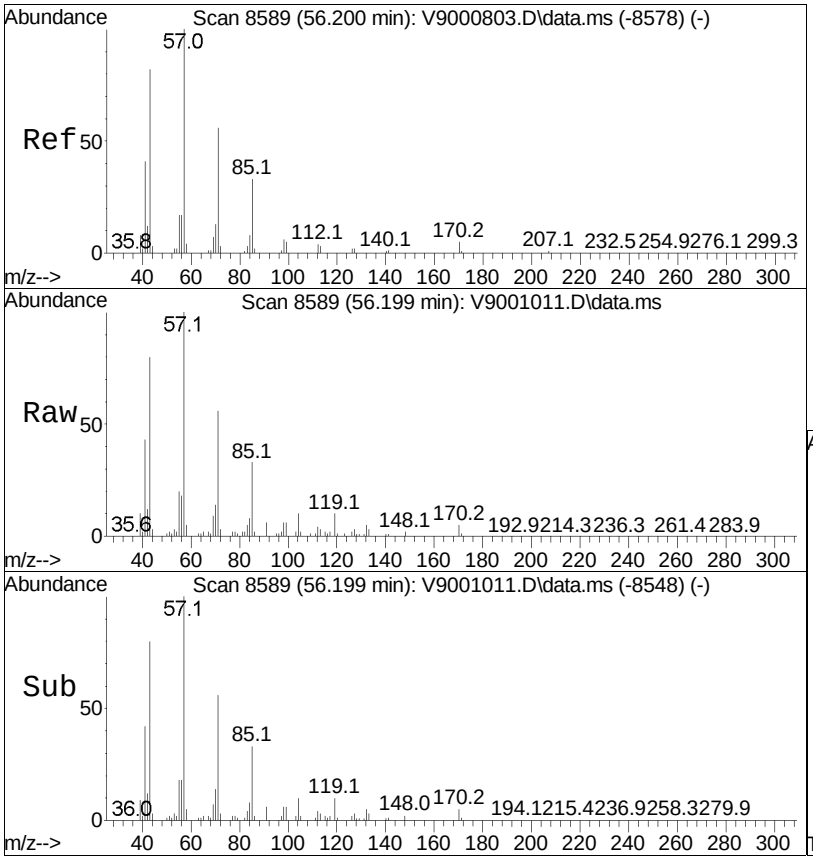


#140
1,2,3,4-Tetramethylbenzene
Concen: 52.90 ug/L m
RT: 56.05 min Scan# 8564
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:119 Resp: 266704

Ion	Ratio	Lower	Upper
119	100		
134	35.4	18.1	58.1
91	24.3	0.0	39.2

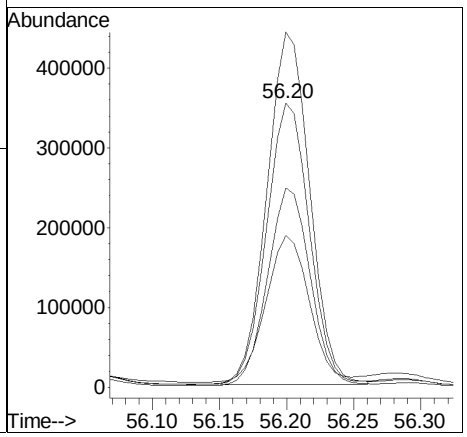


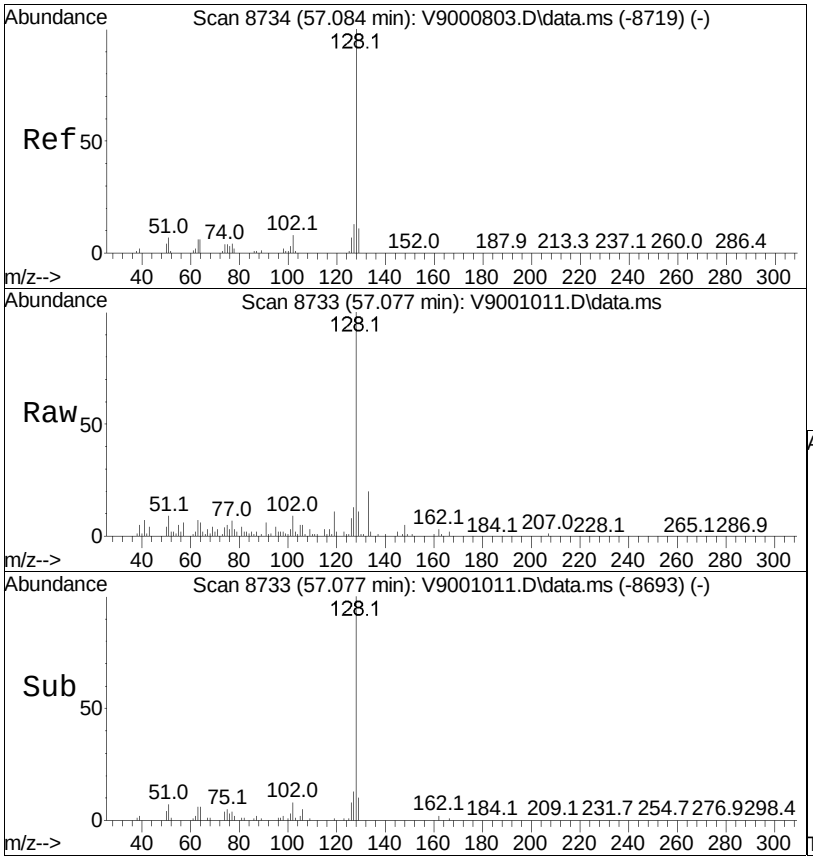


#142
Dodecane
Concen: 519.04 ug/L
RT: 56.20 min Scan# 8589
Delta R.T. 0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 43 Resp: 786858

Ion	Ratio	Lower	Upper
43	100		
57	124.9	102.2	142.2
71	70.2	49.3	89.3
41	53.4	32.1	72.1

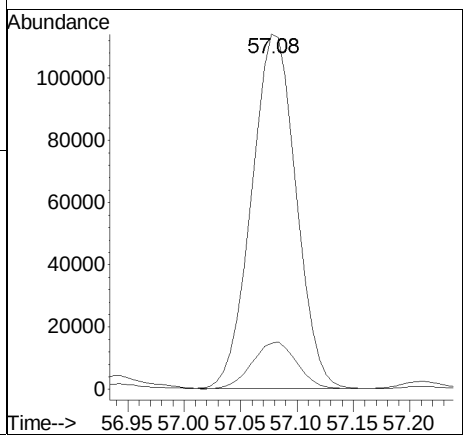


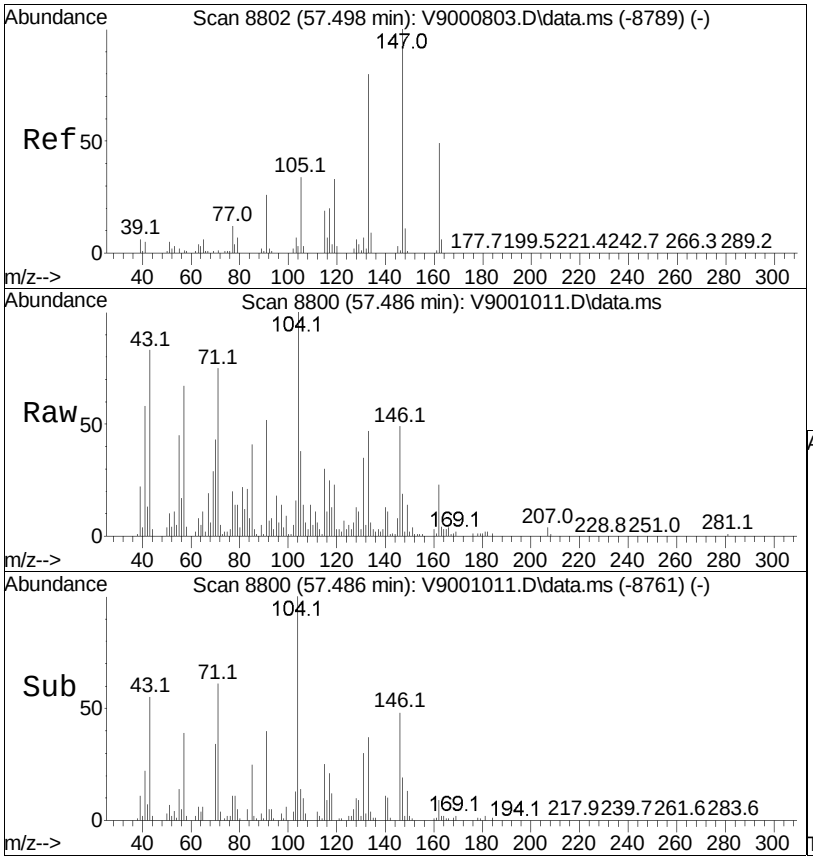


#144
Naphthalene
Concen: 61.02 ug/L
RT: 57.08 min Scan# 8733
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:128 Resp: 312106

Ion	Ratio	Lower	Upper
128	100		
127	13.0	0.0	32.6

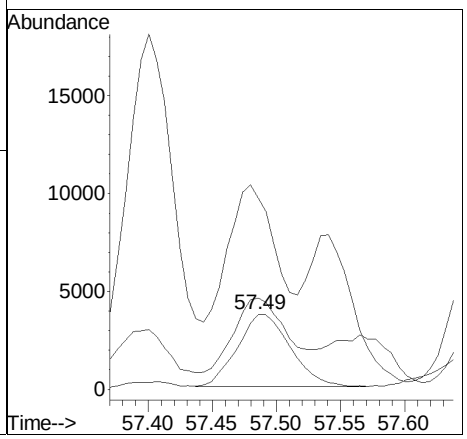


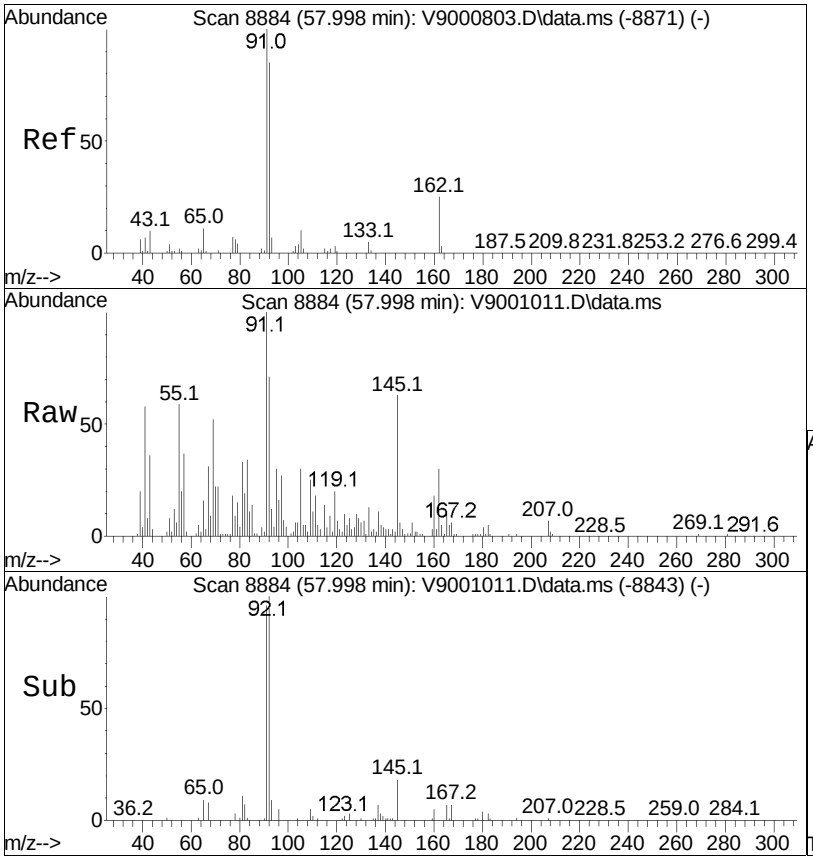


#146
1,2,4-Triethylbenzene
Concen: 5.56 ug/L
RT: 57.49 min Scan# 8800
Delta R.T. -0.012 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:147 Resp: 10663

Ion	Ratio	Lower	Upper
147	100		
162	122.0	30.4	70.4#
133	255.2	64.9	104.9#

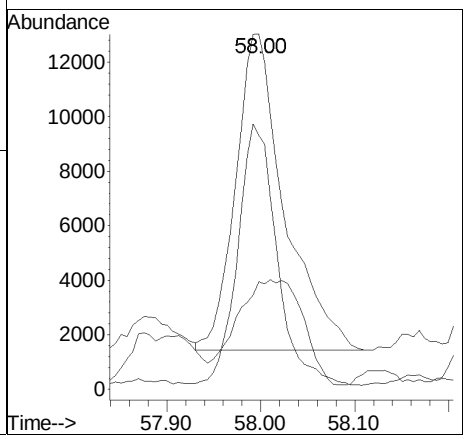


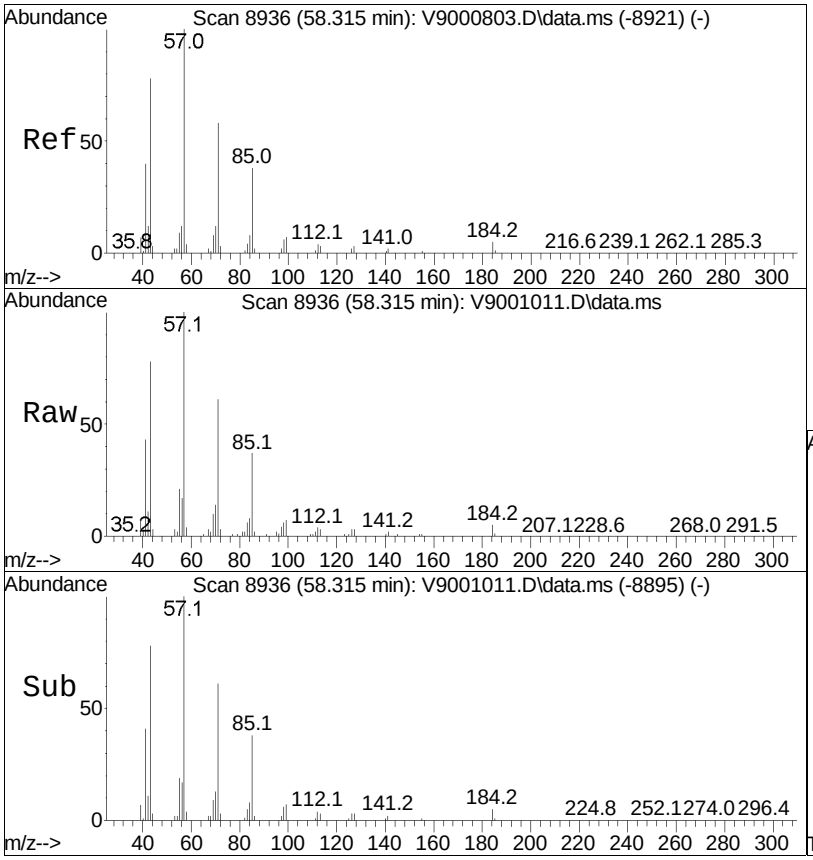


#147
Hexylbenzene
Concen: 13.51 ug/L
RT: 58.00 min Scan# 8884
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 91 Resp: 41996

Ion	Ratio	Lower	Upper
91	100		
92	71.5	65.9	105.9
162	30.3	6.3	46.3

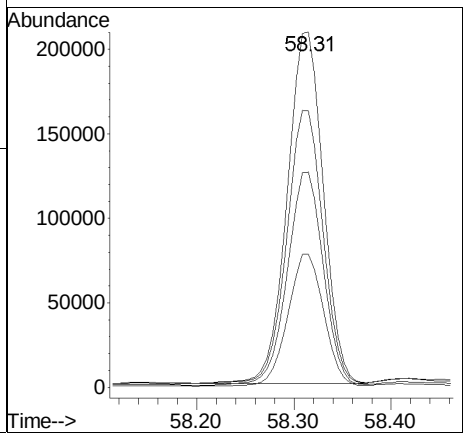


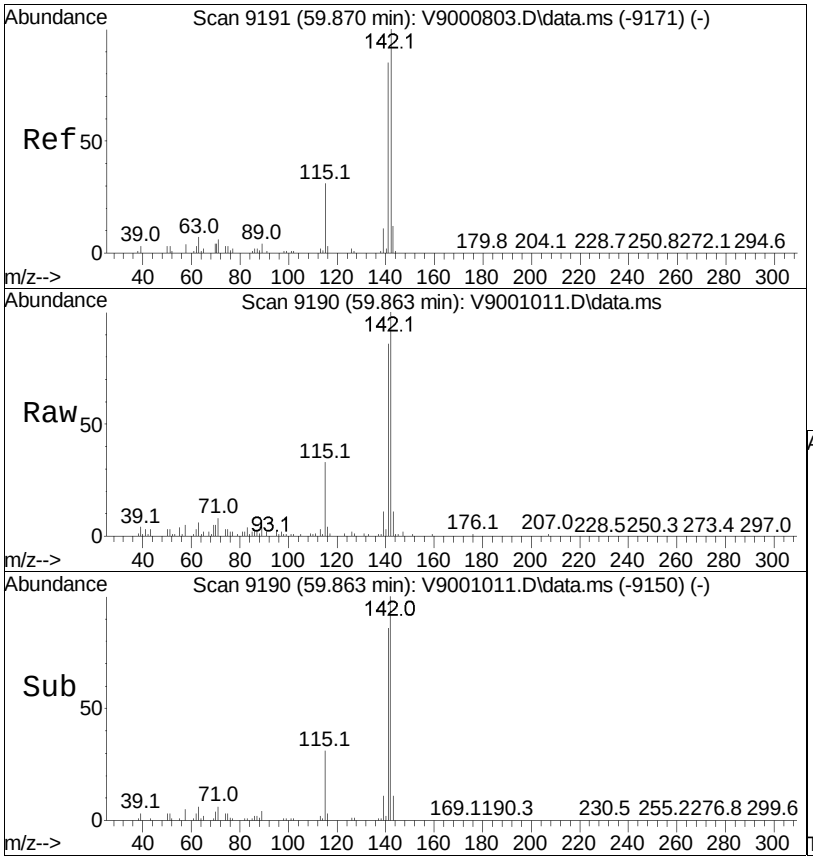


#149
Tridecane
Concen: 331.09 ug/L
RT: 58.31 min Scan# 8936
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 536380

Ion	Ratio	Lower	Upper
57	100		
43	77.8	59.6	99.6
71	60.6	42.3	82.3
85	37.5	18.0	58.0

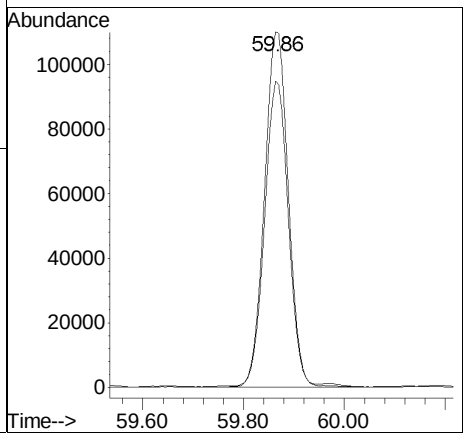


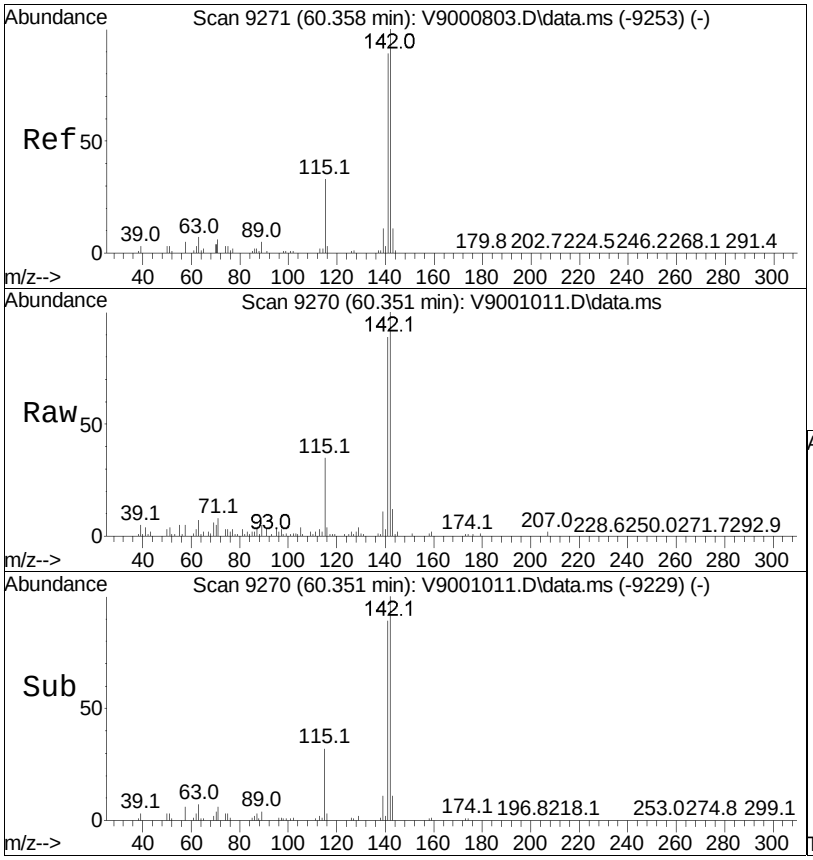


#150
2-Methylnaphthalene
Concen: 112.87 ug/L
RT: 59.86 min Scan# 9190
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:142 Resp: 361646

Ion	Ratio	Lower	Upper
142	100		
141	86.2	66.1	106.1

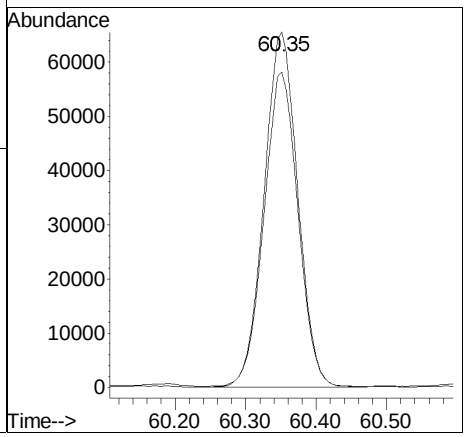


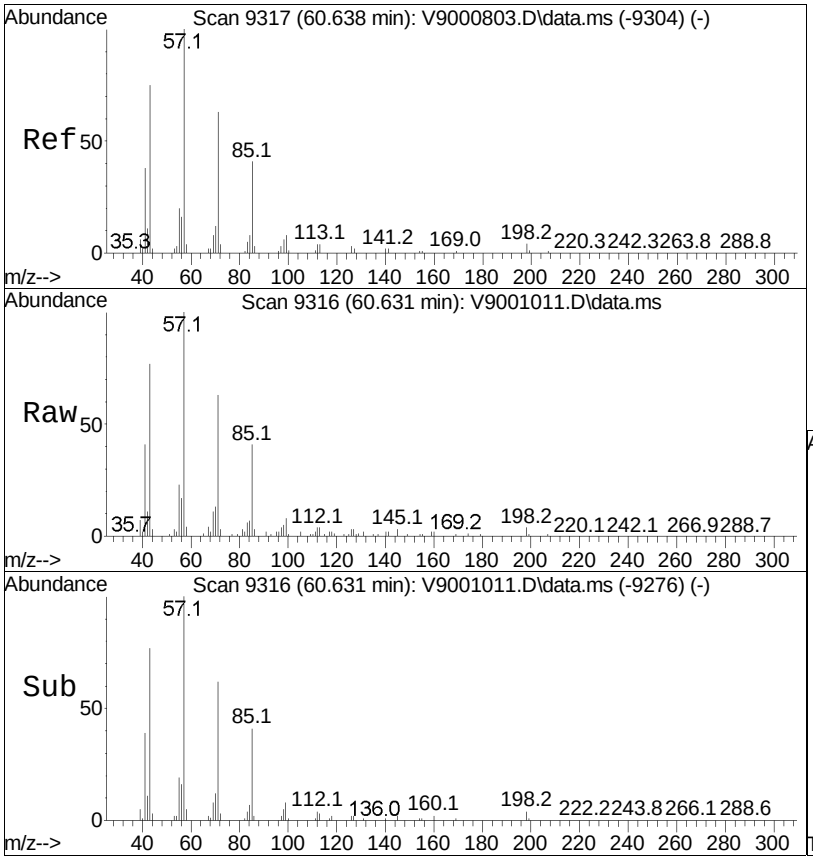


#151
1-Methylnaphthalene
Concen: 75.27 ug/L
RT: 60.35 min Scan# 9270
Delta R.T. -0.000 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion:142 Resp: 217484

Ion	Ratio	Lower	Upper
142	100		
141	88.8	69.0	109.0

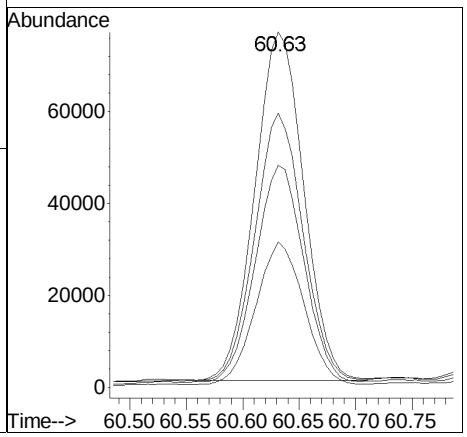


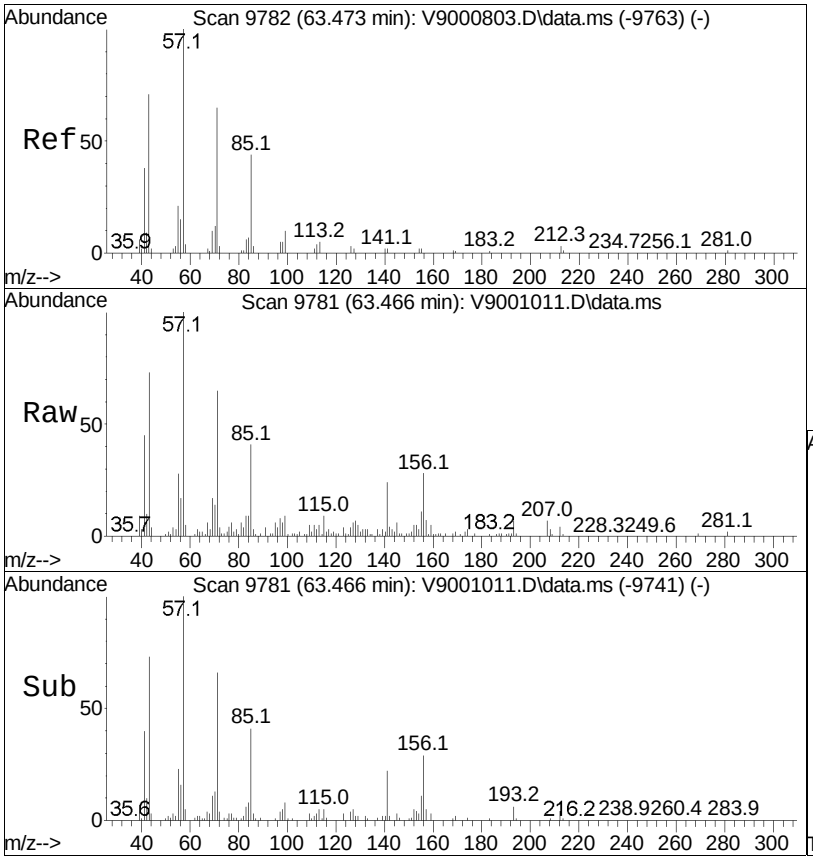


#152
Tetradecane
Concen: 180.36 ug/L
RT: 60.63 min Scan# 9316
Delta R.T. -0.007 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 228412

Ion	Ratio	Lower	Upper
57	100		
43	77.2	55.8	95.8
71	62.6	41.5	81.5
85	41.0	20.3	60.3

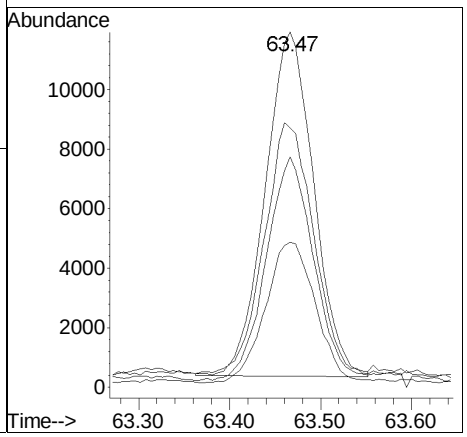




#153
Pentadecane
Concen: 52.32 ug/L
RT: 63.47 min Scan# 9781
Delta R.T. -0.006 min
Lab File: V9001011.D
Acq: 12 Jan 2022 01:17 pm

Tgt Ion: 57 Resp: 43032

Ion	Ratio	Lower	Upper
57	100		
43	73.1	50.8	90.8
71	64.9	40.7	80.7
85	40.8	22.9	62.9



Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001013.D
Acq On : 12 Jan 2022 03:40 pm
Operator : VOA9:RY
Sample : L2200971-01D2,31,0.1071,10,0.0005
Misc : WG1593474,ICAL18591
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 17 10:06:49 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	252581	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.13	113	61426	47.116	ug/L	-0.04
Spiked Amount 50.000	Range 78 - 118		Recovery = 94.23%			
62) Toluene-d8 (surr)	31.23	98	289534	48.967	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 97.93%			
101) 4-Bromofluorobenzene (...	46.52	95	128491	51.722	ug/L	-0.02
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.44%			
Target Compounds						Qvalue
113) Decane	50.78	43	42898	23.459	ug/L	96
132) Undecane	53.97	57	106447	47.027	ug/L	99
142) Dodecane	56.20	43	65178	35.533	ug/L	99
149) Tridecane	58.31	57	47174	24.066	ug/L	99
152) Tetradecane	60.63	57	23098	15.073	ug/L	98

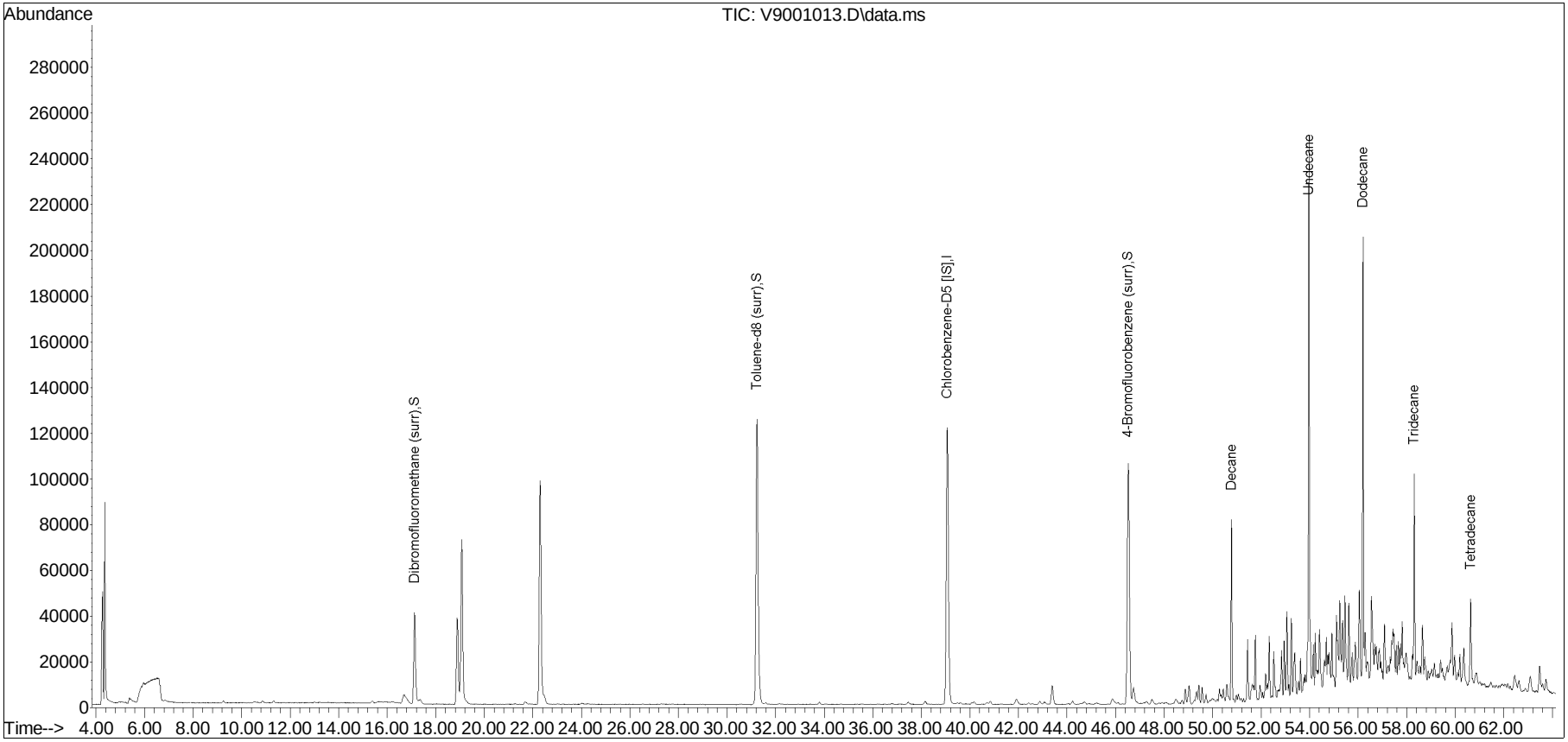
(#) = qualifier out of range (m) = manual integration (+) = signals summed

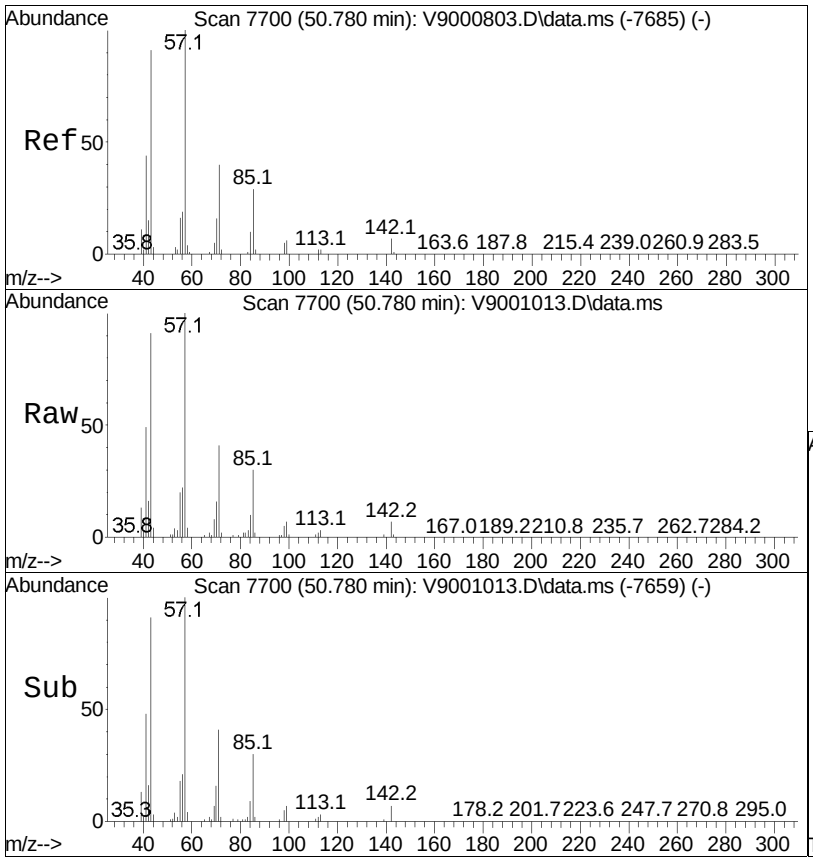
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001013.D
Acq On : 12 Jan 2022 03:40 pm
Operator : VOA9:RY
Sample : L2200971-01D2,31,0.1071,10,0.0005
Misc : WG1593474,ICAL18591
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 17 10:06:49 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

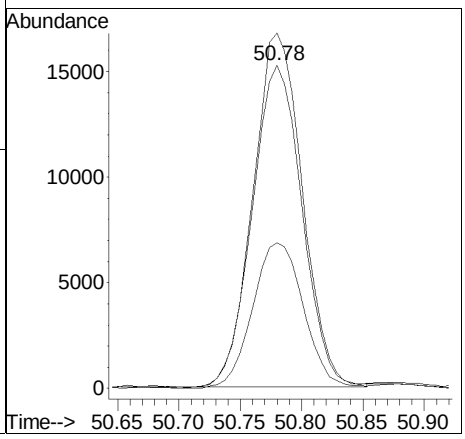


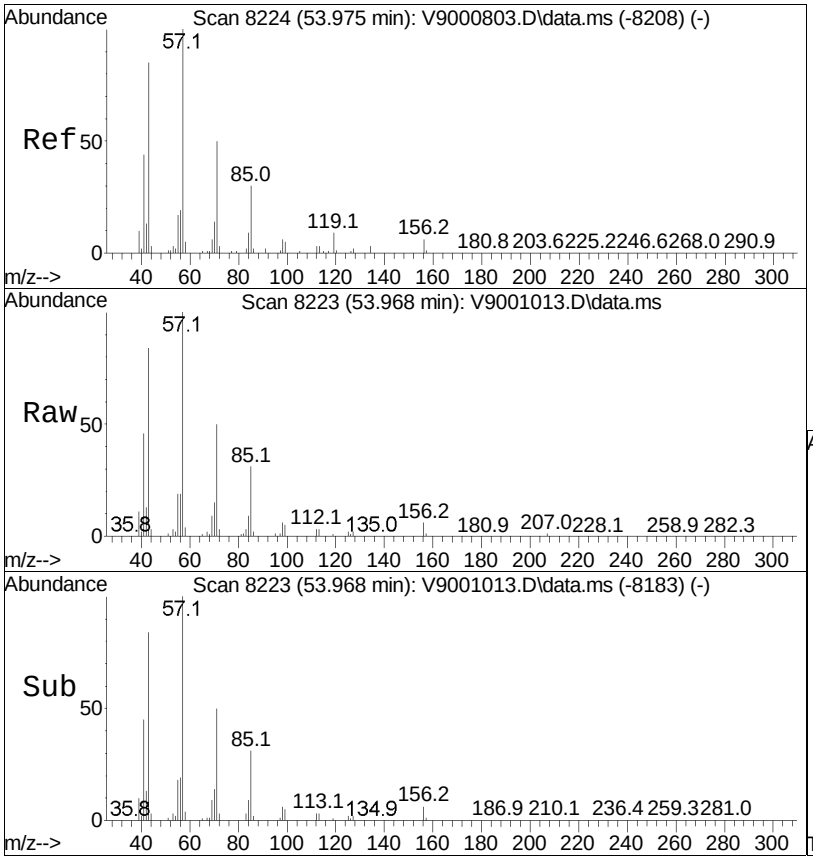


#113
Decane
Concen: 23.46 ug/L
RT: 50.78 min Scan# 7700
Delta R.T. 0.000 min
Lab File: V9001013.D
Acq: 12 Jan 2022 03:40 pm

Tgt Ion: 43 Resp: 42898

Ion	Ratio	Lower	Upper
43	100		
57	110.0	85.6	125.6
71	45.1	23.5	63.5

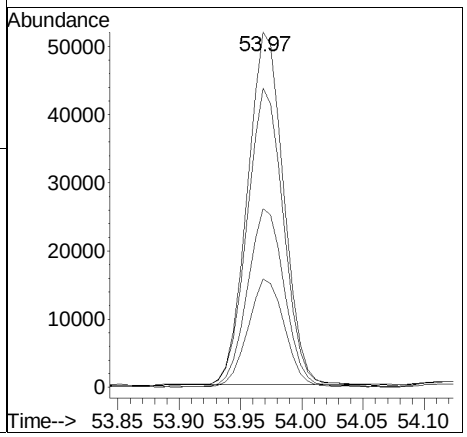


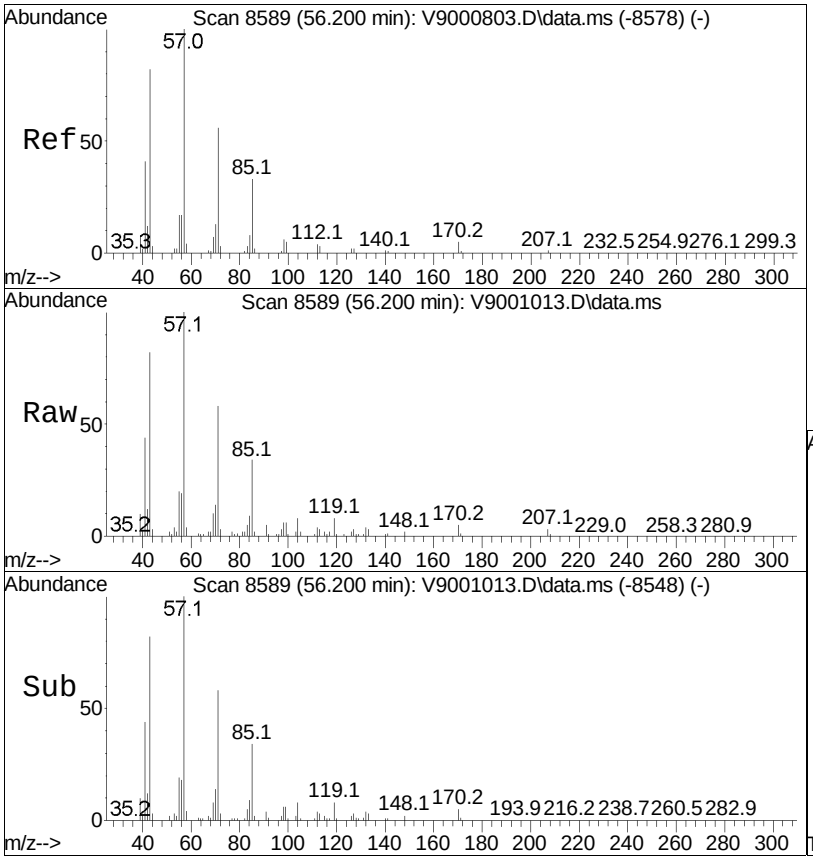


#132
Undecane
Concen: 47.03 ug/L
RT: 53.97 min Scan# 8223
Delta R.T. -0.006 min
Lab File: V9001013.D
Acq: 12 Jan 2022 03:40 pm

Tgt Ion: 57 Resp: 106447

Ion	Ratio	Lower	Upper
57	100		
43	84.2	62.9	102.9
71	50.3	30.0	70.0
85	30.5	10.9	50.9

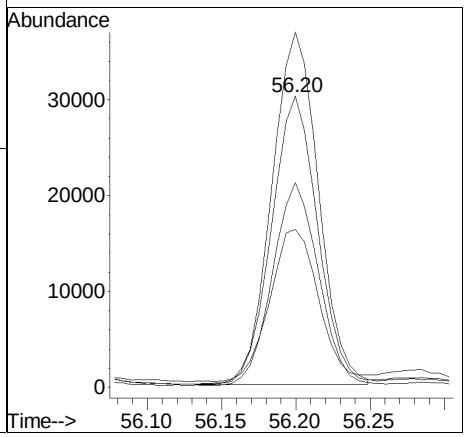


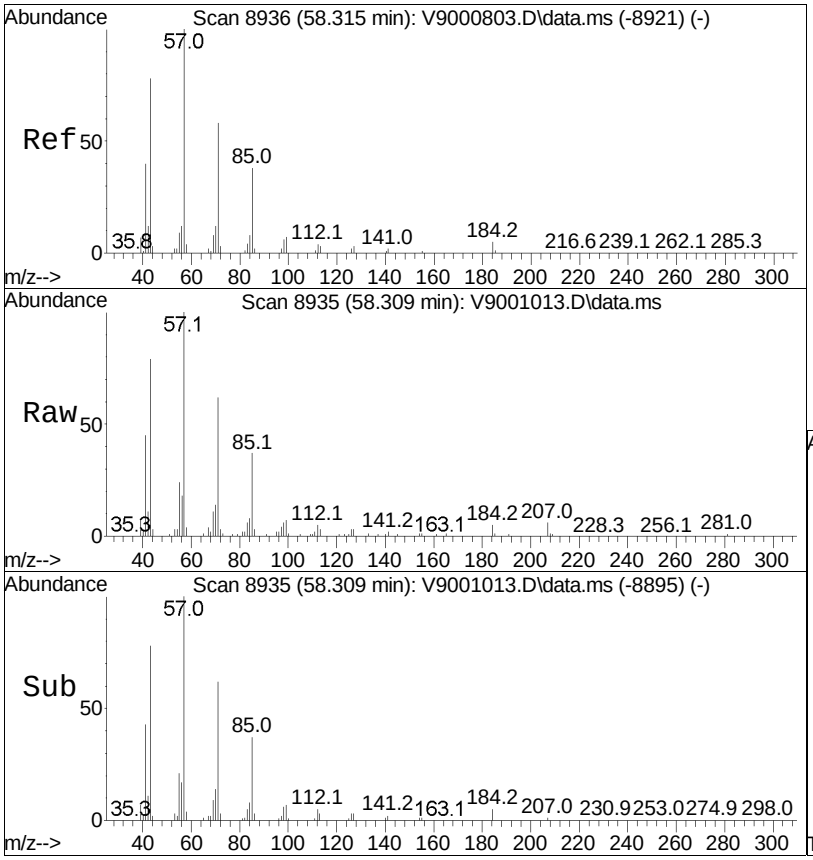


#142
Dodecane
Concen: 35.53 ug/L
RT: 56.20 min Scan# 8589
Delta R.T. 0.001 min
Lab File: V9001013.D
Acq: 12 Jan 2022 03:40 pm

Tgt Ion: 43 Resp: 65178

Ion	Ratio	Lower	Upper
43	100		
57	122.0	102.2	142.2
71	70.4	49.3	89.3
41	54.3	32.1	72.1

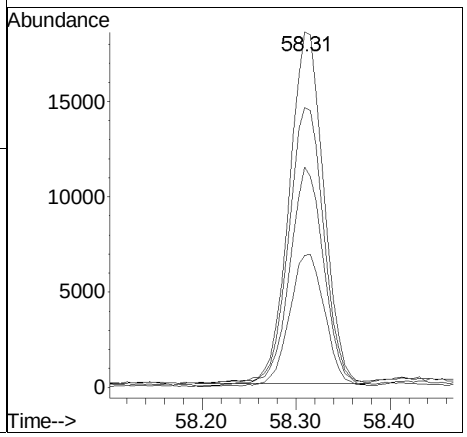


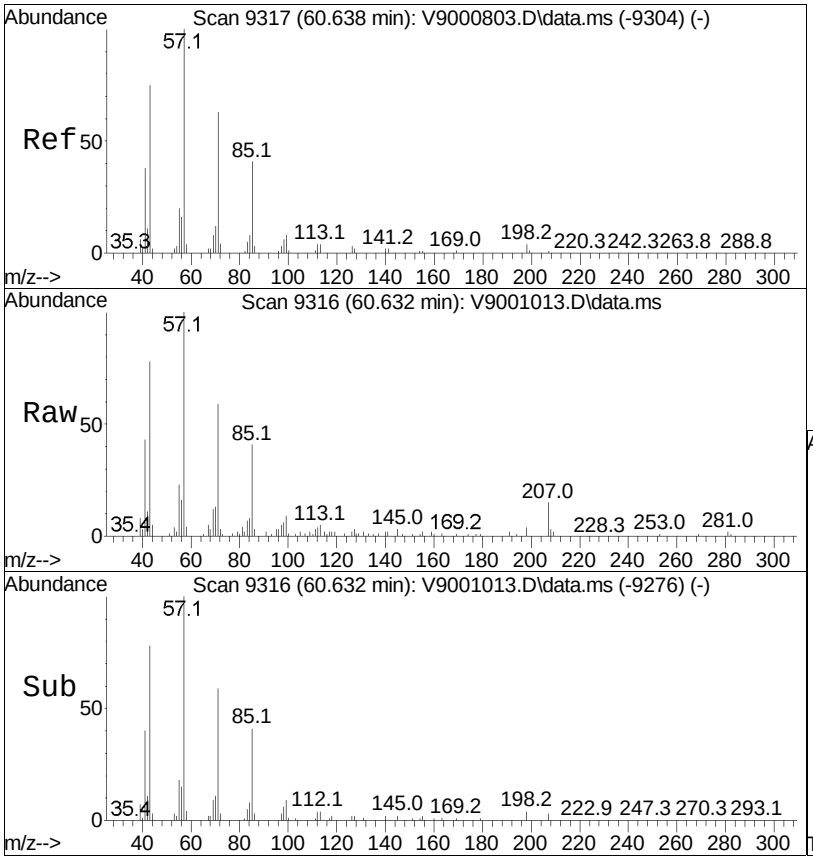


#149
Tridecane
Concen: 24.07 ug/L
RT: 58.31 min Scan# 8935
Delta R.T. -0.006 min
Lab File: V9001013.D
Acq: 12 Jan 2022 03:40 pm

Tgt Ion: 57 Resp: 47174

Ion	Ratio	Lower	Upper
57	100		
43	78.8	59.6	99.6
71	62.0	42.3	82.3
85	37.2	18.0	58.0

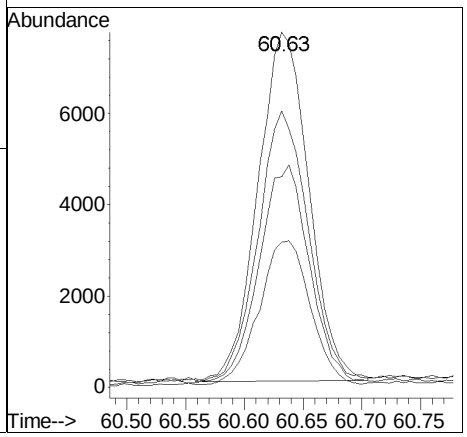




#152
Tetradecane
Concen: 15.07 ug/L
RT: 60.63 min Scan# 9316
Delta R.T. -0.006 min
Lab File: V9001013.D
Acq: 12 Jan 2022 03:40 pm

Tgt Ion: 57 Resp: 23098

Ion	Ratio	Lower	Upper
57	100		
43	77.8	55.8	95.8
71	59.3	41.5	81.5
85	40.9	20.3	60.3



Batch Quality Control

Method Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001009.D
Acq On : 12 Jan 2022 01:12 am
Operator : VOA9:RY
Sample : WG1593474-6,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 17 08:25:13 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Chlorobenzene-D5 [IS]	39.07	117	230182	50.000	ug/L	0.00
System Monitoring Compounds						
24) Dibromofluoromethane (...	17.13	113	57849	48.690	ug/L	-0.04
Spiked Amount 50.000	Range 78 - 118		Recovery = 97.38%			
62) Toluene-d8 (surr)	31.23	98	259836	48.221	ug/L	-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 96.44%			
101) 4-Bromofluorobenzene (...	46.54	95	115076	50.829	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 101.66%			
Target Compounds						Qvalue
2) 3-Methyl-1-butene	0.00		0	N.D.	d	
3) Isopentane	0.00		0	N.D.	d	
4) 1-Pentene	0.00		0	N.D.	d	
5) 2-Methyl-1-butene	0.00		0	N.D.	d	
6) Pentane	0.00		0	N.D.	d	
7) trans-2-Pentene	0.00		0	N.D.	d	
8) 2-Methyl-1,3-butadiene	0.00		0	N.D.	d	
9) cis-2-Pentene	0.00		0	N.D.	d	
10) Tertiary butanol	0.00		0	N.D.	d	
11) 2,2-Dimethylbutane	0.00		0	N.D.	d	
12) 4-Methyl-1-pentene	0.00		0	N.D.	d	
13) Cyclopentane	0.00		0	N.D.	d	
14) 2,3-Dimethylbutane	0.00		0	N.D.	d	
15) 2-Methylpentane	0.00		0	N.D.	d	
16) MTBE	0.00		0	N.D.	d	
17) 3-Methylpentane	0.00		0	N.D.	d	
18) 1-Hexene	0.00		0	N.D.	d	
19) Hexane	0.00		0	N.D.	d	
20) Diisopropyl ether	0.00		0	N.D.	d	
21) trans-2-Hexene	0.00		0	N.D.	d	
22) 2-Methyl-2-pentene	0.00		0	N.D.	d	
23) cis-2-Hexene	0.00		0	N.D.	d	
25) Ethyl tertiary butyl e...	0.00		0	N.D.	d	
26) 2,2-Dimethylpentane	0.00		0	N.D.	d	
27) Methylcyclopentane	0.00		0	N.D.	d	
28) 2,4-Dimethylpentane	0.00		0	N.D.	d	
29) 2,2,3-Trimethylbutane	0.00		0	N.D.	d	
30) 1,2-Dichloroethane	0.00		0	N.D.	d	
31) 3,3-Dimethylpentane	0.00		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001009.D
Acq On : 12 Jan 2022 01:12 am
Operator : VOA9:RY
Sample : WG1593474-6,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 17 08:25:13 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Cyclohexane	0.00		0	N.D.	d	
33) 2-Methylhexane	0.00		0	N.D.	d	
34) Benzene	0.00		0	N.D.	d	
35) 2,3-Dimethylpentane	0.00		0	N.D.	d	
36) Thiophene	0.00		0	N.D.	d	
37) 1,1-Dimethylcyclopentane	0.00		0	N.D.	d	
38) 3-Methylhexane	0.00		0	N.D.	d	
39) TAME	0.00		0	N.D.	d	
40) cis-1,3-Dimethylcyclop...	0.00		0	N.D.	d	
41) 3-Ethylpentane	0.00		0	N.D.	d	
43) 1-Heptene/trans-1,2-DMCP	0.00		0	N.D.	d	
44) Isooctane	0.00		0	N.D.	d	
45) trans-3-Heptene	0.00		0	N.D.	d	
46) Heptane	0.00		0	N.D.	d	
48) trans-2-Heptene	0.00		0	N.D.	d	
49) cis-2-Heptene	0.00		0	N.D.	d	
50) 2,2-Dimethylhexane	0.00		0	N.D.	d	
51) Methylcyclohexane	0.00		0	N.D.	d	
52) 2,5-Dimethylhexane	0.00		0	N.D.	d	
53) 2,4-Dimethylhexane	0.00		0	N.D.	d	
54) Ethylcyclopentane	0.00		0	N.D.	d	
55) 2,2,3-Trimethylpentane	0.00		0	N.D.	d	
57) 2,3,4-Trimethylpentane	0.00		0	N.D.	d	
58) 2,3,3-Trimethylpentane	0.00		0	N.D.	d	
59) 2,3-Dimethylhexane	0.00		0	N.D.	d	
60) 2-Methylheptane	0.00		0	N.D.	d	
61) 4-Methylheptane	0.00		0	N.D.	d	
63) 3-Methylheptane	0.00		0	N.D.	d	
65) 3-Ethylhexane	0.00		0	N.D.	d	
66) Toluene	0.00		0	N.D.	d	
67) 2-Methylthiophene	0.00		0	N.D.	d	
68) trans-1,4-Dimethylcycl...	0.00		0	N.D.	d	
69) 3-Methylthiophene	0.00		0	N.D.	d	
70) 1-Octene	0.00		0	N.D.	d	
71) Octane	0.00		0	N.D.	d	
72) trans-1,2-Dimethylcycl...	0.00		0	N.D.	d	
73) 1,2-Dibromoethane	0.00		0	N.D.	d	
75) cis-2-Octene	0.00		0	N.D.	d	
76) Isopropylcyclopentane	0.00		0	N.D.	d	
77) cis-1,2-Dimethylcycloh...	0.00		0	N.D.	d	
78) 2,5-Dimethylheptane	0.00		0	N.D.	d	

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001009.D
Acq On : 12 Jan 2022 01:12 am
Operator : VOA9:RY
Sample : WG1593474-6,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 17 08:25:13 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
79) 3,5-Dimethylheptane	0.00		0		N.D.	d
80) 3,3-Dimethylheptane	0.00		0		N.D.	d
81) 1,1,4-Trimethylcyclohe...	0.00		0		N.D.	d
82) 2,3-Dimethylheptane	0.00		0		N.D.	d
83) 3,4-Dimethylheptane	0.00		0		N.D.	d
84) 4-Methyloctane	0.00		0		N.D.	d
85) 2-Methyloctane	0.00		0		N.D.	d
86) Ethylbenzene	0.00		0		N.D.	d
88) 2-Ethylthiophene	0.00		0		N.D.	d
89) 3-Methyloctane	0.00		0		N.D.	d
90) 3,3-Diethylpentane	0.00		0		N.D.	d
91) p/m-Xylene	0.00		0		N.D.	d
92) 1-Nonene	0.00		0		N.D.	d
93) trans-3-Nonene	0.00		0		N.D.	d
94) cis-3-Nonene	0.00		0		N.D.	d
95) Nonane	0.00		0		N.D.	d
96) Styrene	0.00		0		N.D.	d
98) o-Xylene	0.00		0		N.D.	d
99) 2-Nonene	0.00		0		N.D.	d
100) Isopropylcyclohexane	0.00		0		N.D.	d
102) Isopropylbenzene	0.00		0		N.D.	d
103) 3,3-Dimethyloctane	0.00		0		N.D.	d
104) n-Propylbenzene	0.00		0		N.D.	d
105) 2-Methylnonane	0.00		0		N.D.	d
106) 3-Methylnonane	0.00		0		N.D.	d
107) 1-Methyl-3-ethylbenzene	0.00		0		N.D.	d
108) 1-Methyl-4-ethylbenzene	0.00		0		N.D.	d
109) 1,3,5-Trimethylbenzene	0.00		0		N.D.	d
110) 1-Decene	0.00		0		N.D.	d
111) Isobutylcyclohexane	0.00		0		N.D.	d
112) 1-Methyl-2-ethylbenzene	0.00		0		N.D.	d
113) Decane	0.00		0		N.D.	d
114) tert-Butylbenzene	0.00		0		N.D.	d
115) 1,2,4-Trimethylbenzene	0.00		0		N.D.	d
116) Isobutylbenzene	0.00		0		N.D.	d
117) sec-Butylbenzene	0.00		0		N.D.	d
118) 1-Methyl-3-isopropylbe...	0.00		0		N.D.	d
119) 1-Methyl-4-isopropylbe...	0.00		0		N.D.	d
120) 1,2,3-Trimethylbenzene	0.00		0		N.D.	d
121) 1-Methyl-2-isopropylbe...	0.00		0		N.D.	d
122) Indan	0.00		0		N.D.	d

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001009.D
Acq On : 12 Jan 2022 01:12 am
Operator : VOA9:RY
Sample : WG1593474-6,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 17 08:25:13 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
123) 1,3-Diethylbenzene	0.00		0	N.D.	d	
124) 1-Methyl-3-propylbenzene	0.00		0	N.D.	d	
125) Indene	0.00		0	N.D.	d	
126) 1-Methyl-4-propylbenzene	0.00		0	N.D.	d	
127) n-Butylbenzene	0.00		0	N.D.	d	
128) 1,2-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
129) 1,2-Diethylbenzene	0.00		0	N.D.	d	
130) 1-Methyl-2-propylbenzene	0.00		0	N.D.	d	
131) 1,4-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
132) Undecane	0.00		0	N.D.	d	
133) 1,3-Dimethyl-4-ethylbe...	0.00		0	N.D.	d	
134) 1,3-Dimethyl-5-ethylbe...	0.00		0	N.D.	d	
135) 1,3-Dimethyl-2-ethylbe...	0.00		0	N.D.	d	
136) 1,2-Dimethyl-3-ethylbe...	0.00		0	N.D.	d	
137) 1,2,4,5-Tetramethylben...	0.00		0	N.D.	d	
138) 1,2,3,5-Tetramethylben...	0.00		0	N.D.	d	
139) Pentylbenzene	0.00		0	N.D.	d	
140) 1,2,3,4-Tetramethylben...	0.00		0	N.D.	d	
141) 1,3-DM-5-tert-Butylben...	0.00		0	N.D.	d	
142) Dodecane	0.00		0	N.D.	d	
143) 1,3,5-Triethylbenzene	0.00		0	N.D.	d	
144) Naphthalene	0.00		0	N.D.	d	
145) Benzothiophene	0.00		0	N.D.	d	
146) 1,2,4-Triethylbenzene	0.00		0	N.D.	d	
147) Hexylbenzene	0.00		0	N.D.	d	
148) MMT	0.00		0	N.D.	d	
149) Tridecane	0.00		0	N.D.	d	
150) 2-Methylnaphthalene	0.00		0	N.D.	d	
151) 1-Methylnaphthalene	0.00		0	N.D.	d	
152) Tetradecane	0.00		0	N.D.	d	
153) Pentadecane	0.00		0	N.D.	d	

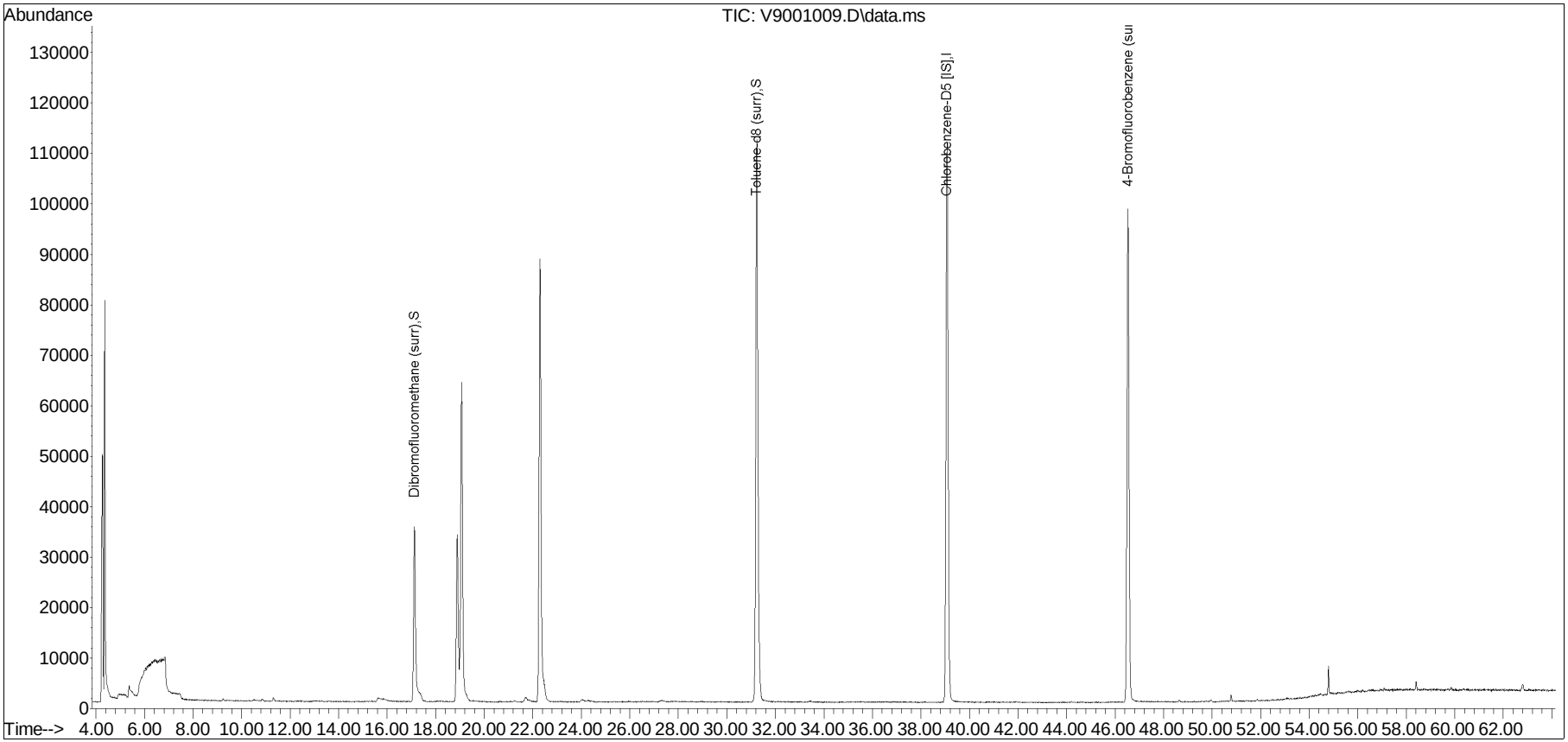
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001009.D
Acq On : 12 Jan 2022 01:12 am
Operator : VOA9:RY
Sample : WG1593474-6,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 17 08:25:13 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_NEW-NHS - PIANO



LCS Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001006.D
Acq On : 11 Jan 2022 09:38 pm
Operator : VOA9:RY
Sample : WG1593474-3,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 12 08:11:24 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Chlorobenzene-D5 [IS]	39.07	117	241880	50.000	ug/L		0.00
System Monitoring Compounds							
24) Dibromofluoromethane (...	17.13	113	63510	50.870	ug/L		-0.04
Spiked Amount 50.000	Range 78 - 118		Recovery = 101.74%				
62) Toluene-d8 (surr)	31.23	98	278397	49.167	ug/L		-0.01
Spiked Amount 50.000	Range 87 - 113		Recovery = 98.33%				
101) 4-Bromofluorobenzene (...	46.53	95	124915	52.507	ug/L		0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 105.01%				
Target Compounds							Qvalue
4) 1-Pentene	8.87	42	22063	18.546	ug/L		98
6) Pentane	9.24	43	29095	15.742	ug/L		95
10) Tertiary butanol	10.73	59	27724M4	68.108	ug/L		
13) Cyclopentane	12.97	70	14653	18.077	ug/L	#	38
15) 2-Methylpentane	13.18	43	39031	18.756	ug/L		98
16) MTBE	13.50	73	55410	18.252	ug/L		97
17) 3-Methylpentane	14.17	57	36931	20.287	ug/L		96
18) 1-Hexene	14.77	56	21234	19.895	ug/L		95
19) Hexane	15.38	57	30787	18.899	ug/L		98
20) Diisopropyl ether	15.69	45	58012	19.312	ug/L		97
25) Ethyl tertiary butyl e...	17.17	59	59520	19.734	ug/L		94
27) Methylcyclopentane	17.72	56	41637	20.907	ug/L		99
28) 2,4-Dimethylpentane	17.88	43	37446	20.281	ug/L		95
32) Cyclohexane	20.63	56	35855	21.596	ug/L		98
33) 2-Methylhexane	21.08	43	41617	20.507	ug/L		98
34) Benzene	21.27	78	82569	19.637	ug/L		99
35) 2,3-Dimethylpentane	21.39	56	34383	20.561	ug/L		99
38) 3-Methylhexane	21.90	43	33147	19.093	ug/L		98
39) TAME	22.27	73	59929	17.352	ug/L		99
44) Isooctane	23.34	57	91151	21.737	ug/L		99
46) Heptane	24.08	43	34079	22.640	ug/L		98
51) Methylcyclohexane	26.51	83	38945	21.519	ug/L		96
60) 2-Methylheptane	30.53	57	38491	21.214	ug/L		99
63) 3-Methylheptane	31.27	43	38321	21.223	ug/L		96
66) Toluene	31.59	91	91812	19.593	ug/L		100
71) Octane	33.80	43	42802	22.510	ug/L		97
86) Ethylbenzene	40.69	91	102928	19.753	ug/L		97
91) p/m-Xylene	41.95	91	159669	40.529	ug/L		100
95) Nonane	43.38	43	39935	19.378	ug/L		99

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001006.D
Acq On : 11 Jan 2022 09:38 pm
Operator : VOA9:RY
Sample : WG1593474-3,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 12 08:11:24 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) o-Xylene	44.22	91	82679	20.489	ug/L	98
102) Isopropylbenzene	46.55	105	106753	21.169	ug/L	99
104) n-Propylbenzene	48.99	91	123180	21.181	ug/L	99
107) 1-Methyl-3-ethylbenzene	49.57	105	102700	21.065	ug/L	100
108) 1-Methyl-4-ethylbenzene	49.73	105	101260	21.663	ug/L	100
109) 1,3,5-Trimethylbenzene	50.29	105	88409	21.928	ug/L	95
110) 1-Decene	50.41	41	18058	18.716	ug/L	99
112) 1-Methyl-2-ethylbenzene	50.60	105	105519	21.382	ug/L	98
113) Decane	50.78	43	40974	23.398	ug/L	95
115) 1,2,4-Trimethylbenzene	51.44	105	89450	20.855	ug/L	99
117) sec-Butylbenzene	51.69	105	119047	22.706	ug/L	99
126) 1-Methyl-4-propylbenzene	53.23	105	136556	21.835	ug/L	99
127) n-Butylbenzene	53.22	91	110851	22.124	ug/L	98
129) 1,2-Diethylbenzene	53.44	119	48770	21.729	ug/L	98
132) Undecane	53.97	57	48560	22.402	ug/L	97
134) 1,3-Dimethyl-5-ethylbe...	54.15	119	110119	23.433	ug/L	99
139) Pentylbenzene	55.72	91	94949	22.793	ug/L	99
142) Dodecane	56.20	43	40452	23.029	ug/L	96

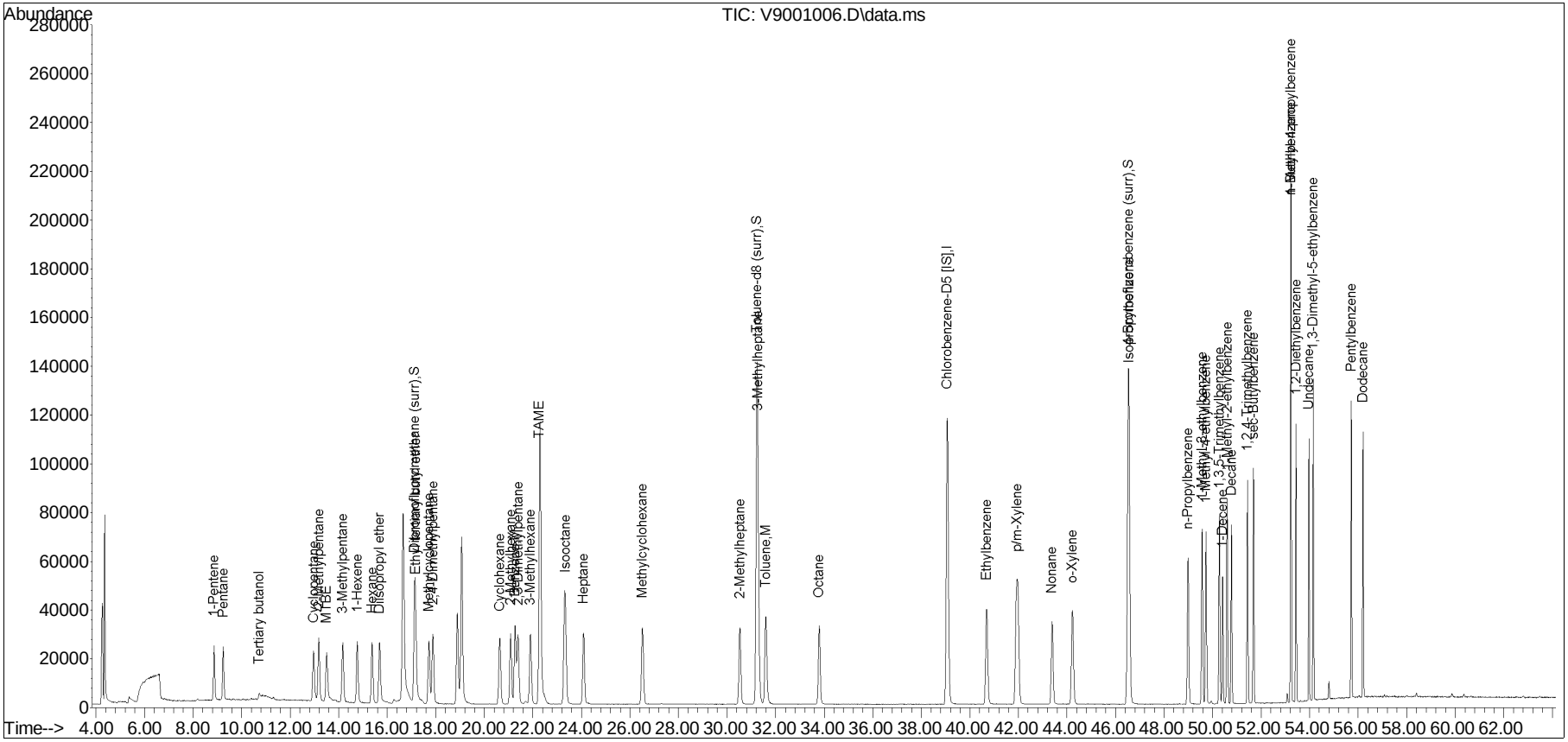
(#) = qualifier out of range (m) = manual integration (+) = signals summed

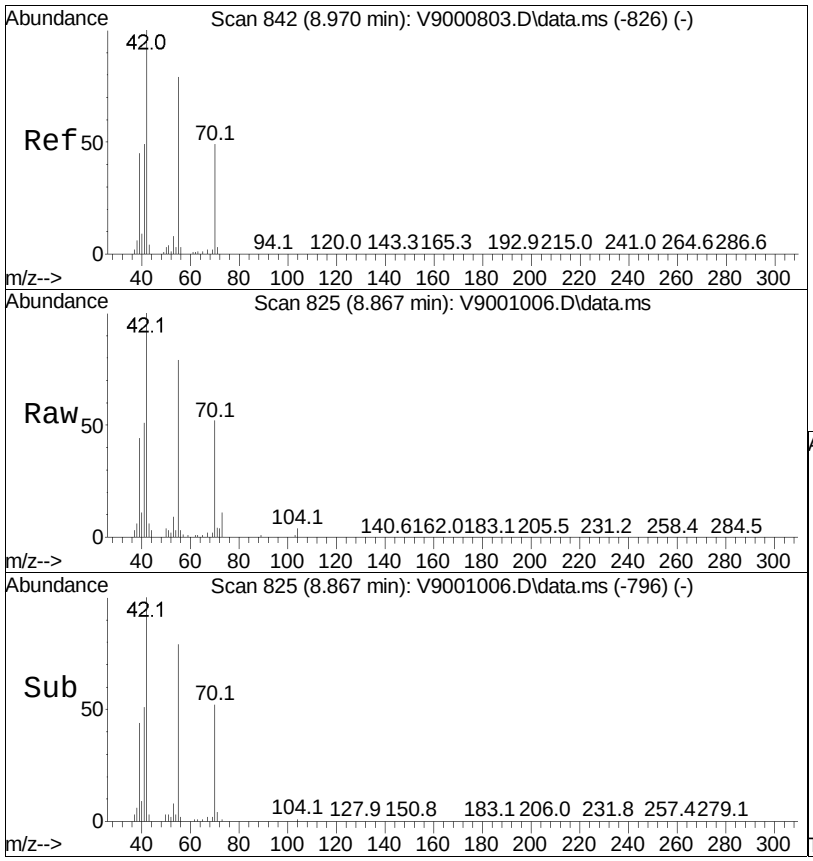
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001006.D
Acq On : 11 Jan 2022 09:38 pm
Operator : VOA9:RY
Sample : WG1593474-3,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 12 08:11:24 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

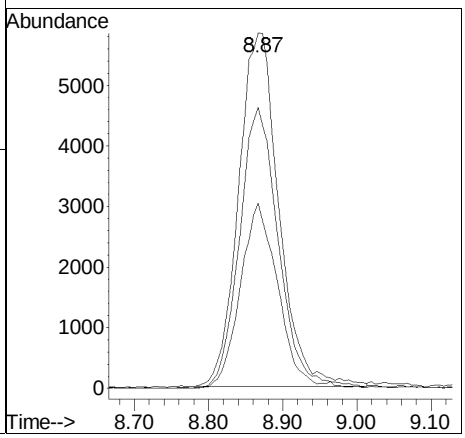


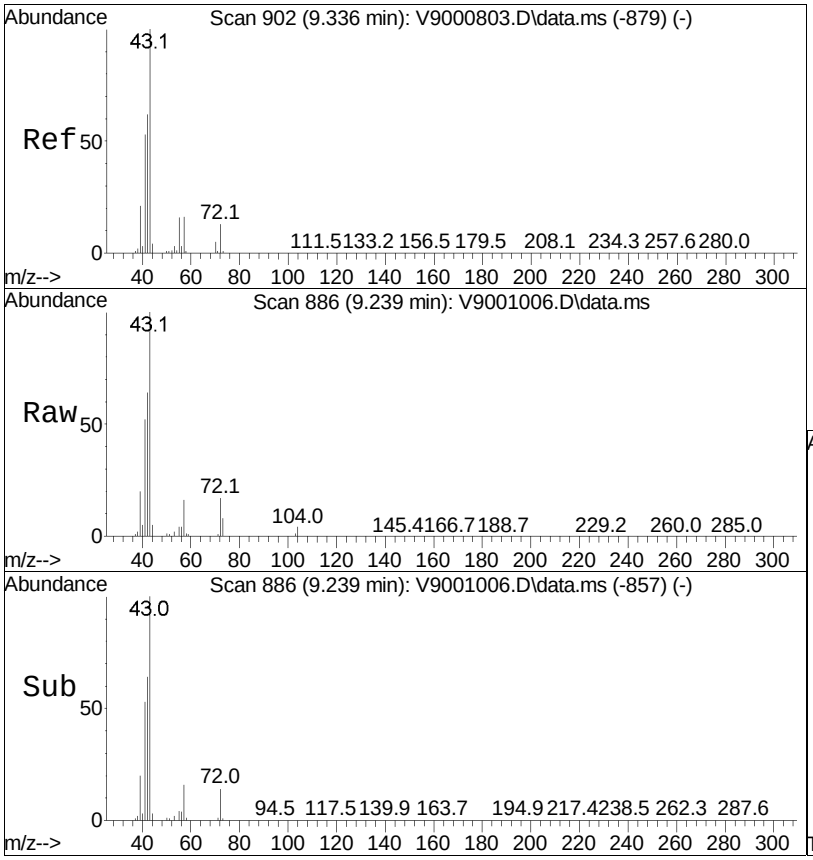


#4
1-Pentene
Concen: 18.55 ug/L
RT: 8.87 min Scan# 825
Delta R.T. -0.073 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 42 Resp: 22063

Ion	Ratio	Lower	Upper
42	100		
55	79.1	56.9	96.9
70	52.2	31.8	71.8

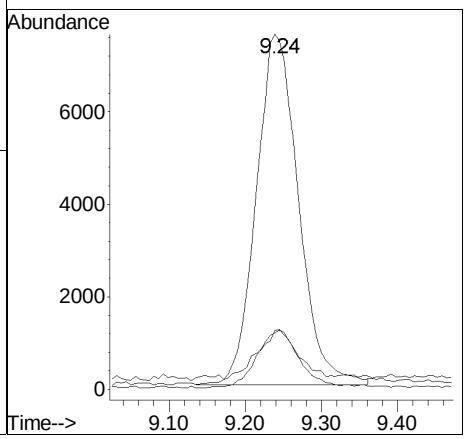


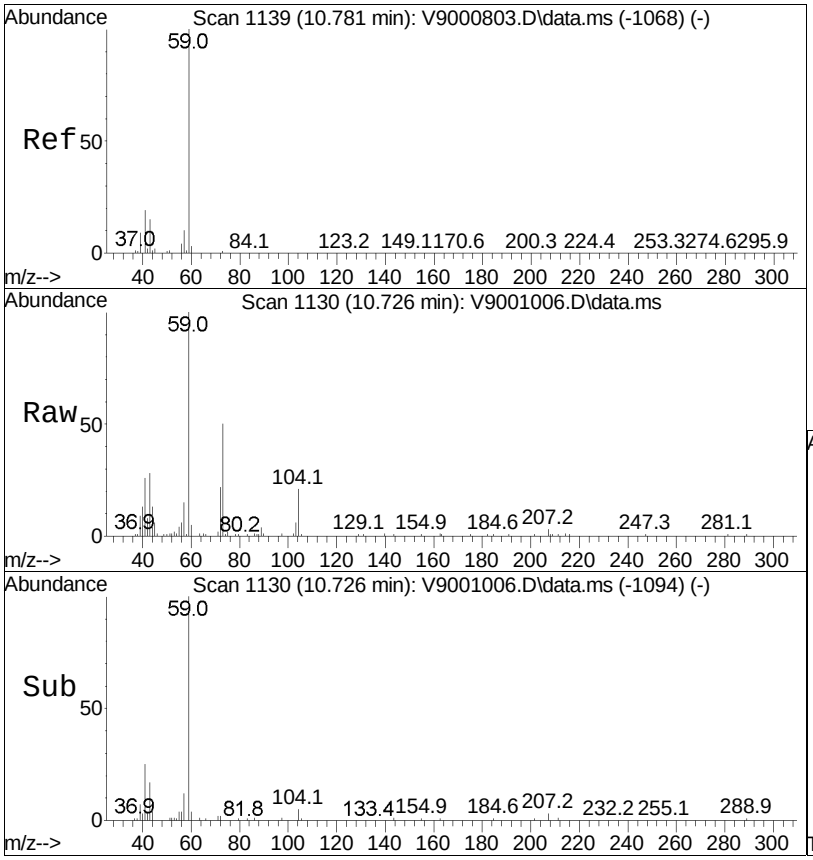


#6
Pentane
Concen: 15.74 ug/L
RT: 9.24 min Scan# 886
Delta R.T. -0.073 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 29095

Ion	Ratio	Lower	Upper
43	100		
57	15.9	0.0	36.4
72	16.5	0.0	32.6

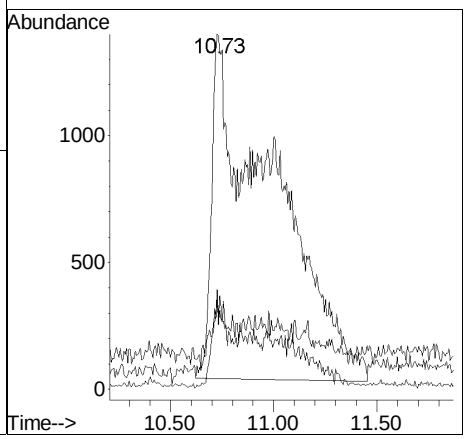


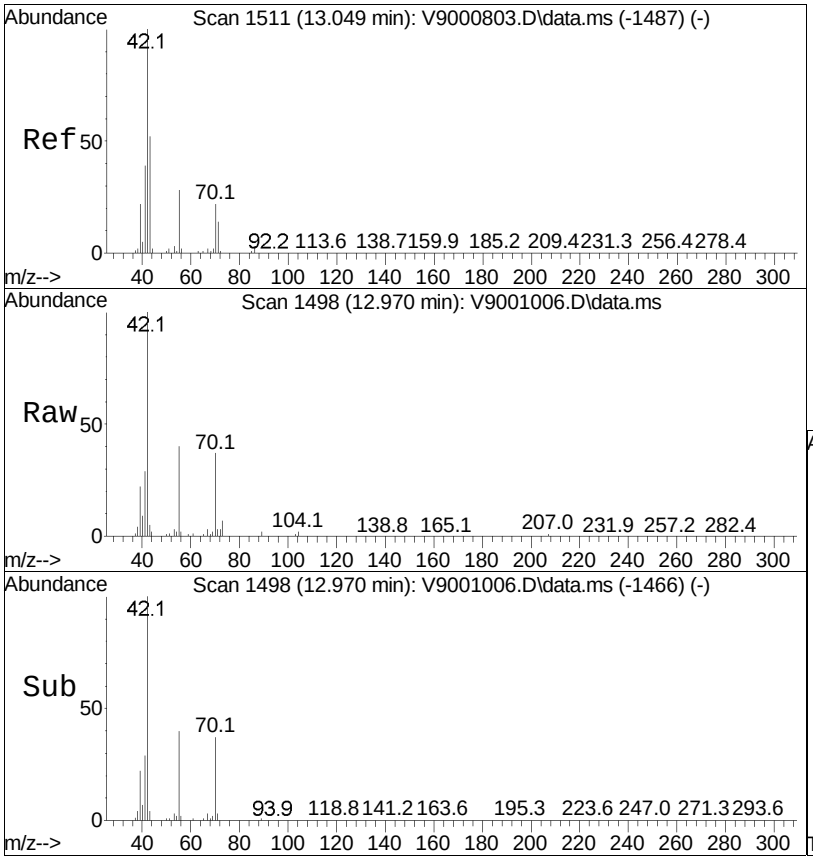


#10
Tertiary butanol
Concen: 68.11 ug/L m
RT: 10.73 min Scan# 1130
Delta R.T. -0.030 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 59 Resp: 27724

Ion	Ratio	Lower	Upper
59	100		
41	25.5	0.8	40.8
43	28.2	0.0	34.8

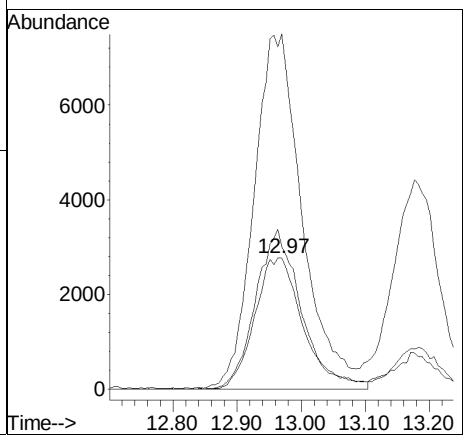


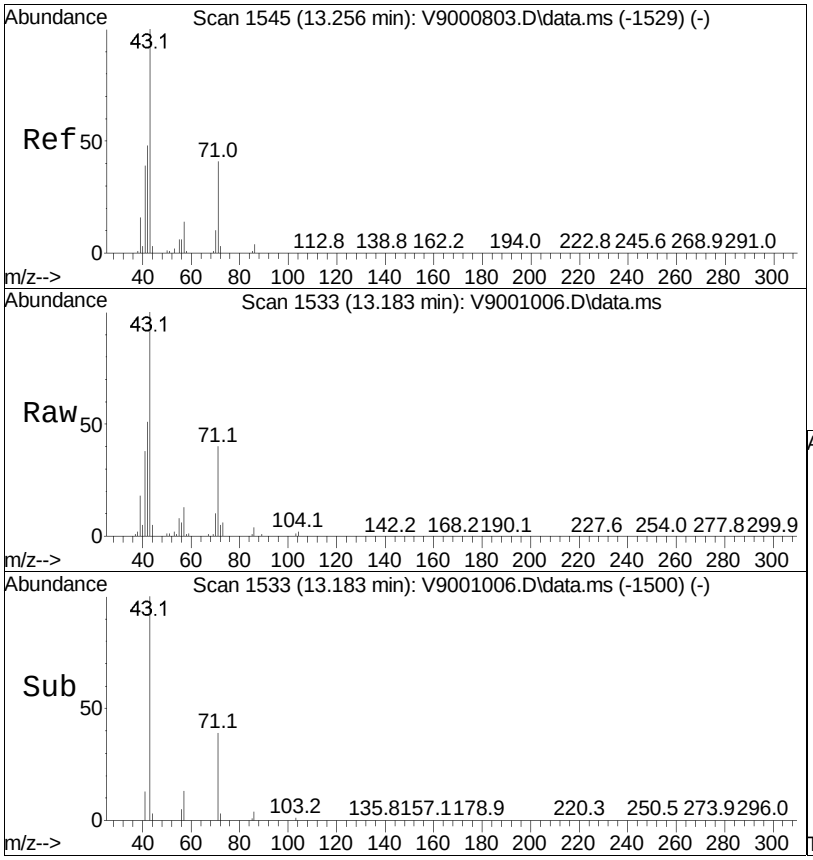


#13
Cyclopentane
Concen: 18.08 ug/L
RT: 12.97 min Scan# 1498
Delta R.T. -0.055 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 70 Resp: 14653

Ion	Ratio	Lower	Upper
70	100		
42	270.5	444.4	484.4#
55	108.8	109.2	149.2#

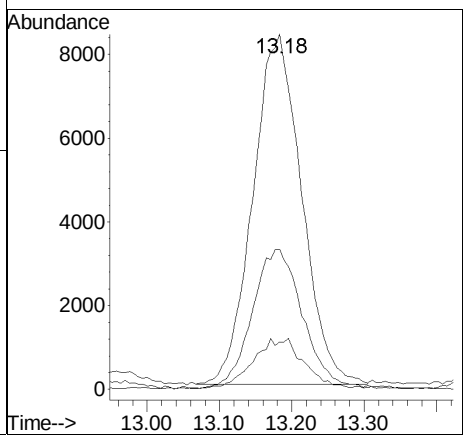


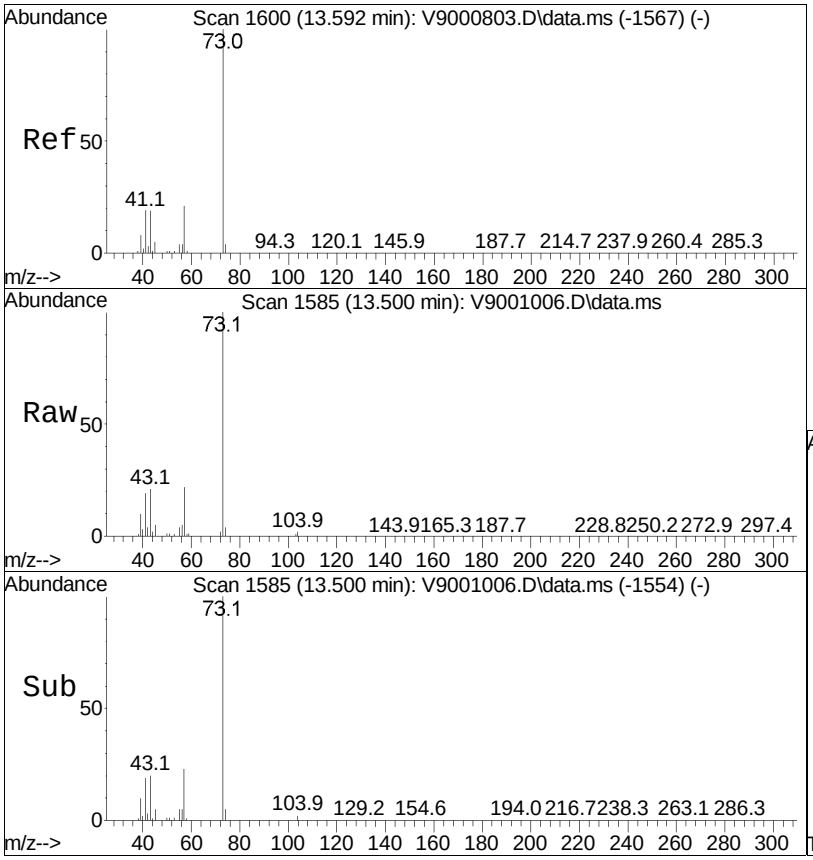


#15
2-Methylpentane
Concen: 18.76 ug/L
RT: 13.18 min Scan# 1533
Delta R.T. -0.049 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 39031

Ion	Ratio	Lower	Upper
43	100		
71	39.5	20.8	60.8
57	13.4	0.0	34.3

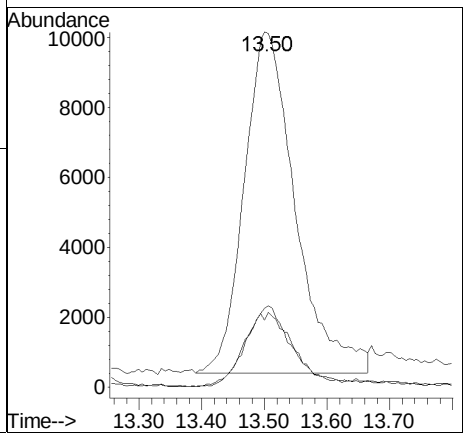


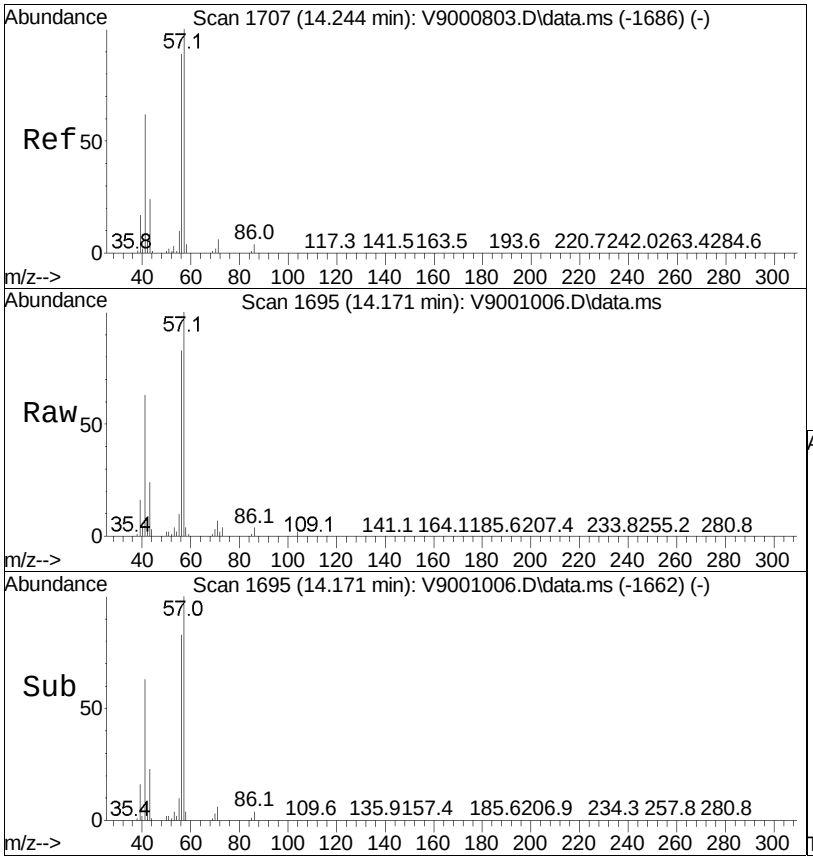


#16
MTBE
Concen: 18.25 ug/L
RT: 13.50 min Scan# 1585
Delta R.T. -0.061 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 73 Resp: 55410

Ion	Ratio	Lower	Upper
73	100		
57	22.3	2.5	42.5
41	18.9	1.4	41.4

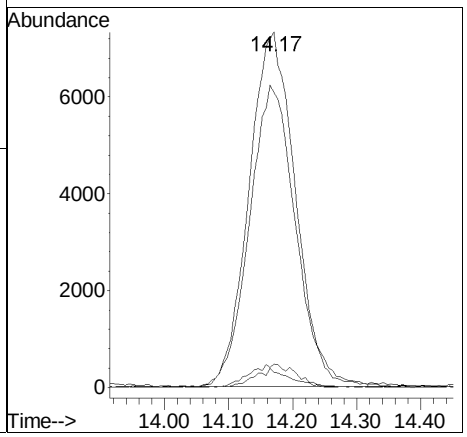


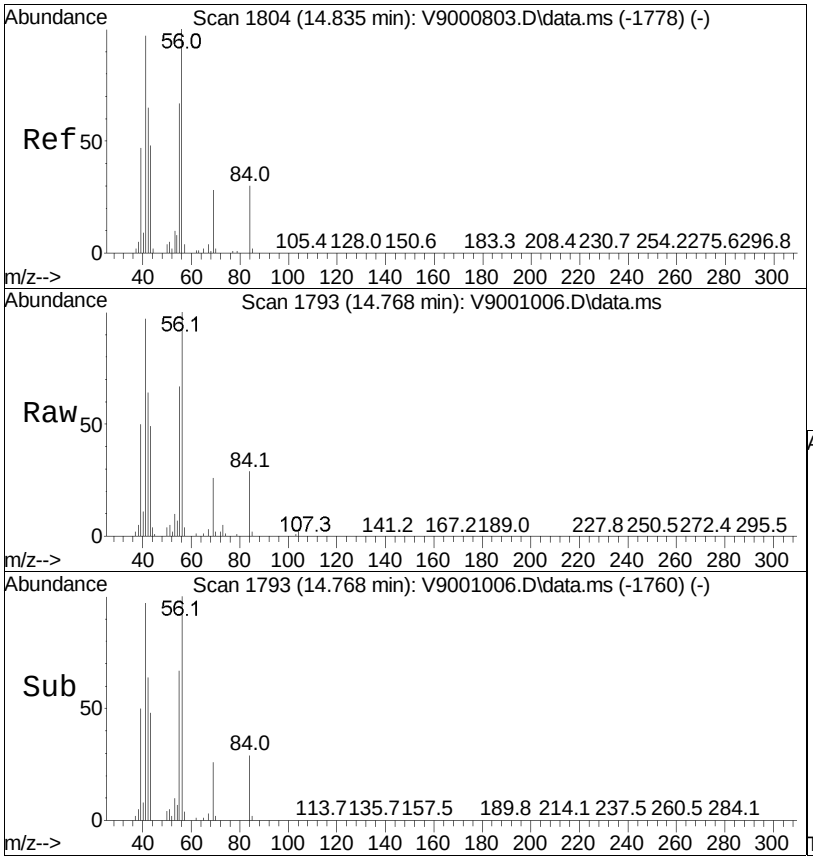


#17
3-Methylpentane
Concen: 20.29 ug/L
RT: 14.17 min Scan# 1695
Delta R.T. -0.049 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 57 Resp: 36931

Ion	Ratio	Lower	Upper
57	100		
56	83.0	67.6	107.6
71	6.6	0.0	26.7
86	4.3	0.0	24.3

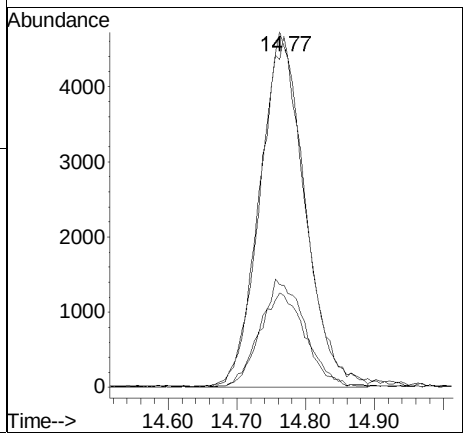


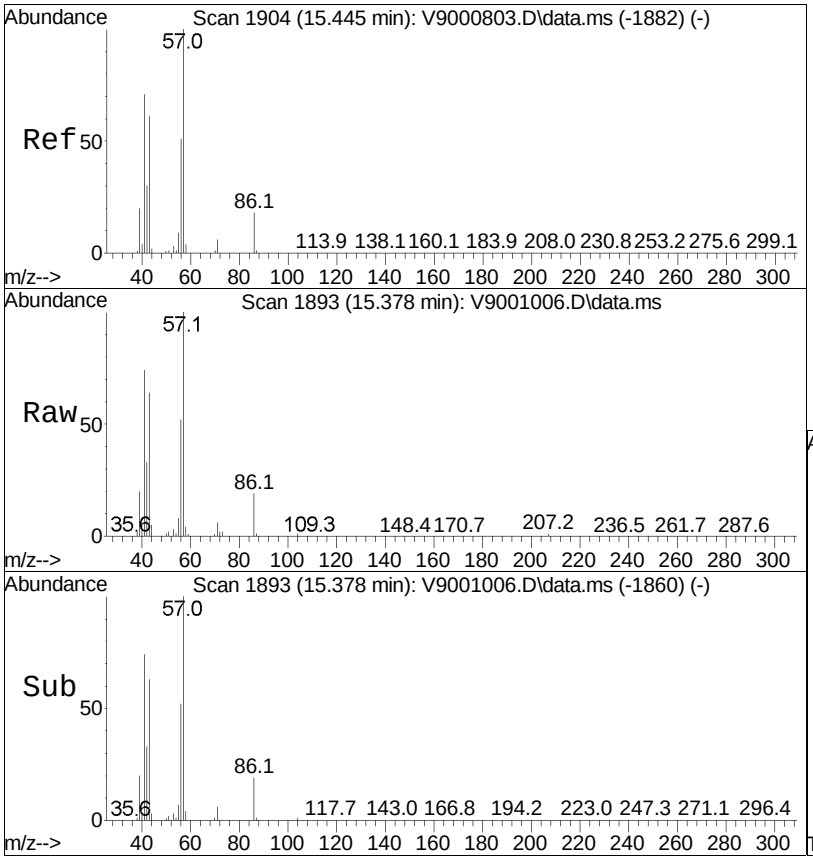


#18
1-Hexene
Concen: 19.90 ug/L
RT: 14.77 min Scan# 1793
Delta R.T. -0.049 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 56 Resp: 21234

Ion	Ratio	Lower	Upper
56	100		
41	97.2	82.9	122.9
84	29.1	10.3	50.3
69	26.2	8.6	48.6

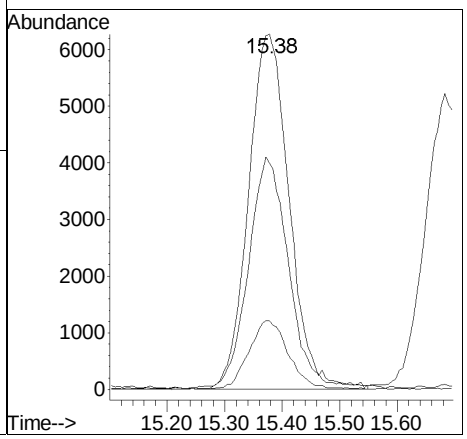


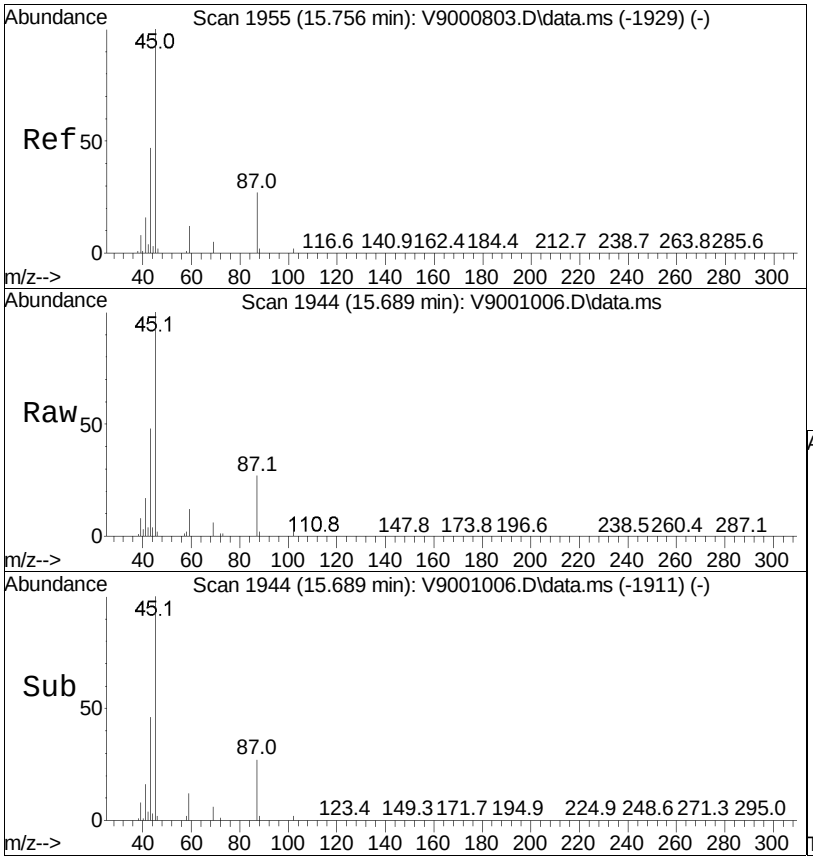


#19
Hexane
Concen: 18.90 ug/L
RT: 15.38 min Scan# 1893
Delta R.T. -0.049 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 57 Resp: 30787

Ion	Ratio	Lower	Upper
57	100		
43	63.7	41.5	81.5
86	19.3	0.0	39.1

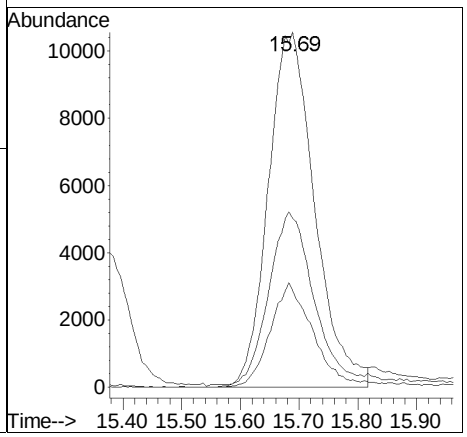


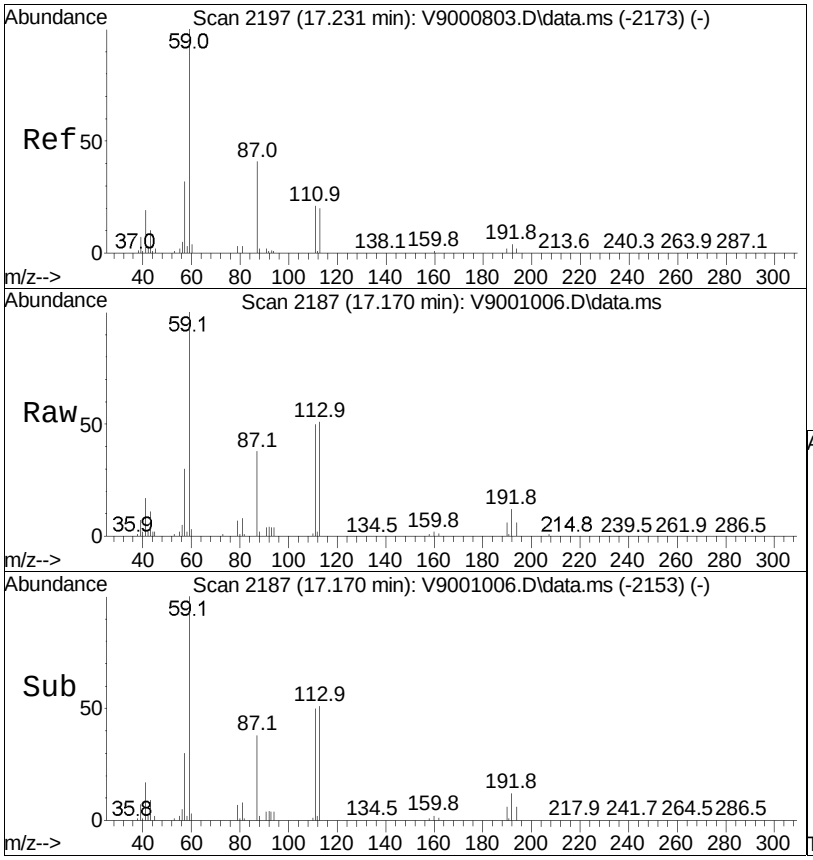


#20
Diisopropyl ether
Concen: 19.31 ug/L
RT: 15.69 min Scan# 1944
Delta R.T. -0.049 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 45 Resp: 58012

Ion	Ratio	Lower	Upper
45	100		
87	27.3	4.7	44.7
43	47.6	26.5	66.5

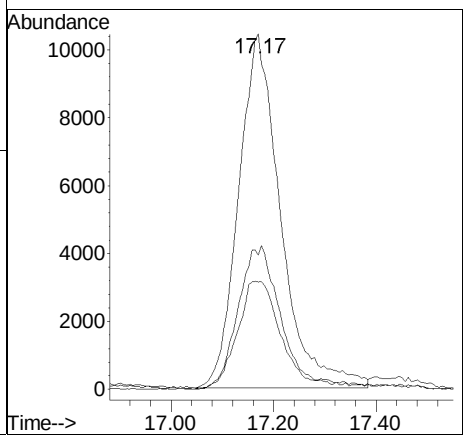


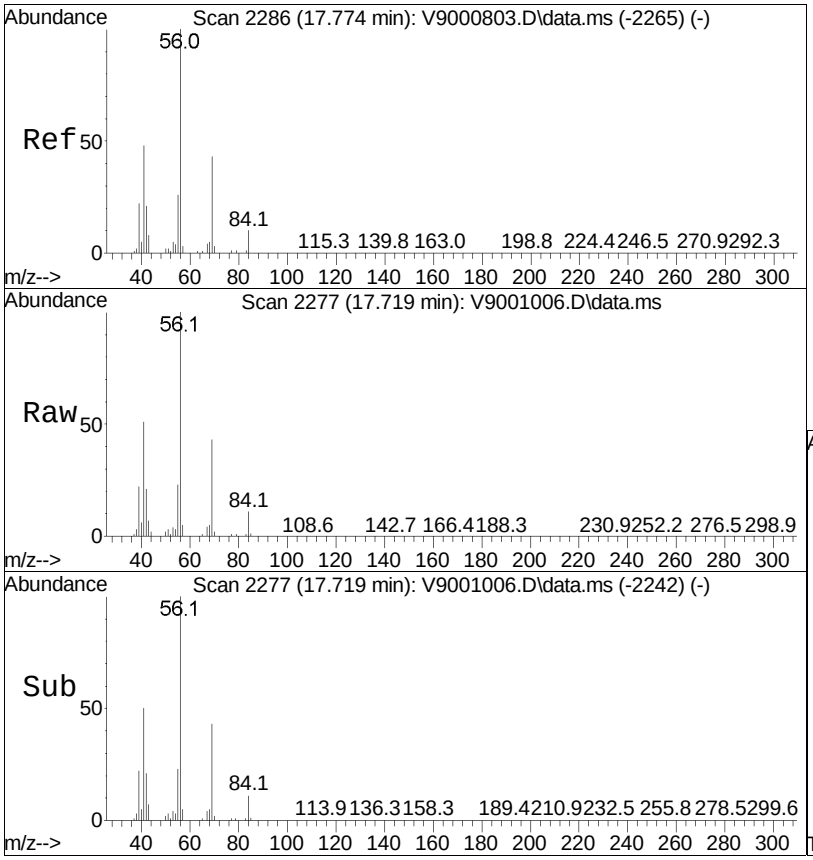


#25
Ethyl tertiary butyl ether
Concen: 19.73 ug/L
RT: 17.17 min Scan# 2187
Delta R.T. -0.042 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 59 Resp: 59520

Ion	Ratio	Lower	Upper
59	100		
87	37.8	22.0	62.0
57	30.2	12.8	52.8

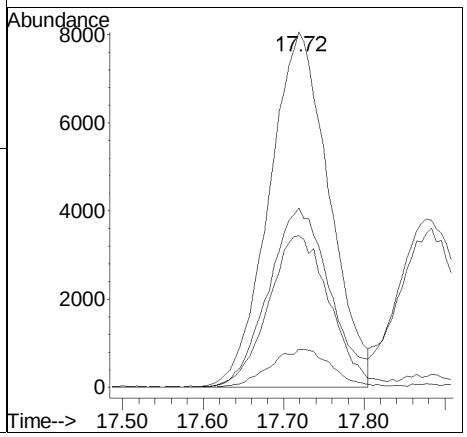


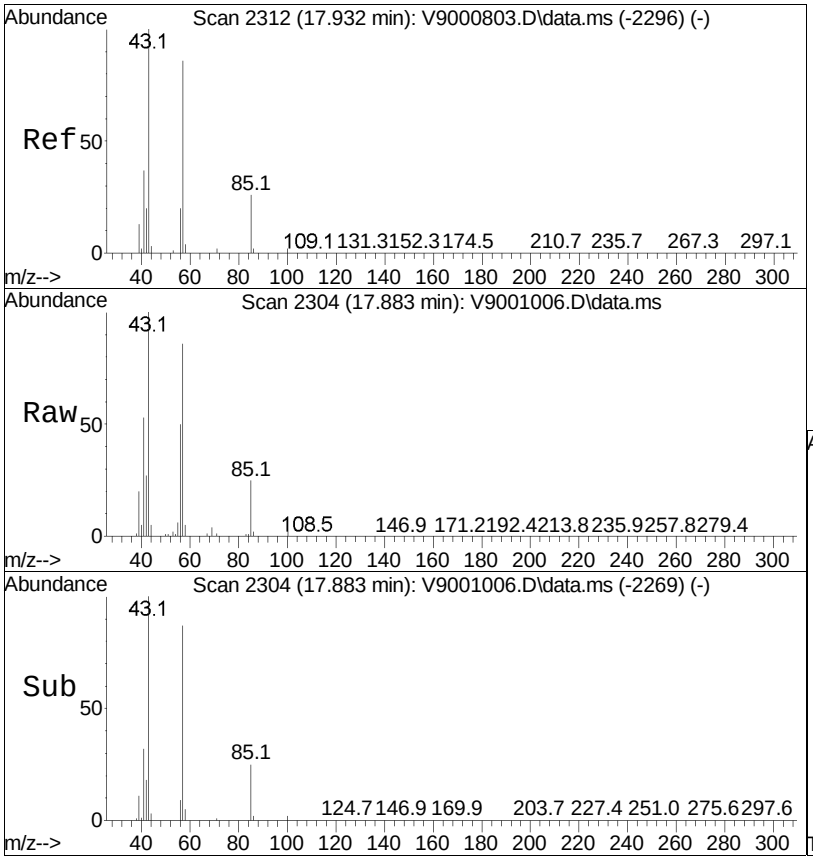


#27
Methylcyclopentane
Concen: 20.91 ug/L
RT: 17.72 min Scan# 2277
Delta R.T. -0.036 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 56 Resp: 41637

Ion	Ratio	Lower	Upper
56	100		
69	42.7	22.9	62.9
41	50.5	30.3	70.3
84	10.8	0.0	29.9

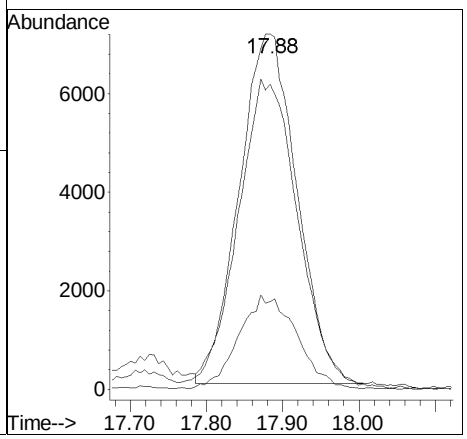


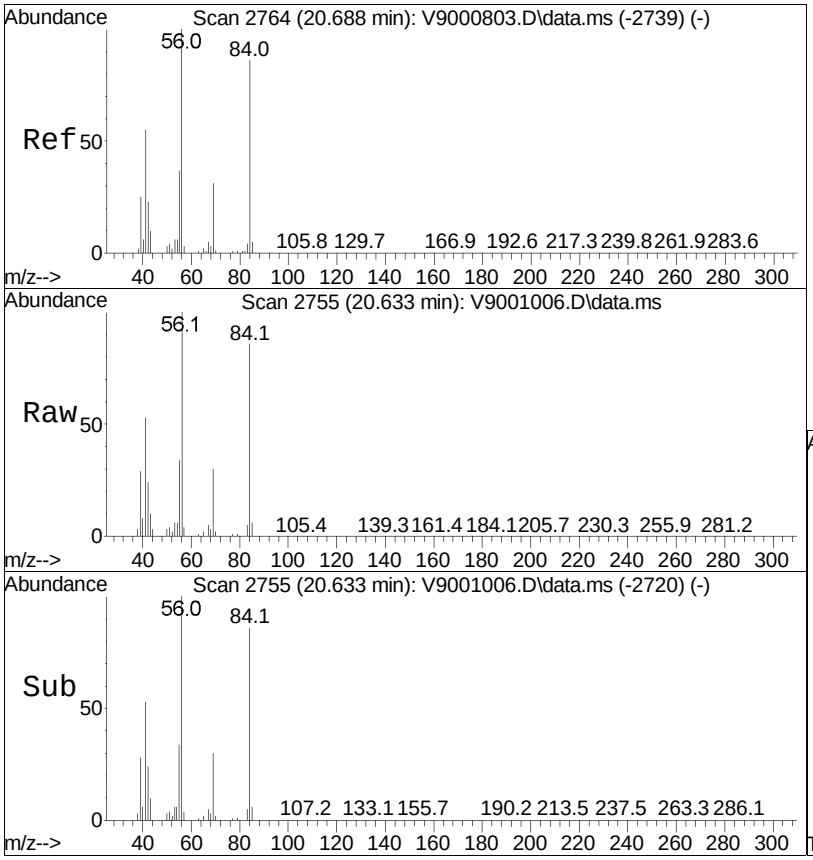


#28
2,4-Dimethylpentane
Concen: 20.28 ug/L
RT: 17.88 min Scan# 2304
Delta R.T. -0.036 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 37446

Ion	Ratio	Lower	Upper
43	100		
57	85.9	70.3	110.3
85	24.7	6.8	46.8

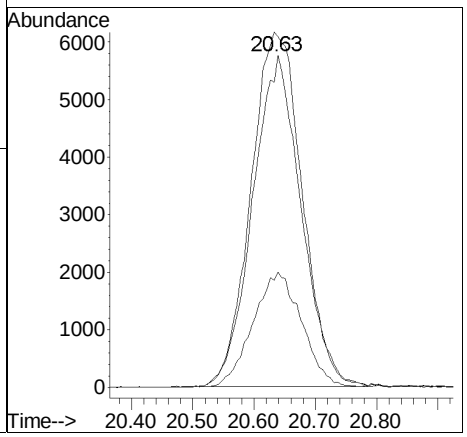


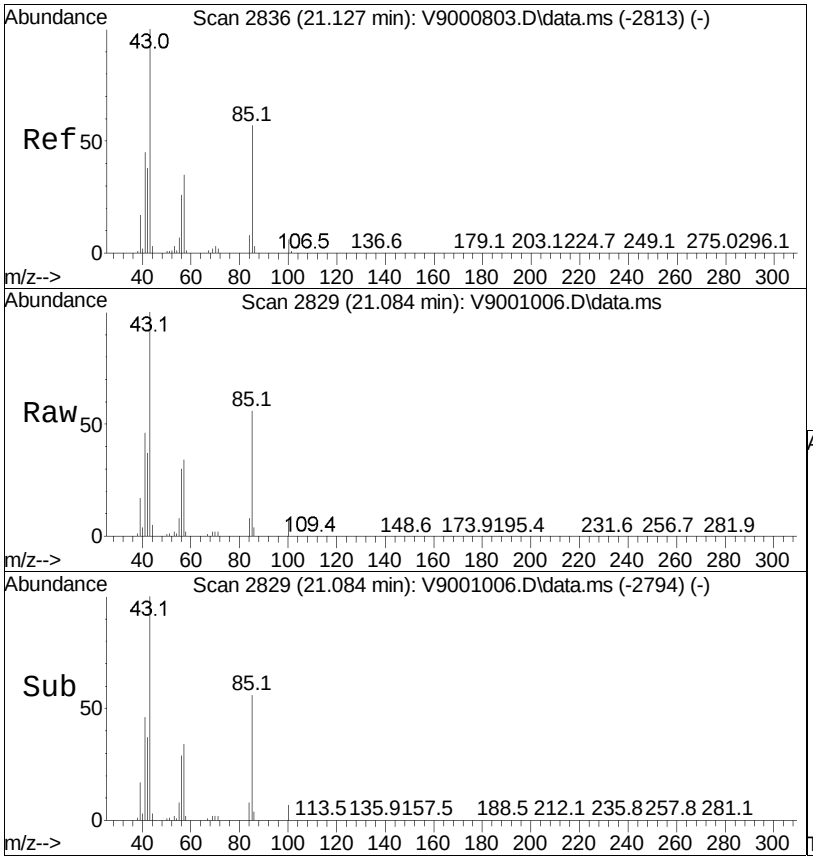


#32
Cyclohexane
Concen: 21.60 ug/L
RT: 20.63 min Scan# 2755
Delta R.T. -0.036 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 56 Resp: 35855

Ion	Ratio	Lower	Upper
56	100		
84	85.8	67.7	107.7
69	30.2	11.1	51.1

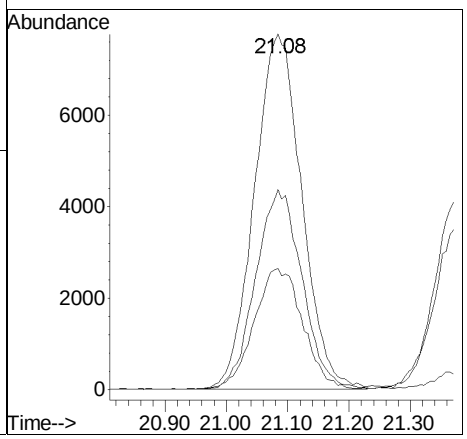


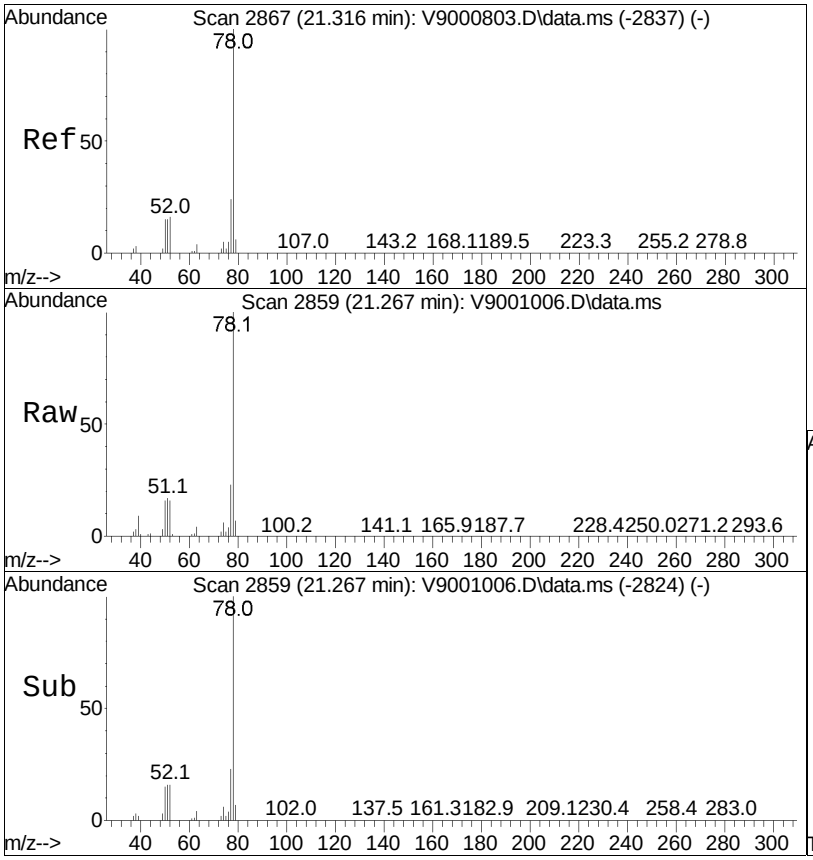


#33
2-Methylhexane
Concen: 20.51 ug/L
RT: 21.08 min Scan# 2829
Delta R.T. -0.036 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 41617

Ion	Ratio	Lower	Upper
43	100		
85	56.3	34.0	74.0
57	34.1	14.6	54.6

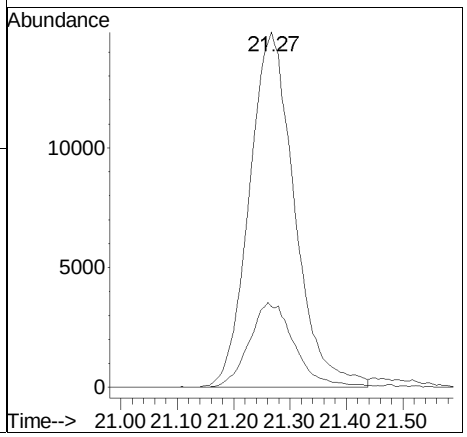


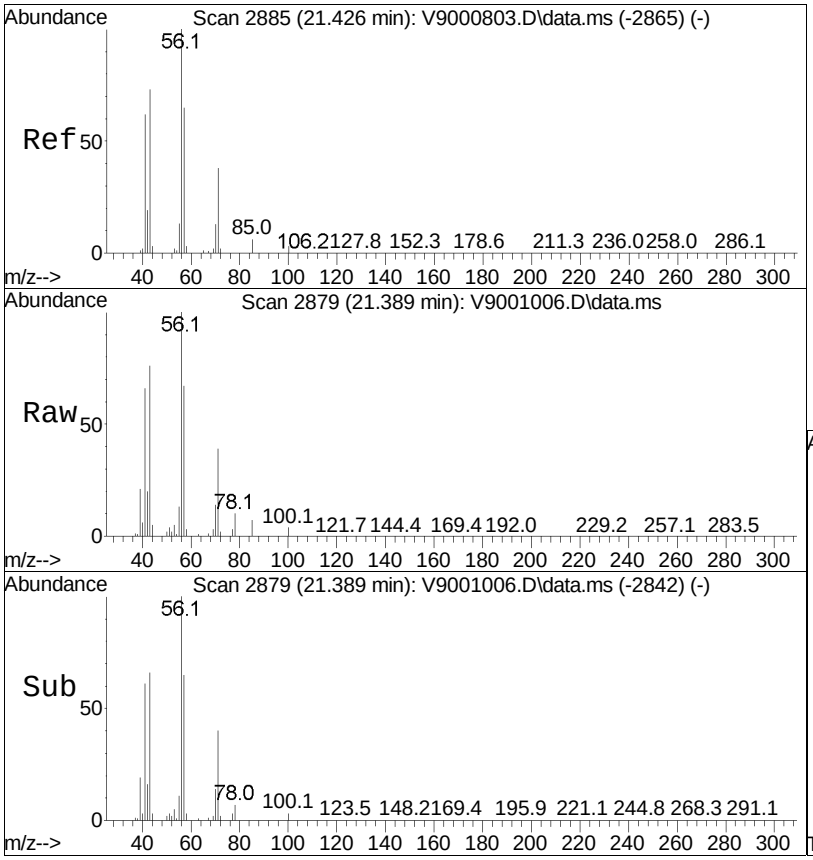


#34
Benzene
Concen: 19.64 ug/L
RT: 21.27 min Scan# 2859
Delta R.T. -0.036 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 78 Resp: 82569

Ion	Ratio	Lower	Upper
78	100		
77	22.7	3.1	43.1

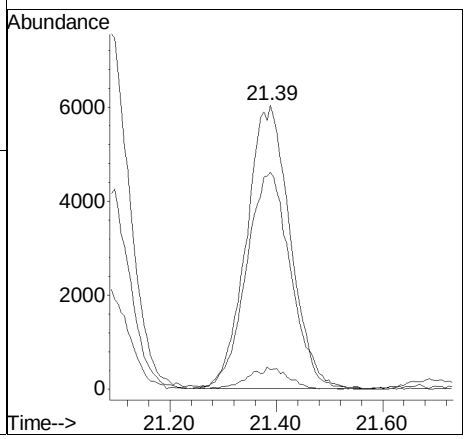


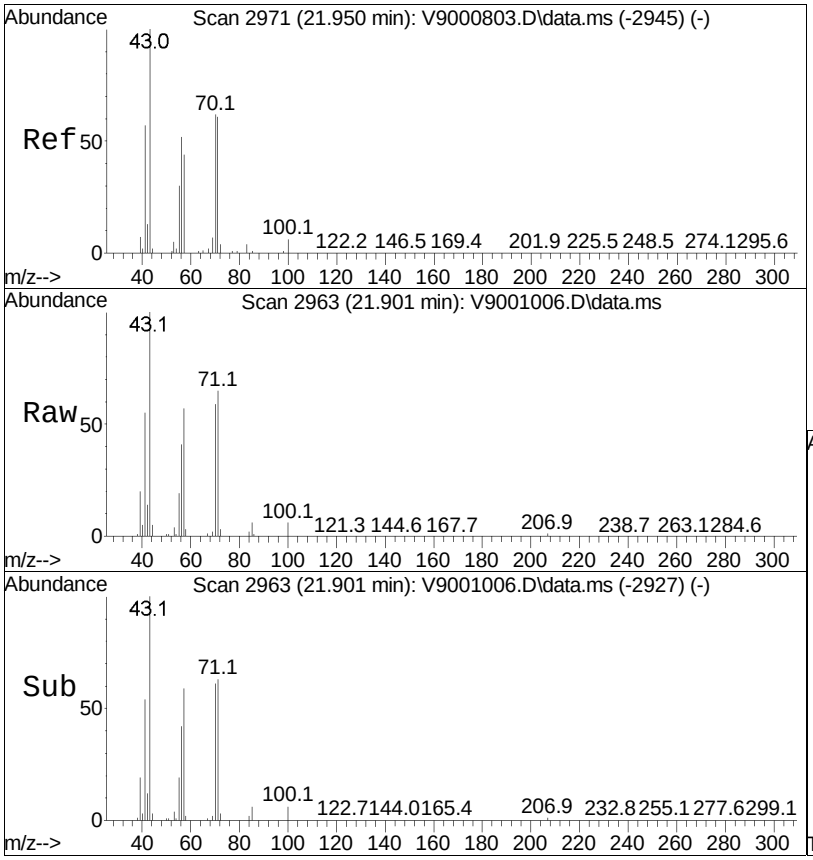


#35
2,3-Dimethylpentane
Concen: 20.56 ug/L
RT: 21.39 min Scan# 2879
Delta R.T. -0.024 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 56 Resp: 34383

Ion	Ratio	Lower	Upper
56	100		
43	76.5	56.9	96.9
85	6.9	0.0	25.7

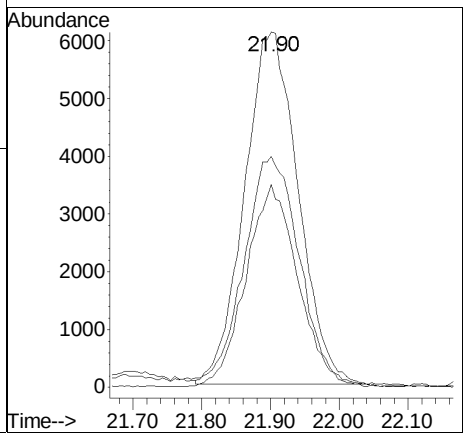


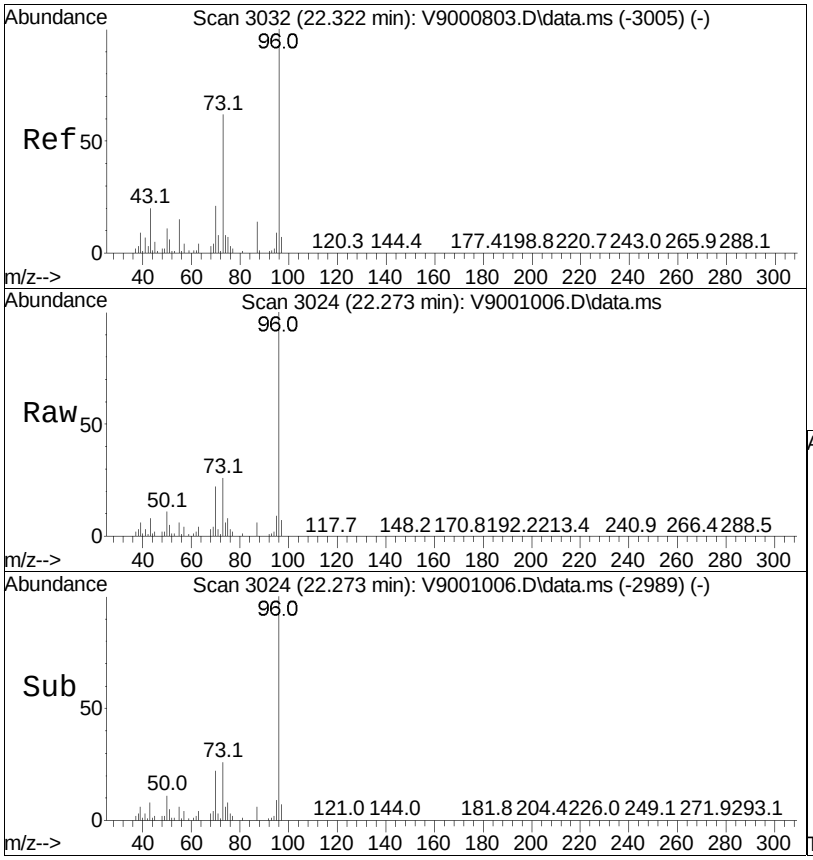


#38
3-Methylhexane
Concen: 19.09 ug/L
RT: 21.90 min Scan# 2963
Delta R.T. -0.030 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 33147

Ion	Ratio	Lower	Upper
43	100		
57	57.1	37.9	77.9
71	65.0	43.4	83.4

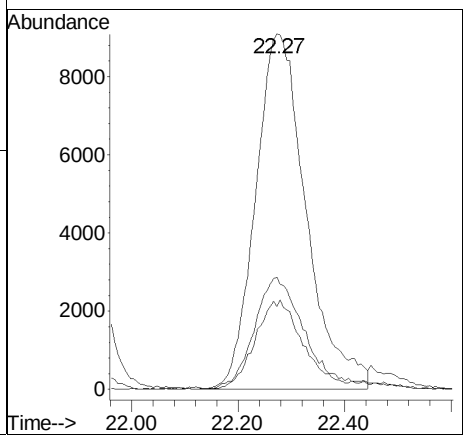


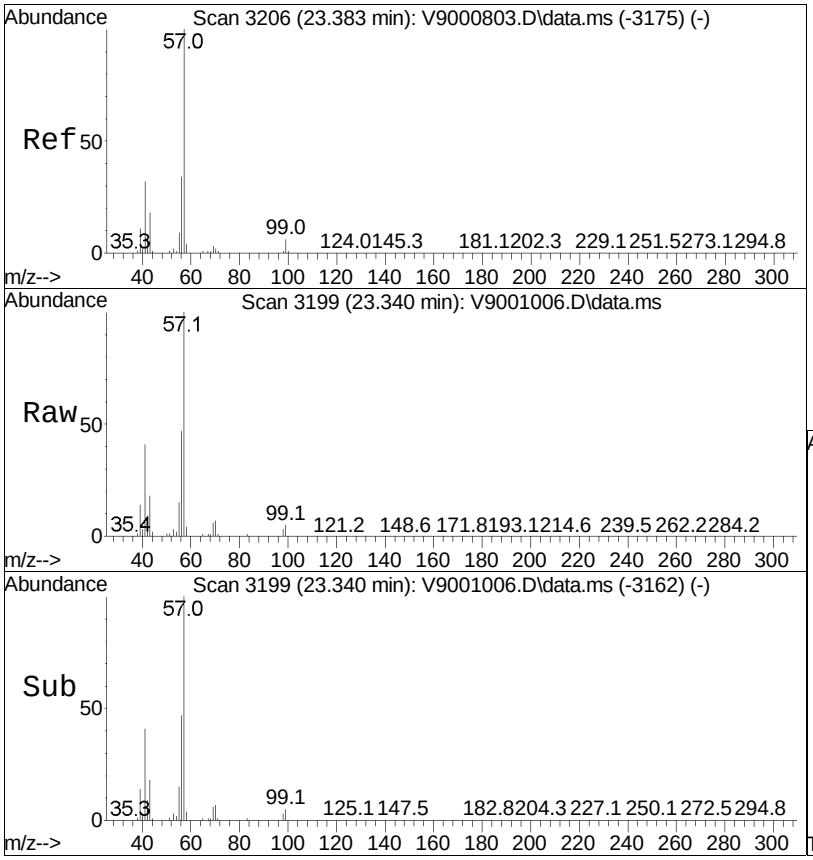


#39
TAME
Concen: 17.35 ug/L
RT: 22.27 min Scan# 3024
Delta R.T. -0.036 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 73 Resp: 59929

Ion	Ratio	Lower	Upper
73	100		
43	31.6	11.3	51.3
55	23.3	4.5	44.5

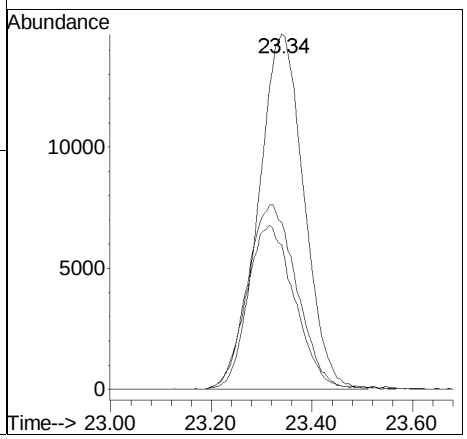


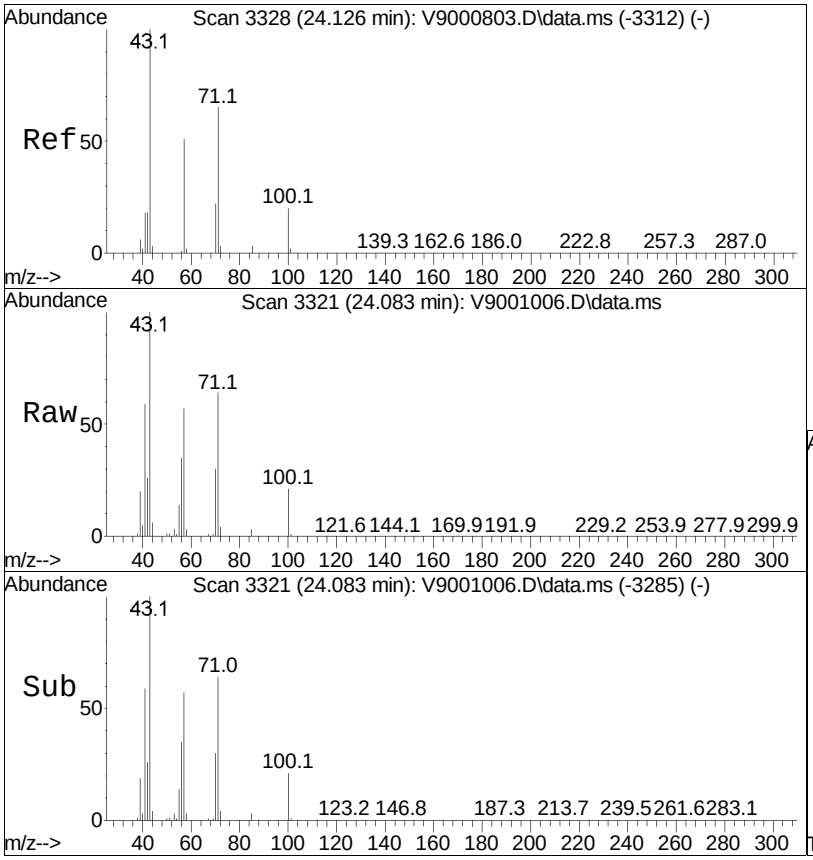


#44
Isooctane
Concen: 21.74 ug/L
RT: 23.34 min Scan# 3199
Delta R.T. -0.024 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 57 Resp: 91151

Ion	Ratio	Lower	Upper
57	100		
41	40.7	21.0	61.0
56	47.0	28.6	68.6

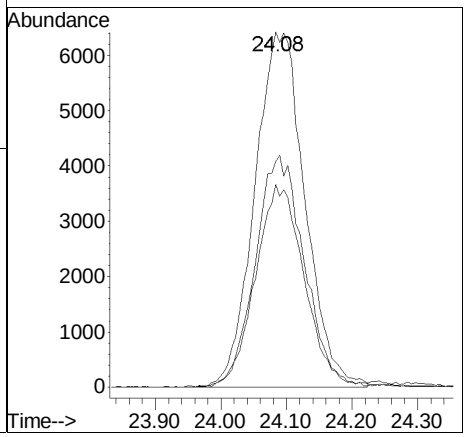


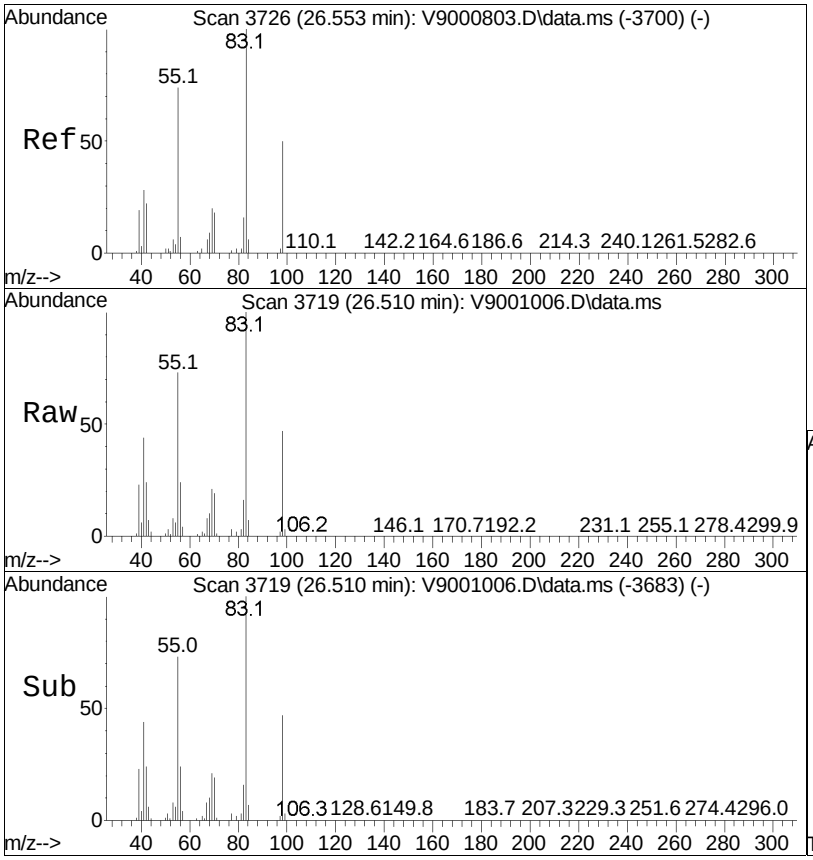


#46
Heptane
Concen: 22.64 ug/L
RT: 24.08 min Scan# 3321
Delta R.T. -0.030 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 34079

Ion	Ratio	Lower	Upper
43	100		
57	57.1	34.6	74.6
71	63.6	44.0	84.0

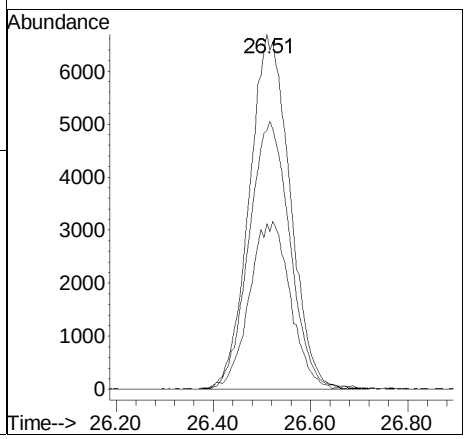


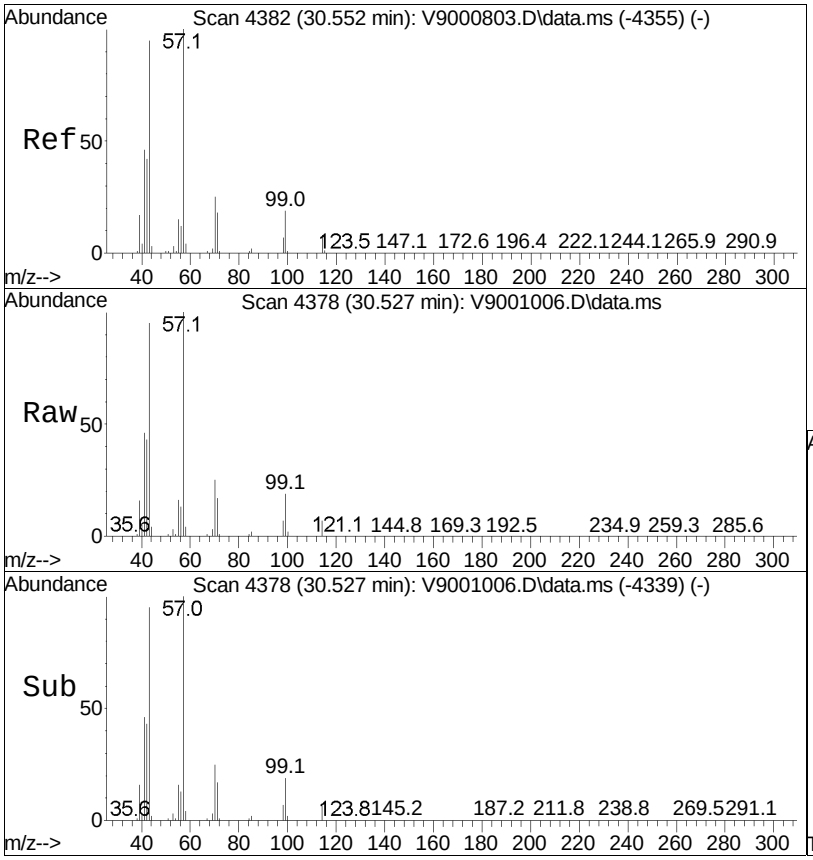


#51
Methylcyclohexane
Concen: 21.52 ug/L
RT: 26.51 min Scan# 3719
Delta R.T. -0.030 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 83 Resp: 38945

Ion	Ratio	Lower	Upper
83	100		
55	72.9	58.3	98.3
98	46.7	26.5	66.5

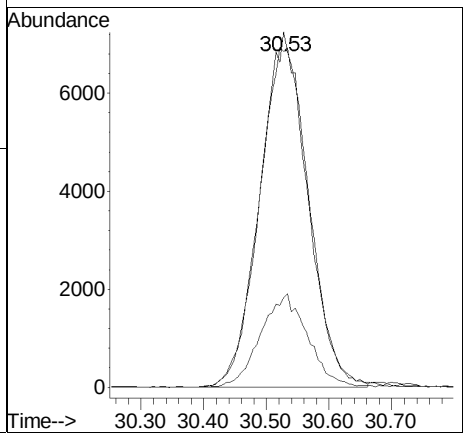


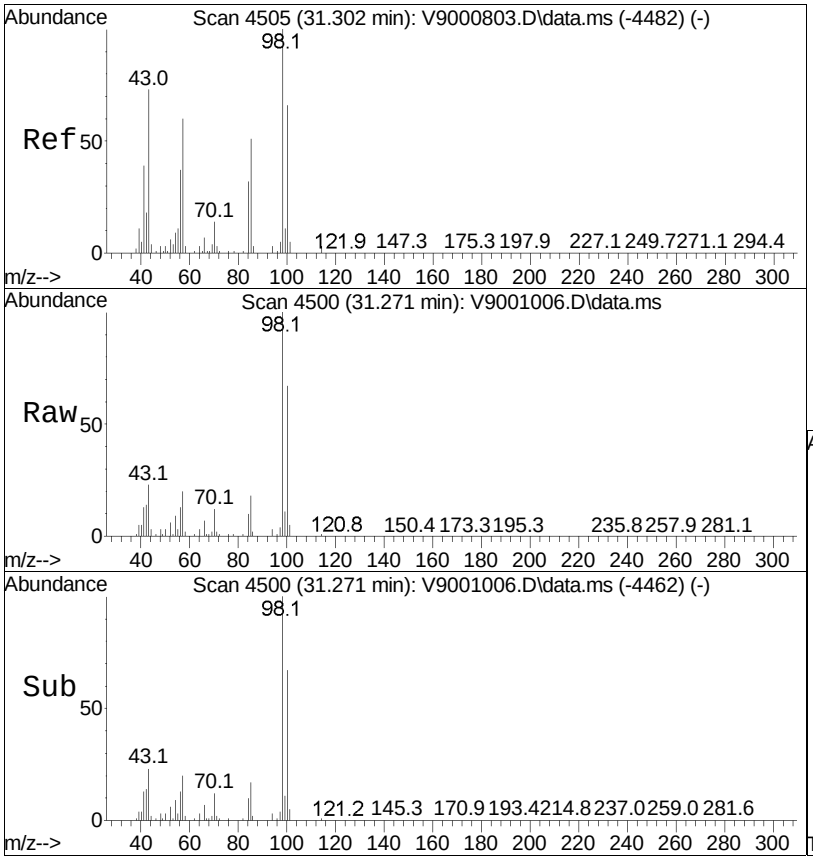


#60
2-Methylheptane
Concen: 21.21 ug/L
RT: 30.53 min Scan# 4378
Delta R.T. -0.012 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 57 Resp: 38491

Ion	Ratio	Lower	Upper
57	100		
43	94.5	74.5	114.5
70	25.2	3.7	43.7

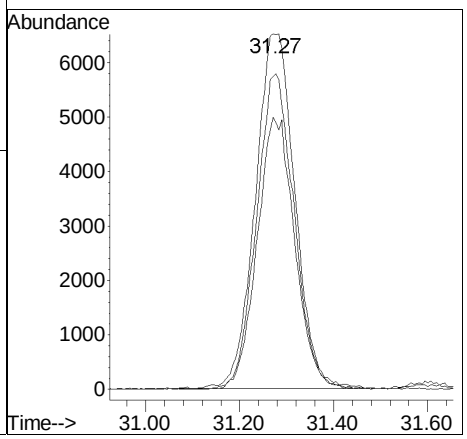


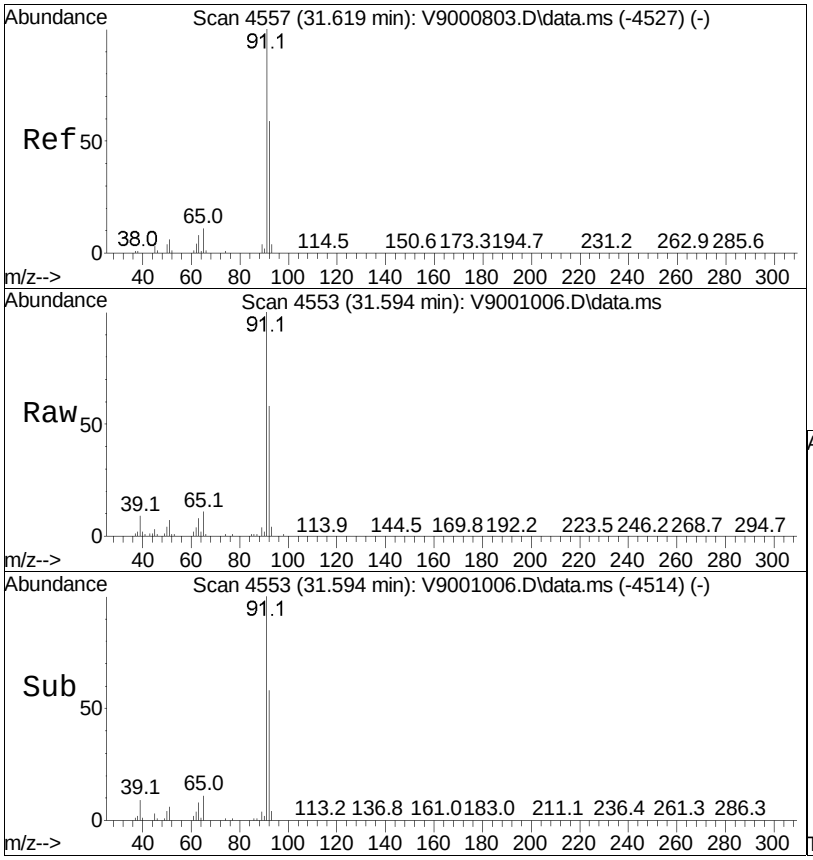


#63
3-Methylheptane
Concen: 21.22 ug/L
RT: 31.27 min Scan# 4500
Delta R.T. -0.018 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 38321

Ion	Ratio	Lower	Upper
43	100		
57	88.0	63.0	103.0
85	76.5	54.0	94.0

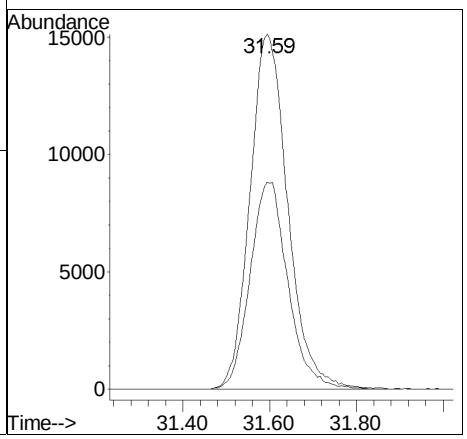


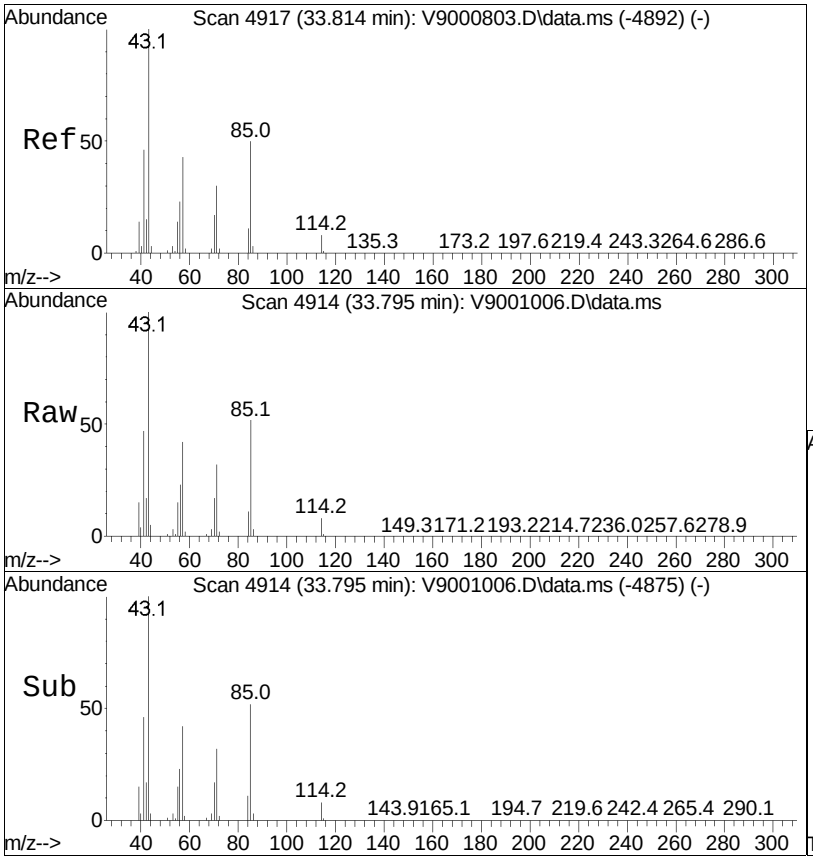


#66
Toluene
Concen: 19.59 ug/L
RT: 31.59 min Scan# 4553
Delta R.T. -0.012 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 91 Resp: 91812

Ion	Ratio	Lower	Upper
91	100		
92	58.3	38.3	78.3

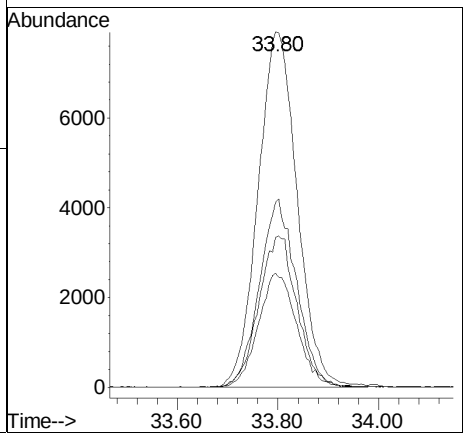


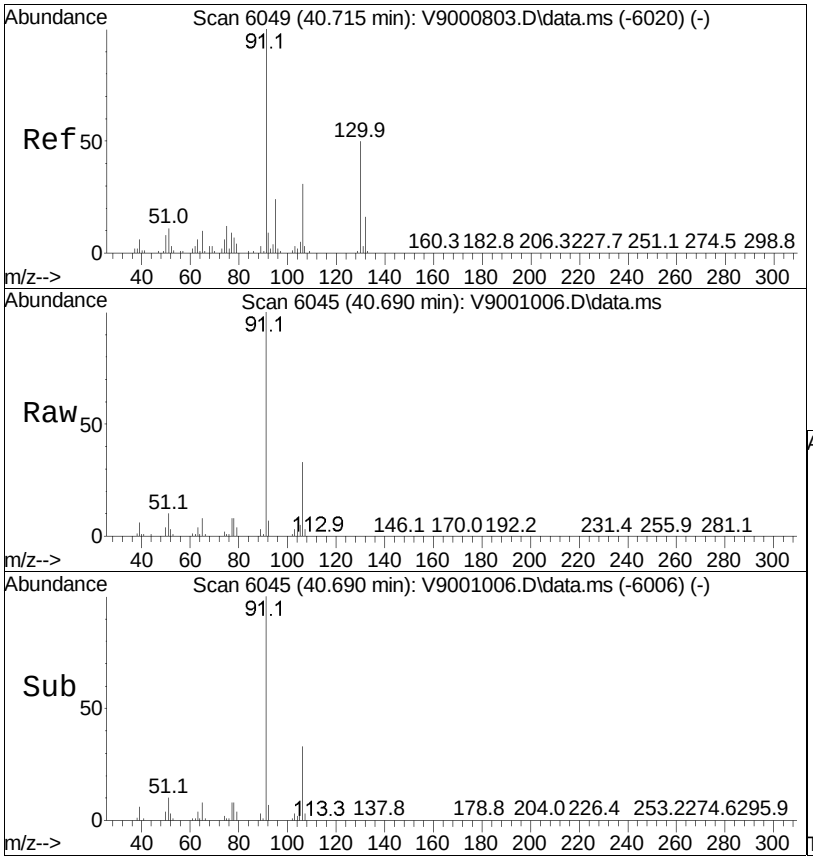


#71
Octane
Concen: 22.51 ug/L
RT: 33.80 min Scan# 4914
Delta R.T. -0.012 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 42802

Ion	Ratio	Lower	Upper
43	100		
57	42.3	23.0	63.0
85	52.1	29.3	69.3
71	32.1	10.8	50.8

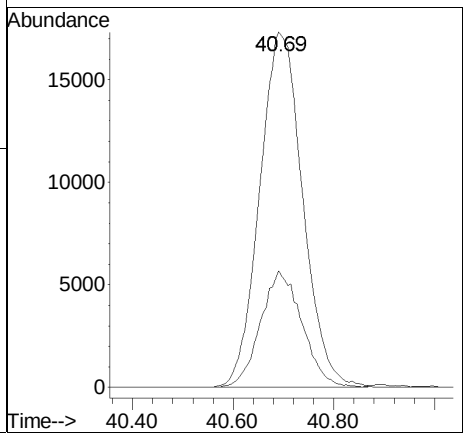


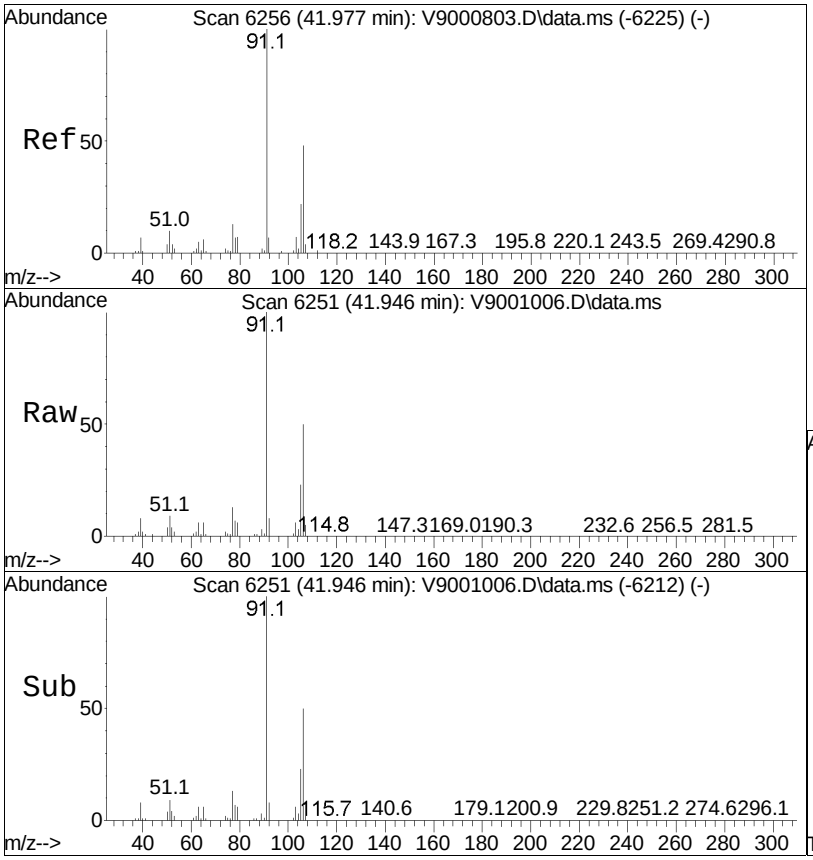


#86
Ethylbenzene
Concen: 19.75 ug/L
RT: 40.69 min Scan# 6045
Delta R.T. -0.012 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 91 Resp: 102928

Ion	Ratio	Lower	Upper
91	100		
106	32.8	11.2	51.2

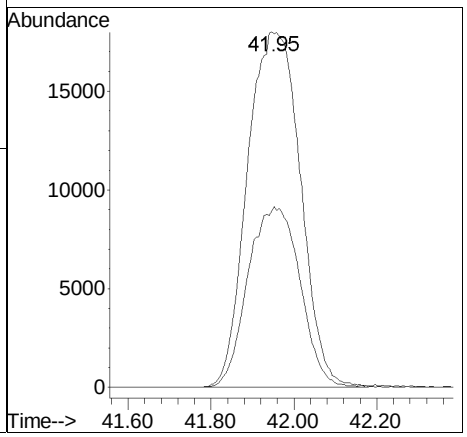


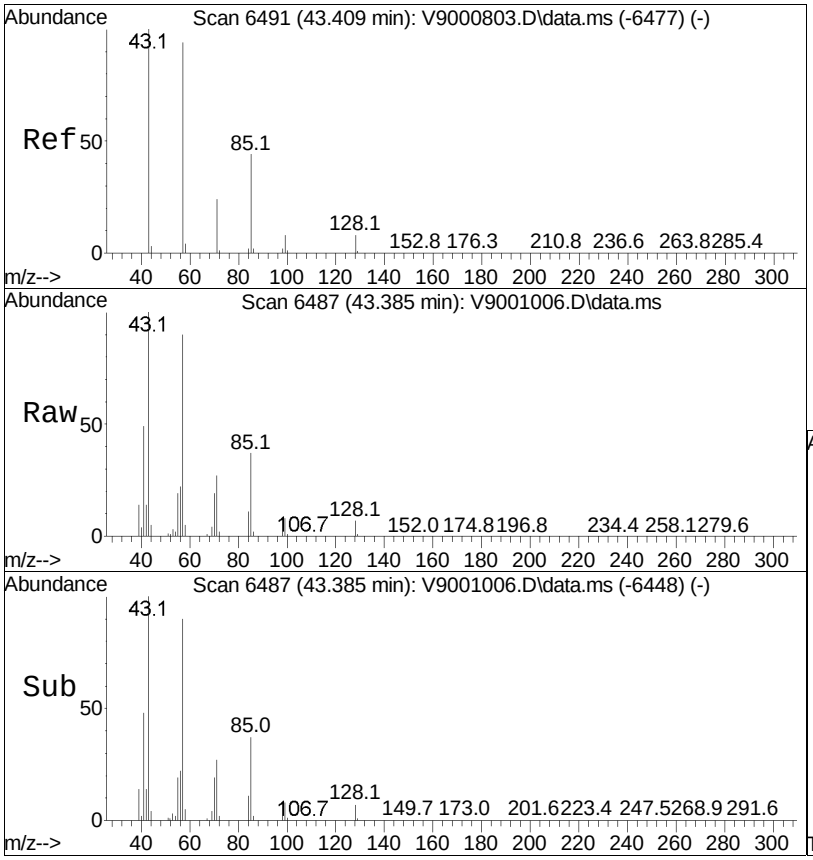


#91
p/m-Xylene
Concen: 40.53 ug/L
RT: 41.95 min Scan# 6251
Delta R.T. -0.012 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 91 Resp: 159669

Ion	Ratio	Lower	Upper
91	100		
106	49.5	29.3	69.3

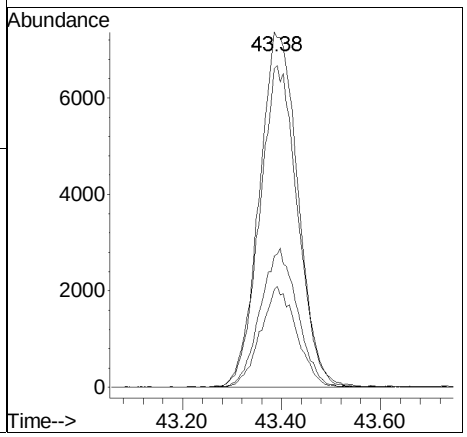


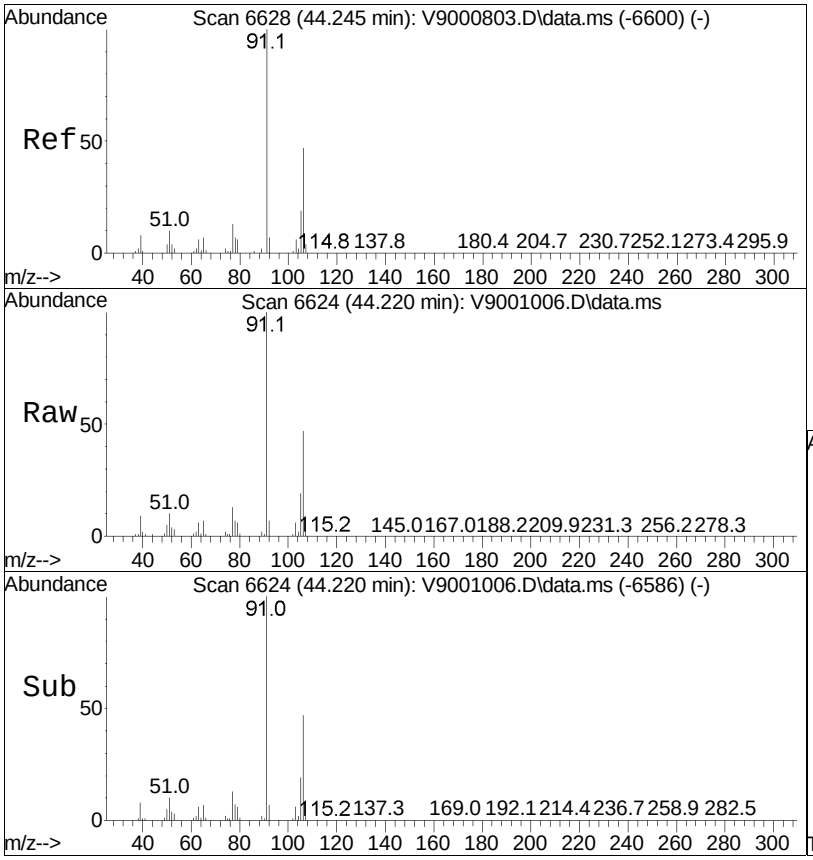


#95
Nonane
Concen: 19.38 ug/L
RT: 43.38 min Scan# 6487
Delta R.T. -0.012 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 39935

Ion	Ratio	Lower	Upper
43	100		
57	89.7	70.0	110.0
85	36.9	15.8	55.8
71	27.5	7.0	47.0

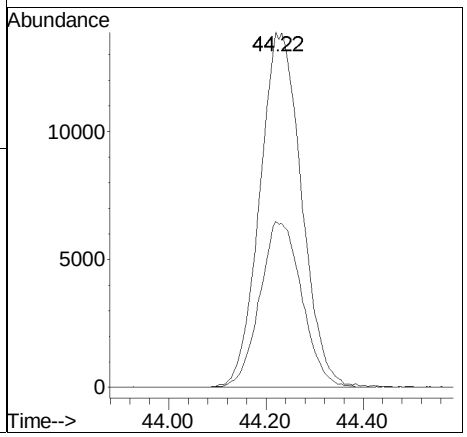


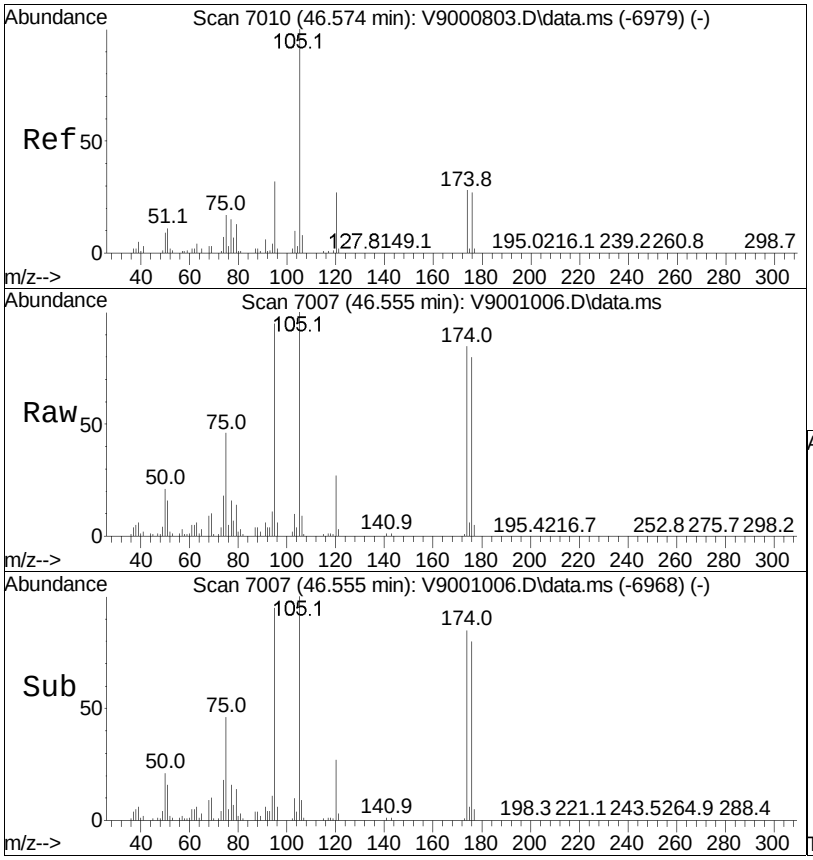


#98
o-Xylene
Concen: 20.49 ug/L
RT: 44.22 min Scan# 6624
Delta R.T. -0.018 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 91 Resp: 82679

Ion	Ratio	Lower	Upper
91	100		
106	46.7	27.9	67.9

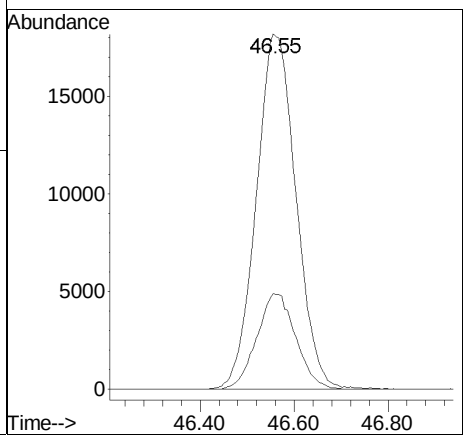


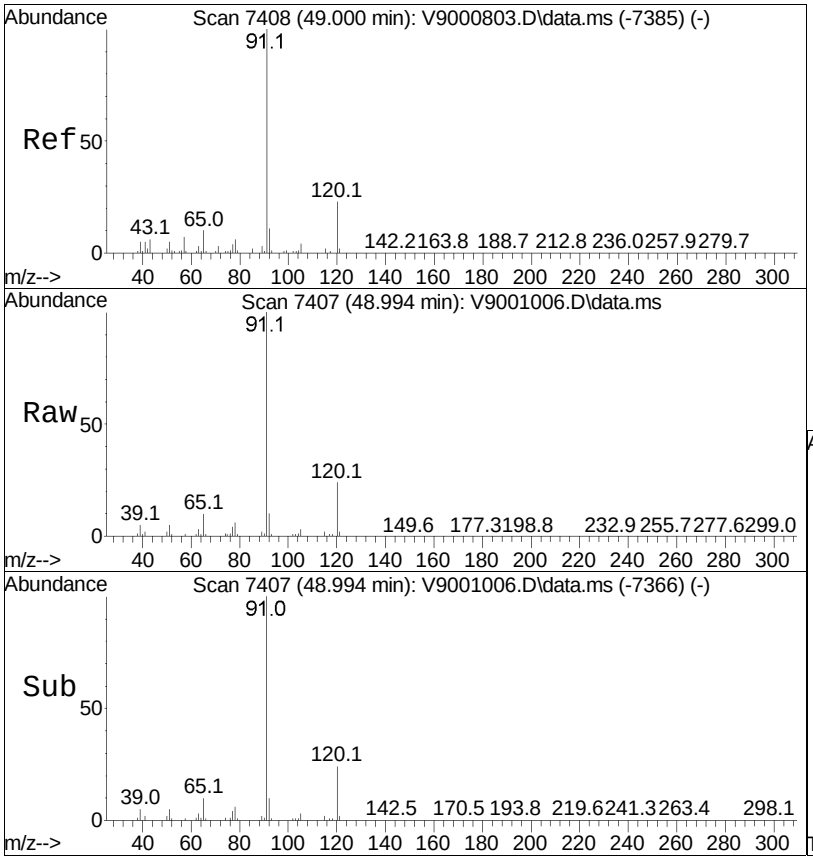


#102
Isopropylbenzene
Concen: 21.17 ug/L
RT: 46.55 min Scan# 7007
Delta R.T. -0.012 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:105 Resp: 106753

Ion	Ratio	Lower	Upper
105	100		
120	27.0	6.5	46.5

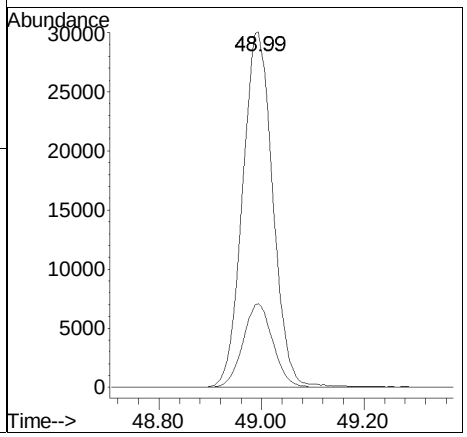


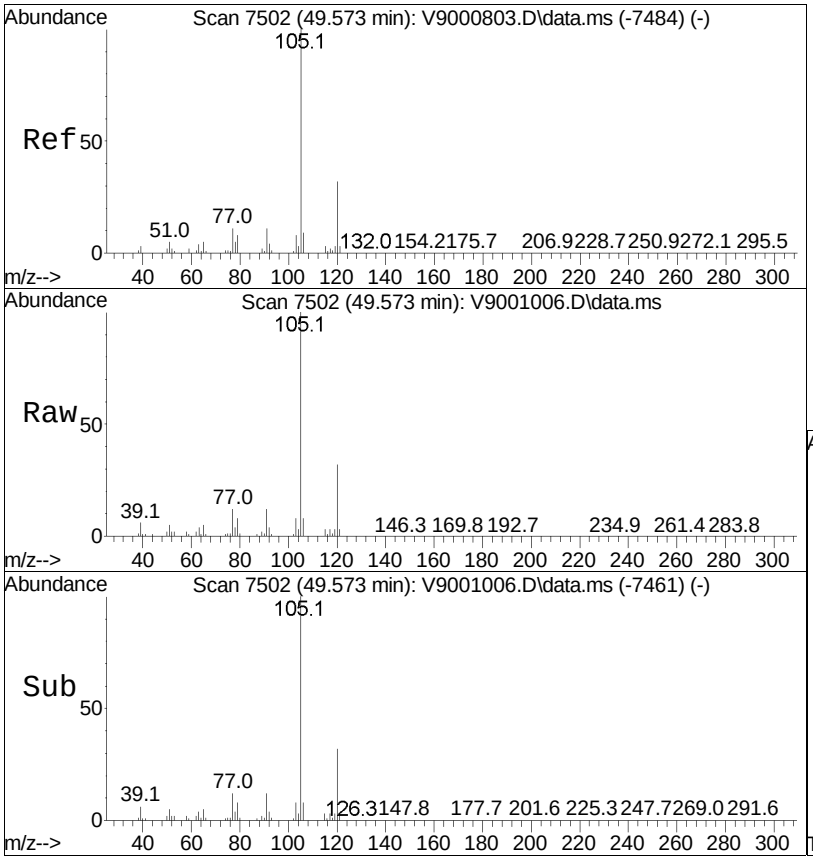


#104
n-Propylbenzene
Concen: 21.18 ug/L
RT: 48.99 min Scan# 7407
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 91 Resp: 123180

Ion	Ratio	Lower	Upper
91	100		
120	23.5	3.1	43.1

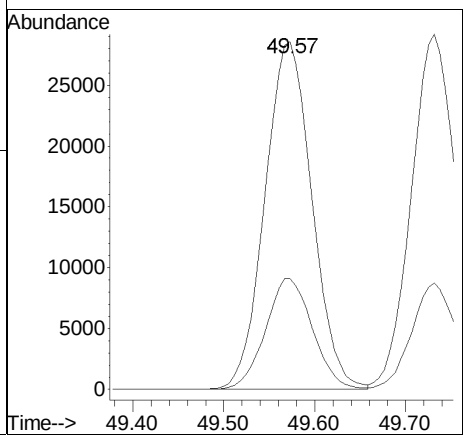


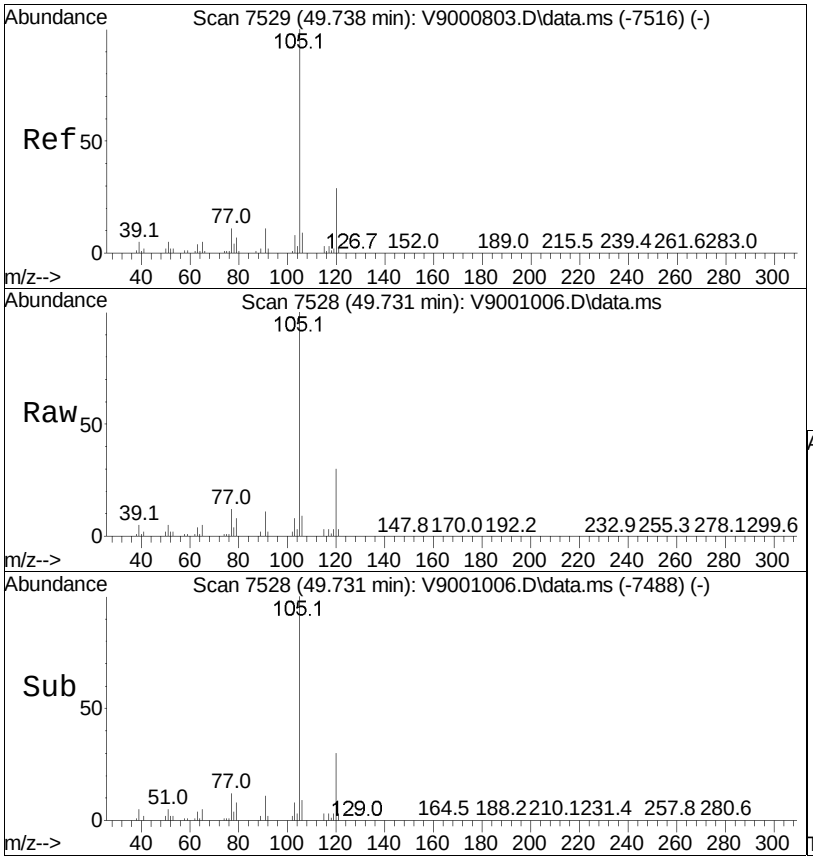


#107
1-Methyl-3-ethylbenzene
Concen: 21.07 ug/L
RT: 49.57 min Scan# 7502
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:105 Resp: 102700

Ion	Ratio	Lower	Upper
105	100		
120	31.9	11.8	51.8

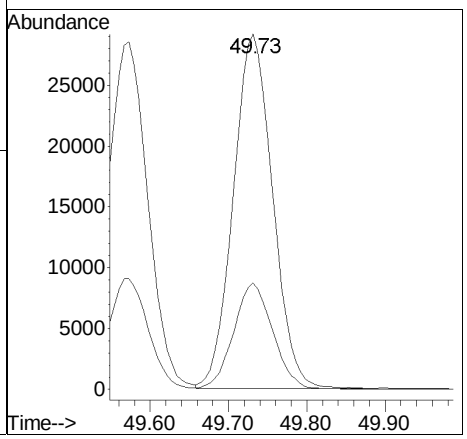


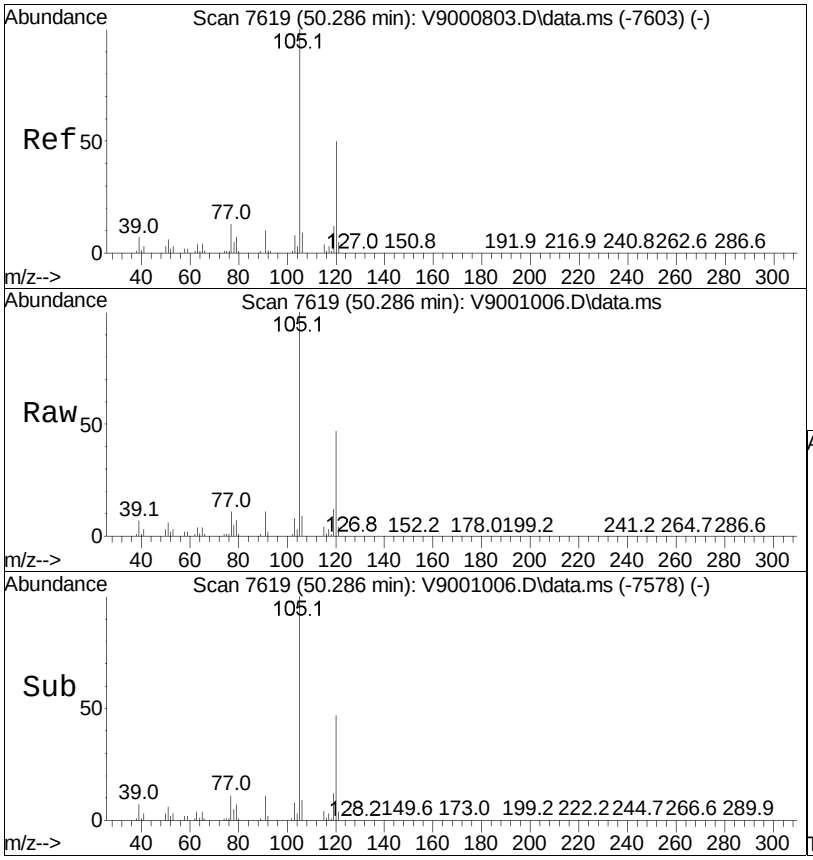


#108
1-Methyl-4-ethylbenzene
Concen: 21.66 ug/L
RT: 49.73 min Scan# 7528
Delta R.T. -0.006 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:105 Resp: 101260

Ion	Ratio	Lower	Upper
105	100		
120	30.0	9.7	49.7

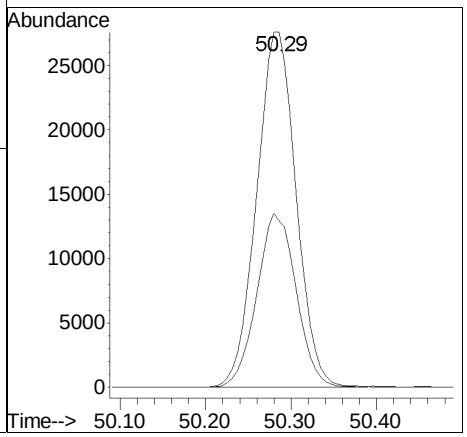


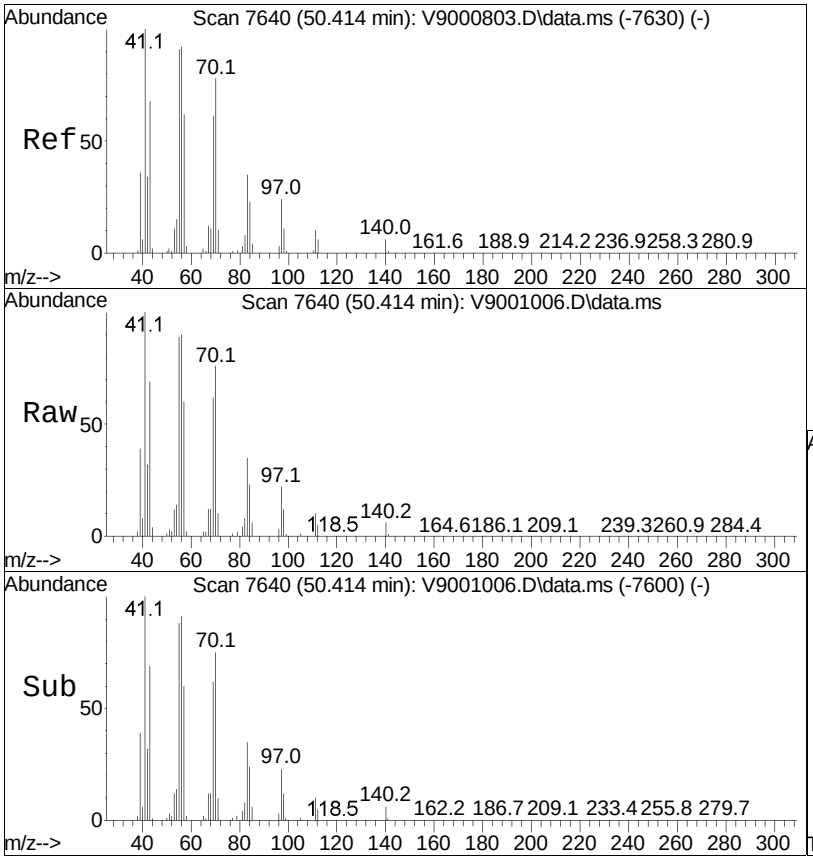


#109
1,3,5-Trimethylbenzene
Concen: 21.93 ug/L
RT: 50.29 min Scan# 7619
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:105 Resp: 88409

Ion	Ratio	Lower	Upper
105	100		
120	46.9	30.3	70.3

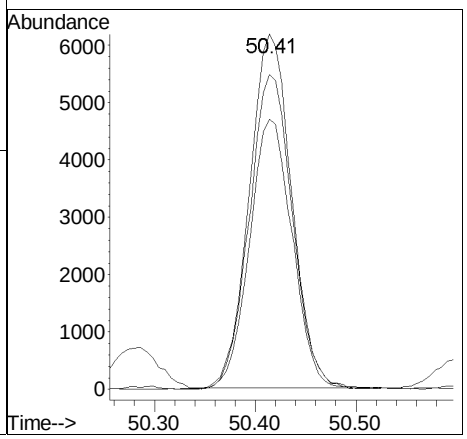


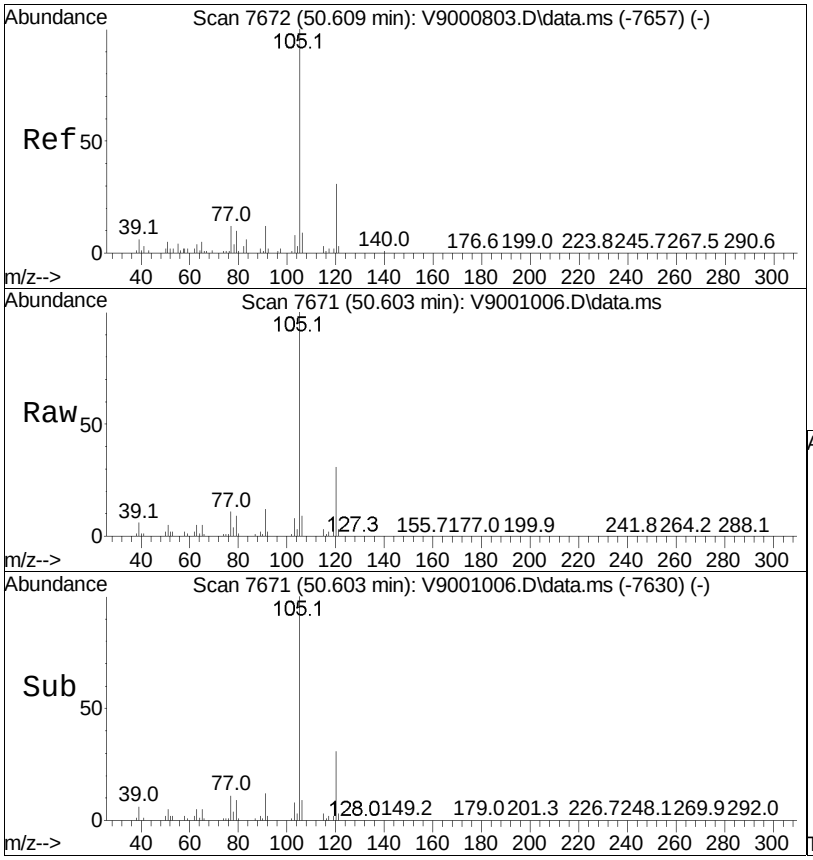


#110
1-Decene
Concen: 18.72 ug/L
RT: 50.41 min Scan# 7640
Delta R.T. -0.006 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 41 Resp: 18058

Ion	Ratio	Lower	Upper
41	100		
55	88.6	70.1	110.1
70	76.1	57.3	97.3

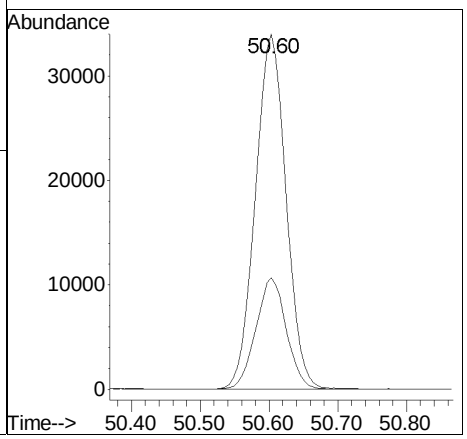


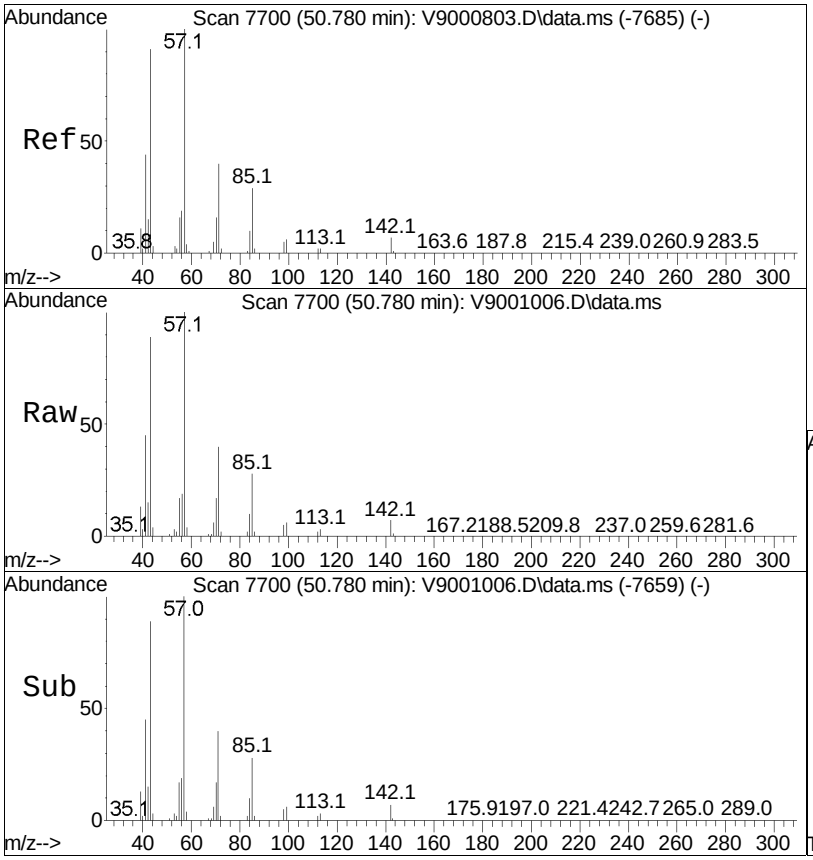


#112
1-Methyl-2-ethylbenzene
Concen: 21.38 ug/L
RT: 50.60 min Scan# 7671
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:105 Resp: 105519

Ion	Ratio	Lower	Upper
105	100		
120	31.4	10.4	50.4

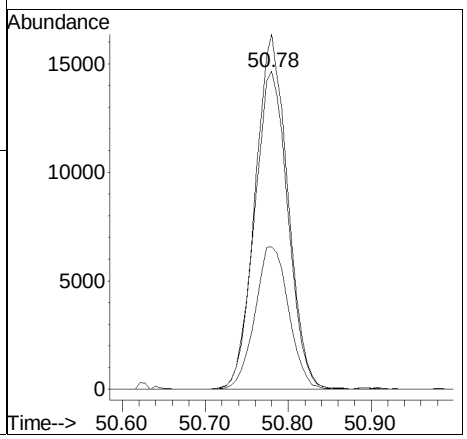


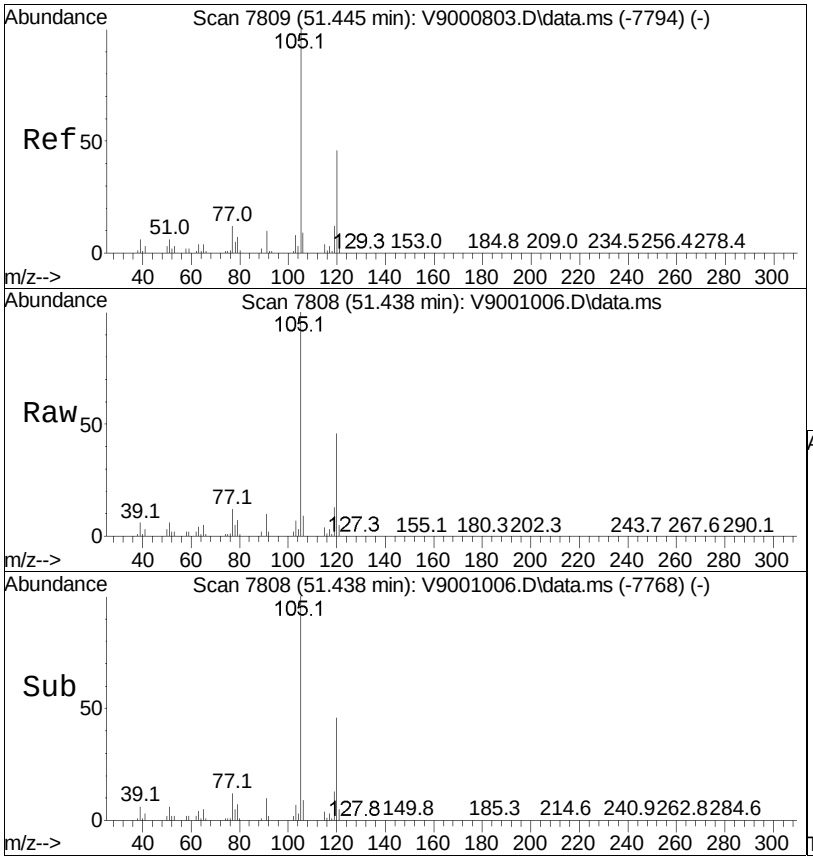


#113
Decane
Concen: 23.40 ug/L
RT: 50.78 min Scan# 7700
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 40974

Ion	Ratio	Lower	Upper
43	100		
57	111.8	85.6	125.6
71	44.9	23.5	63.5

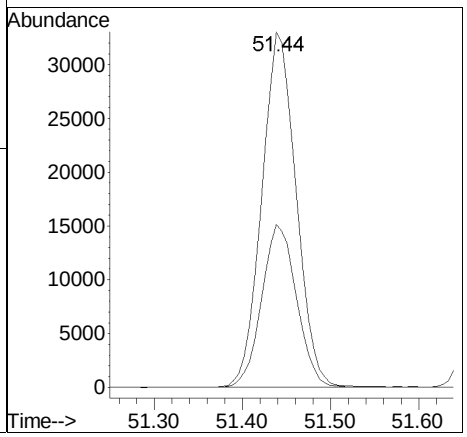


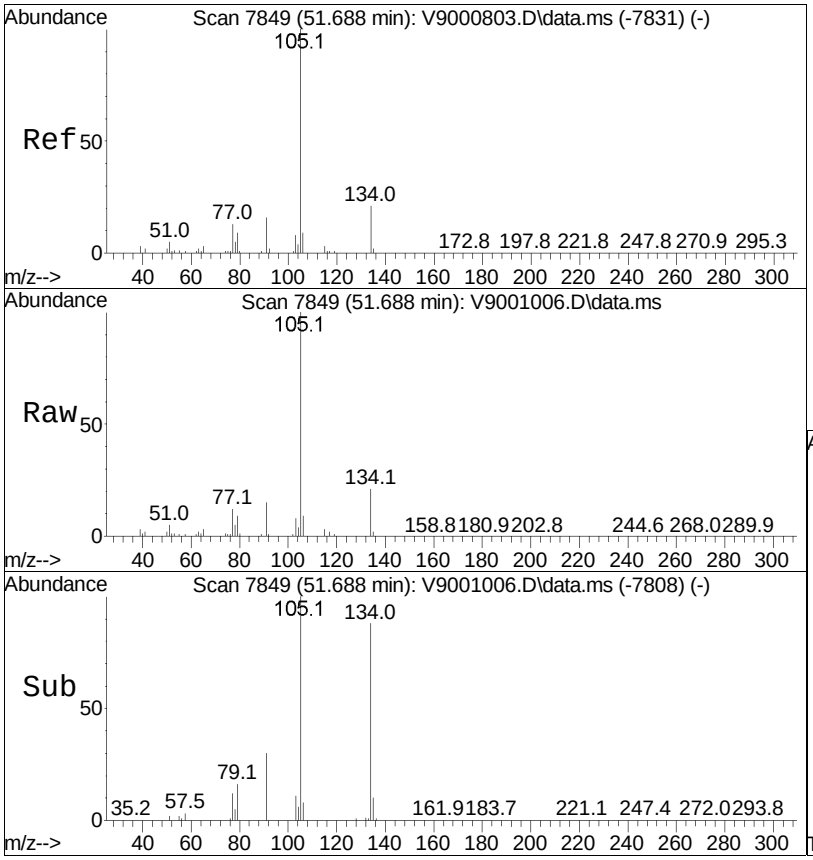


#115
1,2,4-Trimethylbenzene
Concen: 20.85 ug/L
RT: 51.44 min Scan# 7808
Delta R.T. -0.006 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:105 Resp: 89450

Ion	Ratio	Lower	Upper
105	100		
120	45.9	26.6	66.6

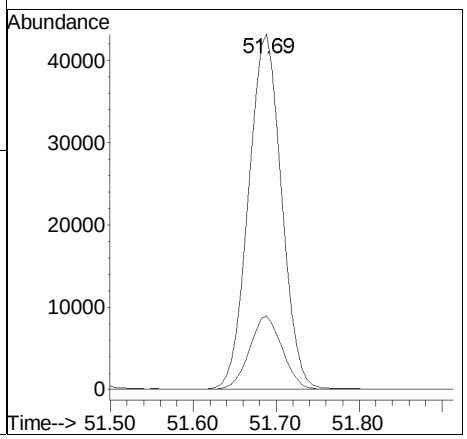


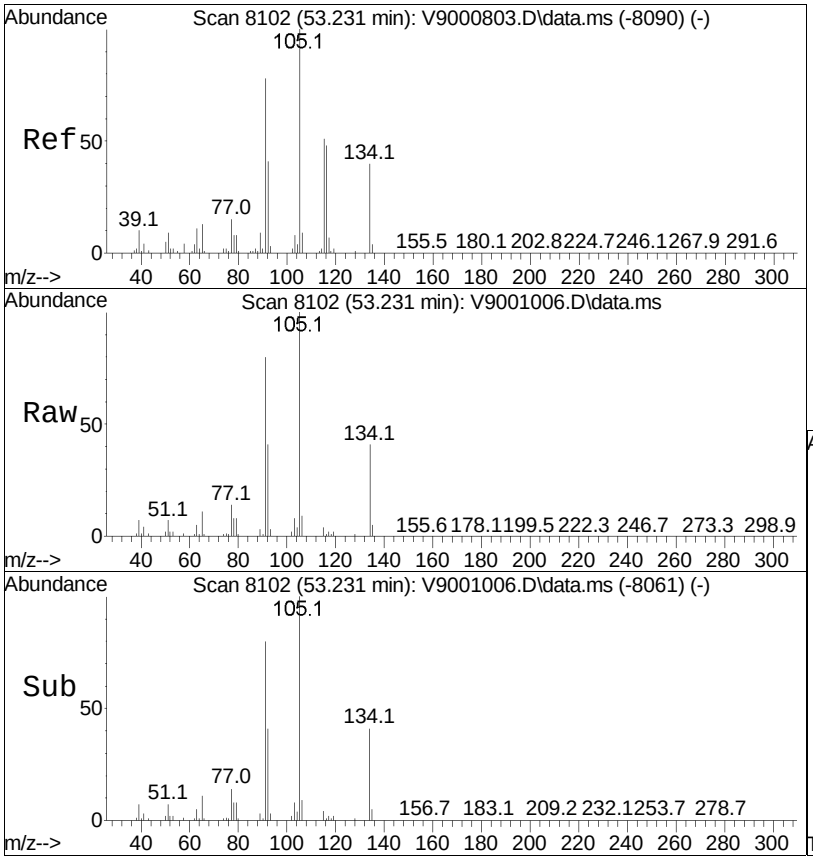


#117
sec-Butylbenzene
Concen: 22.71 ug/L
RT: 51.69 min Scan# 7849
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:105 Resp: 119047

Ion	Ratio	Lower	Upper
105	100		
134	20.7	1.0	41.0

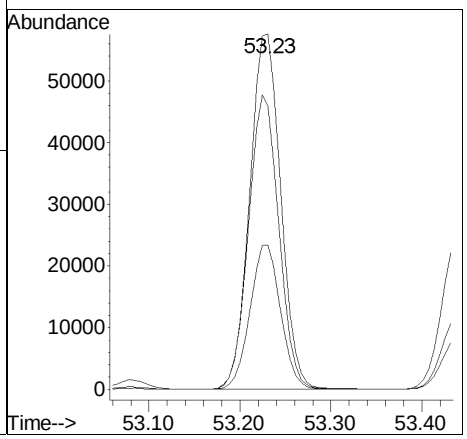


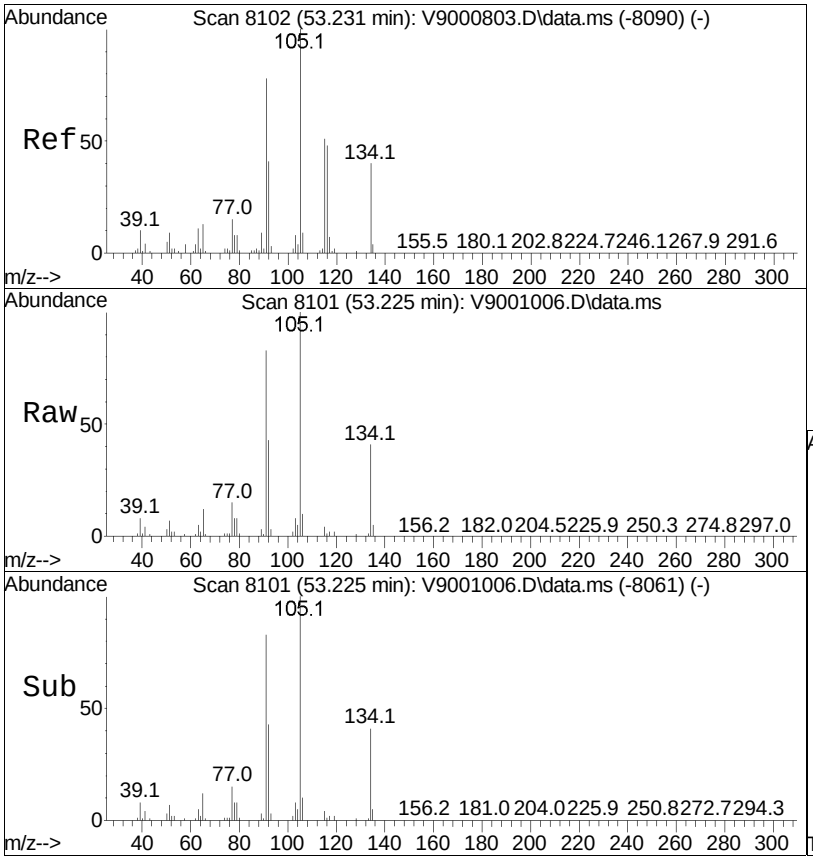


#126
1-Methyl-4-propylbenzene
Concen: 21.84 ug/L
RT: 53.23 min Scan# 8102
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:105 Resp: 136556

Ion	Ratio	Lower	Upper
105	100		
134	40.6	20.2	60.2
91	79.8	58.2	98.2

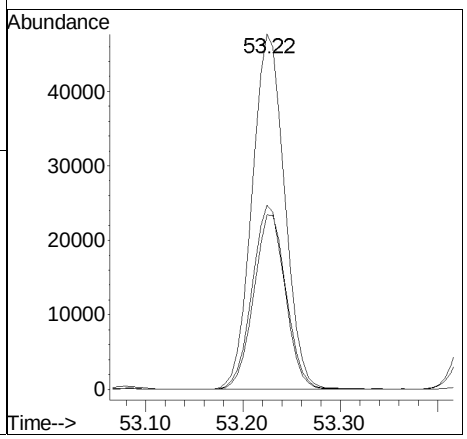


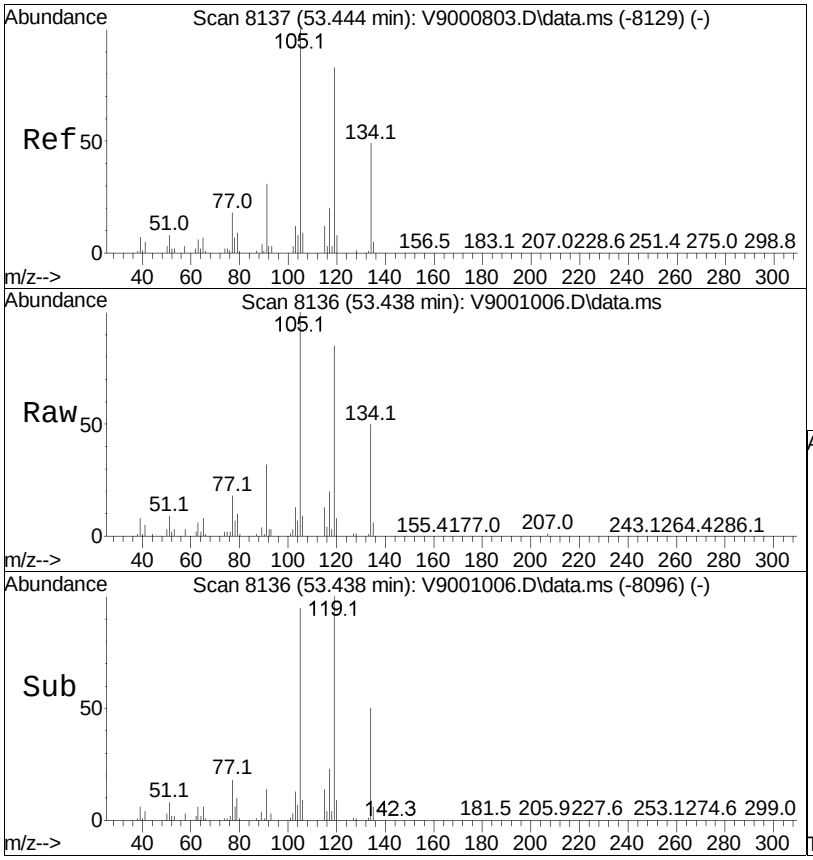


#127
n-Butylbenzene
Concen: 22.12 ug/L
RT: 53.22 min Scan# 8101
Delta R.T. -0.006 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 91 Resp: 110851

Ion	Ratio	Lower	Upper
91	100		
92	51.8	32.2	72.2
134	49.1	31.4	71.4

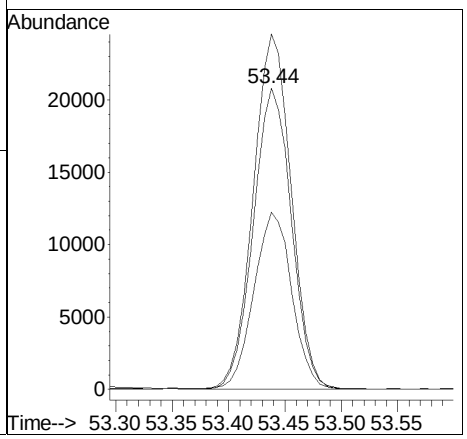


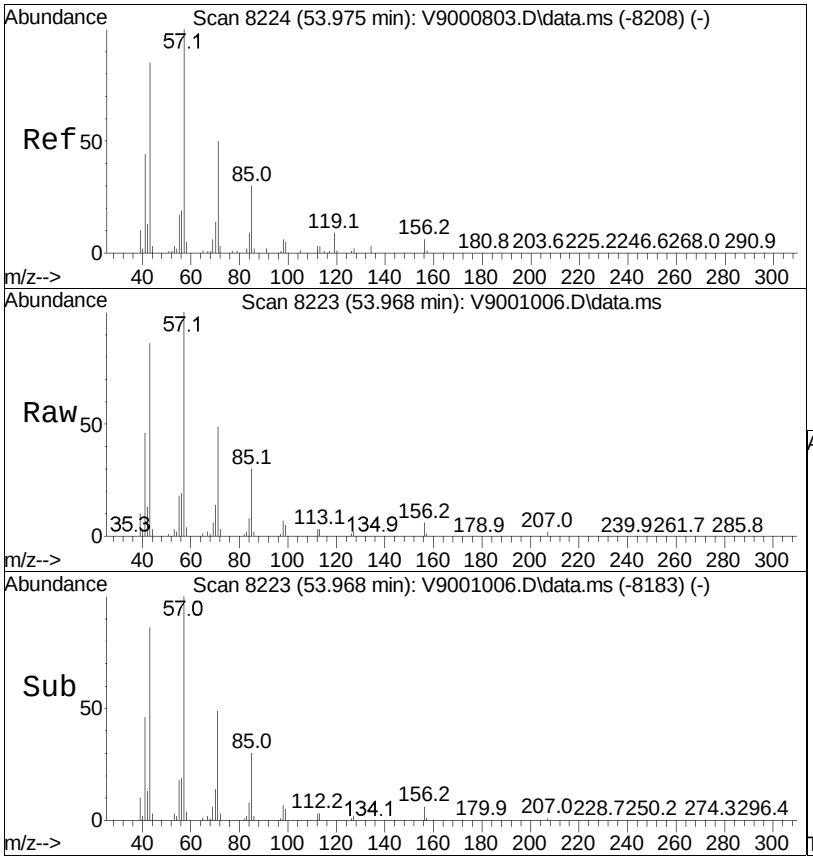


#129
1,2-Diethylbenzene
Concen: 21.73 ug/L
RT: 53.44 min Scan# 8136
Delta R.T. -0.006 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:119 Resp: 48770

Ion	Ratio	Lower	Upper
119	100		
105	118.0	95.6	135.6
134	58.8	38.0	78.0

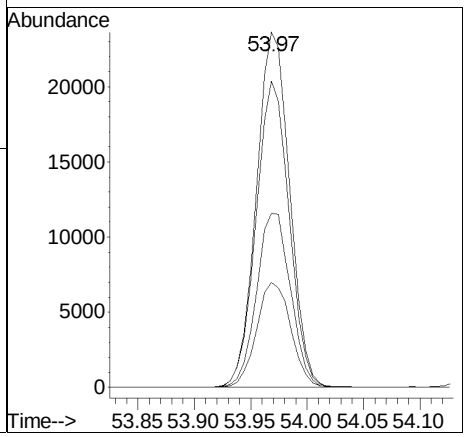


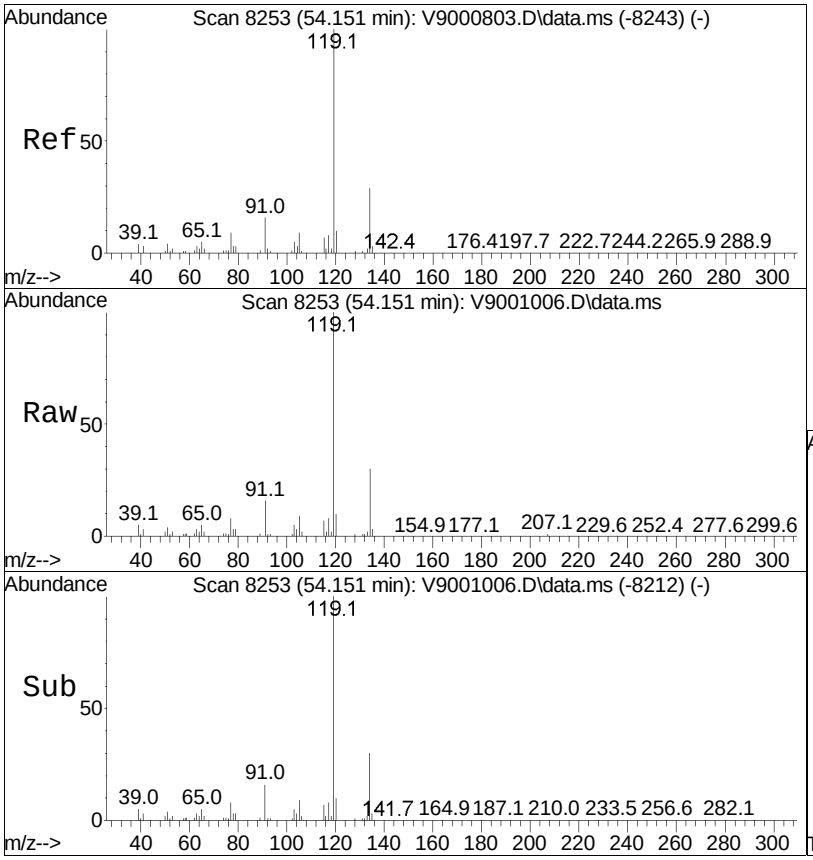


#132
Undecane
Concen: 22.40 ug/L
RT: 53.97 min Scan# 8223
Delta R.T. -0.006 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 57 Resp: 48560

Ion	Ratio	Lower	Upper
57	100		
43	86.2	62.9	102.9
71	49.0	30.0	70.0
85	29.5	10.9	50.9

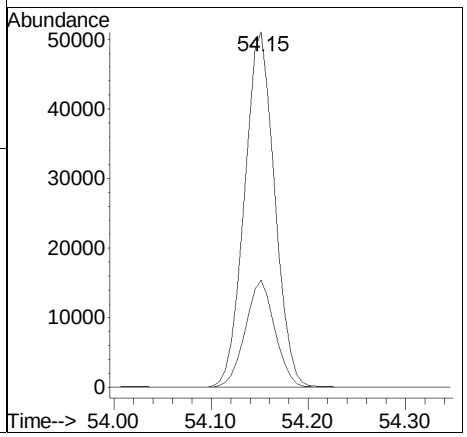


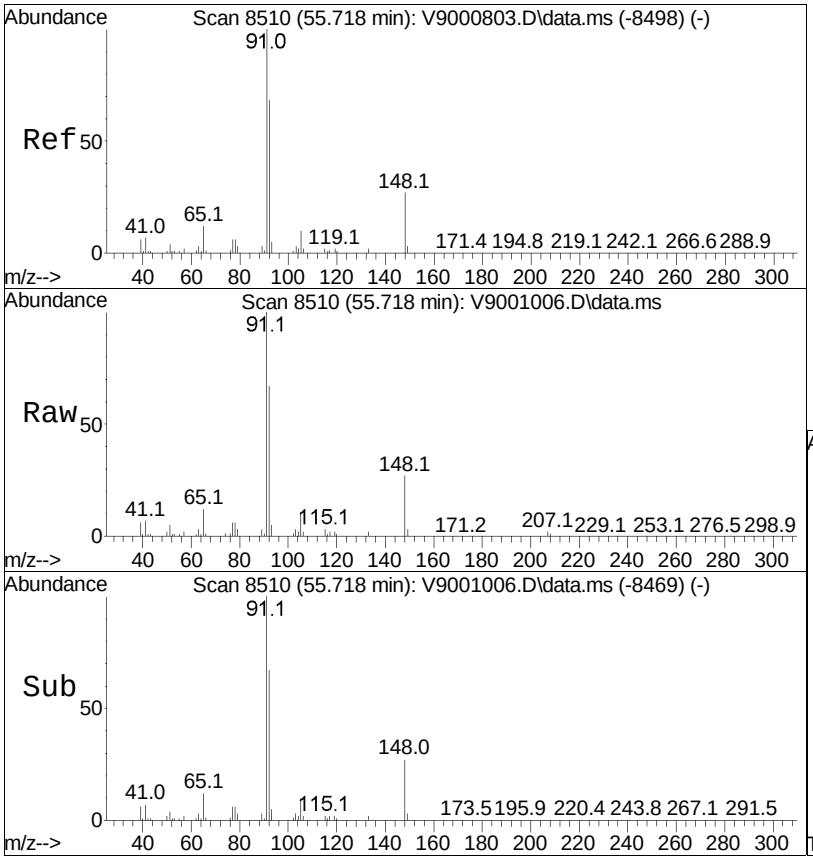


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 23.43 ug/L
RT: 54.15 min Scan# 8253
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion:119 Resp: 110119

Ion	Ratio	Lower	Upper
119	100		
134	30.2	9.7	49.7

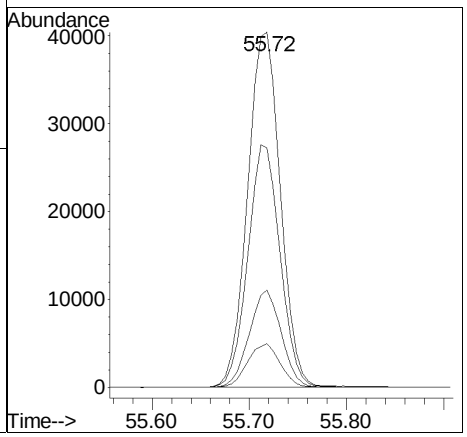


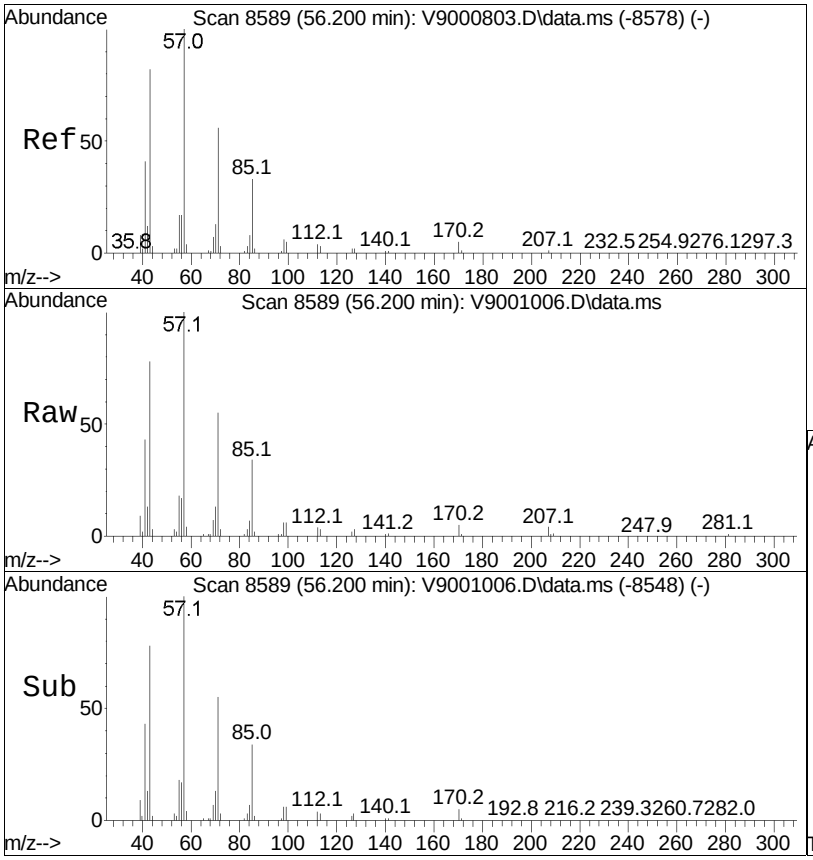


#139
Pentylbenzene
Concen: 22.79 ug/L
RT: 55.72 min Scan# 8510
Delta R.T. 0.000 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 91 Resp: 94949

Ion	Ratio	Lower	Upper
91	100		
92	67.4	47.3	87.3
65	12.3	0.0	31.8
148	27.4	6.4	46.4

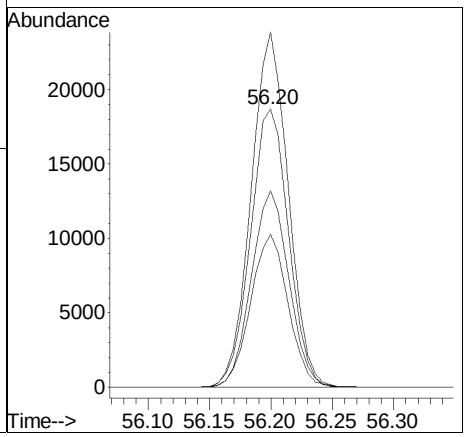




#142
Dodecane
Concen: 23.03 ug/L
RT: 56.20 min Scan# 8589
Delta R.T. 0.001 min
Lab File: V9001006.D
Acq: 11 Jan 2022 09:38 pm

Tgt Ion: 43 Resp: 40452

Ion	Ratio	Lower	Upper
43	100		
57	127.7	102.2	142.2
71	70.7	49.3	89.3
41	55.1	32.1	72.1



LCS Duplicate Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001007.D
Acq On : 11 Jan 2022 10:49 pm
Operator : VOA9:RY
Sample : WG1593474-4,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 12 08:12:37 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Chlorobenzene-D5 [IS]	39.07	117	236200	50.000	ug/L		-0.01
System Monitoring Compounds							
24) Dibromofluoromethane (...	17.12	113	60413	49.553	ug/L		-0.05
Spiked Amount 50.000	Range 78 - 118		Recovery = 99.11%				
62) Toluene-d8 (surr)	31.23	98	276345	49.978	ug/L		-0.02
Spiked Amount 50.000	Range 87 - 113		Recovery = 99.96%				
101) 4-Bromofluorobenzene (...	46.52	95	120556	51.893	ug/L		-0.01
Spiked Amount 50.000	Range 76 - 120		Recovery = 103.79%				
Target Compounds							Qvalue
4) 1-Pentene	8.86	42	21527	18.531	ug/L		99
6) Pentane	9.23	43	27886	15.450	ug/L		99
10) Tertiary butanol	10.74	59	26620M4	66.969	ug/L		
13) Cyclopentane	12.96	70	14146	17.871	ug/L	#	37
15) 2-Methylpentane	13.18	43	38715	19.051	ug/L		99
16) MTBE	13.51	73	57606	19.432	ug/L		98
17) 3-Methylpentane	14.16	57	36542	20.556	ug/L		100
18) 1-Hexene	14.77	56	21077	20.223	ug/L		99
19) Hexane	15.37	57	30467	19.152	ug/L		95
20) Diisopropyl ether	15.68	45	59706	20.354	ug/L		98
25) Ethyl tertiary butyl e...	17.16	59	59431	20.179	ug/L		97
27) Methylcyclopentane	17.72	56	41672	21.428	ug/L		99
28) 2,4-Dimethylpentane	17.88	43	37167	20.614	ug/L		97
32) Cyclohexane	20.64	56	36286	22.382	ug/L		99
33) 2-Methylhexane	21.08	43	41371	20.876	ug/L		98
34) Benzene	21.27	78	82390	20.066	ug/L		98
35) 2,3-Dimethylpentane	21.38	56	34454	21.099	ug/L		97
38) 3-Methylhexane	21.90	43	33731	19.896	ug/L		95
39) TAME	22.28	73	59610	17.675	ug/L		99
44) Isooctane	23.34	57	91343	22.306	ug/L		95
46) Heptane	24.08	43	34608	23.545	ug/L		98
51) Methylcyclohexane	26.52	83	39064	22.104	ug/L		99
60) 2-Methylheptane	30.53	57	39264	22.160	ug/L		98
63) 3-Methylheptane	31.27	43	38193	21.661	ug/L		97
66) Toluene	31.60	91	91560	20.009	ug/L		97
71) Octane	33.80	43	42886	23.096	ug/L		98
86) Ethylbenzene	40.68	91	102659	20.176	ug/L		100
91) p/m-Xylene	41.94	91	159040	41.340	ug/L		98
95) Nonane	43.40	43	40832	20.289	ug/L		97

Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001007.D
Acq On : 11 Jan 2022 10:49 pm
Operator : VOA9:RY
Sample : WG1593474-4,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 12 08:12:37 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98)	o-Xylene	44.23	91	82599	20.961	ug/L	100
102)	Isopropylbenzene	46.57	105	106116	21.549	ug/L	99
104)	n-Propylbenzene	48.99	91	122218	21.521	ug/L	99
107)	1-Methyl-3-ethylbenzene	49.57	105	101766	21.375	ug/L	98
108)	1-Methyl-4-ethylbenzene	49.73	105	100689	22.059	ug/L	99
109)	1,3,5-Trimethylbenzene	50.28	105	86370	21.938	ug/L	99
110)	1-Decene	50.41	41	18488	19.622	ug/L	98
112)	1-Methyl-2-ethylbenzene	50.60	105	105195	21.829	ug/L	99
113)	Decane	50.78	43	41899	24.501	ug/L	94
115)	1,2,4-Trimethylbenzene	51.44	105	88105	21.035	ug/L	100
117)	sec-Butylbenzene	51.69	105	118380	23.122	ug/L	99
126)	1-Methyl-4-propylbenzene	53.22	105	134981	22.103	ug/L	96
127)	n-Butylbenzene	53.22	91	109083	22.295	ug/L	98
129)	1,2-Diethylbenzene	53.44	119	47892	21.851	ug/L	94
132)	Undecane	53.97	57	48895	23.099	ug/L	99
134)	1,3-Dimethyl-5-ethylbe...	54.15	119	108426	23.627	ug/L	99
139)	Pentylbenzene	55.72	91	94019	23.112	ug/L	97
142)	Dodecane	56.20	43	40425	23.567	ug/L	97

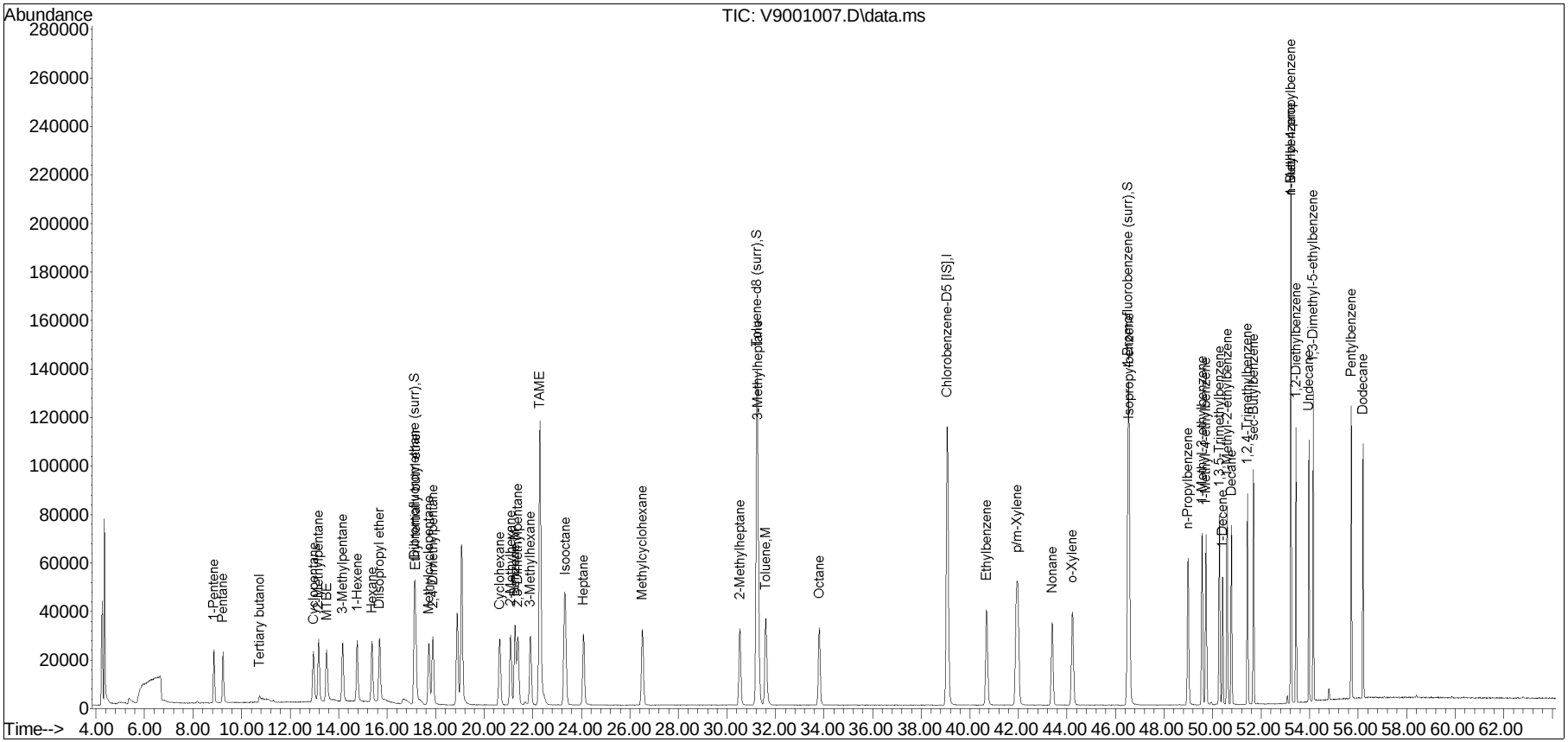
(#) = qualifier out of range (m) = manual integration (+) = signals summed

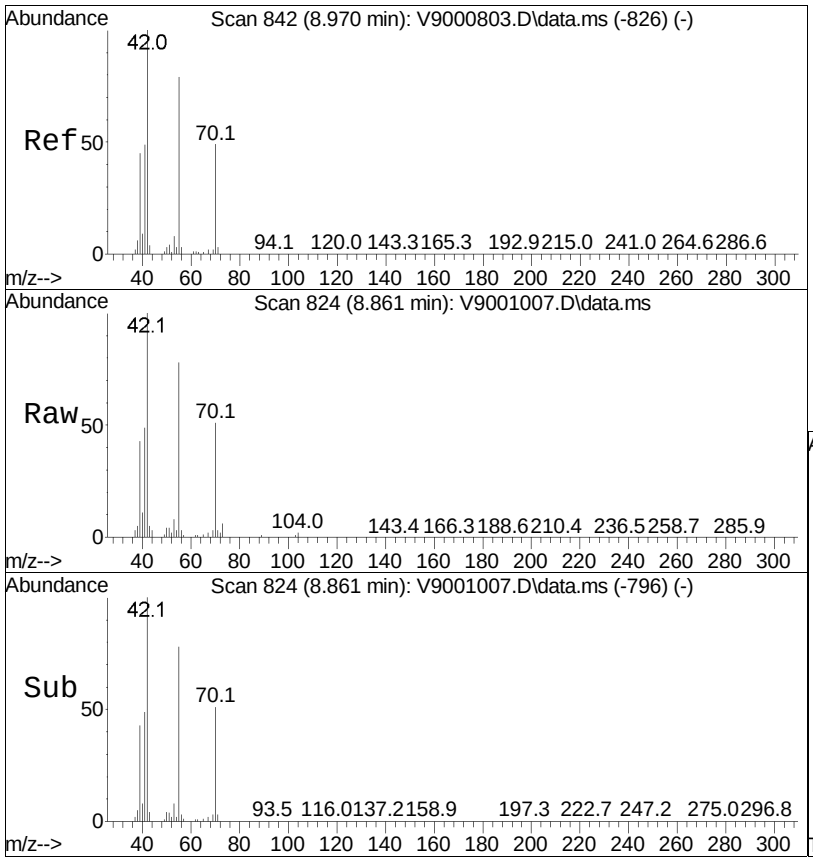
Quantitation Report (QT Reviewed)

Data Path : O:\Organics\DATA\VOA9\2022\01\220111\
Data File : V9001007.D
Acq On : 11 Jan 2022 10:49 pm
Operator : VOA9:RY
Sample : WG1593474-4,31,0.1,10,0.1
Misc : WG1593474,ICAL18591
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 12 08:12:37 2022
Quant Method : O:\Organics\DATA\VOA9\2022\01\220111\P9122021W.M
Quant Title : PIANO VOLATILES
QLast Update : Tue Dec 21 11:54:07 2021
Response via : Initial Calibration

Sub List : PIANO_VOA_LCS-NHS - PIANO

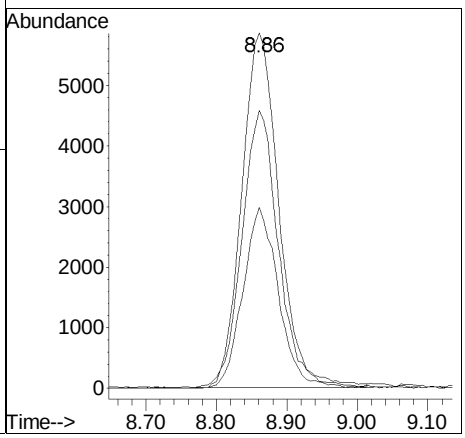


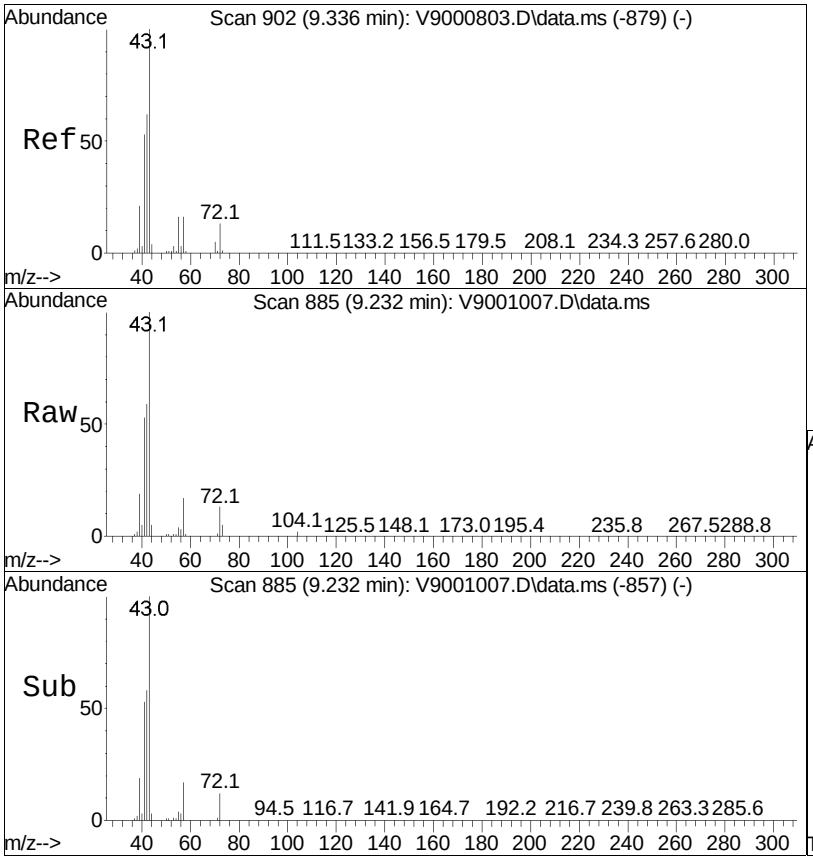


#4
1-Pentene
Concen: 18.53 ug/L
RT: 8.86 min Scan# 824
Delta R.T. -0.079 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 42 Resp: 21527

Ion	Ratio	Lower	Upper
42	100		
55	78.2	56.9	96.9
70	51.0	31.8	71.8

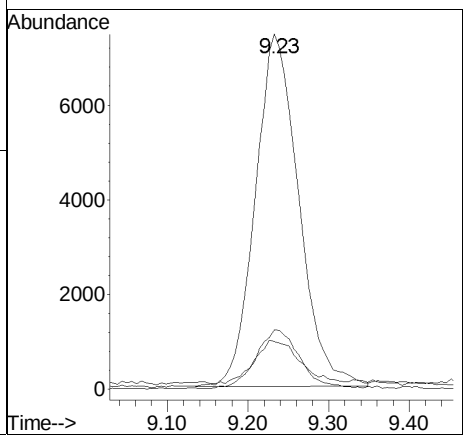


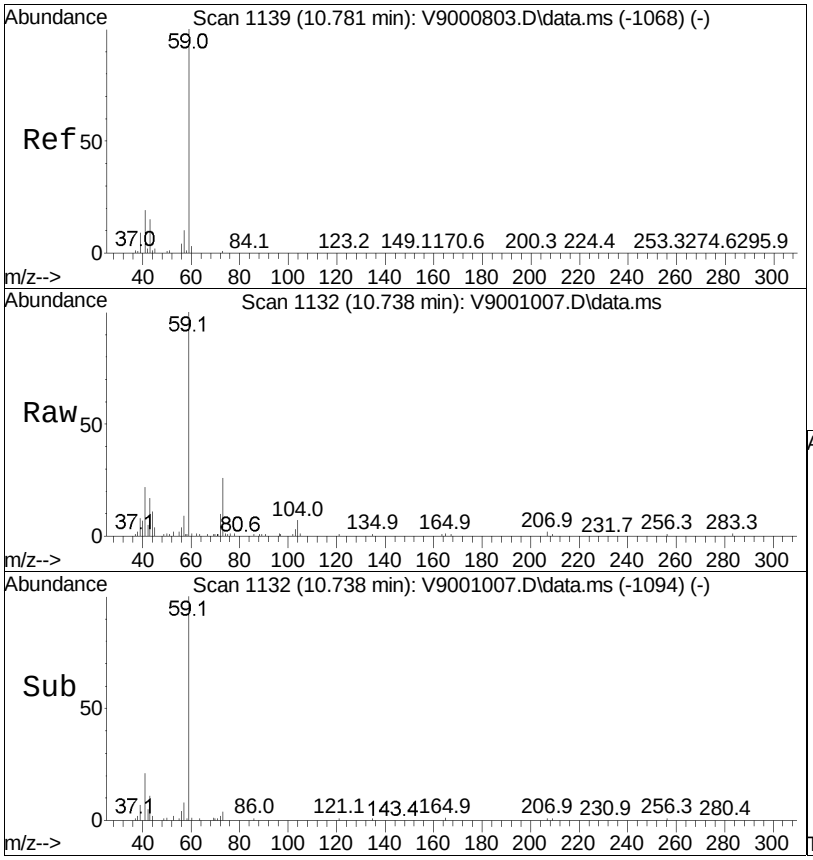


#6
Pentane
Concen: 15.45 ug/L
RT: 9.23 min Scan# 885
Delta R.T. -0.079 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 27886

Ion	Ratio	Lower	Upper
43	100		
57	16.8	0.0	36.4
72	13.5	0.0	32.6

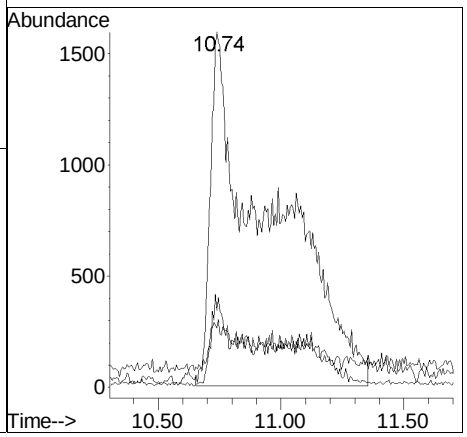


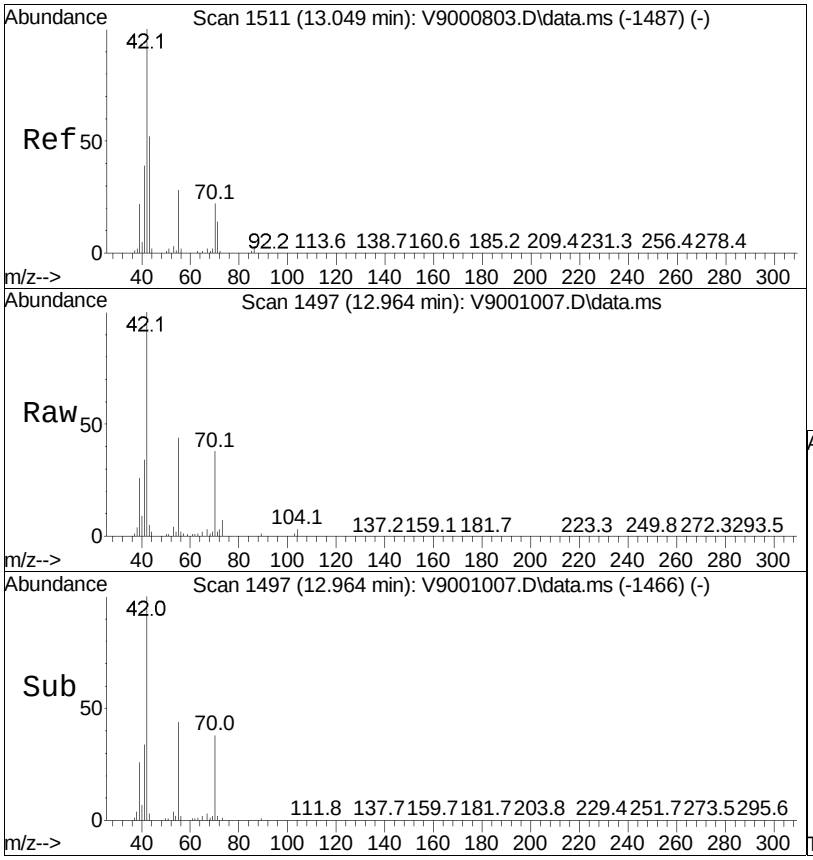


#10
Tertiary butanol
Concen: 66.97 ug/L m
RT: 10.74 min Scan# 1132
Delta R.T. -0.018 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 59 Resp: 26620

Ion	Ratio	Lower	Upper
59	100		
41	21.7	0.8	40.8
43	16.7	0.0	34.8

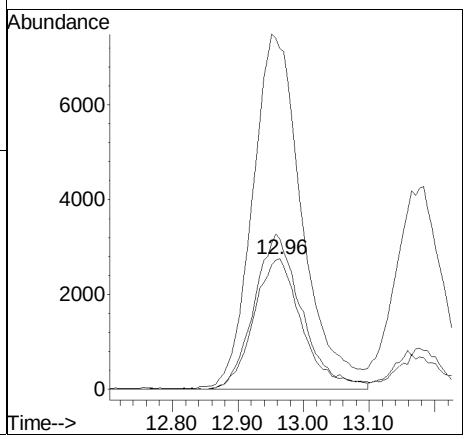


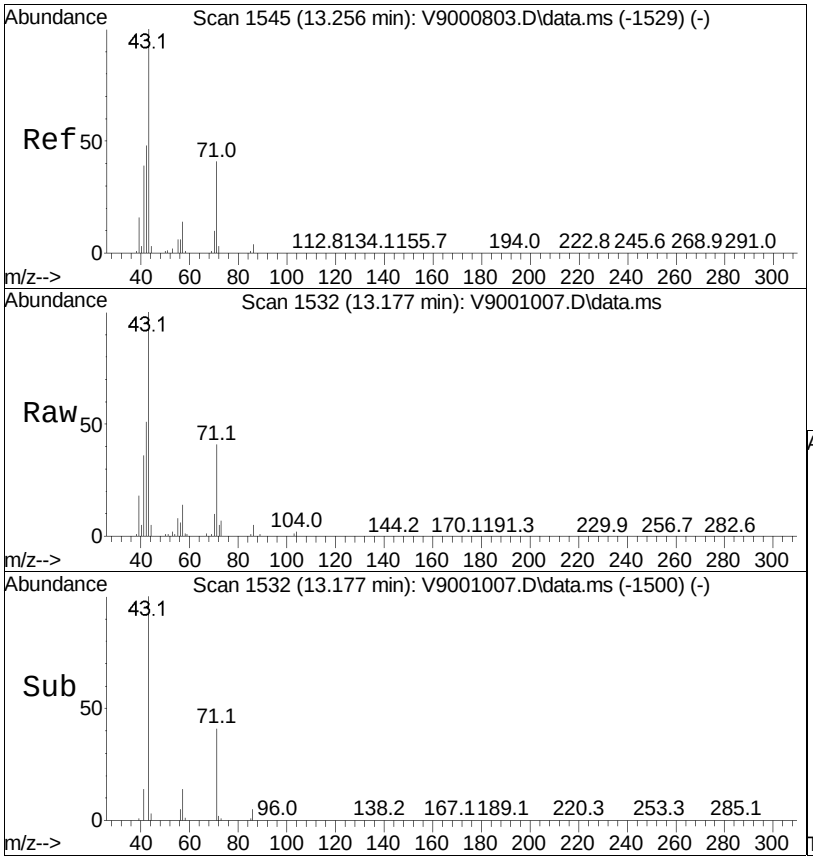


#13
Cyclopentane
Concen: 17.87 ug/L
RT: 12.96 min Scan# 1497
Delta R.T. -0.061 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 70 Resp: 14146

Ion	Ratio	Lower	Upper
70	100		
42	260.8	444.4	484.4#
55	115.5	109.2	149.2

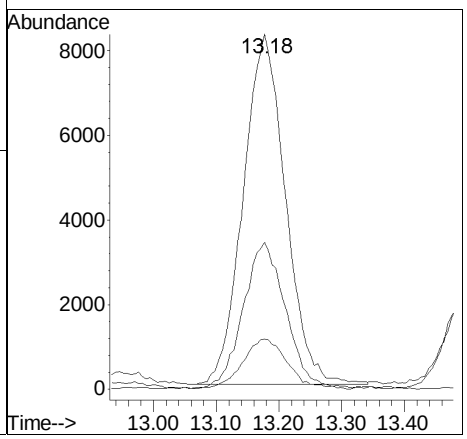


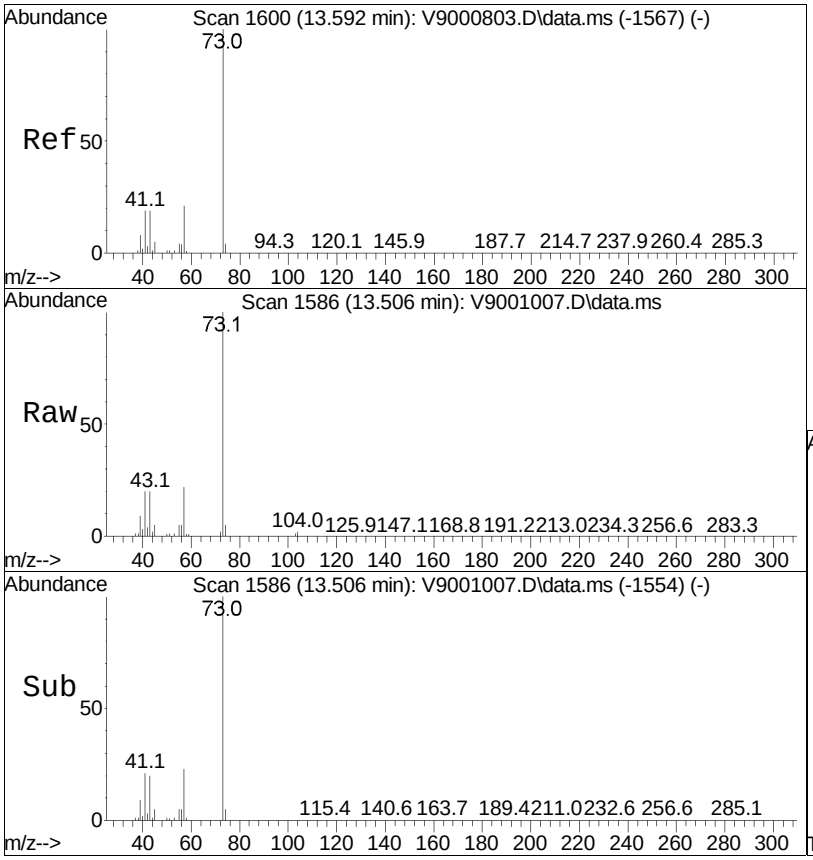


#15
2-Methylpentane
Concen: 19.05 ug/L
RT: 13.18 min Scan# 1532
Delta R.T. -0.055 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 38715

Ion	Ratio	Lower	Upper
43	100		
71	41.4	20.8	60.8
57	14.1	0.0	34.3

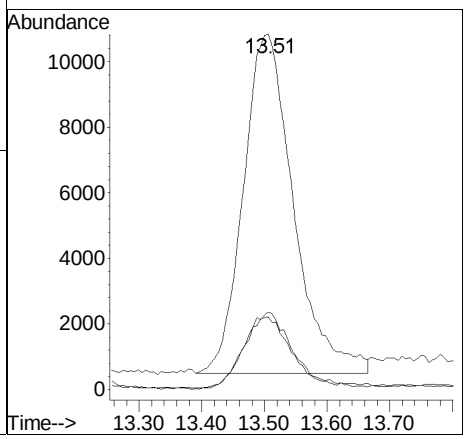


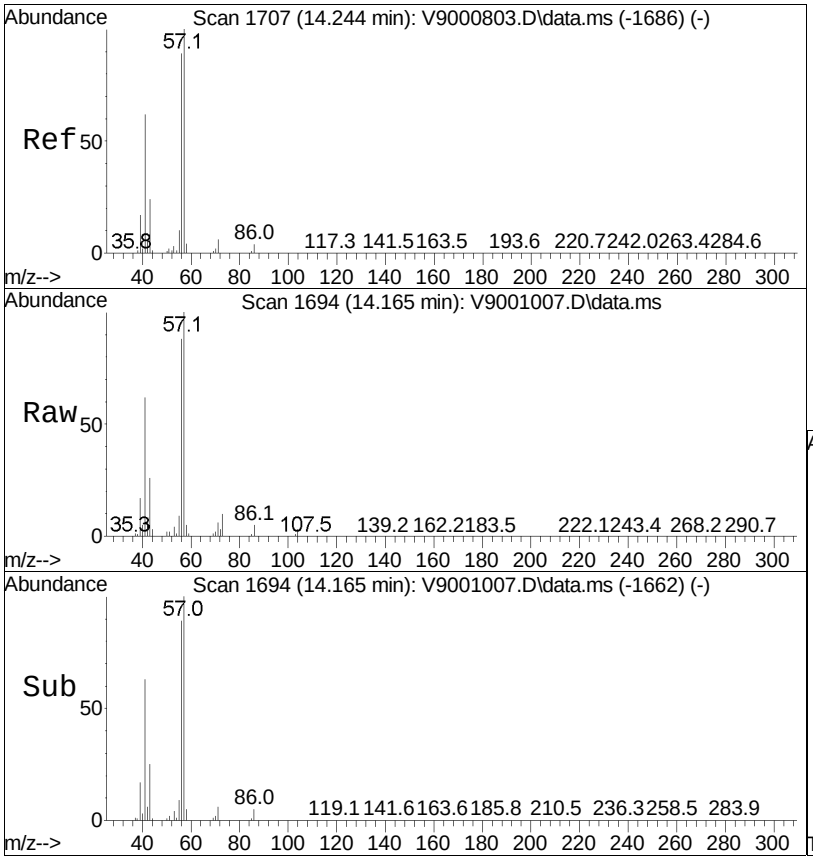


#16
MTBE
Concen: 19.43 ug/L
RT: 13.51 min Scan# 1586
Delta R.T. -0.055 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 73 Resp: 57606

Ion	Ratio	Lower	Upper
73	100		
57	21.8	2.5	42.5
41	20.4	1.4	41.4

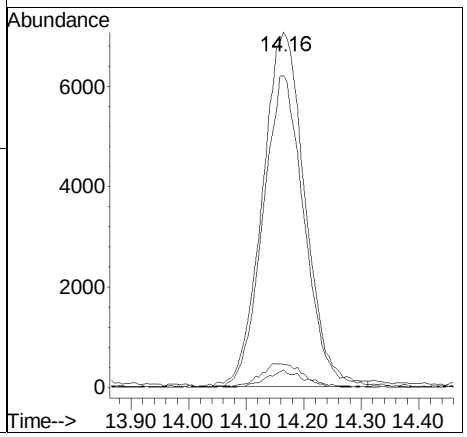


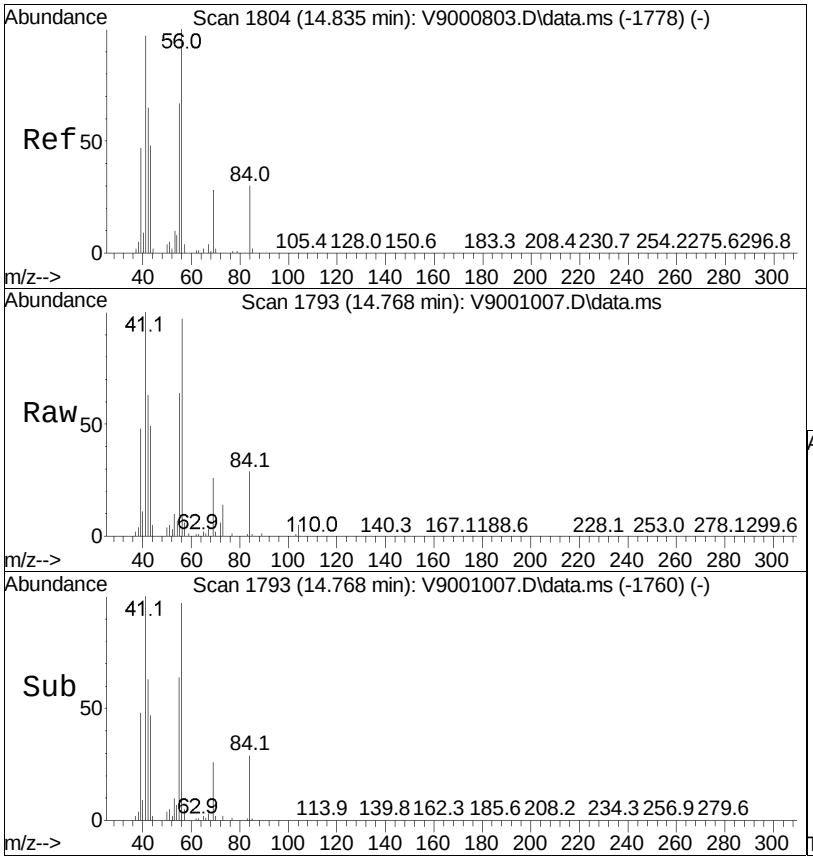


#17
3-Methylpentane
Concen: 20.56 ug/L
RT: 14.16 min Scan# 1694
Delta R.T. -0.055 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 57 Resp: 36542

Ion	Ratio	Lower	Upper
57	100		
56	87.8	67.6	107.6
71	6.5	0.0	26.7
86	4.9	0.0	24.3

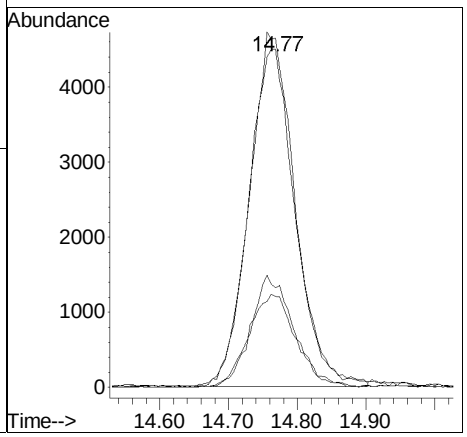


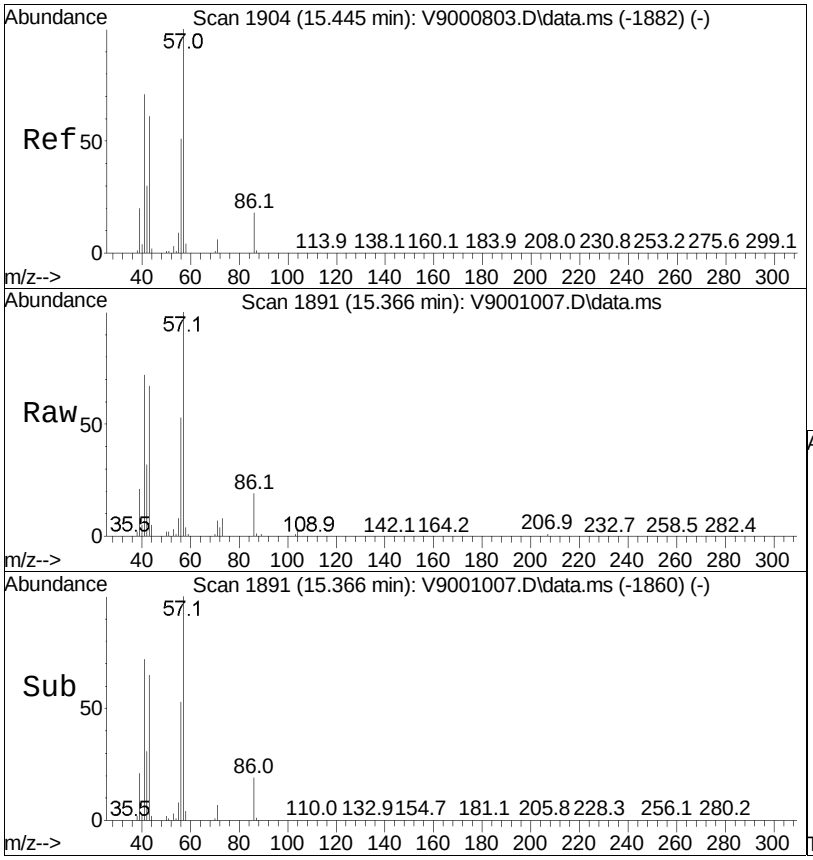


#18
1-Hexene
Concen: 20.22 ug/L
RT: 14.77 min Scan# 1793
Delta R.T. -0.048 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 56 Resp: 21077

Ion	Ratio	Lower	Upper
56	100		
41	103.3	82.9	122.9
84	29.5	10.3	50.3
69	26.9	8.6	48.6

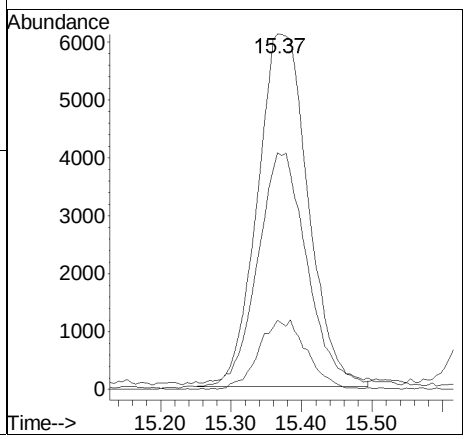


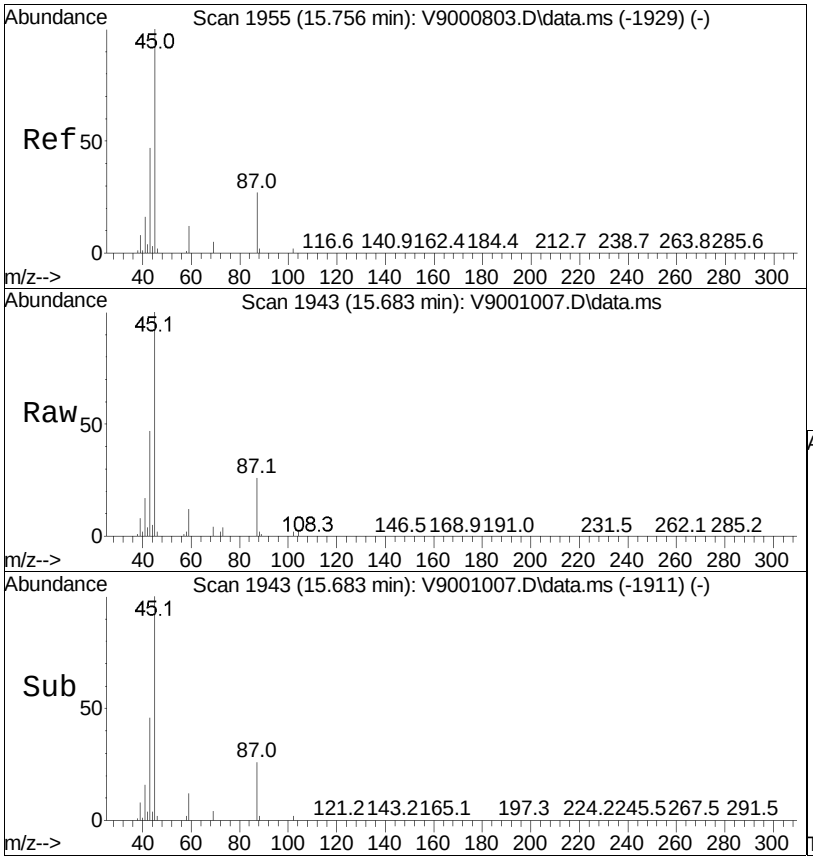


#19
Hexane
Concen: 19.15 ug/L
RT: 15.37 min Scan# 1891
Delta R.T. -0.061 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 57 Resp: 30467

Ion	Ratio	Lower	Upper
57	100		
43	66.6	41.5	81.5
86	19.4	0.0	39.1

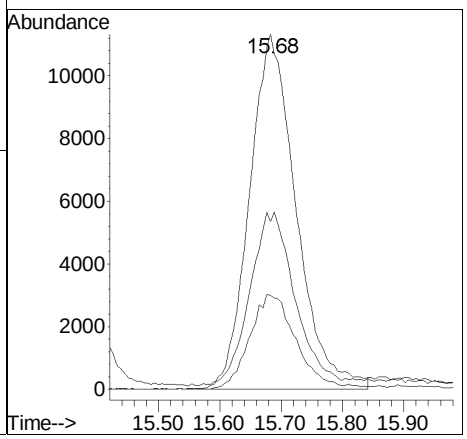


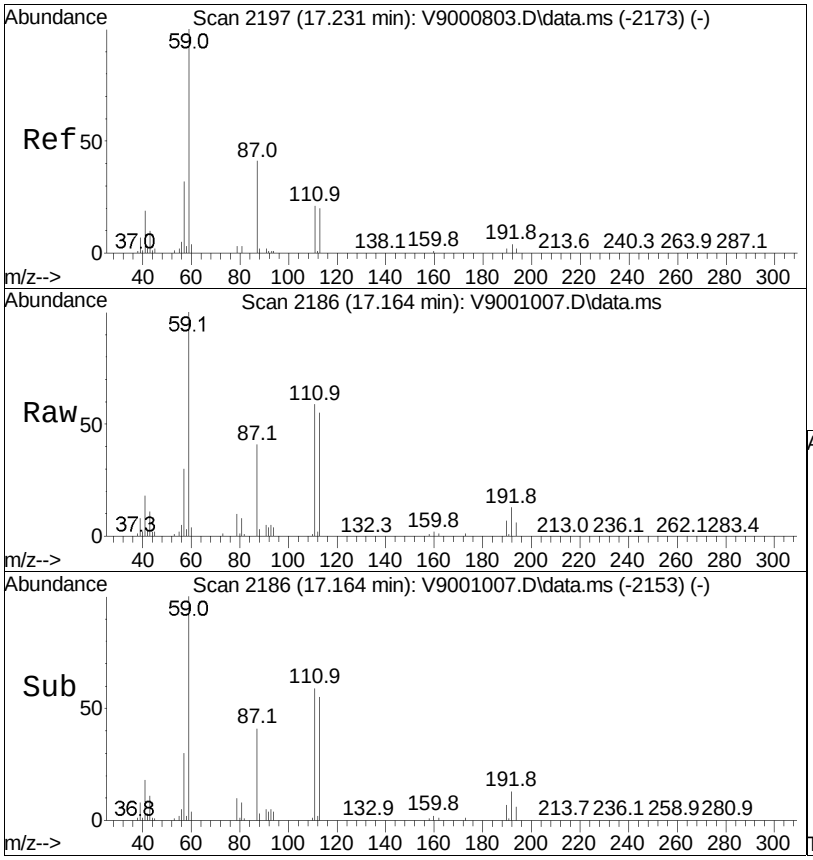


#20
Diisopropyl ether
Concen: 20.35 ug/L
RT: 15.68 min Scan# 1943
Delta R.T. -0.055 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 45 Resp: 59706

Ion	Ratio	Lower	Upper
45	100		
87	26.5	4.7	44.7
43	47.2	26.5	66.5

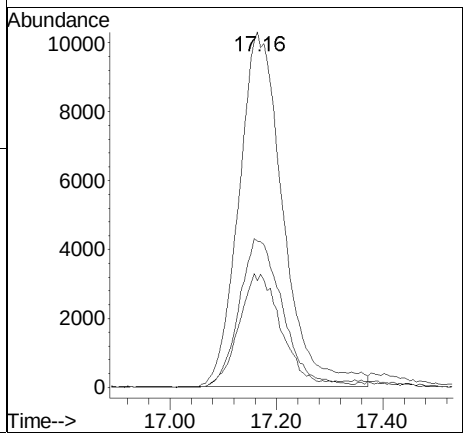


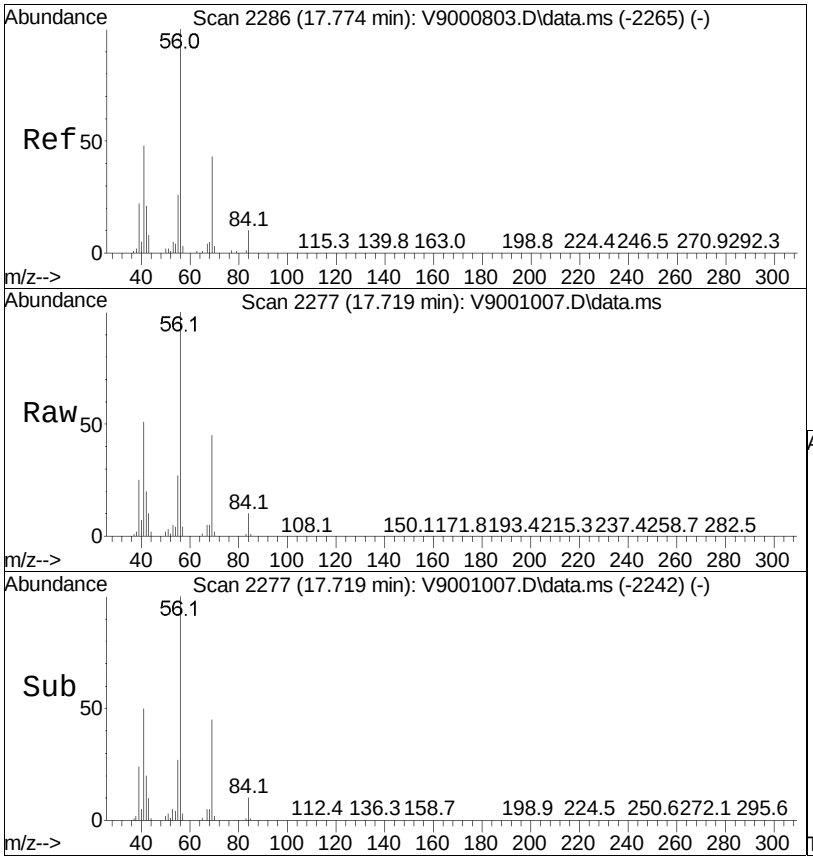


#25
Ethyl tertiary butyl ether
Concen: 20.18 ug/L
RT: 17.16 min Scan# 2186
Delta R.T. -0.048 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 59 Resp: 59431

Ion	Ratio	Lower	Upper
59	100		
87	41.2	22.0	62.0
57	30.1	12.8	52.8

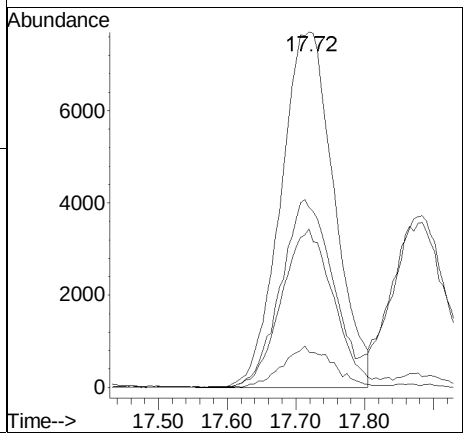


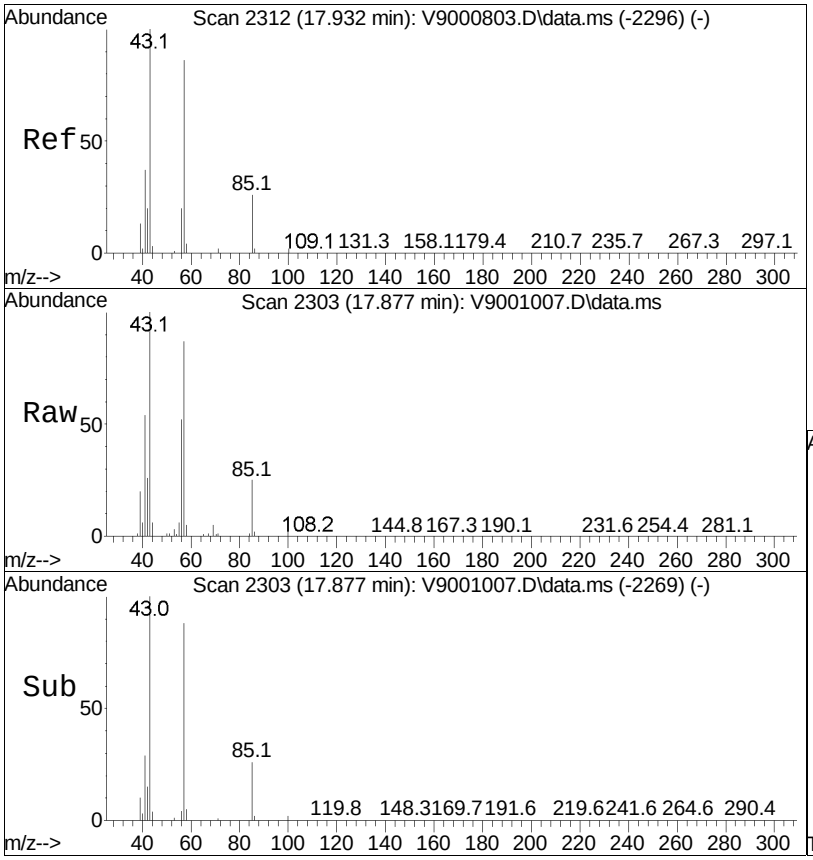


#27
Methylcyclopentane
Concen: 21.43 ug/L
RT: 17.72 min Scan# 2277
Delta R.T. -0.036 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 56 Resp: 41672

Ion	Ratio	Lower	Upper
56	100		
69	44.6	22.9	62.9
41	50.7	30.3	70.3
84	10.0	0.0	29.9

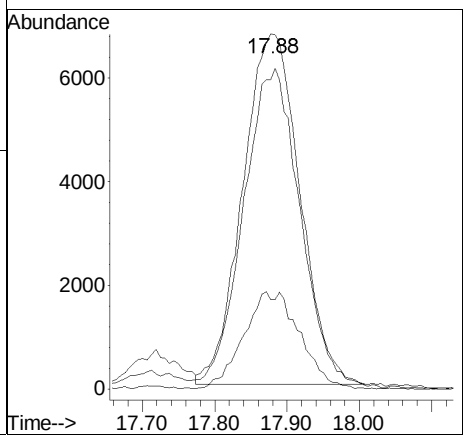


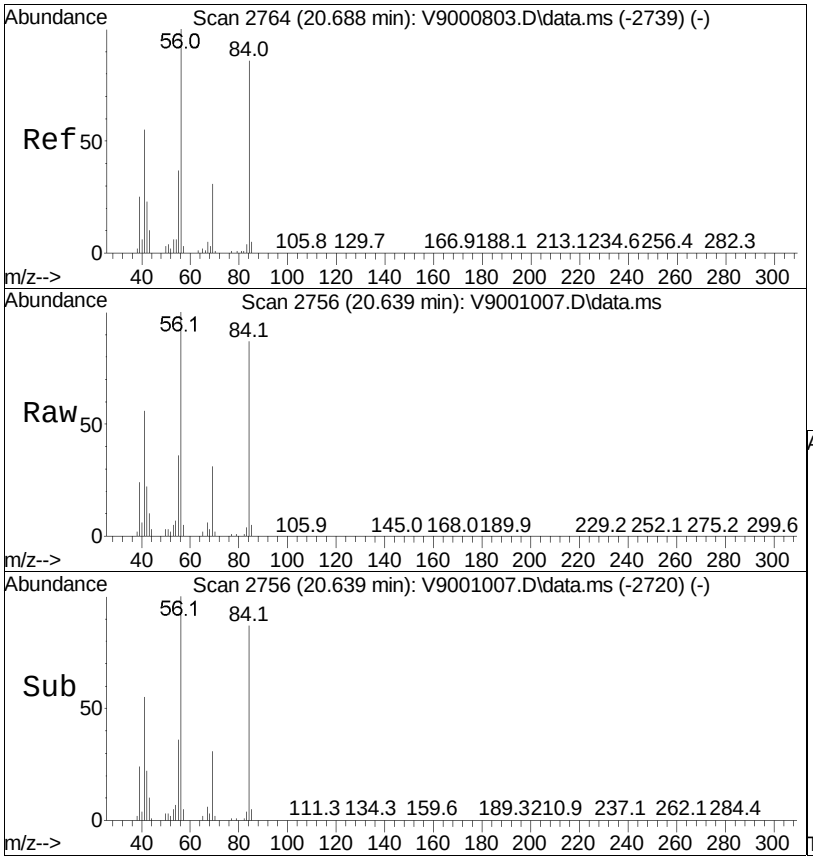


#28
2,4-Dimethylpentane
Concen: 20.61 ug/L
RT: 17.88 min Scan# 2303
Delta R.T. -0.042 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 37167

Ion	Ratio	Lower	Upper
43	100		
57	87.2	70.3	110.3
85	25.3	6.8	46.8

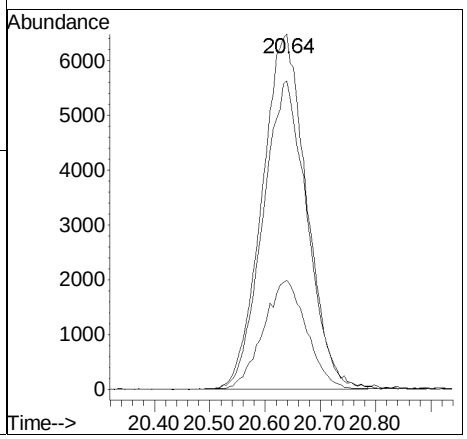


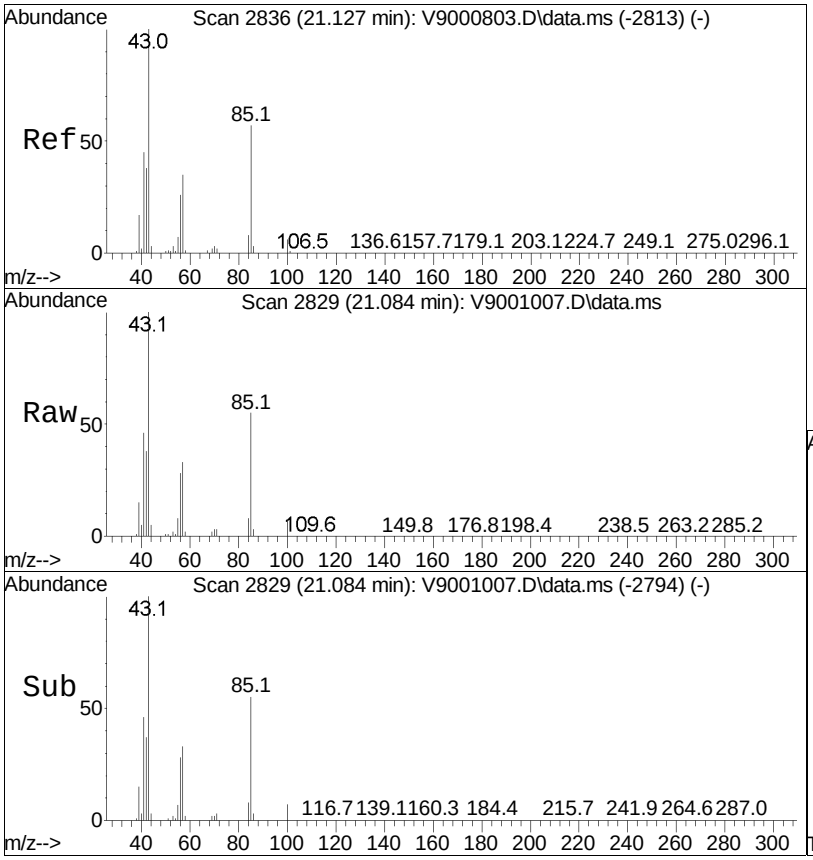


#32
Cyclohexane
Concen: 22.38 ug/L
RT: 20.64 min Scan# 2756
Delta R.T. -0.030 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 56 Resp: 36286

Ion	Ratio	Lower	Upper
56	100		
84	86.8	67.7	107.7
69	30.7	11.1	51.1

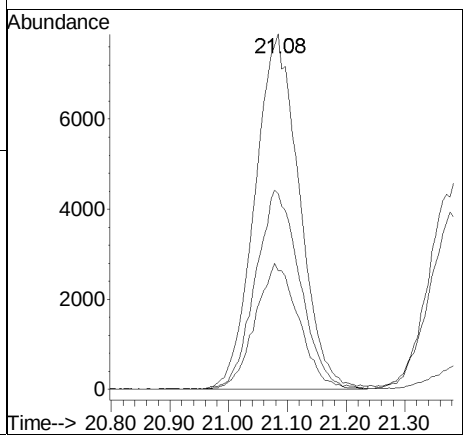


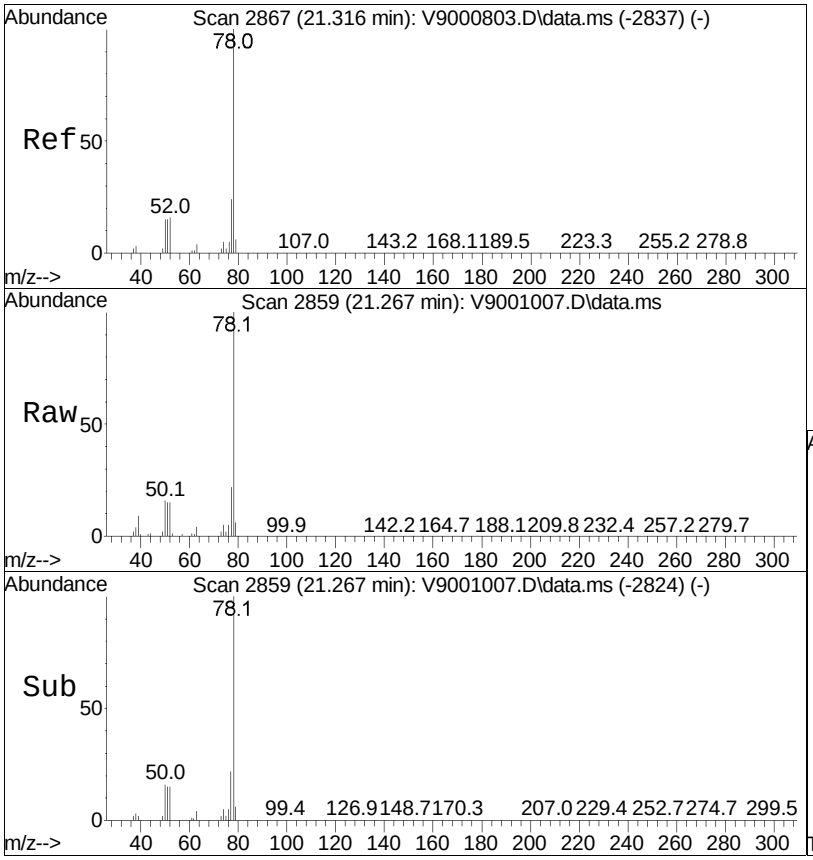


#33
2-Methylhexane
Concen: 20.88 ug/L
RT: 21.08 min Scan# 2829
Delta R.T. -0.036 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 41371

Ion	Ratio	Lower	Upper
43	100		
85	55.1	34.0	74.0
57	33.4	14.6	54.6

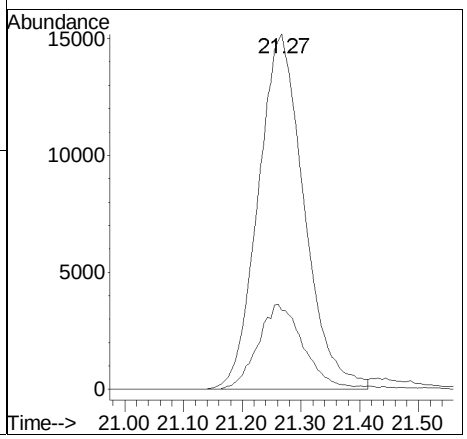


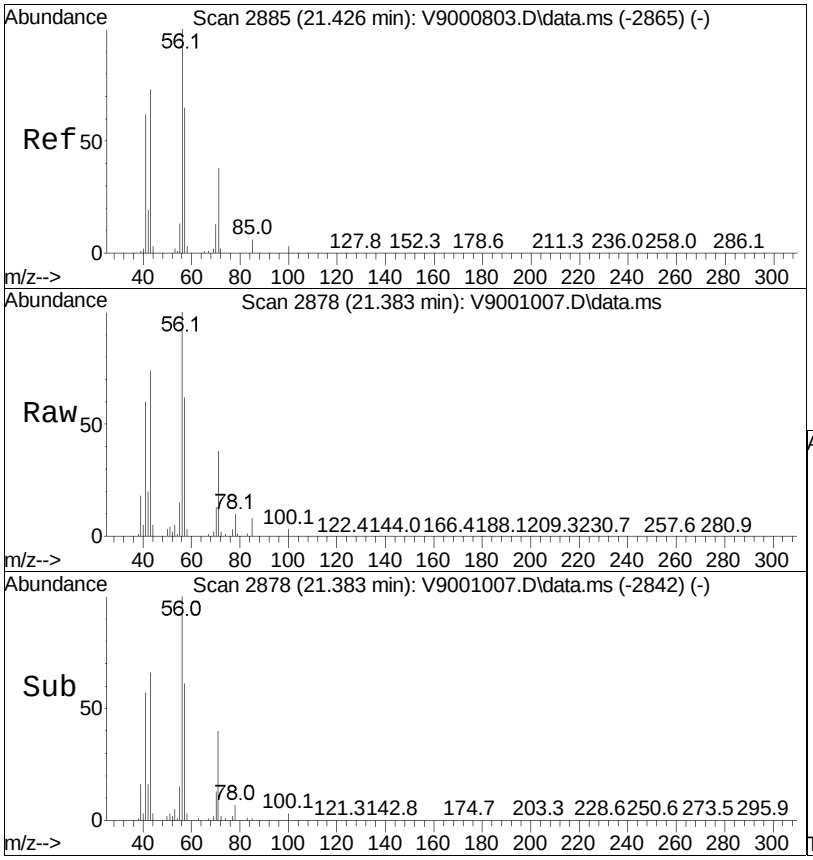


#34
Benzene
Concen: 20.07 ug/L
RT: 21.27 min Scan# 2859
Delta R.T. -0.036 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 78 Resp: 82390

Ion	Ratio	Lower	Upper
78	100		
77	22.3	3.1	43.1

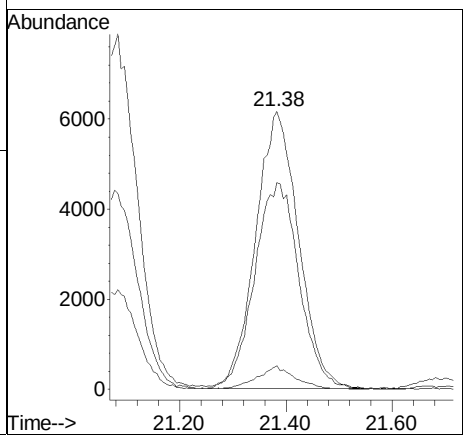


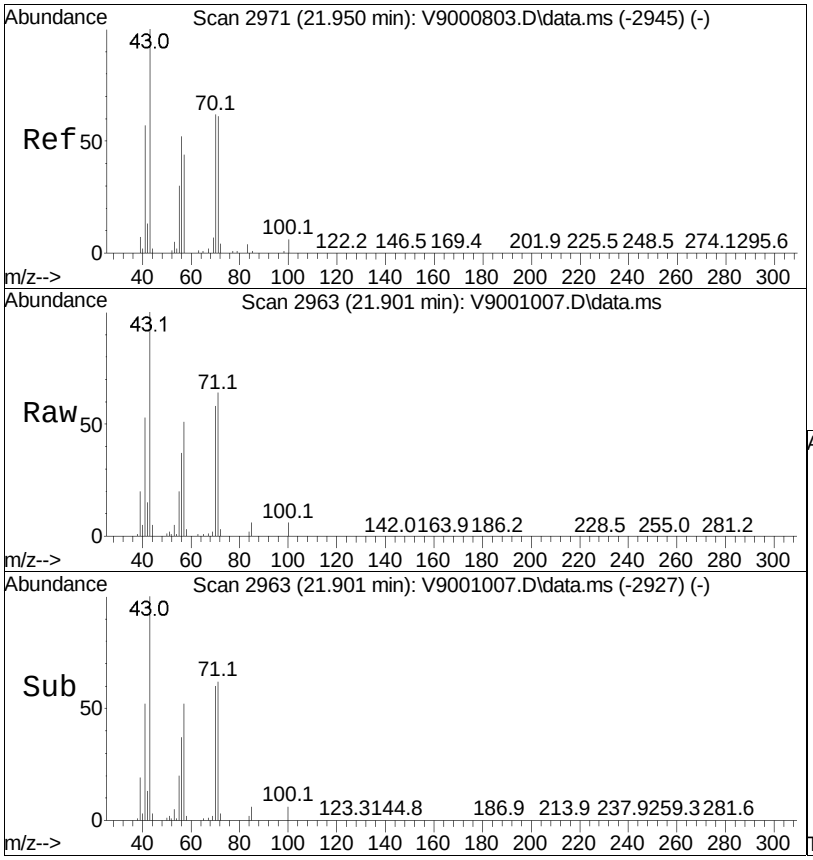


#35
2,3-Dimethylpentane
Concen: 21.10 ug/L
RT: 21.38 min Scan# 2878
Delta R.T. -0.030 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 56 Resp: 34454

Ion	Ratio	Lower	Upper
56	100		
43	74.4	56.9	96.9
85	8.5	0.0	25.7

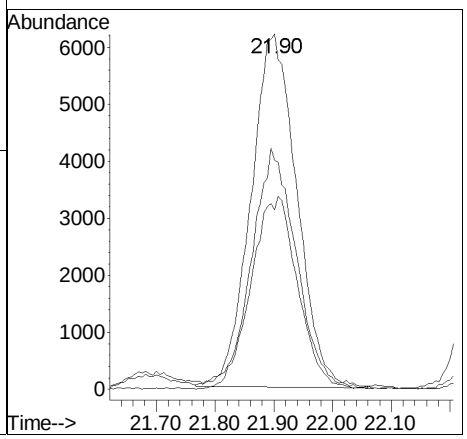


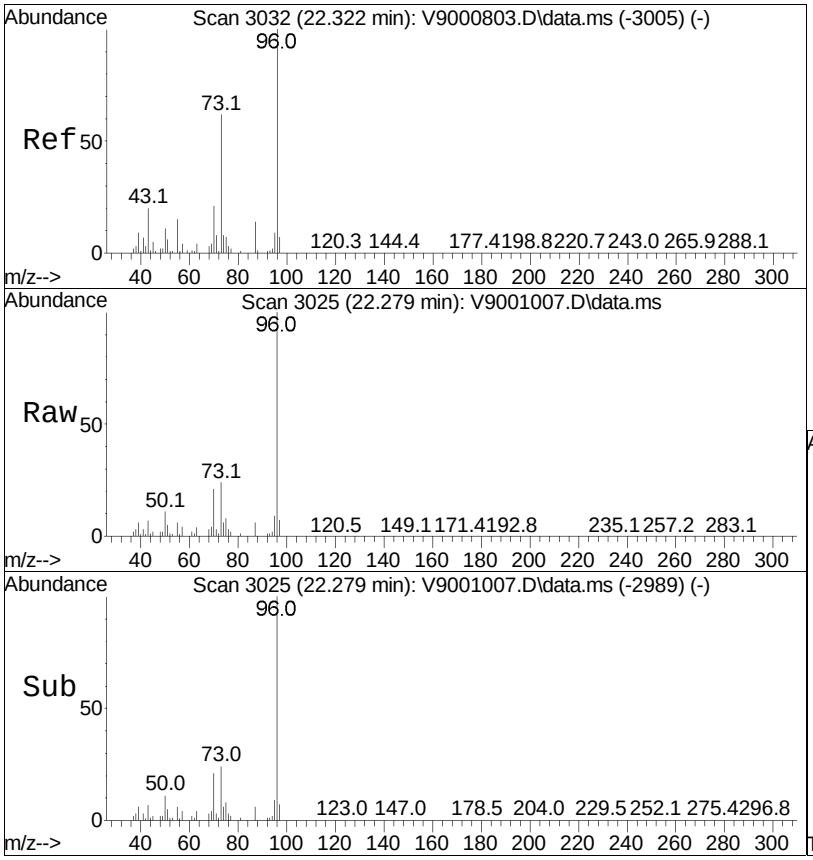


#38
3-Methylhexane
Concen: 19.90 ug/L
RT: 21.90 min Scan# 2963
Delta R.T. -0.030 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 33731

Ion	Ratio	Lower	Upper
43	100		
57	50.5	37.9	77.9
71	64.5	43.4	83.4

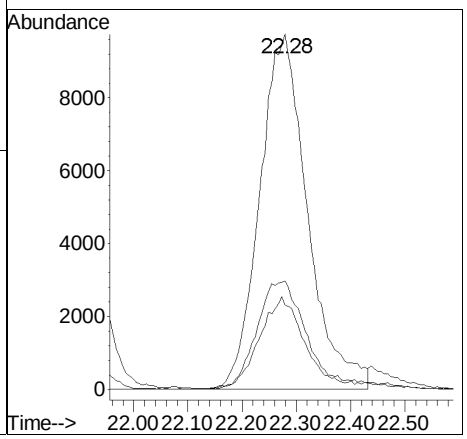


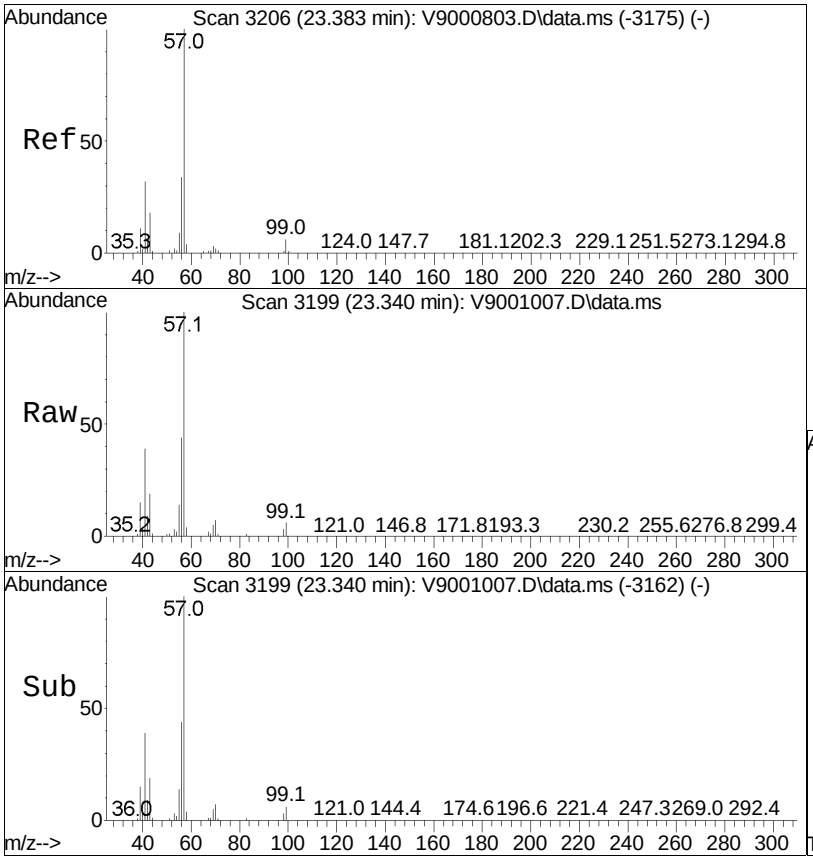


#39
TAME
Concen: 17.67 ug/L
RT: 22.28 min Scan# 3025
Delta R.T. -0.030 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 73 Resp: 59610

Ion	Ratio	Lower	Upper
73	100		
43	30.5	11.3	51.3
55	23.7	4.5	44.5

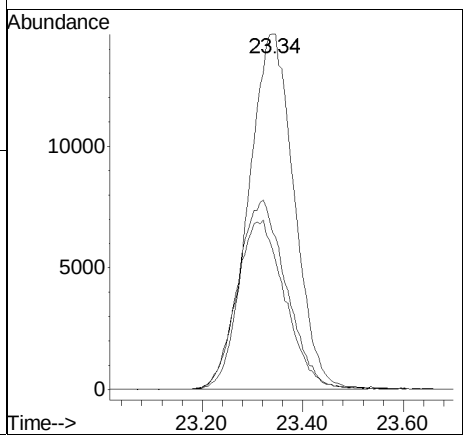


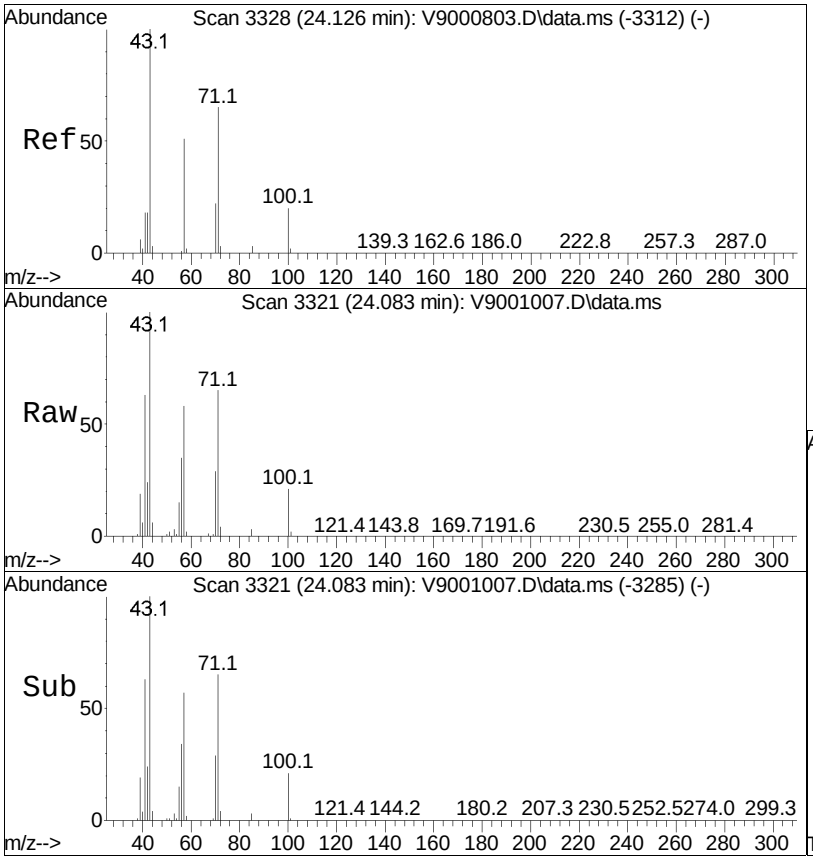


#44
Isooctane
Concen: 22.31 ug/L
RT: 23.34 min Scan# 3199
Delta R.T. -0.024 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 57 Resp: 91343

Ion	Ratio	Lower	Upper
57	100		
41	39.4	21.0	61.0
56	44.2	28.6	68.6

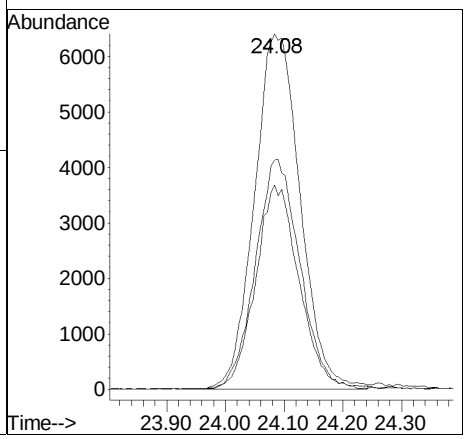


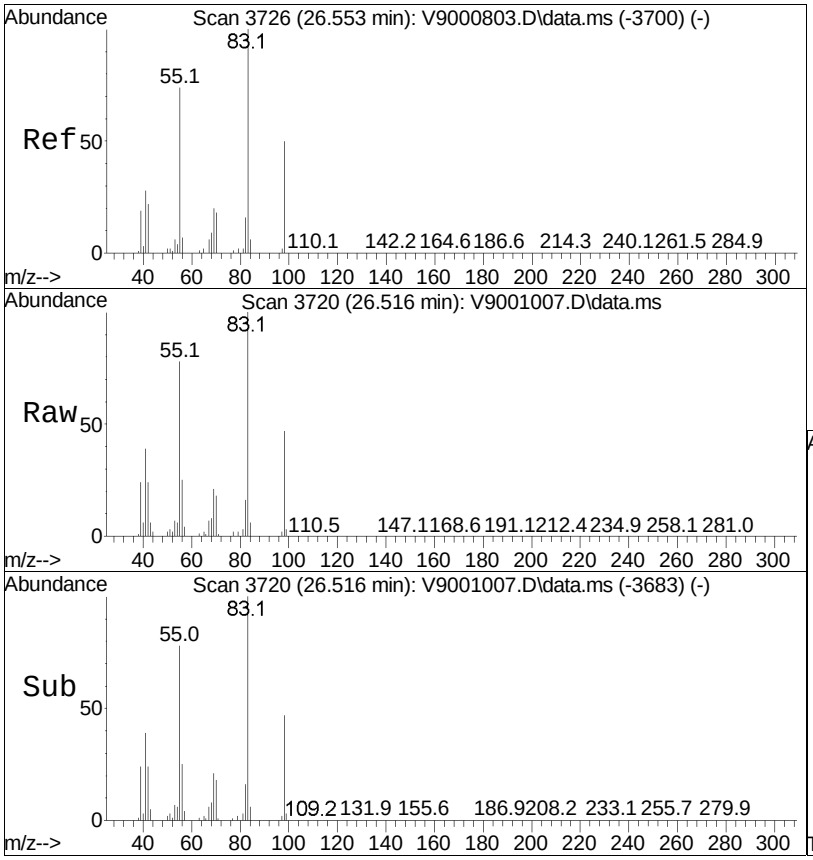


#46
Heptane
Concen: 23.54 ug/L
RT: 24.08 min Scan# 3321
Delta R.T. -0.030 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 34608

Ion	Ratio	Lower	Upper
43	100		
57	57.5	34.6	74.6
71	64.5	44.0	84.0

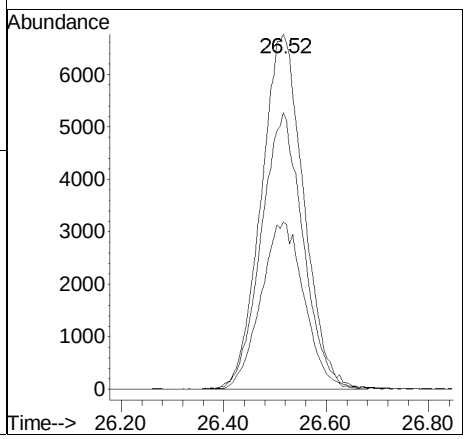


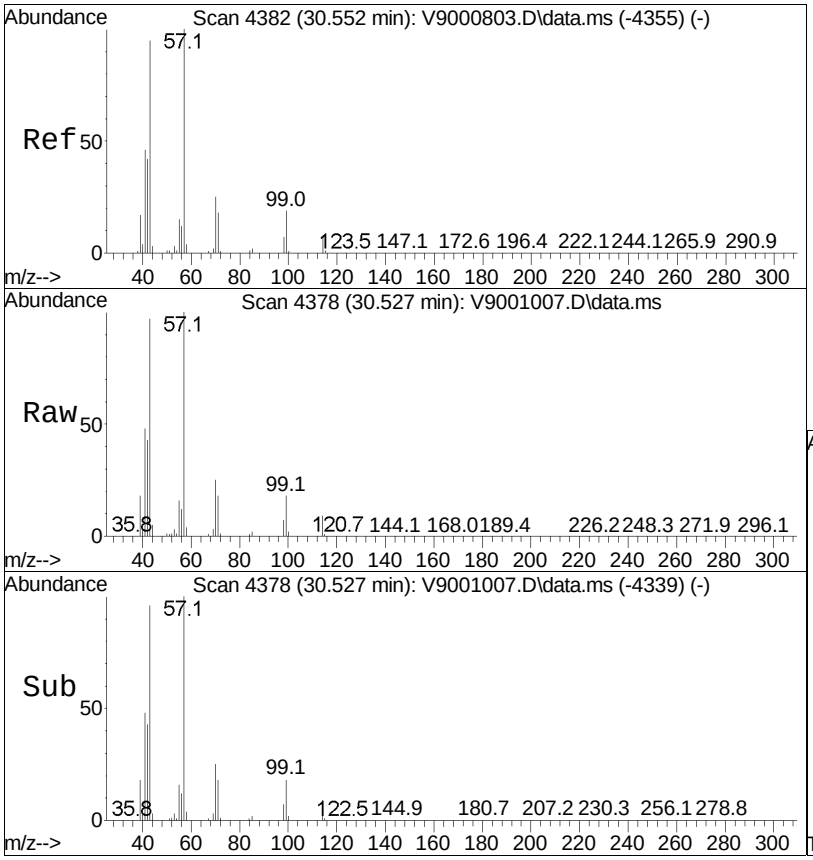


#51
Methylcyclohexane
Concen: 22.10 ug/L
RT: 26.52 min Scan# 3720
Delta R.T. -0.024 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 83 Resp: 39064

Ion	Ratio	Lower	Upper
83	100		
55	77.8	58.3	98.3
98	47.1	26.5	66.5

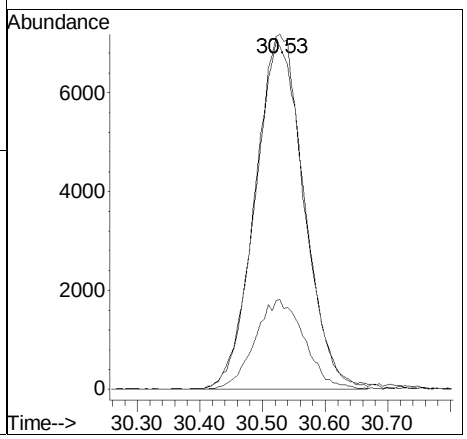


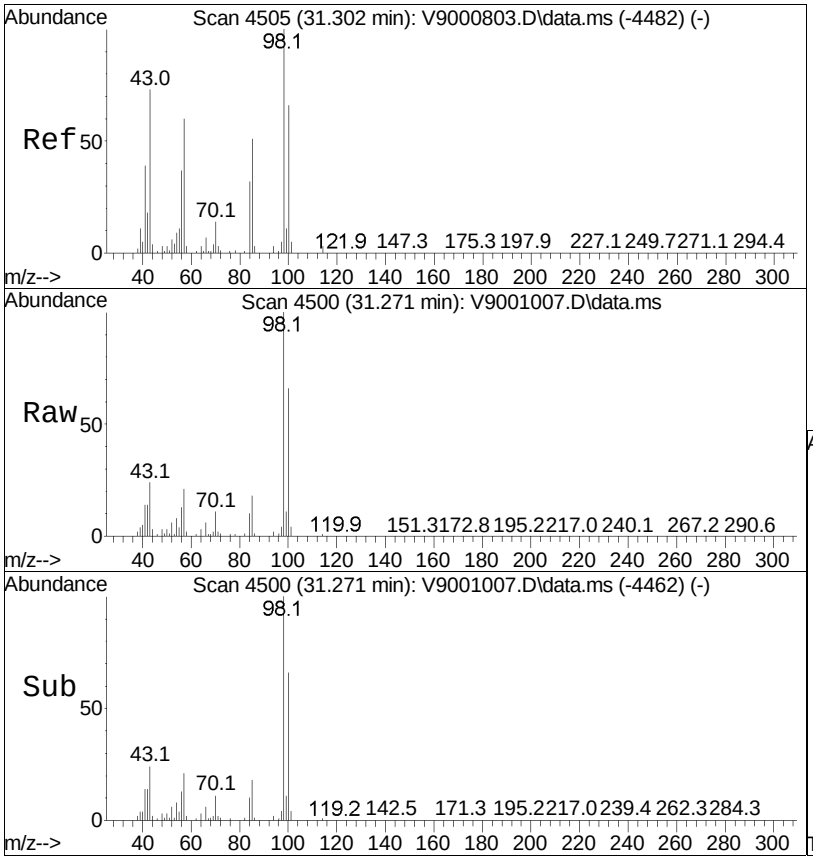


#60
2-Methylheptane
Concen: 22.16 ug/L
RT: 30.53 min Scan# 4378
Delta R.T. -0.012 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 57 Resp: 39264

Ion	Ratio	Lower	Upper
57	100		
43	96.6	74.5	114.5
70	25.4	3.7	43.7

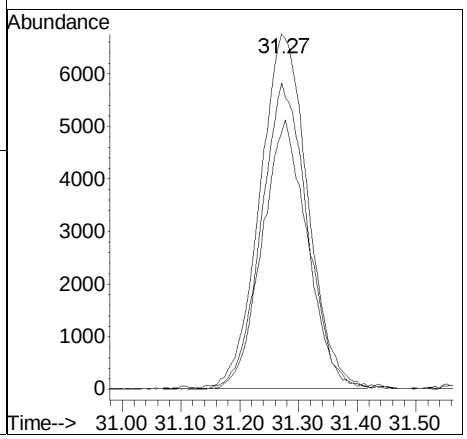


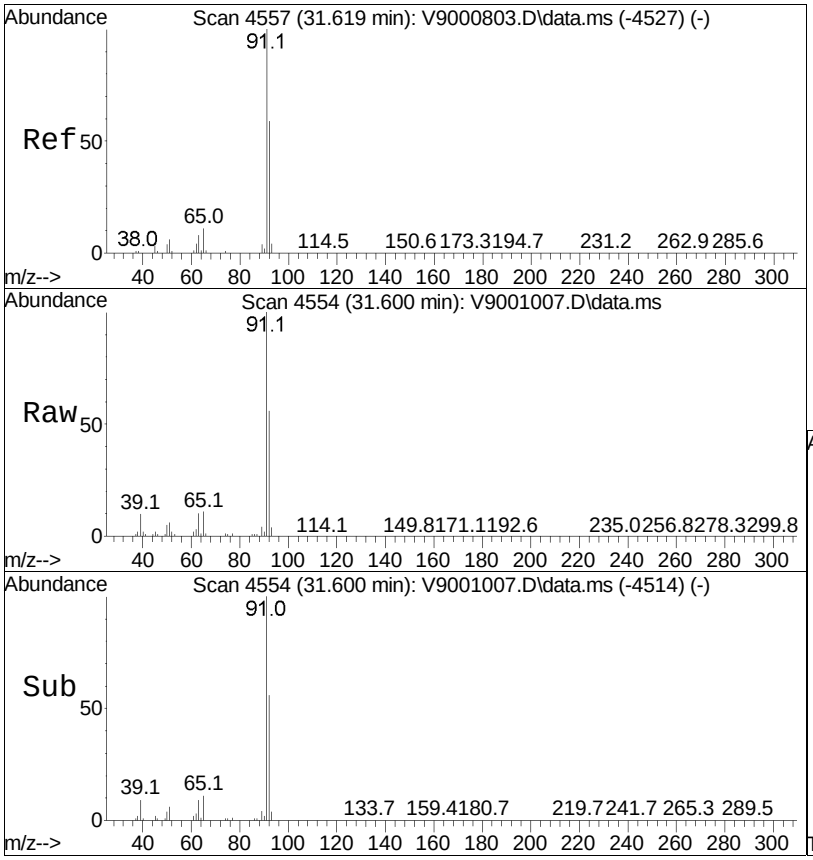


#63
3-Methylheptane
Concen: 21.66 ug/L
RT: 31.27 min Scan# 4500
Delta R.T. -0.018 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 38193

Ion	Ratio	Lower	Upper
43	100		
57	86.2	63.0	103.0
85	72.4	54.0	94.0

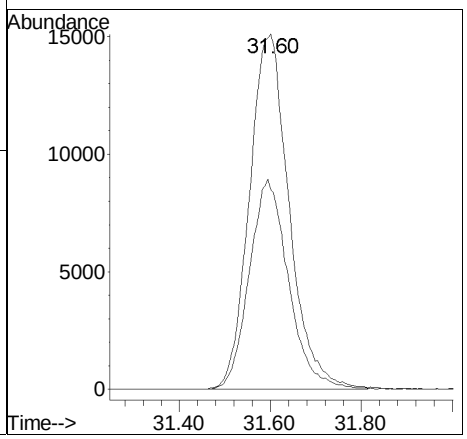


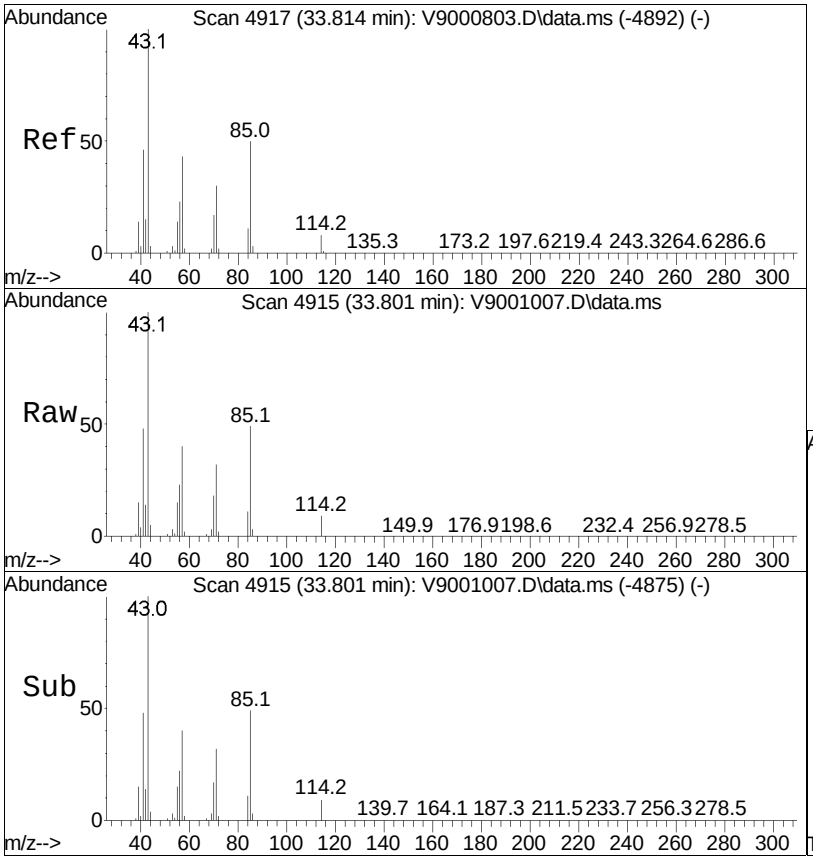


#66
Toluene
Concen: 20.01 ug/L
RT: 31.60 min Scan# 4554
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 91 Resp: 91560

Ion	Ratio	Lower	Upper
91	100		
92	56.3	38.3	78.3

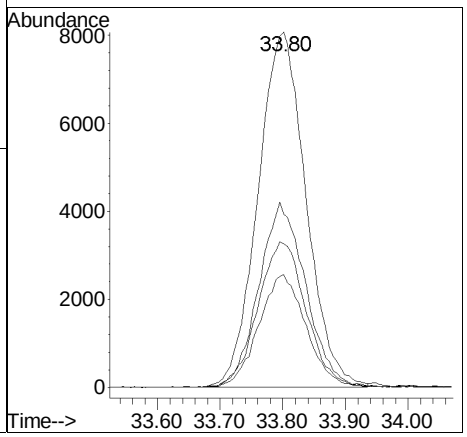


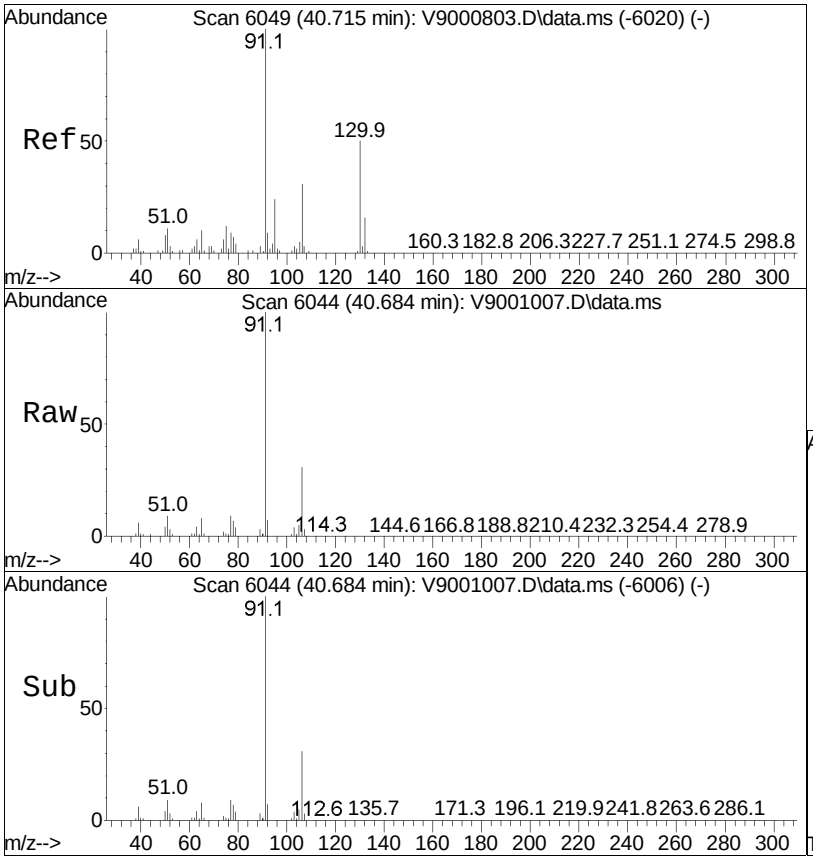


#71
Octane
Concen: 23.10 ug/L
RT: 33.80 min Scan# 4915
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 42886

Ion	Ratio	Lower	Upper
43	100		
57	40.4	23.0	63.0
85	48.8	29.3	69.3
71	31.8	10.8	50.8

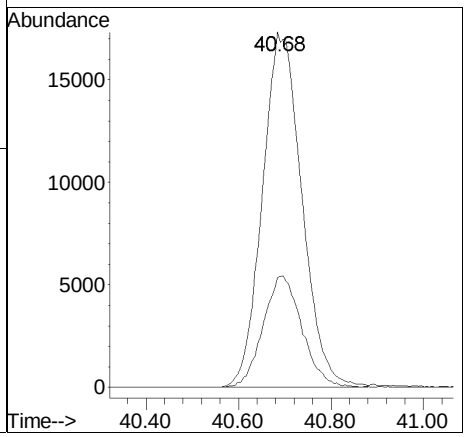


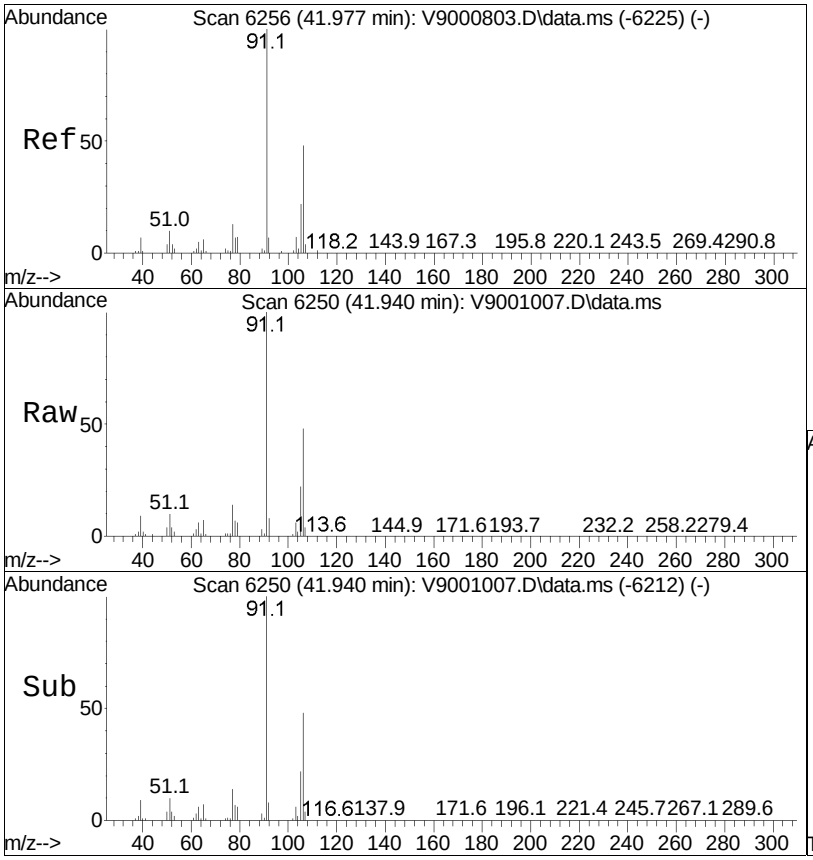


#86
Ethylbenzene
Concen: 20.18 ug/L
RT: 40.68 min Scan# 6044
Delta R.T. -0.018 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 91 Resp: 102659

Ion	Ratio	Lower	Upper
91	100		
106	31.0	11.2	51.2

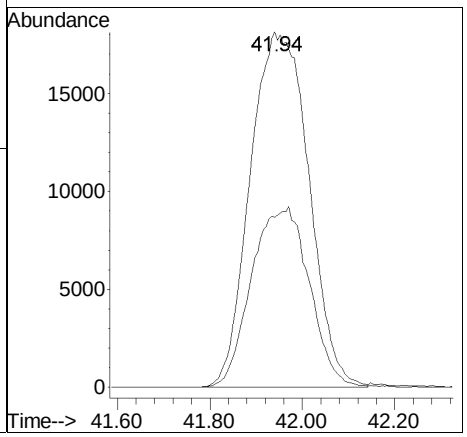


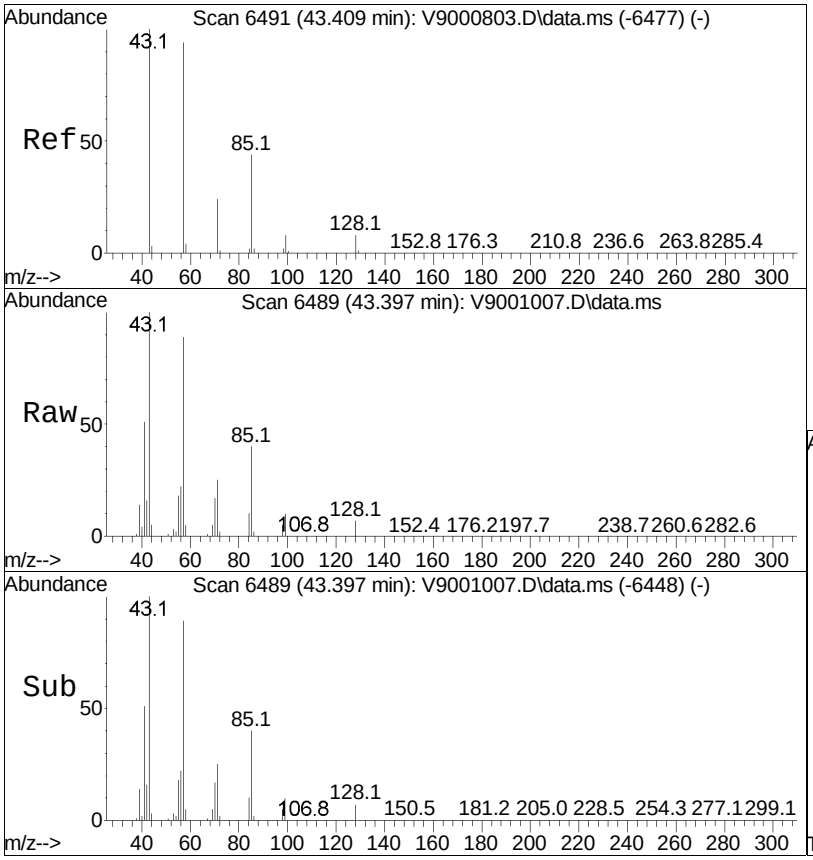


#91
p/m-Xylene
Concen: 41.34 ug/L
RT: 41.94 min Scan# 6250
Delta R.T. -0.018 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 91 Resp: 159040

Ion	Ratio	Lower	Upper
91	100		
106	47.8	29.3	69.3

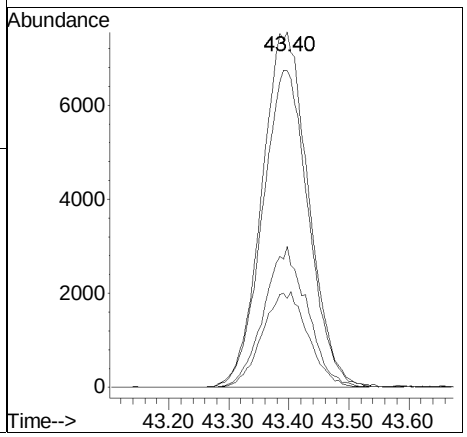


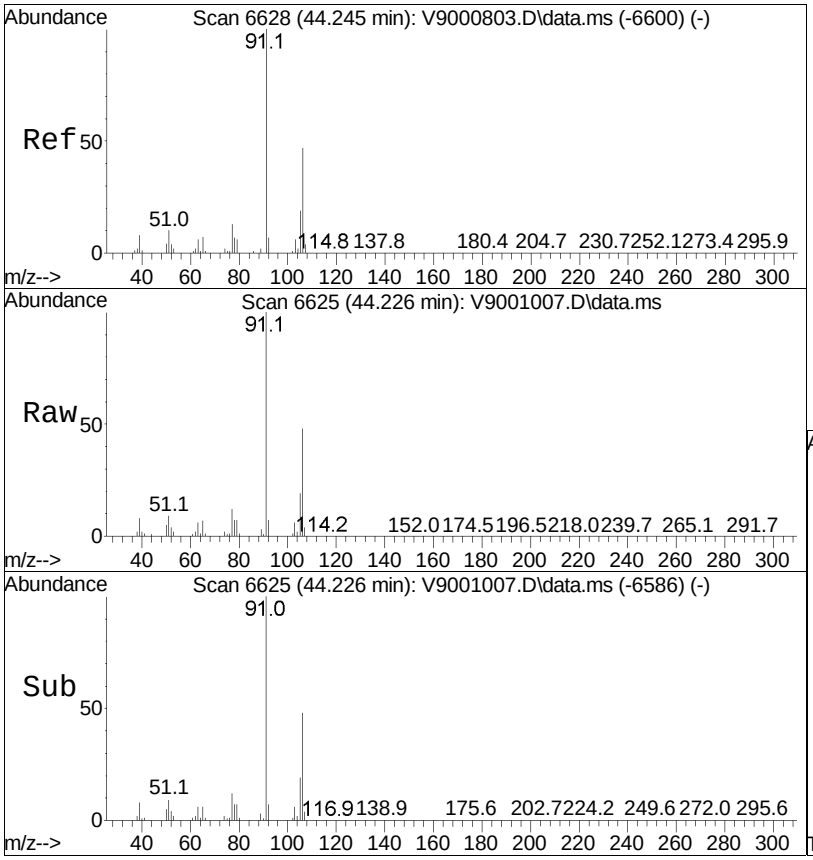


#95
Nonane
Concen: 20.29 ug/L
RT: 43.40 min Scan# 6489
Delta R.T. 0.000 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 40832

Ion	Ratio	Lower	Upper
43	100		
57	89.2	70.0	110.0
85	39.6	15.8	55.8
71	25.0	7.0	47.0

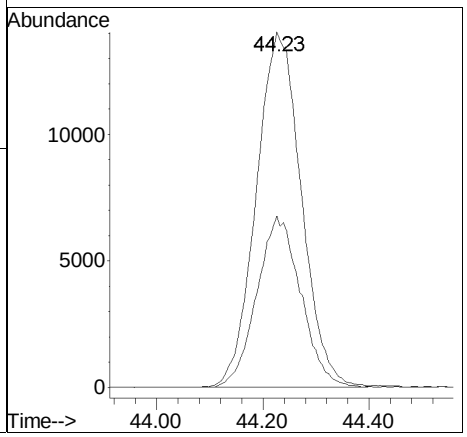


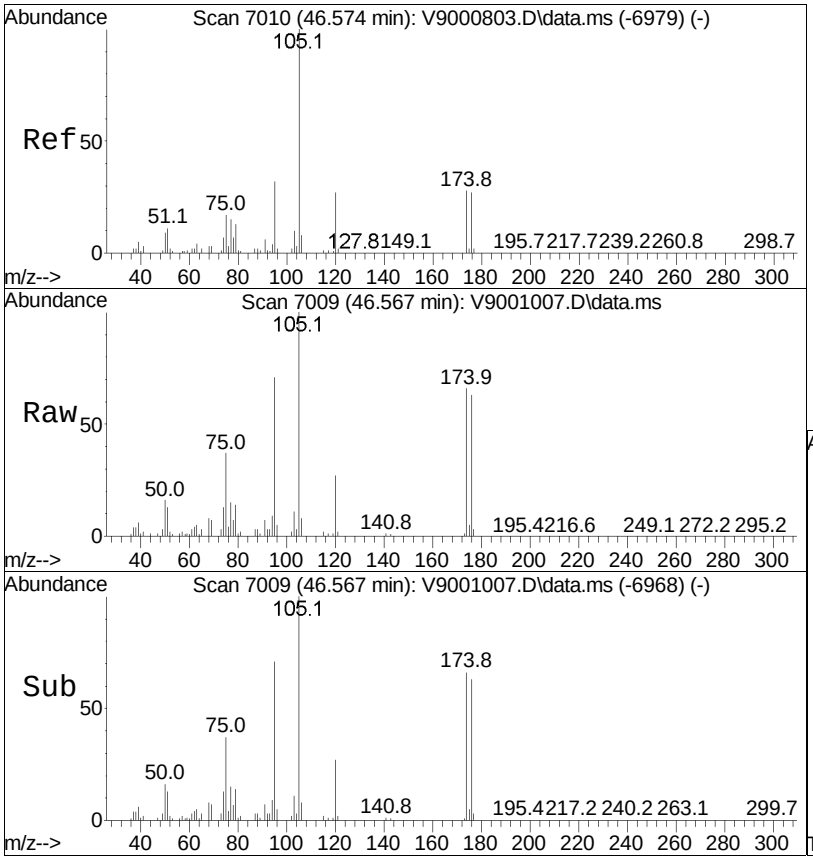


#98
o-Xylene
Concen: 20.96 ug/L
RT: 44.23 min Scan# 6625
Delta R.T. -0.012 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 91 Resp: 82599

Ion	Ratio	Lower	Upper
91	100		
106	48.2	27.9	67.9

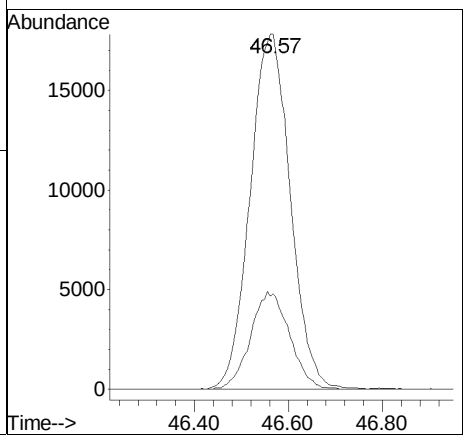


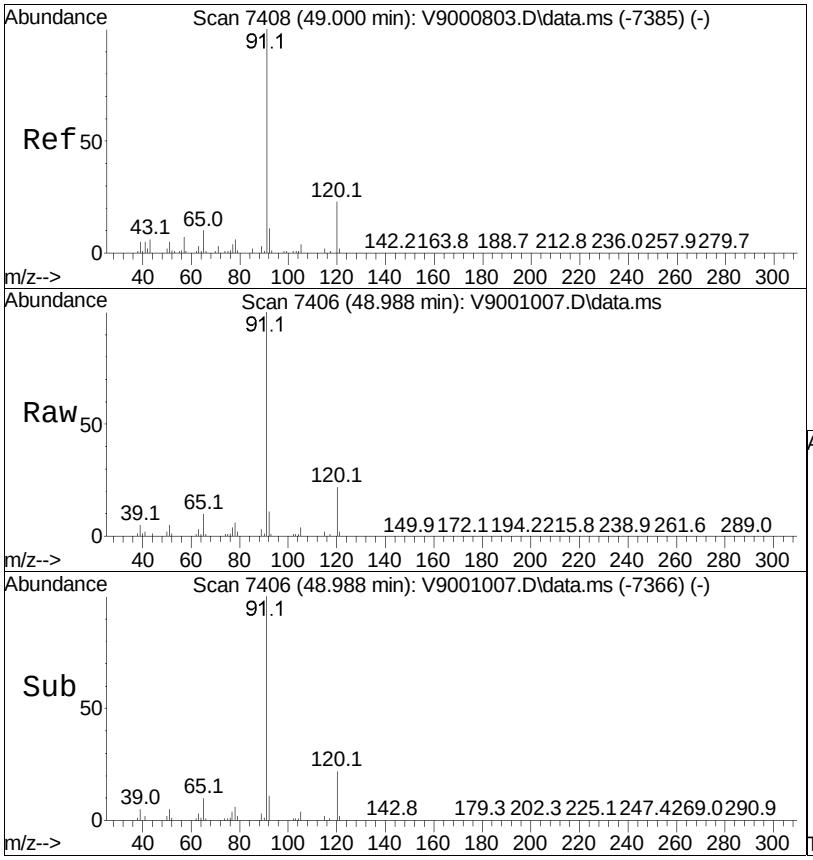


#102
Isopropylbenzene
Concen: 21.55 ug/L
RT: 46.57 min Scan# 7009
Delta R.T. 0.000 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:105 Resp: 106116

Ion	Ratio	Lower	Upper
105	100		
120	26.9	6.5	46.5

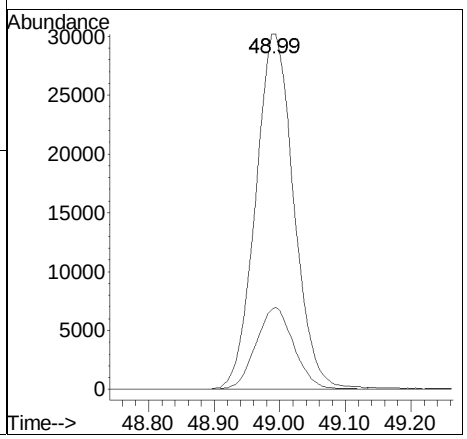


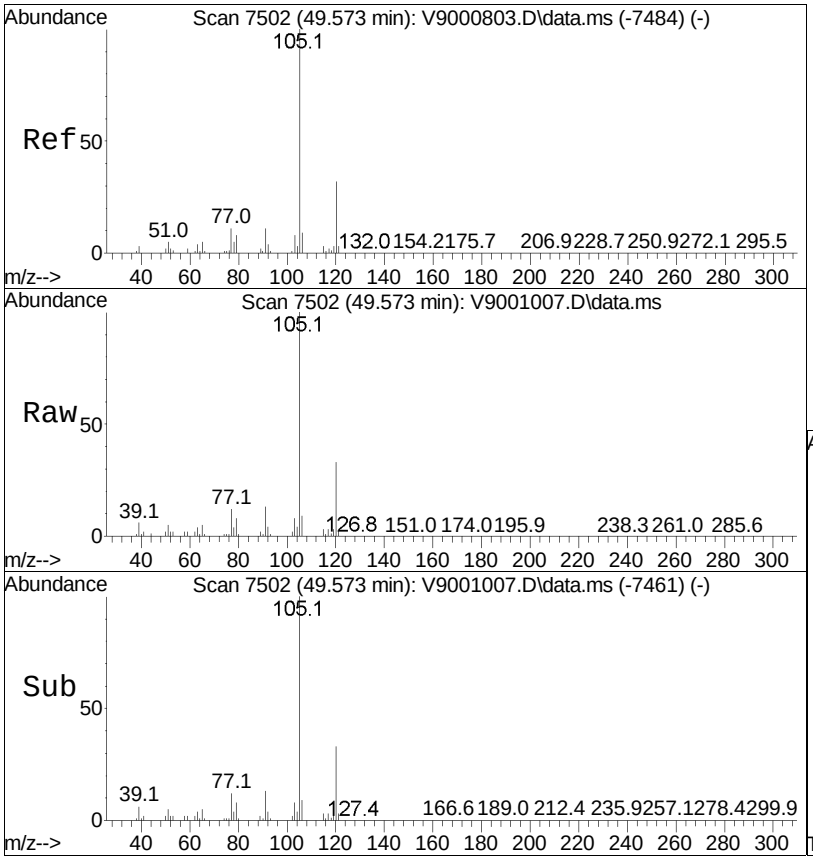


#104
n-Propylbenzene
Concen: 21.52 ug/L
RT: 48.99 min Scan# 7406
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 91 Resp: 122218

Ion	Ratio	Lower	Upper
91	100		
120	22.5	3.1	43.1

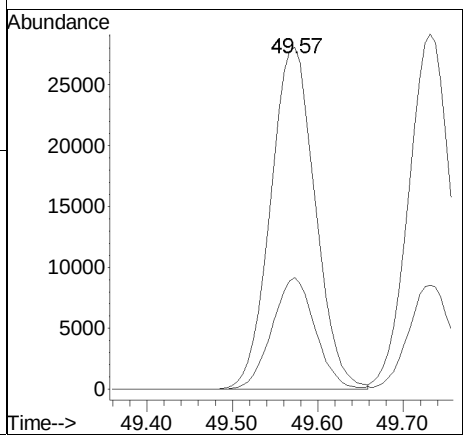


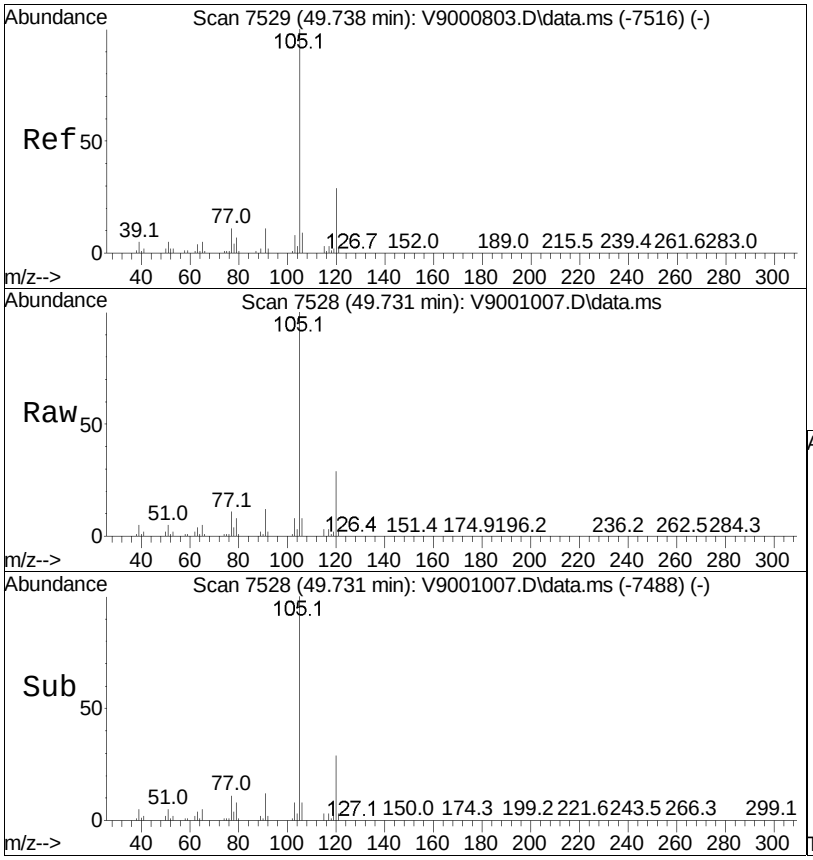


#107
1-Methyl-3-ethylbenzene
Concen: 21.38 ug/L
RT: 49.57 min Scan# 7502
Delta R.T. 0.000 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:105 Resp: 101766

Ion	Ratio	Lower	Upper
105	100		
120	32.7	11.8	51.8

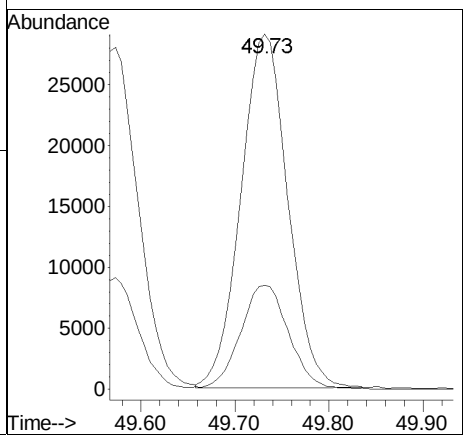


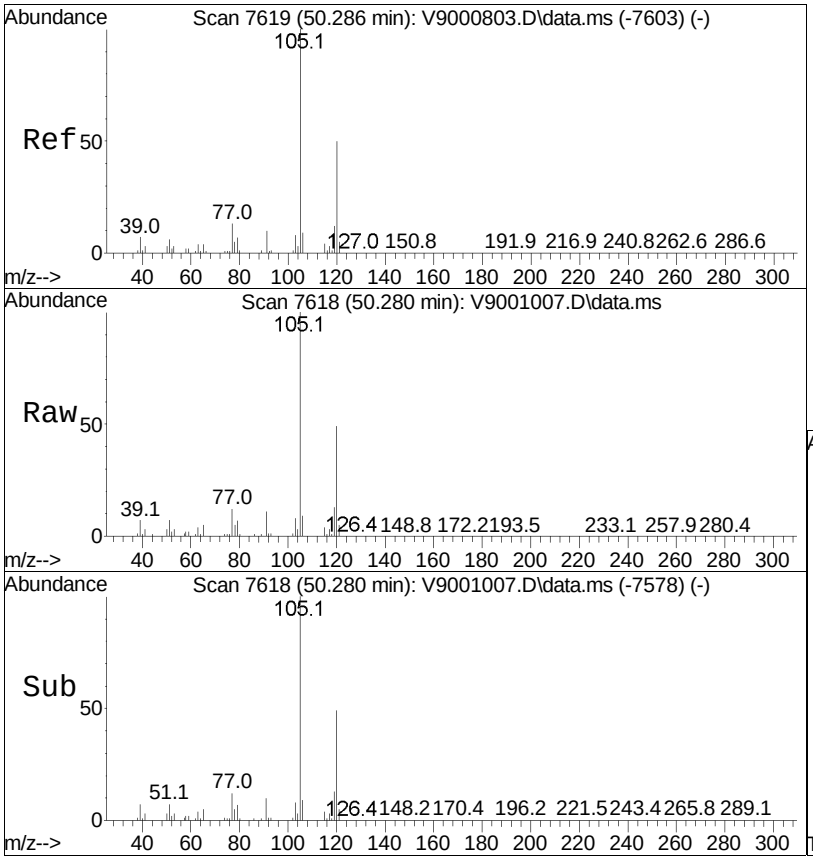


#108
1-Methyl-4-ethylbenzene
Concen: 22.06 ug/L
RT: 49.73 min Scan# 7528
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:105 Resp: 100689

Ion	Ratio	Lower	Upper
105	100		
120	29.3	9.7	49.7

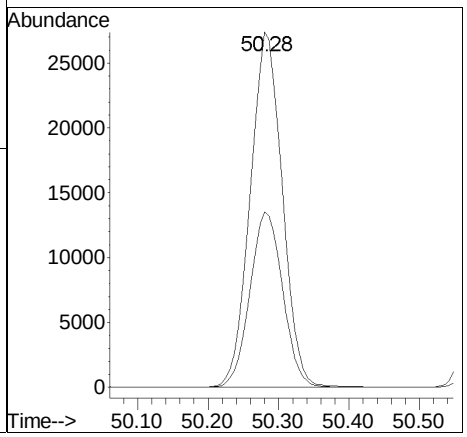


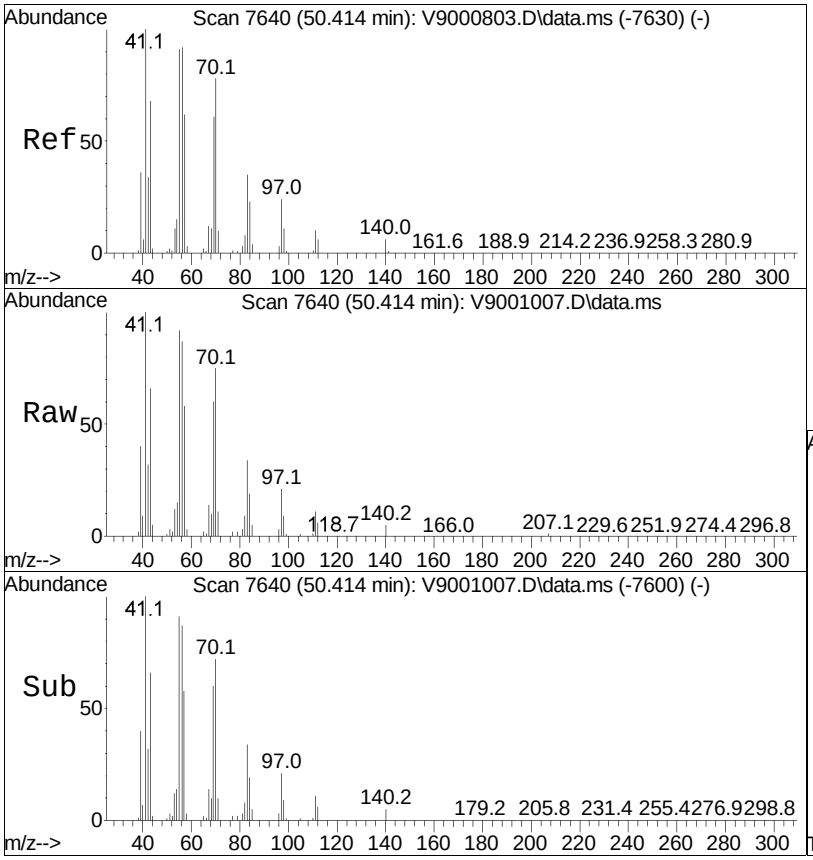


#109
1,3,5-Trimethylbenzene
Concen: 21.94 ug/L
RT: 50.28 min Scan# 7618
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:105 Resp: 86370

Ion	Ratio	Lower	Upper
105	100		
120	49.3	30.3	70.3

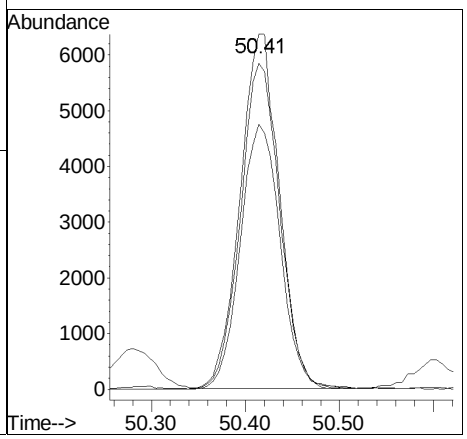


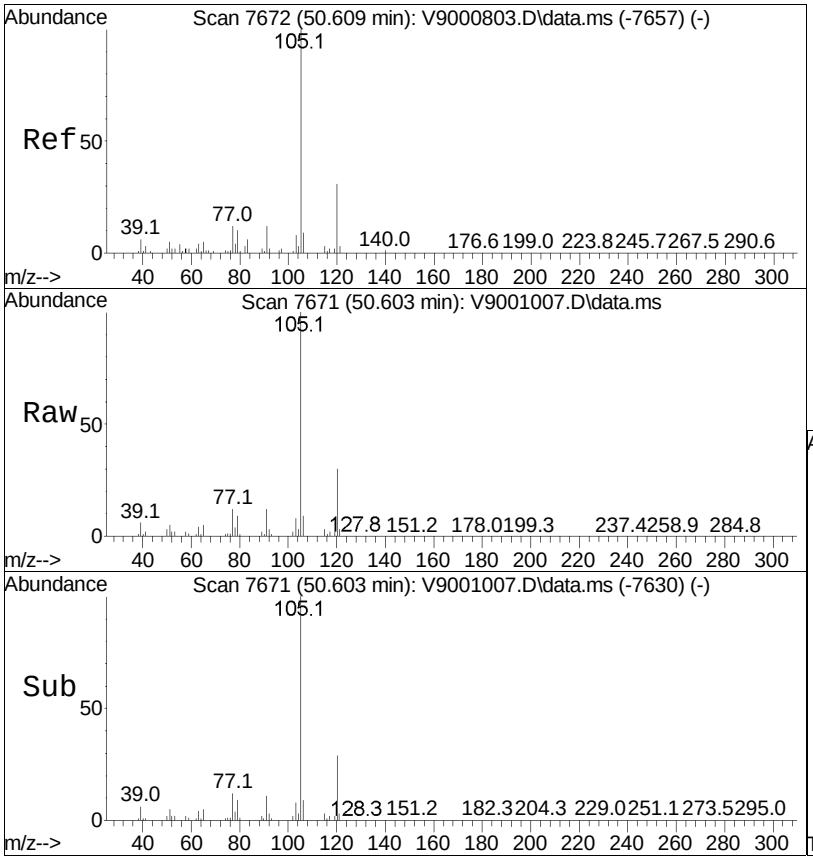


#110
1-Decene
Concen: 19.62 ug/L
RT: 50.41 min Scan# 7640
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 41 Resp: 18488

Ion	Ratio	Lower	Upper
41	100		
55	91.8	70.1	110.1
70	74.7	57.3	97.3

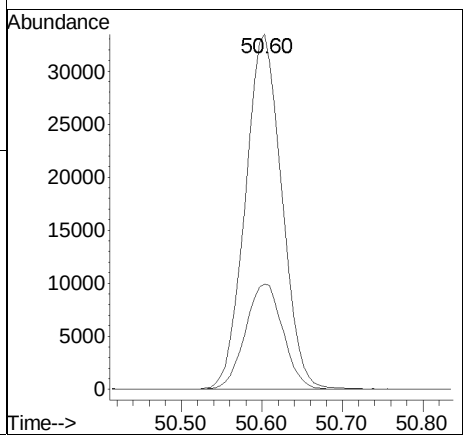


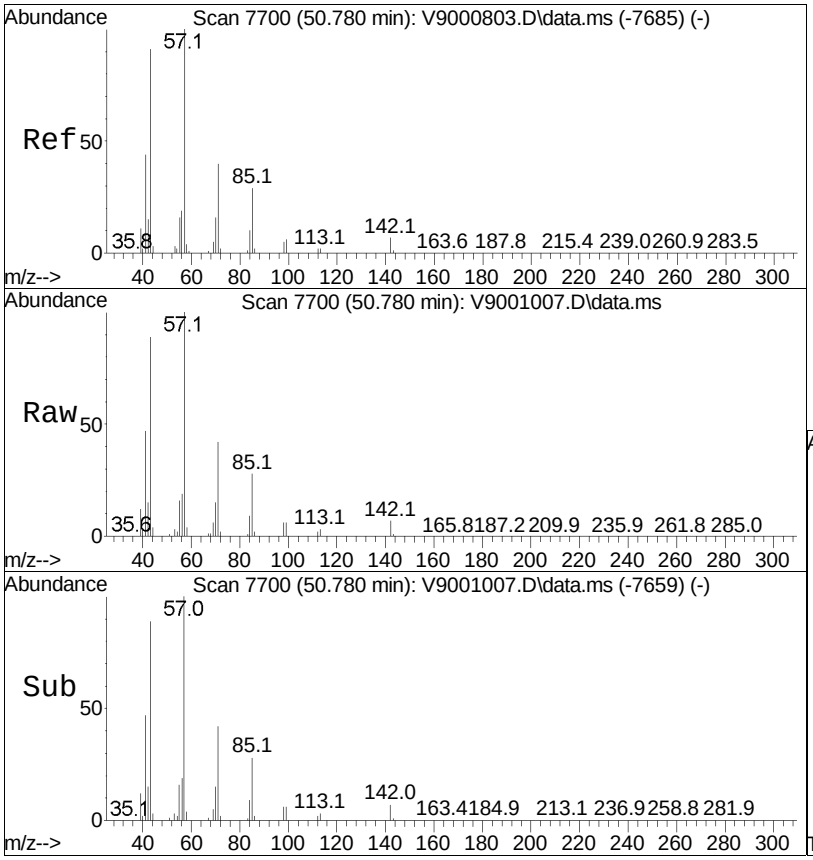


#112
1-Methyl-2-ethylbenzene
Concen: 21.83 ug/L
RT: 50.60 min Scan# 7671
Delta R.T. 0.000 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:105 Resp: 105195

Ion	Ratio	Lower	Upper
105	100		
120	29.6	10.4	50.4

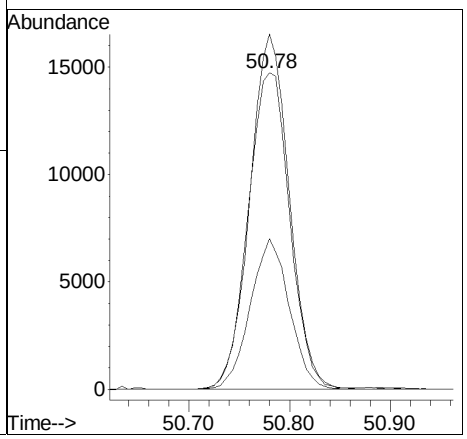


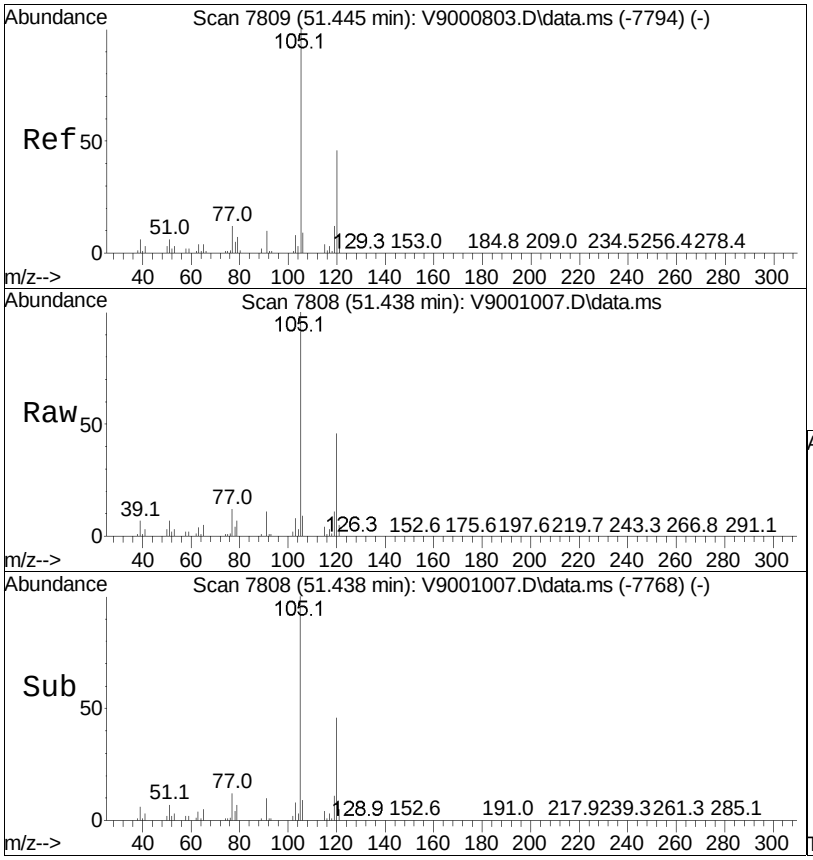


#113
Decane
Concen: 24.50 ug/L
RT: 50.78 min Scan# 7700
Delta R.T. 0.000 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 41899

Ion	Ratio	Lower	Upper
43	100		
57	112.2	85.6	125.6
71	47.6	23.5	63.5

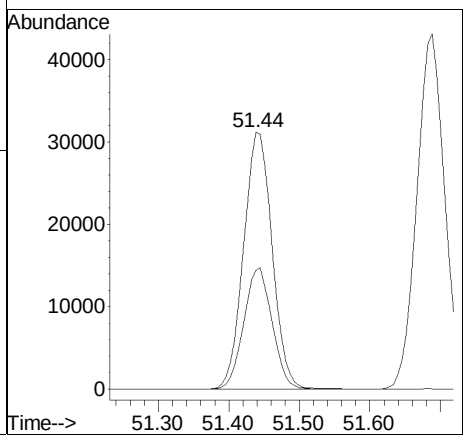


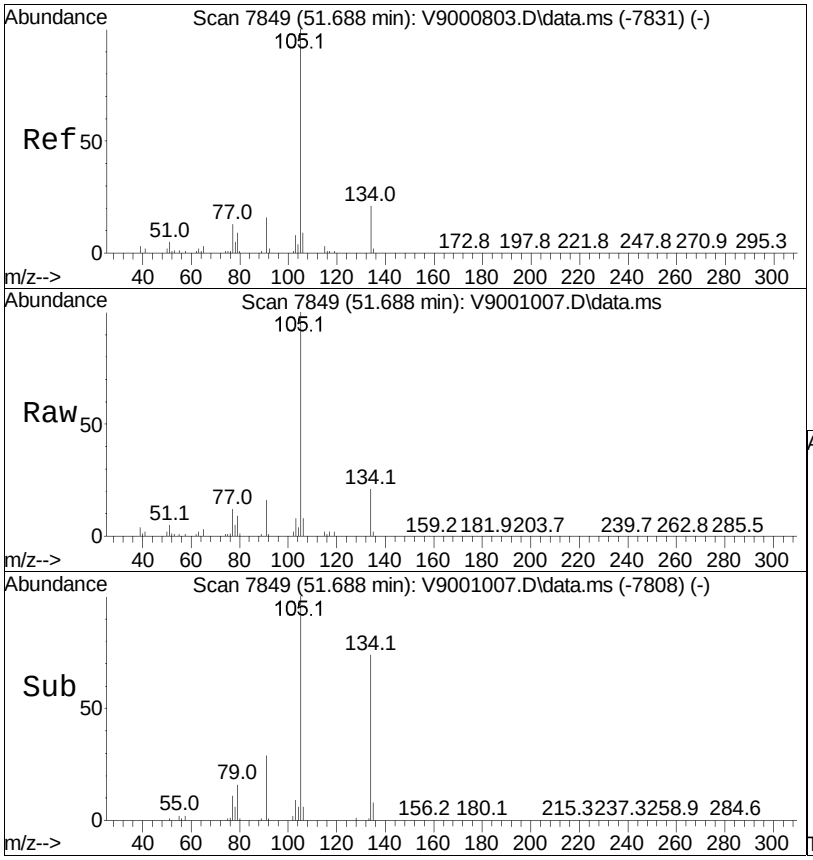


#115
1,2,4-Trimethylbenzene
Concen: 21.04 ug/L
RT: 51.44 min Scan# 7808
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:105 Resp: 88105

Ion	Ratio	Lower	Upper
105	100		
120	46.3	26.6	66.6

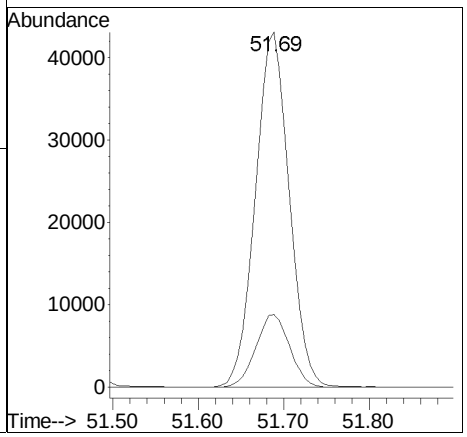


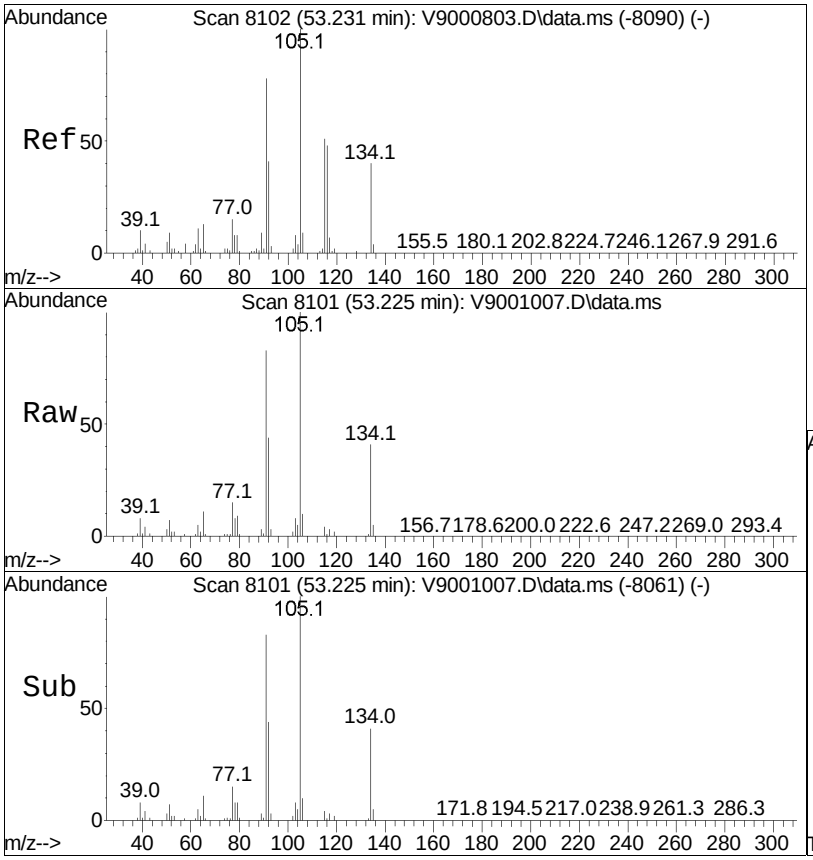


#117
sec-Butylbenzene
Concen: 23.12 ug/L
RT: 51.69 min Scan# 7849
Delta R.T. 0.000 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:105 Resp: 118380

Ion	Ratio	Lower	Upper
105	100		
134	20.5	1.0	41.0

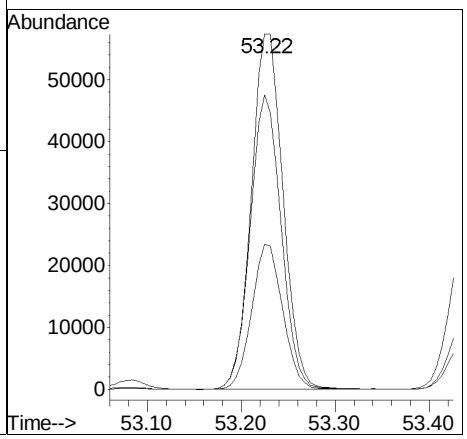


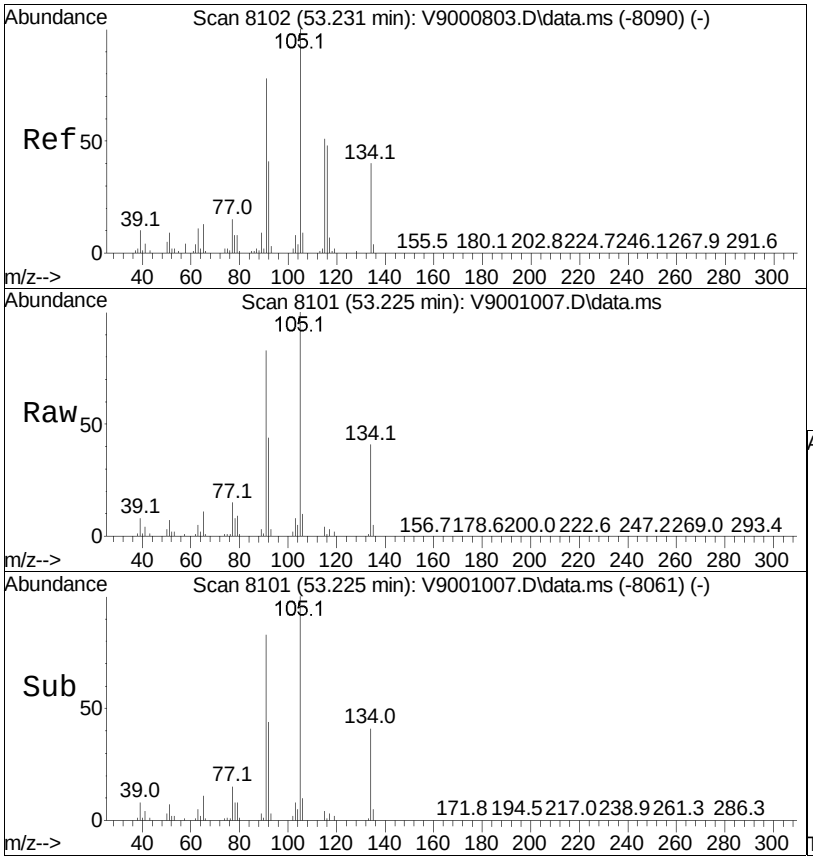


#126
1-Methyl-4-propylbenzene
Concen: 22.10 ug/L
RT: 53.22 min Scan# 8101
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:105 Resp: 134981

Ion	Ratio	Lower	Upper
105	100		
134	40.9	20.2	60.2
91	82.9	58.2	98.2

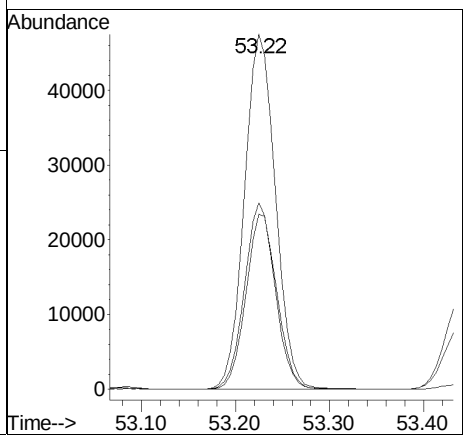


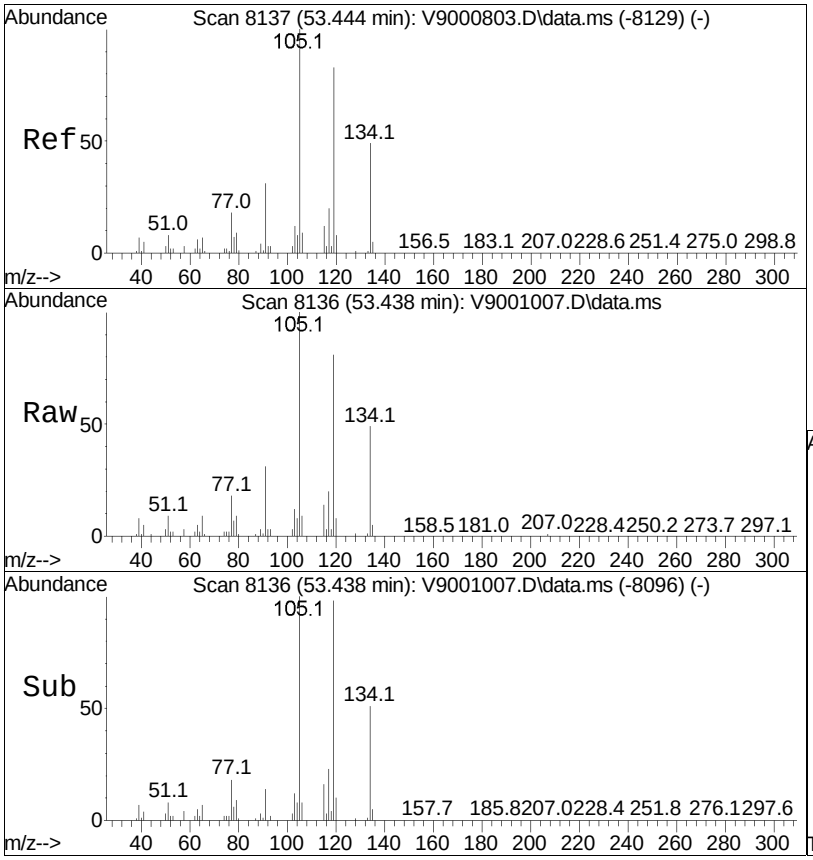


#127
n-Butylbenzene
Concen: 22.29 ug/L
RT: 53.22 min Scan# 8101
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 91 Resp: 109083

Ion	Ratio	Lower	Upper
91	100		
92	52.6	32.2	72.2
134	49.3	31.4	71.4

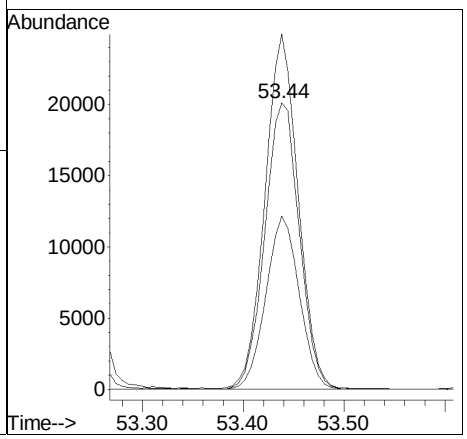


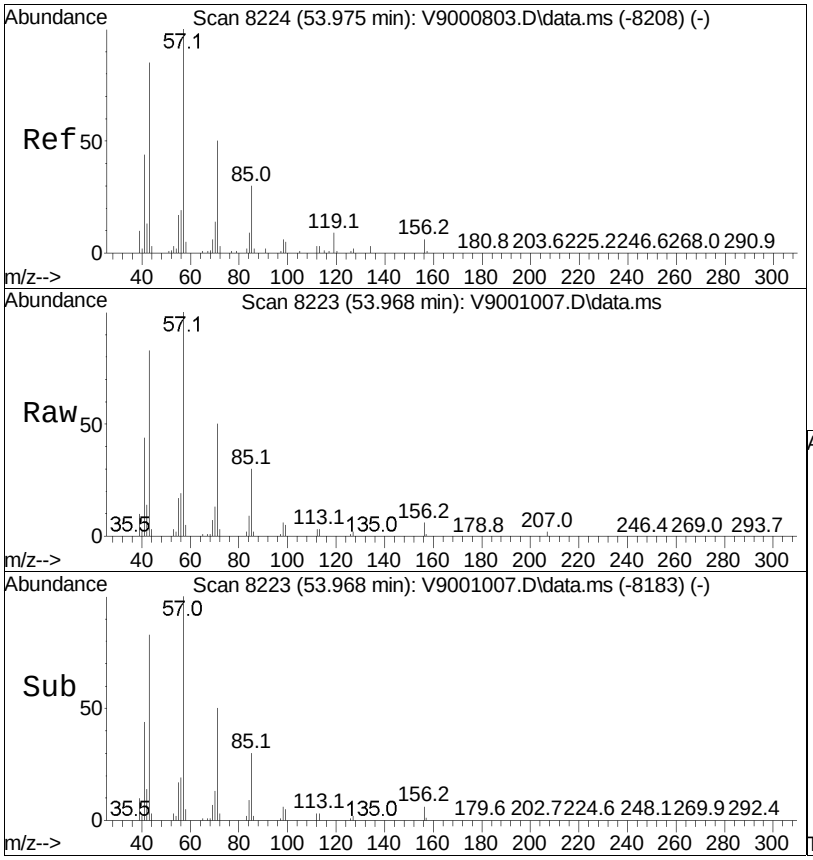


#129
1,2-Diethylbenzene
Concen: 21.85 ug/L
RT: 53.44 min Scan# 8136
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:119 Resp: 47892

Ion	Ratio	Lower	Upper
119	100		
105	124.0	95.6	135.6
134	60.5	38.0	78.0

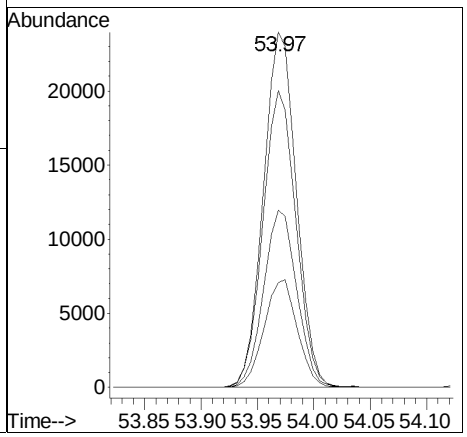


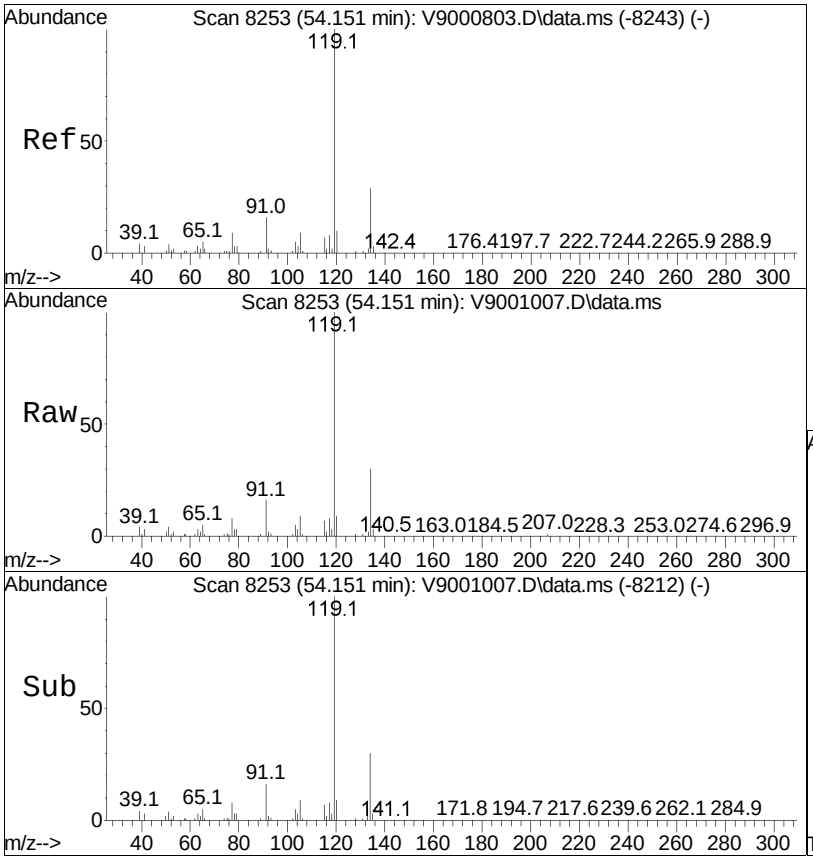


#132
Undecane
Concen: 23.10 ug/L
RT: 53.97 min Scan# 8223
Delta R.T. -0.006 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 57 Resp: 48895

Ion	Ratio	Lower	Upper
57	100		
43	83.5	62.9	102.9
71	49.8	30.0	70.0
85	29.5	10.9	50.9

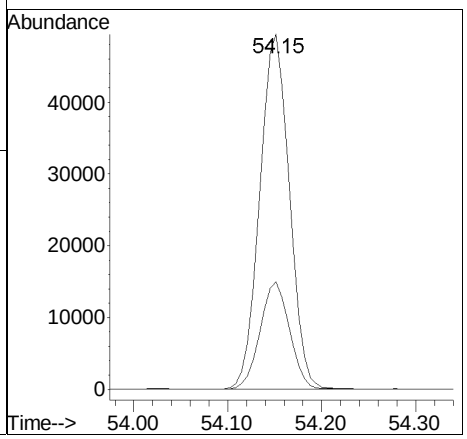


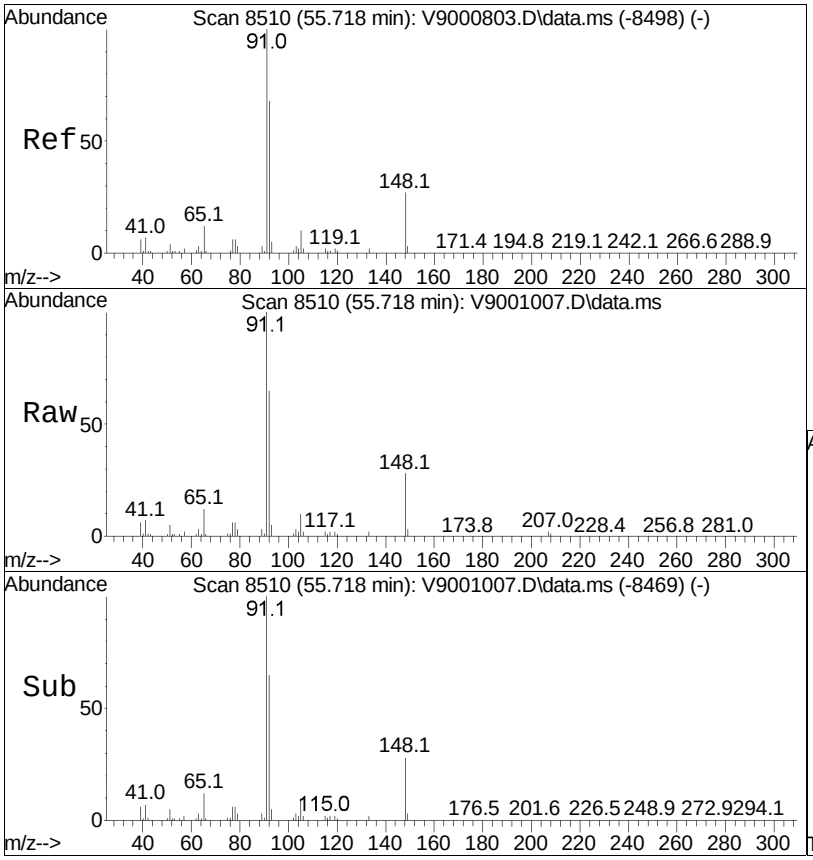


#134
1,3-Dimethyl-5-ethylbenzene
Concen: 23.63 ug/L
RT: 54.15 min Scan# 8253
Delta R.T. 0.000 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion:119 Resp: 108426

Ion	Ratio	Lower	Upper
119	100		
134	30.3	9.7	49.7

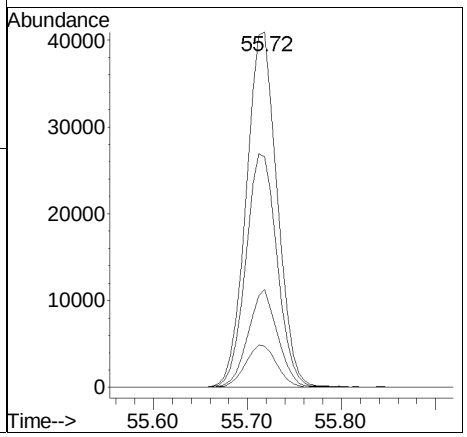


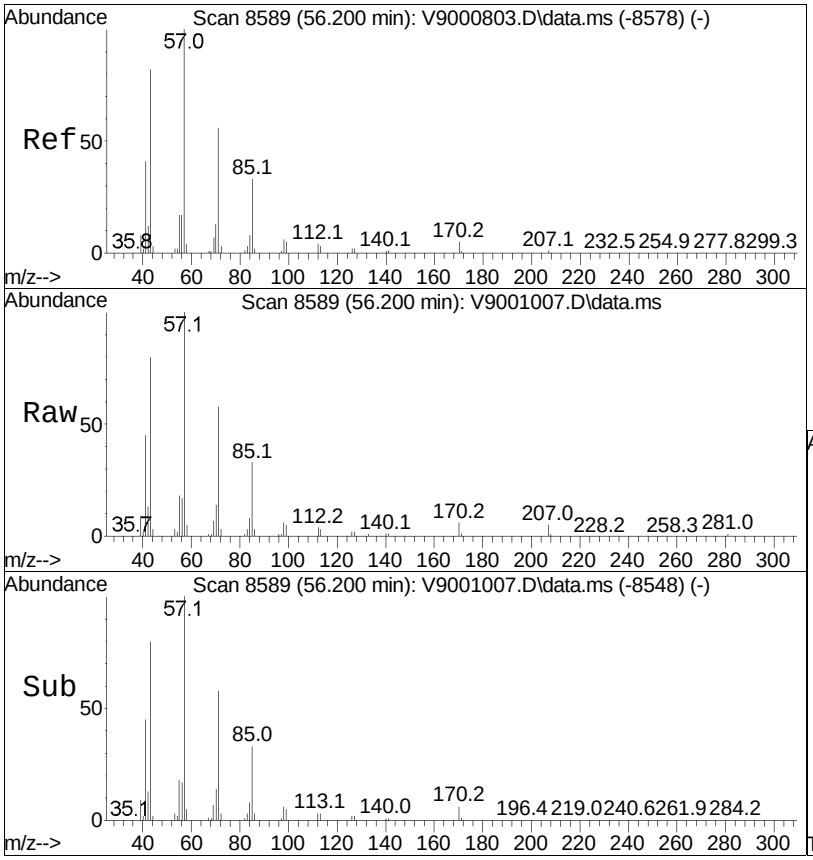


#139
Pentylbenzene
Concen: 23.11 ug/L
RT: 55.72 min Scan# 8510
Delta R.T. 0.000 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 91 Resp: 94019

Ion	Ratio	Lower	Upper
91	100		
92	64.9	47.3	87.3
65	11.6	0.0	31.8
148	27.6	6.4	46.4

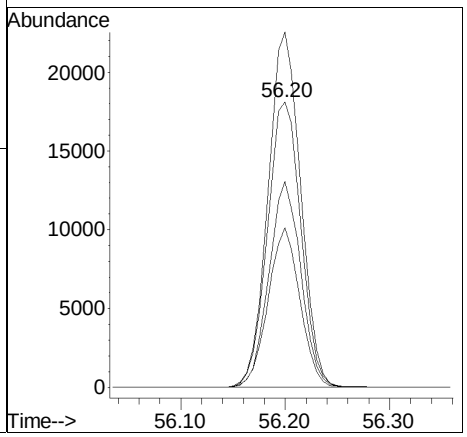




#142
Dodecane
Concen: 23.57 ug/L
RT: 56.20 min Scan# 8589
Delta R.T. 0.001 min
Lab File: V9001007.D
Acq: 11 Jan 2022 10:49 pm

Tgt Ion: 43 Resp: 40425

Ion	Ratio	Lower	Upper
43	100		
57	124.4	102.2	142.2
71	72.1	49.3	89.3
41	55.9	32.1	72.1



Supporting Documentation

Date	Analyst	Sample ID	Initial Vial Weight	Final Weight Vial + Sample	Sample Weight
1/12/2022	JB	L2200971-01			0.1071g

Saturated Hydrocarbon Analysis

Initial Calibration

Response Factor Report FID17

Method Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Method File : HC17120721R_DRO.M
Title : FID Forensics
Last Update : Thu Dec 09 16:30:28 2021
Response Via : Initial Calibration

Calibration Files
1 =F1712072111.D 10 =F1712072113.D 50 =F1712072115.D 100 =F1712072117.D 200 =F1712072119.D
500 =F1712072121.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.792	0.819	0.812	0.790	0.804		0.803	1.56
3)	t	n-Nonane (C9)	0.818	0.842	0.860	0.844	0.796		0.832	3.02
4)	t	n-Decane (C10)	0.812	0.808	0.882	0.884	0.854		0.848	4.32
5)	t	n-Undecane (C11)	0.773	0.877	0.932	0.904	0.857		0.868	6.97
6)	t	n-Dodecane (C12)	0.861	0.876	0.934	0.920	0.869		0.892	3.67
7)	t	n-Tridecane (...	0.914	0.909	0.947	0.926	0.873		0.914	2.96
8)	t	1380	0.947	0.943	0.967	0.950	0.897		0.941	2.81
9)	t	n-Tetradecane...	0.947	0.943	0.967	0.950	0.897		0.941	2.81
10)	t	1470	0.936	0.950	0.964	0.957	0.904		0.942	2.52
11)	t	n-Pentadecane...	0.936	0.950	0.964	0.957	0.904		0.942	2.52
12)	t	n-Hexadecane ...	0.973	0.955	0.981	0.950	0.898		0.952	3.39
13)	t	1650	0.863	0.936	0.984	0.965	0.921		0.934	4.99
14)	t	n-Heptadecane...	0.863	0.936	0.984	0.965	0.921		0.934	4.99
15)	t	Pristane	1.104	1.024	1.007	0.979	0.916		1.006	6.80
16)	t	n-Octadecane ...	0.968	0.991	1.007	0.971	0.922		0.972	3.30
17)	t	Phytane	0.953	0.935	0.938	0.906	0.864		0.919	3.85
18)	t	n-Nonadecane ...	0.988	0.995	0.992	0.972	0.923		0.974	3.05
19)	s	ortho-terphenyl	1.099	1.077	1.230	1.077	1.030	1.113	1.104	6.15
20)	t	n-Eicosane (C20)	1.005	1.011	1.013	0.981	0.930		0.988	3.52
21)	t	n-Heneicosane...	1.014	1.021	1.004	0.984	0.934		0.991	3.54
22)	t	n-Docosane (C22)	1.024	1.025	1.022	0.981	0.932		0.997	4.09
23)	t	n-Tricosane (...	1.041	1.035	1.020	0.979	0.931		1.001	4.60
24)	s	d50-Tetracosane	0.887	0.896	0.982	0.854	0.822	0.895	0.889	6.03
25)	t	n-Tetracosane...	1.050	1.036	0.969	0.973	0.926		0.991	5.15
26)	t	n-Pentacosane...	1.019	1.023	1.003	0.953	0.911		0.982	4.95
27)	t	n-Hexacosane ...	1.045	1.054	1.031	0.974	0.934		1.008	5.14
28)	t	n-Heptacosane...	1.050	1.060	0.992	0.965	0.932		1.000	5.49
29)	t	n-Octacosane ...	1.076	1.092	1.033	0.986	0.952		1.028	5.74
30)	t	n-Nonacosane ...	1.052	1.088	1.024	0.978	0.947		1.018	5.54
31)	t	n-Triacontane...	1.051	1.096	1.024	0.978	0.950		1.020	5.68

Response Factor Report FID17

Method Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Method File : HC17120721R_DRO.M
Title : FID Forensics
Last Update : Thu Dec 09 16:30:28 2021
Response Via : Initial Calibration

Calibration Files
1 =F1712072111.D 10 =F1712072113.D 50 =F1712072115.D 100 =F1712072117.D 200 =F1712072119.D
500 =F1712072121.D

		Compound	1	10	50	100	200	500	Avg	%RSD
32)	t	n-Hentriacont...	1.020	1.062	0.991	0.942	0.917		0.986	5.96
33)	t	n-Dotriaconta...	1.055	1.120	1.035	0.987	0.963		1.032	5.93
34)	t	n-Tritriacont...	1.018	1.093	0.993	0.959	0.937		1.000	6.06
35)	t	n-tetratriaco...	1.016	1.090	0.987	0.959	0.936		0.997	5.98
36)	t	n-Pentatriaco...	0.944	1.022	0.991	0.897	0.877		0.946	6.47
37)	t	n-Hexatriacon...	1.141	1.237	1.063	1.086	1.062		1.118	6.61
38)	t	n-Heptatriaco...	1.041	1.130	0.978	0.991	0.971		1.022	6.48
39)	t	n-Octatriacon...	1.054	1.147	1.009	1.004	0.986		1.040	6.21
40)	t	n-Nonatriacon...	1.022	1.138	1.013	0.993	0.978		1.029	6.17
41)	t	n-Tetracontan...	1.022	1.138	1.013	0.993	0.978		1.029	6.17
42)	h	C9-C44 Total ...	0.989	1.019	0.988	0.960	0.921		0.975	3.77
43)	h	C9-C40 Total ...	0.989	1.019	0.988	0.960	0.921		0.975	3.77
44)	h	C10-C28 DRO	0.966	0.979	0.983	0.957	0.911		0.959	3.03
45)	h	C28-C40 ORO	1.039	1.112	1.012	0.981	0.958		1.020	5.84
46)	h	Total Resolve...	0.989	1.019	0.988	0.960	0.921		0.975	3.77

(#) = Out of Range

rfupdate

RSF Update Summary Report

Method Path.....: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Method File.....: HC17120721R_DRO.M
Method Title.....: FID Forensics
Last Update.....: Thu Dec 09 16:27:50 2021

Generating Average Response Factor For: C9-C44 Total Petroleum Hydroca

No	Compound	Level	Conc	Response
1	n-Nonane (C9)	1	1.00000	868886.157
2	n-Decane (C10)	1	1.00000	862853.746
3	n-Undecane (C11)	1	1.00000	821056.548
4	n-Dodecane (C12)	1	1.00000	915397.085
5	n-Tridecane (C13)	1	1.00000	971538.070
6	n-Tetradecane (C14)	1	1.00000	1006418.216
7	n-Pentadecane (C15)	1	1.00000	994958.617
8	n-Hexadecane (C16)	1	1.00000	1034115.223
9	n-Heptadecane (C17)	1	1.00000	917480.401
10	Pristane	1	1.00000	1173129.274
11	n-Octadecane (C18)	1	1.00000	1028952.488
12	Phytane	1	1.00000	1013405.471
13	n-Nonadecane (C19)	1	1.00000	1050030.068
14	n-Eicosane (C20)	1	1.00000	1068533.073
15	n-Heneicosane (C21)	1	1.00000	1077970.360
16	n-Docosane (C22)	1	1.00000	1088627.258
17	n-Tricosane (C23)	1	1.00000	1106485.723
18	n-Tetracosane (C24)	1	1.00000	1115512.299
19	n-Pentacosane (C25)	1	1.00000	1083457.763
20	n-Hexacosane (C26)	1	1.00000	1111130.366
21	n-Heptacosane (C27)	1	1.00000	1116174.198
22	n-Octacosane (C28)	1	1.00000	1143129.348
23	n-Nonacosane (C29)	1	1.00000	1117917.437
24	n-Triacontane (C30)	1	1.00000	1117325.834
25	n-Hentriacontane (C31)	1	1.00000	1083982.147
26	n-Dotriacontane (C32)	1	1.00000	1120982.278
27	n-Tritriacontane (C33)	1	1.00000	1081775.089
28	n-tetratriacontane (C34)	1	1.00000	1079397.032
29	n-Pentatriacontane (C35)	1	1.00000	1003818.964
30	n-Hexatriacontane (C36)	1	1.00000	1212806.513
31	n-Heptatriacontane (C37)	1	1.00000	1106552.620
32	n-Octatriacontane (C38)	1	1.00000	1119751.289
33	n-Tetracontane (C40)	1	1.00000	1086271.613
Avg RSF For: C9-C44 Total Petroleum			1.00000	1051509.775
1	n-Nonane (C9)	2	10.00000	8266446.377
2	n-Decane (C10)	2	10.00000	7938269.178
3	n-Undecane (C11)	2	10.00000	8609271.899
4	n-Dodecane (C12)	2	10.00000	8599071.412
5	n-Tridecane (C13)	2	10.00000	8930850.442
6	n-Tetradecane (C14)	2	10.00000	9265702.486
7	n-Pentadecane (C15)	2	10.00000	9328914.912
8	n-Hexadecane (C16)	2	10.00000	9382998.506
9	n-Heptadecane (C17)	2	10.00000	9187964.096
10	Pristane	2	10.00000	10055983.983
11	n-Octadecane (C18)	2	10.00000	9732506.170

		rfupdate	
12 Phytane	2	10.00000	9179018.234
13 n-Nonadecane (C19)	2	10.00000	9771956.705
14 n-Eicosane (C20)	2	10.00000	9926609.330
15 n-Heneicosane (C21)	2	10.00000	10031599.020
16 n-Docosane (C22)	2	10.00000	10069577.195
17 n-Tricosane (C23)	2	10.00000	10164050.480
18 n-Tetracosane (C24)	2	10.00000	10170991.818
19 n-Pentacosane (C25)	2	10.00000	10044781.098
20 n-Hexacosane (C26)	2	10.00000	10353753.788
21 n-Heptacosane (C27)	2	10.00000	10414974.345
22 n-Octacosane (C28)	2	10.00000	10725304.320
23 n-Nonacosane (C29)	2	10.00000	10683527.108
24 n-Triacontane (C30)	2	10.00000	10764480.592
25 n-Hentriacontane (C31)	2	10.00000	10434822.534
26 n-Dotriacontane (C32)	2	10.00000	10997861.996
27 n-Tritriacontane (C33)	2	10.00000	10737953.146
28 n-tetratriacontane (C34)	2	10.00000	10702283.498
29 n-Pentatriacontane (C35)	2	10.00000	10038545.482
30 n-Hexatriacontane (C36)	2	10.00000	12146305.200
31 n-Heptatriacontane (C37)	2	10.00000	11098081.630
32 n-Octatriacontane (C38)	2	10.00000	11263935.309
33 n-Tetracontane (C40)	2	10.00000	11177206.740
Avg RSF For: C9-C44 Total Petroleum		10.00000	10005927.243

1 n-Nonane (C9)	3	50.00000	45808072.856
2 n-Decane (C10)	3	50.00000	46987928.477
3 n-Undecane (C11)	3	50.00000	49619618.520
4 n-Dodecane (C12)	3	50.00000	49757613.810
5 n-Tridecane (C13)	3	50.00000	50434604.986
6 n-Tetradecane (C14)	3	50.00000	51522029.496
7 n-Pentadecane (C15)	3	50.00000	51320652.994
8 n-Hexadecane (C16)	3	50.00000	52226107.692
9 n-Heptadecane (C17)	3	50.00000	52419775.339
10 Pristane	3	50.00000	53629386.636
11 n-Octadecane (C18)	3	50.00000	53628297.984
12 Phytane	3	50.00000	49970709.703
13 n-Nonadecane (C19)	3	50.00000	52845850.478
14 n-Eicosane (C20)	3	50.00000	53928686.355
15 n-Heneicosane (C21)	3	50.00000	53465553.842
16 n-Docosane (C22)	3	50.00000	54431324.106
17 n-Tricosane (C23)	3	50.00000	54332058.928
18 n-Tetracosane (C24)	3	50.00000	51614109.344
19 n-Pentacosane (C25)	3	50.00000	53407641.186
20 n-Hexacosane (C26)	3	50.00000	54891732.920
21 n-Heptacosane (C27)	3	50.00000	52818300.340
22 n-Octacosane (C28)	3	50.00000	55011659.472
23 n-Nonacosane (C29)	3	50.00000	54533646.872
24 n-Triacontane (C30)	3	50.00000	54526505.505
25 n-Hentriacontane (C31)	3	50.00000	52749720.462
26 n-Dotriacontane (C32)	3	50.00000	55114208.014
27 n-Tritriacontane (C33)	3	50.00000	52864771.911
28 n-tetratriacontane (C34)	3	50.00000	52546176.706
29 n-Pentatriacontane (C35)	3	50.00000	52800110.145
30 n-Hexatriacontane (C36)	3	50.00000	56600885.671
31 n-Heptatriacontane (C37)	3	50.00000	52075160.504
32 n-Octatriacontane (C38)	3	50.00000	53756893.413
33 n-Tetracontane (C40)	3	50.00000	53934500.797
Avg RSF For: C9-C44 Total Petroleum		50.00000	52593160.469

		rfupdate		
1	n-Nonane (C9)	4	100.00000	89132733.844
2	n-Decane (C10)	4	100.00000	93299604.433
3	n-Undecane (C11)	4	100.00000	95456546.589
4	n-Dodecane (C12)	4	100.00000	97103954.963
5	n-Tridecane (C13)	4	100.00000	97754302.384
6	n-Tetradecane (C14)	4	100.00000	100327825.286
7	n-Pentadecane (C15)	4	100.00000	101109575.933
8	n-Hexadecane (C16)	4	100.00000	100367931.766
9	n-Heptadecane (C17)	4	100.00000	101940782.276
10	Pristane	4	100.00000	103351567.758
11	n-Octadecane (C18)	4	100.00000	102519840.454
12	Phytane	4	100.00000	95640183.207
13	n-Nonadecane (C19)	4	100.00000	102664670.603
14	n-Eicosane (C20)	4	100.00000	103546898.282
15	n-Heneicosane (C21)	4	100.00000	103870125.582
16	n-Docosane (C22)	4	100.00000	103554014.677
17	n-Tricosane (C23)	4	100.00000	103362161.049
18	n-Tetracosane (C24)	4	100.00000	102736109.320
19	n-Pentacosane (C25)	4	100.00000	100613230.036
20	n-Hexacosane (C26)	4	100.00000	102866236.029
21	n-Heptacosane (C27)	4	100.00000	101869379.811
22	n-Octacosane (C28)	4	100.00000	104164441.581
23	n-Nonacosane (C29)	4	100.00000	103264928.338
24	n-Triacontane (C30)	4	100.00000	103306859.243
25	n-Hentriacontane (C31)	4	100.00000	99422613.322
26	n-Dotriacontane (C32)	4	100.00000	104267746.686
27	n-Tritriacontane (C33)	4	100.00000	101310940.609
28	n-tetratriacontane (C34)	4	100.00000	101222389.564
29	n-Pentatriacontane (C35)	4	100.00000	94718068.498
30	n-Hexatriacontane (C36)	4	100.00000	114655276.010
31	n-Heptatriacontane (C37)	4	100.00000	104605262.863
32	n-Octatriacontane (C38)	4	100.00000	106059497.751
33	n-Tetracontane (C40)	4	100.00000	104881927.741
Avg RSF For: C9-C44 Total Petroleum			100.00000	101362655.348
1	n-Nonane (C9)	5	200.00000	172819296.257
2	n-Decane (C10)	5	200.00000	185416506.552
3	n-Undecane (C11)	5	200.00000	186096861.822
4	n-Dodecane (C12)	5	200.00000	188682530.608
5	n-Tridecane (C13)	5	200.00000	189491610.077
6	n-Tetradecane (C14)	5	200.00000	194585862.434
7	n-Pentadecane (C15)	5	200.00000	196194264.507
8	n-Hexadecane (C16)	5	200.00000	194944165.329
9	n-Heptadecane (C17)	5	200.00000	199856326.498
10	Pristane	5	200.00000	198807170.087
11	n-Octadecane (C18)	5	200.00000	200091114.463
12	Phytane	5	200.00000	187504434.197
13	n-Nonadecane (C19)	5	200.00000	200396704.556
14	n-Eicosane (C20)	5	200.00000	201863330.448
15	n-Heneicosane (C21)	5	200.00000	202707187.132
16	n-Docosane (C22)	5	200.00000	202298881.352
17	n-Tricosane (C23)	5	200.00000	202108428.044
18	n-Tetracosane (C24)	5	200.00000	201051506.669
19	n-Pentacosane (C25)	5	200.00000	197641350.941
20	n-Hexacosane (C26)	5	200.00000	202633360.611
21	n-Heptacosane (C27)	5	200.00000	202334869.586
22	n-Octacosane (C28)	5	200.00000	206561490.198
23	n-Nonacosane (C29)	5	200.00000	205500799.065
24	n-Triacontane (C30)	5	200.00000	206152178.600
25	n-Hentriacontane (C31)	5	200.00000	198947868.532
26	n-Dotriacontane (C32)	5	200.00000	208986159.229

27	n-Tritriacontane (C33)	5	200.00000	203337992.326
28	n-tetratriacontane (C34)	5	200.00000	203144813.042
29	n-Pentatriacontane (C35)	5	200.00000	190356691.051
30	n-Hexatriacontane (C36)	5	200.00000	230576885.118
31	n-Heptatriacontane (C37)	5	200.00000	210744106.240
32	n-Octatriacontane (C38)	5	200.00000	214038441.751
33	n-Tetracontane (C40)	5	200.00000	212243217.866
Avg RSF For: C9-C44 Total Petroleum			200.00000	199942921.369

Generating Average Response Factor For: C10-C28 DRO

No	Compound	Level	Conc	Response
1	n-Decane (C10)	1	1.00000	862853.746
2	n-Undecane (C11)	1	1.00000	821056.548
3	n-Dodecane (C12)	1	1.00000	915397.085
4	n-Tridecane (C13)	1	1.00000	971538.070
5	n-Tetradecane (C14)	1	1.00000	1006418.216
6	n-Pentadecane (C15)	1	1.00000	994958.617
7	n-Hexadecane (C16)	1	1.00000	1034115.223
8	n-Heptadecane (C17)	1	1.00000	917480.401
9	n-Octadecane (C18)	1	1.00000	1028952.488
10	n-Nonadecane (C19)	1	1.00000	1050030.068
11	n-Eicosane (C20)	1	1.00000	1068533.073
12	n-Heneicosane (C21)	1	1.00000	1077970.360
13	n-Docosane (C22)	1	1.00000	1088627.258
14	n-Tricosane (C23)	1	1.00000	1106485.723
15	n-Tetracosane (C24)	1	1.00000	1115512.299
16	n-Pentacosane (C25)	1	1.00000	1083457.763
17	n-Hexacosane (C26)	1	1.00000	1111130.366
18	n-Heptacosane (C27)	1	1.00000	1116174.198
19	n-Octacosane (C28)	1	1.00000	1143129.348
Avg RSF For: C10-C28 DRO			1.00000	1027043.203
1	n-Decane (C10)	2	10.00000	7938269.178
2	n-Undecane (C11)	2	10.00000	8609271.899
3	n-Dodecane (C12)	2	10.00000	8599071.412
4	n-Tridecane (C13)	2	10.00000	8930850.442
5	n-Tetradecane (C14)	2	10.00000	9265702.486
6	n-Pentadecane (C15)	2	10.00000	9328914.912
7	n-Hexadecane (C16)	2	10.00000	9382998.506
8	n-Heptadecane (C17)	2	10.00000	9187964.096
9	n-Octadecane (C18)	2	10.00000	9732506.170
10	n-Nonadecane (C19)	2	10.00000	9771956.705
11	n-Eicosane (C20)	2	10.00000	9926609.330
12	n-Heneicosane (C21)	2	10.00000	10031599.020
13	n-Docosane (C22)	2	10.00000	10069577.195
14	n-Tricosane (C23)	2	10.00000	10164050.480
15	n-Tetracosane (C24)	2	10.00000	10170991.818
16	n-Pentacosane (C25)	2	10.00000	10044781.098
17	n-Hexacosane (C26)	2	10.00000	10353753.788
18	n-Heptacosane (C27)	2	10.00000	10414974.345
19	n-Octacosane (C28)	2	10.00000	10725304.320
Avg RSF For: C10-C28 DRO			10.00000	9613113.011
1	n-Decane (C10)	3	50.00000	46987928.477
2	n-Undecane (C11)	3	50.00000	49619618.520

		rfupdate		
3	n-Dodecane (C12)	3	50.00000	49757613.810
4	n-Tridecane (C13)	3	50.00000	50434604.986
5	n-Tetradecane (C14)	3	50.00000	51522029.496
6	n-Pentadecane (C15)	3	50.00000	51320652.994
7	n-Hexadecane (C16)	3	50.00000	52226107.692
8	n-Heptadecane (C17)	3	50.00000	52419775.339
9	n-Octadecane (C18)	3	50.00000	53628297.984
10	n-Nonadecane (C19)	3	50.00000	52845850.478
11	n-Eicosane (C20)	3	50.00000	53928686.355
12	n-Heneicosane (C21)	3	50.00000	53465553.842
13	n-Docosane (C22)	3	50.00000	54431324.106
14	n-Tricosane (C23)	3	50.00000	54332058.928
15	n-Tetracosane (C24)	3	50.00000	51614109.344
16	n-Pentacosane (C25)	3	50.00000	53407641.186
17	n-Hexacosane (C26)	3	50.00000	54891732.920
18	n-Heptacosane (C27)	3	50.00000	52818300.340
19	n-Octacosane (C28)	3	50.00000	55011659.472
Avg RSF For: C10-C28 DRO			50.00000	52350712.961
1	n-Decane (C10)	4	100.00000	93299604.433
2	n-Undecane (C11)	4	100.00000	95456546.589
3	n-Dodecane (C12)	4	100.00000	97103954.963
4	n-Tridecane (C13)	4	100.00000	97754302.384
5	n-Tetradecane (C14)	4	100.00000	100327825.286
6	n-Pentadecane (C15)	4	100.00000	101109575.933
7	n-Hexadecane (C16)	4	100.00000	100367931.766
8	n-Heptadecane (C17)	4	100.00000	101940782.276
9	n-Octadecane (C18)	4	100.00000	102519840.454
10	n-Nonadecane (C19)	4	100.00000	102664670.603
11	n-Eicosane (C20)	4	100.00000	103546898.282
12	n-Heneicosane (C21)	4	100.00000	103870125.582
13	n-Docosane (C22)	4	100.00000	103554014.677
14	n-Tricosane (C23)	4	100.00000	103362161.049
15	n-Tetracosane (C24)	4	100.00000	102736109.320
16	n-Pentacosane (C25)	4	100.00000	100613230.036
17	n-Hexacosane (C26)	4	100.00000	102866236.029
18	n-Heptacosane (C27)	4	100.00000	101869379.811
19	n-Octacosane (C28)	4	100.00000	104164441.581
Avg RSF For: C10-C28 DRO			100.00000	101006717.424
1	n-Decane (C10)	5	200.00000	185416506.552
2	n-Undecane (C11)	5	200.00000	186096861.822
3	n-Dodecane (C12)	5	200.00000	188682530.608
4	n-Tridecane (C13)	5	200.00000	189491610.077
5	n-Tetradecane (C14)	5	200.00000	194585862.434
6	n-Pentadecane (C15)	5	200.00000	196194264.507
7	n-Hexadecane (C16)	5	200.00000	194944165.329
8	n-Heptadecane (C17)	5	200.00000	199856326.498
9	n-Octadecane (C18)	5	200.00000	200091114.463
10	n-Nonadecane (C19)	5	200.00000	200396704.556
11	n-Eicosane (C20)	5	200.00000	201863330.448
12	n-Heneicosane (C21)	5	200.00000	202707187.132
13	n-Docosane (C22)	5	200.00000	202298881.352
14	n-Tricosane (C23)	5	200.00000	202108428.044
15	n-Tetracosane (C24)	5	200.00000	201051506.669
16	n-Pentacosane (C25)	5	200.00000	197641350.941
17	n-Hexacosane (C26)	5	200.00000	202633360.611
18	n-Heptacosane (C27)	5	200.00000	202334869.586
19	n-Octacosane (C28)	5	200.00000	206561490.198

Avg RSF For: C10-C28 DRO		200.00000	197629281.675

Generating Average Response Factor For: C28-C40 ORO

No	Compound	Level	Conc	Response
1	n-Octacosane (C28)	1	1.00000	1143129.348
2	n-Nonacosane (C29)	1	1.00000	1117917.437
3	n-Triacontane (C30)	1	1.00000	1117325.834
4	n-Hentriacontane (C31)	1	1.00000	1083982.147
5	n-Dotriacontane (C32)	1	1.00000	1120982.278
6	n-Tritriacontane (C33)	1	1.00000	1081775.089
7	n-tetratriacontane (C34)	1	1.00000	1079397.032
8	n-Pentatriacontane (C35)	1	1.00000	1003818.964
9	n-Hexatriacontane (C36)	1	1.00000	1212806.513
10	n-Heptatriacontane (C37)	1	1.00000	1106552.620
11	n-Octatriacontane (C38)	1	1.00000	1119751.289
12	n-Nonatriacontane (C39)	1	1.00000	1086271.613
13	n-Tetracontane (C40)	1	1.00000	1086271.613
Avg RSF For: C28-C40 ORO			1.00000	1104613.983
1	n-Octacosane (C28)	2	10.00000	10725304.320
2	n-Nonacosane (C29)	2	10.00000	10683527.108
3	n-Triacontane (C30)	2	10.00000	10764480.592
4	n-Hentriacontane (C31)	2	10.00000	10434822.534
5	n-Dotriacontane (C32)	2	10.00000	10997861.996
6	n-Tritriacontane (C33)	2	10.00000	10737953.146
7	n-tetratriacontane (C34)	2	10.00000	10702283.498
8	n-Pentatriacontane (C35)	2	10.00000	10038545.482
9	n-Hexatriacontane (C36)	2	10.00000	12146305.200
10	n-Heptatriacontane (C37)	2	10.00000	11098081.630
11	n-Octatriacontane (C38)	2	10.00000	11263935.309
12	n-Nonatriacontane (C39)	2	10.00000	11177206.740
13	n-Tetracontane (C40)	2	10.00000	11177206.740
Avg RSF For: C28-C40 ORO			10.00000	10919039.561
1	n-Octacosane (C28)	3	50.00000	55011659.472
2	n-Nonacosane (C29)	3	50.00000	54533646.872
3	n-Triacontane (C30)	3	50.00000	54526505.505
4	n-Hentriacontane (C31)	3	50.00000	52749720.462
5	n-Dotriacontane (C32)	3	50.00000	55114208.014
6	n-Tritriacontane (C33)	3	50.00000	52864771.911
7	n-tetratriacontane (C34)	3	50.00000	52546176.706
8	n-Pentatriacontane (C35)	3	50.00000	52800110.145
9	n-Hexatriacontane (C36)	3	50.00000	56600885.671
10	n-Heptatriacontane (C37)	3	50.00000	52075160.504
11	n-Octatriacontane (C38)	3	50.00000	53756893.413
12	n-Nonatriacontane (C39)	3	50.00000	53934500.797
13	n-Tetracontane (C40)	3	50.00000	53934500.797
Avg RSF For: C28-C40 ORO			50.00000	53880672.329
1	n-Octacosane (C28)	4	100.00000	104164441.581
2	n-Nonacosane (C29)	4	100.00000	103264928.338
3	n-Triacontane (C30)	4	100.00000	103306859.243
4	n-Hentriacontane (C31)	4	100.00000	99422613.322

		rfupdate		
5	n-Dotriacontane (C32)	4	100.00000	104267746.686
6	n-Tritriacontane (C33)	4	100.00000	101310940.609
7	n-tetratriacontane (C34)	4	100.00000	101222389.564
8	n-Pentatriacontane (C35)	4	100.00000	94718068.498
9	n-Hexatriacontane (C36)	4	100.00000	114655276.010
10	n-Heptatriacontane (C37)	4	100.00000	104605262.863
11	n-Octatriacontane (C38)	4	100.00000	106059497.751
12	n-Nonatriacontane (C39)	4	100.00000	104881927.741
13	n-Tetracontane (C40)	4	100.00000	104881927.741
Avg RSF For: C28-C40 ORO			100.00000	103597067.688

1	n-Octacosane (C28)	5	200.00000	206561490.198
2	n-Nonacosane (C29)	5	200.00000	205500799.065
3	n-Triacontane (C30)	5	200.00000	206152178.600
4	n-Hentriacontane (C31)	5	200.00000	198947868.532
5	n-Dotriacontane (C32)	5	200.00000	208986159.229
6	n-Tritriacontane (C33)	5	200.00000	203337992.326
7	n-tetratriacontane (C34)	5	200.00000	203144813.042
8	n-Pentatriacontane (C35)	5	200.00000	190356691.051
9	n-Hexatriacontane (C36)	5	200.00000	230576885.118
10	n-Heptatriacontane (C37)	5	200.00000	210744106.240
11	n-Octatriacontane (C38)	5	200.00000	214038441.751
12	n-Nonatriacontane (C39)	5	200.00000	212243217.866
13	n-Tetracontane (C40)	5	200.00000	212243217.866
Avg RSF For: C28-C40 ORO			200.00000	207910296.991

Generating Reference Response Factors

No	Compound	No	Refrence Compound
8	1380	9	n-Tetradecane (C14)
10	1470	11	n-Pentadecane (C15)
13	1650	14	n-Heptadecane (C17)
40	n-Nonatriacontane (C39)	41	n-Tetracontane (C40)
43	C9-C40 Total Petroleum Hydrocarbons	42	C9-C44 Total Petroleum Hydr
46	Total Resolved Hydrocarbons	42	C9-C44 Total Petroleum Hydr

Abacus Response Factor Update Macro Ver. 1.0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072111.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 4:55 pm
Operator : FID17:WR
Sample : I1712072101R
Misc : WG1581826,FRBD77,1ug/ml
ALS Vial : 56 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 15:14:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 15:10:22 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.242	53142710	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.210	1168384	0.894 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	1.79%#
24) s	d50-Tetracosane	35.845	943129	0.904 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	1.81%#
	Target Compounds			
2) t	n-Octane (C8)	5.608	841423	0.975 ug/mL M4
3) t	n-Nonane (C9)	7.810	868886	0.950 ug/mL M4
4) t	n-Decane (C10)	10.292	862854	0.920 ug/mL M4
5) t	n-Undecane (C11)	12.806	821057	0.829 ug/mL M4
6) t	n-Dodecane (C12)	15.232	915397	0.922 ug/mL M4
7) t	n-Tridecane (C13)	17.535	971538	0.965 ug/mL M4
9) t	n-Tetradecane (C14)	19.714	1006418	0.979 ug/mL M4
11) t	n-Pentadecane (C15)	21.775	994959	0.971 ug/mL M4
12) t	n-Hexadecane (C16)	23.725	1034115	0.992 ug/mL M4
14) t	n-Heptadecane (C17)	25.577	917480	0.877 ug/mL M4
15) t	Pristane	25.682	1173129	1.096 ug/mL M4
16) t	n-Octadecane (C18)	27.340	1028952	0.961 ug/mL M4
17) t	Phytane	27.498	1013405	1.016 ug/mL M4
18) t	n-Nonadecane (C19)	29.017	1050030	0.996 ug/mL M4
20) t	n-Eicosane (C20)	30.624	1068533	0.993 ug/mL M4
21) t	n-Heneicosane (C21)	32.157	1077970	1.010 ug/mL M4
22) t	n-Docosane (C22)	33.626	1088627	1.002 ug/mL M4
23) t	n-Tricosane (C23)	35.034	1106486	1.020 ug/mL M4
25) t	n-Tetracosane (C24)	36.387	1115512	1.083 ug/mL M4
26) t	n-Pentacosane (C25)	37.688	1083458	1.016 ug/mL M4
27) t	n-Hexacosane (C26)	38.940	1111130	1.014 ug/mL M4
28) t	n-Heptacosane (C27)	40.148	1116174	1.059 ug/mL M4
29) t	n-Octacosane (C28)	41.316	1143129	1.041 ug/mL M4
30) t	n-Nonacosane (C29)	42.444	1117917	1.027 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072111.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 4:55 pm
Operator : FID17:WR
Sample : I1712072101R
Misc : WG1581826,FRBD77,1ug/ml
ALS Vial : 56 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 15:14:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 15:10:22 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

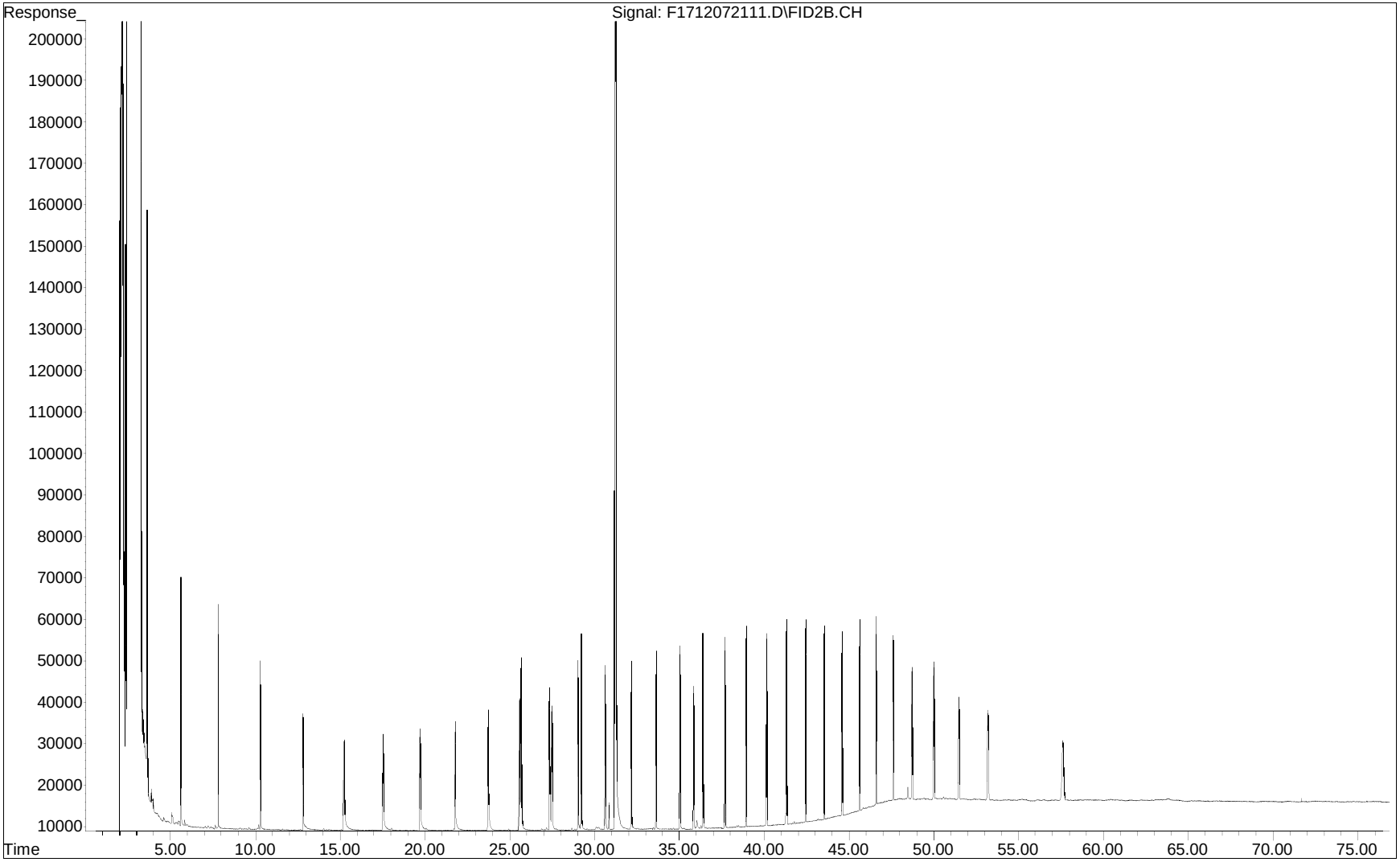
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.535	1117326	1.027 ug/mL M4
32) t	n-Hentriacontane (C31)	44.594	1083982	1.030 ug/mL M4
33) t	n-Dotriacontane (C32)	45.617	1120982	1.019 ug/mL M4
34) t	n-Tritriacontane (C33)	46.609	1081775	1.025 ug/mL M4
35) t	n-tetratriacontane (C34)	47.608	1079397	1.029 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.726	1003819	0.953 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.002	1212807	1.074 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.477	1106553	1.065 ug/mL M4
39) t	n-Octatriacontane (C38)	53.196	1119751	1.044 ug/mL M4
41) t	n-Tetracontane (C40)	57.602	1086272	1.009 ug/mL M4

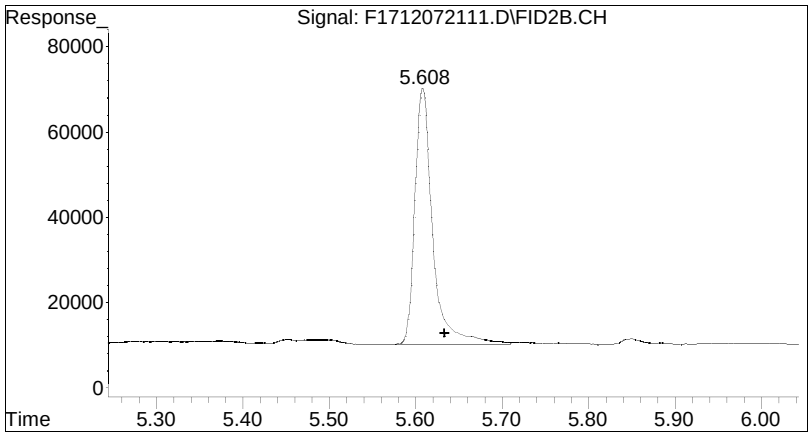
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

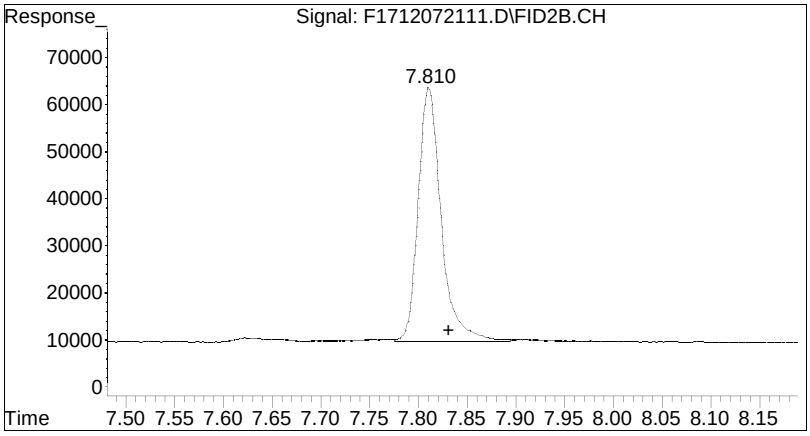
File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072111.D
Operator : FID17:WR
Acquired : 07 Dec 2021 4:55 pm using AcqMethod FID17A.M
Sample Name: I1712072101R
Instrument: FID17
Misc Info : WG1581826,FRBD77,1ug/ml
Vial Number: 56
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M





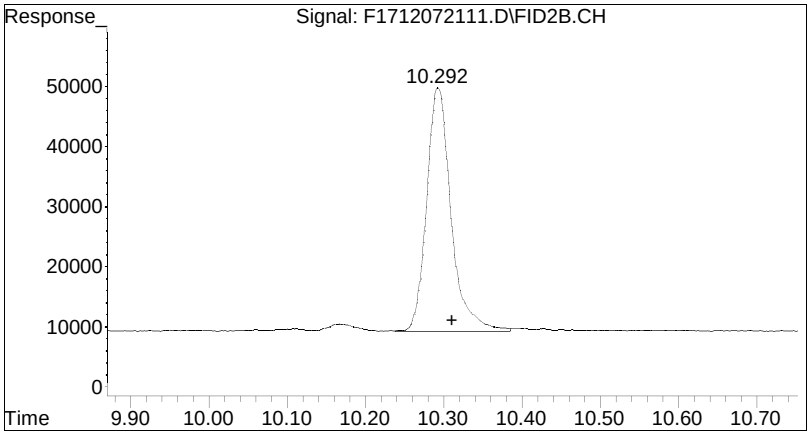
#2 n-Octane (C8)

R.T.:	5.608 min
Delta R.T.:	-0.026 min
Response:	841423
Conc:	0.97 ug/mL M4



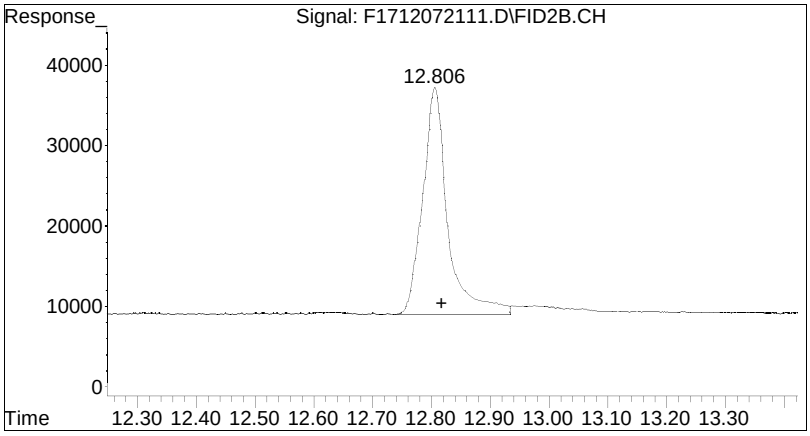
#3 n-Nonane (C9)

R.T.:	7.810 min
Delta R.T.:	-0.021 min
Response:	868886
Conc:	0.95 ug/mL M4



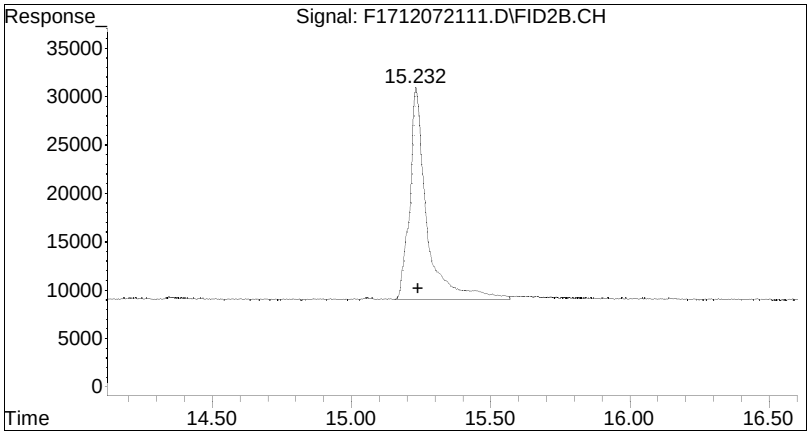
#4 n-Decane (C10)

R.T.:	10.292 min
Delta R.T.:	-0.018 min
Response:	862854
Conc:	0.92 ug/mL M4



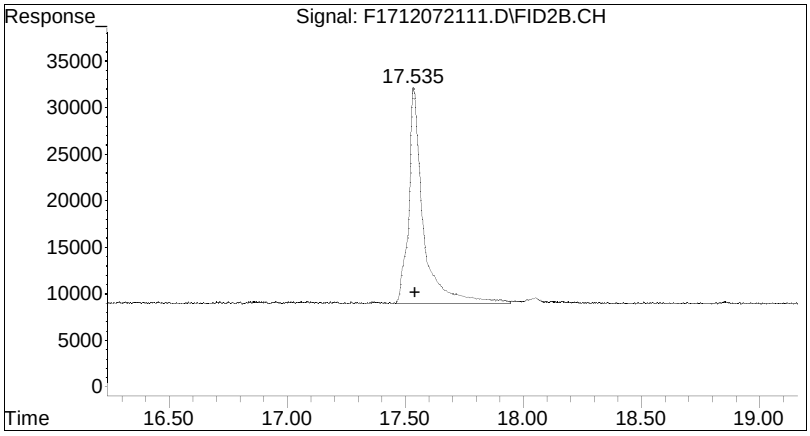
#5 n-Undecane (C11)

R.T.:	12.806 min
Delta R.T.:	-0.012 min
Response:	821057
Conc:	0.83 ug/mL M4



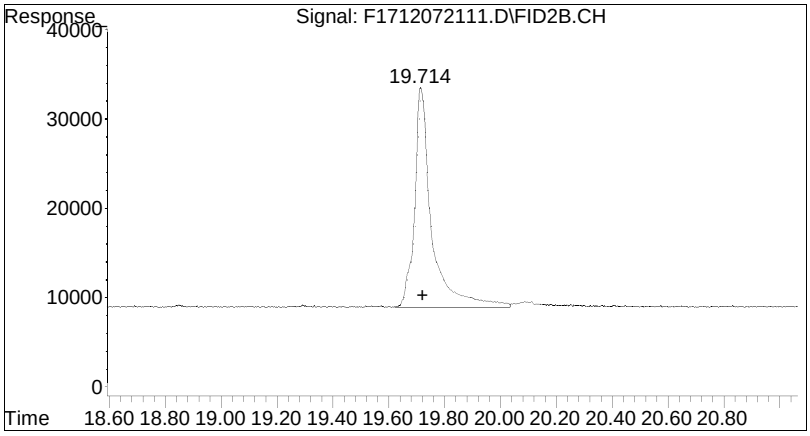
#6 n-Dodecane (C12)

R.T.:	15.232 min
Delta R.T.:	-0.008 min
Response:	915397
Conc:	0.92 ug/mL M4



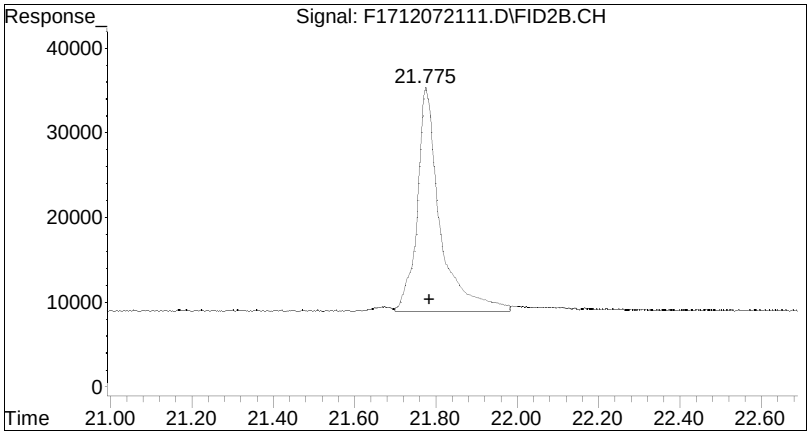
#7 n-Tridecane (C13)

R.T.:	17.535 min
Delta R.T.:	-0.008 min
Response:	971538
Conc:	0.97 ug/mL M4



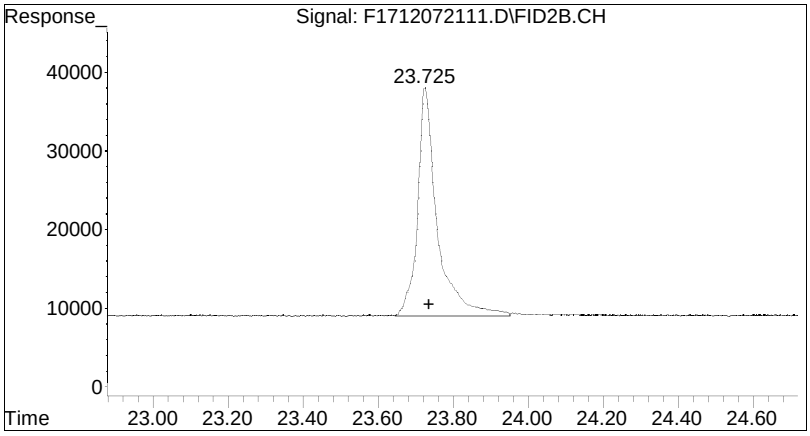
#9 n-Tetradecane (C14)

R.T.:	19.714 min
Delta R.T.:	-0.009 min
Response:	1006418
Conc:	0.98 ug/mL M4



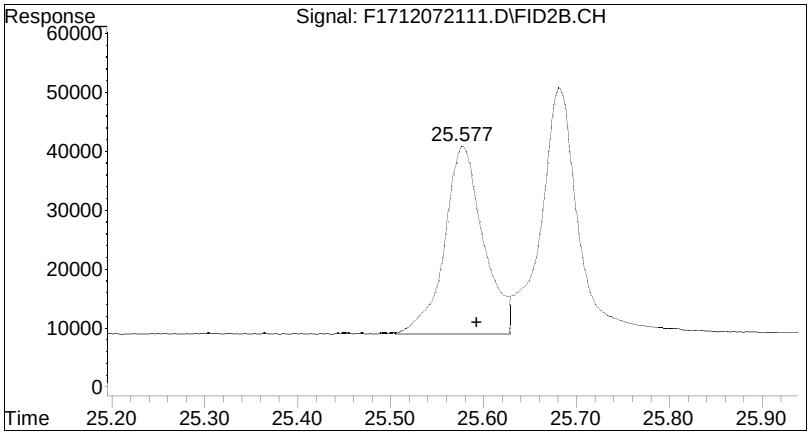
#11 n-Pentadecane (C15)

R.T.:	21.775 min
Delta R.T.:	-0.009 min
Response:	994959
Conc:	0.97 ug/mL M4



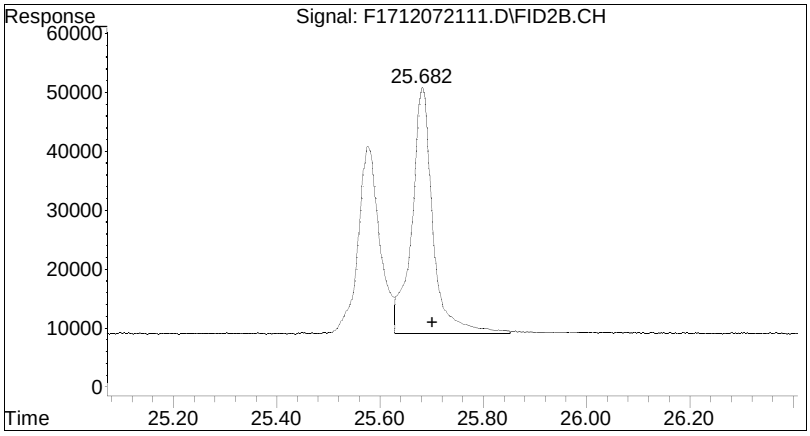
#12 n-Hexadecane (C16)

R.T.:	23.725 min
Delta R.T.:	-0.012 min
Response:	1034115
Conc:	0.99 ug/mL M4



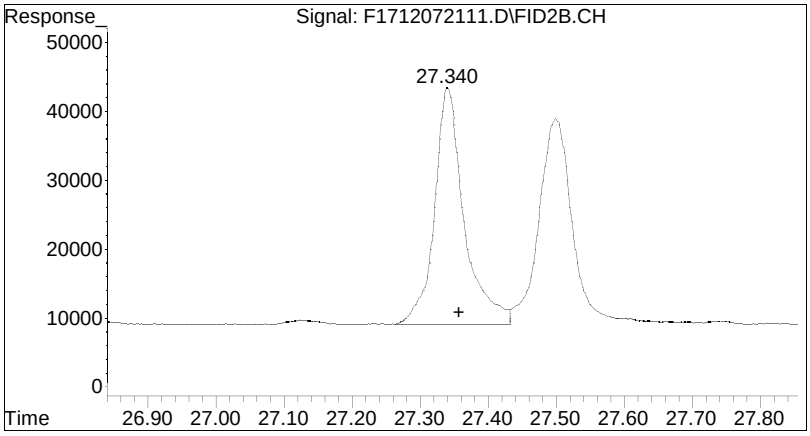
#14 n-Heptadecane (C17)

R.T.:	25.577 min
Delta R.T.:	-0.016 min
Response:	917480
Conc:	0.88 ug/mL M4



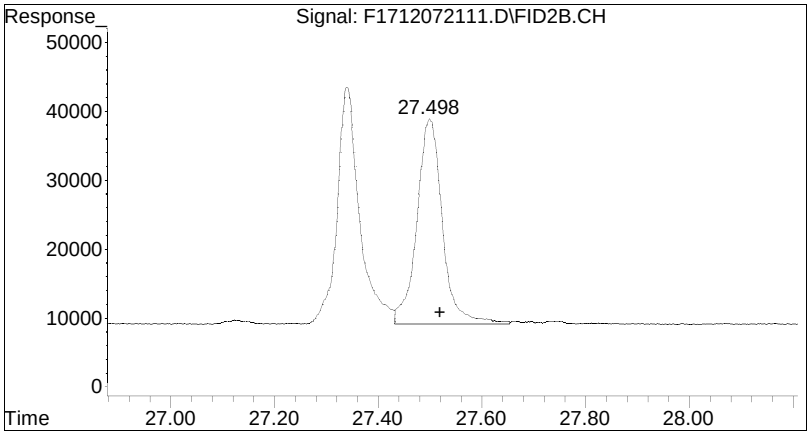
#15 Pristane

R.T.:	25.682 min
Delta R.T.:	-0.020 min
Response:	1173129
Conc:	1.10 ug/mL M4



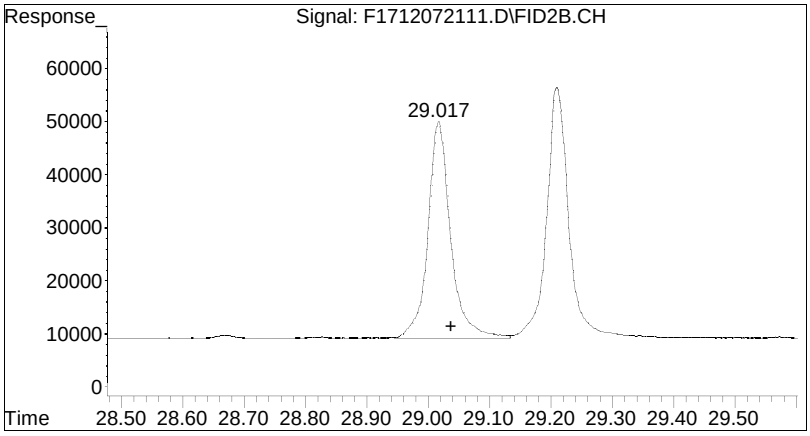
#16 n-Octadecane (C18)

R.T.:	27.340 min
Delta R.T.:	-0.017 min
Response:	1028952
Conc:	0.96 ug/mL M4



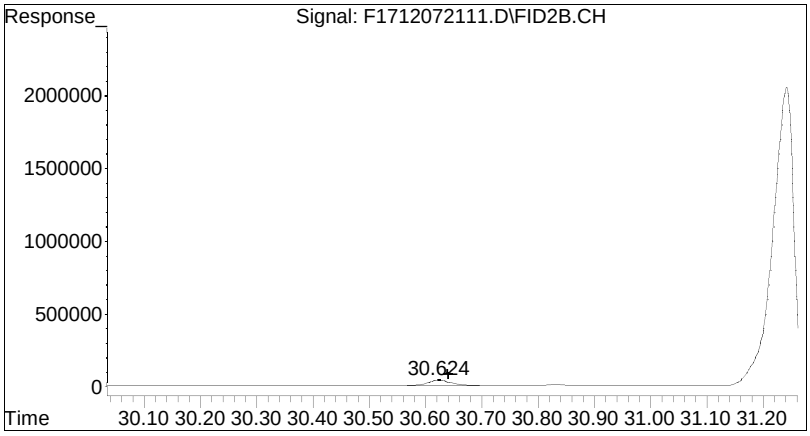
#17 Phytane

R.T.:	27.498 min
Delta R.T.:	-0.022 min
Response:	1013405
Conc:	1.02 ug/mL M4



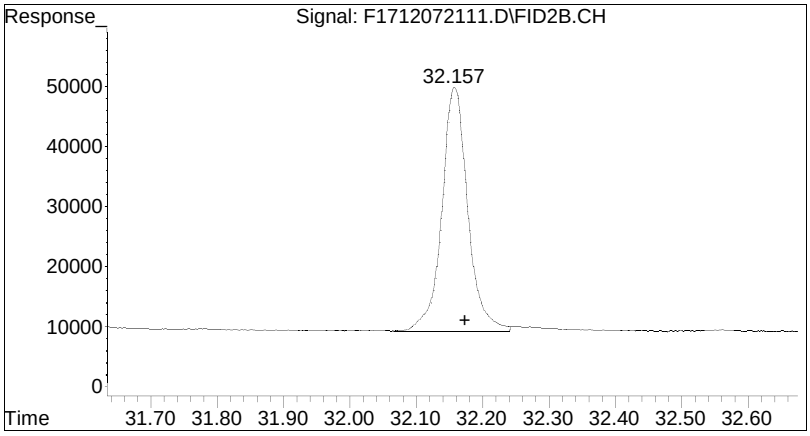
#18 n-Nonadecane (C19)

R.T.:	29.017 min
Delta R.T.:	-0.020 min
Response:	1050030
Conc:	1.00 ug/mL M4



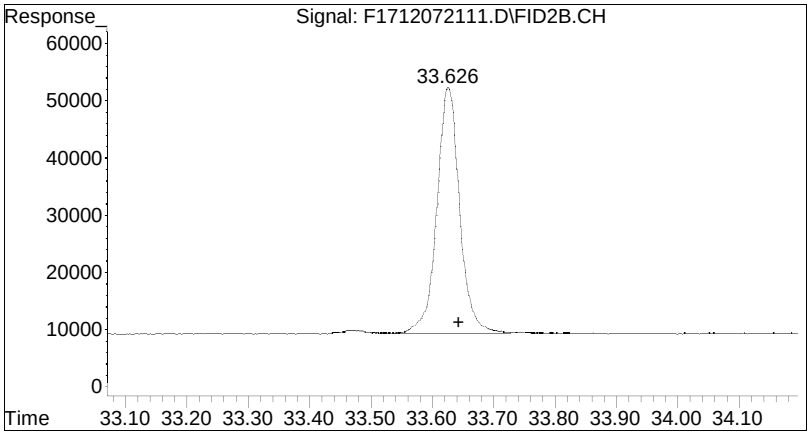
#20 n-Eicosane (C20)

R.T.:	30.624 min
Delta R.T.:	-0.017 min
Response:	1068533
Conc:	0.99 ug/mL M4



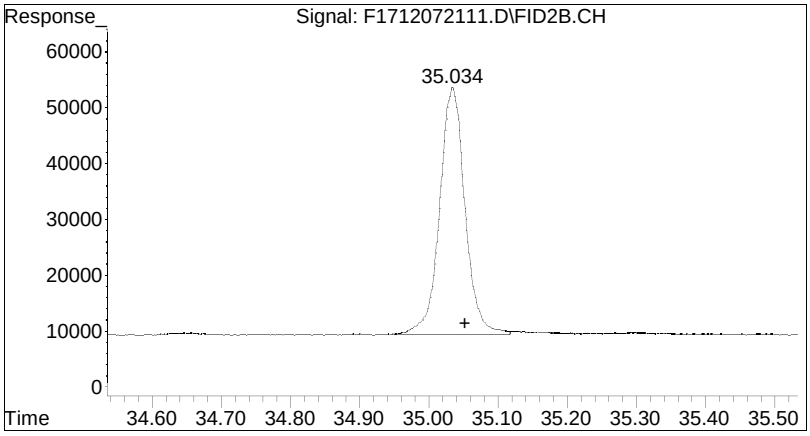
#21 n-Heneicosane (C21)

R.T.:	32.157 min
Delta R.T.:	-0.016 min
Response:	1077970
Conc:	1.01 ug/mL M4



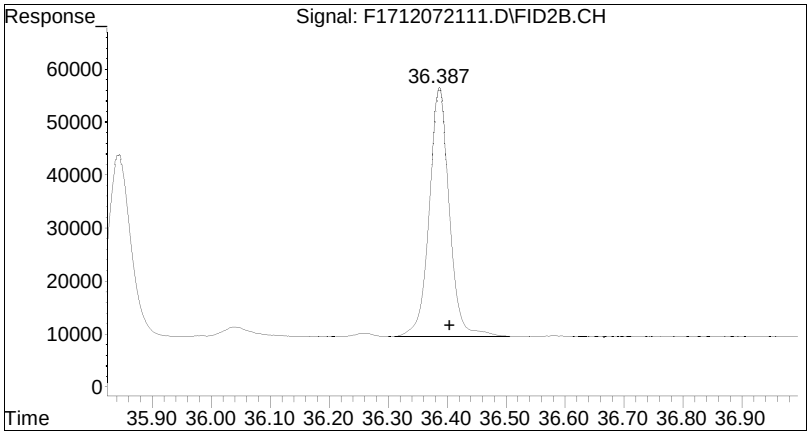
#22 n-Docosane (C22)

R.T.:	33.626 min
Delta R.T.:	-0.018 min
Response:	1088627
Conc:	1.00 ug/mL M4



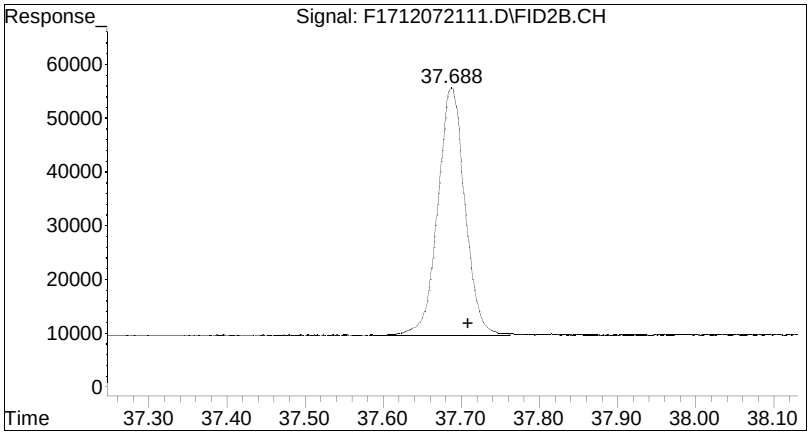
#23 n-Tricosane (C23)

R.T.:	35.034 min
Delta R.T.:	-0.018 min
Response:	1106486
Conc:	1.02 ug/mL M4



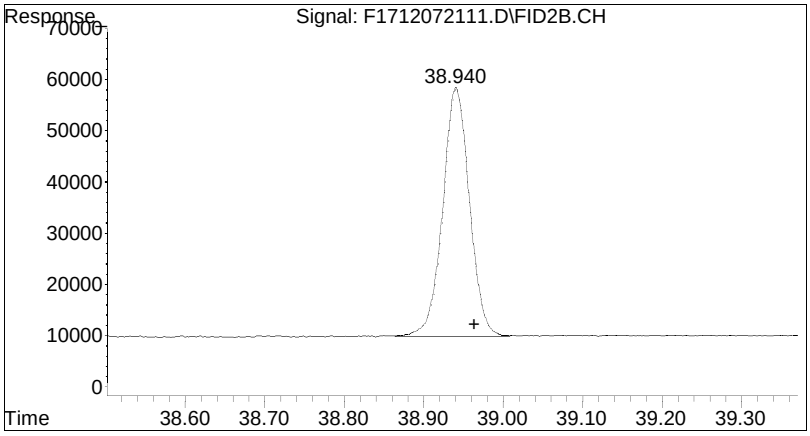
#25 n-Tetracosane (C24)

R.T.:	36.387 min
Delta R.T.:	-0.018 min
Response:	1115512
Conc:	1.08 ug/mL M4



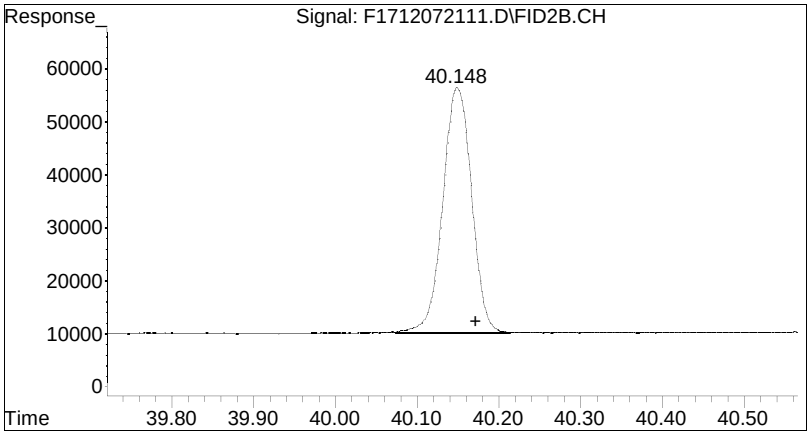
#26 n-Pentacosane (C25)

R.T.:	37.688 min
Delta R.T.:	-0.021 min
Response:	1083458
Conc:	1.02 ug/mL M4



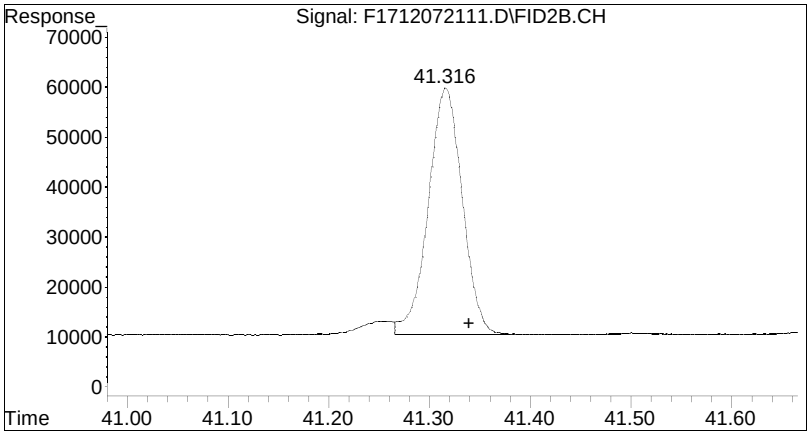
#27 n-Hexacosane (C26)

R.T.:	38.940 min
Delta R.T.:	-0.024 min
Response:	1111130
Conc:	1.01 ug/mL M4



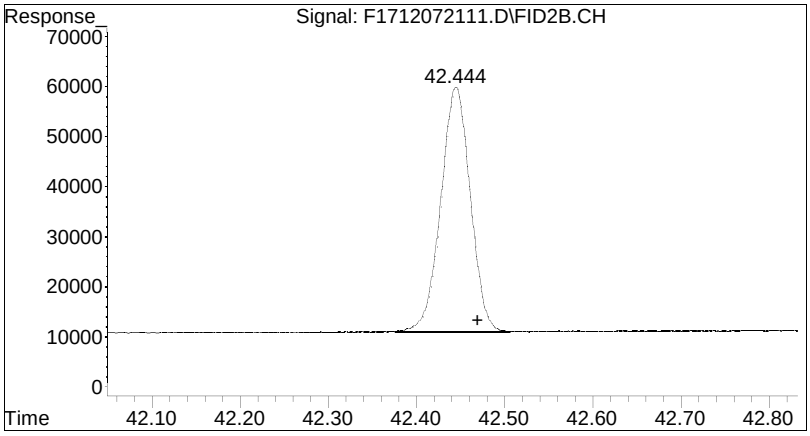
#28 n-Heptacosane (C27)

R.T.:	40.148 min
Delta R.T.:	-0.024 min
Response:	1116174
Conc:	1.06 ug/mL M4



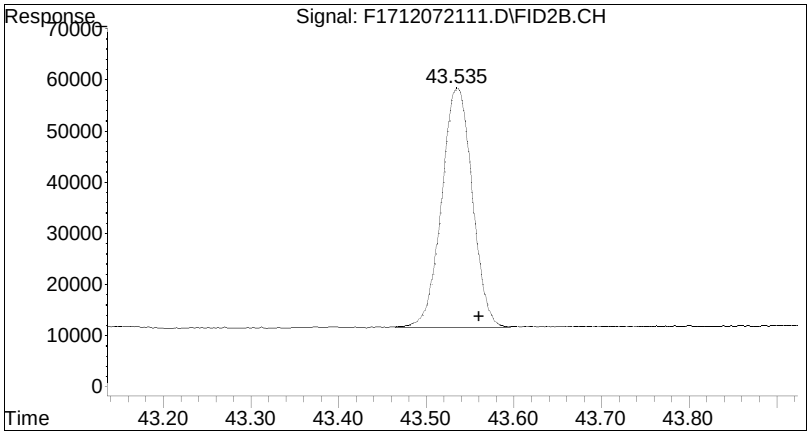
#29 n-Octacosane (C28)

R.T.:	41.316 min
Delta R.T.:	-0.024 min
Response:	1143129
Conc:	1.04 ug/mL M4



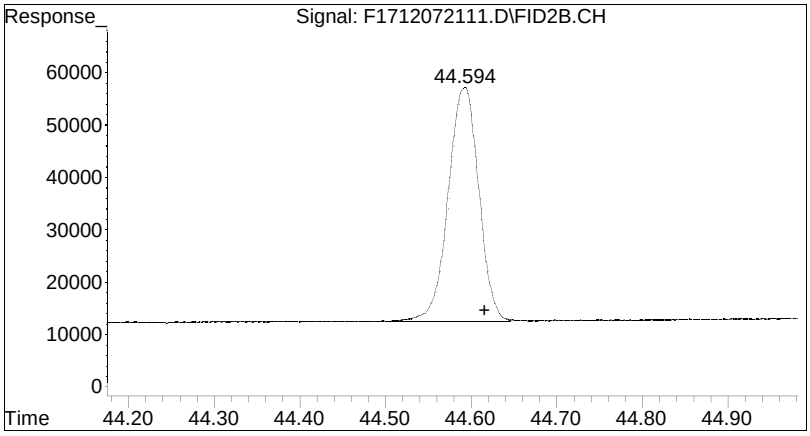
#30 n-Nonacosane (C29)

R.T.:	42.444 min
Delta R.T.:	-0.025 min
Response:	1117917
Conc:	1.03 ug/mL M4



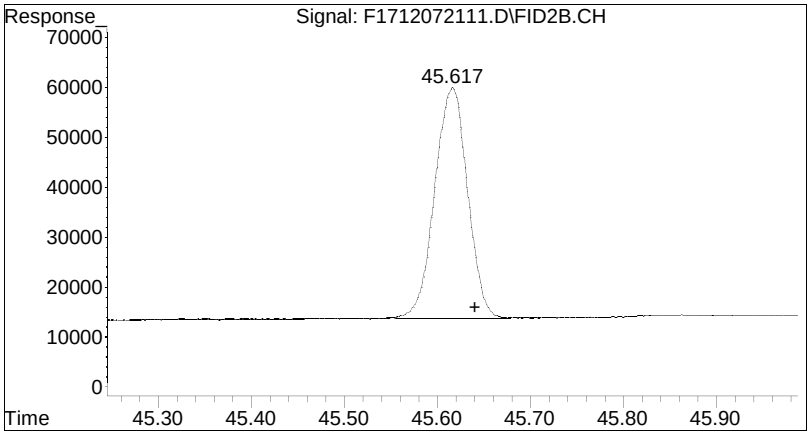
#31 n-Triacontane (C30)

R.T.:	43.535 min
Delta R.T.:	-0.026 min
Response:	1117326
Conc:	1.03 ug/mL M4



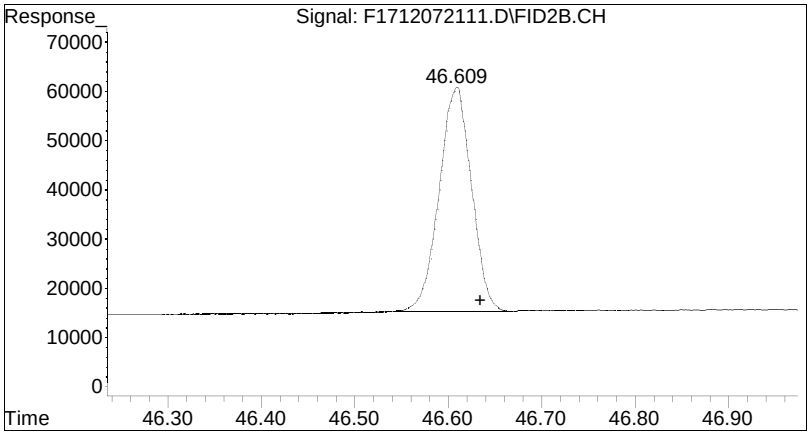
#32 n-Hentriacontane (C31)

R.T.:	44.594 min
Delta R.T.:	-0.023 min
Response:	1083982
Conc:	1.03 ug/mL M4



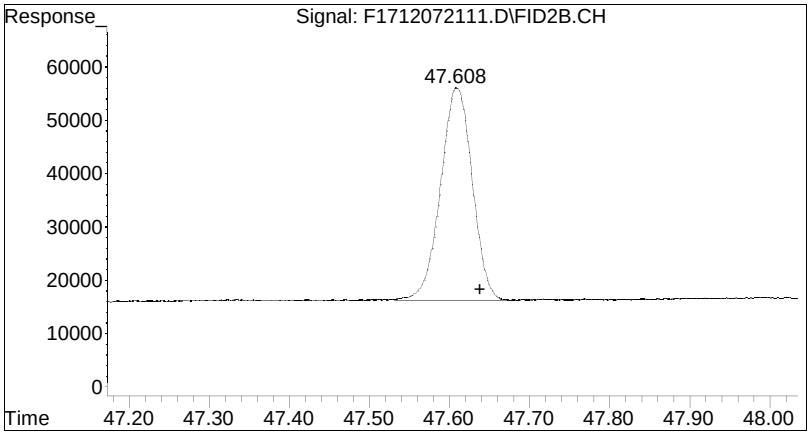
#33 n-Dotriacontane (C32)

R.T.:	45.617 min
Delta R.T.:	-0.024 min
Response:	1120982
Conc:	1.02 ug/mL M4



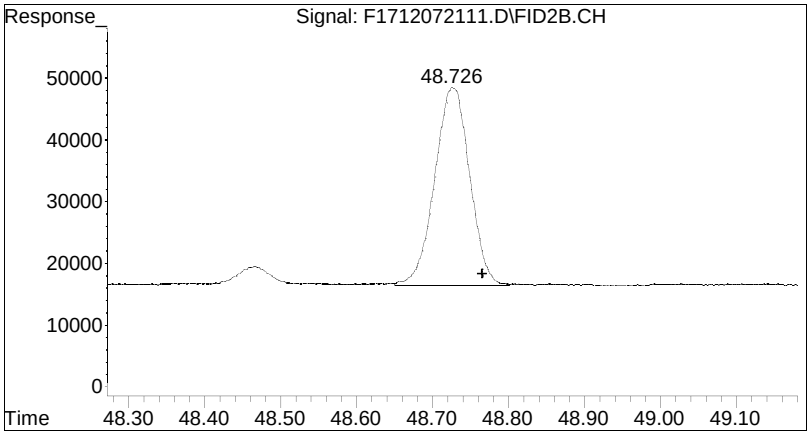
#34 n-Tritriacontane (C33)

R.T.:	46.609 min
Delta R.T.:	-0.025 min
Response:	1081775
Conc:	1.03 ug/mL M4



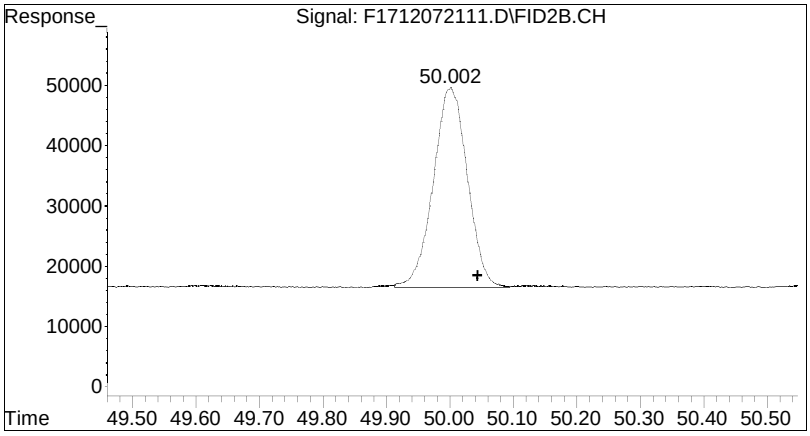
#35 n-tetratriacontane (C34)

R.T.:	47.608 min
Delta R.T.:	-0.030 min
Response:	1079397
Conc:	1.03 ug/mL M4



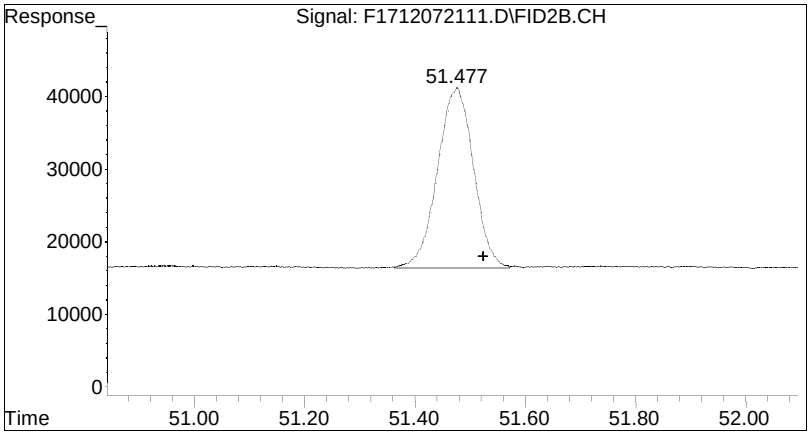
#36 n-Pentatriacontane (C35)

R.T.:	48.726 min
Delta R.T.:	-0.040 min
Response:	1003819
Conc:	0.95 ug/mL M4



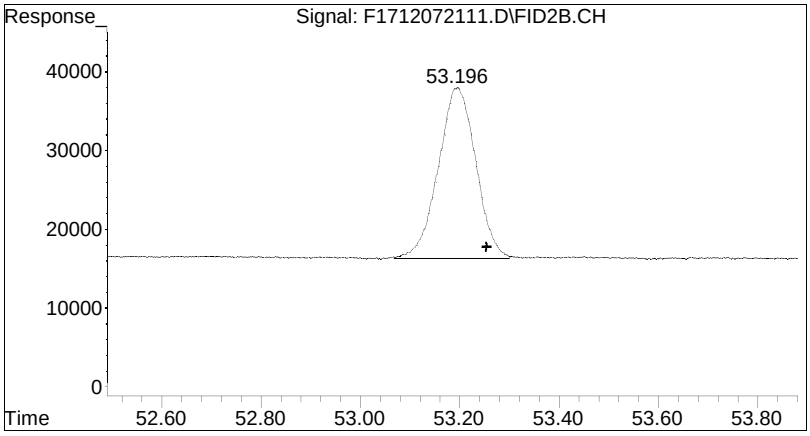
#37 n-Hexatriacontane (C36)

R.T.:	50.002 min
Delta R.T.:	-0.042 min
Response:	1212807
Conc:	1.07 ug/mL M4



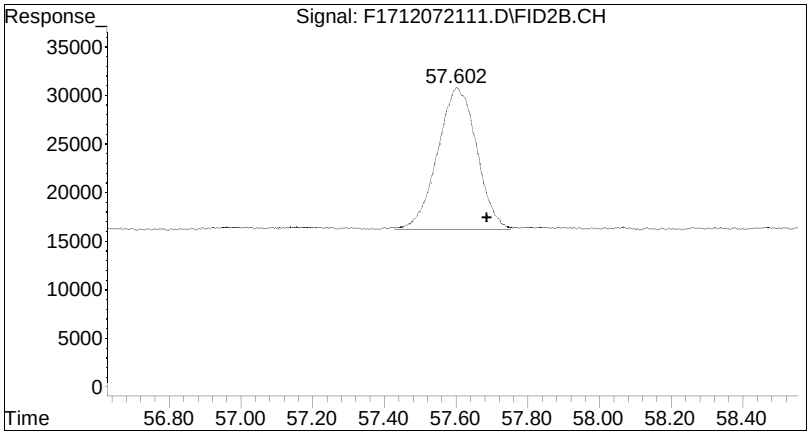
#38 n-Heptatriacontane (C37)

R.T.:	51.477 min
Delta R.T.:	-0.047 min
Response:	1106553
Conc:	1.06 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.:	53.196 min
Delta R.T.:	-0.058 min
Response:	1119751
Conc:	1.04 ug/mL M4



#41 n-Tetracontane (C40)

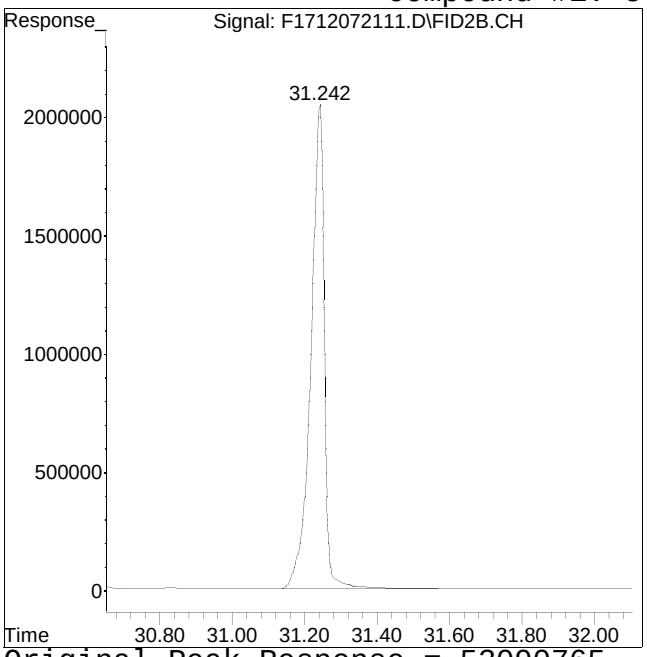
R.T.:	57.602 min
Delta R.T.:	-0.084 min
Response:	1086272
Conc:	1.01 ug/mL M4

Manual Integration/Negative Proof Report

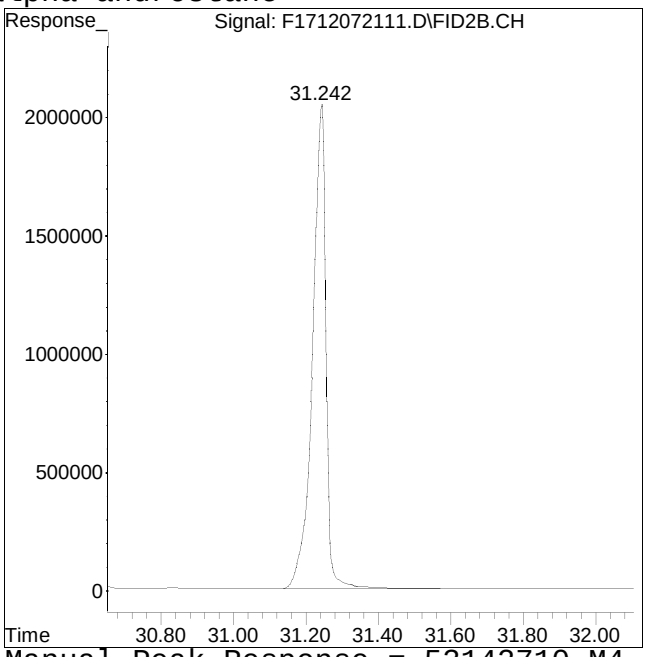
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 53090765



Manual Peak Response = 53142710 M4

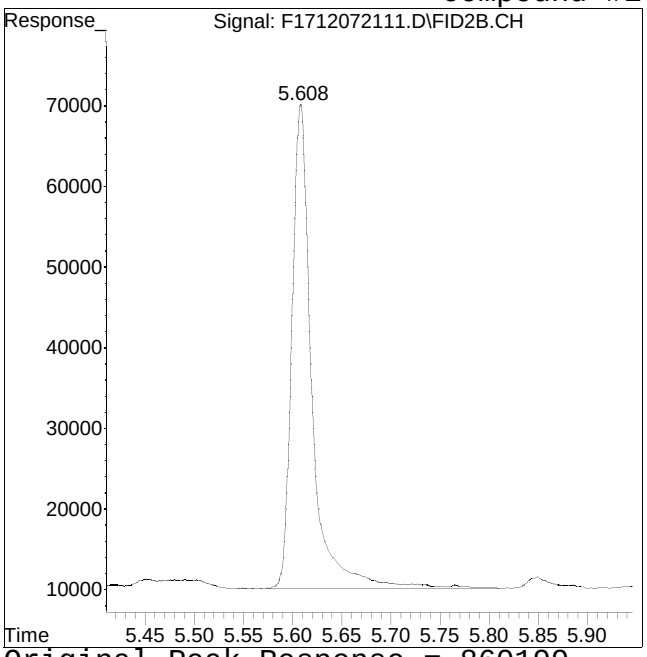
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

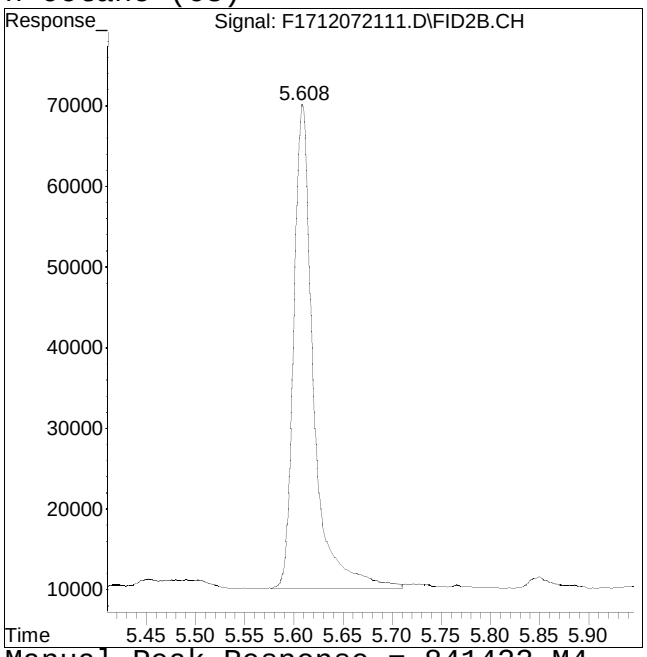
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #2: n-Octane (C8)



Original Peak Response = 860199



Manual Peak Response = 841423 M4

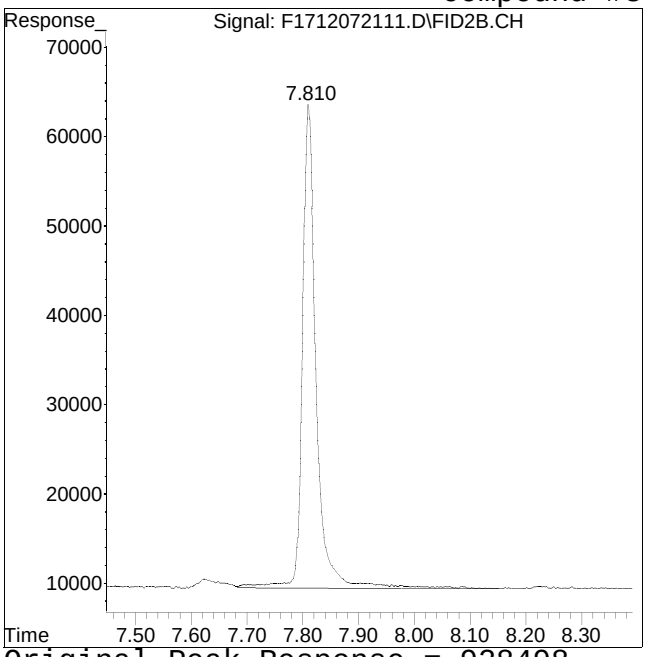
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

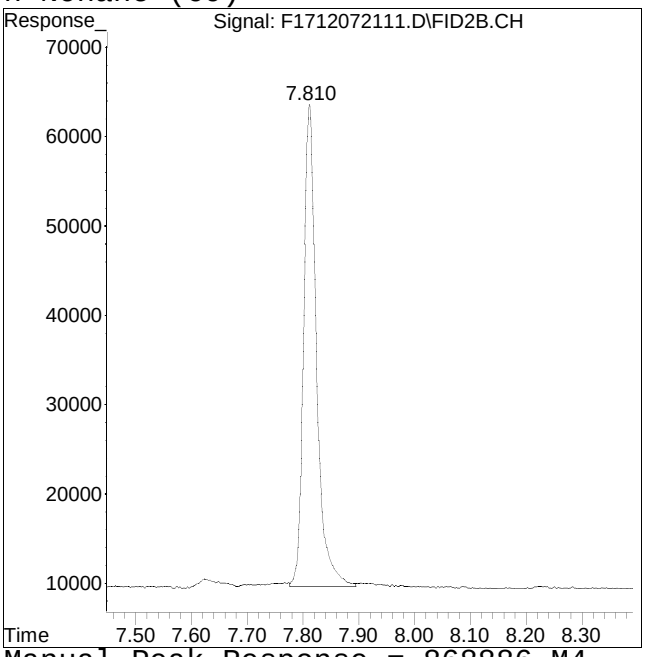
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 928498



Manual Peak Response = 868886 M4

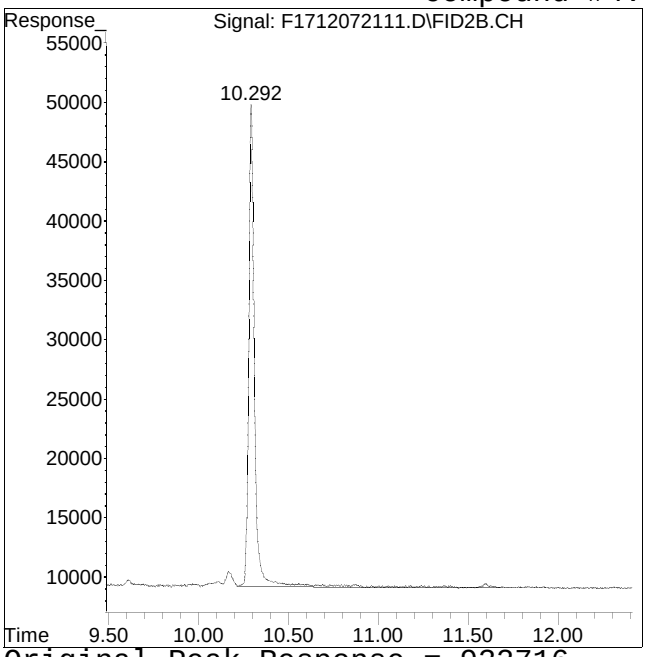
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

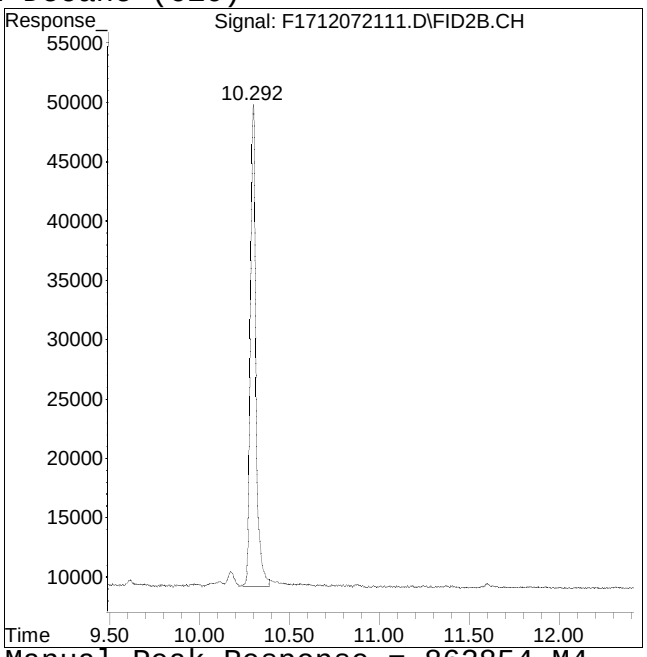
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #4: n-Decane (C10)



Original Peak Response = 932716



Manual Peak Response = 862854 M4

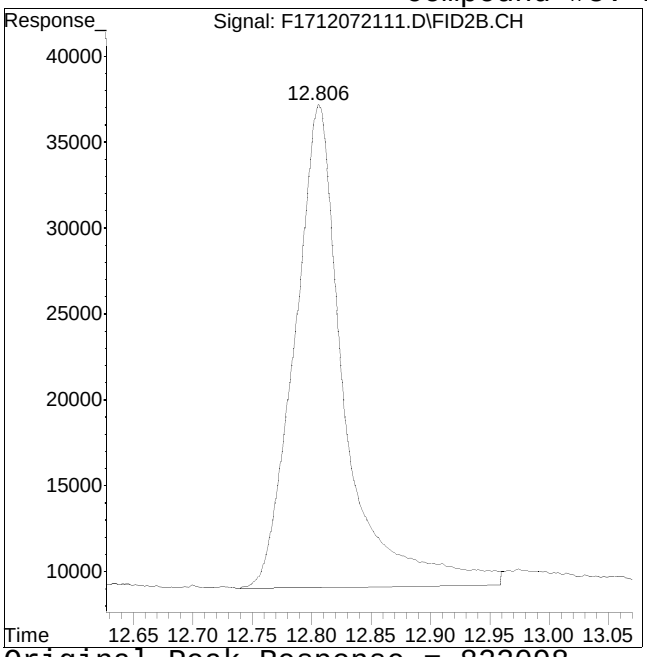
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

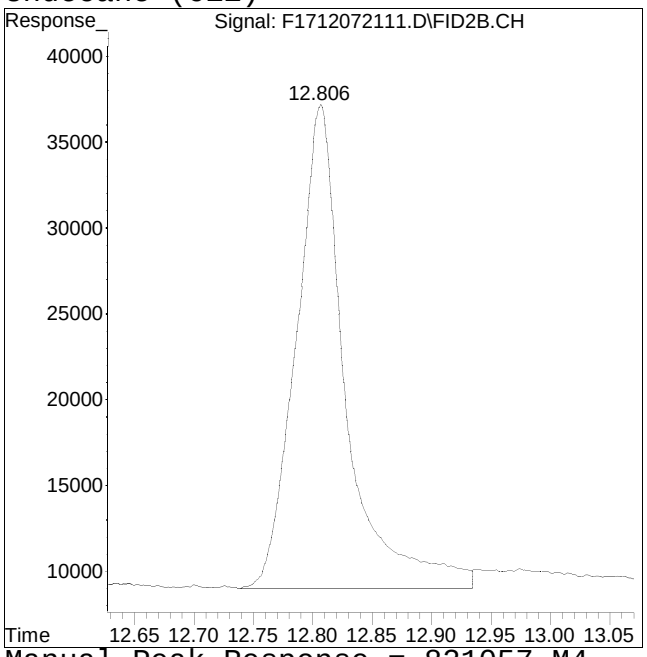
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 822098



Manual Peak Response = 821057 M4

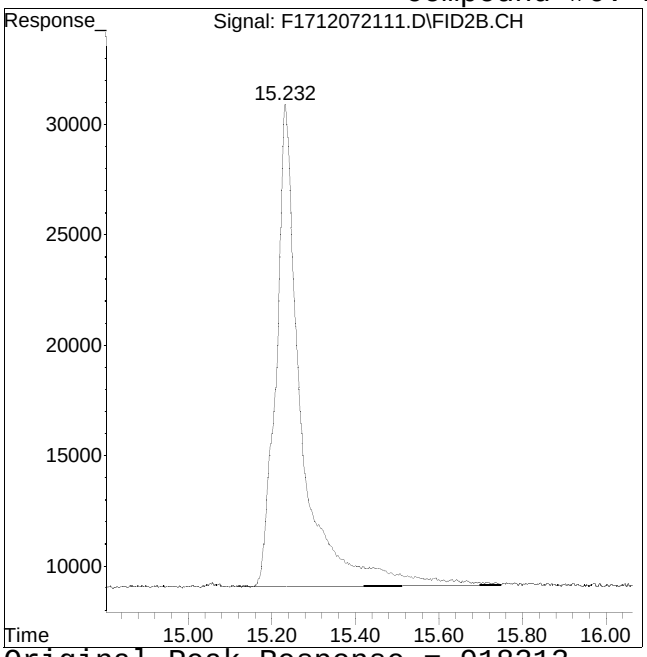
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

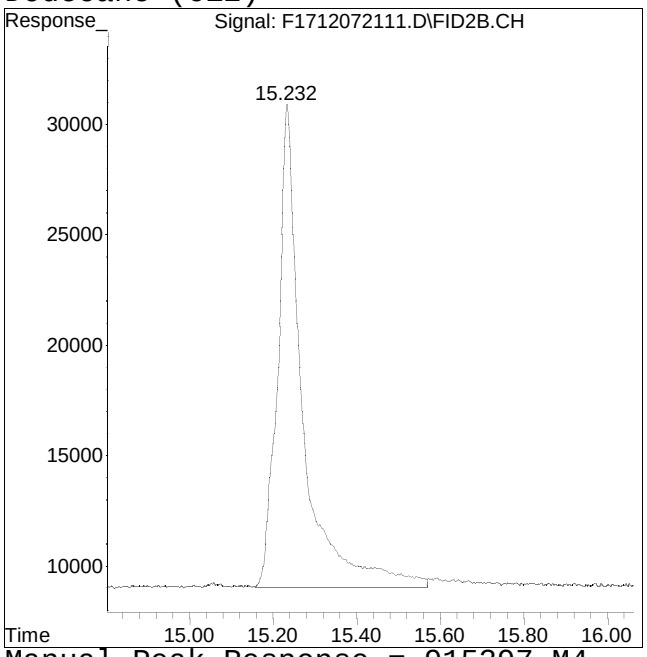
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 918313



Manual Peak Response = 915397 M4

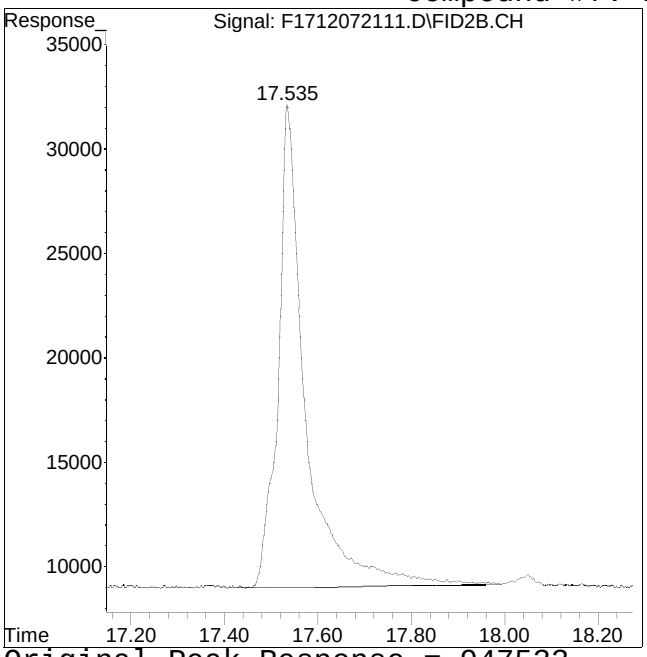
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

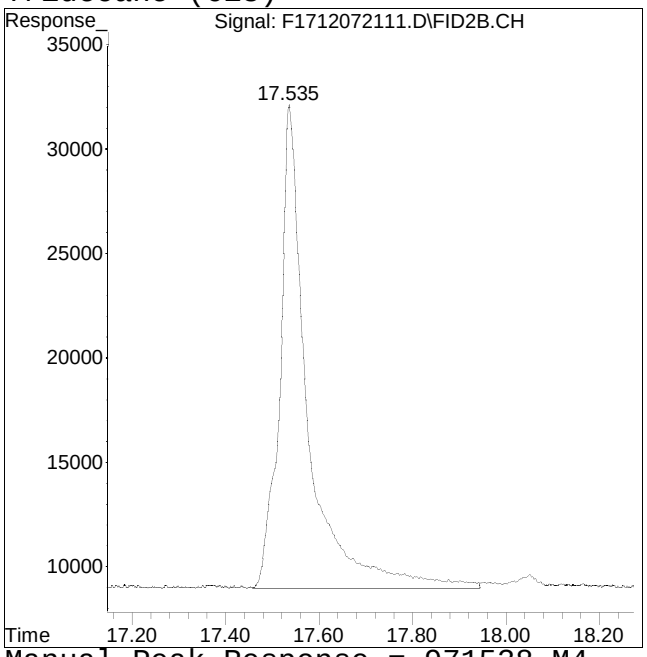
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 947533



Manual Peak Response = 971538 M4

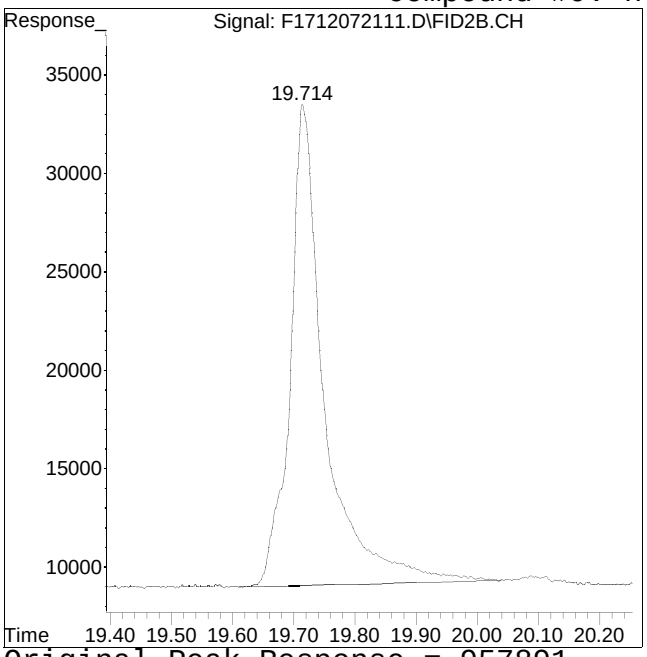
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

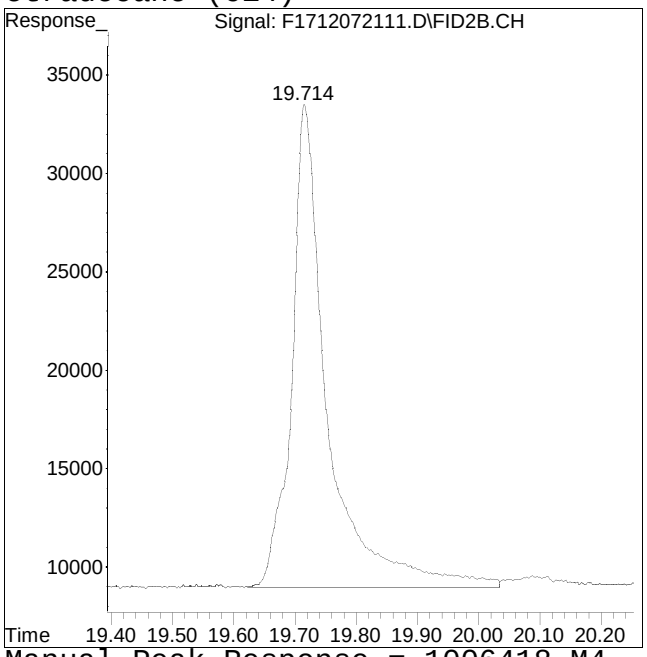
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 957891



Manual Peak Response = 1006418 M4

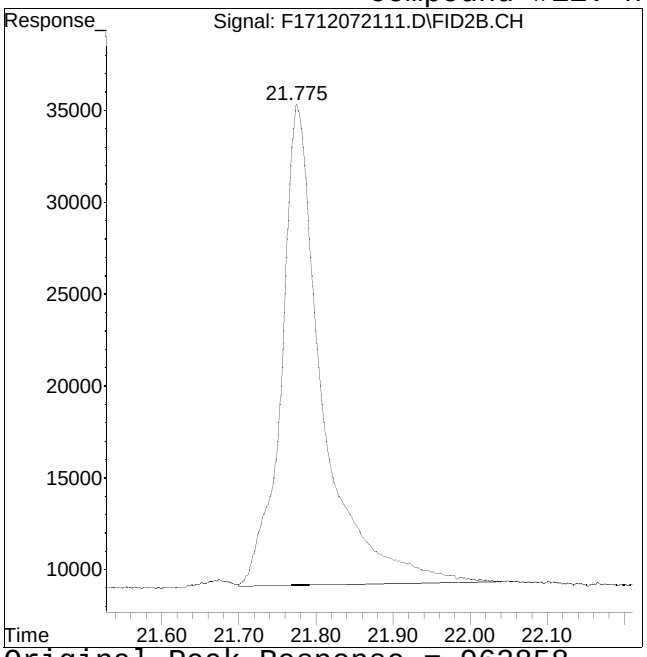
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

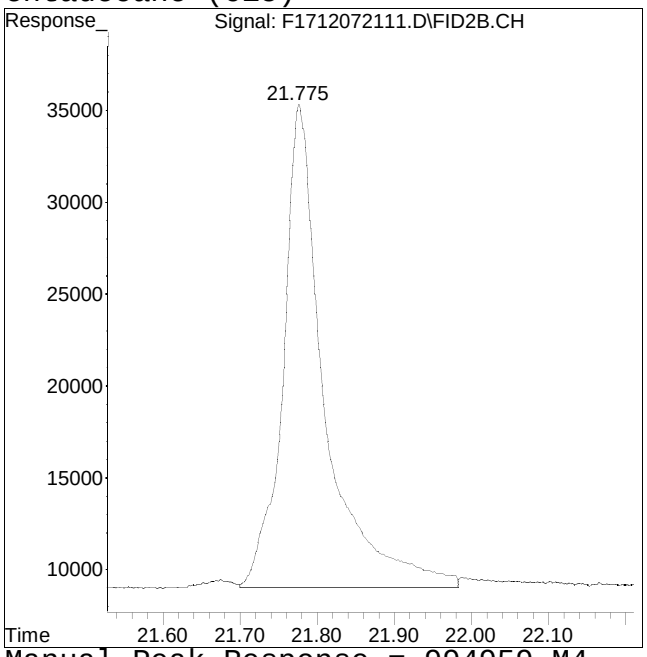
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 962858



Manual Peak Response = 994959 M4

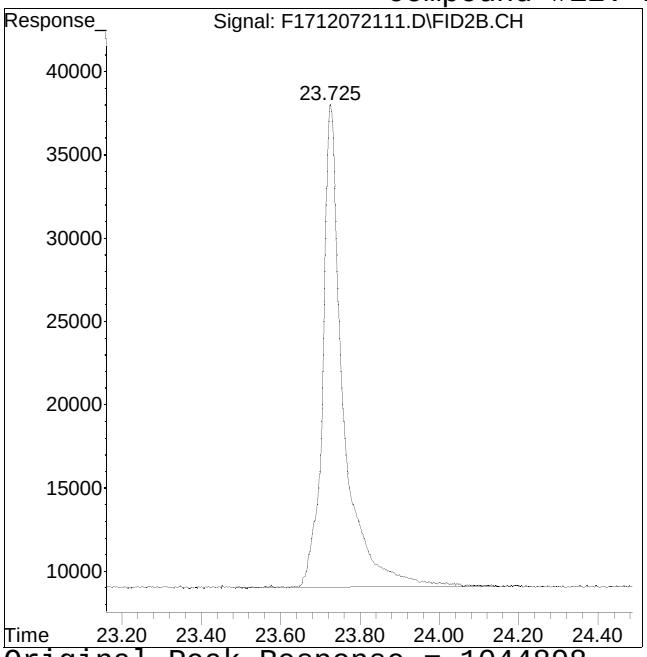
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

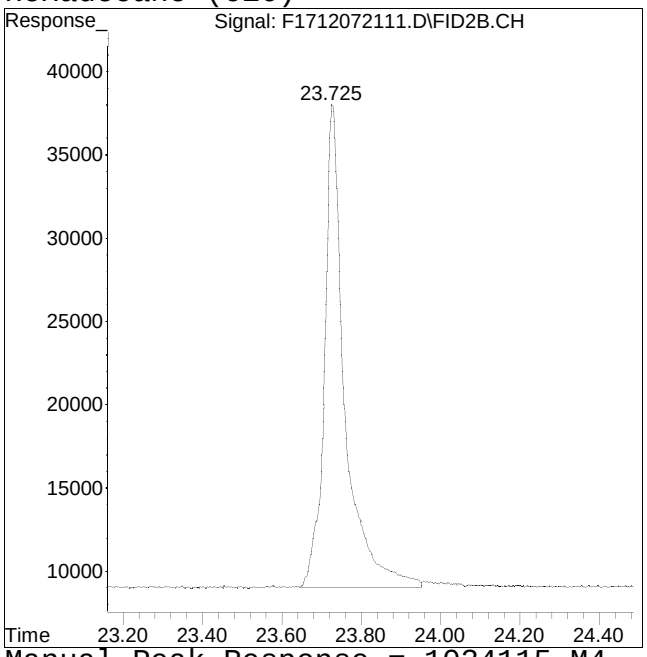
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 1044898



Manual Peak Response = 1034115 M4

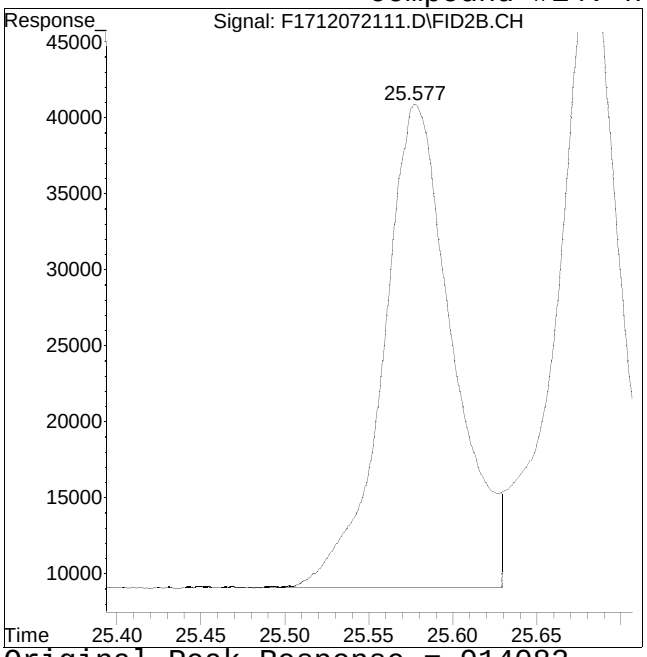
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

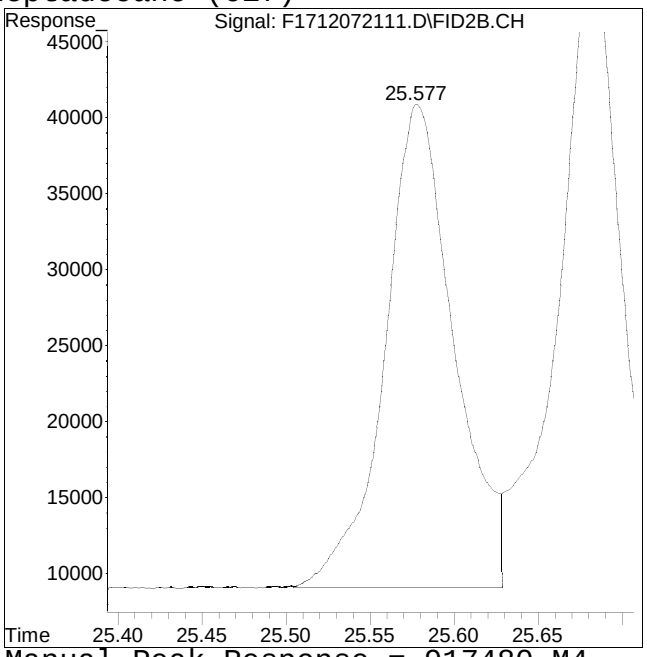
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 914082



Manual Peak Response = 917480 M4

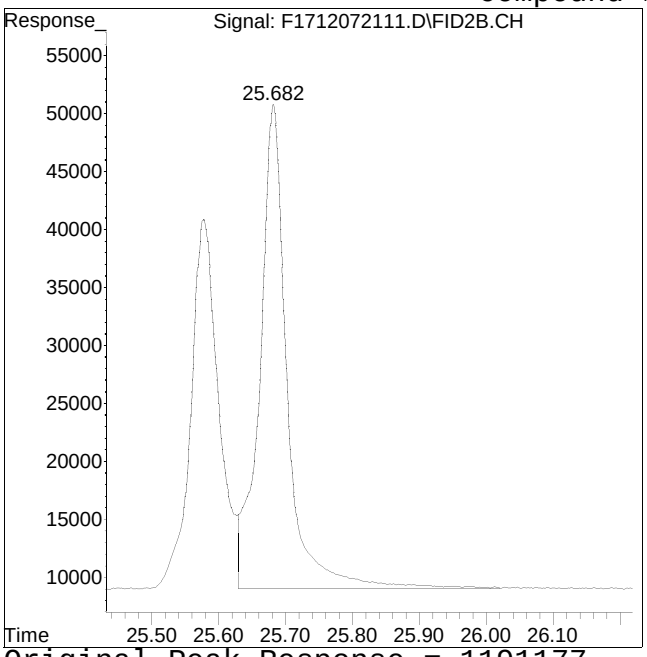
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

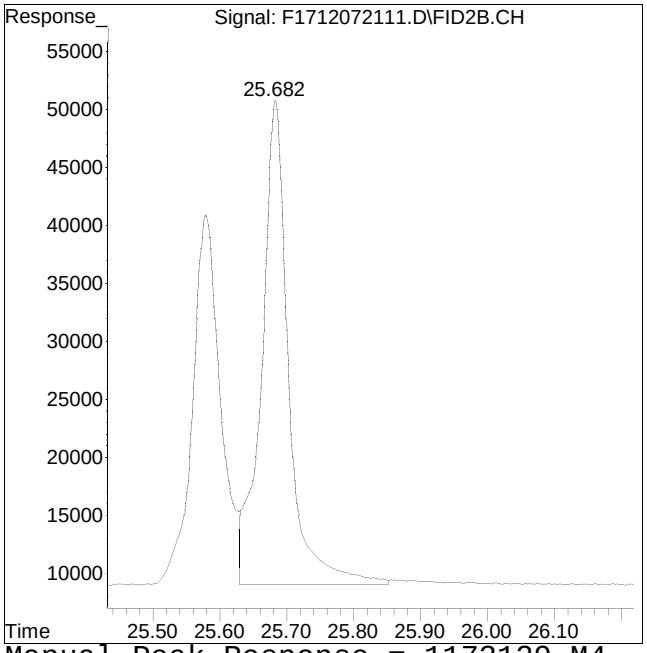
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #15: Pristane



Original Peak Response = 1191177



Manual Peak Response = 1173129 M4

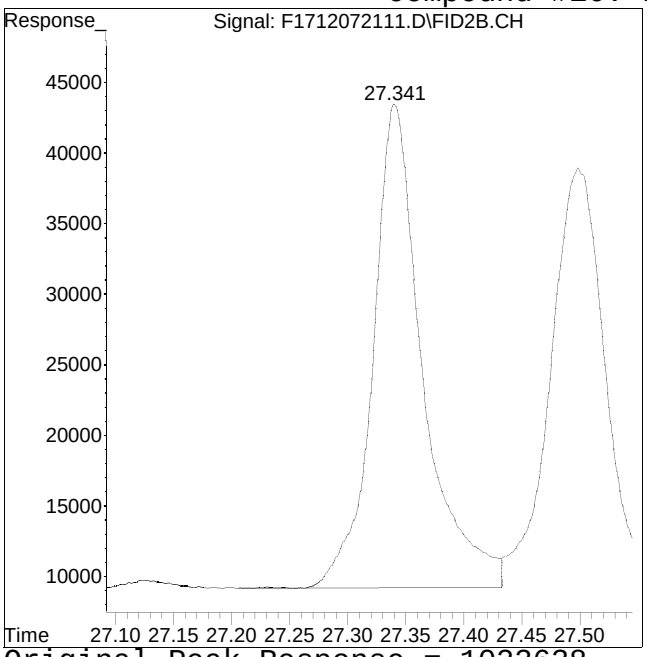
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

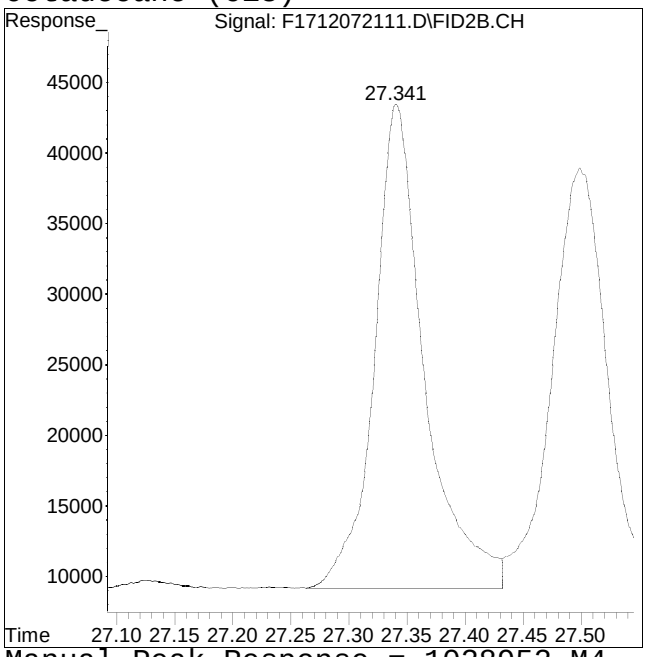
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 1023638



Manual Peak Response = 1028952 M4

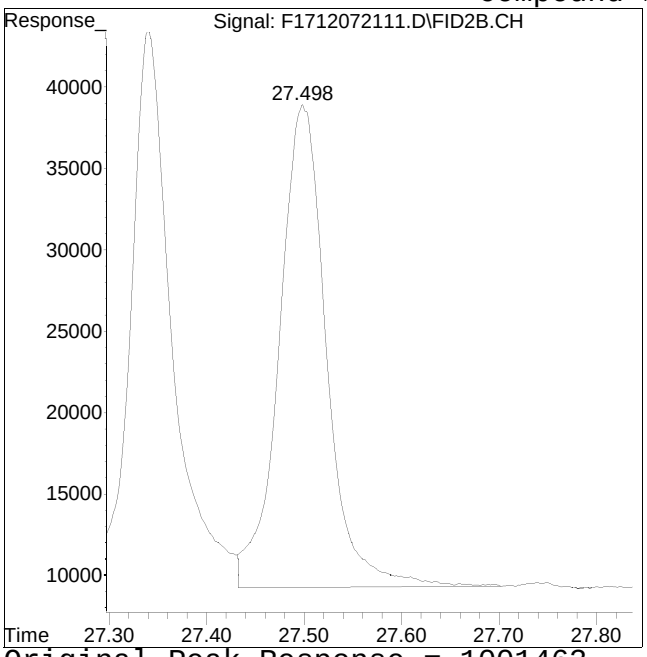
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

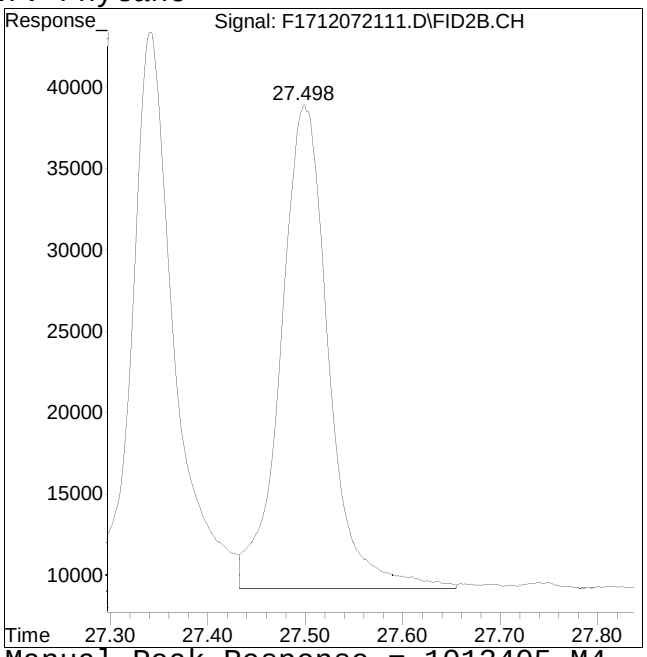
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #17: Phytane



Original Peak Response = 1001463



Manual Peak Response = 1013405 M4

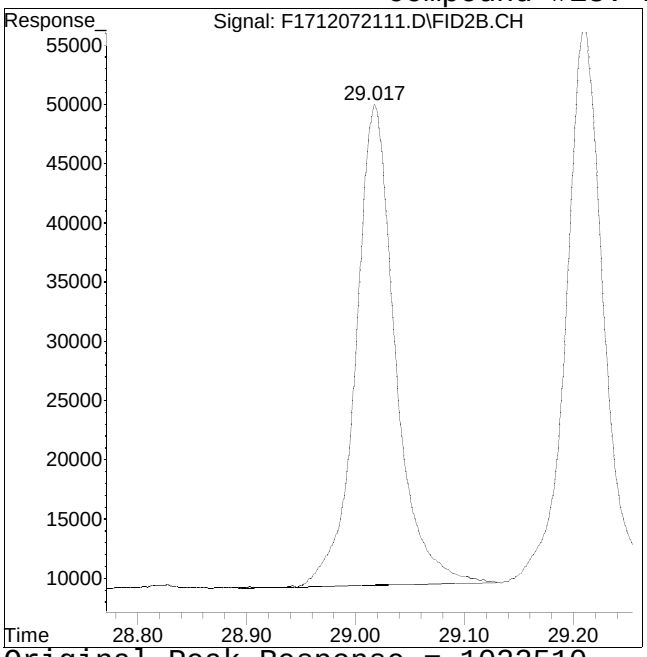
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

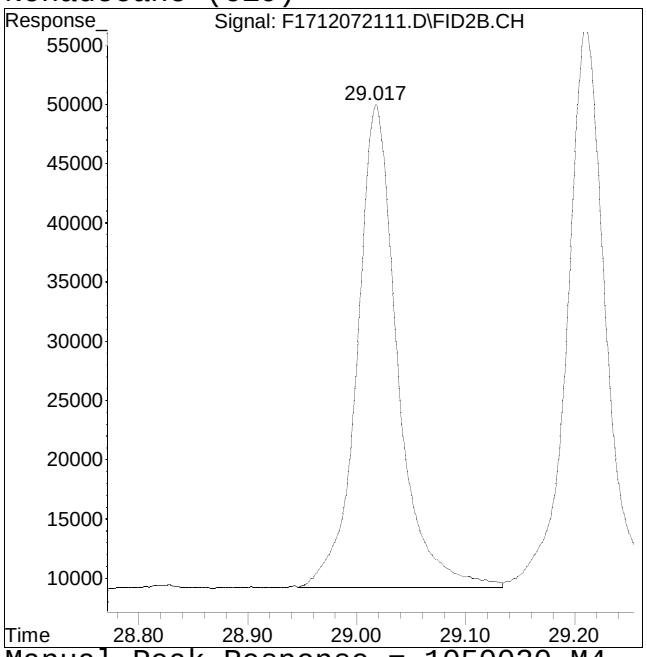
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 1022510



Manual Peak Response = 1050030 M4

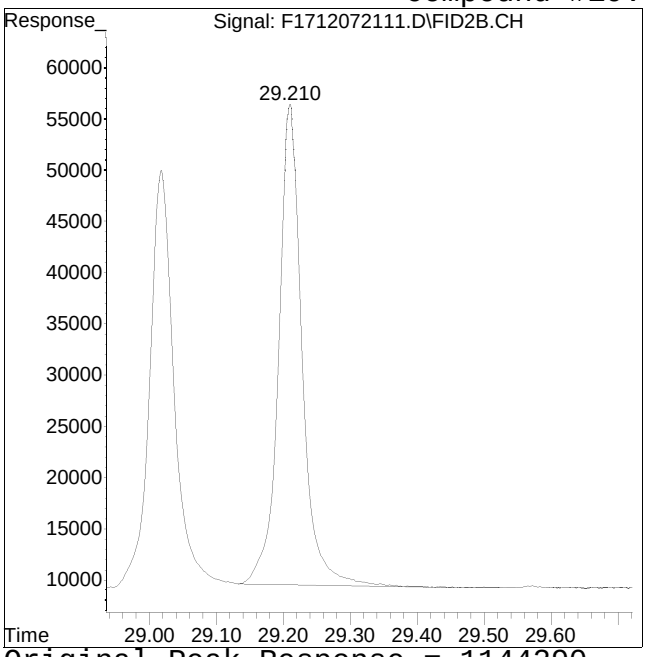
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

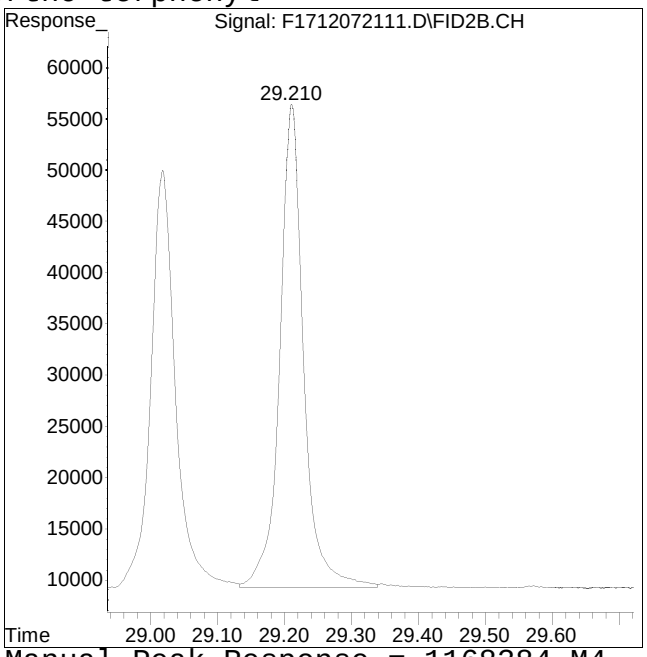
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #19: ortho-terphenyl



Original Peak Response = 1144290



Manual Peak Response = 1168384 M4

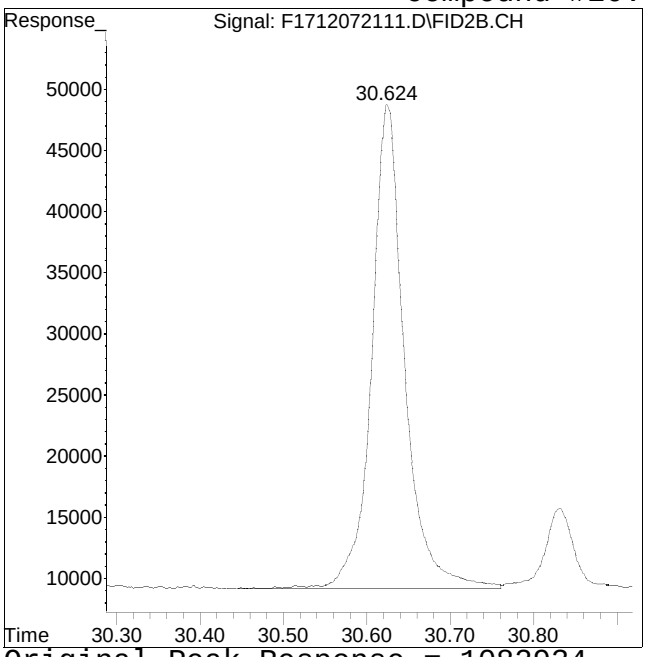
M4 = Poor automated baseline construction.

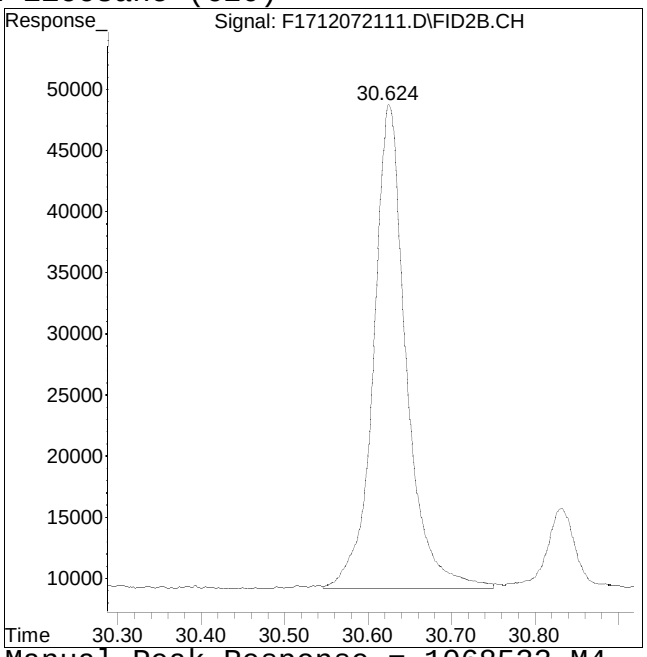
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #20: n-Eicosane (C20)





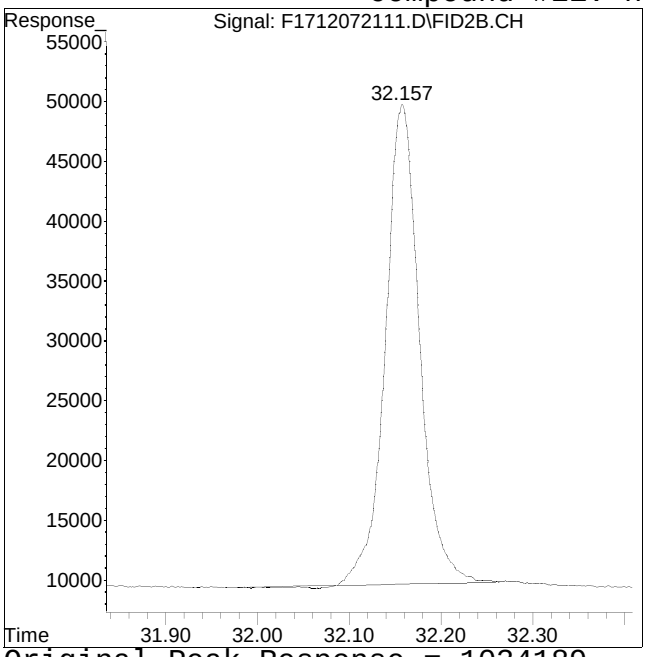
Original Peak Response = 1082934 Manual Peak Response = 1068533 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

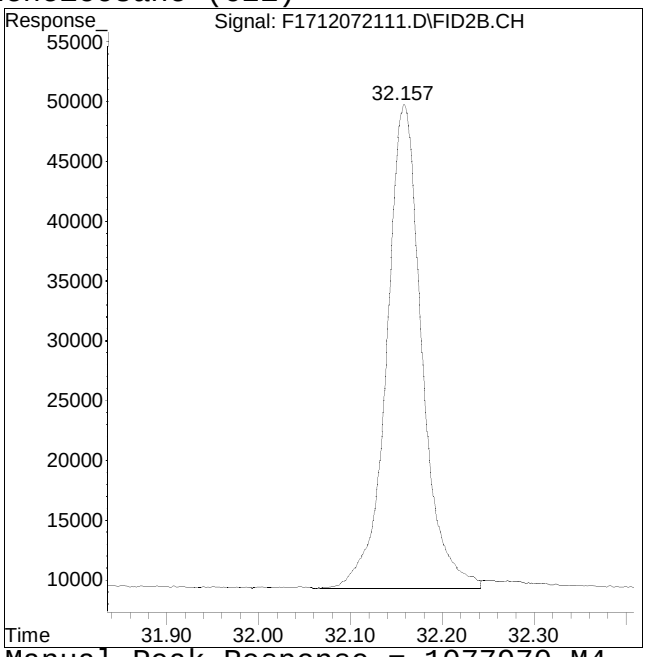
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 1034189



Manual Peak Response = 1077970 M4

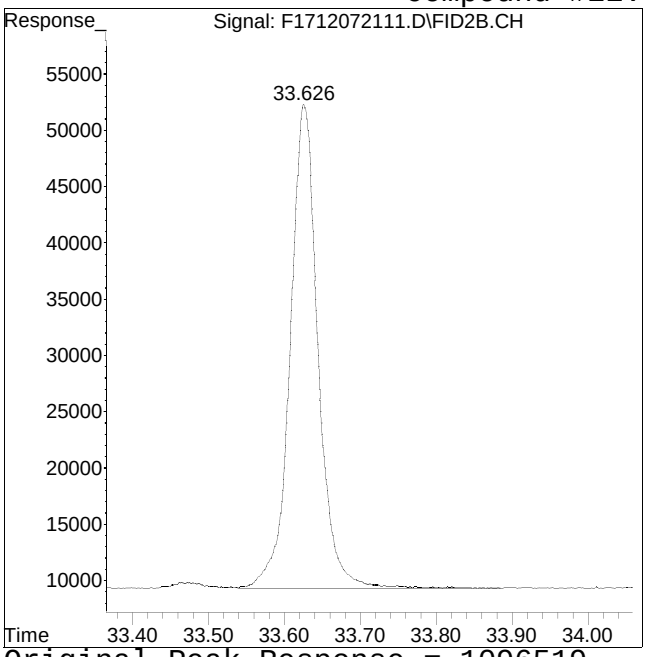
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

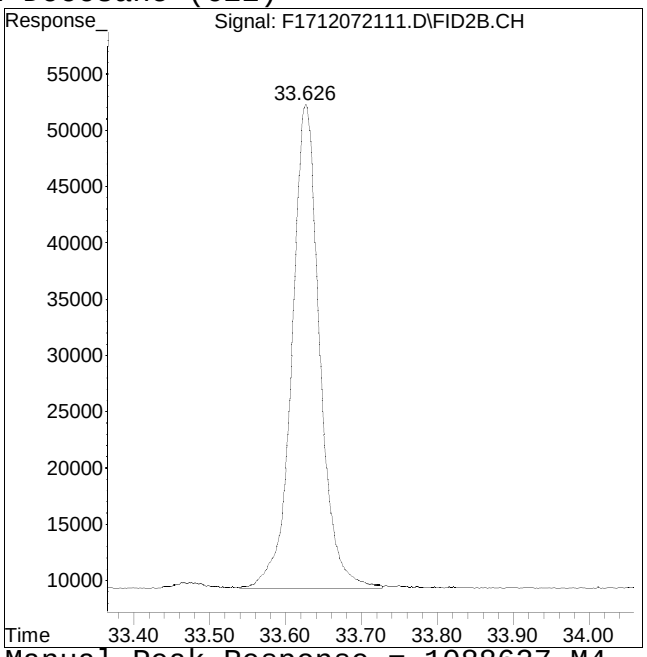
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 1096519



Manual Peak Response = 1088627 M4

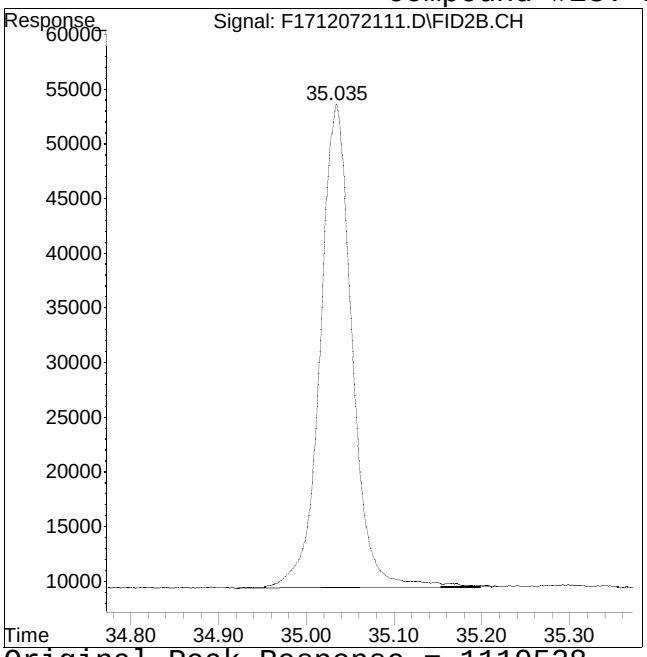
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

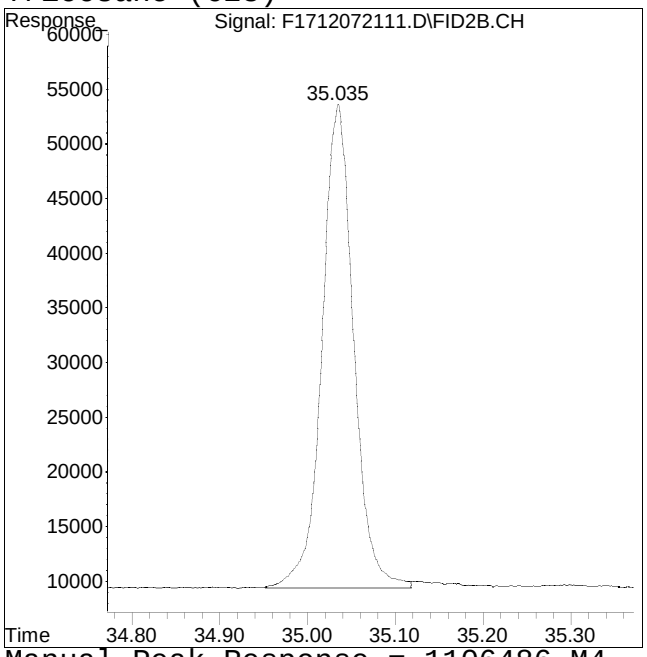
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 1119528



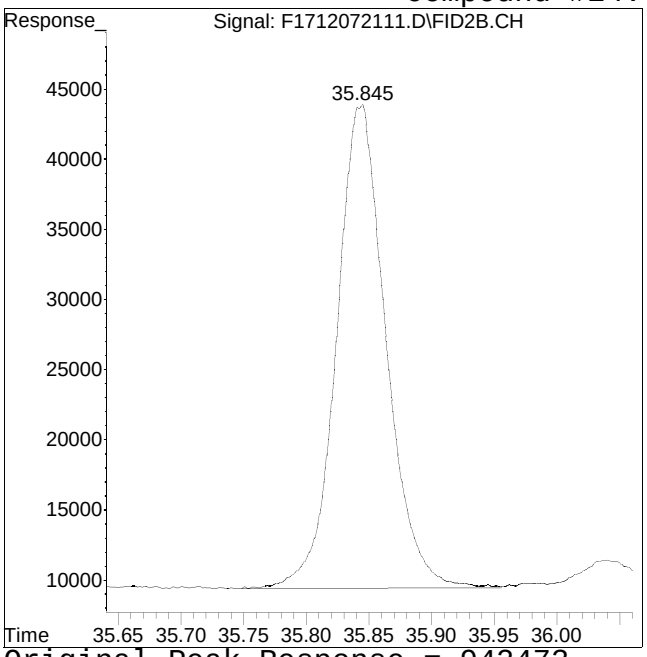
Manual Peak Response = 1106486 M4

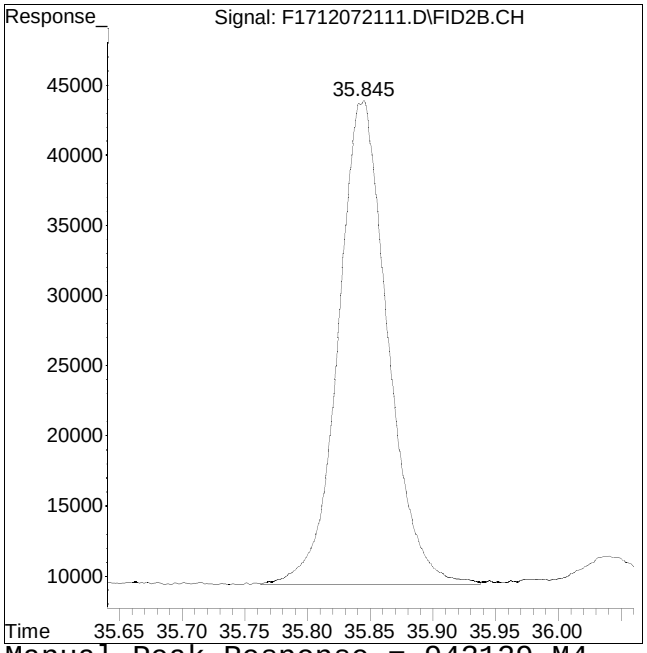
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17120721R_DRO.M
Data File : F1712072111.D Operator : FID17:WR
Date Inj'd : 12/7/2021 4:55 pm Instrument : FID17
Sample : I1712072101R Quant Date : 12/9/2021 3:10 pm

Compound #24: d50-Tetracosane





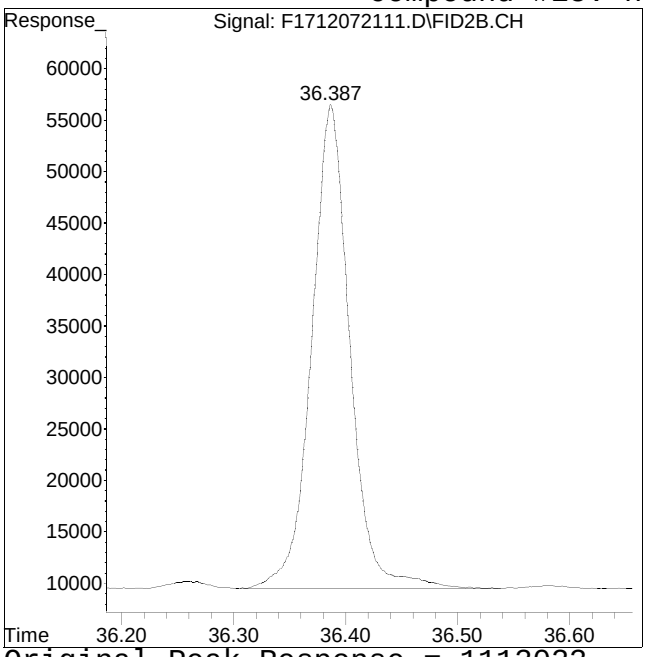
Original Peak Response = 942473 Manual Peak Response = 943129 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

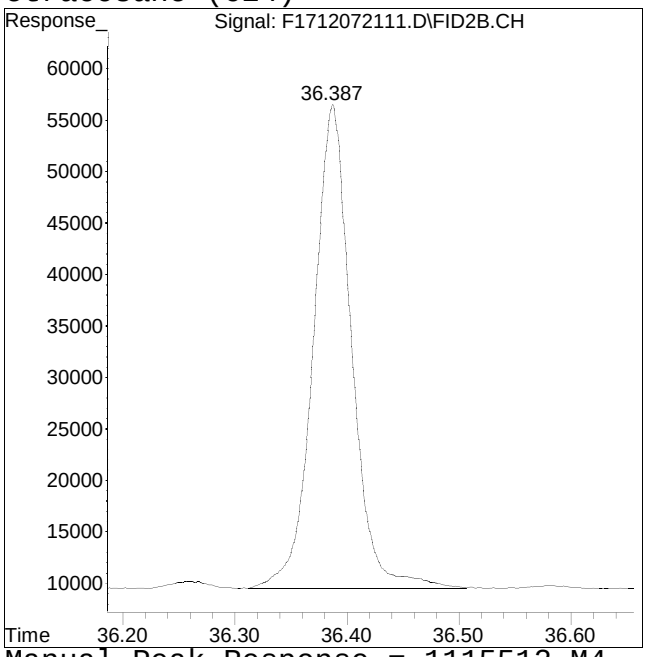
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 1113023



Manual Peak Response = 1115512 M4

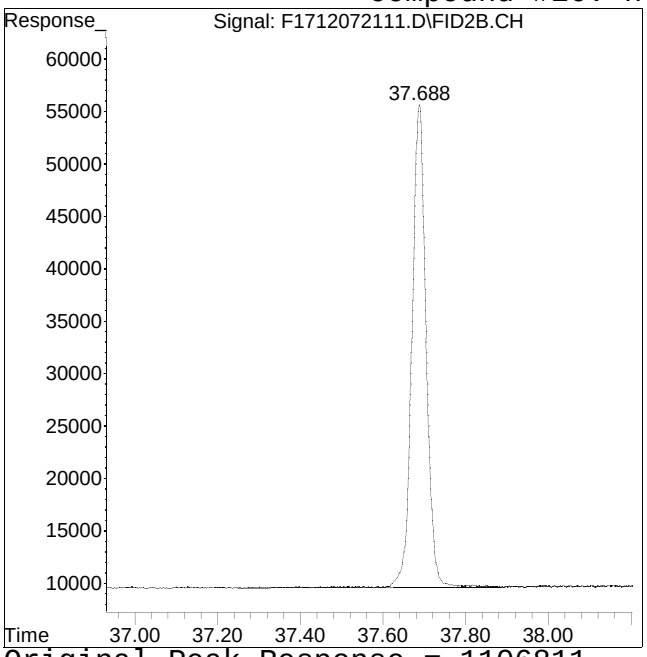
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

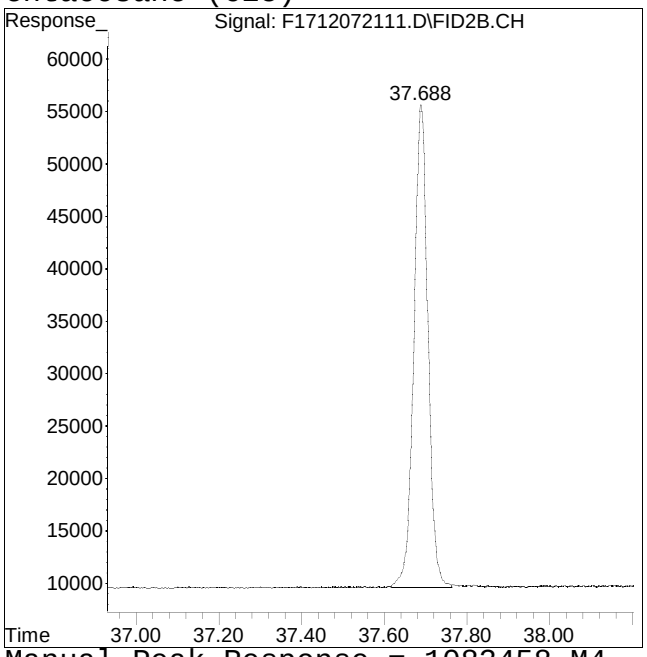
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 1106811



Manual Peak Response = 1083458 M4

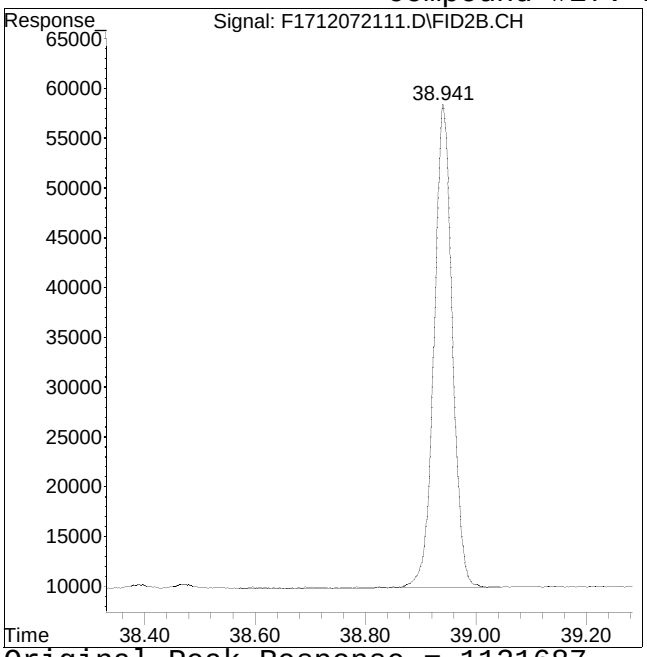
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

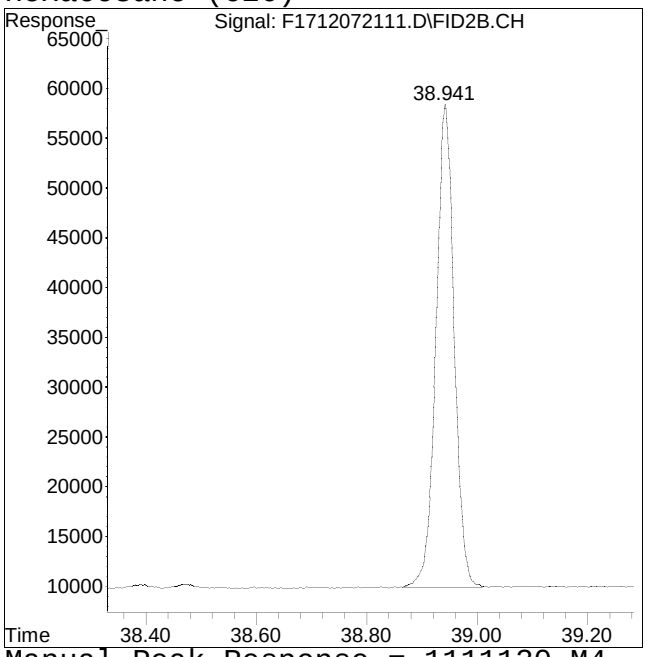
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 1121687



Manual Peak Response = 1111130 M4

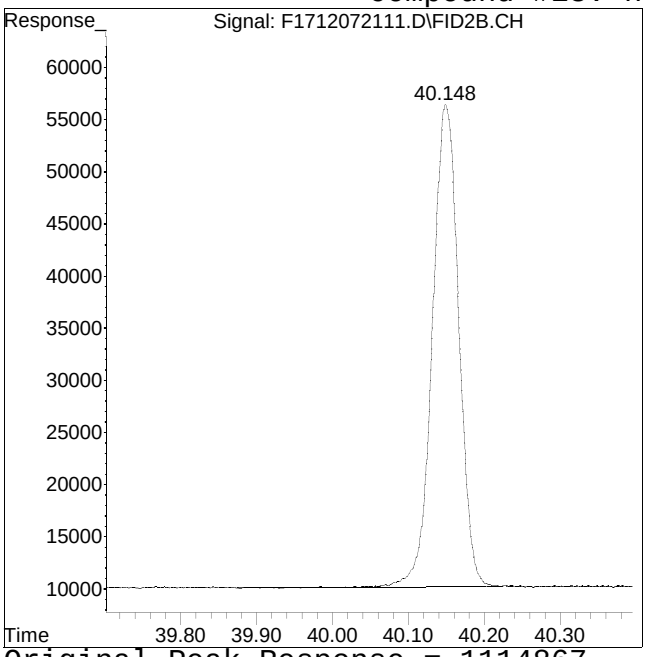
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

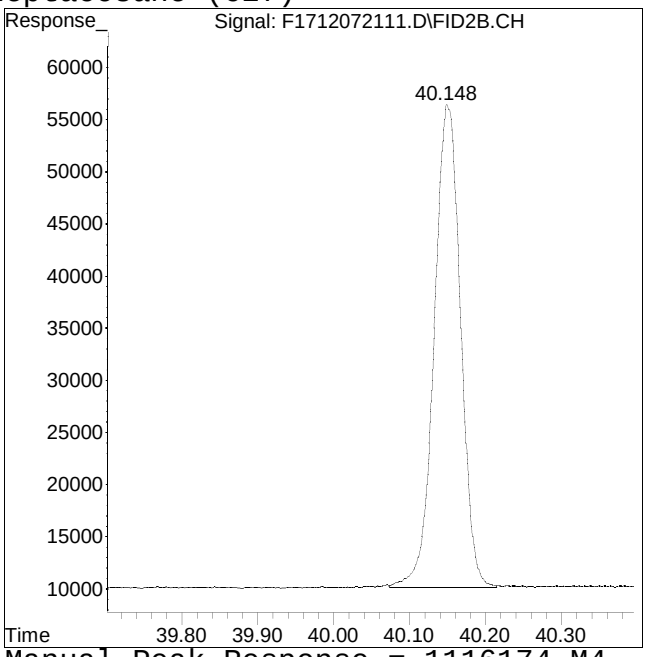
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 1114867



Manual Peak Response = 1116174 M4

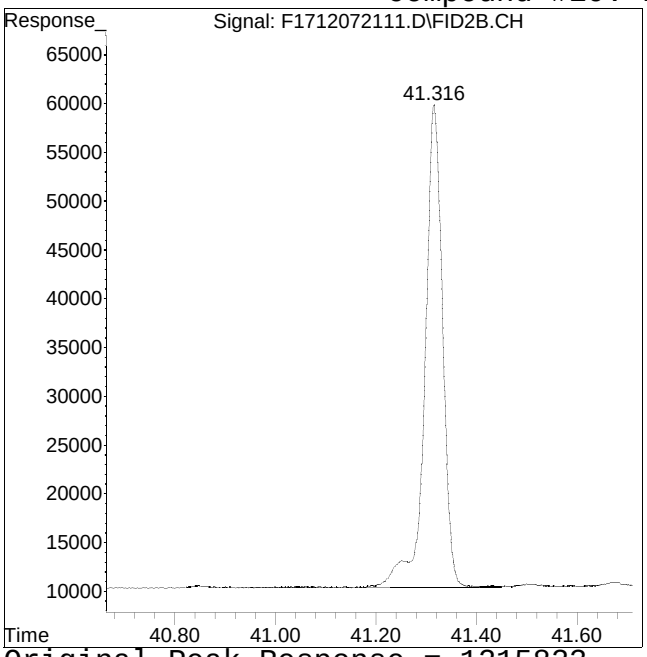
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

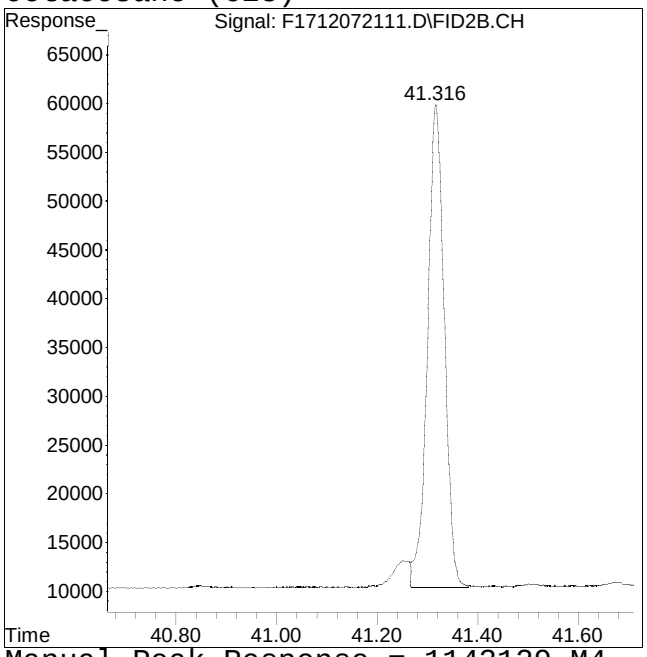
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 1215823



Manual Peak Response = 1143129 M4

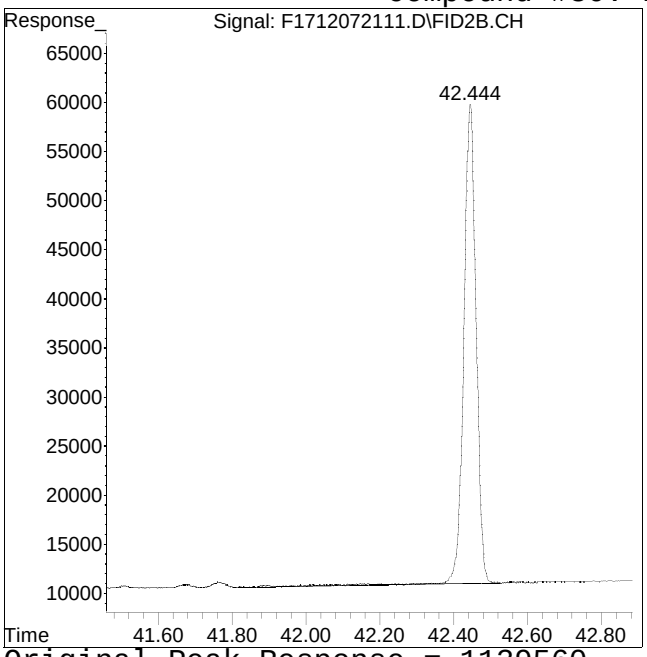
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

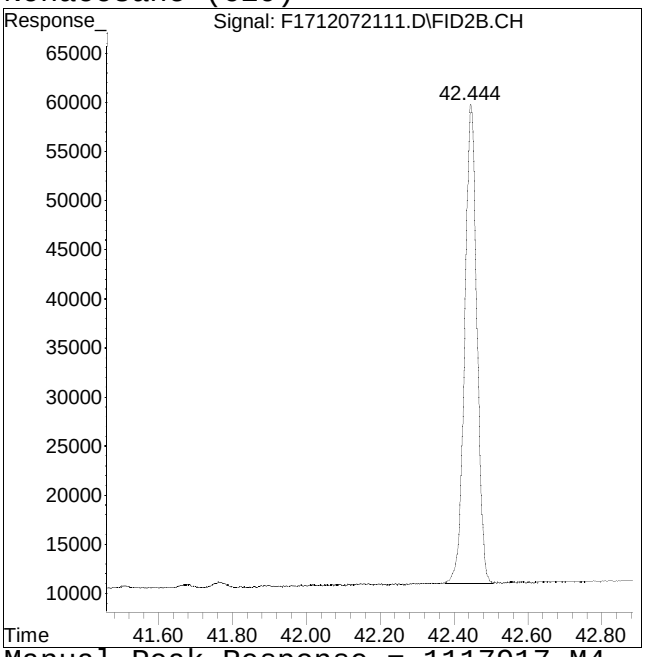
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 1139560



Manual Peak Response = 1117917 M4

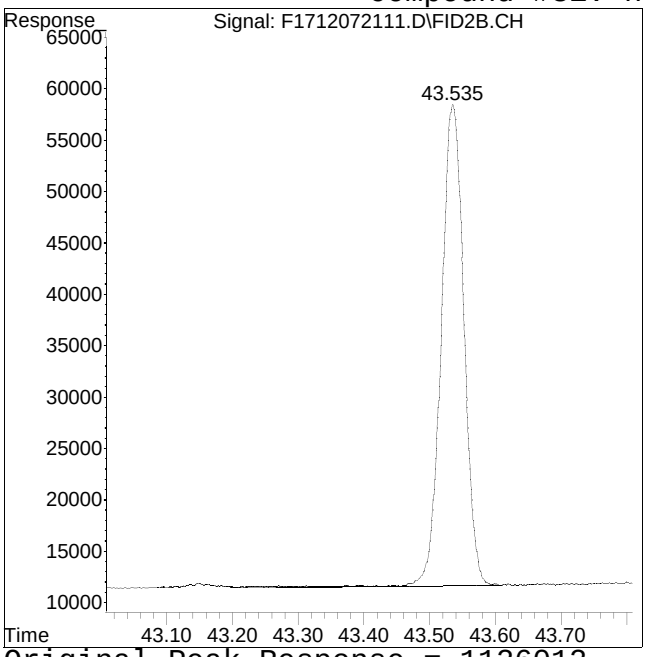
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

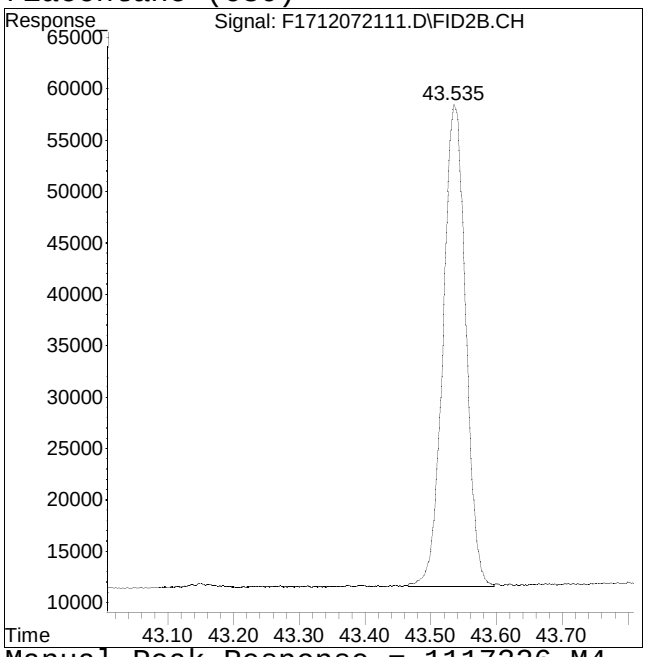
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 1126012



Manual Peak Response = 1117326 M4

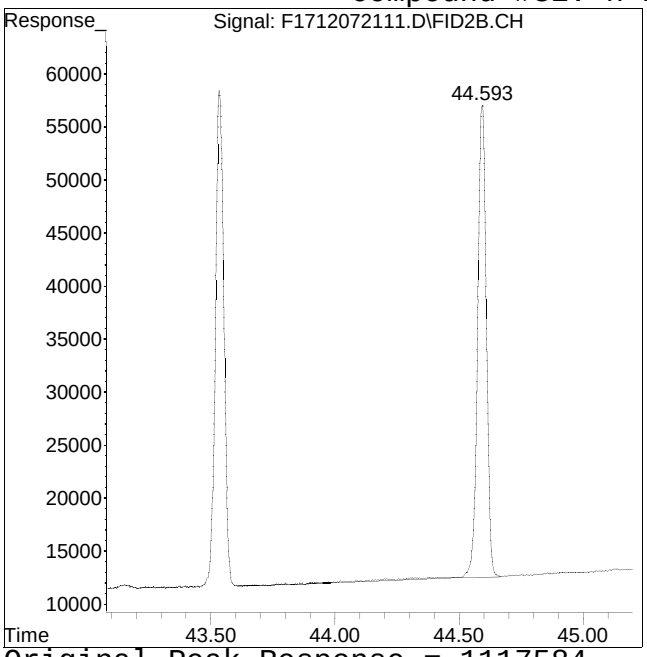
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

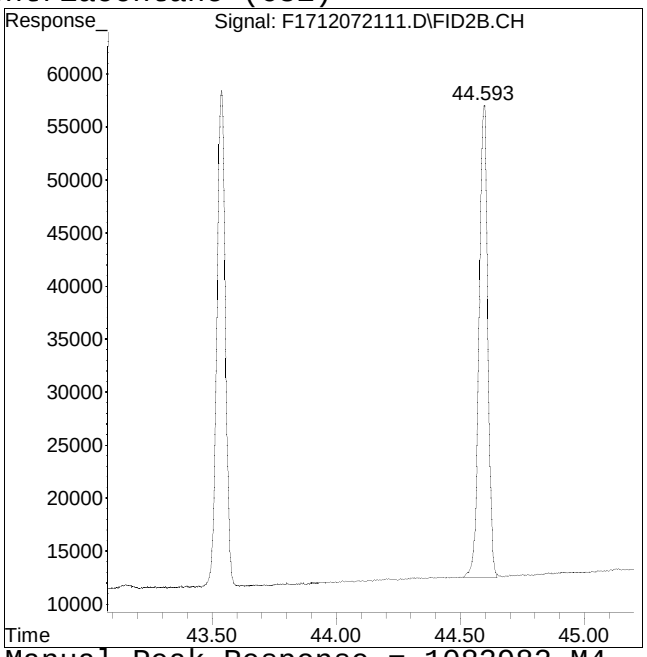
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 1117584



Manual Peak Response = 1083982 M4

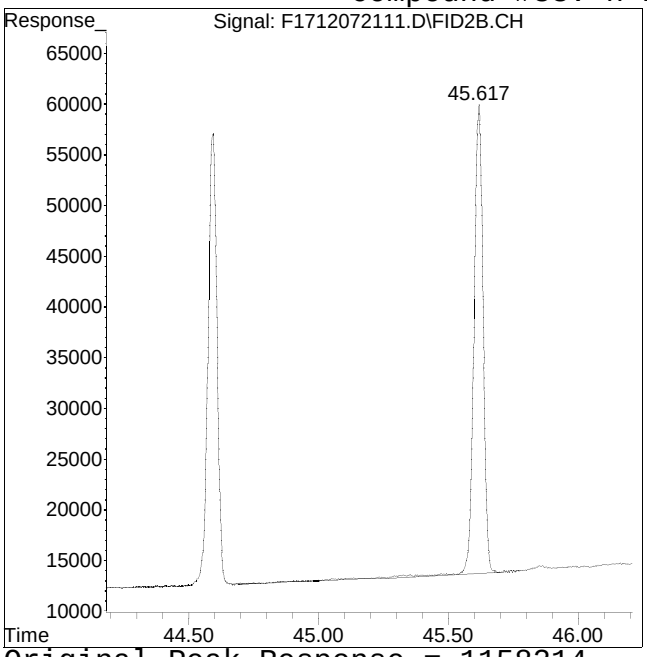
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

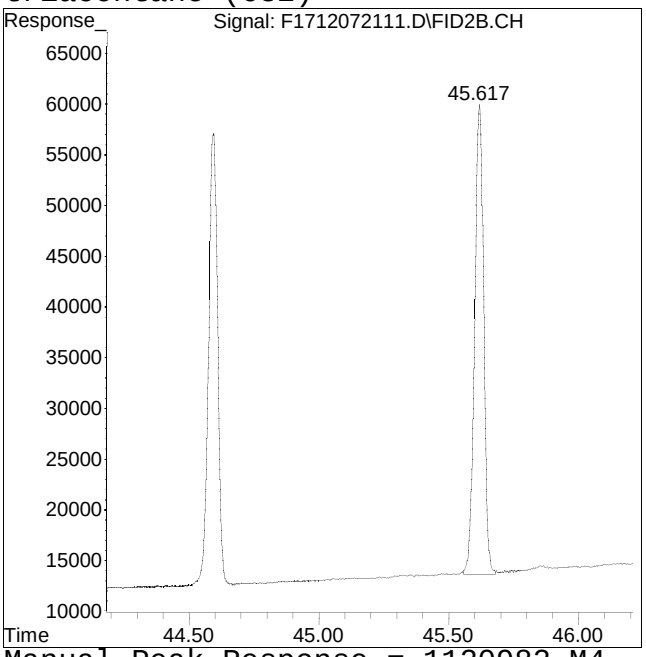
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 1158214



Manual Peak Response = 1120982 M4

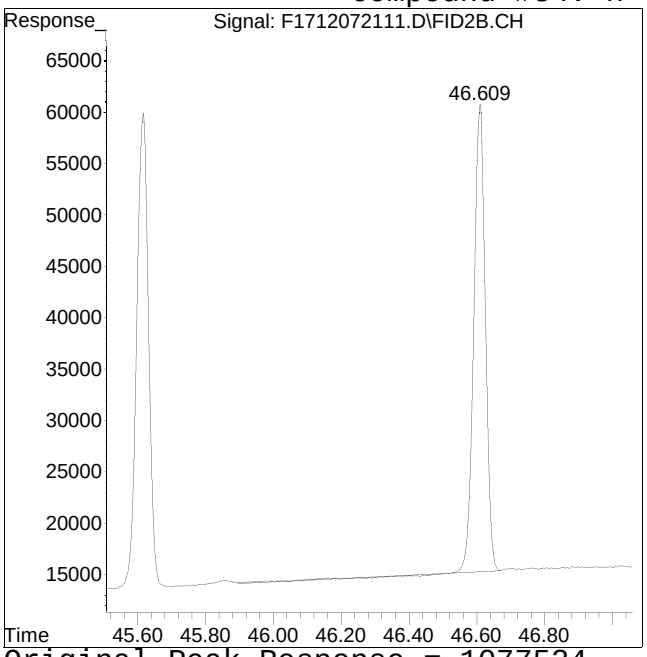
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

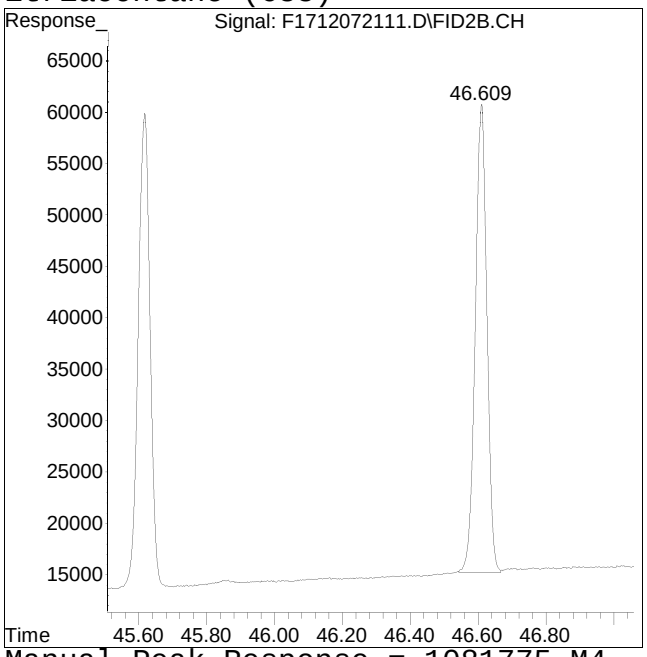
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 1077524



Manual Peak Response = 1081775 M4

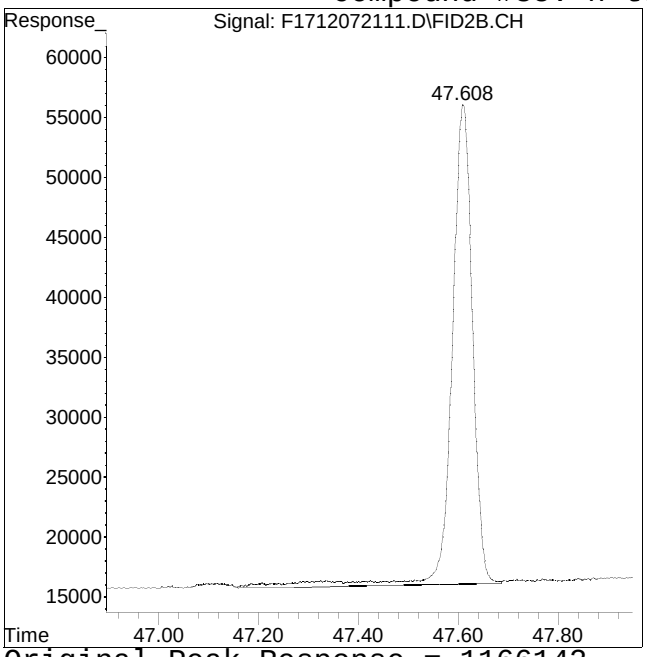
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

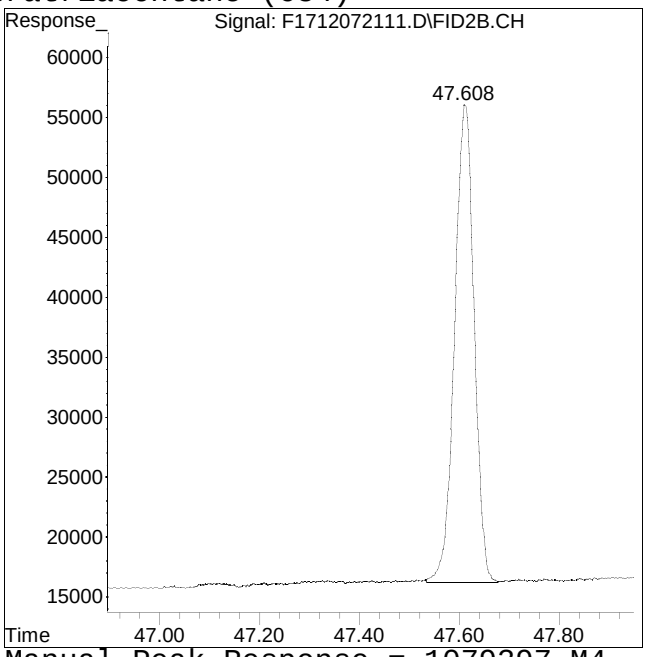
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 1166142



Manual Peak Response = 1079397 M4

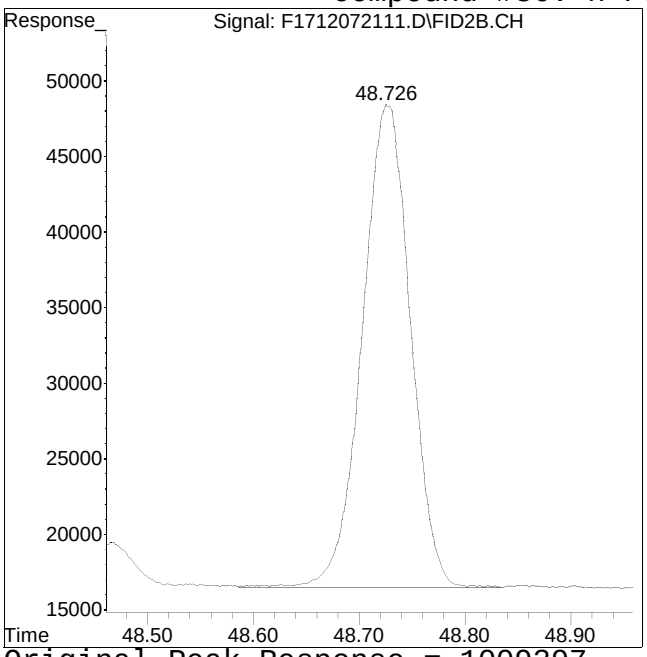
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

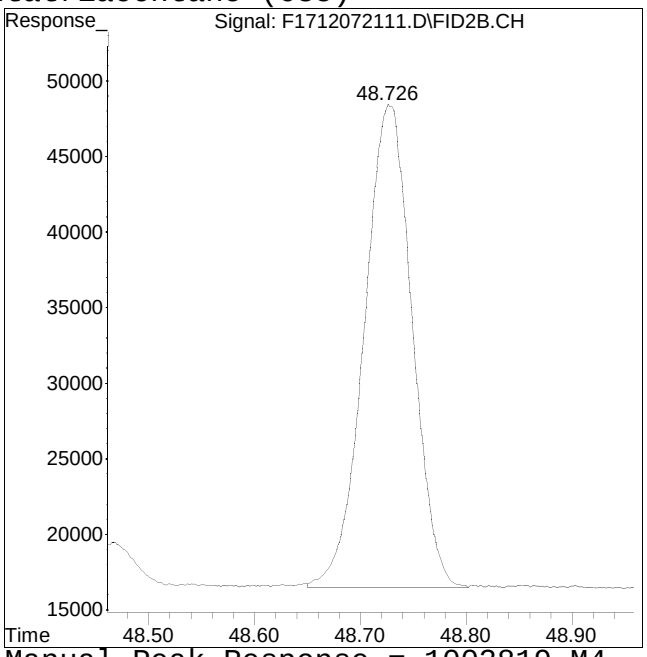
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 1009397



Manual Peak Response = 1003819 M4

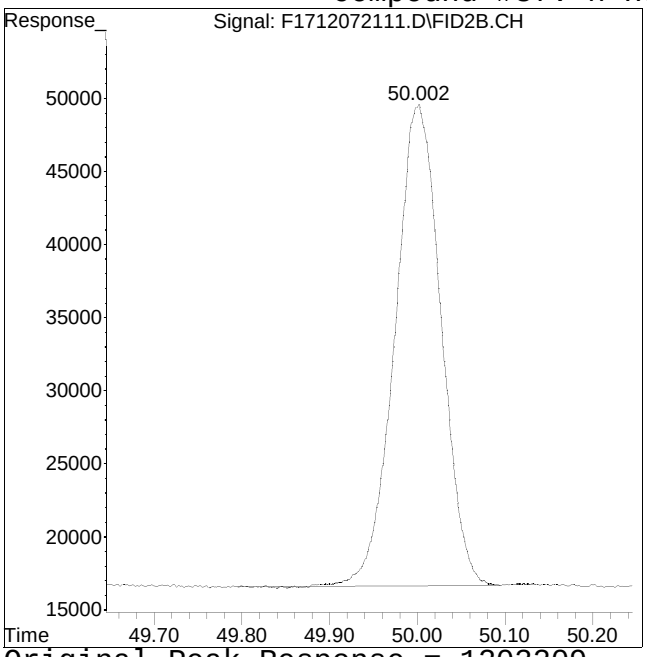
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

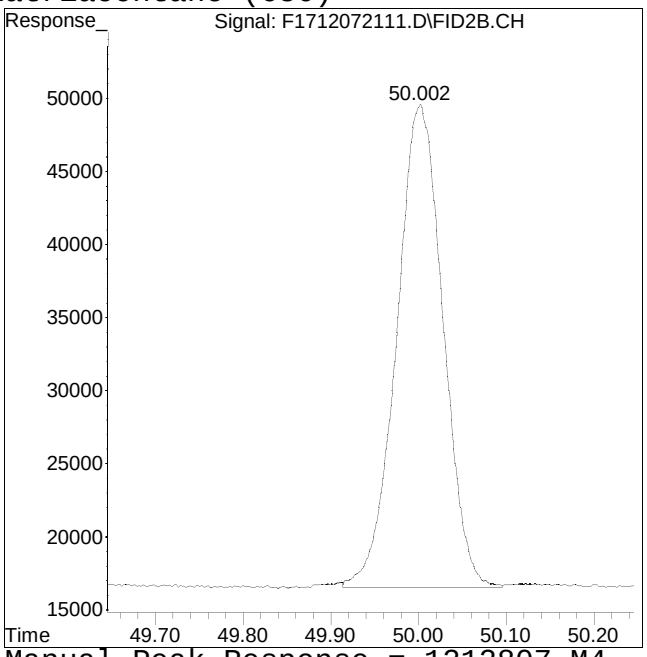
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 1203209



Manual Peak Response = 1212807 M4

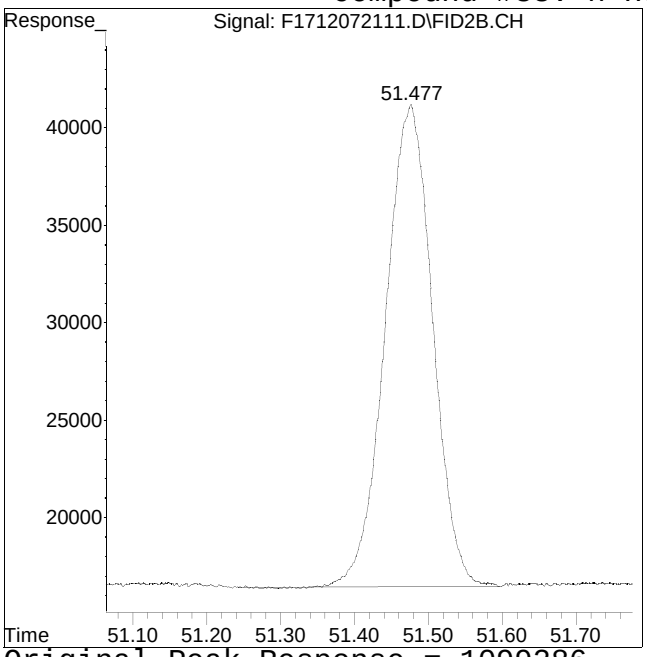
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

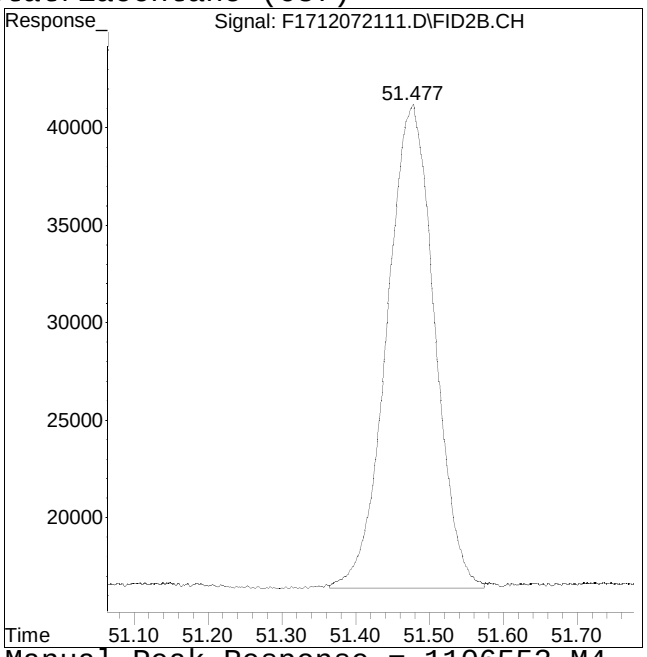
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 1099286



Manual Peak Response = 1106553 M4

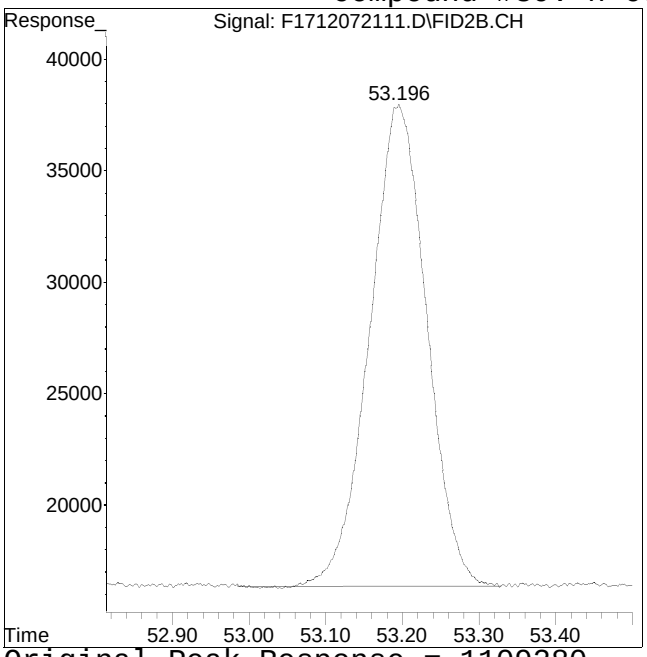
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

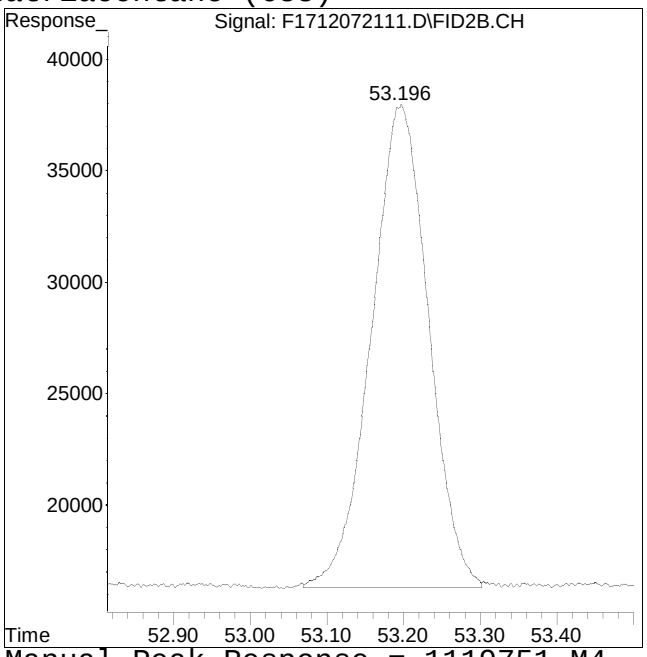
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 1109280



Manual Peak Response = 1119751 M4

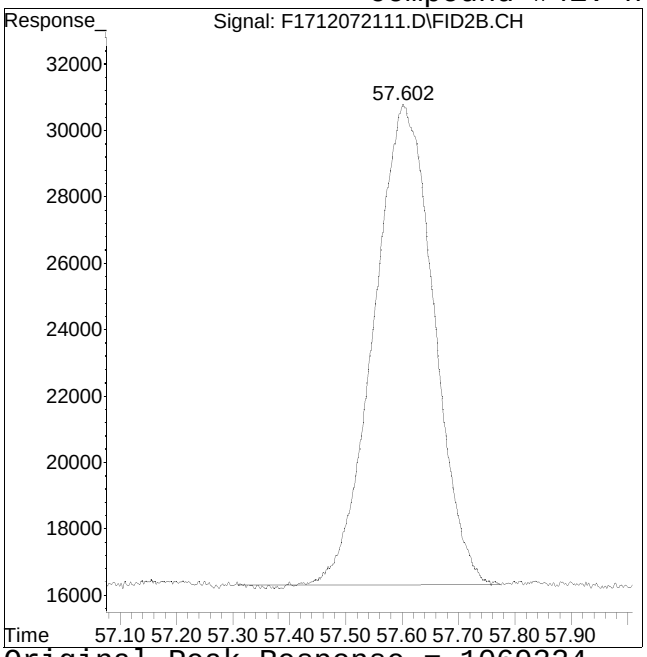
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

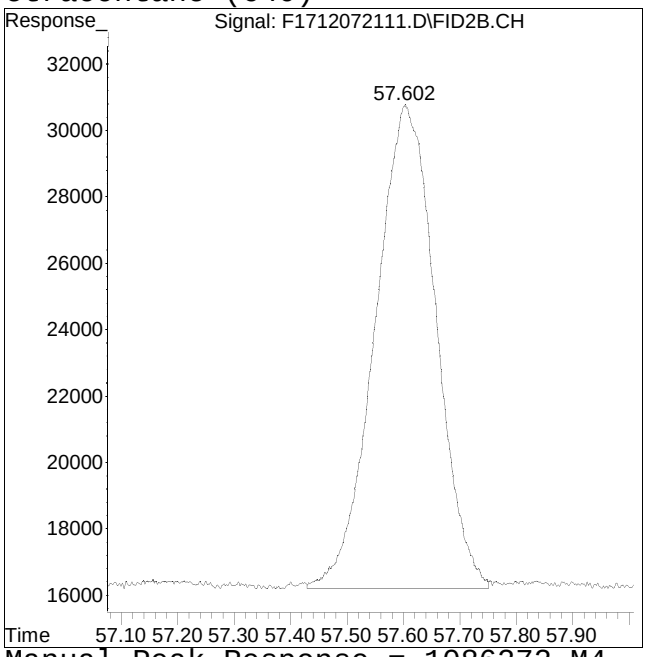
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072111.D
Date Inj'd : 12/7/2021 4:55 pm
Sample : I1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:10 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 1069324



Manual Peak Response = 1086272 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072113.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 6:23 pm
Operator : FID17:WR
Sample : I1712072102R
Misc : WG1581826,FRBD78,10ug/ml
ALS Vial : 57 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 15:49:29 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 15:14:54 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.242	49107048	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.213	10573832	9.243 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 18.49%#	
24) s d50-Tetracosane	35.844	8797548	9.584 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 19.17%#	
Target Compounds			
2) t n-Octane (C8)	5.610	8038912	10.208 ug/mL M4
3) t n-Nonane (C9)	7.815	8266446	10.034 ug/mL M4
4) t n-Decane (C10)	10.299	7938269	9.542 ug/mL M4
5) t n-Undecane (C11)	12.808	8609272	10.287 ug/mL M4
6) t n-Dodecane (C12)	15.230	8599071	9.752 ug/mL M4
7) t n-Tridecane (C13)	17.532	8930850	9.772 ug/mL M4
9) t n-Tetradecane (C14)	19.711	9265702	9.856 ug/mL M4
11) t n-Pentadecane (C15)	21.771	9328915	10.000 ug/mL M4
12) t n-Hexadecane (C16)	23.725	9382999	9.780 ug/mL M4
14) t n-Heptadecane (C17)	25.576	9187964	10.127 ug/mL M4
15) t Pristane	25.685	10055984	9.702 ug/mL M4
16) t n-Octadecane (C18)	27.339	9732506	10.034 ug/mL M4
17) t Phytane	27.499	9179018	9.880 ug/mL M4
18) t n-Nonadecane (C19)	29.021	9771957	10.049 ug/mL M4
20) t n-Eicosane (C20)	30.624	9926609	10.017 ug/mL M4
21) t n-Heneicosane (C21)	32.157	10031599	10.122 ug/mL M4
22) t n-Docosane (C22)	33.627	10069577	10.021 ug/mL M4
23) t n-Tricosane (C23)	35.035	10164050	10.041 ug/mL M4
25) t n-Tetracosane (C24)	36.389	10170992	10.260 ug/mL M4
26) t n-Pentacosane (C25)	37.691	10044781	10.115 ug/mL M4
27) t n-Hexacosane (C26)	38.944	10353754	10.155 ug/mL M4
28) t n-Heptacosane (C27)	40.152	10414974	10.386 ug/mL M4
29) t n-Octacosane (C28)	41.320	10725304	10.358 ug/mL M4
30) t n-Nonacosane (C29)	42.444	10683527	10.481 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072113.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 6:23 pm
Operator : FID17:WR
Sample : I1712072102R
Misc : WG1581826,FRBD78,10ug/ml
ALS Vial : 57 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 15:49:29 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 15:14:54 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

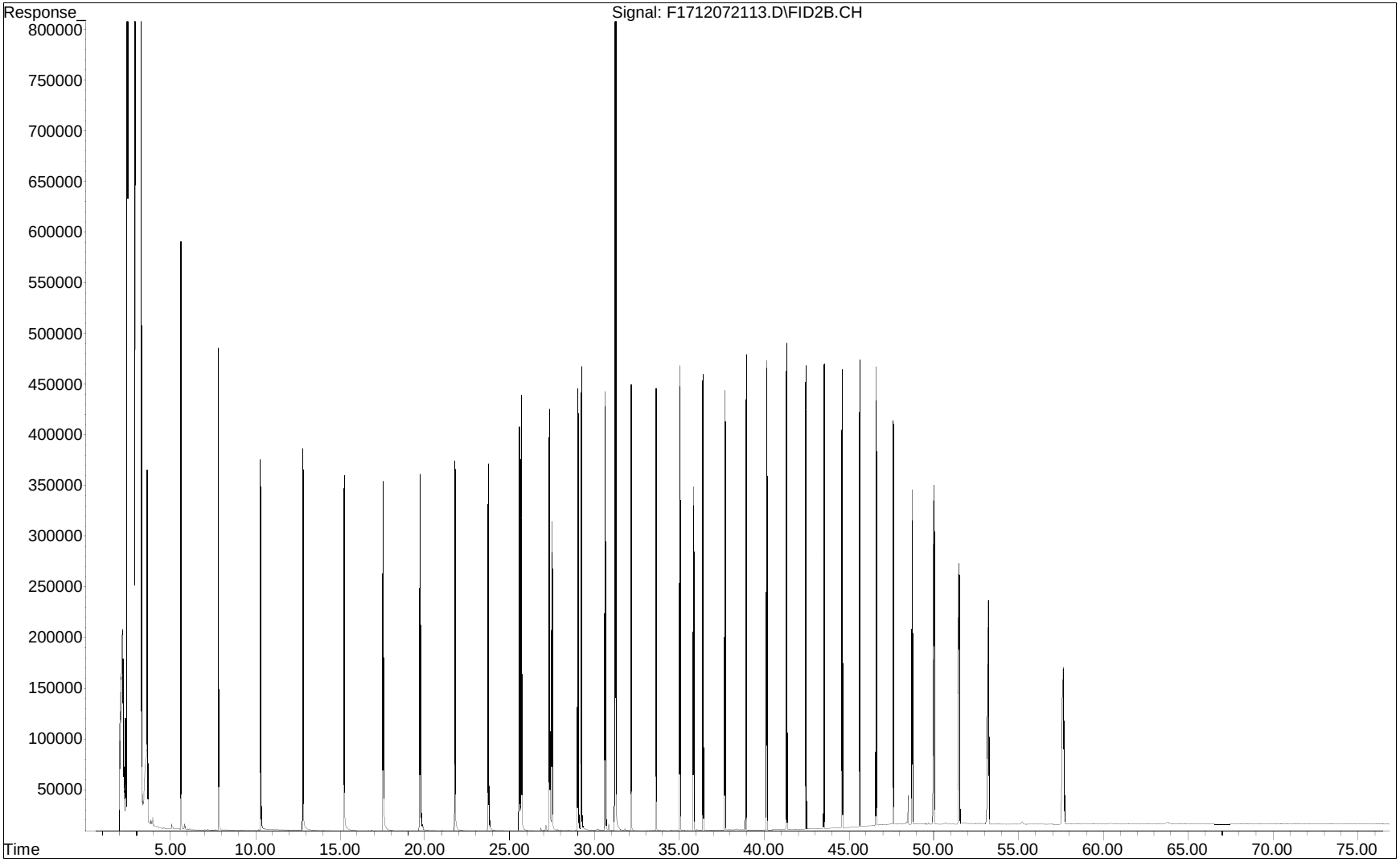
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.538	10764481	10.563 ug/mL M4
32) t	n-Hentriacontane (C31)	44.596	10434823	10.570 ug/mL M4
33) t	n-Dotriacontane (C32)	45.617	10997862	10.718 ug/mL M4
34) t	n-Tritriacontane (C33)	46.613	10737953	10.876 ug/mL M4
35) t	n-tetratriacontane (C34)	47.613	10702283	10.885 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.733	10038545	10.559 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.013	12146305	11.223 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.487	11098082	11.194 ug/mL M4
39) t	n-Octatriacontane (C38)	53.207	11263935	11.119 ug/mL M4
41) t	n-Tetracontane (C40)	57.624	11177207	11.186 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072113.D
Operator : FID17:WR
Acquired : 07 Dec 2021 6:23 pm using AcqMethod FID17A.M
Sample Name: I1712072102R
Instrument: FID17
Misc Info : WG1581826,FRBD78,10ug/ml
Vial Number: 57
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M

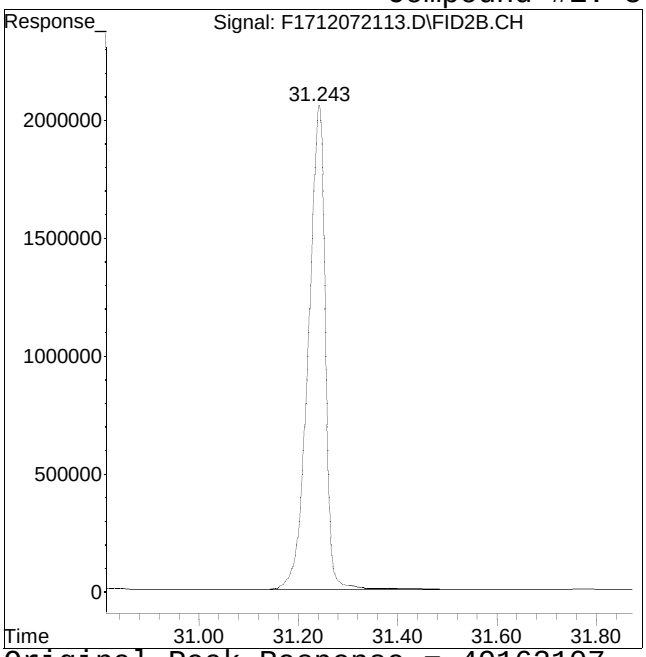


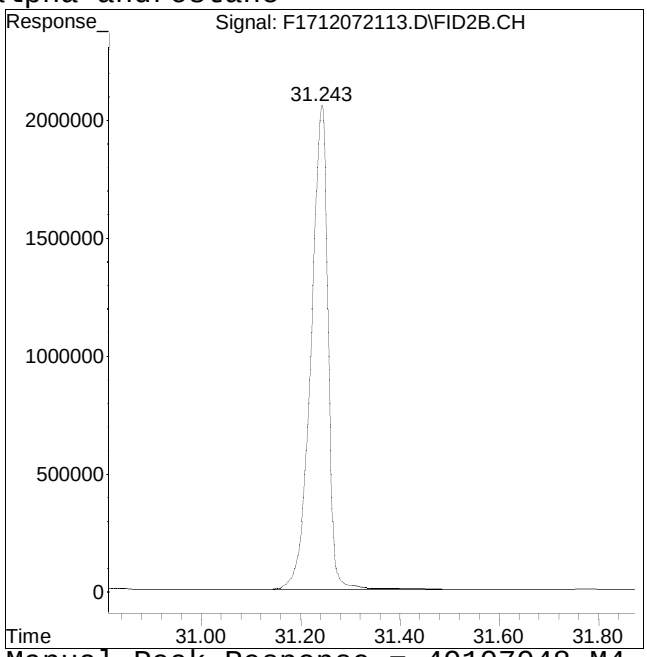
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #1: 5-alpha-androstane





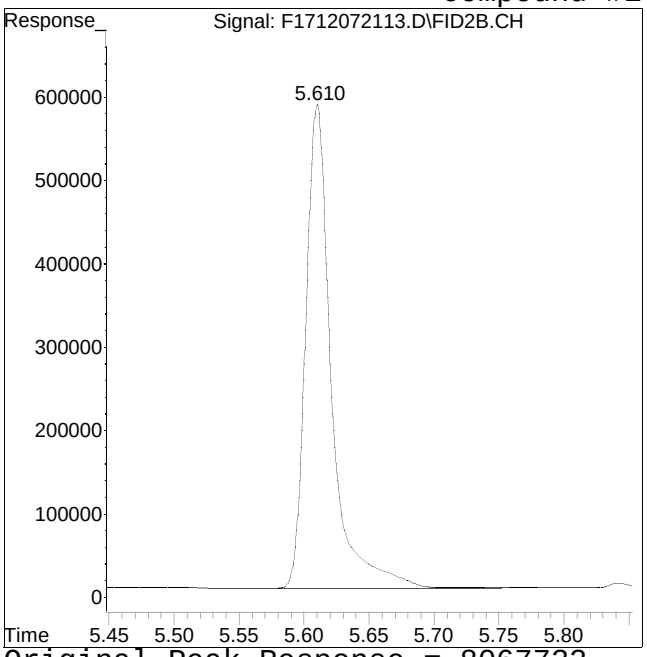
Original Peak Response = 49162107 Manual Peak Response = 49107048 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

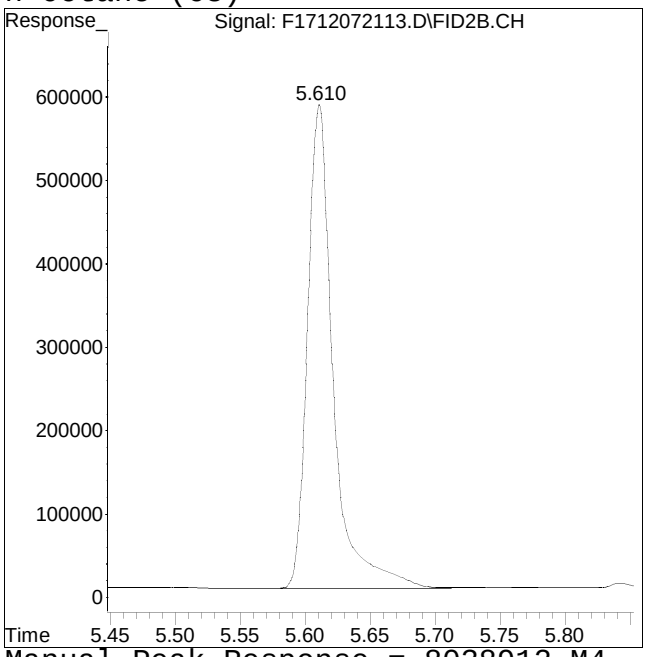
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #2: n-Octane (C8)



Original Peak Response = 8067732



Manual Peak Response = 8038912 M4

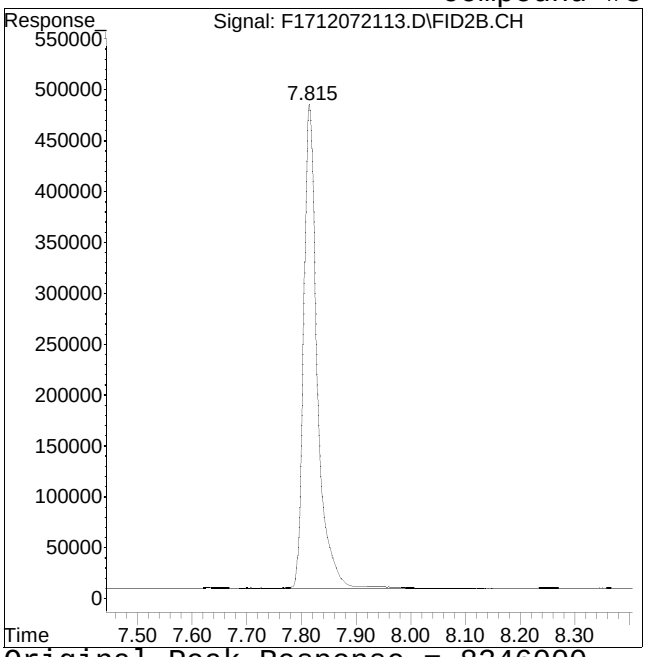
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

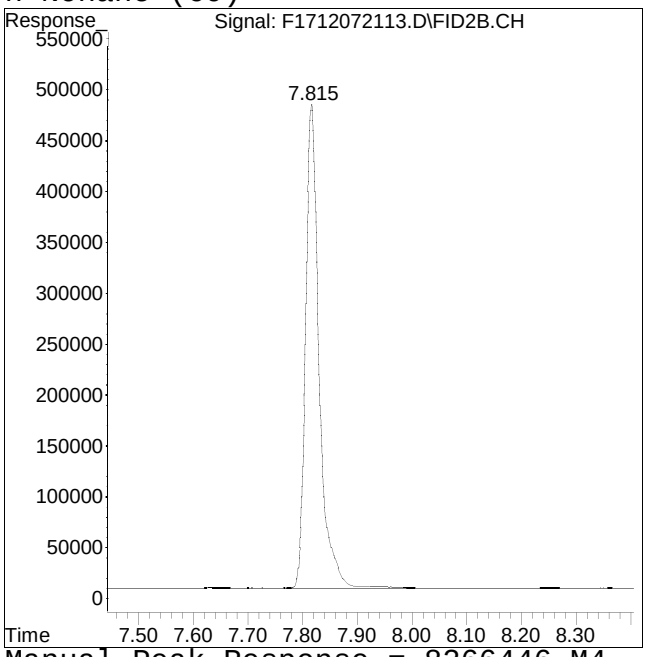
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 8346000



Manual Peak Response = 8266446 M4

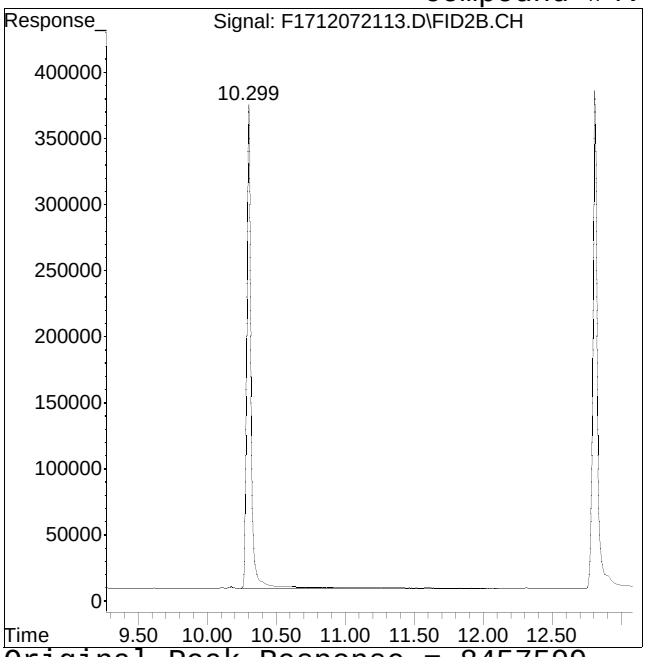
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

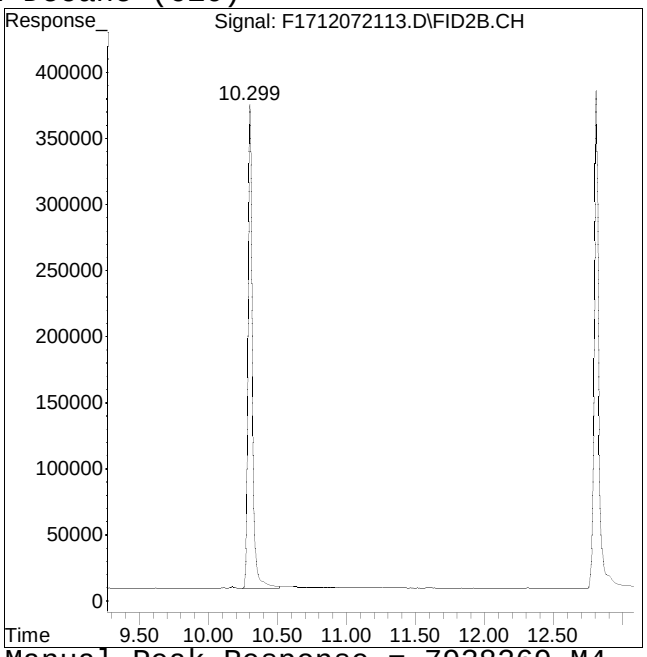
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #4: n-Decane (C10)



Original Peak Response = 8457599



Manual Peak Response = 7938269 M4

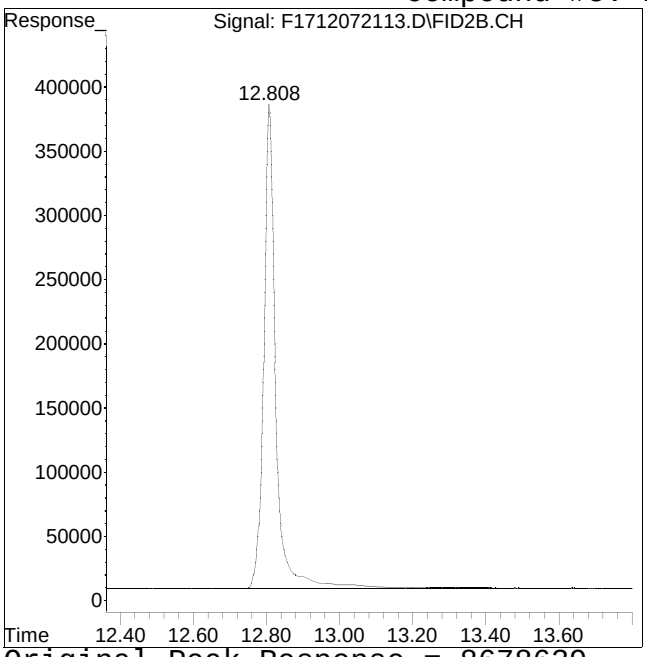
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

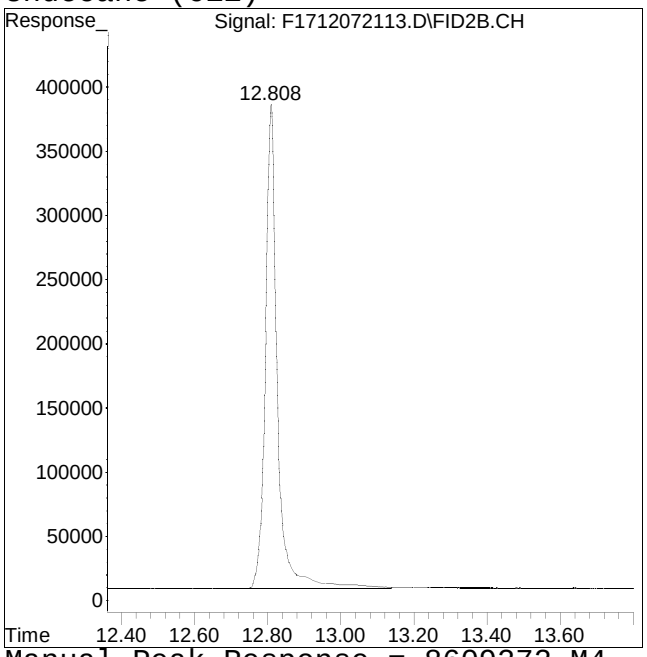
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 8678639



Manual Peak Response = 8609272 M4

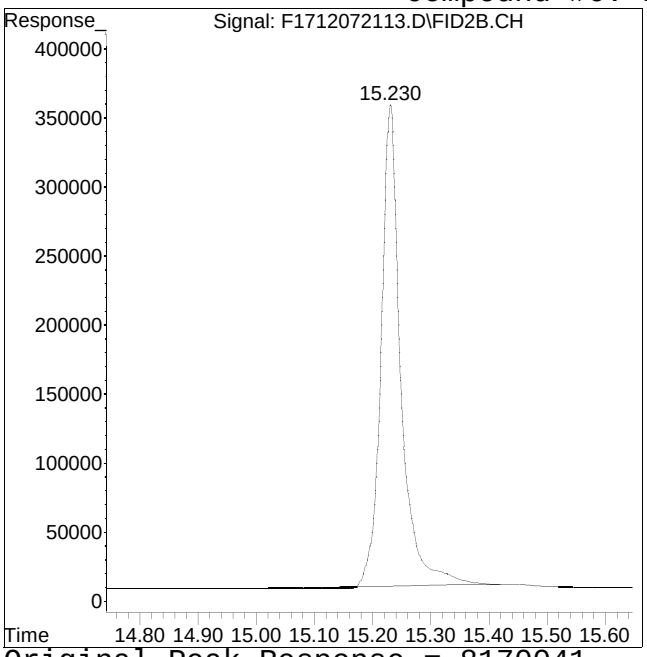
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

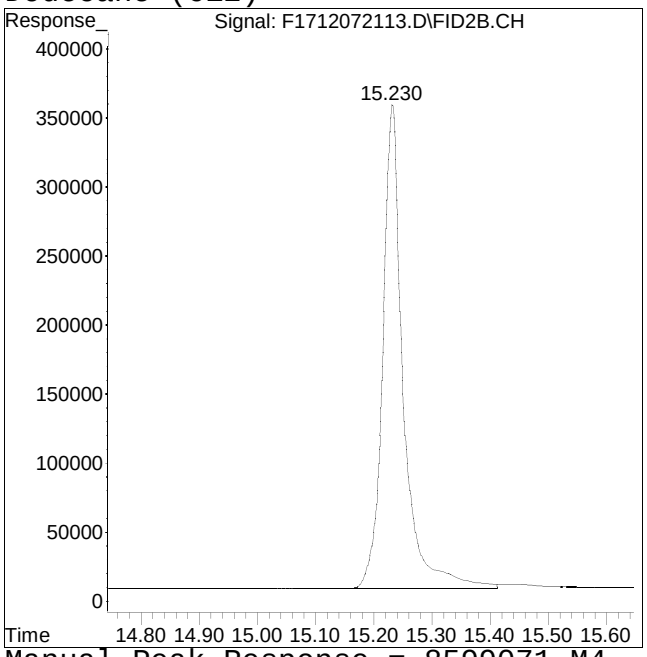
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 8170041



Manual Peak Response = 8599071 M4

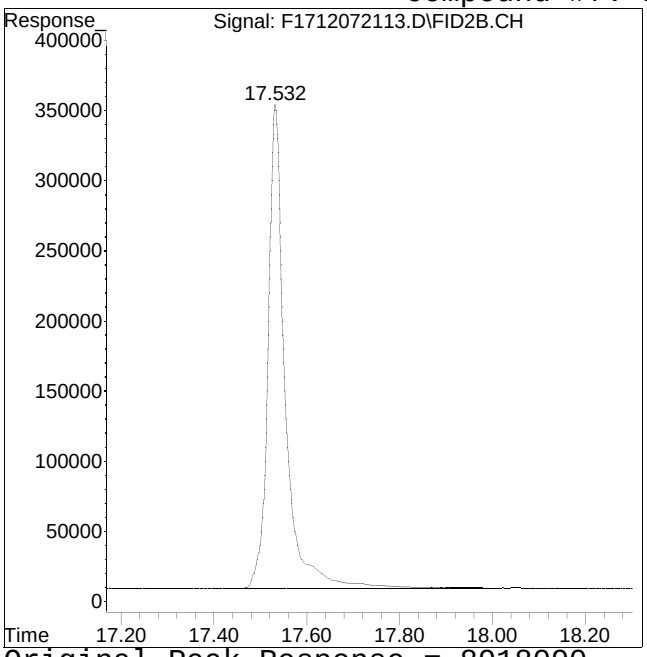
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

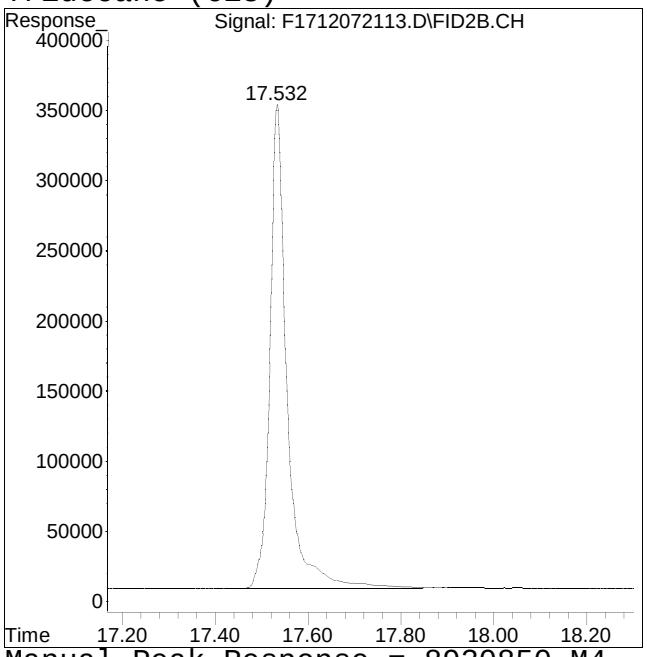
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 8918090



Manual Peak Response = 8930850 M4

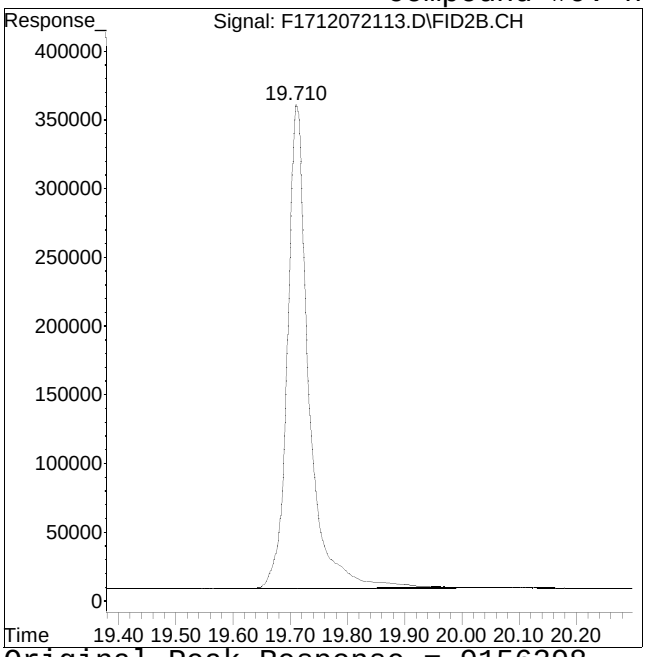
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

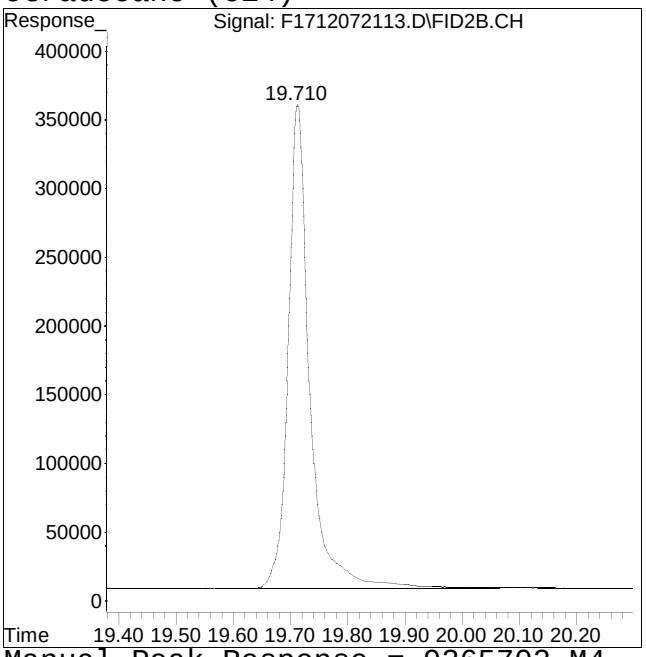
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 9156398



Manual Peak Response = 9265702 M4

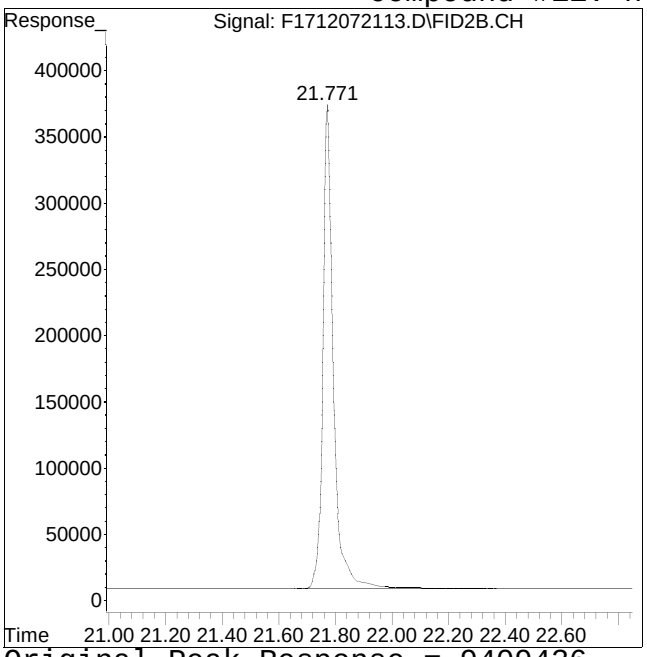
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

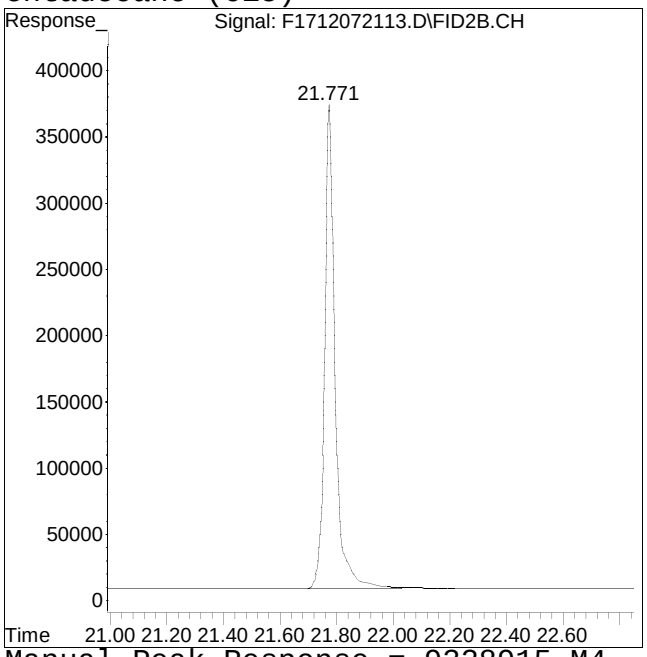
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 9409436



Manual Peak Response = 9328915 M4

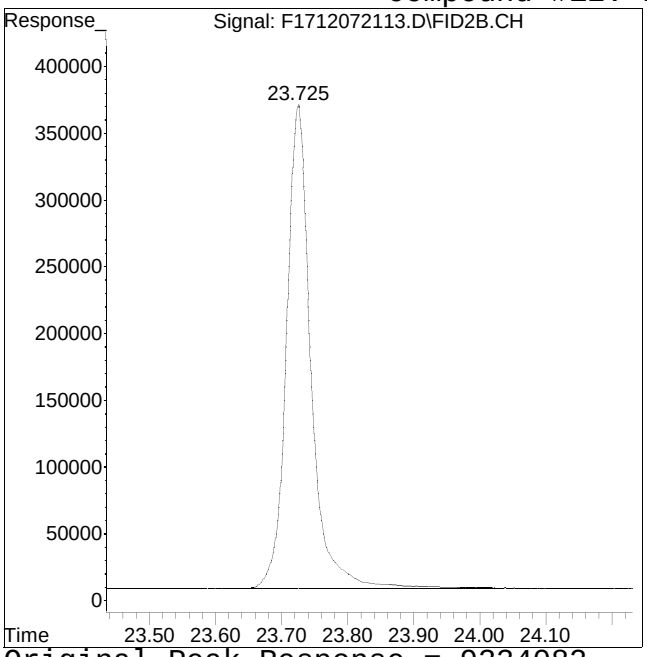
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

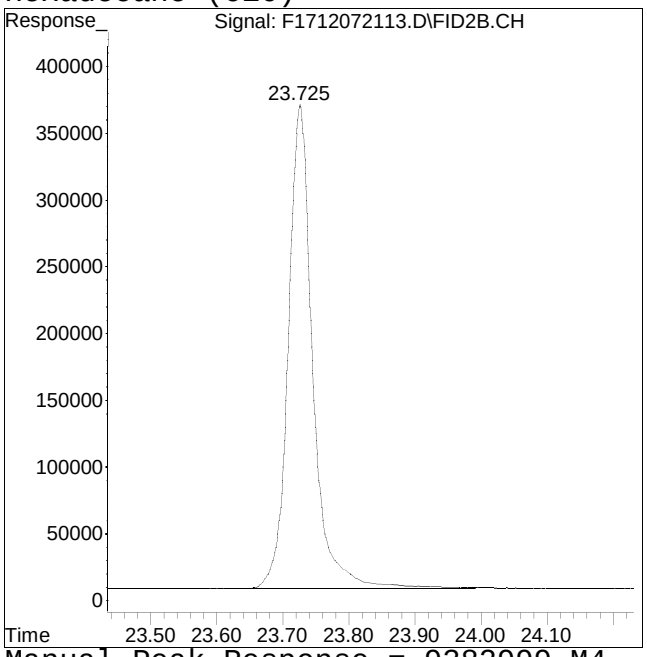
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 9334082



Manual Peak Response = 9382999 M4

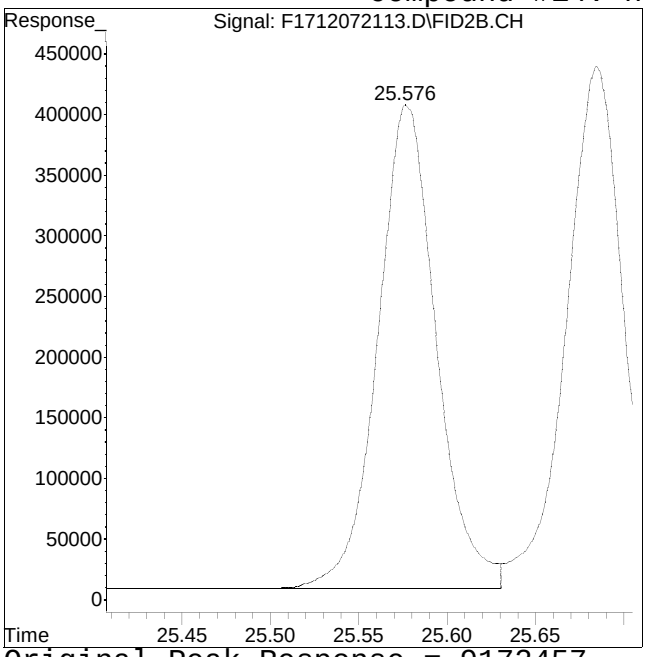
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

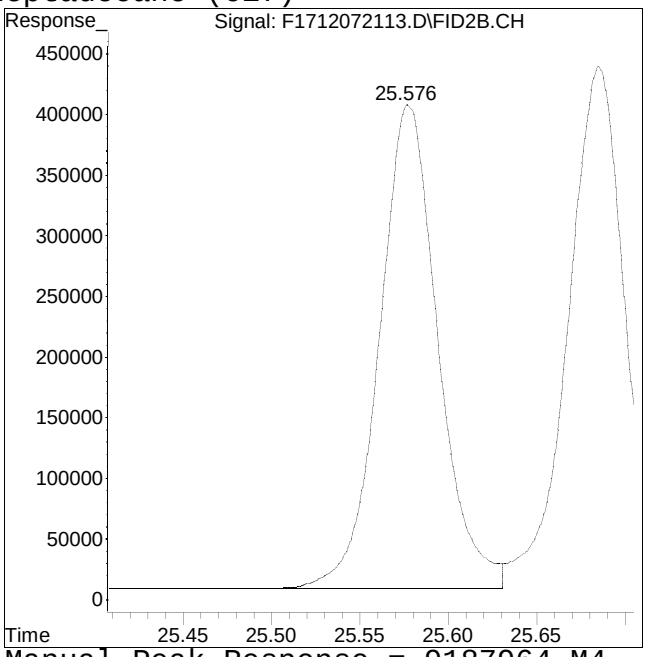
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 9172457



Manual Peak Response = 9187964 M4

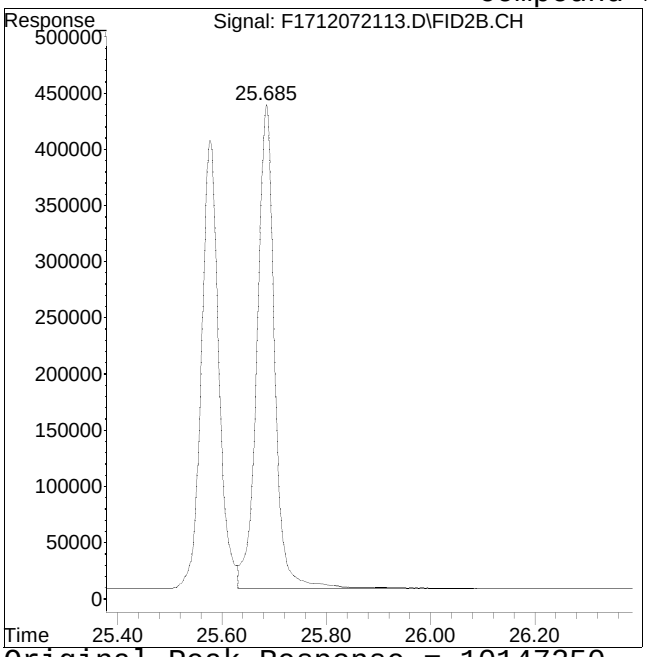
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

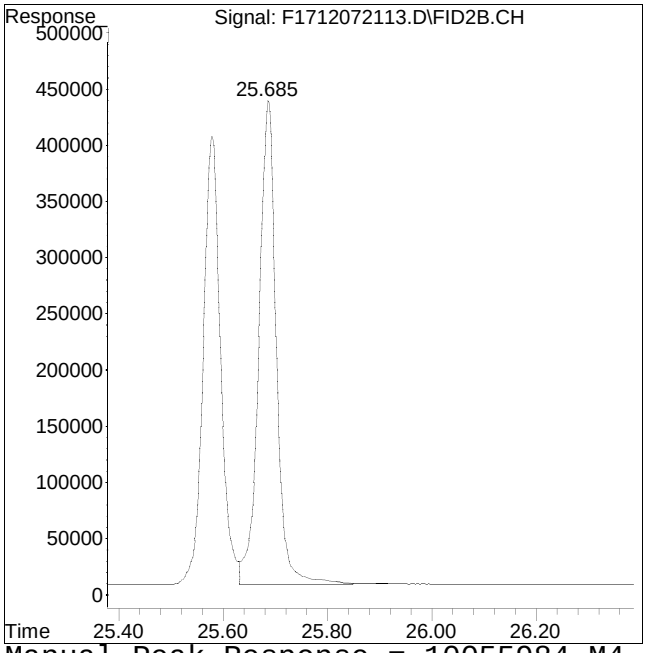
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #15: Pristane



Original Peak Response = 10147250



Manual Peak Response = 10055984 M4

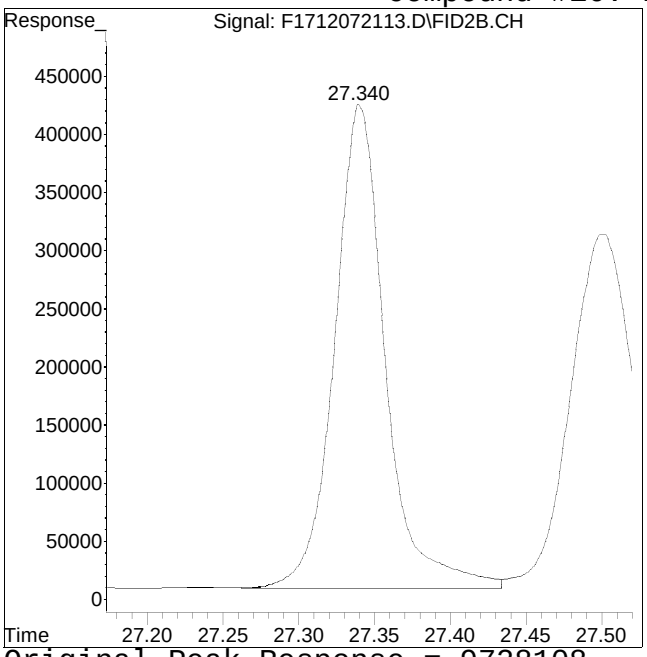
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

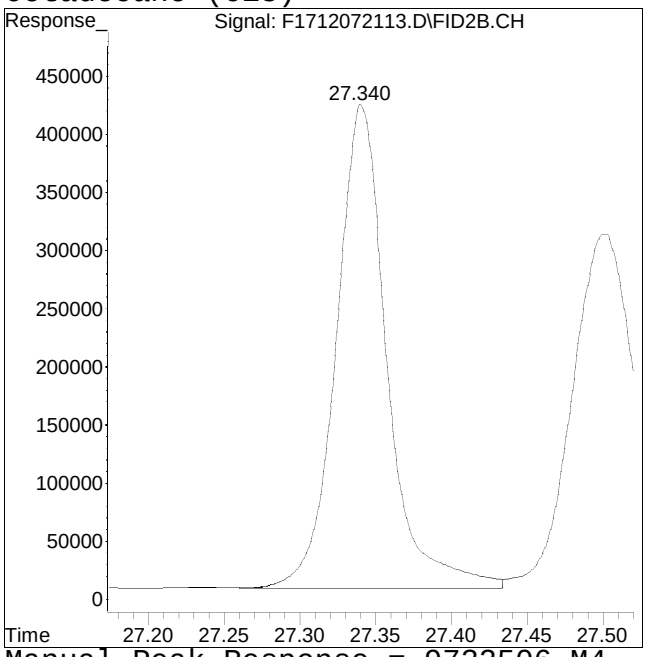
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 9728108



Manual Peak Response = 9732506 M4

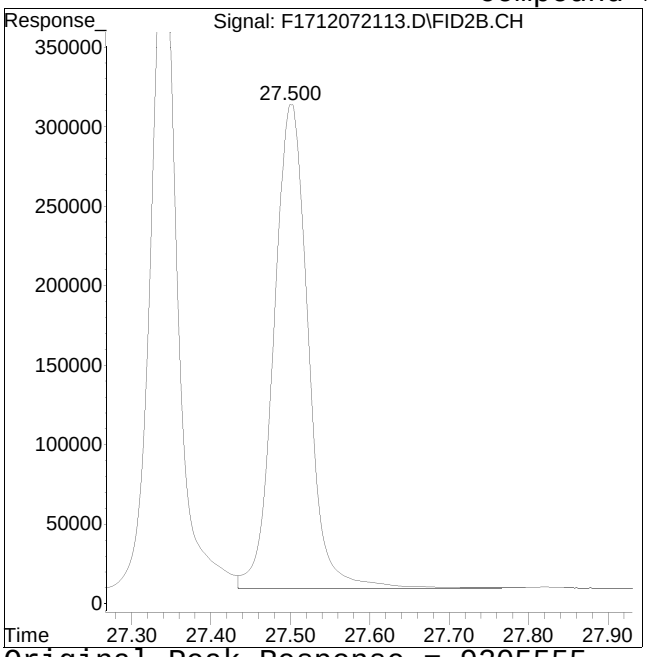
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

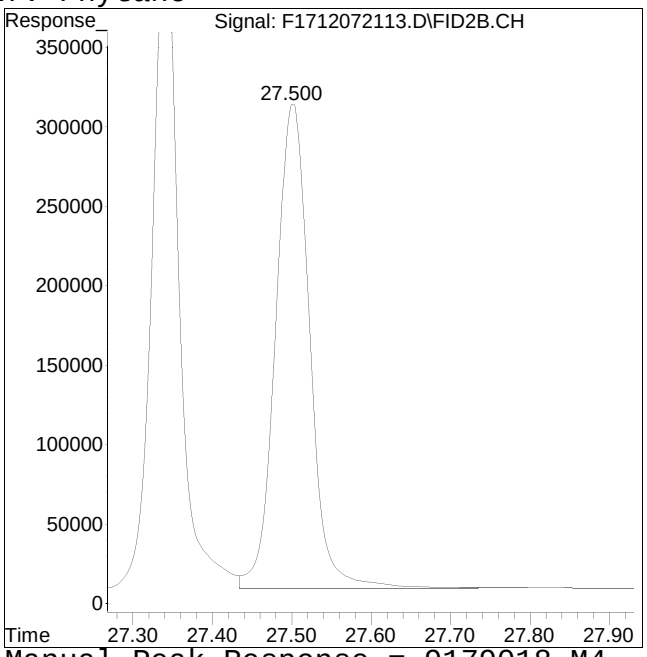
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #17: Phytane



Original Peak Response = 9205555



Manual Peak Response = 9179018 M4

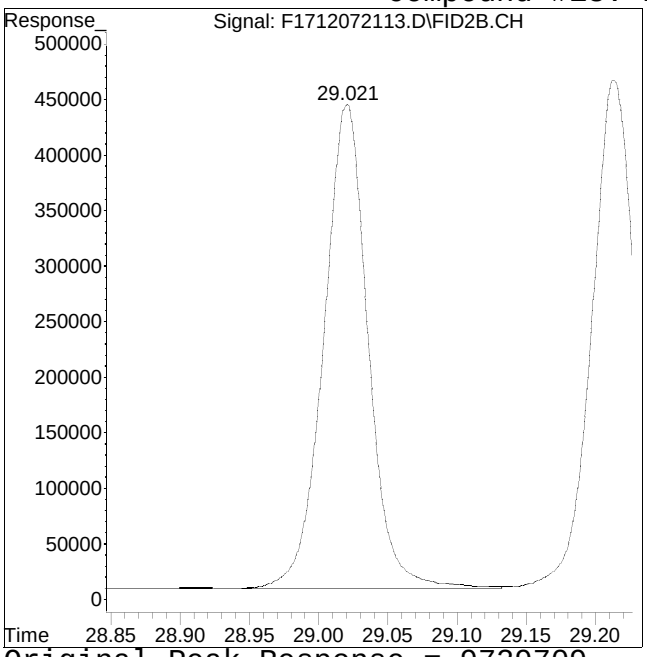
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

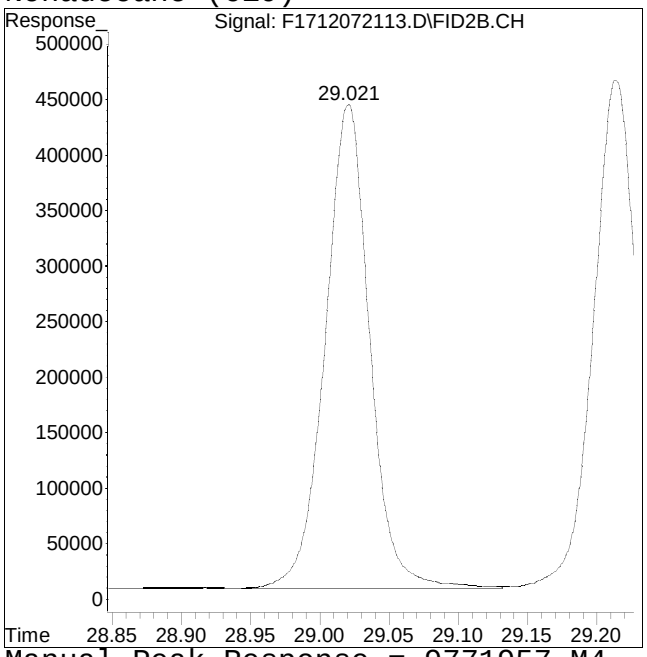
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 9729709



Manual Peak Response = 9771957 M4

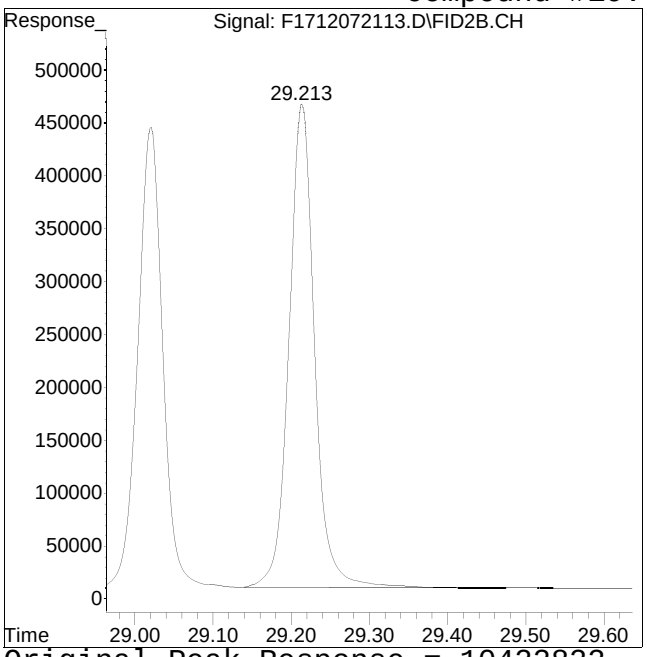
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

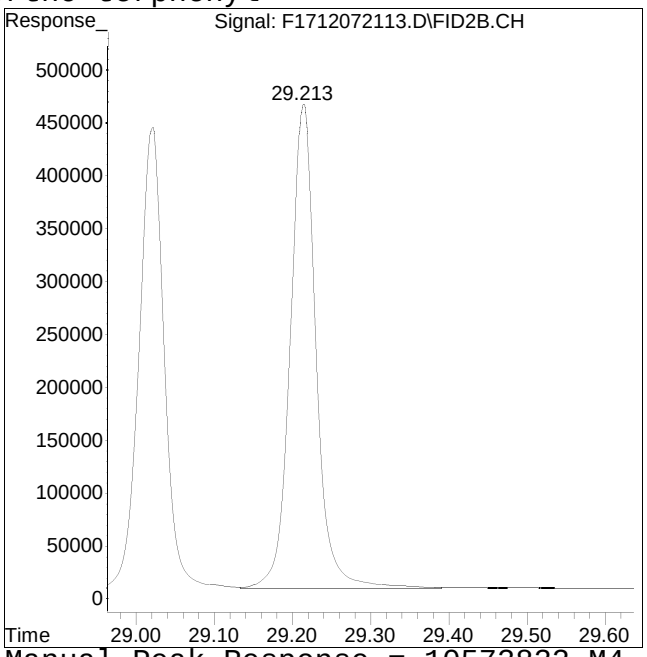
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #19: ortho-terphenyl



Original Peak Response = 10422822



Manual Peak Response = 10573832 M4

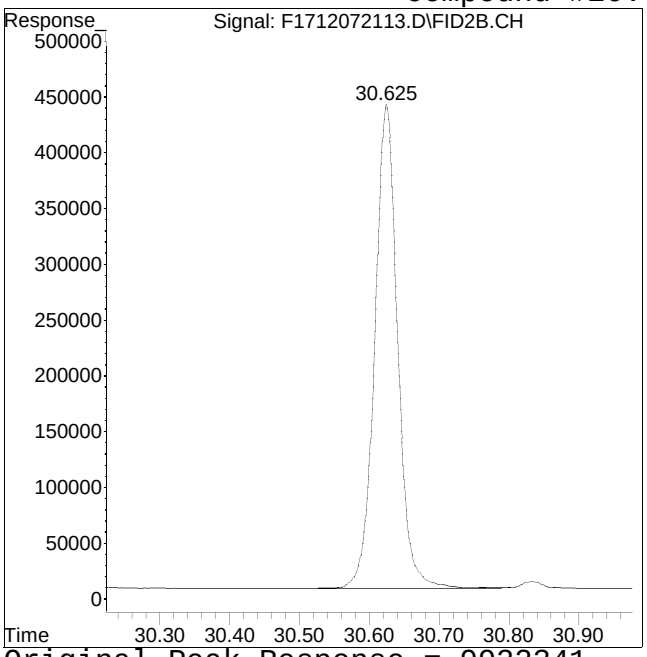
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

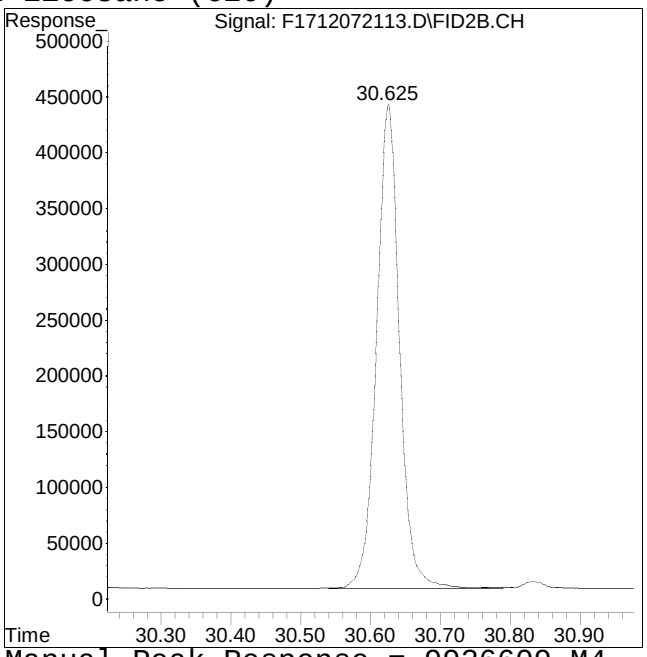
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 9922341



Manual Peak Response = 9926609 M4

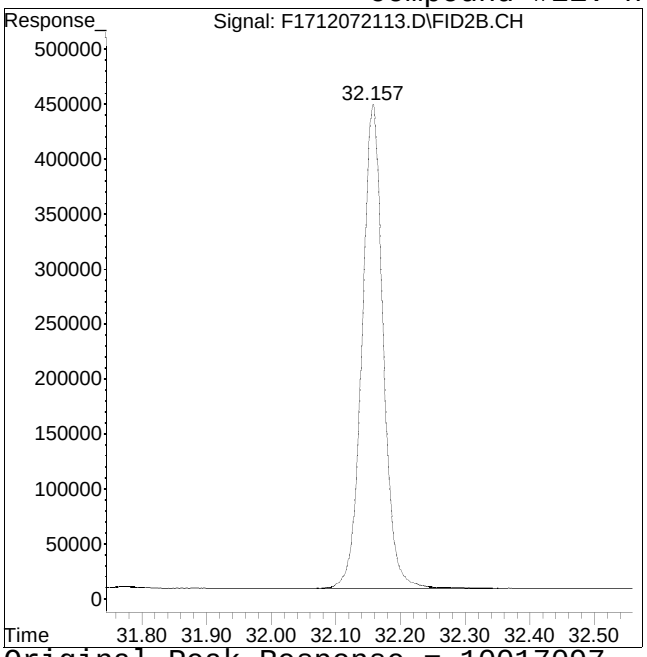
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

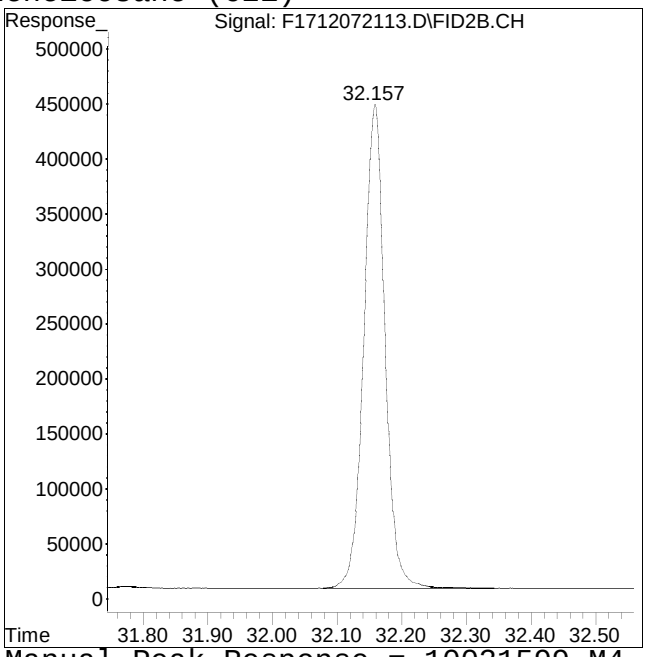
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 10017097



Manual Peak Response = 10031599 M4

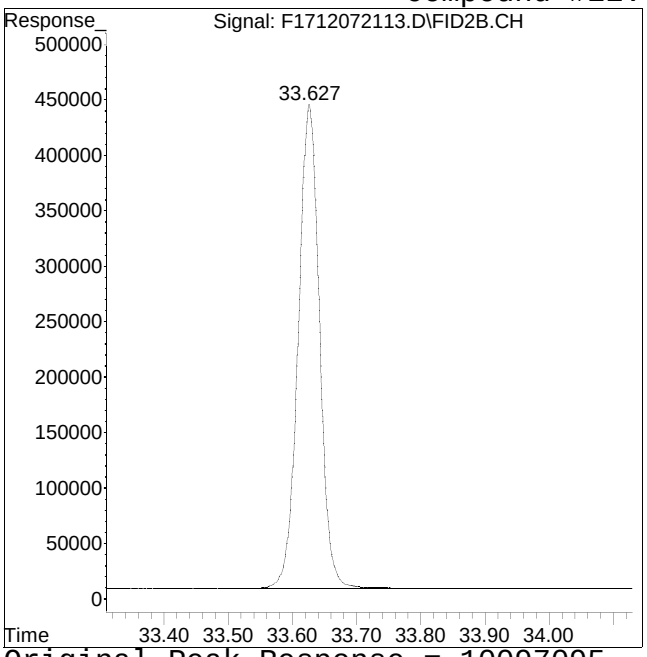
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

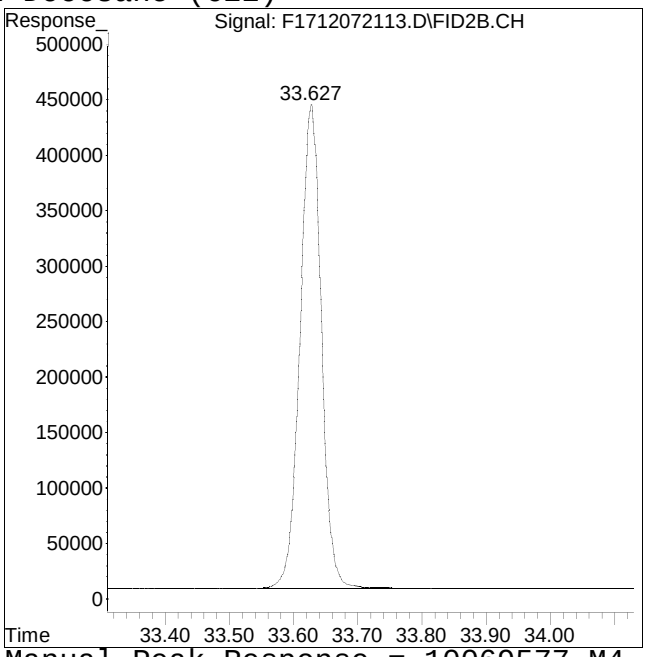
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 10097095



Manual Peak Response = 10069577 M4

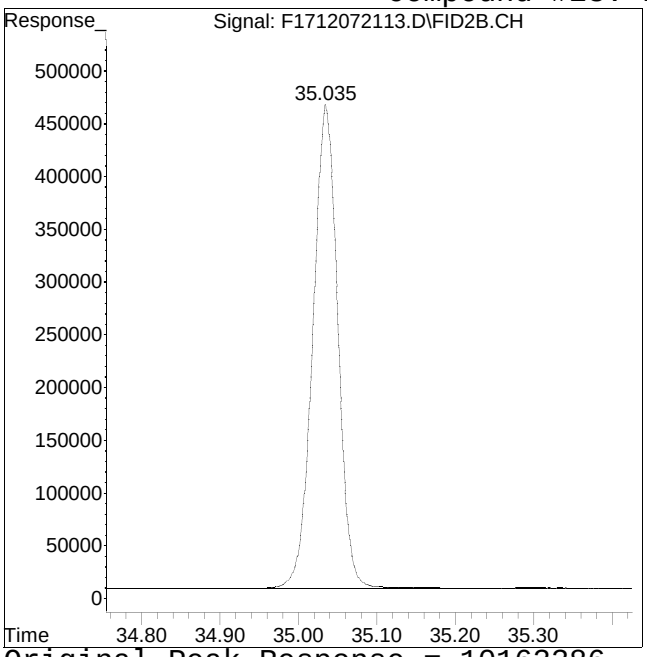
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

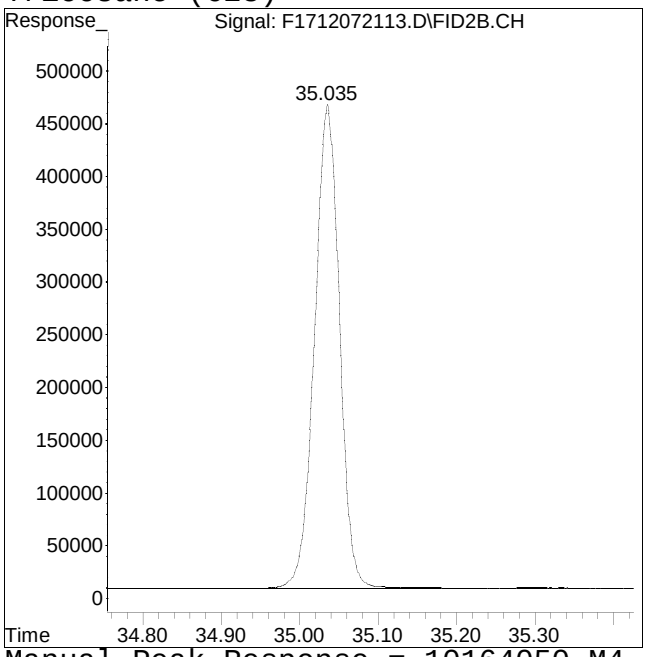
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 10163386



Manual Peak Response = 10164050 M4

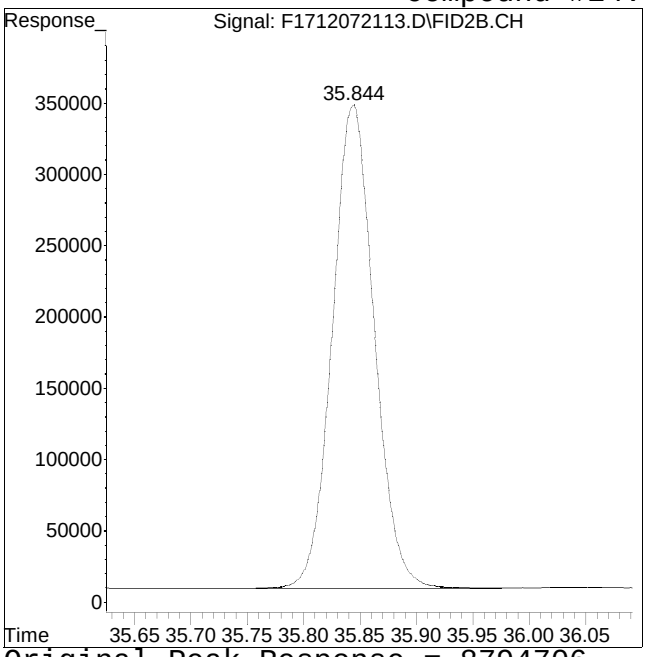
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

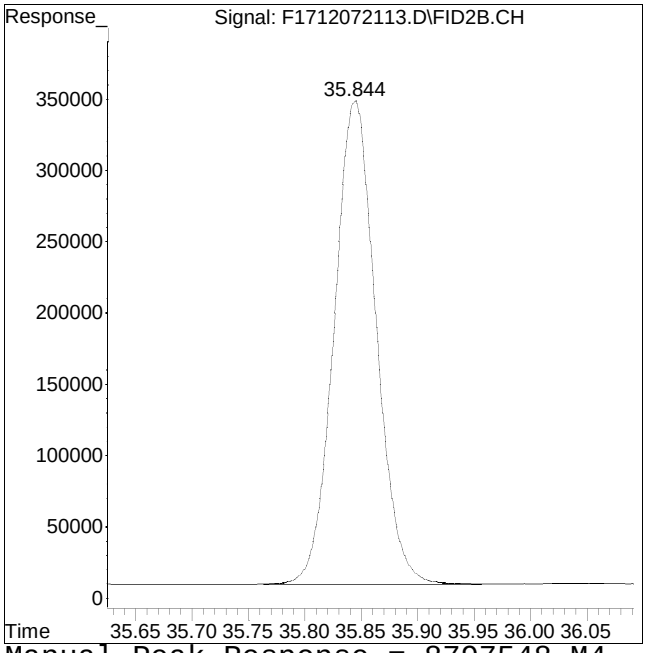
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #24: d50-Tetracosane



Original Peak Response = 8794706



Manual Peak Response = 8797548 M4

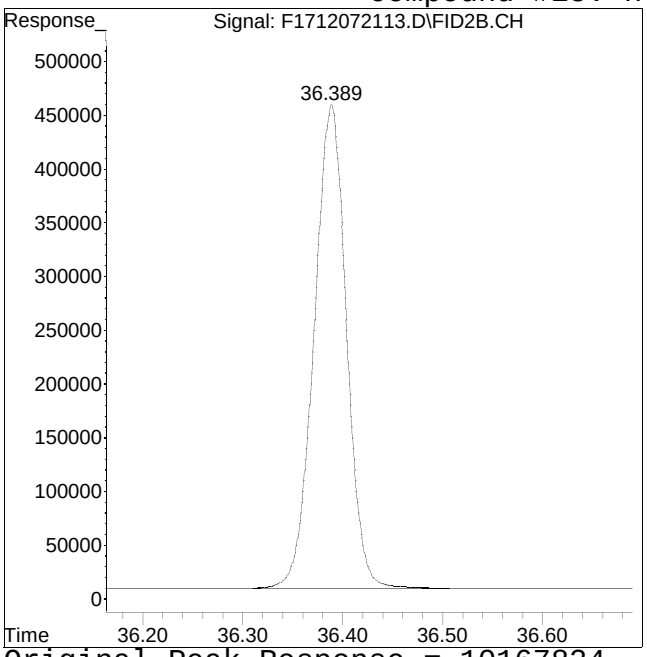
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

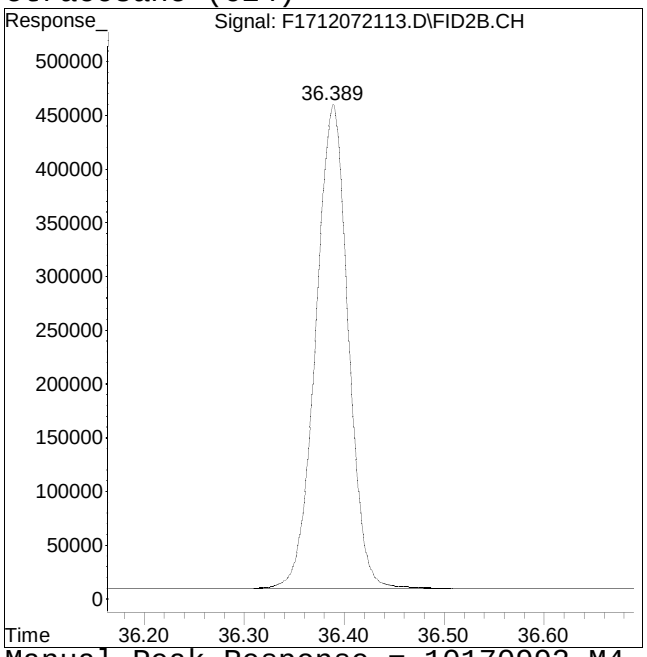
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 10167824



Manual Peak Response = 10170992 M4

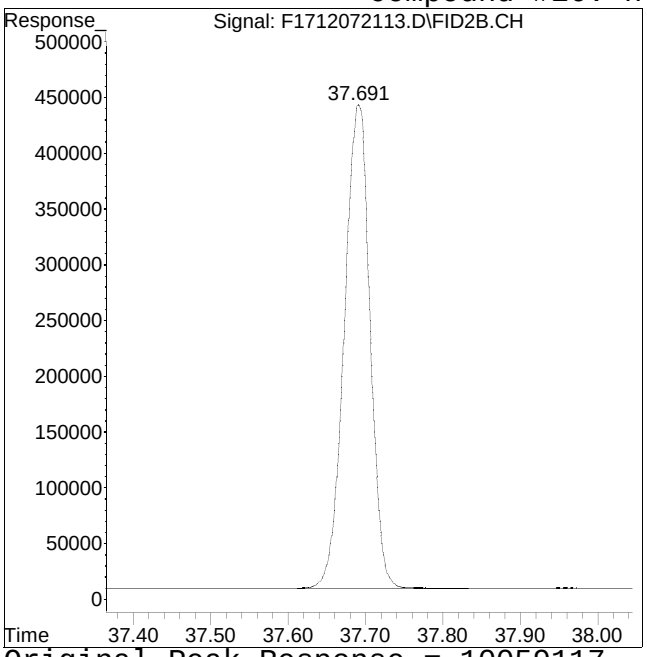
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

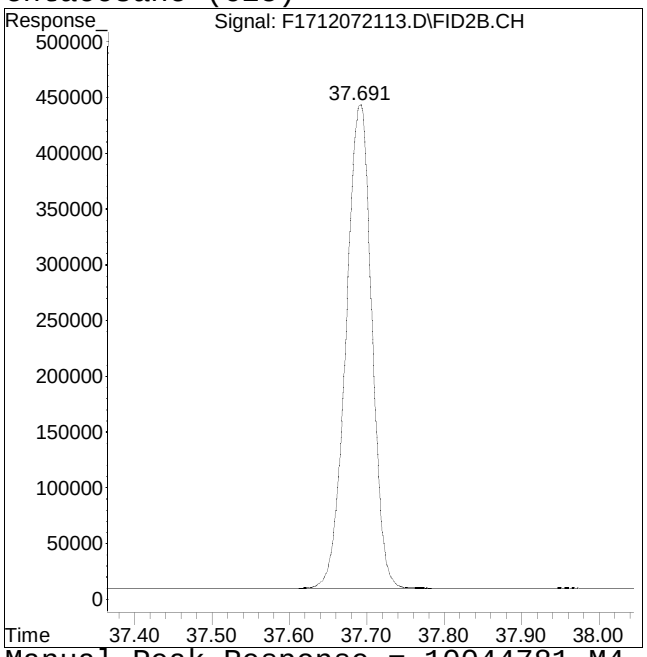
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 10059117



Manual Peak Response = 10044781 M4

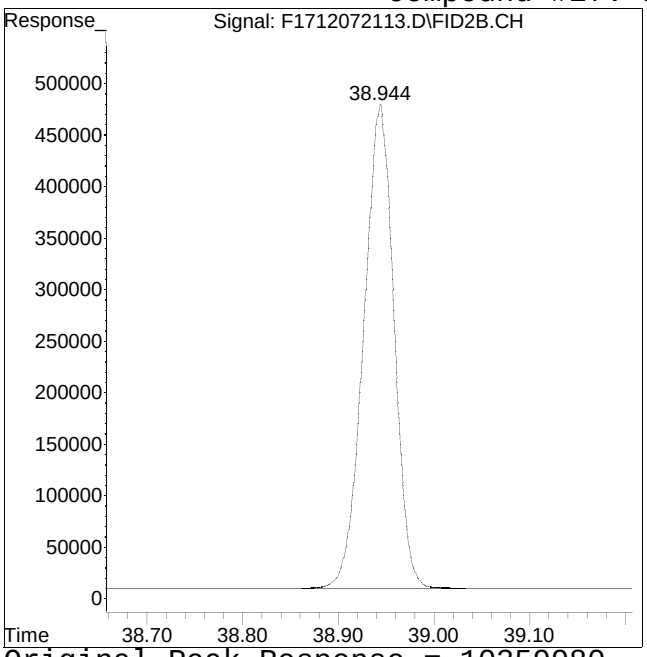
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

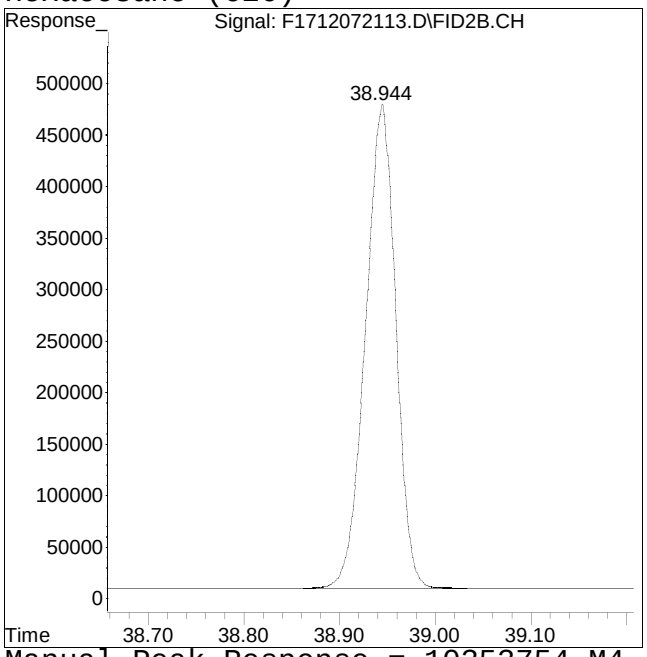
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 10359980



Manual Peak Response = 10353754 M4

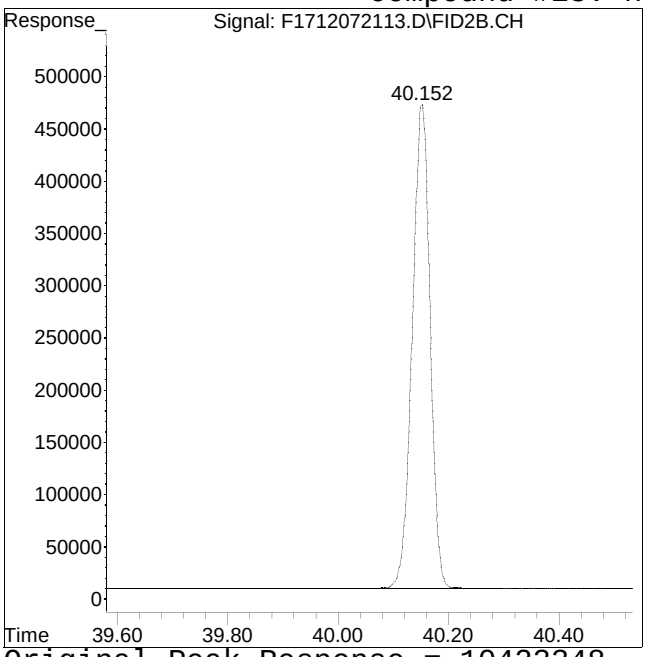
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

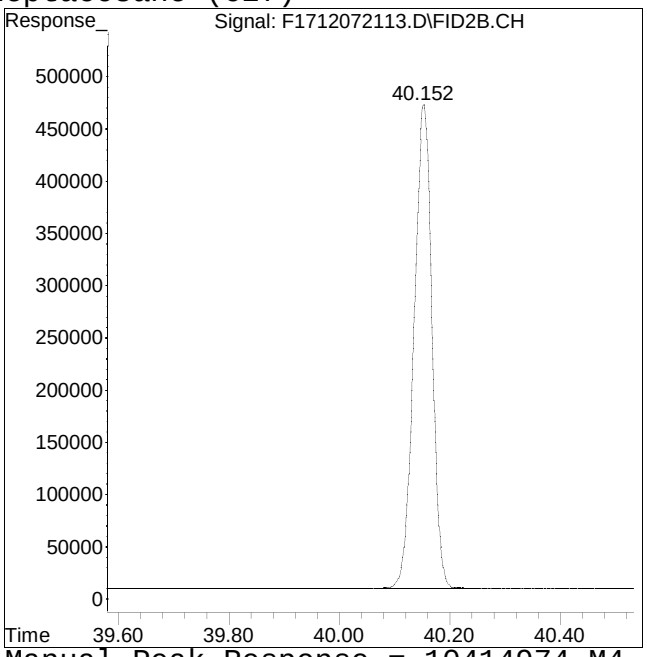
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 10423348



Manual Peak Response = 10414974 M4

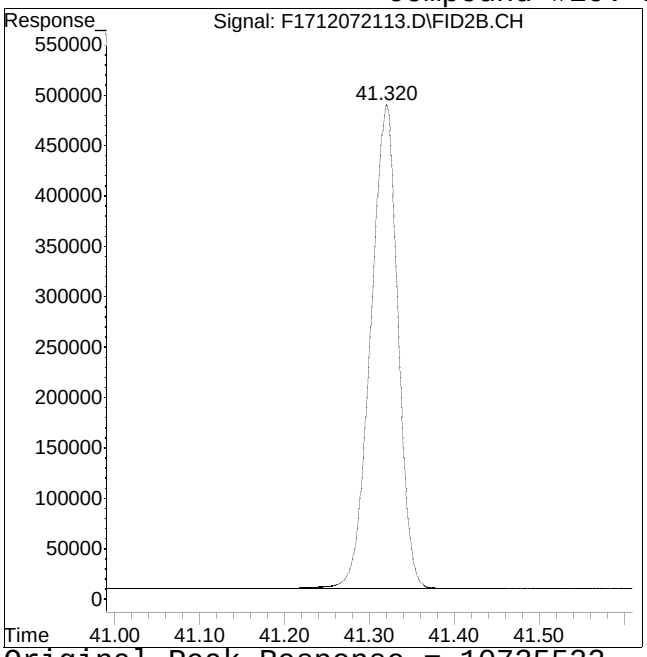
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

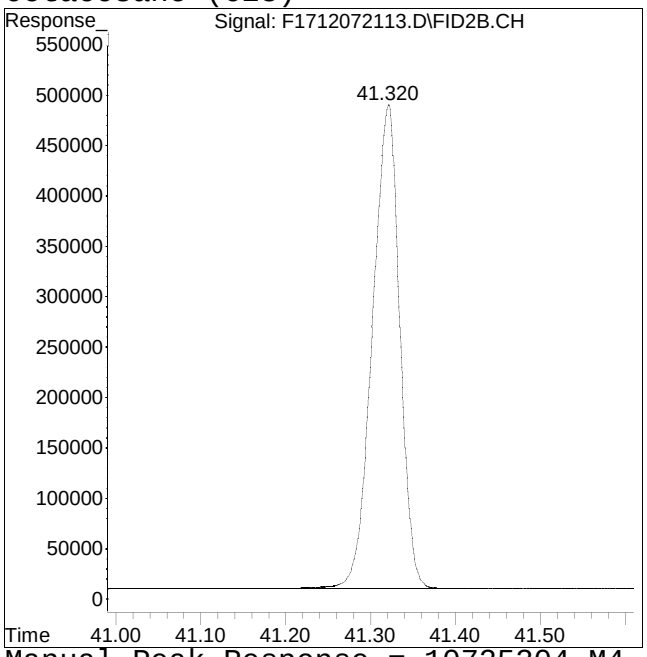
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 10735522



Manual Peak Response = 10725304 M4

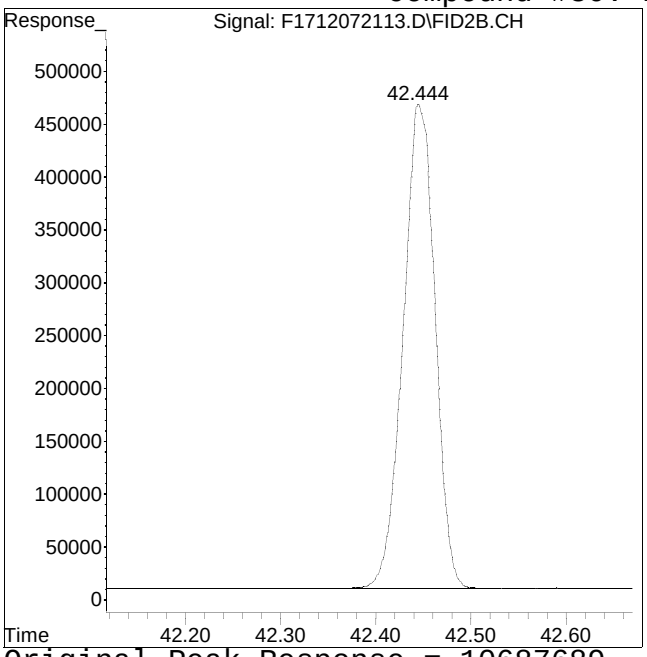
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

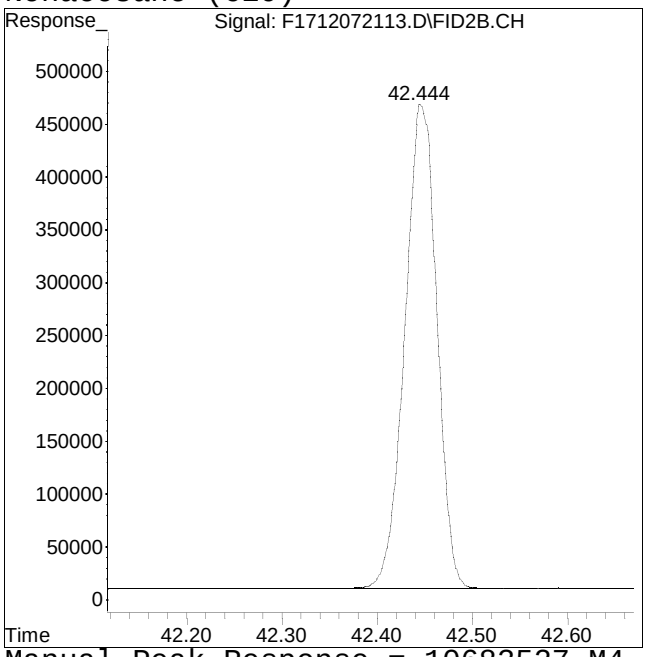
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 10687689



Manual Peak Response = 10683527 M4

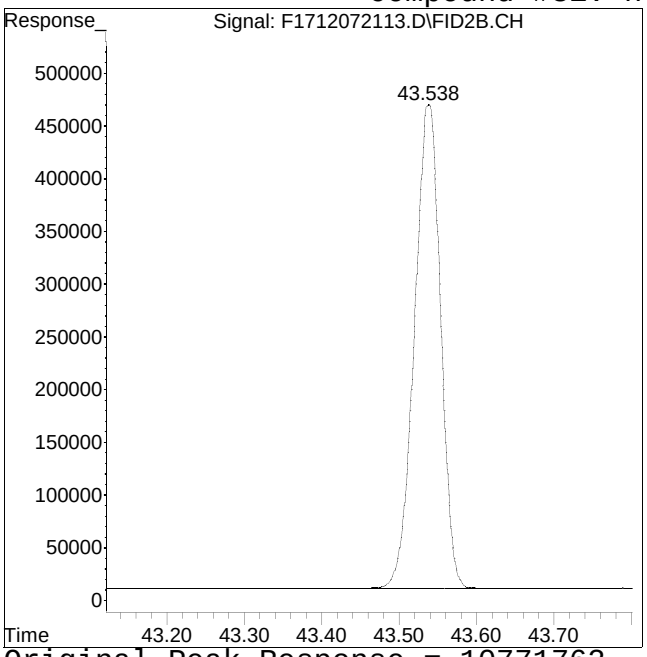
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

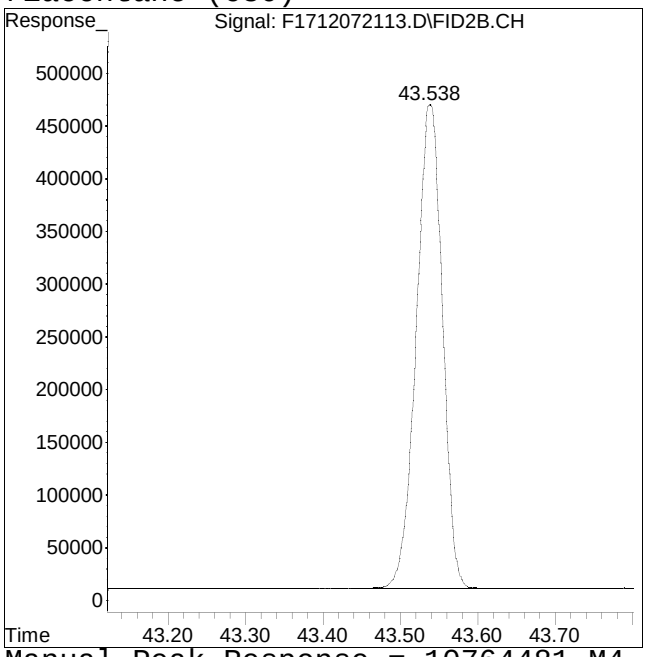
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 10771762



Manual Peak Response = 10764481 M4

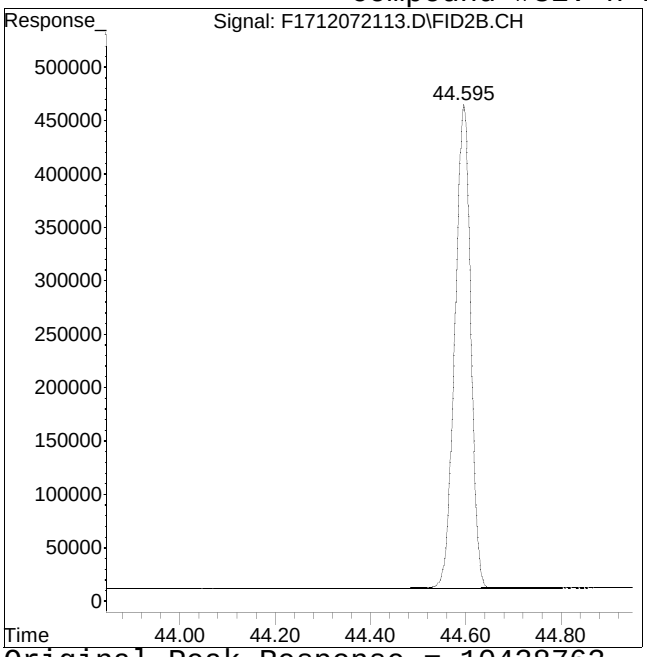
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

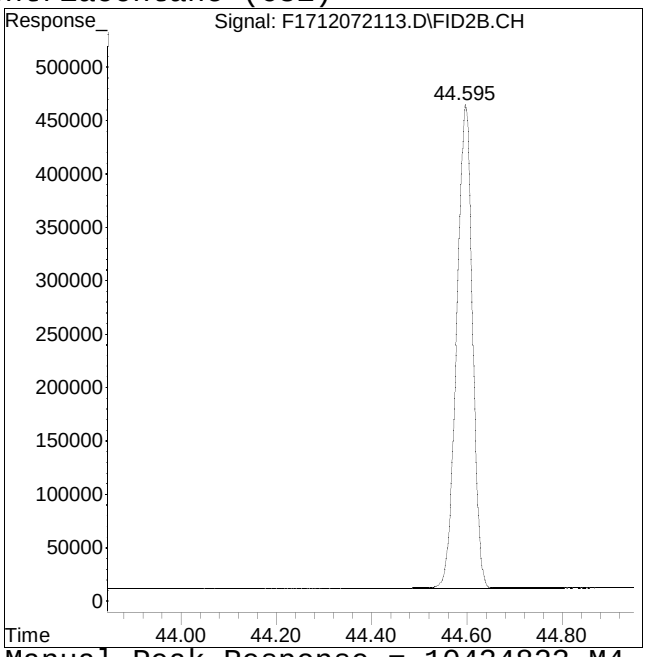
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 10438763



Manual Peak Response = 10434823 M4

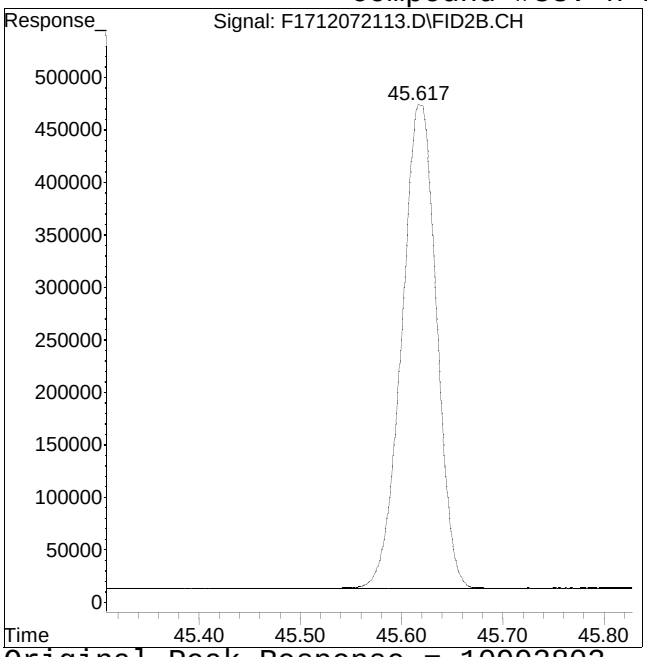
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

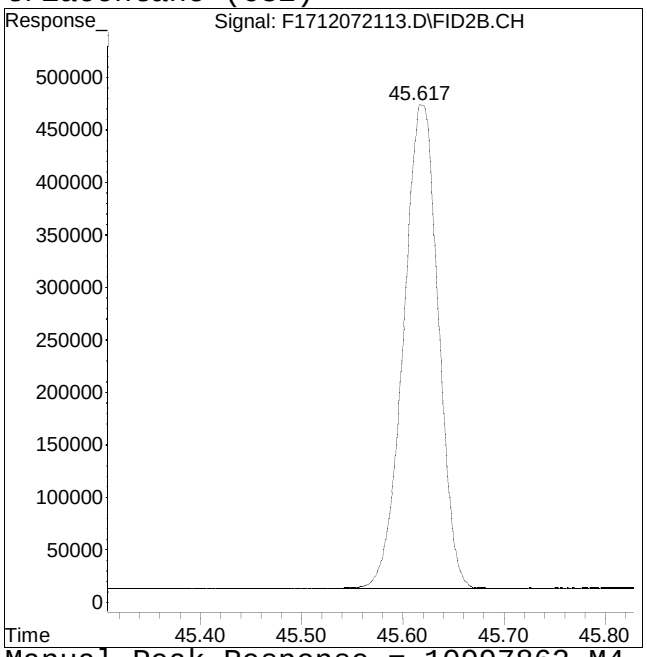
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 10993803



Manual Peak Response = 10997862 M4

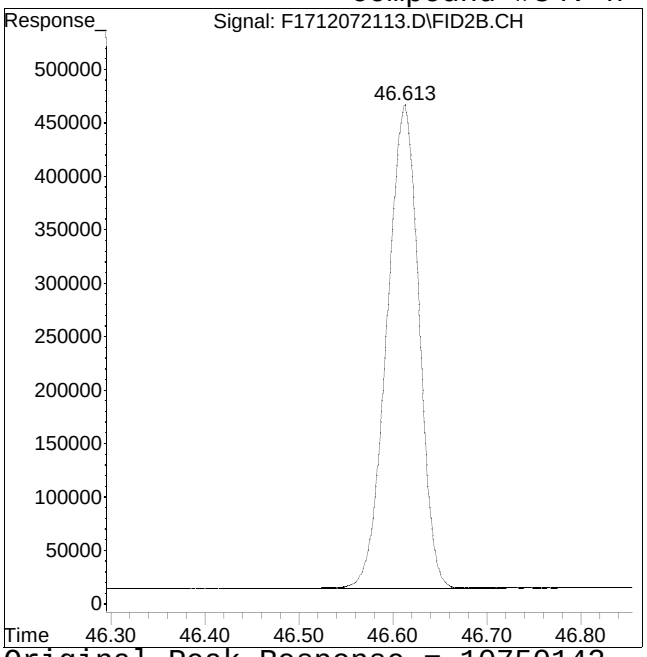
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

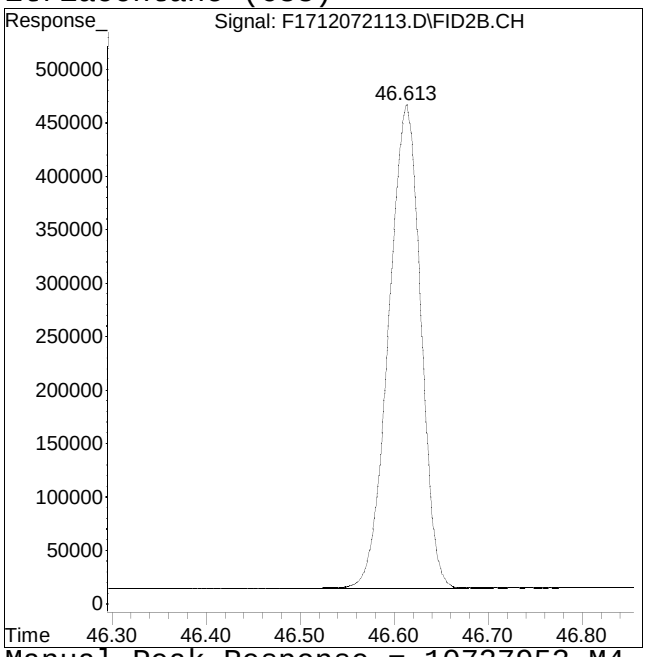
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 10750142



Manual Peak Response = 10737953 M4

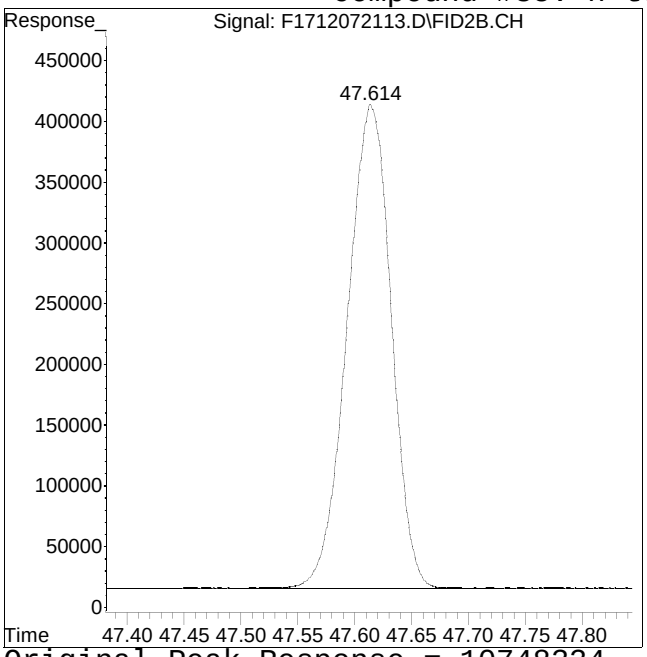
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

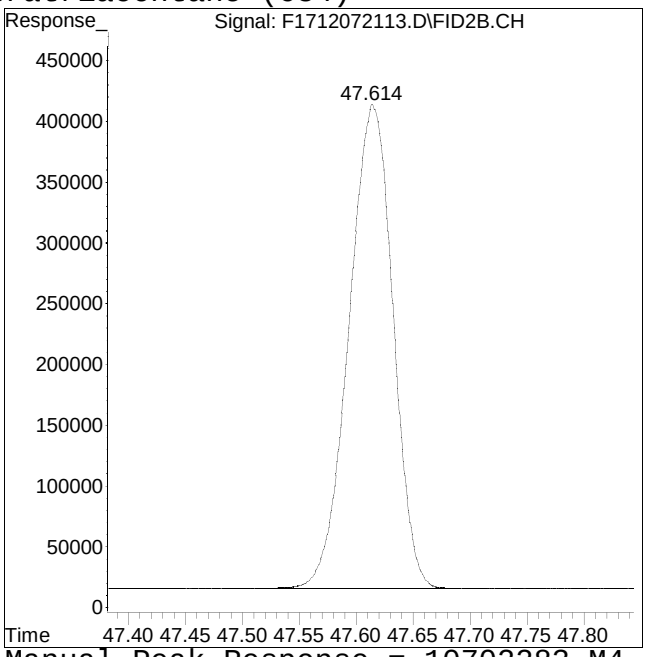
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 10748334



Manual Peak Response = 10702283 M4

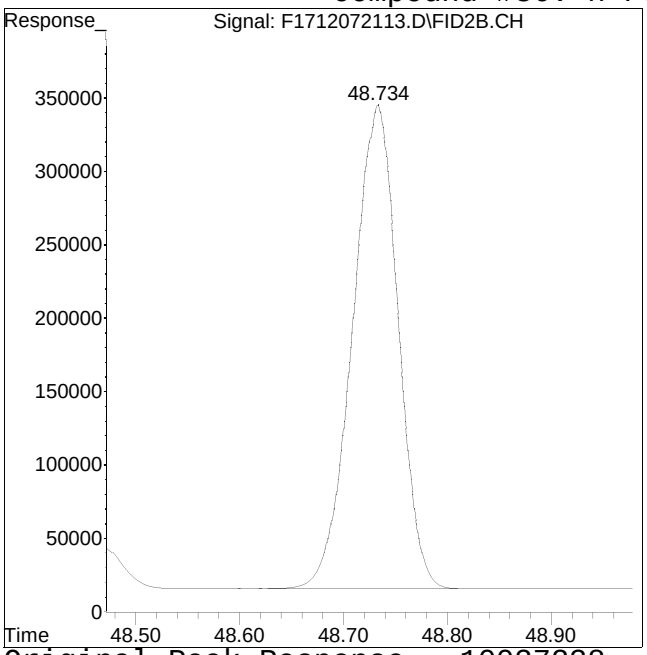
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

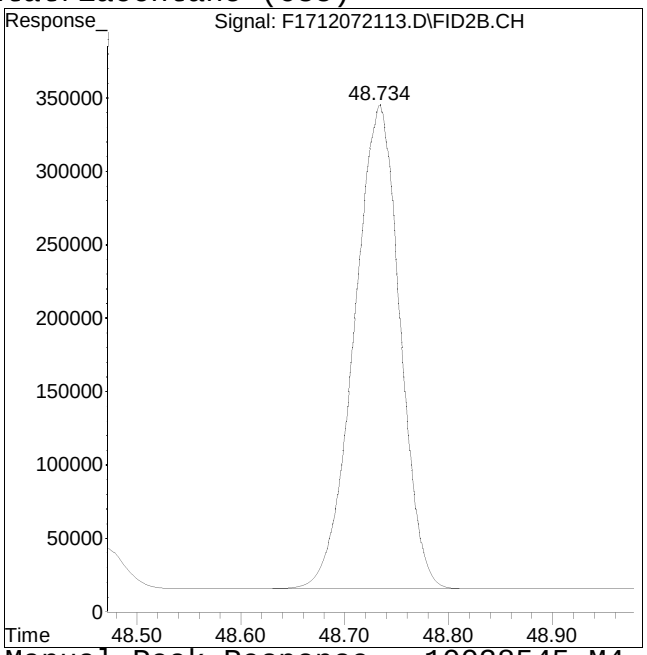
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 10037238



Manual Peak Response = 10038545 M4

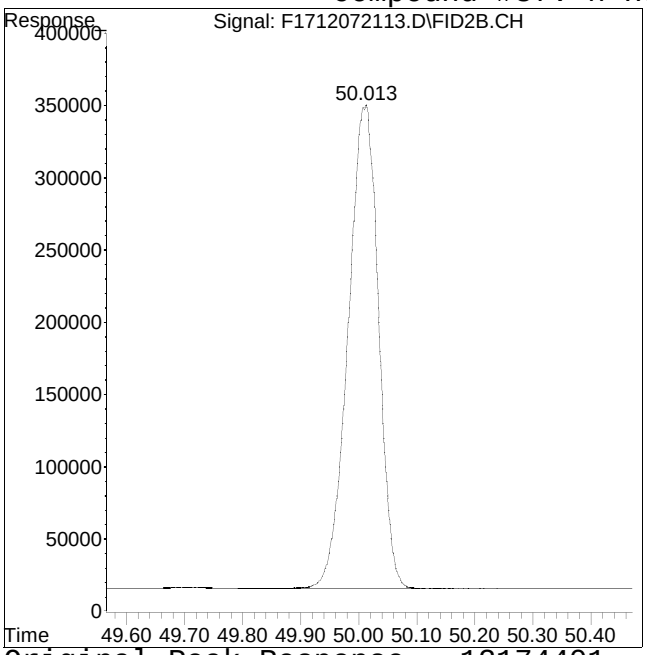
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

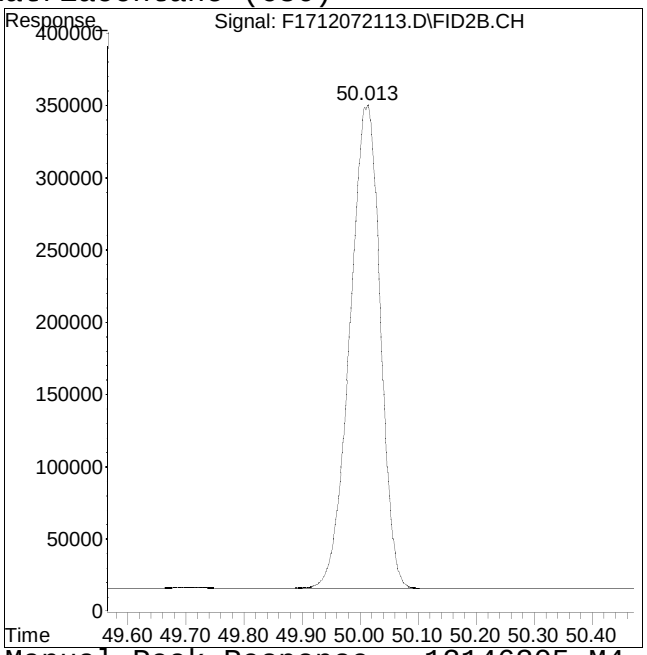
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 12174401



Manual Peak Response = 12146305 M4

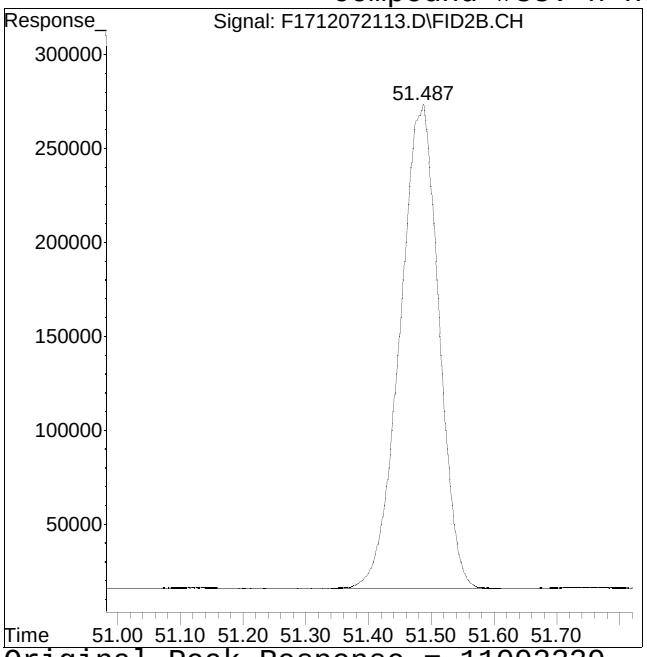
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

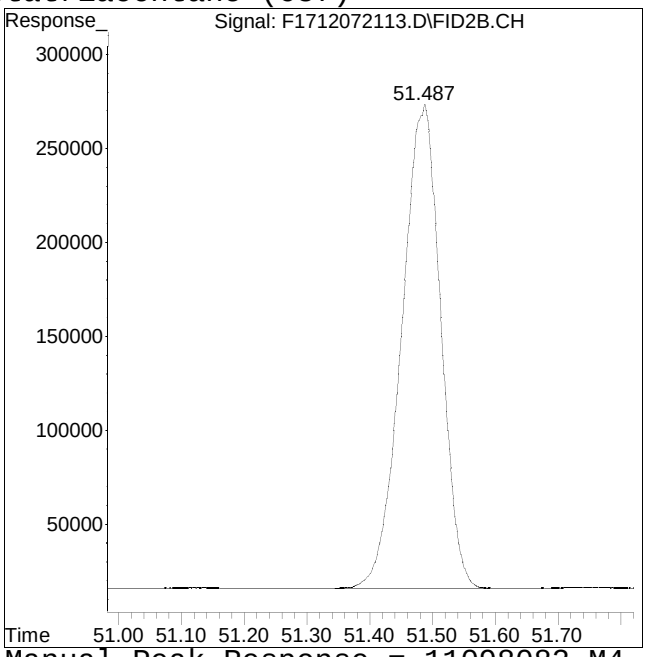
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 11093339



Manual Peak Response = 11098082 M4

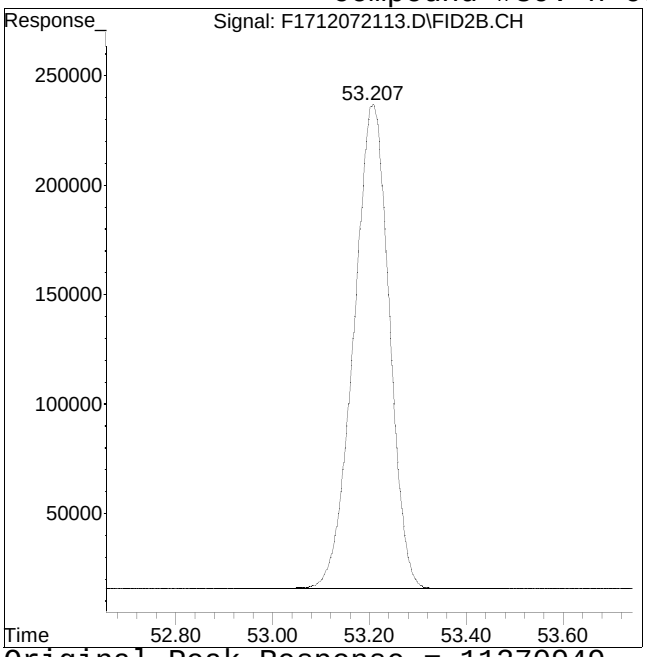
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

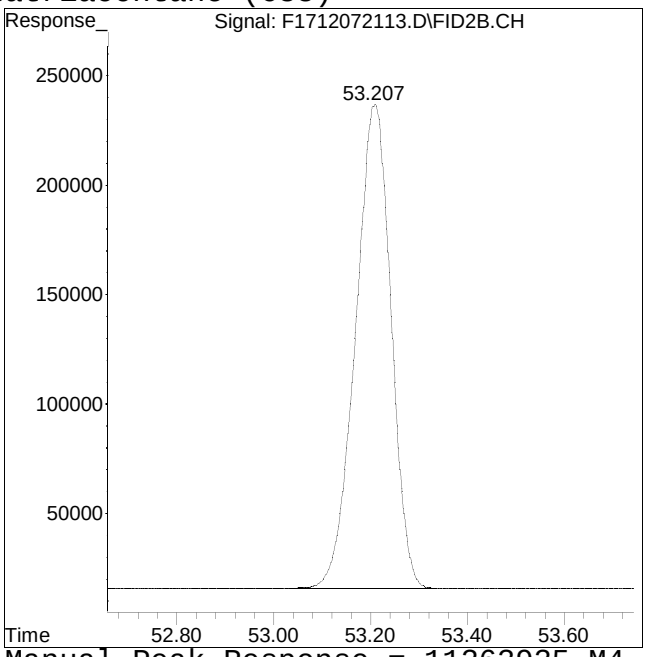
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 11270949



Manual Peak Response = 11263935 M4

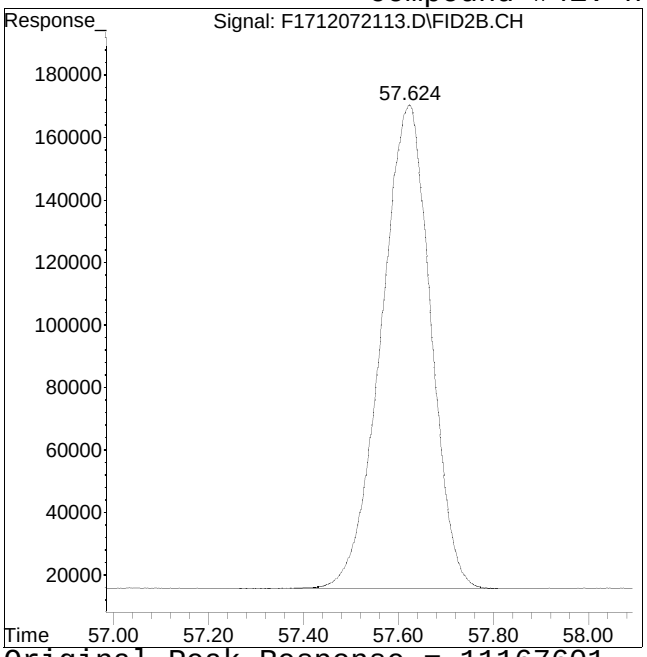
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

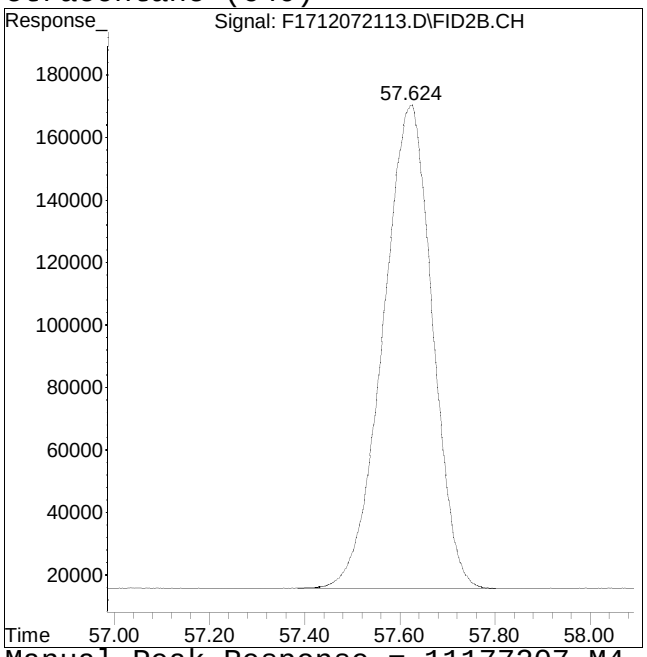
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072113.D
Date Inj'd : 12/7/2021 6:23 pm
Sample : I1712072102R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:43 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 11167601



Manual Peak Response = 11177207 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072115.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 7:51 pm
Operator : FID17:WR
Sample : I1712072103R
Misc : WG1581826,FRBE37,50ug/ml
ALS Vial : 58 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:15:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:14:52 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.245	53255495	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.237	65519159	55.708 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 111.42%	
24) s d50-Tetracosane	35.860	52288936	55.200 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 110.40%	
Target Compounds			
2) t n-Octane (C8)	5.634	43246917	50.552 ug/mL M4
3) t n-Nonane (C9)	7.831	45808073	51.696 ug/mL M4
4) t n-Decane (C10)	10.311	46987928	52.020 ug/mL M4
5) t n-Undecane (C11)	12.818	49619619	53.644 ug/mL M4
6) t n-Dodecane (C12)	15.240	49757614	52.372 ug/mL M4
7) t n-Tridecane (C13)	17.543	50434605	51.816 ug/mL M4
9) t n-Tetradecane (C14)	19.723	51522029	51.412 ug/mL M4
11) t n-Pentadecane (C15)	21.784	51320653	51.138 ug/mL M4
12) t n-Hexadecane (C16)	23.736	52226108	61.835 ug/mL M4
14) t n-Heptadecane (C17)	25.593	52419775	52.702 ug/mL M4
15) t Pristane	25.702	53629387	50.057 ug/mL M4
16) t n-Octadecane (C18)	27.357	53628298	51.813 ug/mL M4
17) t Phytane	27.520	49970710	51.040 ug/mL M4
18) t n-Nonadecane (C19)	29.038	52845850	50.932 ug/mL M4
20) t n-Eicosane (C20)	30.641	53928686	51.254 ug/mL M4
21) t n-Heneicosane (C21)	32.174	53465554	50.631 ug/mL M4
22) t n-Docosane (C22)	33.643	54431324	51.265 ug/mL M4
23) t n-Tricosane (C23)	35.053	54332059	61.125 ug/mL M4
25) t n-Tetracosane (C24)	36.405	51614109	58.692 ug/mL M4
26) t n-Pentacosane (C25)	37.709	53407641	51.078 ug/mL M4
27) t n-Hexacosane (C26)	38.964	54891733	51.146 ug/mL M4
28) t n-Heptacosane (C27)	40.172	52818300	49.596 ug/mL M4
29) t n-Octacosane (C28)	41.340	55011659	60.305 ug/mL M4
30) t n-Nonacosane (C29)	42.470	54533647	50.311 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072115.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 7:51 pm
Operator : FID17:WR
Sample : I1712072103R
Misc : WG1581826,FRBE37,50ug/ml
ALS Vial : 58 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:15:43 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:14:52 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

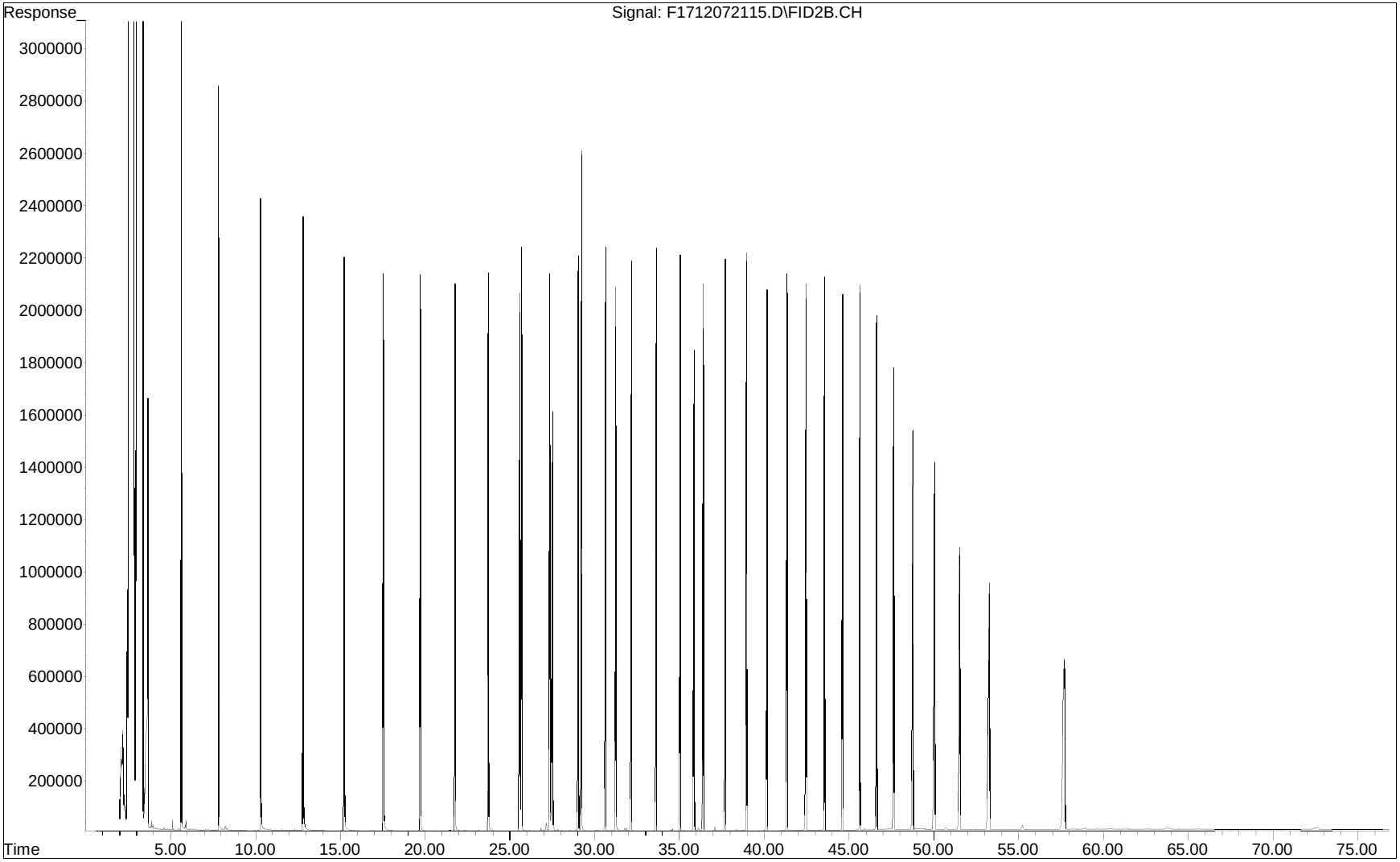
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.561	54526506	60.235 ug/mL M4
32) t	n-Hentriacontane (C31)	44.616	52749720	50.218 ug/mL M4
33) t	n-Dotriacontane (C32)	45.641	55114208	50.144 ug/mL M4
34) t	n-Tritriacontane (C33)	46.635	52864772	49.632 ug/mL M4
35) t	n-tetratriacontane (C34)	47.638	52546177	59.360 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.765	52800110	52.379 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.044	56600886	47.543 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.524	52075161	57.399 ug/mL M4
39) t	n-Octatriacontane (C38)	53.254	53756893	48.526 ug/mL M4
41) t	n-Tetracontane (C40)	57.686	53934501	49.220 ug/mL M4

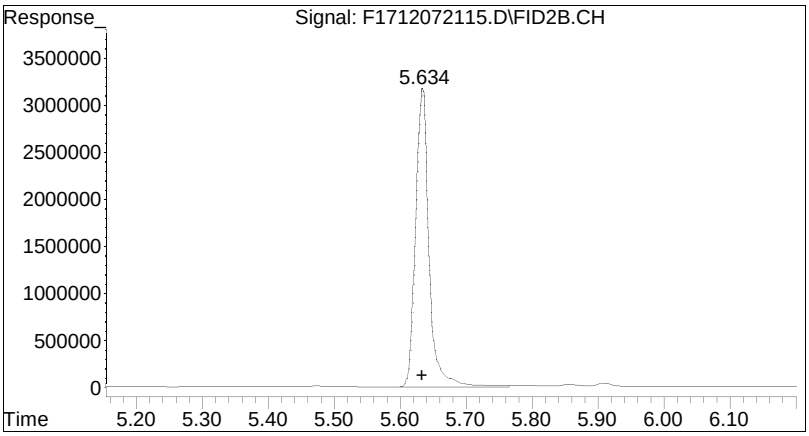
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

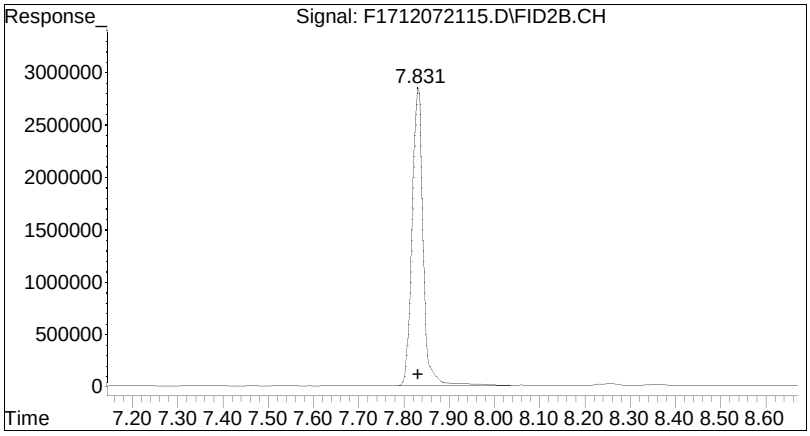
File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072115.D
Operator : FID17:WR
Acquired : 07 Dec 2021 7:51 pm using AcqMethod FID17A.M
Sample Name: I1712072103R
Instrument: FID17
Misc Info : WG1581826,FRBE37,50ug/ml
Vial Number: 58
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M





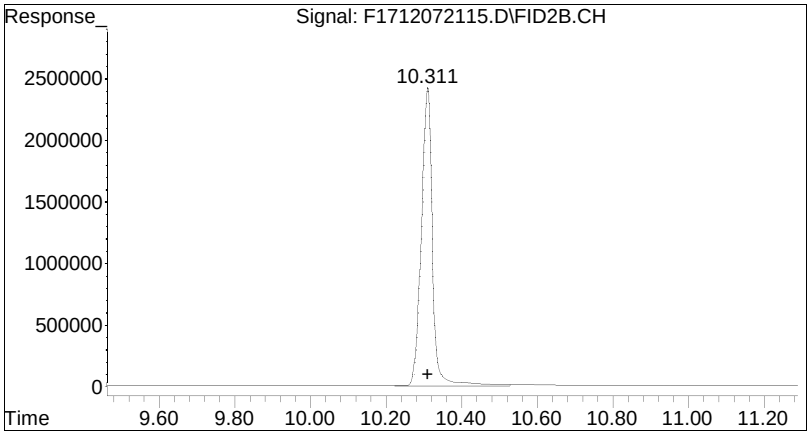
#2 n-Octane (C8)

R.T.:	5.634 min
Delta R.T.:	0.000 min
Response:	43246917
Conc:	50.55 ug/mL M4



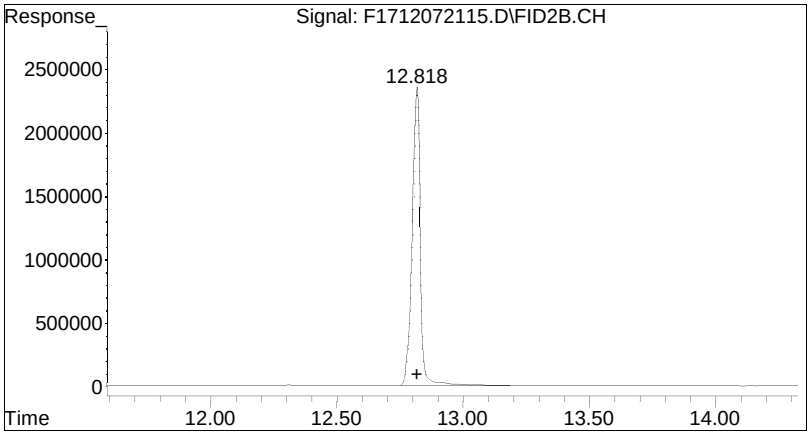
#3 n-Nonane (C9)

R.T.: 7.831 min
Delta R.T.: 0.000 min
Response: 45808073
Conc: 51.70 ug/mL M4



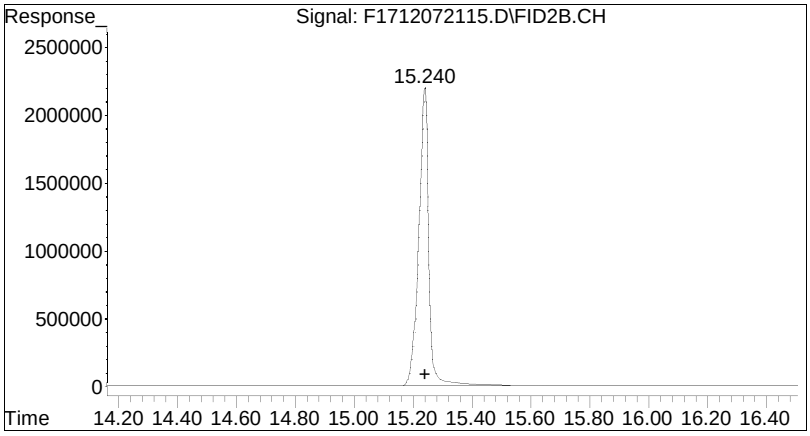
#4 n-Decane (C10)

R.T.: 10.311 min
Delta R.T.: 0.000 min
Response: 46987928
Conc: 52.02 ug/mL M4



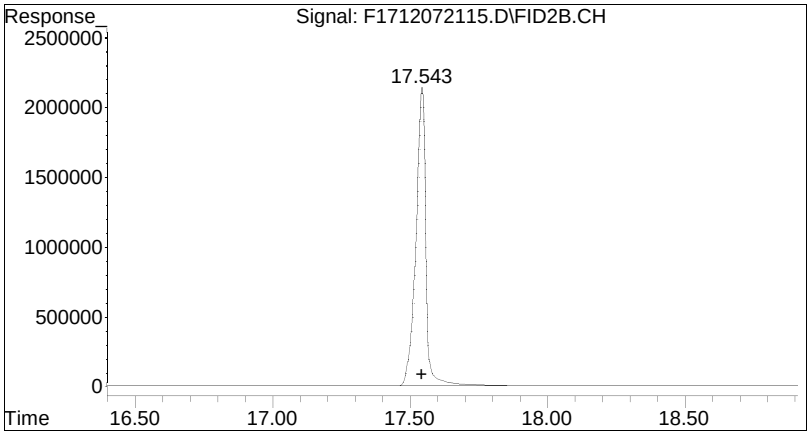
#5 n-Undecane (C11)

R.T.: 12.818 min
Delta R.T.: 0.000 min
Response: 49619619
Conc: 53.64 ug/mL M4



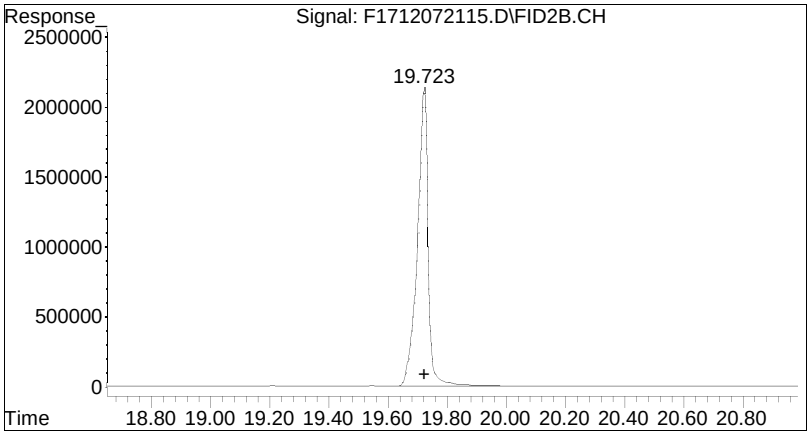
#6 n-Dodecane (C12)

R.T.: 15.240 min
Delta R.T.: 0.000 min
Response: 49757614
Conc: 52.37 ug/mL M4



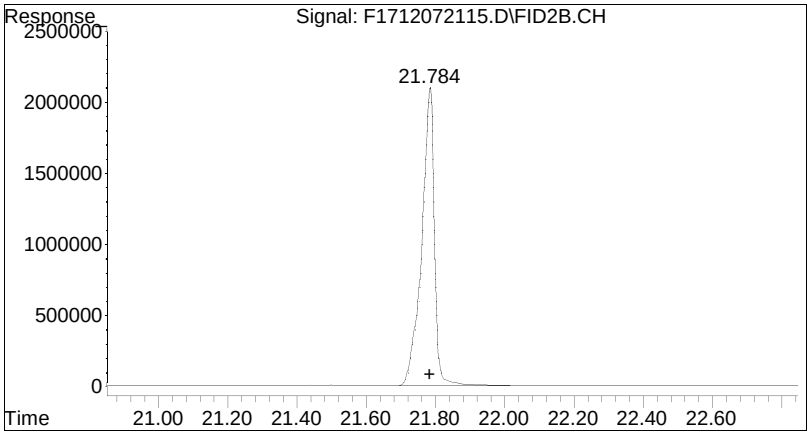
#7 n-Tridecane (C13)

R.T.: 17.543 min
Delta R.T.: 0.000 min
Response: 50434605
Conc: 51.82 ug/mL M4



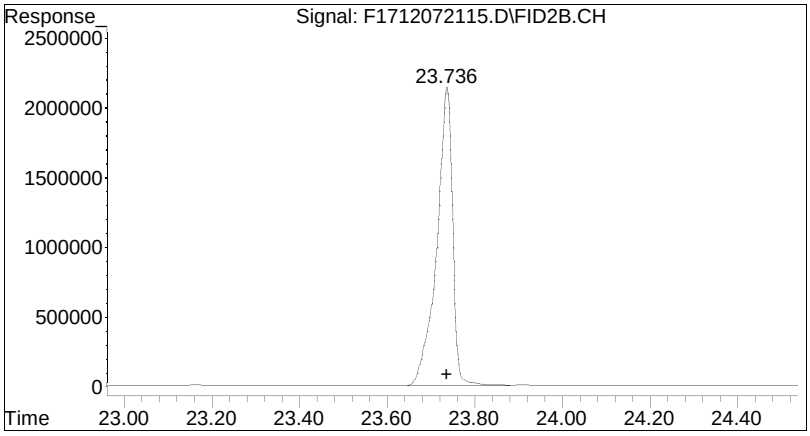
#9 n-Tetradecane (C14)

R.T.: 19.723 min
Delta R.T.: 0.000 min
Response: 51522029
Conc: 51.41 ug/mL M4



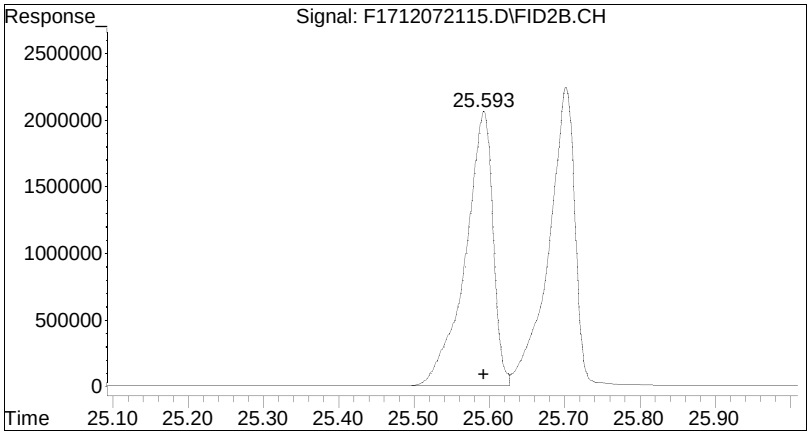
#11 n-Pentadecane (C15)

R.T.: 21.784 min
Delta R.T.: 0.000 min
Response: 51320653
Conc: 51.14 ug/mL M4



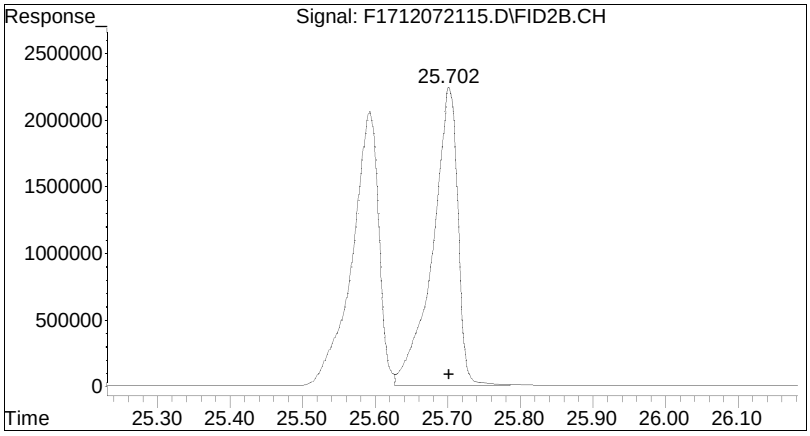
#12 n-Hexadecane (C16)

R.T.: 23.736 min
Delta R.T.: 0.000 min
Response: 52226108
Conc: 61.84 ug/mL M4



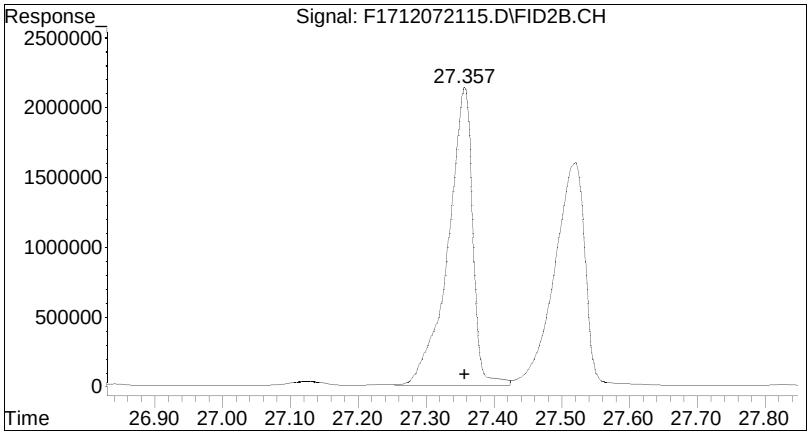
#14 n-Heptadecane (C17)

R.T.: 25.593 min
Delta R.T.: 0.000 min
Response: 52419775
Conc: 52.70 ug/mL M4



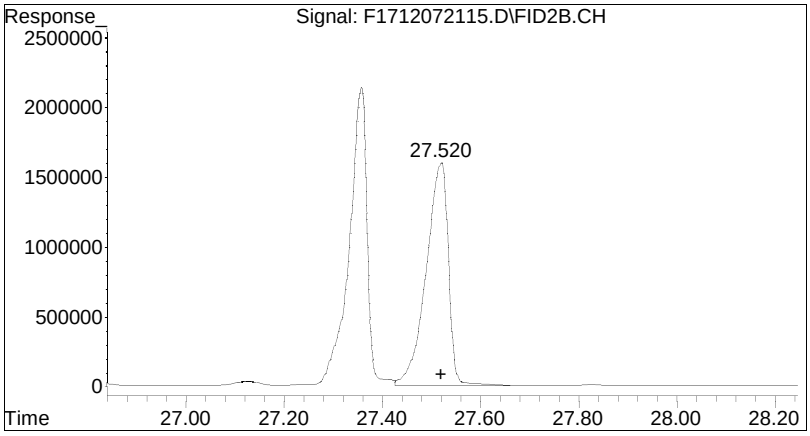
#15 Pristane

R.T.: 25.702 min
Delta R.T.: 0.000 min
Response: 53629387
Conc: 50.06 ug/mL M4



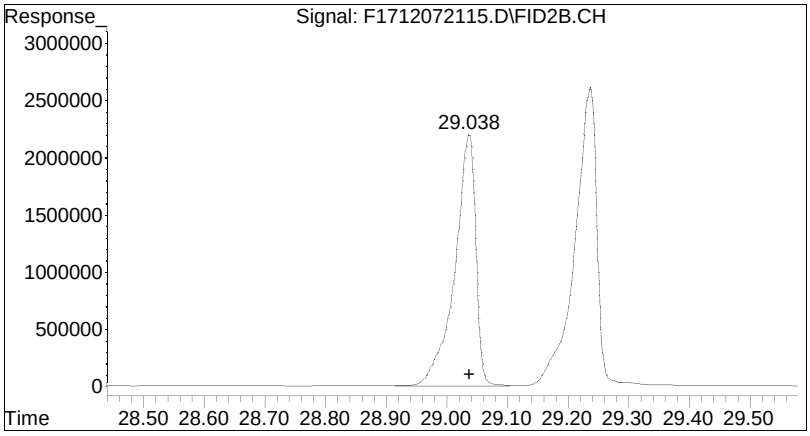
#16 n-Octadecane (C18)

R.T.: 27.357 min
Delta R.T.: 0.000 min
Response: 53628298
Conc: 51.81 ug/mL M4



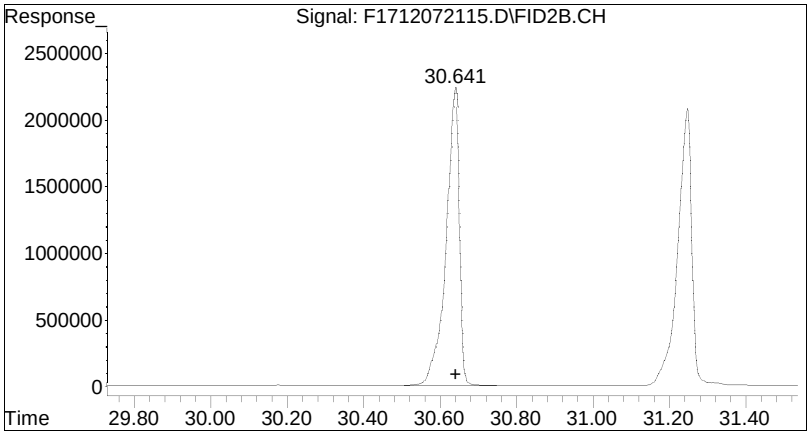
#17 Phytane

R.T.: 27.520 min
Delta R.T.: 0.000 min
Response: 49970710
Conc: 51.04 ug/mL M4



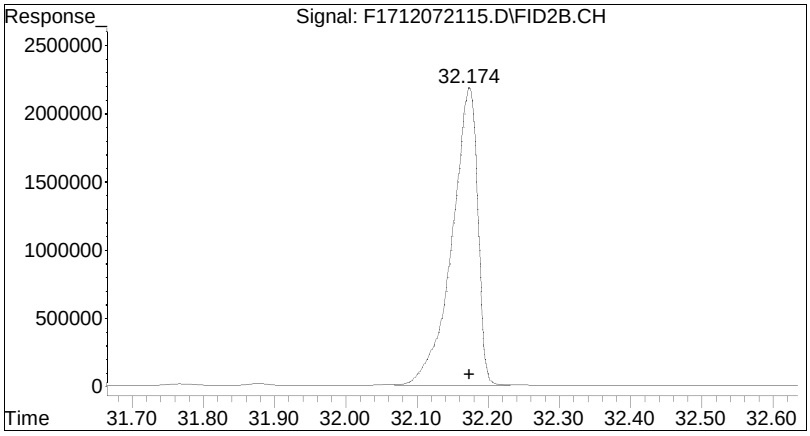
#18 n-Nonadecane (C19)

R.T.: 29.038 min
Delta R.T.: 0.000 min
Response: 52845850
Conc: 50.93 ug/mL M4



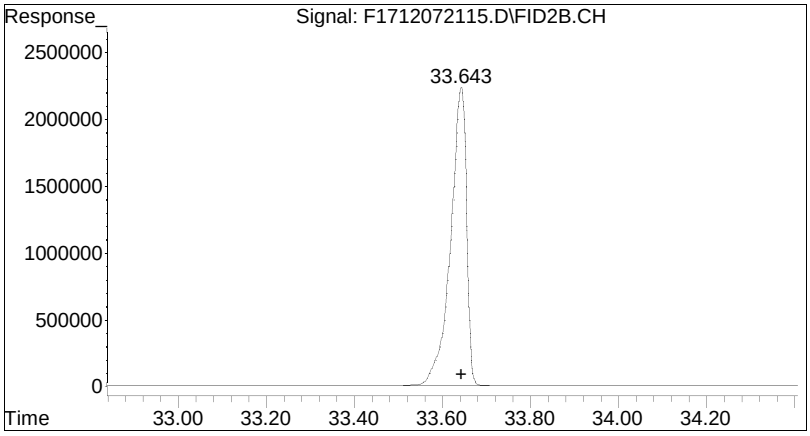
#20 n-Eicosane (C20)

R.T.: 30.641 min
Delta R.T.: 0.000 min
Response: 53928686
Conc: 51.25 ug/mL M4



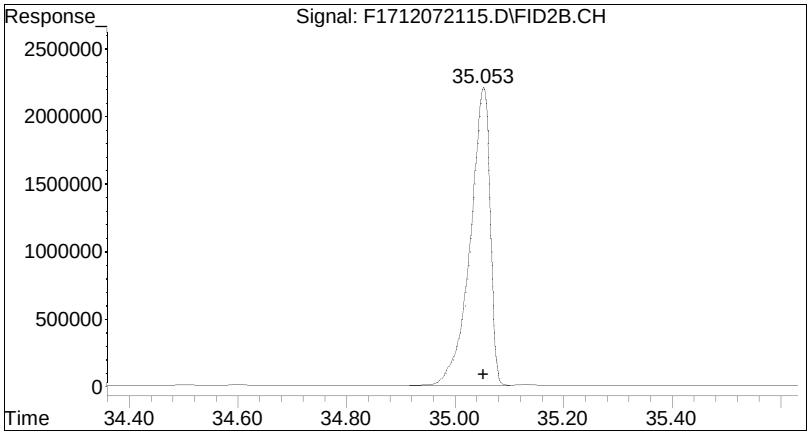
#21 n-Heneicosane (C21)

R.T.: 32.174 min
Delta R.T.: 0.000 min
Response: 53465554
Conc: 50.63 ug/mL M4



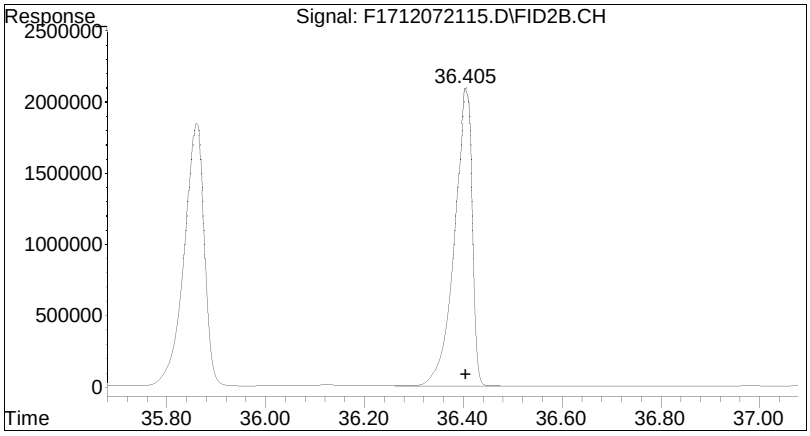
#22 n-Docosane (C22)

R.T.: 33.643 min
Delta R.T.: 0.000 min
Response: 54431324
Conc: 51.26 ug/mL M4



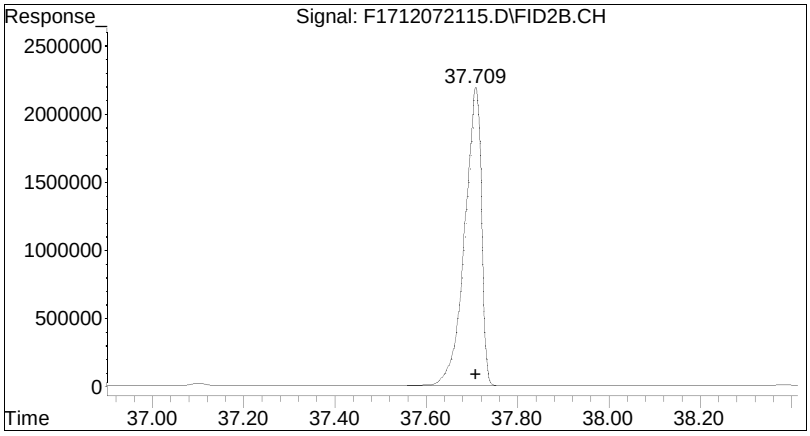
#23 n-Tricosane (C23)

R.T.: 35.053 min
Delta R.T.: 0.000 min
Response: 54332059
Conc: 61.12 ug/mL M4



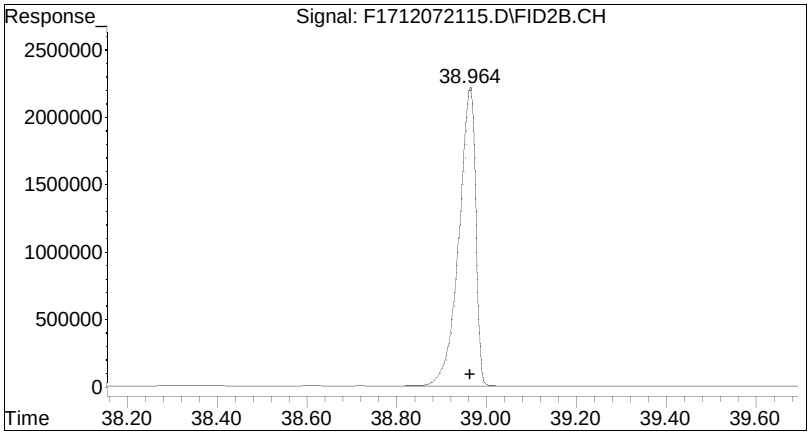
#25 n-Tetracosane (C24)

R.T.: 36.405 min
Delta R.T.: 0.000 min
Response: 51614109
Conc: 58.69 ug/mL M4



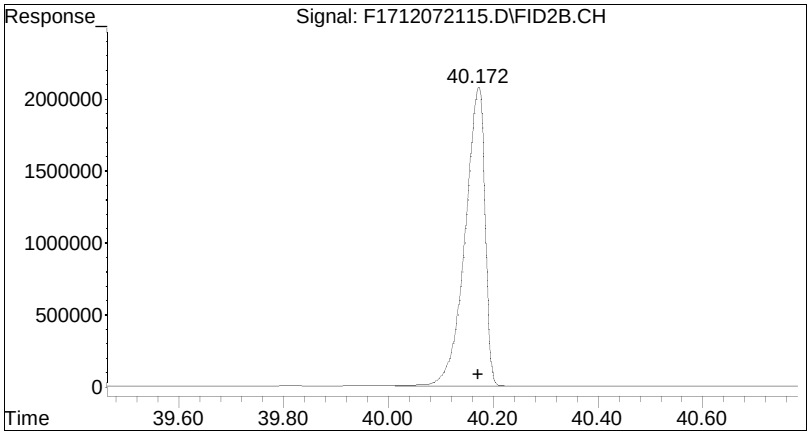
#26 n-Pentacosane (C25)

R.T.: 37.709 min
Delta R.T.: 0.000 min
Response: 53407641
Conc: 51.08 ug/mL M4



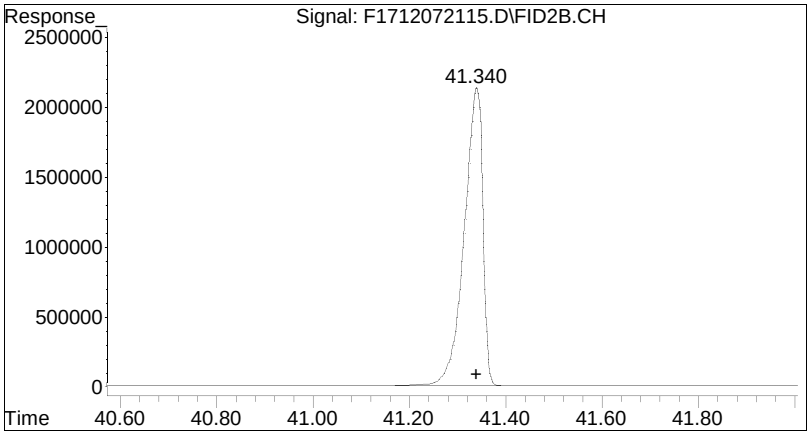
#27 n-Hexacosane (C26)

R.T.: 38.964 min
Delta R.T.: 0.000 min
Response: 54891733
Conc: 51.15 ug/mL M4



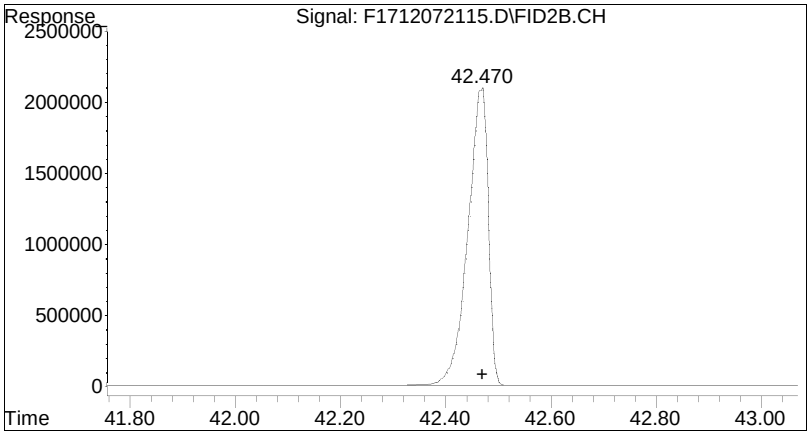
#28 n-Heptacosane (C27)

R.T.: 40.172 min
Delta R.T.: 0.000 min
Response: 52818300
Conc: 49.60 ug/mL M4



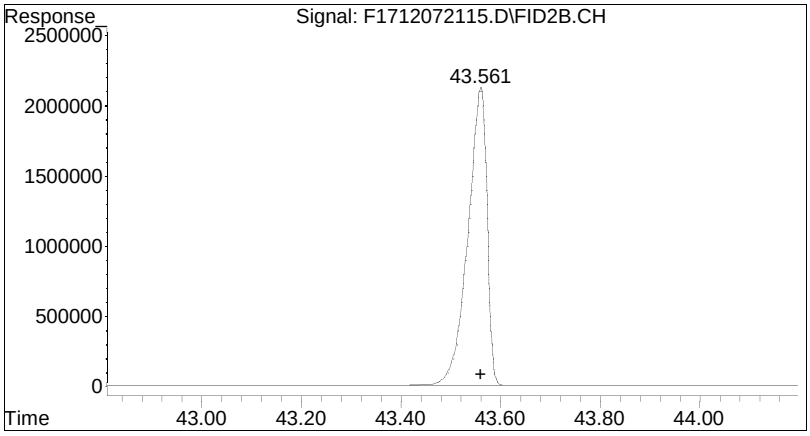
#29 n-Octacosane (C28)

R.T.: 41.340 min
Delta R.T.: 0.000 min
Response: 55011659
Conc: 60.30 ug/mL M4



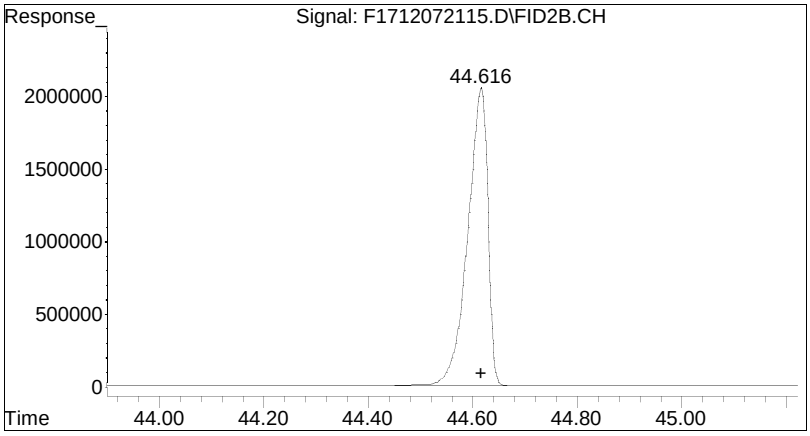
#30 n-Nonacosane (C29)

R.T.: 42.470 min
Delta R.T.: 0.000 min
Response: 54533647
Conc: 50.31 ug/mL M4



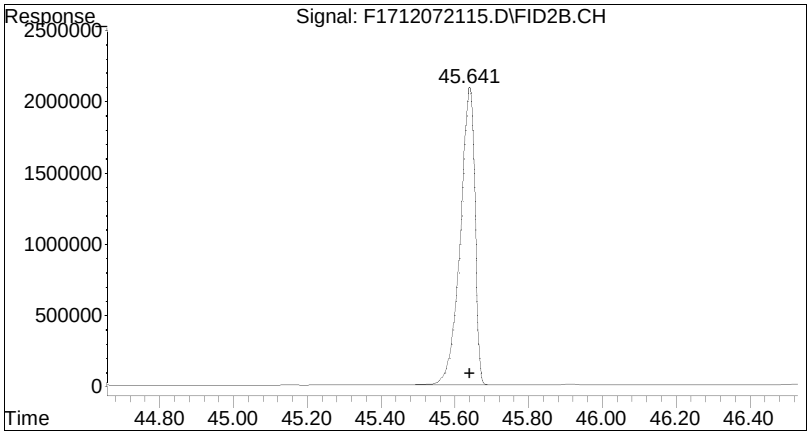
#31 n-Triacontane (C30)

R.T.: 43.561 min
Delta R.T.: 0.000 min
Response: 54526506
Conc: 60.23 ug/mL M4



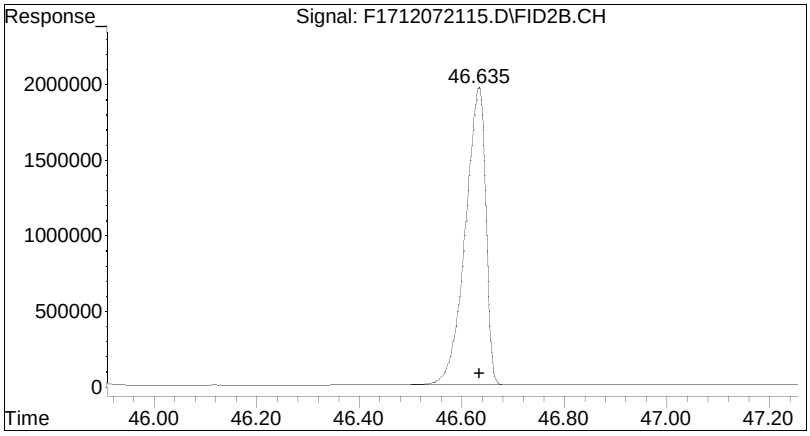
#32 n-Hentriacontane (C31)

R.T.: 44.616 min
Delta R.T.: 0.000 min
Response: 52749720
Conc: 50.22 ug/mL M4



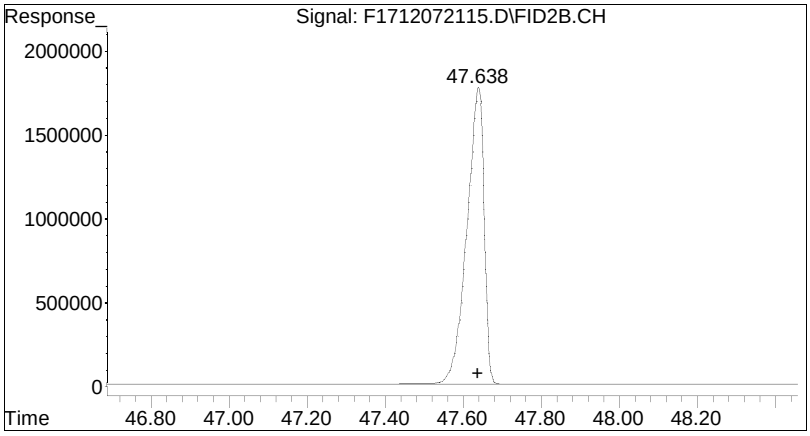
#33 n-Dotriacontane (C32)

R.T.: 45.641 min
Delta R.T.: 0.000 min
Response: 55114208
Conc: 50.14 ug/mL M4



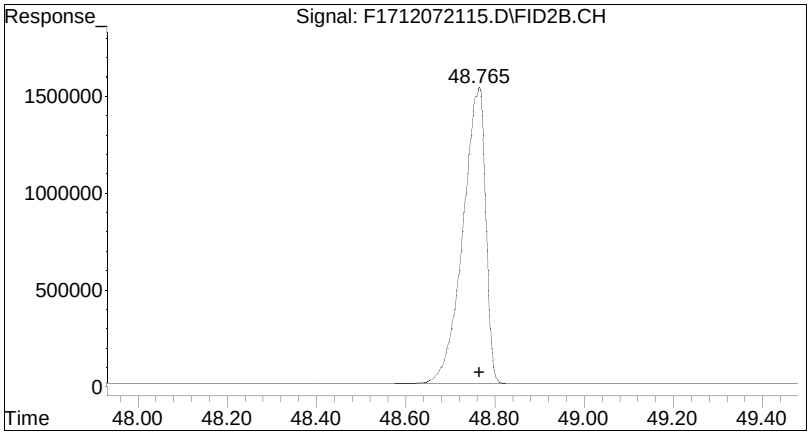
#34 n-Tritriacontane (C33)

R.T.: 46.635 min
Delta R.T.: 0.000 min
Response: 52864772
Conc: 49.63 ug/mL M4



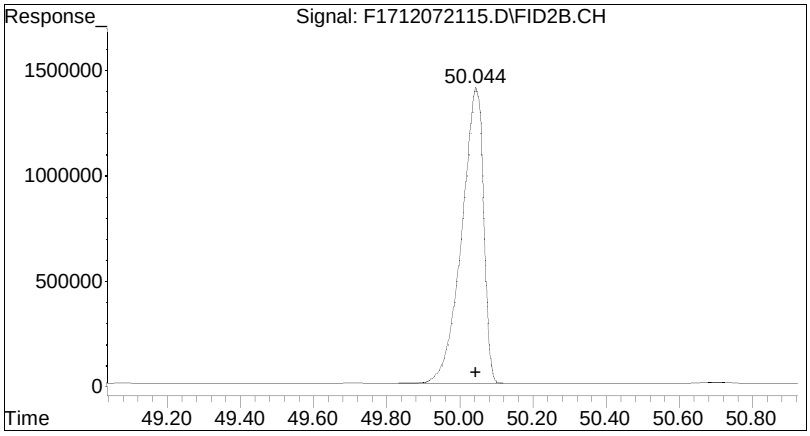
#35 n-tetratriacontane (C34)

R.T.: 47.638 min
Delta R.T.: 0.000 min
Response: 52546177
Conc: 59.36 ug/mL M4



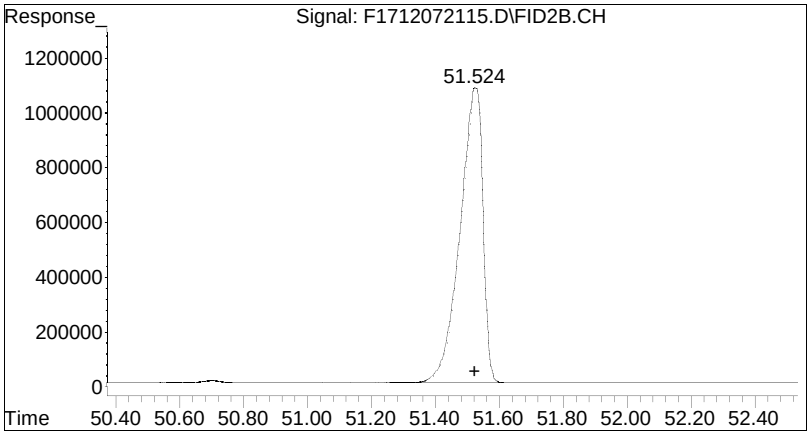
#36 n-Pentatriacontane (C35)

R.T.:	48.765 min
Delta R.T.:	0.000 min
Response:	52800110
Conc:	52.38 ug/mL M4



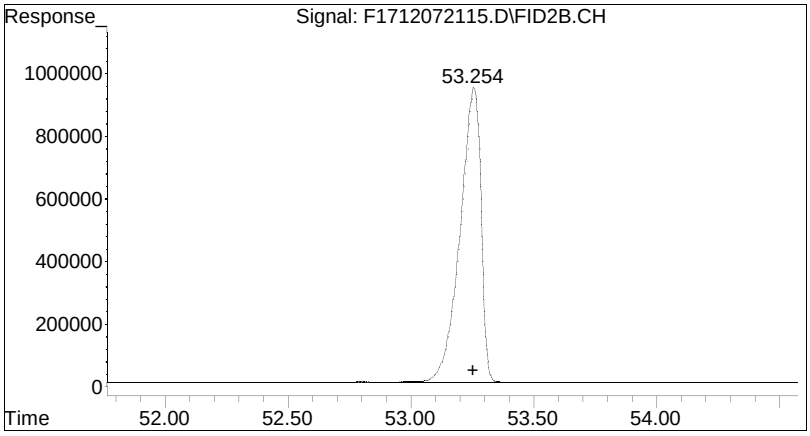
#37 n-Hexatriacontane (C36)

R.T.:	50.044 min
Delta R.T.:	0.000 min
Response:	56600886
Conc:	47.54 ug/mL M4



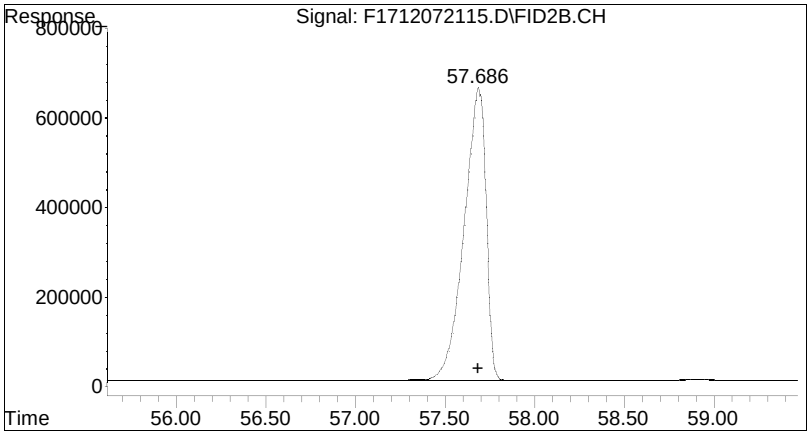
#38 n-Heptatriacontane (C37)

R.T.:	51.524 min
Delta R.T.:	0.000 min
Response:	52075161
Conc:	57.40 ug/mL M4



#39 n-Octatriacontane (C38)

R.T.: 53.254 min
Delta R.T.: 0.000 min
Response: 53756893
Conc: 48.53 ug/mL M4



#41 n-Tetracontane (C40)

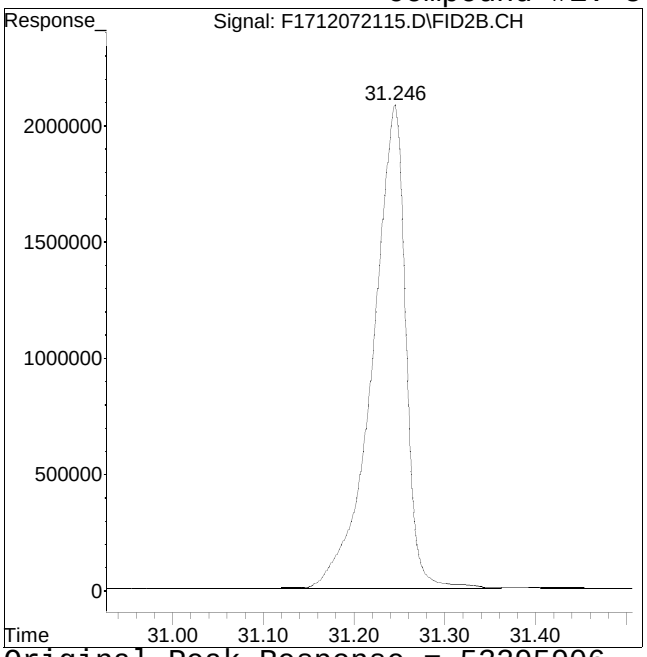
R.T.: 57.686 min
Delta R.T.: 0.000 min
Response: 53934501
Conc: 49.22 ug/mL M4

Manual Integration/Negative Proof Report

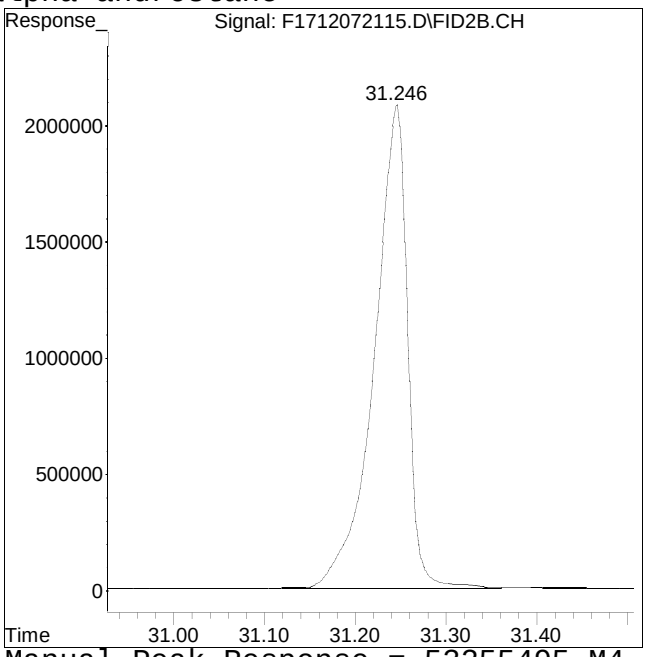
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 53295906



Manual Peak Response = 53255495 M4

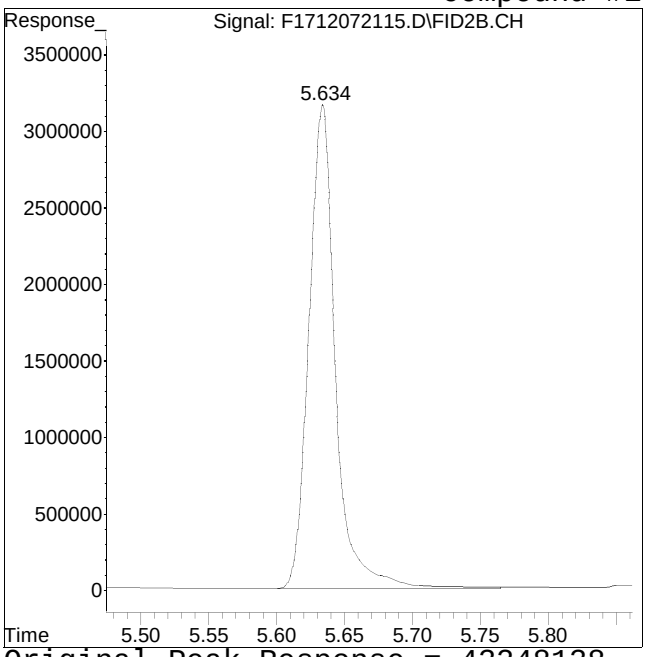
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

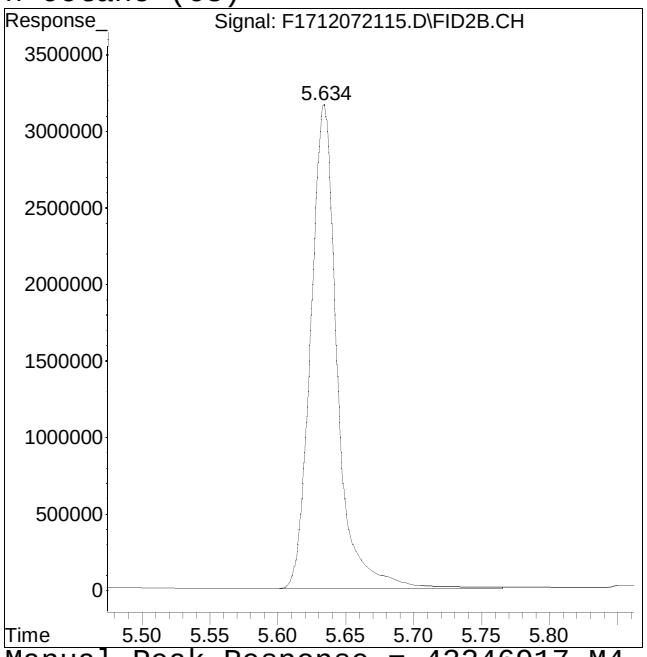
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #2: n-Octane (C8)



Original Peak Response = 43248138



Manual Peak Response = 43246917 M4

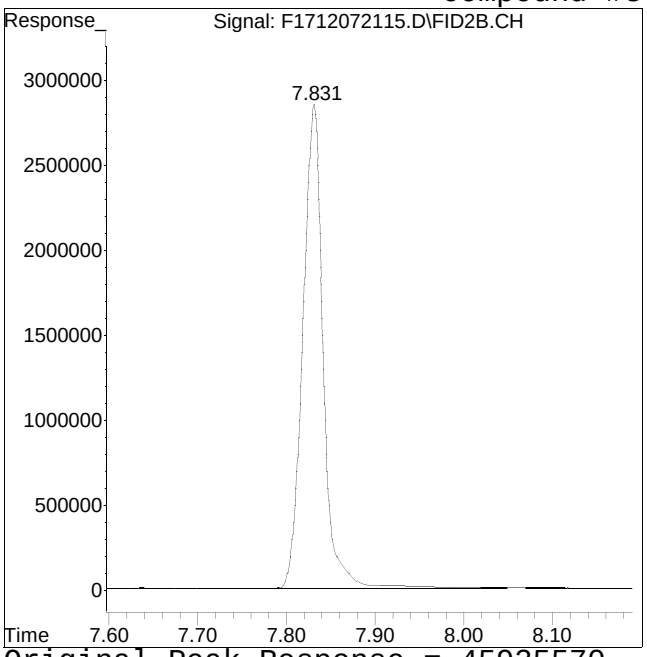
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

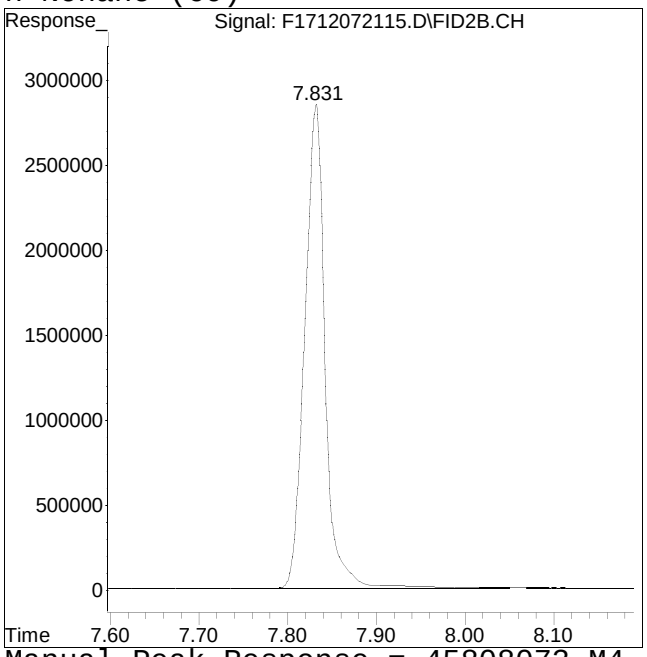
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 45935570



Manual Peak Response = 45808073 M4

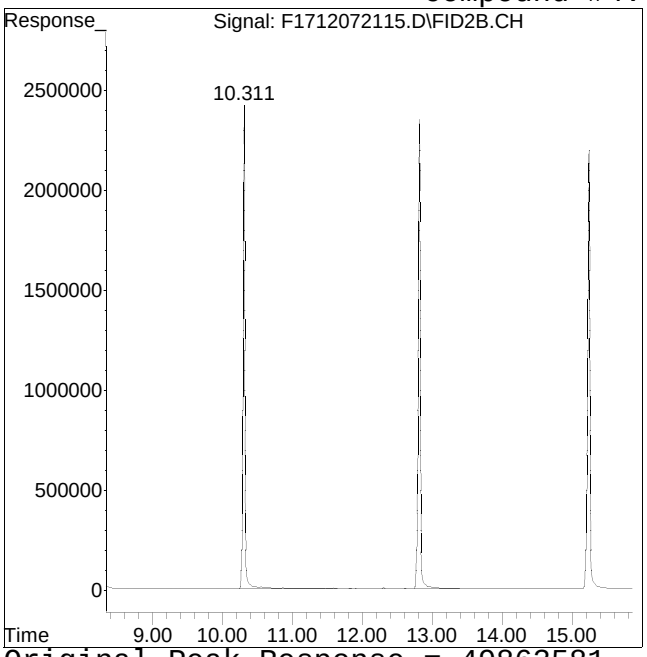
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

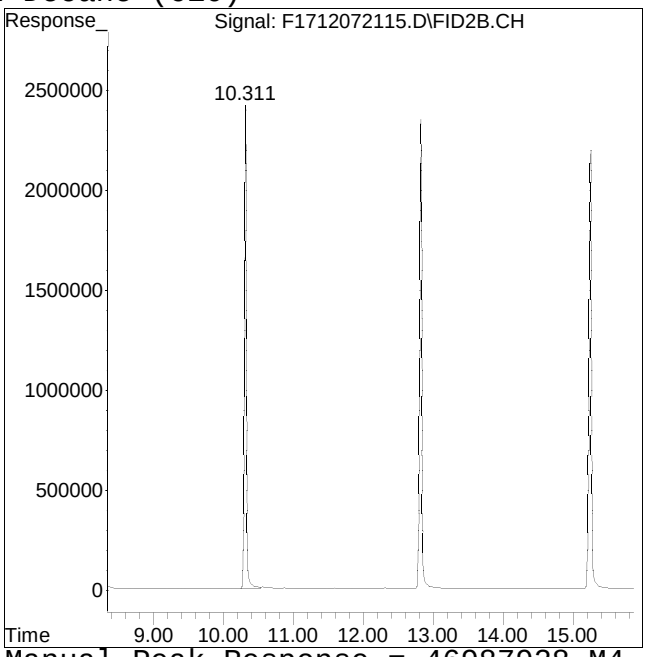
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #4: n-Decane (C10)



Original Peak Response = 49863581



Manual Peak Response = 46987928 M4

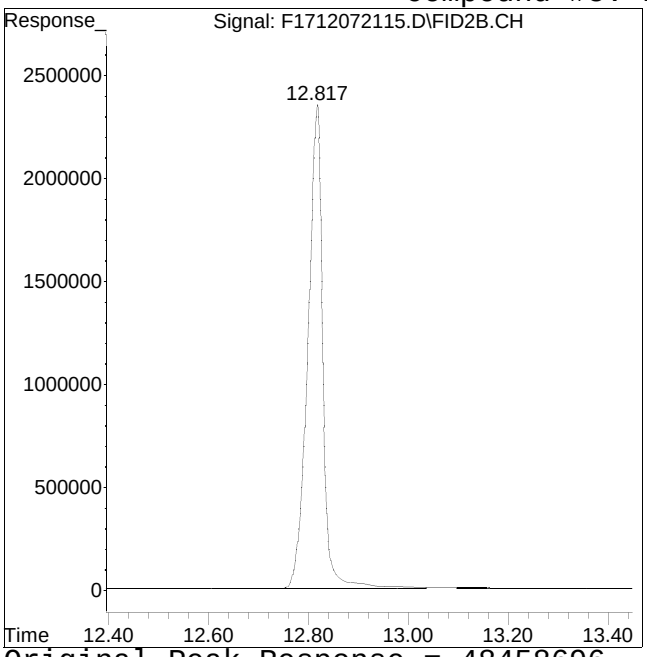
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

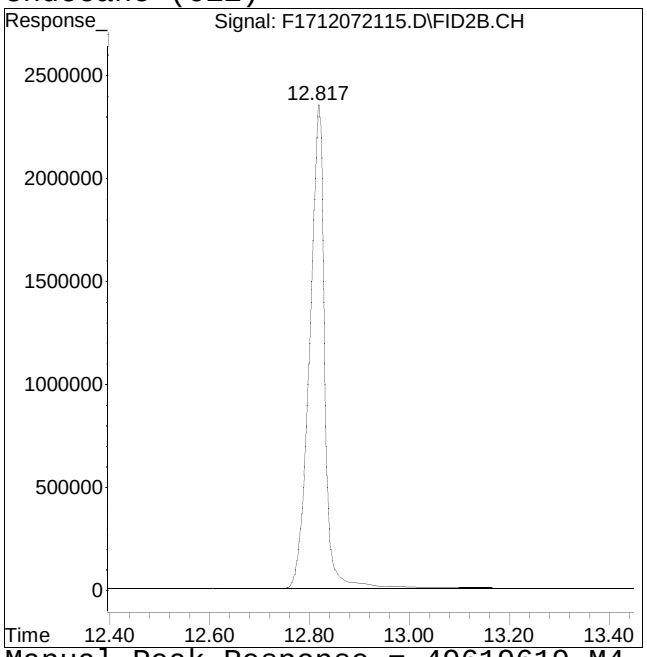
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 48458696



Manual Peak Response = 49619619 M4

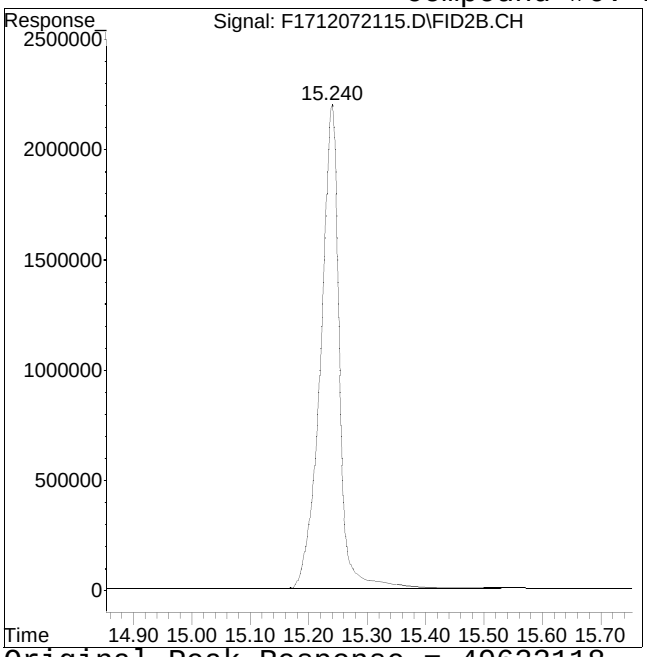
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

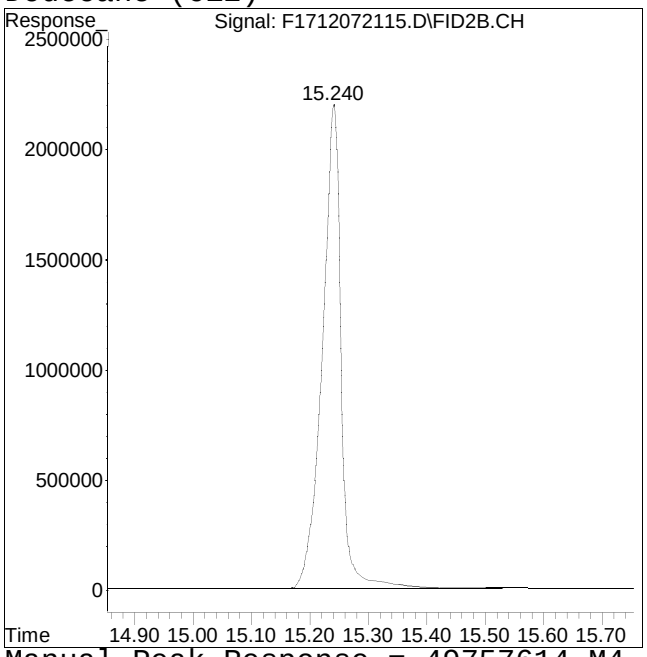
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 49633118



Manual Peak Response = 49757614 M4

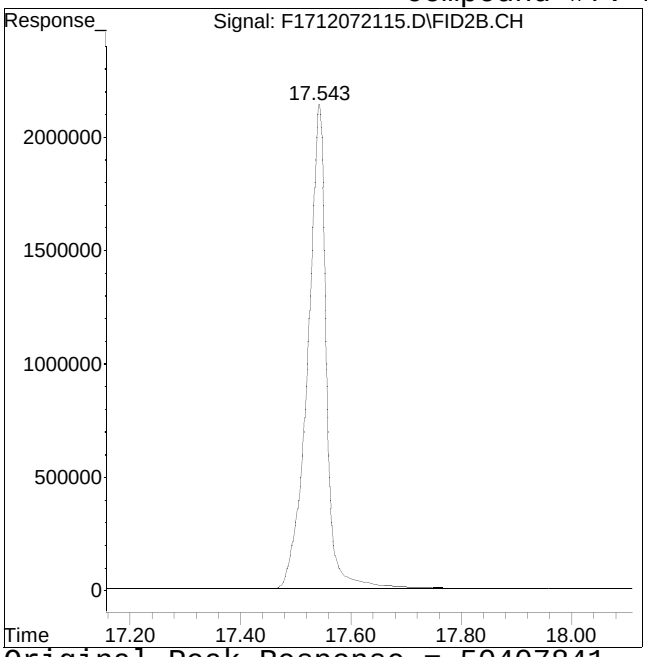
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

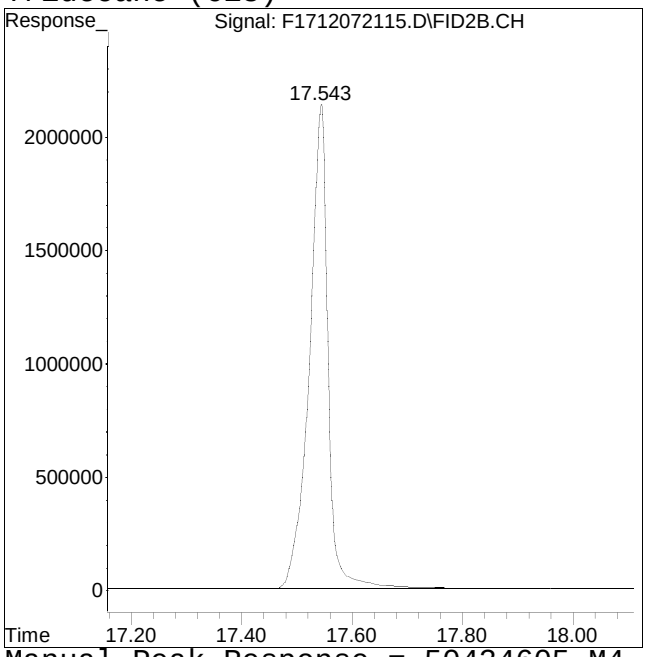
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 50407841



Manual Peak Response = 50434605 M4

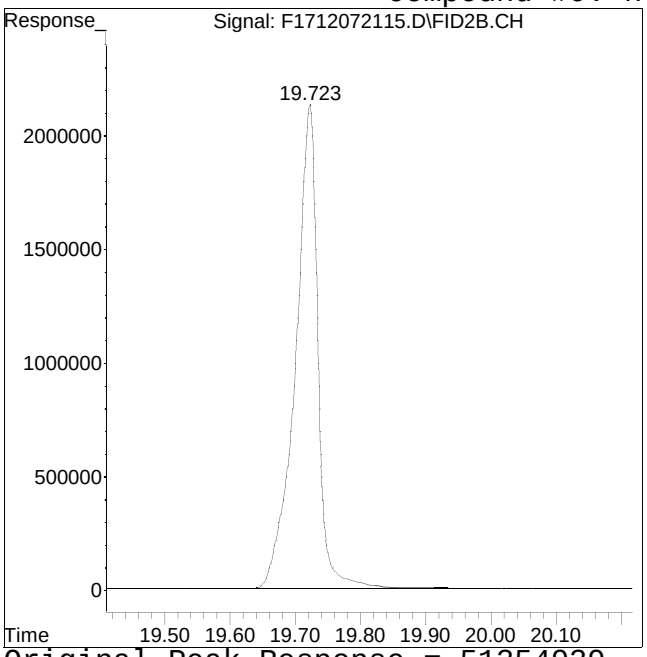
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

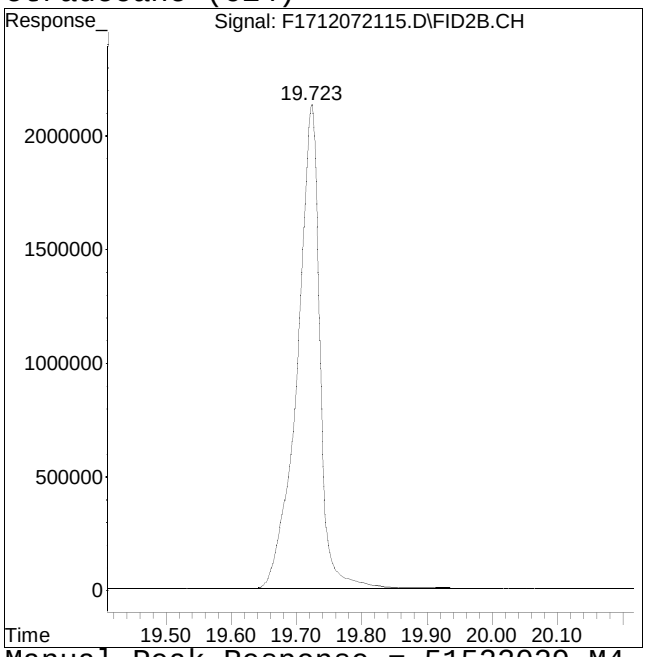
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 51354939



Manual Peak Response = 51522029 M4

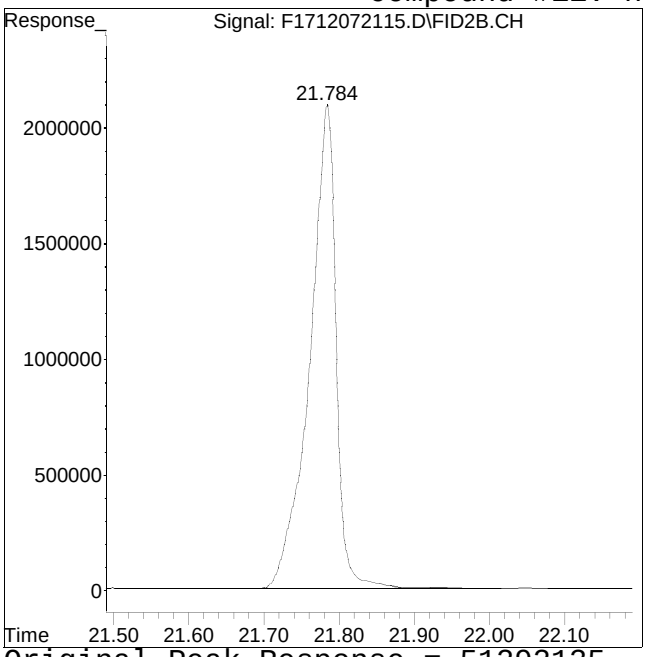
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

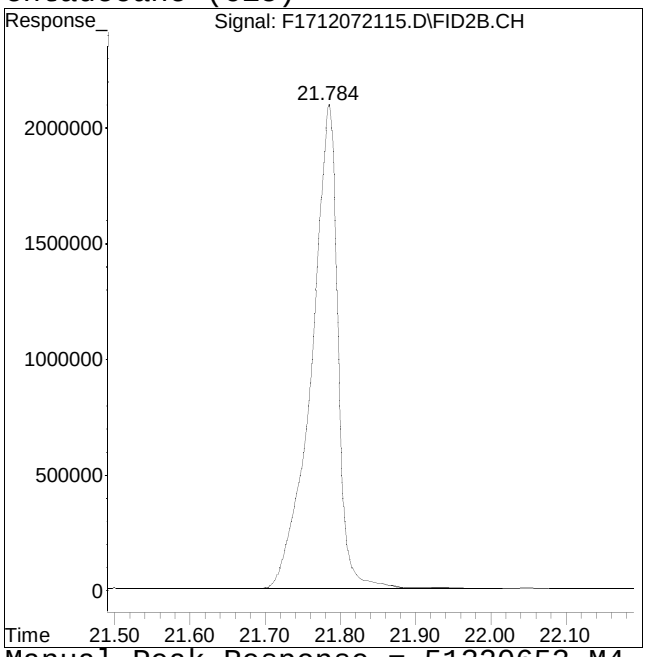
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 51292135



Manual Peak Response = 51320653 M4

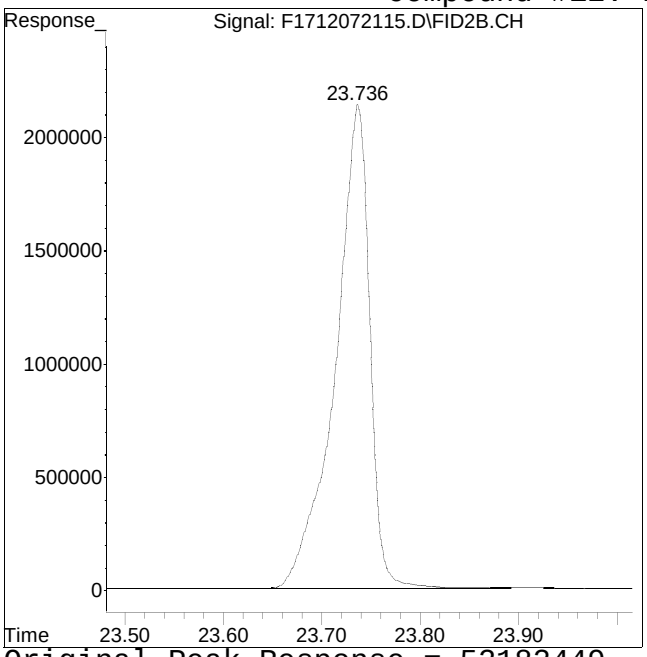
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

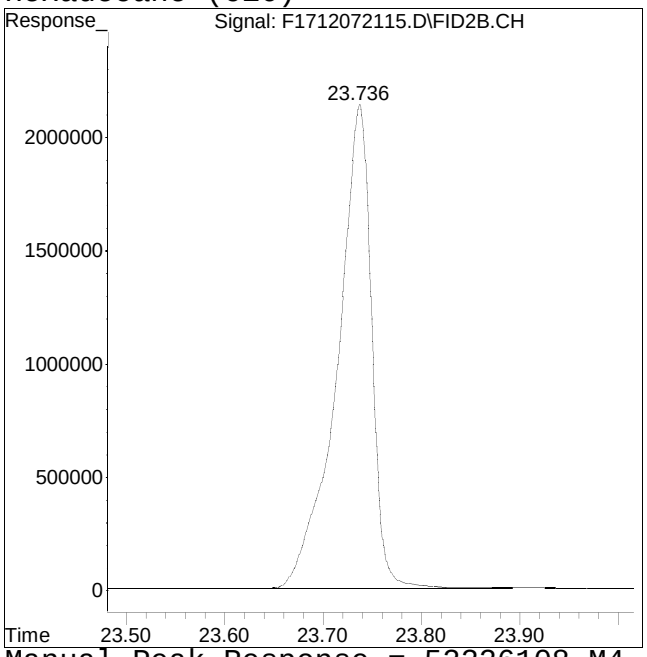
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 52182449



Manual Peak Response = 52226108 M4

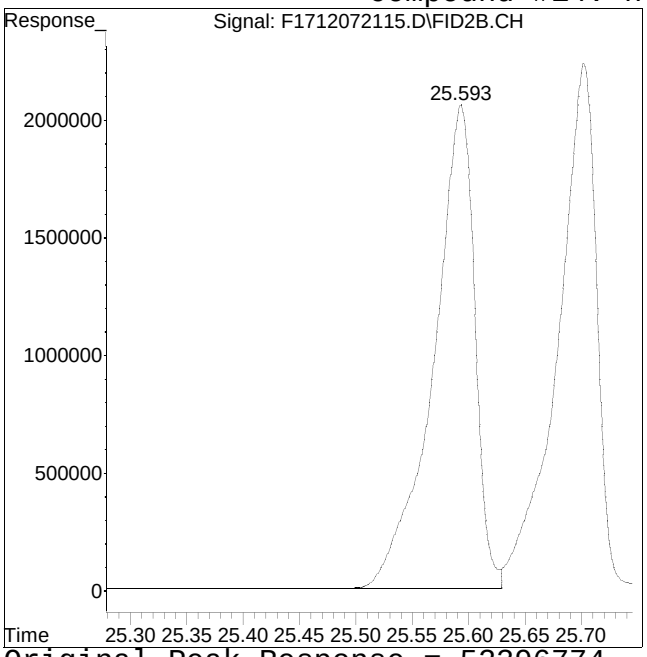
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

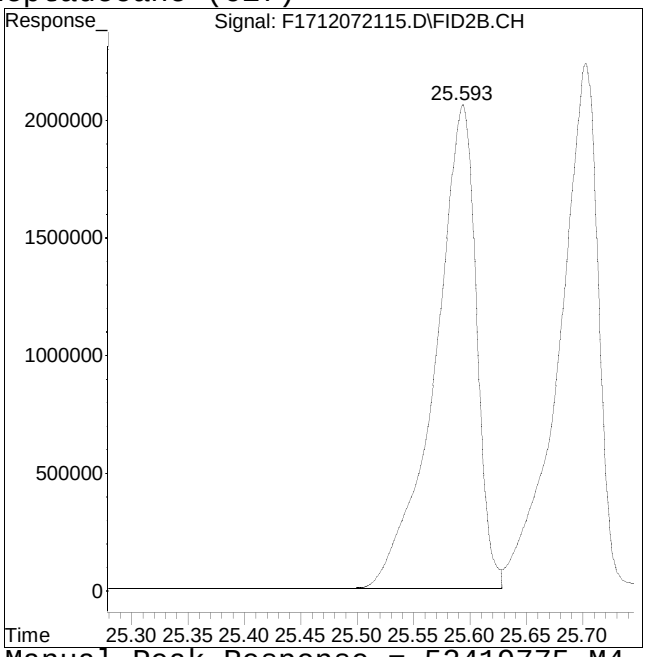
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 52396774



Manual Peak Response = 52419775 M4

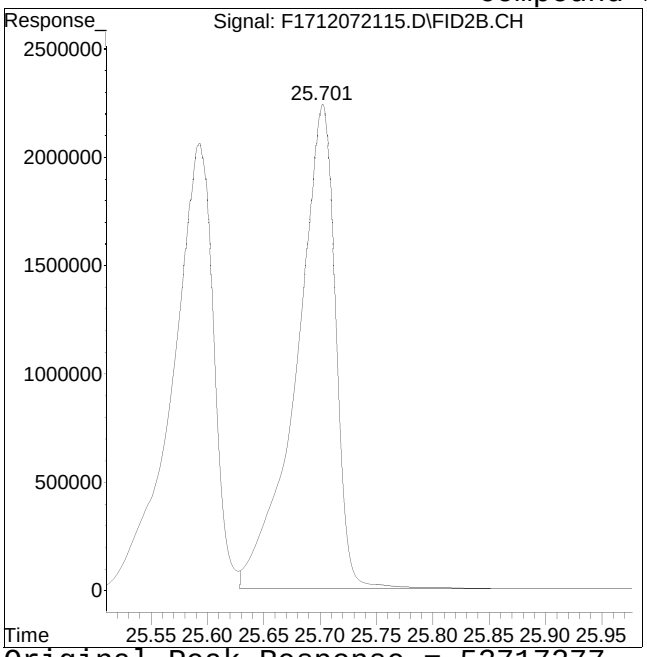
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

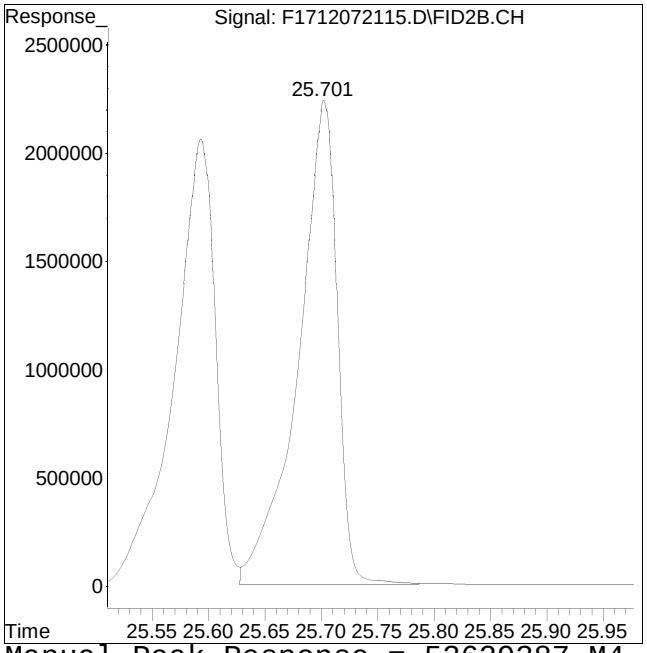
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #15: Pristane



Original Peak Response = 53717277



Manual Peak Response = 53629387 M4

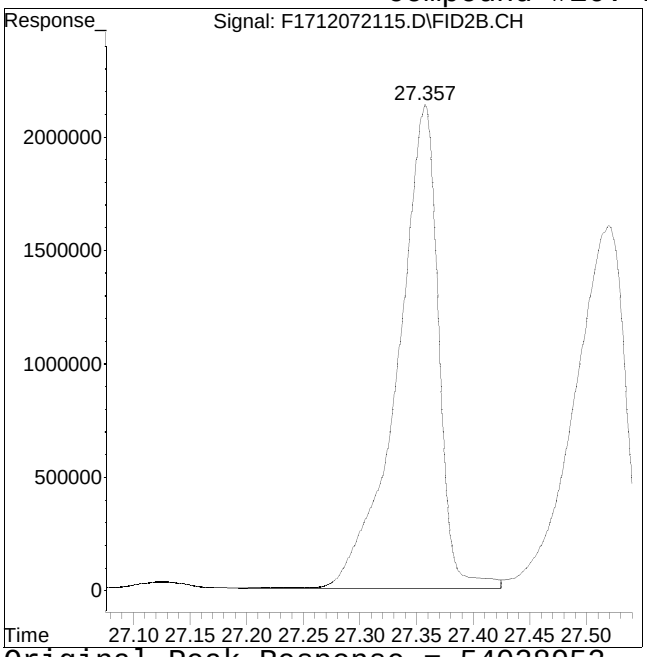
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

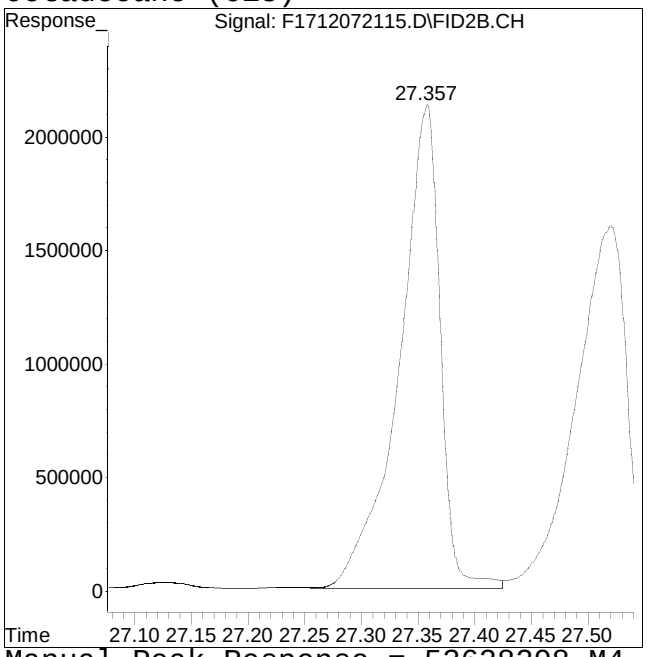
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 54028952



Manual Peak Response = 53628298 M4

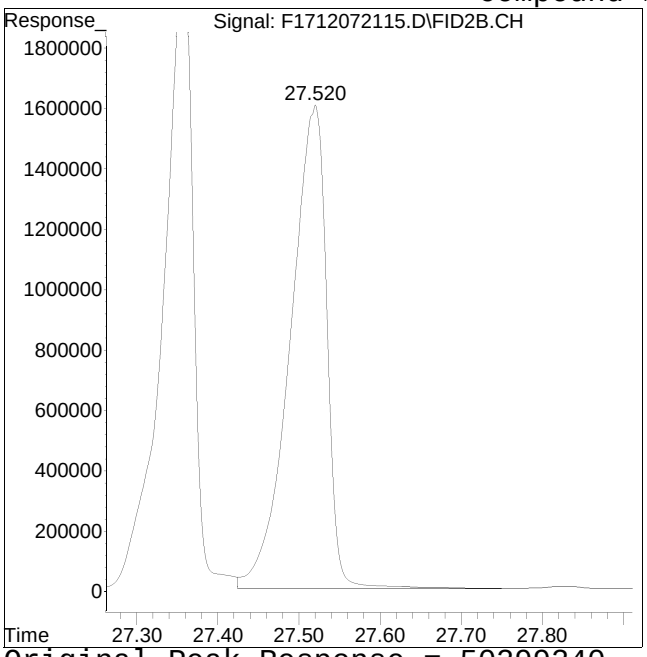
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

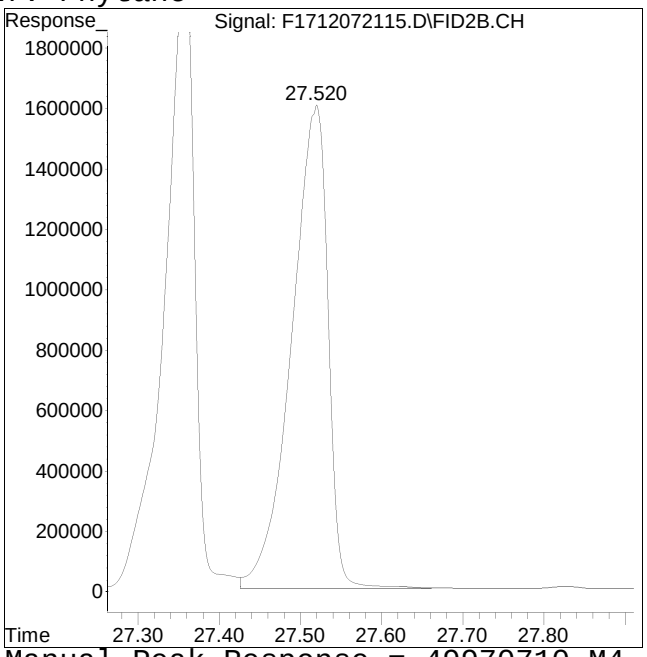
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #17: Phytane



Original Peak Response = 50299240



Manual Peak Response = 49970710 M4

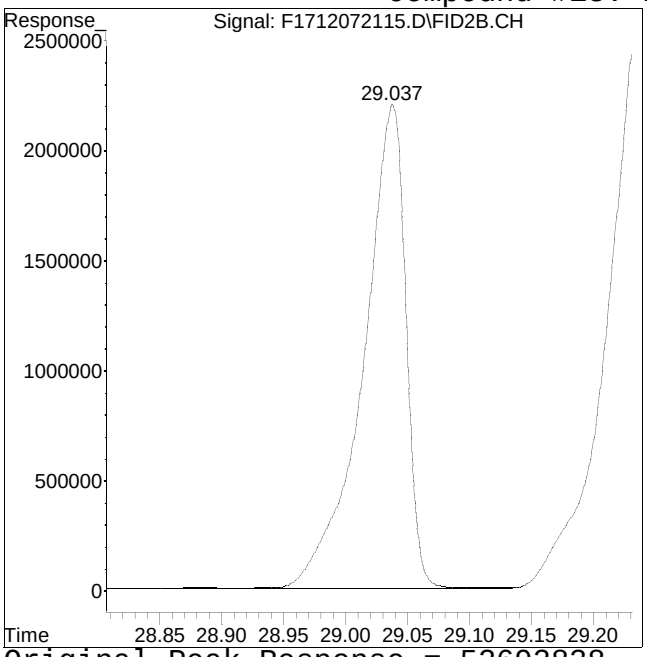
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

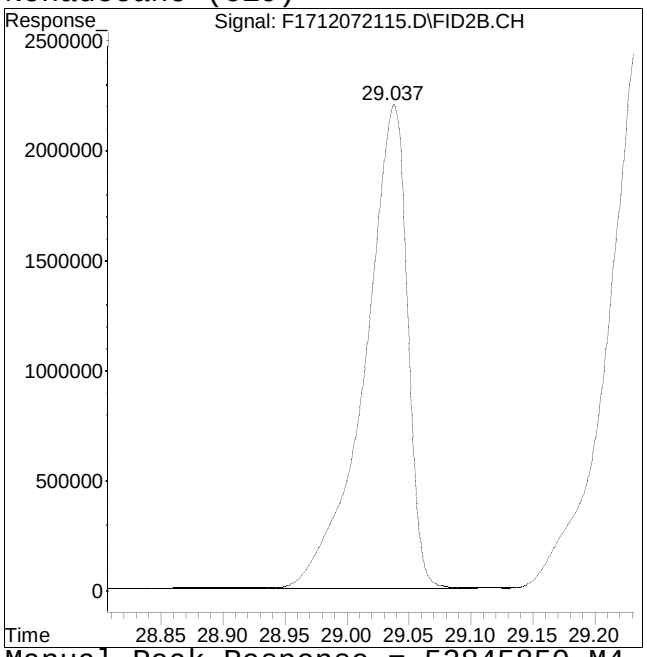
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 52692838



Manual Peak Response = 52845850 M4

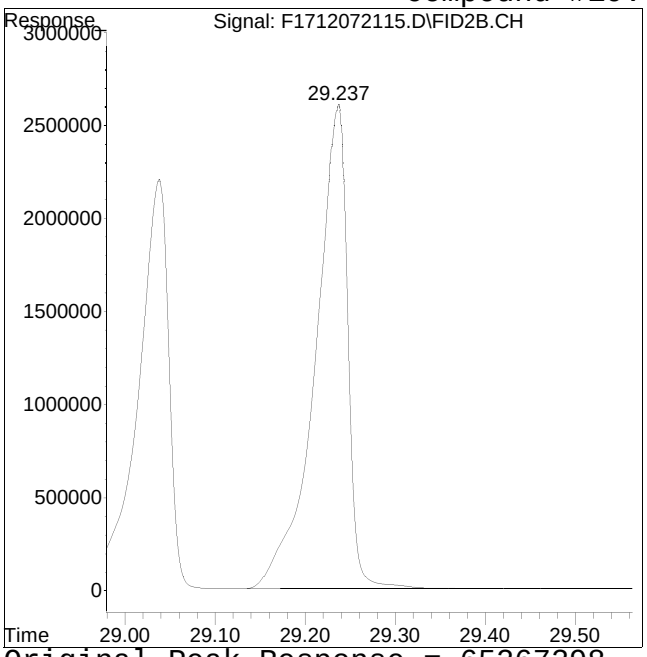
M4 = Poor automated baseline construction.

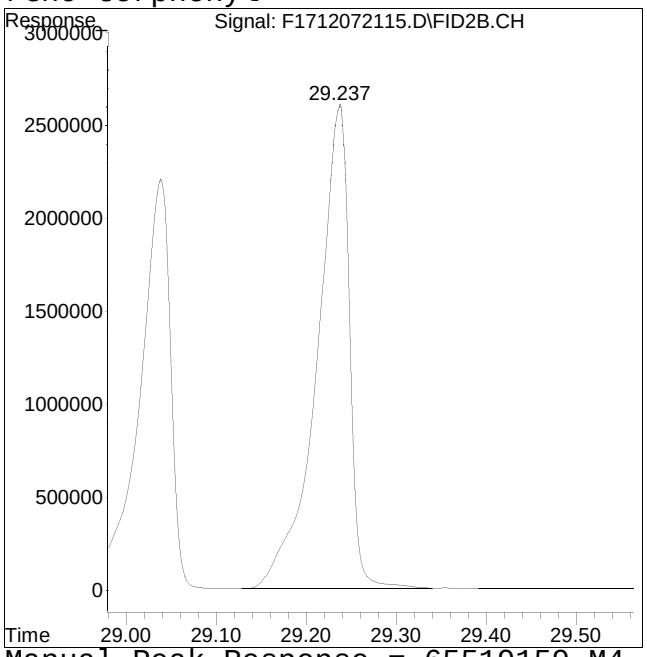
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #19: ortho-terphenyl





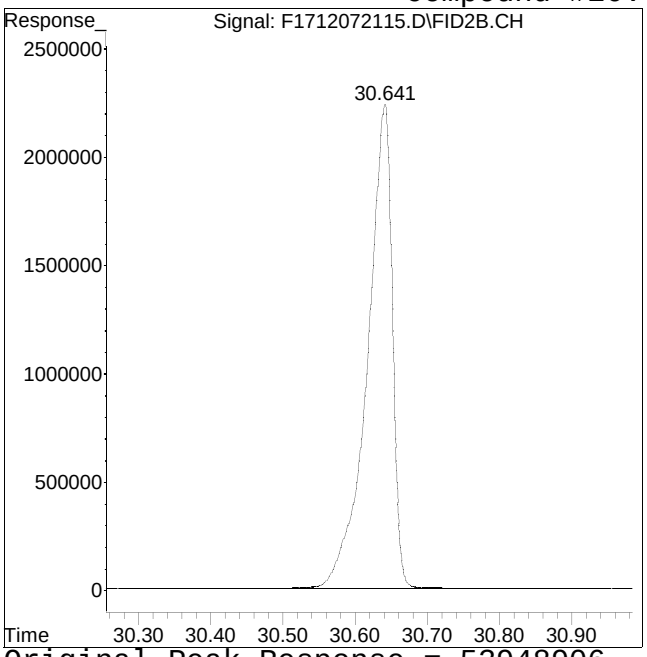
Original Peak Response = 65267298 Manual Peak Response = 65519159 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

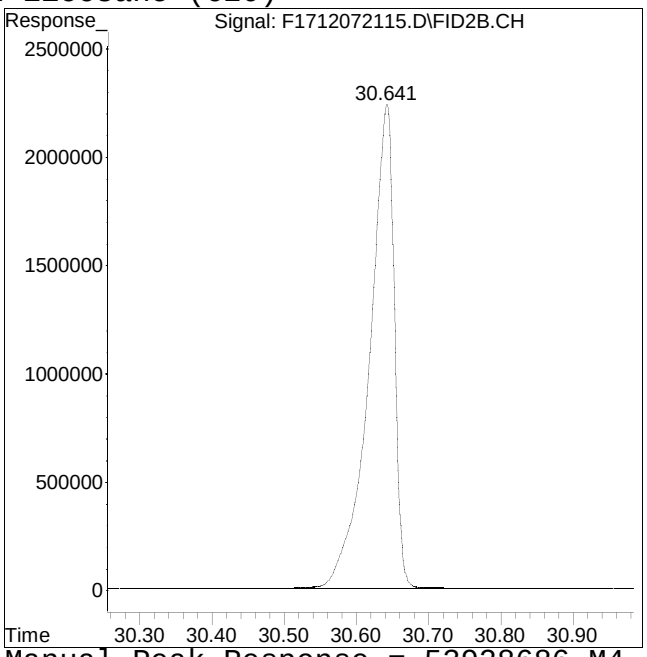
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 53948906



Manual Peak Response = 53928686 M4

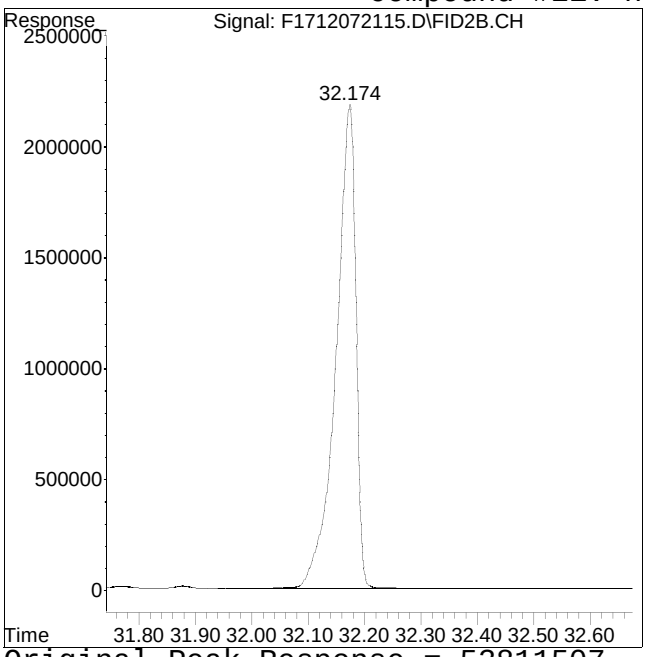
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

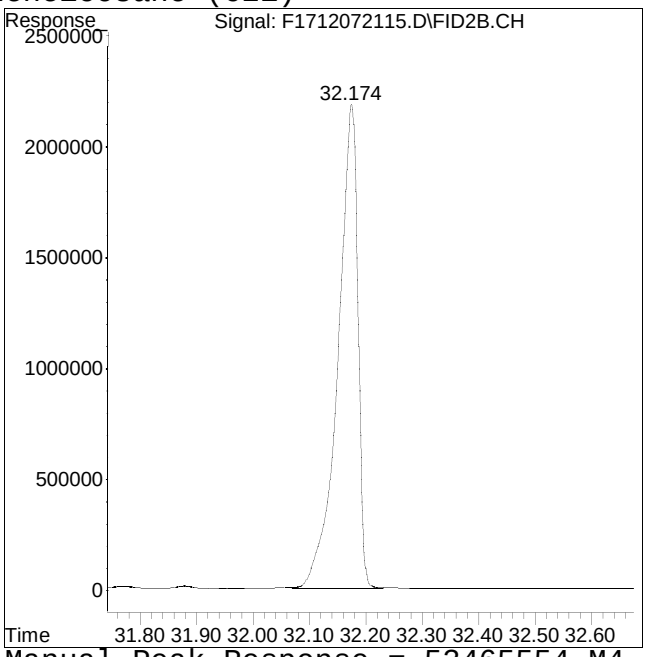
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 53811507



Manual Peak Response = 53465554 M4

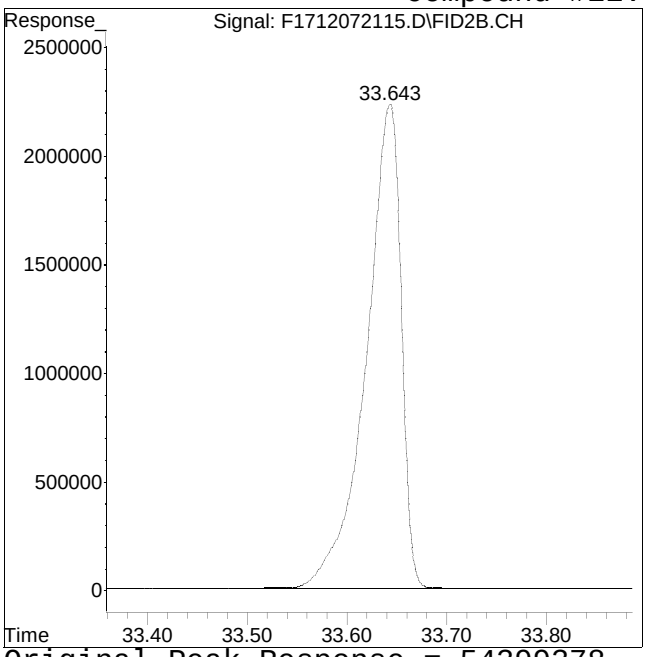
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

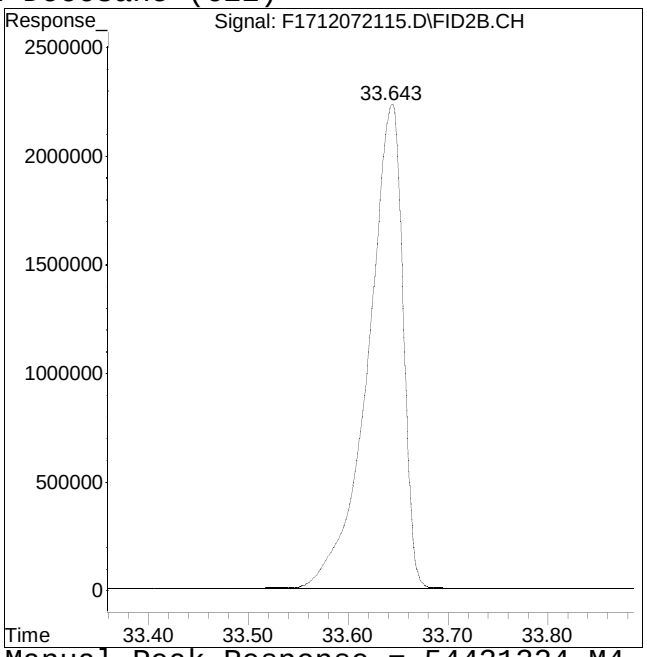
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 54399378



Manual Peak Response = 54431324 M4

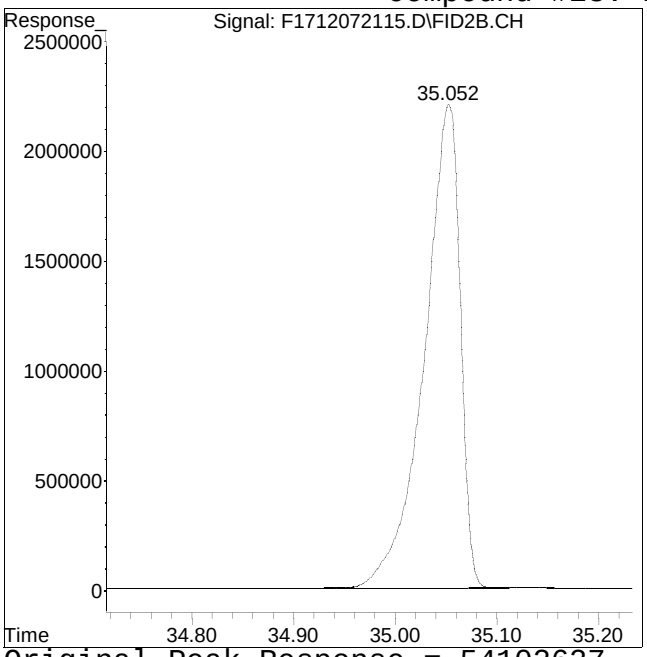
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

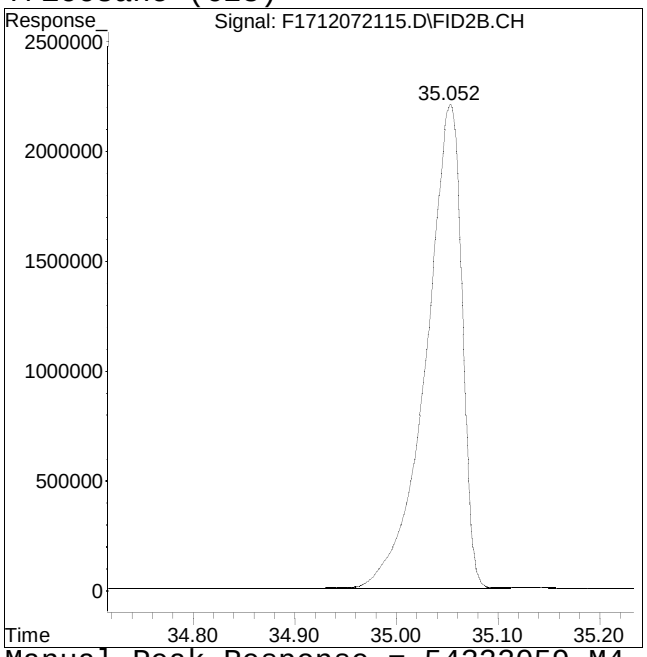
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 54102627



Manual Peak Response = 54332059 M4

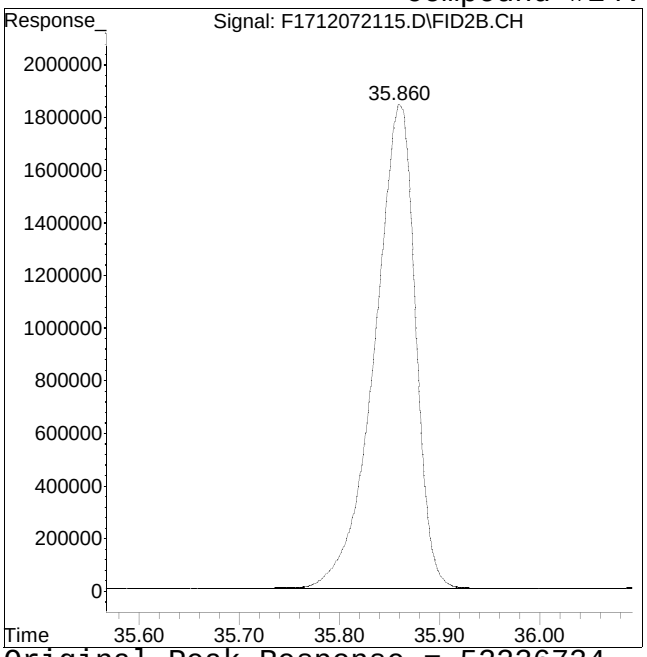
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

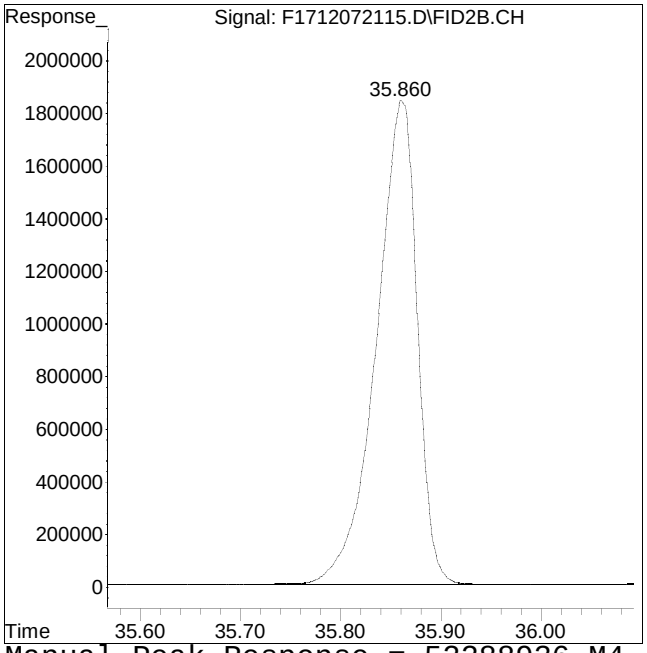
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #24: d50-Tetracosane



Original Peak Response = 52236734



Manual Peak Response = 52288936 M4

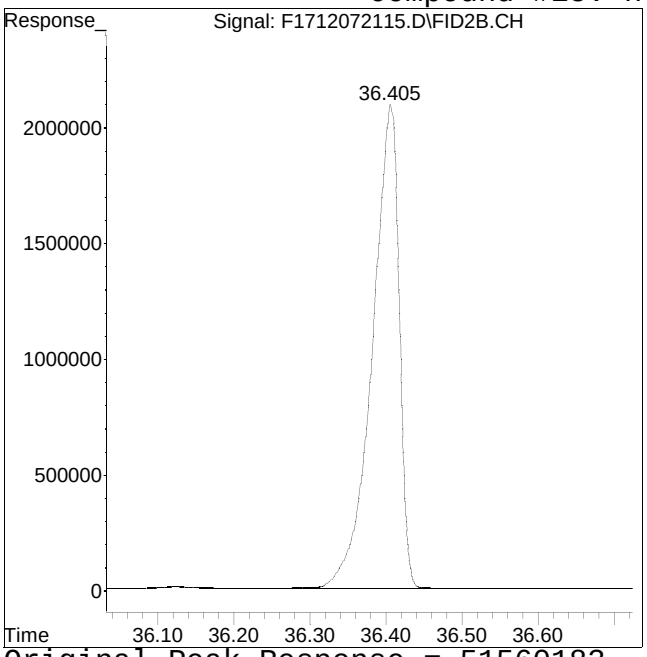
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

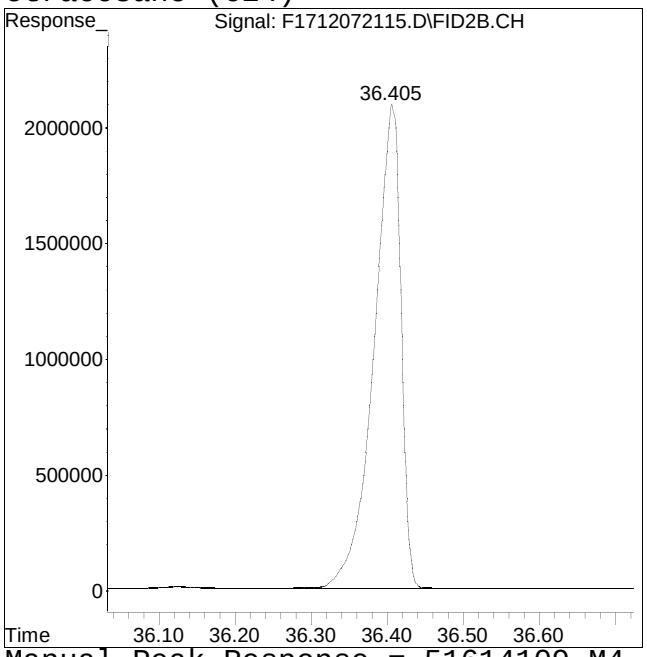
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 51560183



Manual Peak Response = 51614109 M4

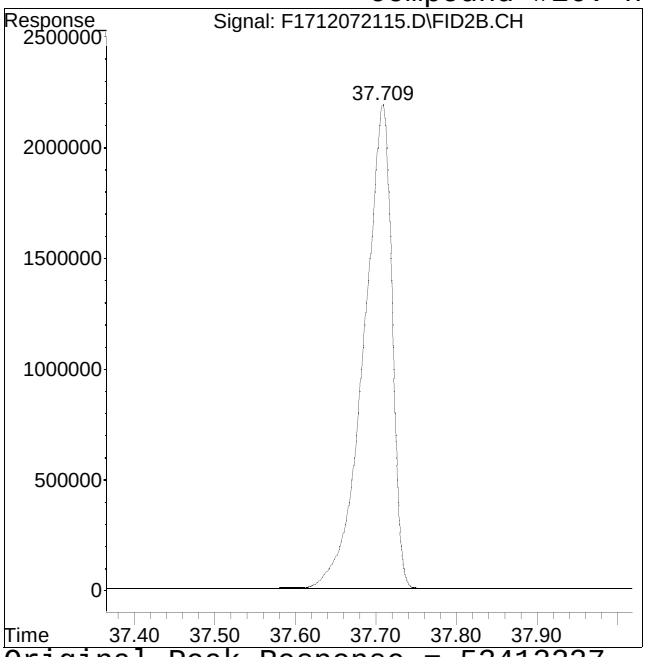
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

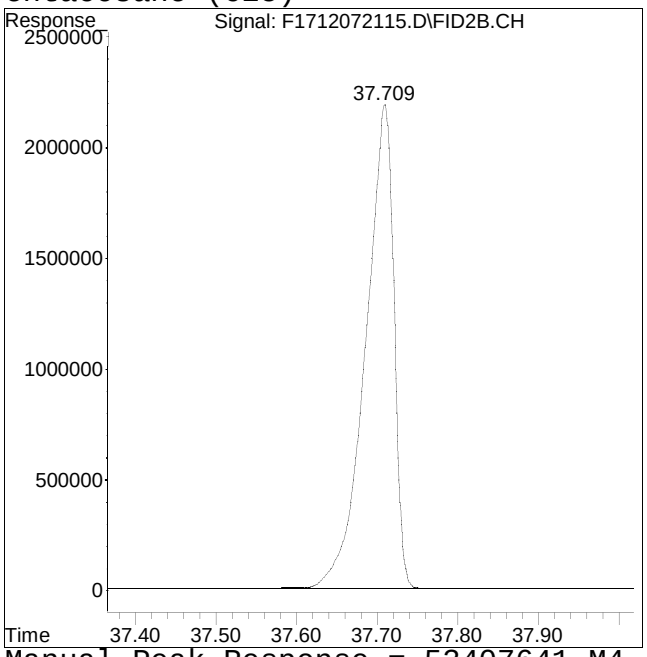
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 53413237



Manual Peak Response = 53407641 M4

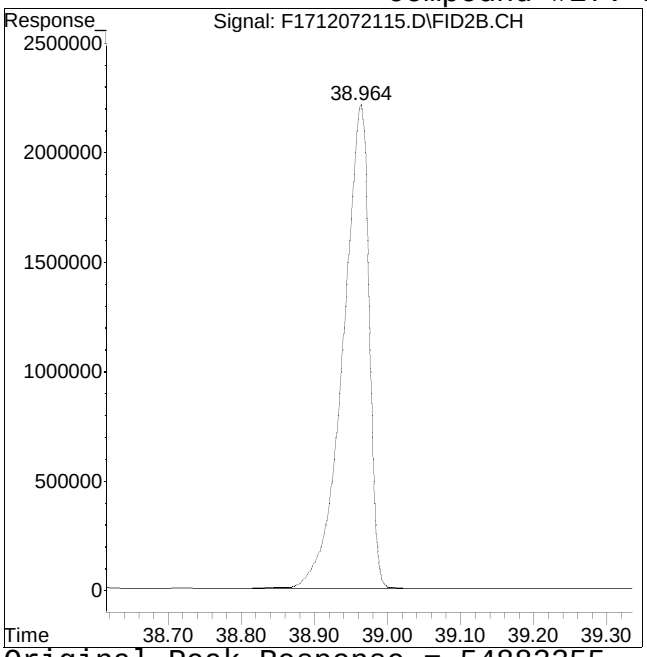
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

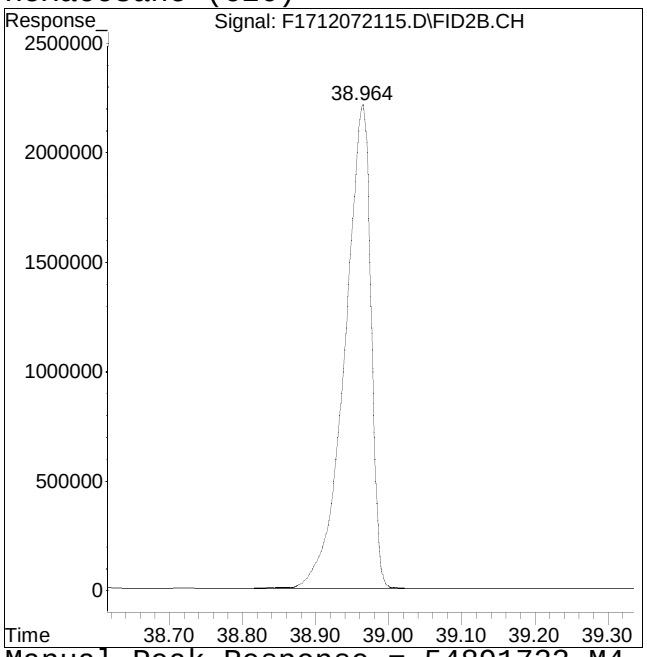
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 54883355



Manual Peak Response = 54891733 M4

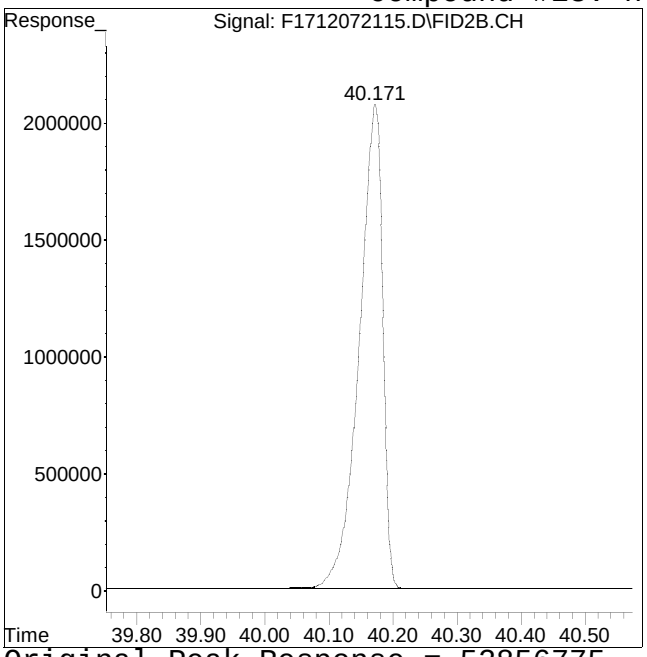
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

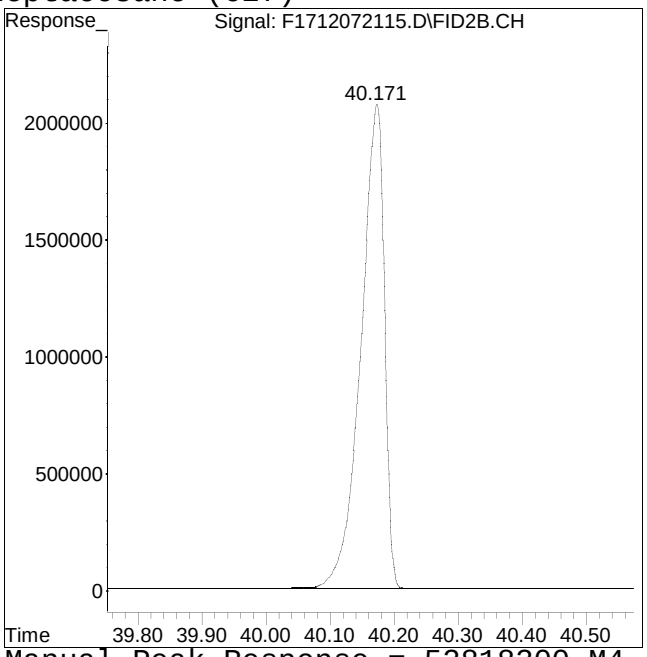
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 52856775



Manual Peak Response = 52818300 M4

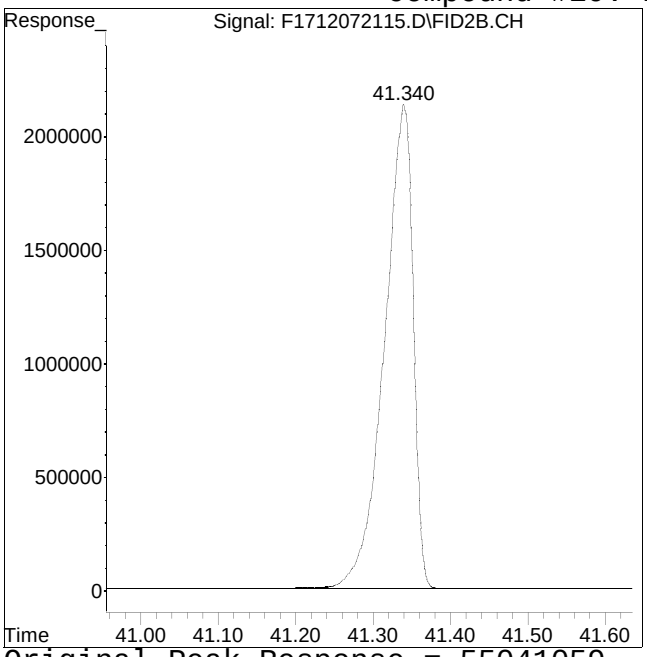
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

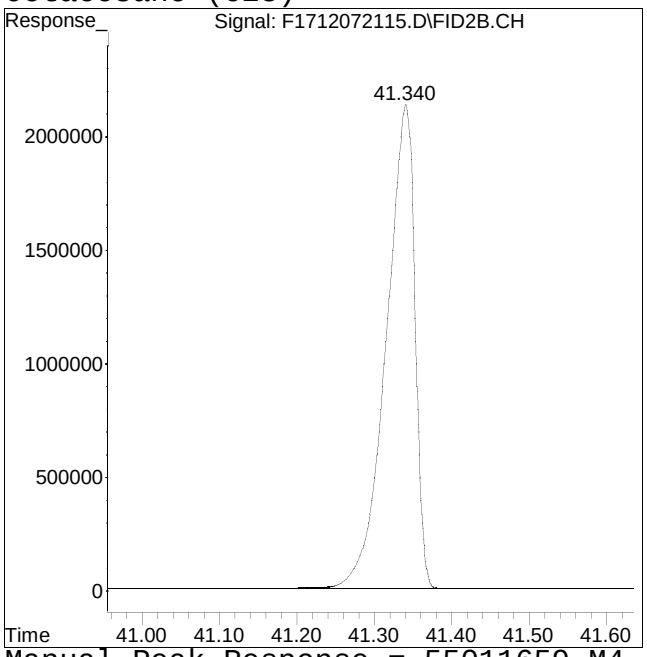
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 55041059



Manual Peak Response = 55011659 M4

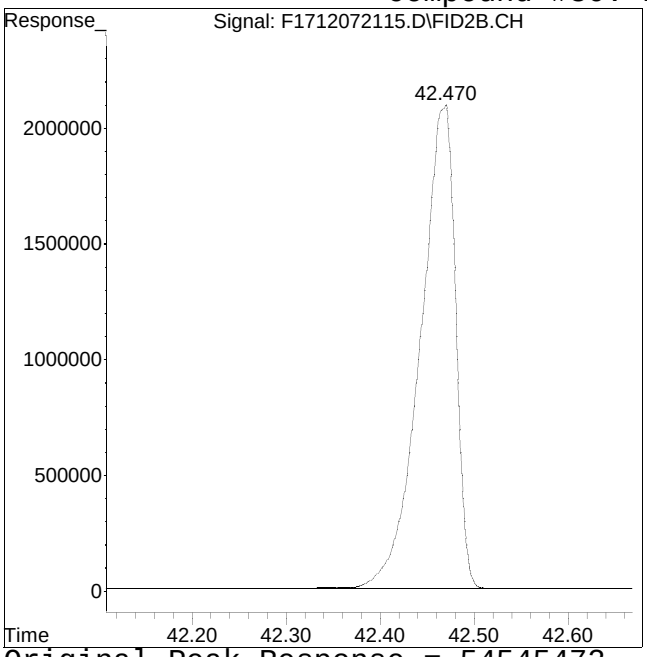
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

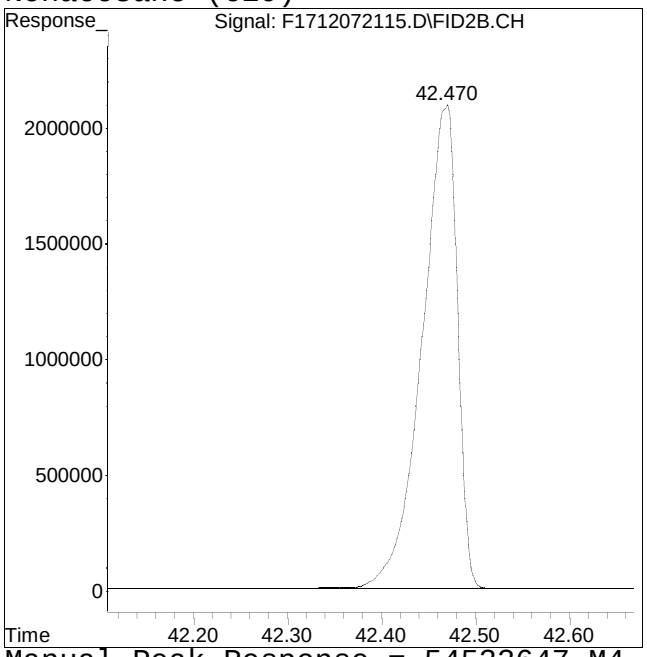
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 54545472



Manual Peak Response = 54533647 M4

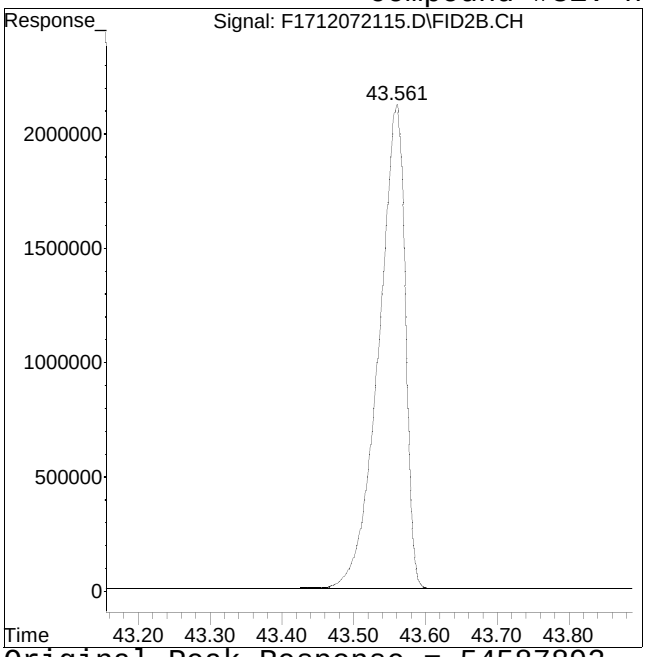
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

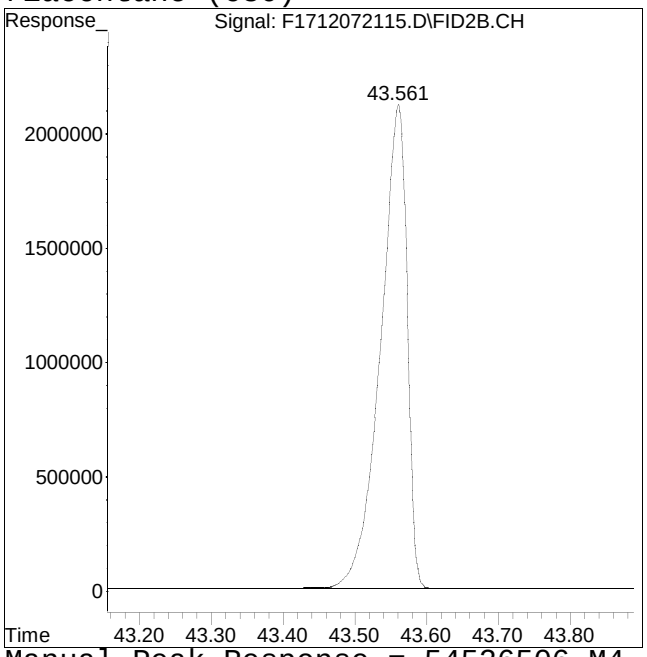
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 54587892



Manual Peak Response = 54526506 M4

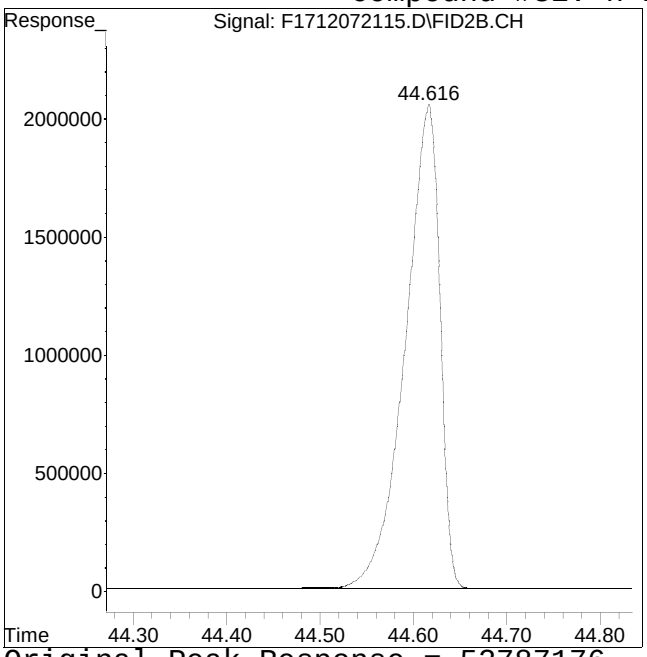
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

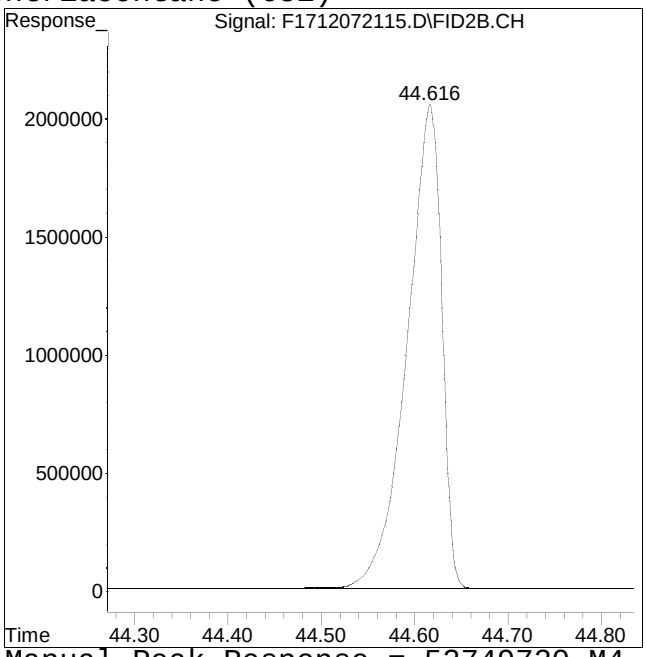
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 52787176



Manual Peak Response = 52749720 M4

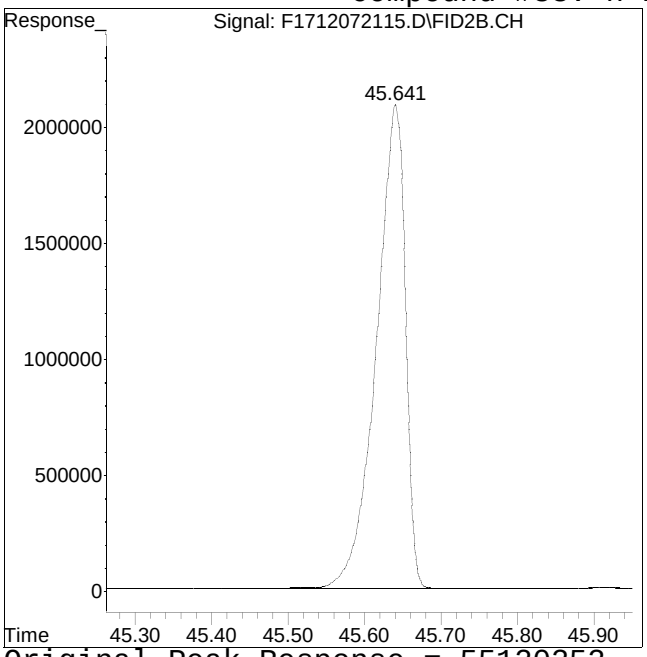
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

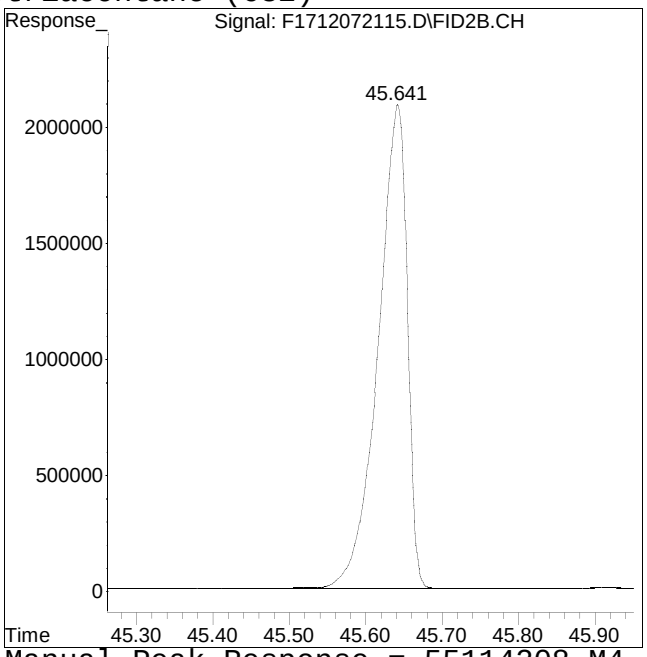
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 55120252



Manual Peak Response = 55114208 M4

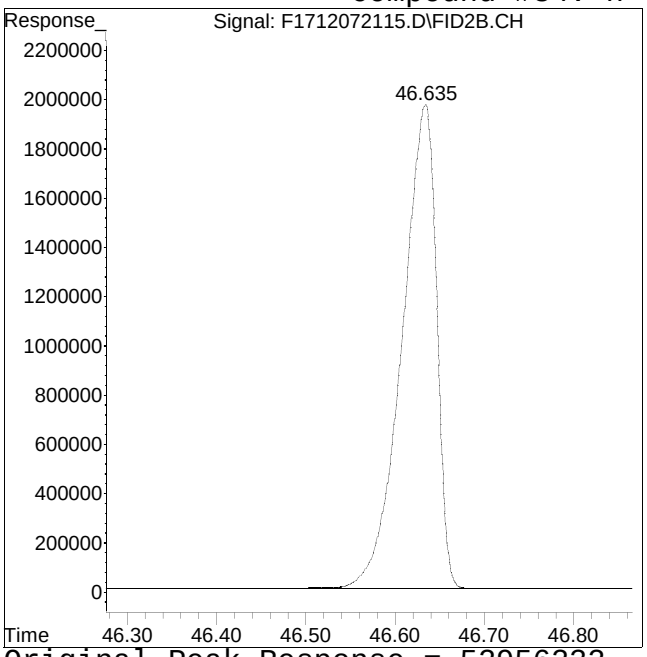
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

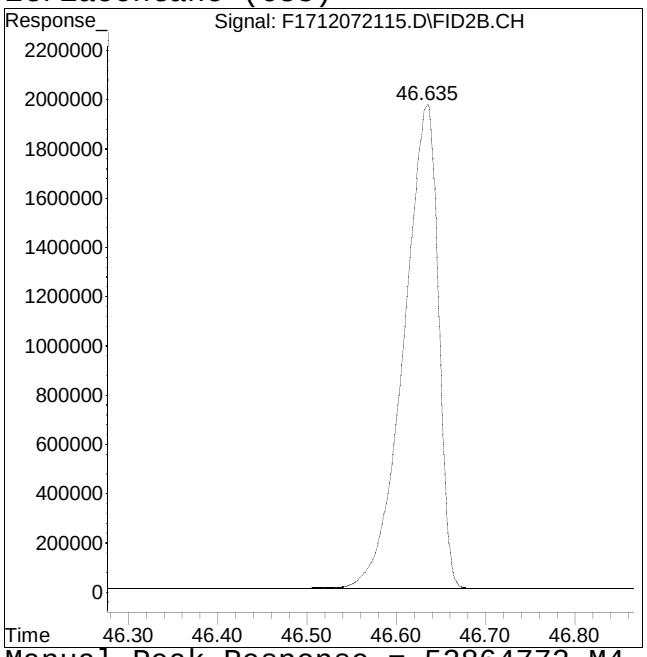
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 52956232



Manual Peak Response = 52864772 M4

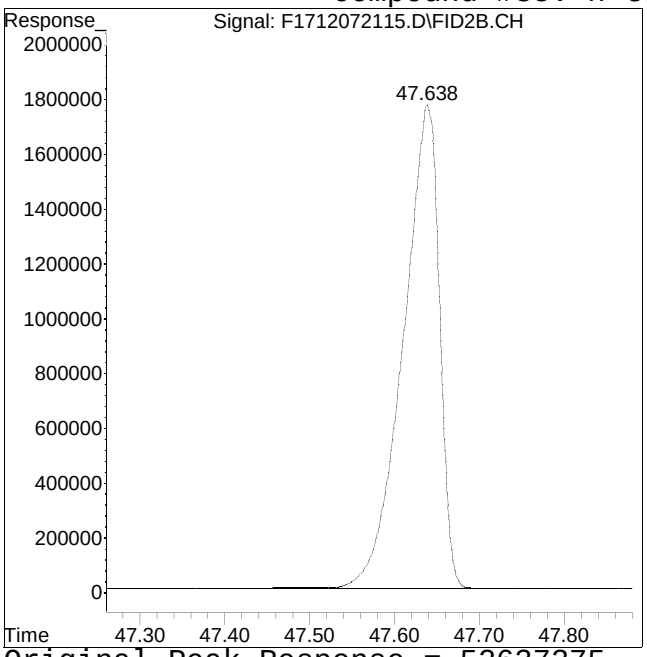
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

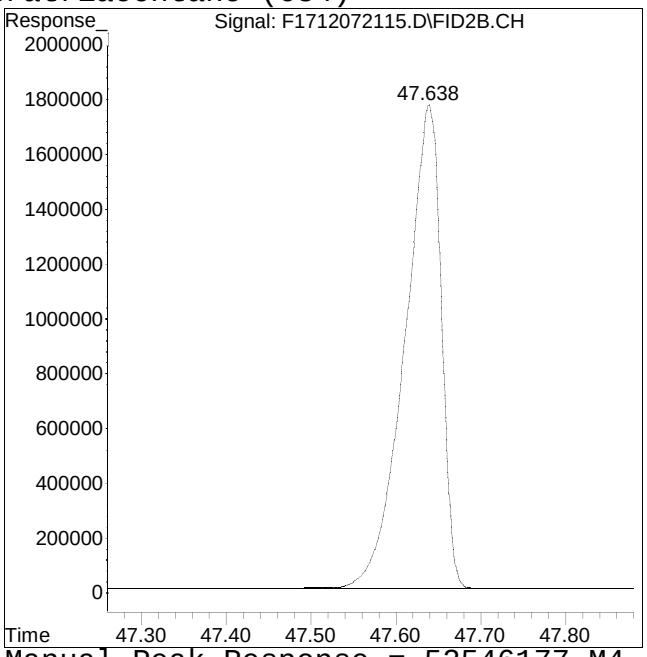
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 52637375



Manual Peak Response = 52546177 M4

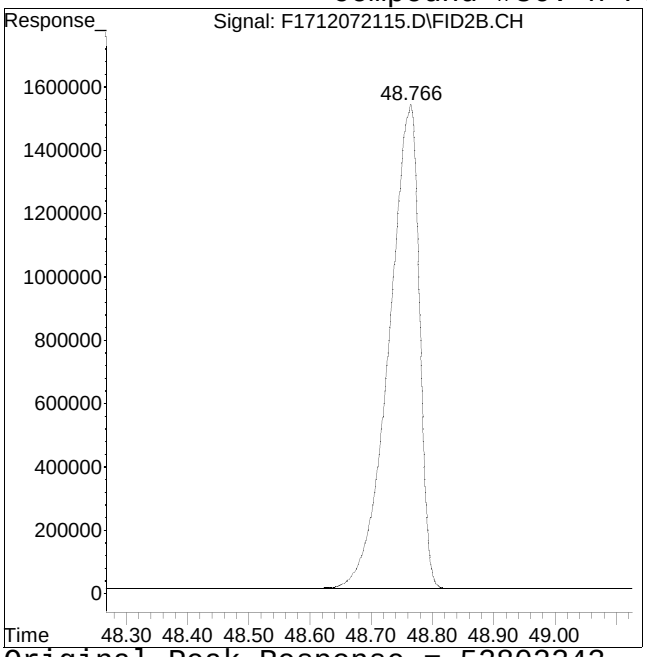
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

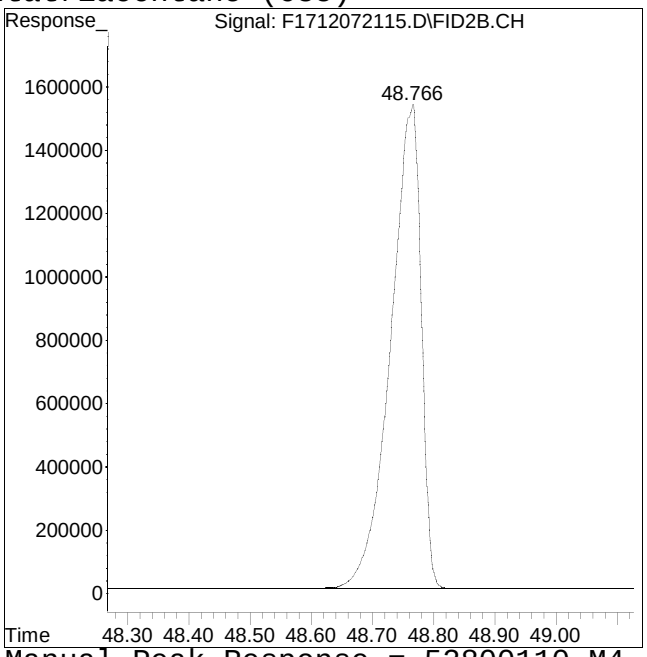
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 52802243



Manual Peak Response = 52800110 M4

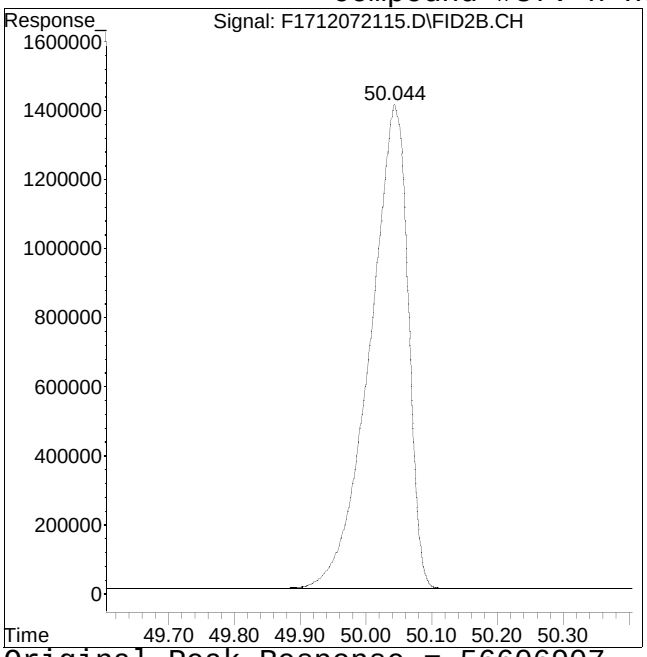
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

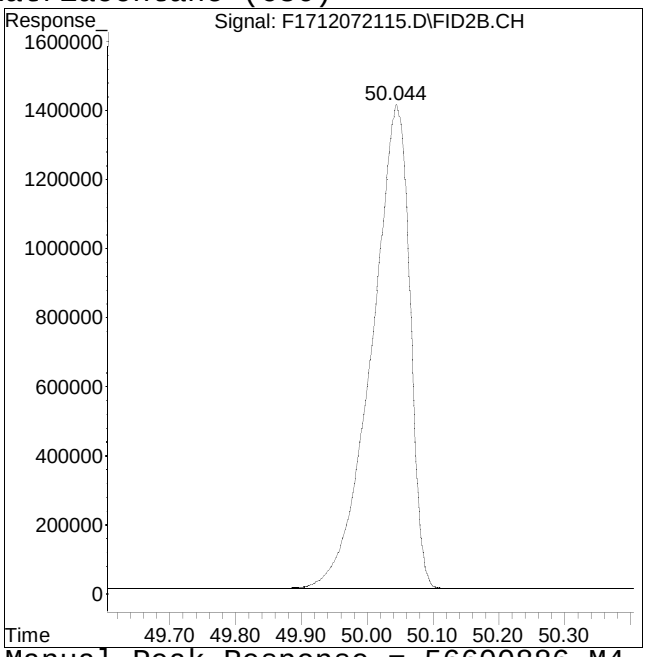
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 56606907



Manual Peak Response = 56600886 M4

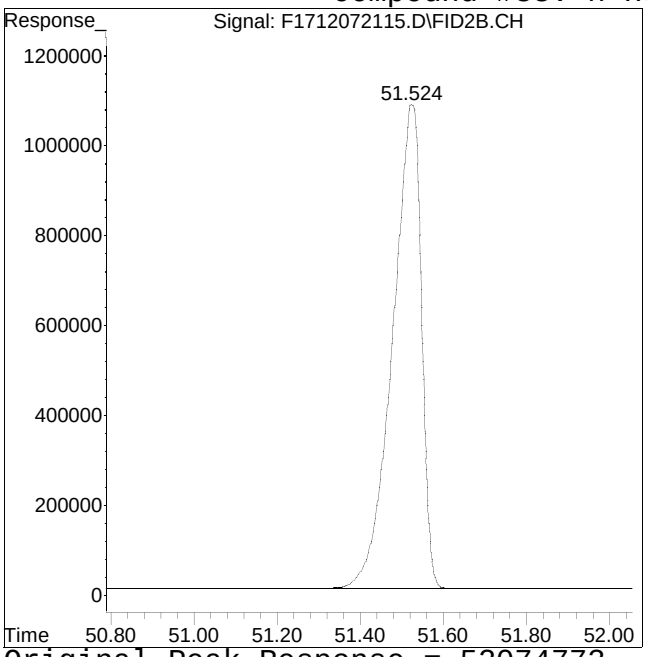
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

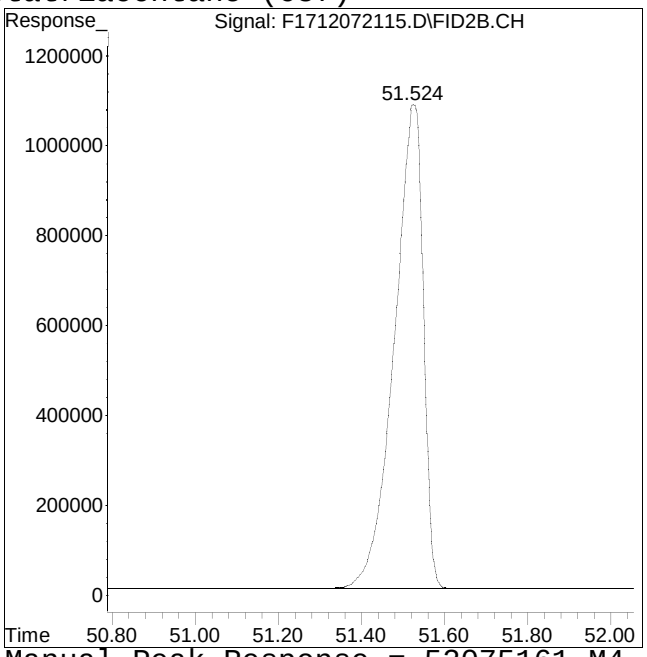
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 52074773



Manual Peak Response = 52075161 M4

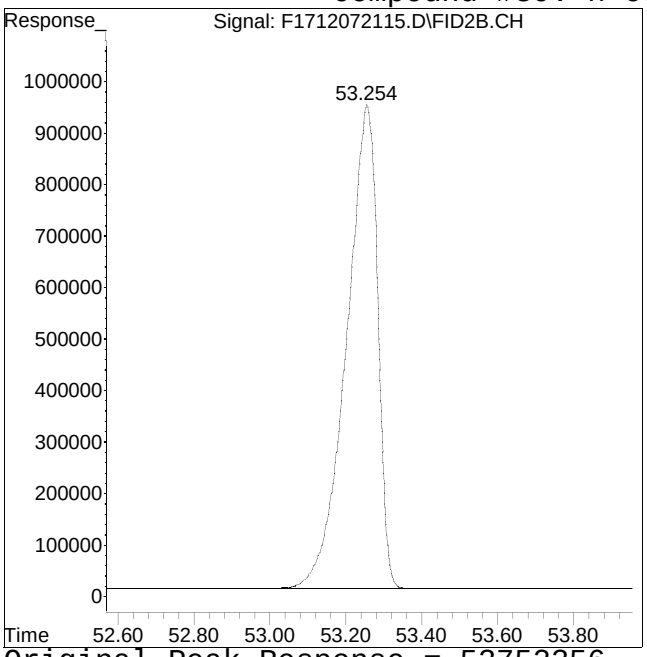
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

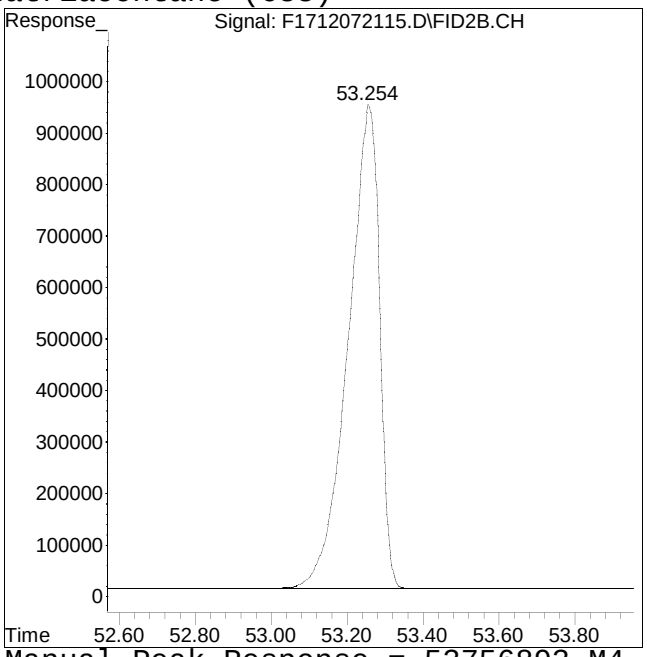
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 53752356



Manual Peak Response = 53756893 M4

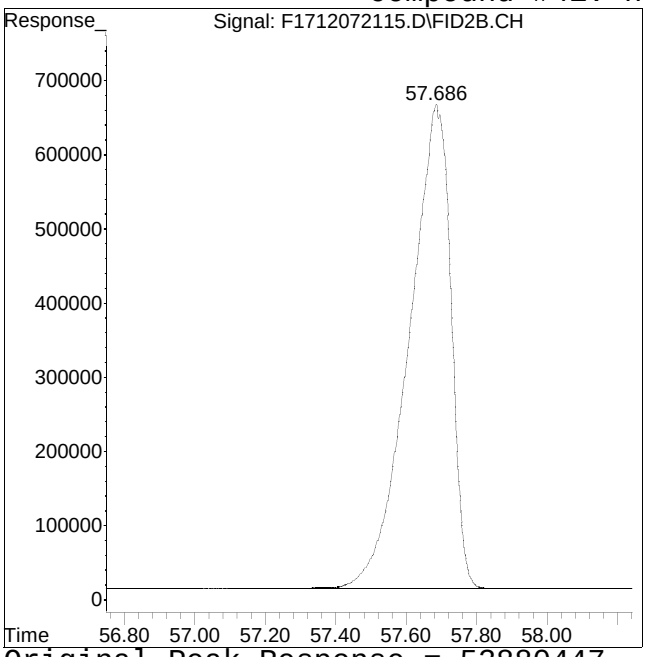
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

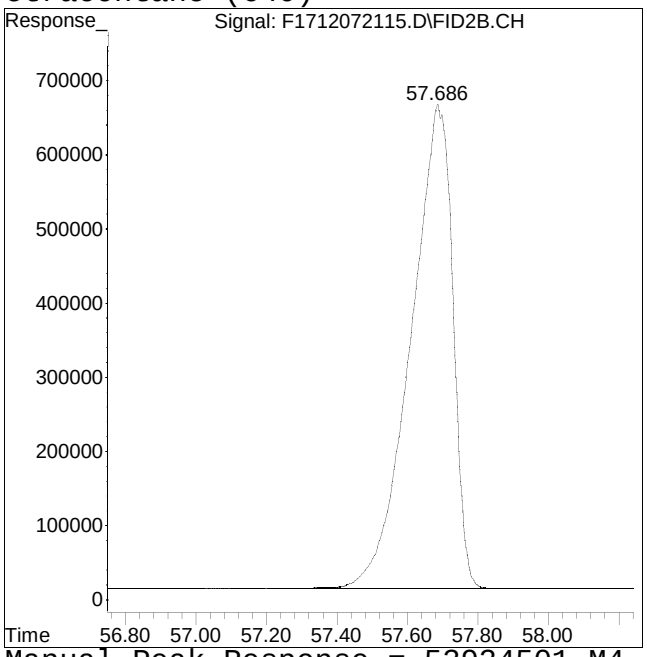
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072115.D
Date Inj'd : 12/7/2021 7:51 pm
Sample : I1712072103R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:15 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 53880447



Manual Peak Response = 53934501 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072117.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 9:19 pm
Operator : FID17:WR
Sample : I1712072104R
Misc : WG1581826,FRBD79,100ug/ml
ALS Vial : 59 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 15:56:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 15:50:01 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.248	52800007	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.254	113681481	94.816 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 189.63%#	
24) s d50-Tetracosane	35.877	90210774	92.689 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 185.38%#	
Target Compounds			
2) t n-Octane (C8)	5.666	83388241	97.801 ug/mL M4
3) t n-Nonane (C9)	7.854	89132734	100.510 ug/mL M4
4) t n-Decane (C10)	10.327	93299604	105.921 ug/mL M4
5) t n-Undecane (C11)	12.832	95456547	105.077 ug/mL M4
6) t n-Dodecane (C12)	15.254	97103955	103.276 ug/mL M4
7) t n-Tridecane (C13)	17.558	97754302	100.241 ug/mL M4
9) t n-Tetradecane (C14)	19.737	100327825	99.736 ug/mL M4
11) t n-Pentadecane (C15)	21.799	101109576	100.800 ug/mL M4
12) t n-Hexadecane (C16)	23.754	100367932	98.019 ug/mL M4
14) t n-Heptadecane (C17)	25.610	101940782	104.061 ug/mL M4
15) t Pristane	25.722	103351568	93.666 ug/mL M4
16) t n-Octadecane (C18)	27.375	102519840	98.194 ug/mL M4
17) t Phytane	27.538	95640183	96.132 ug/mL M4
18) t n-Nonadecane (C19)	29.057	102664671	98.030 ug/mL M4
20) t n-Eicosane (C20)	30.658	103546898	97.127 ug/mL M4
21) t n-Heneicosane (C21)	32.191	103870126	97.081 ug/mL M4
22) t n-Docosane (C22)	33.661	103554015	95.777 ug/mL M4
23) t n-Tricosane (C23)	35.071	103362161	94.841 ug/mL M4
25) t n-Tetracosane (C24)	36.427	102736109	95.558 ug/mL M4
26) t n-Pentacosane (C25)	37.727	100613230	93.870 ug/mL M4
27) t n-Hexacosane (C26)	38.982	102866236	93.355 ug/mL M4
28) t n-Heptacosane (C27)	40.191	101869380	93.283 ug/mL M4
29) t n-Octacosane (C28)	41.360	104164442	92.460 ug/mL M4
30) t n-Nonacosane (C29)	42.486	103264928	92.732 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072117.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 9:19 pm
Operator : FID17:WR
Sample : I1712072104R
Misc : WG1581826,FRBD79,100ug/ml
ALS Vial : 59 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 15:56:37 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 15:50:01 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

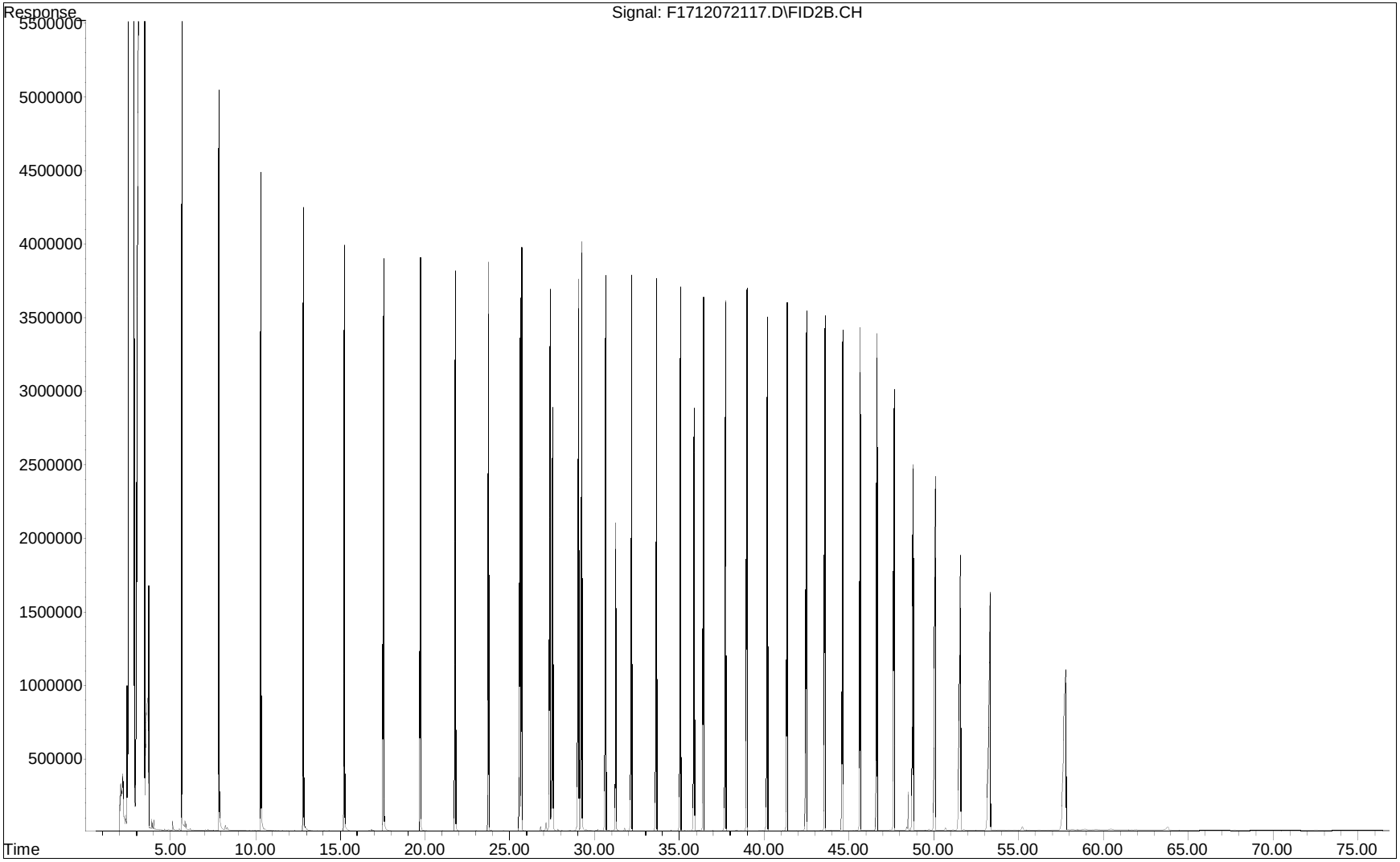
	Compound	R.T.	Response	Conc	Units	
31) t	n-Triacontane (C30)	43.583	103306859	92.549	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.637	99422613	91.918	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.664	104267747	92.297	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.655	101310941	92.730	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.663	101222390	93.004	ug/mL	M4
36) t	n-Pentatriacontane (C35)	48.784	94718068	90.968	ug/mL	M4
37) t	n-Hexatriacontane (C36)	50.085	114655276	94.671	ug/mL	M4
38) t	n-Heptatriacontane (C37)	51.568	104605263	94.373	ug/mL	M4
39) t	n-Octatriacontane (C38)	53.306	106059498	93.870	ug/mL	M4
41) t	n-Tetracontane (C40)	57.764	104881928	93.910	ug/mL	M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

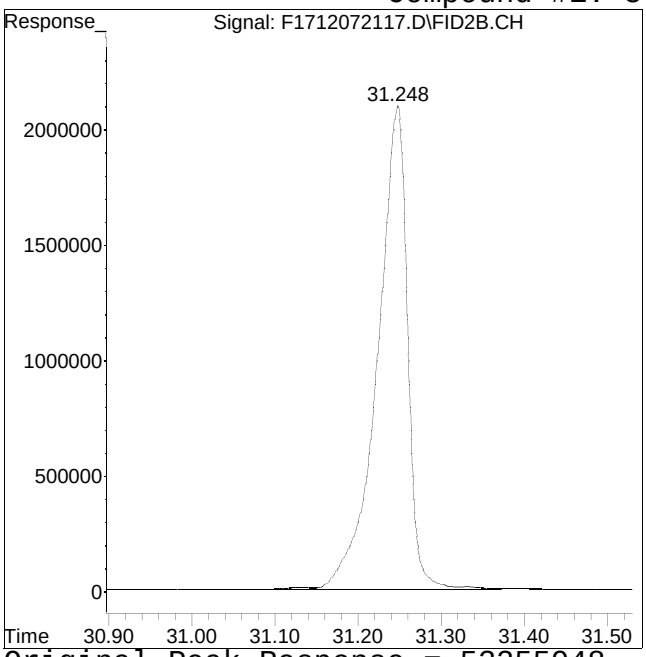
File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072117.D
Operator : FID17:WR
Acquired : 07 Dec 2021 9:19 pm using AcqMethod FID17A.M
Sample Name: I1712072104R
Instrument: FID17
Misc Info : WG1581826,FRBD79,100ug/ml
Vial Number: 59
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M

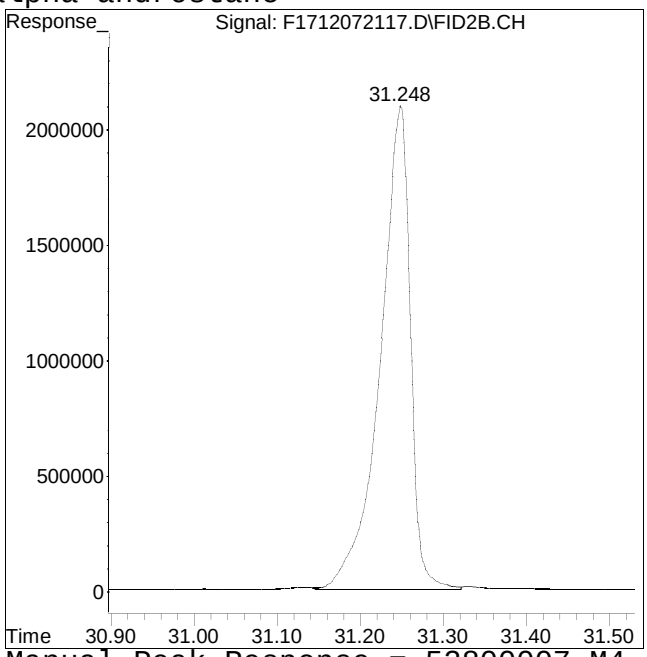


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17120721R_DRO.M
Data File : F1712072117.D Operator : FID17:WR
Date Inj'd : 12/7/2021 9:19 pm Instrument : FID17
Sample : I1712072104R Quant Date : 12/9/2021 3:50 pm

Compound #1: 5-alpha-androstane





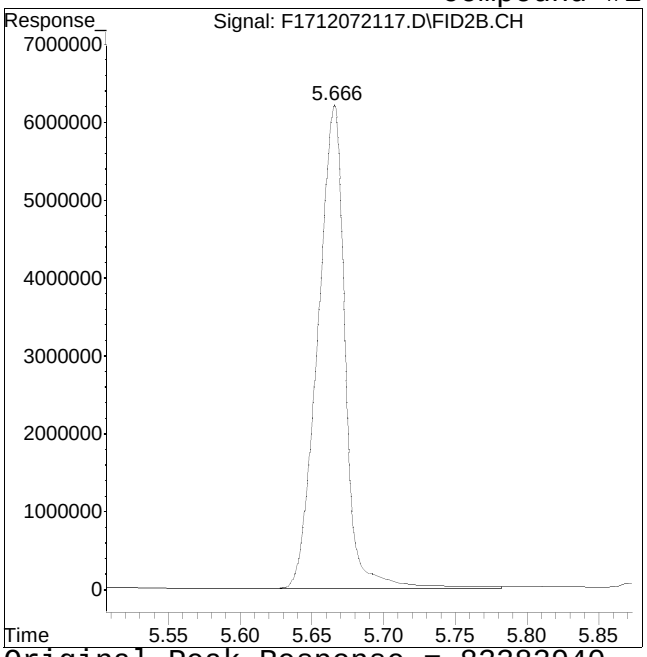
Original Peak Response = 53255948 Manual Peak Response = 52800007 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

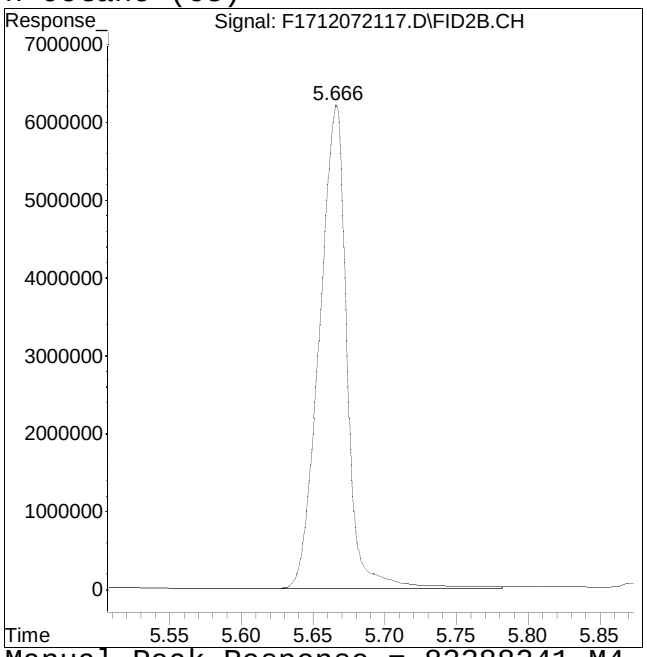
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #2: n-Octane (C8)



Original Peak Response = 83383940



Manual Peak Response = 83388241 M4

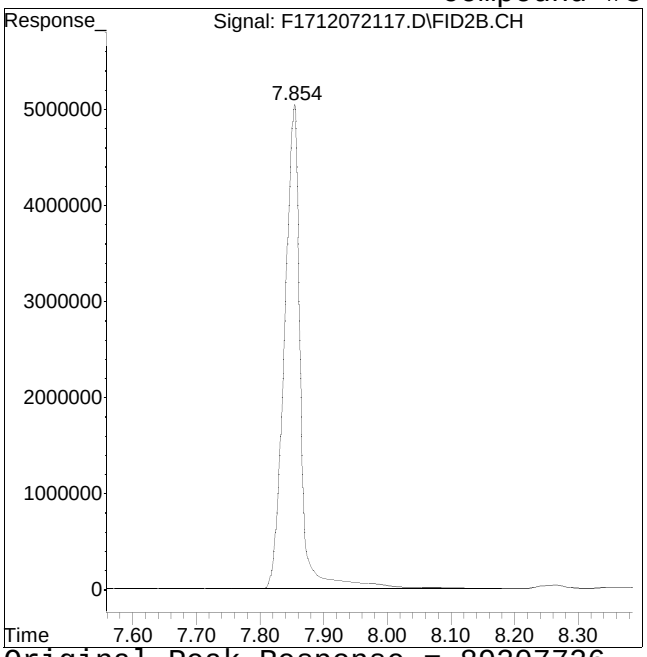
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

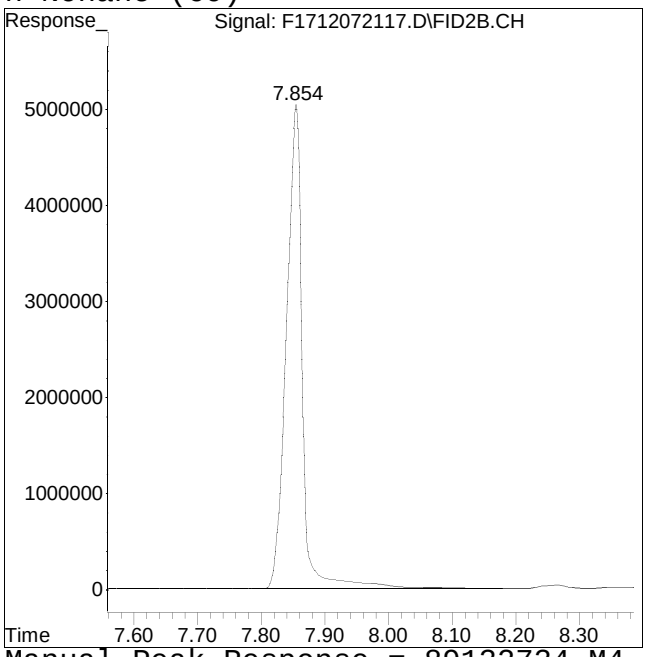
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 89207726



Manual Peak Response = 89132734 M4

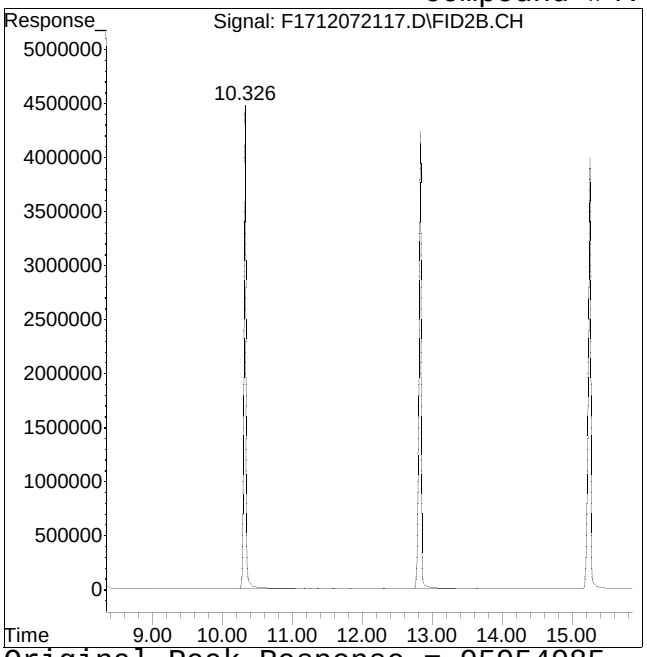
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

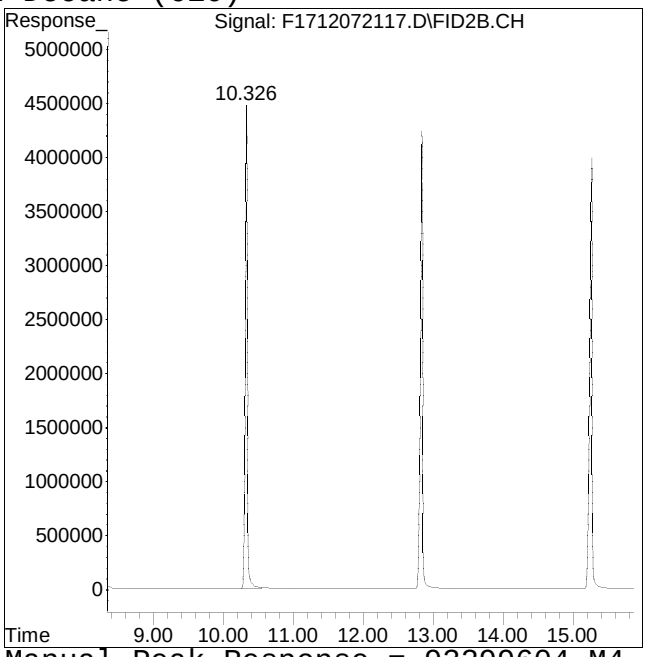
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #4: n-Decane (C10)



Original Peak Response = 95954985



Manual Peak Response = 93299604 M4

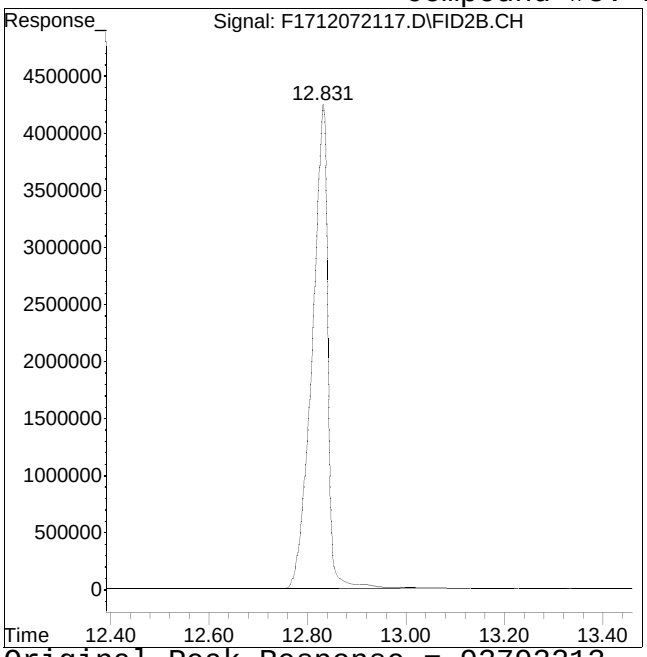
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

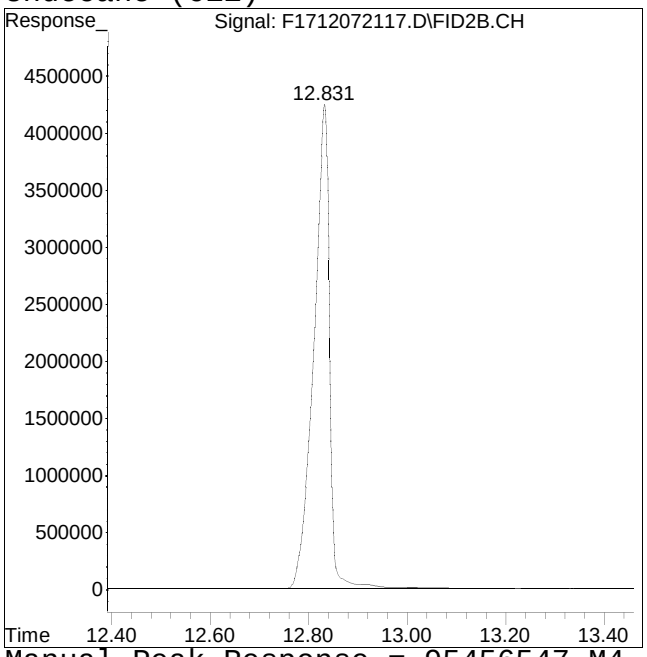
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 93793213



Manual Peak Response = 95456547 M4

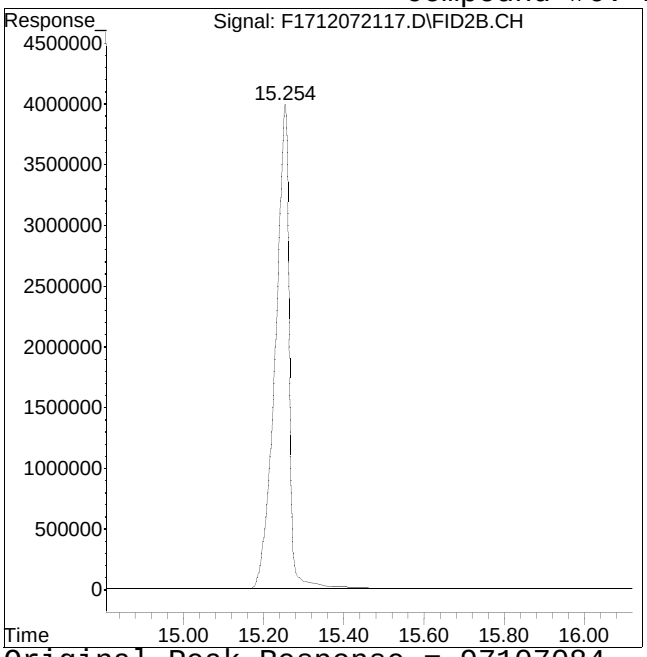
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

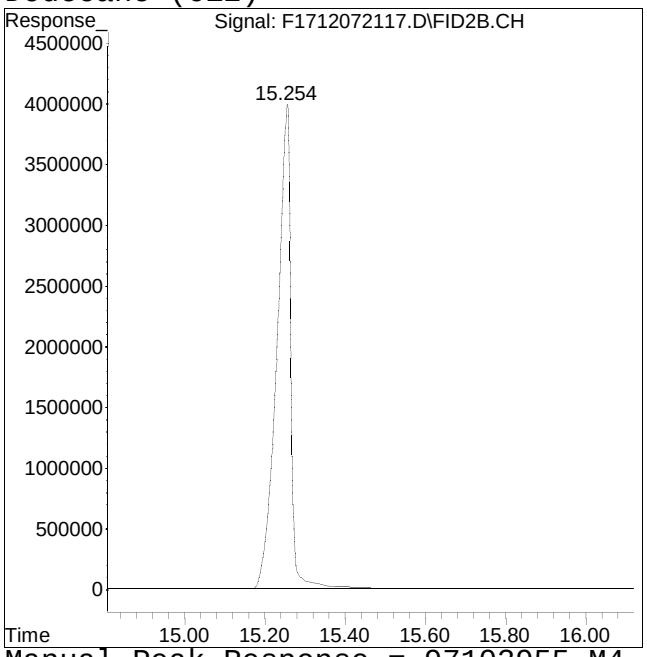
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 97107084



Manual Peak Response = 97103955 M4

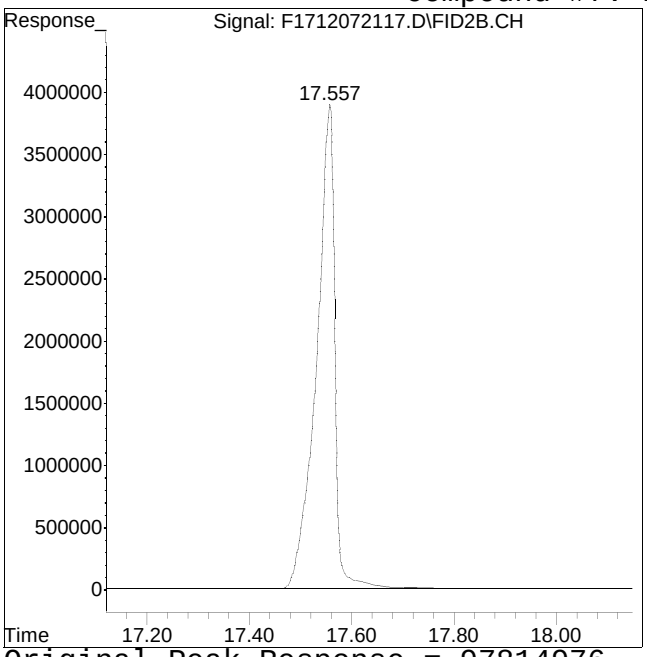
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

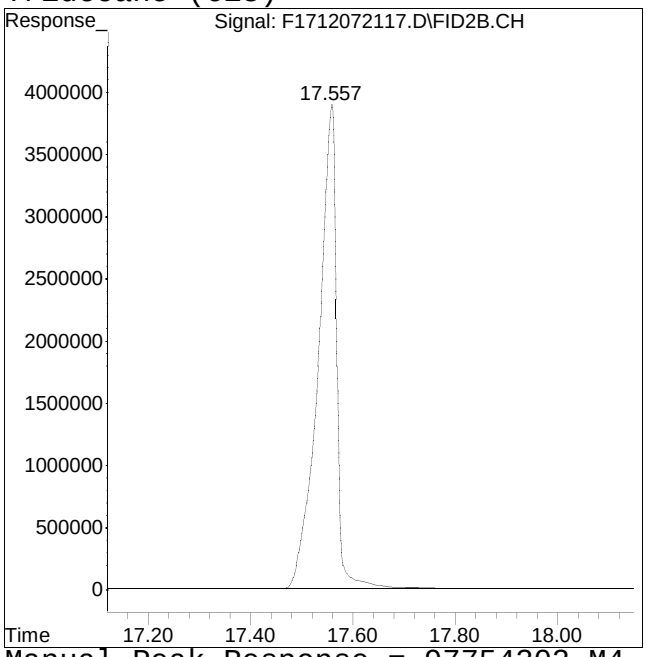
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 97814976



Manual Peak Response = 97754302 M4

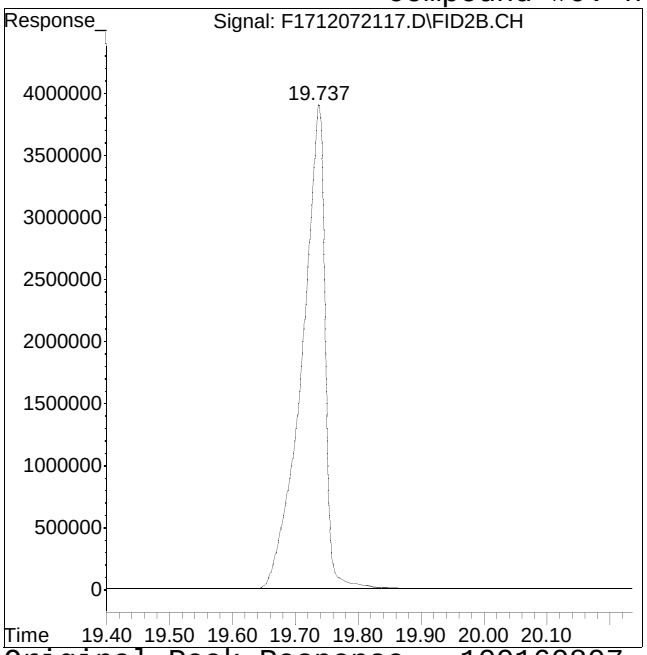
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

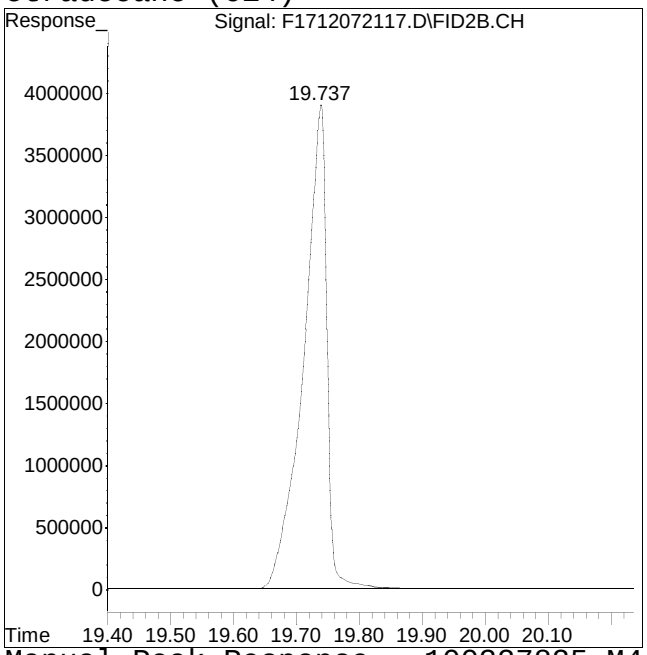
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 100160807



Manual Peak Response = 100327825 M4

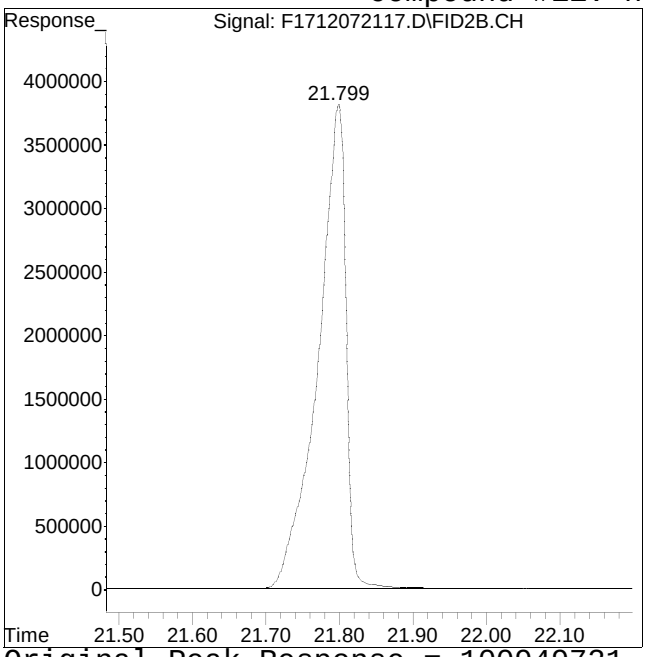
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

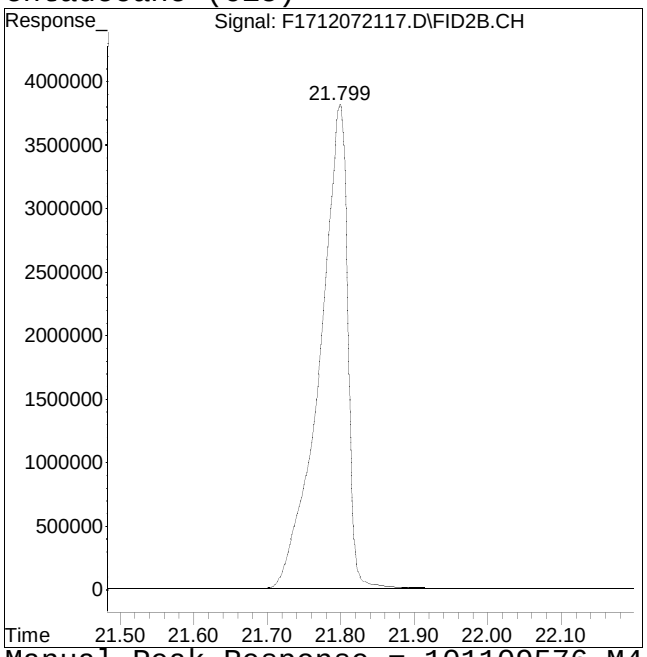
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 100949721



Manual Peak Response = 101109576 M4

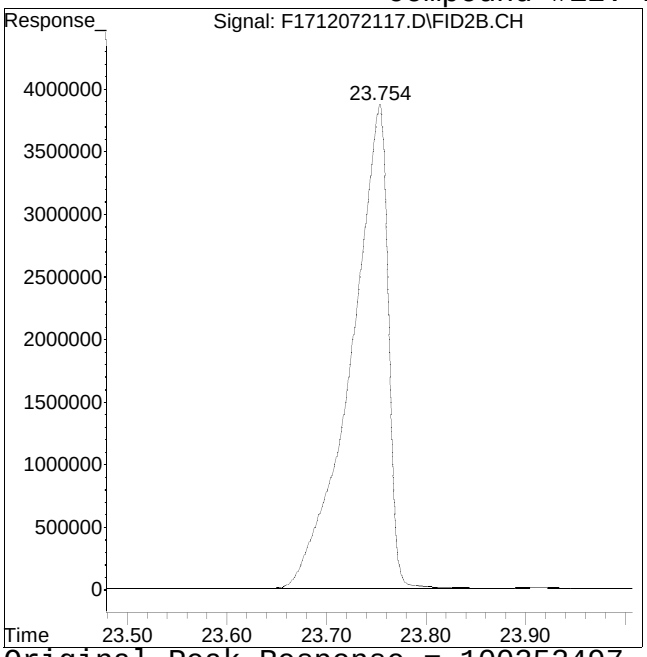
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

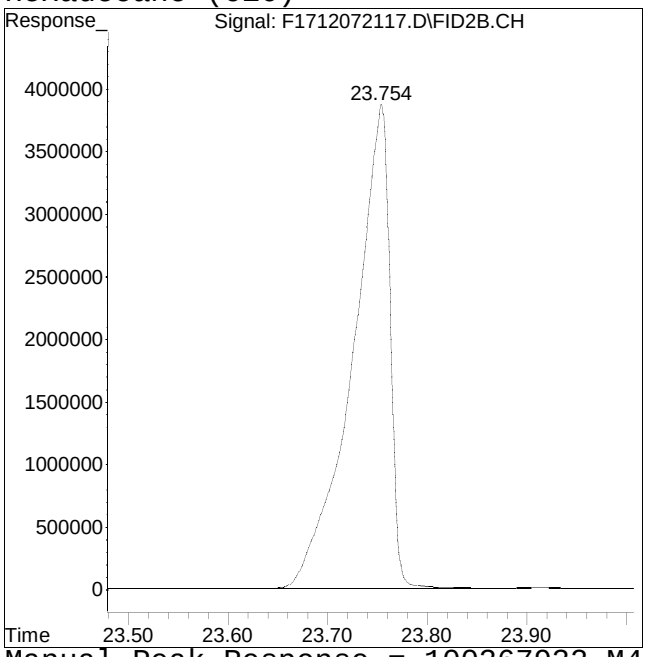
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 100352497



Manual Peak Response = 100367932 M4

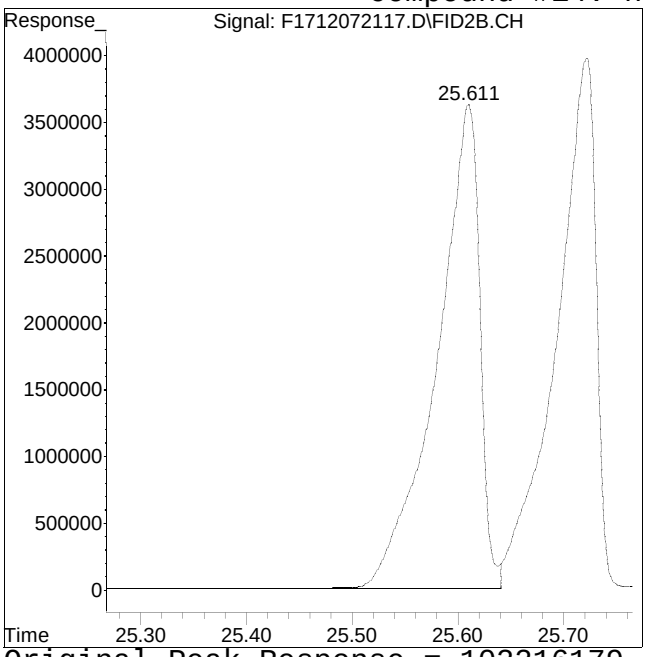
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

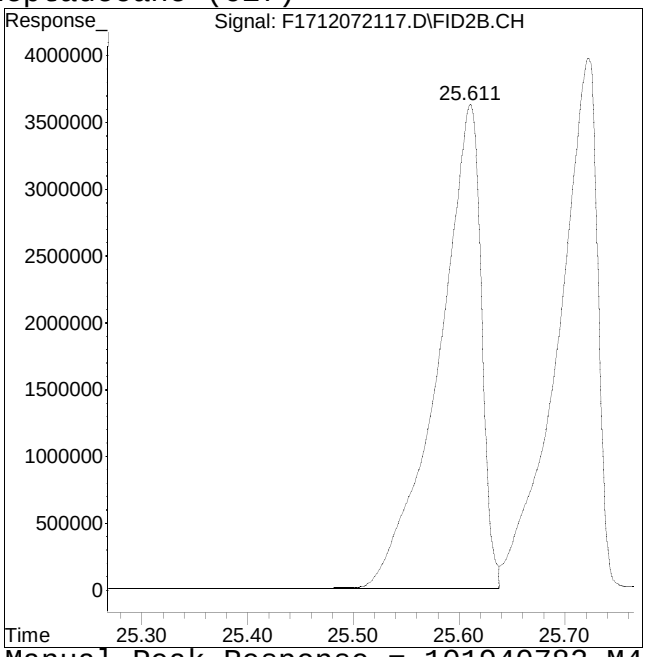
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 102216179



Manual Peak Response = 101940782 M4

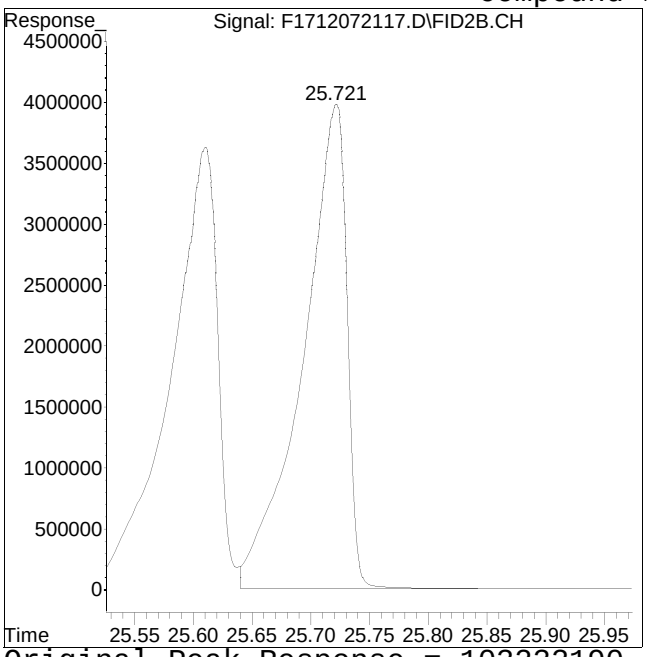
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

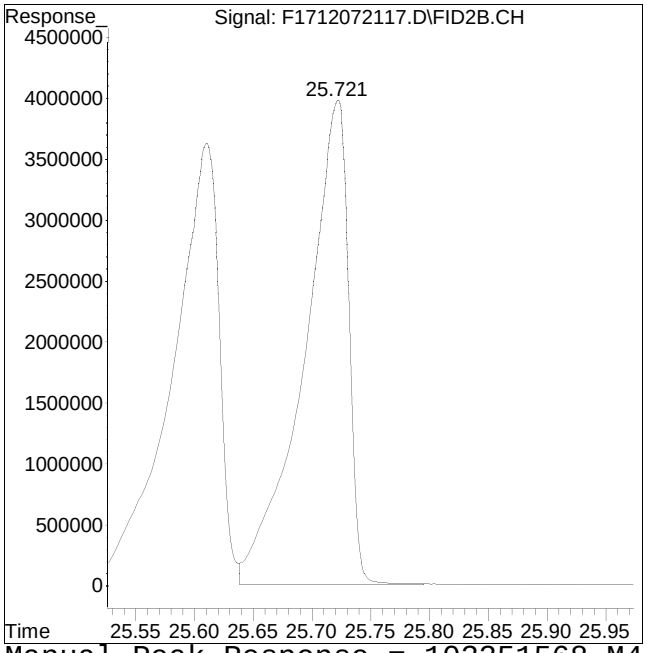
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #15: Pristane



Original Peak Response = 103232190



Manual Peak Response = 103351568 M4

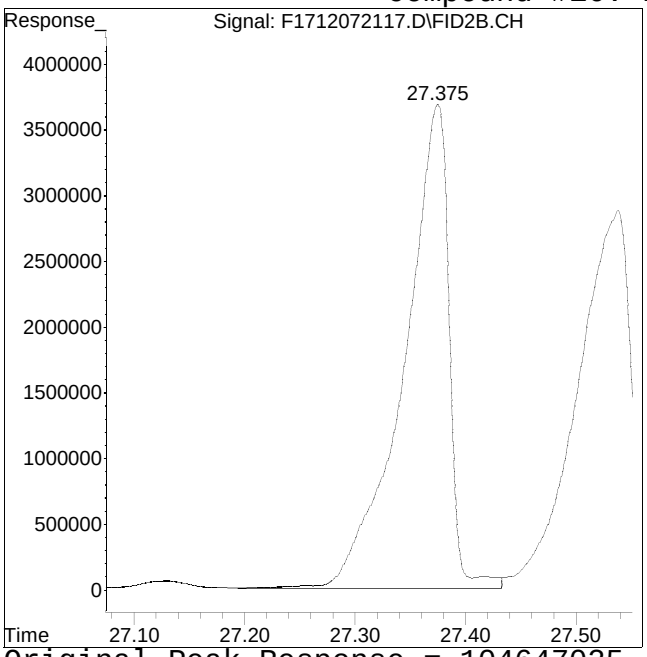
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

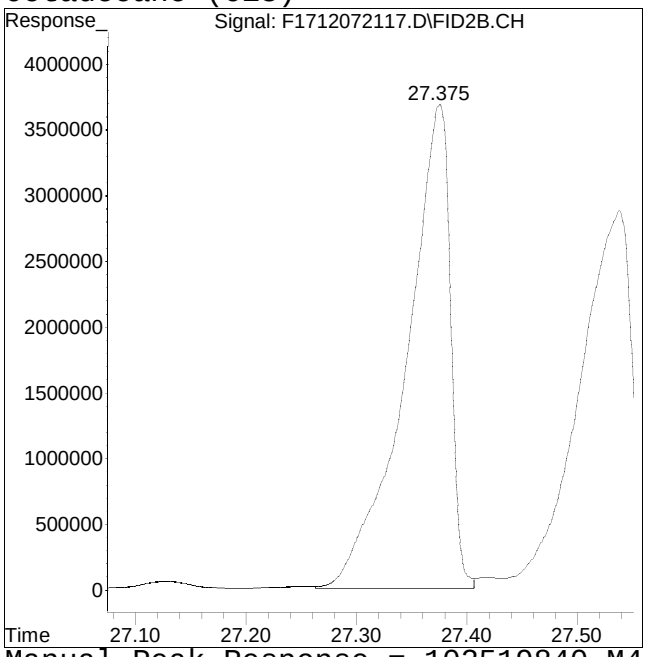
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 104647025



Manual Peak Response = 102519840 M4

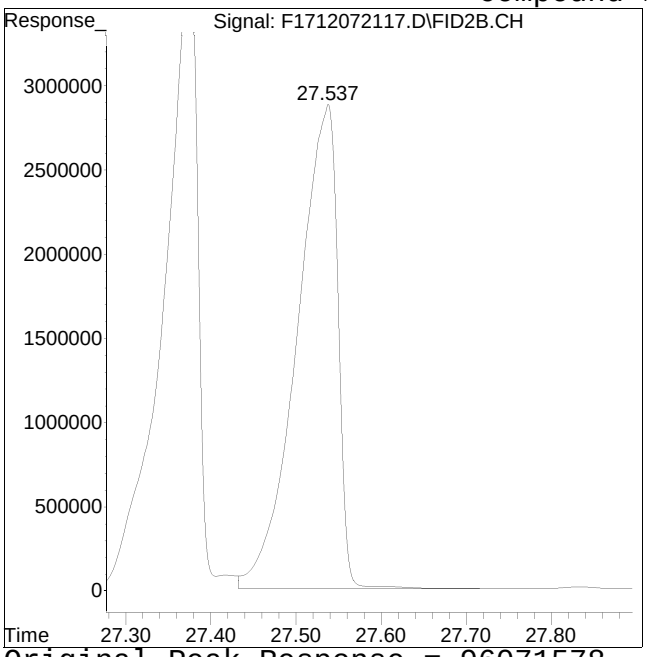
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

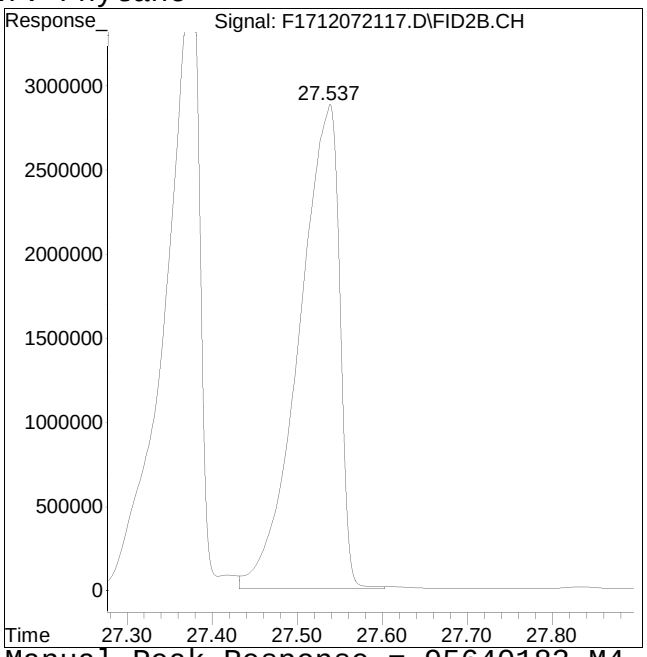
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #17: Phytane



Original Peak Response = 96071578



Manual Peak Response = 95640183 M4

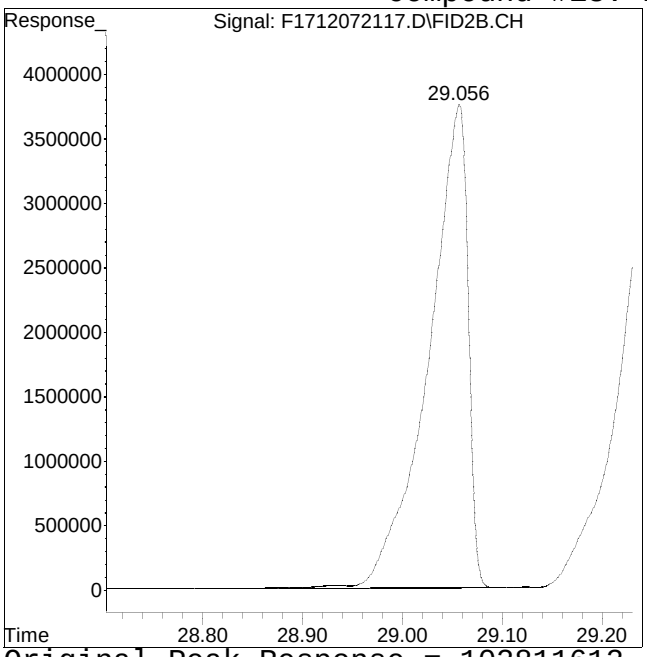
M4 = Poor automated baseline construction.

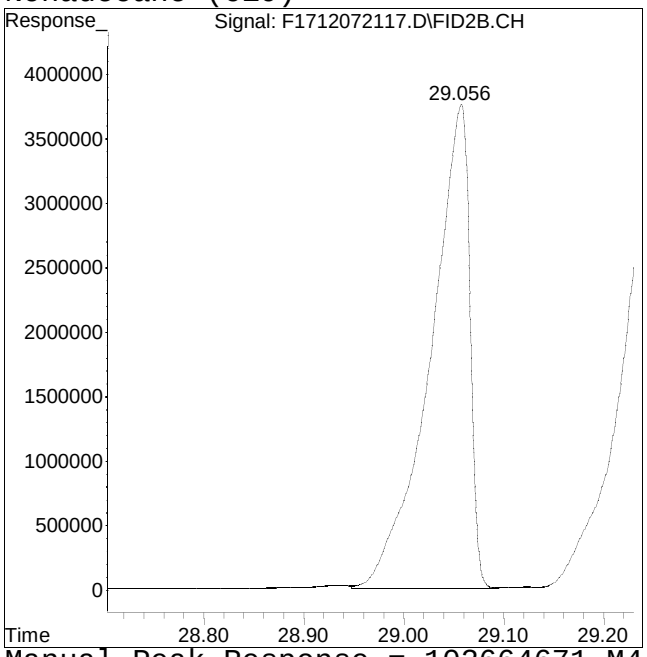
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #18: n-Nonadecane (C19)





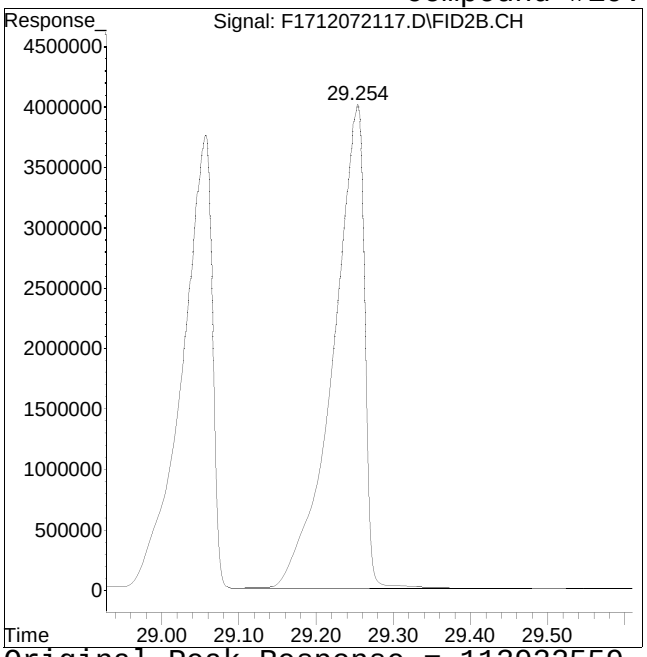
Original Peak Response = 102811612 Manual Peak Response = 102664671 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

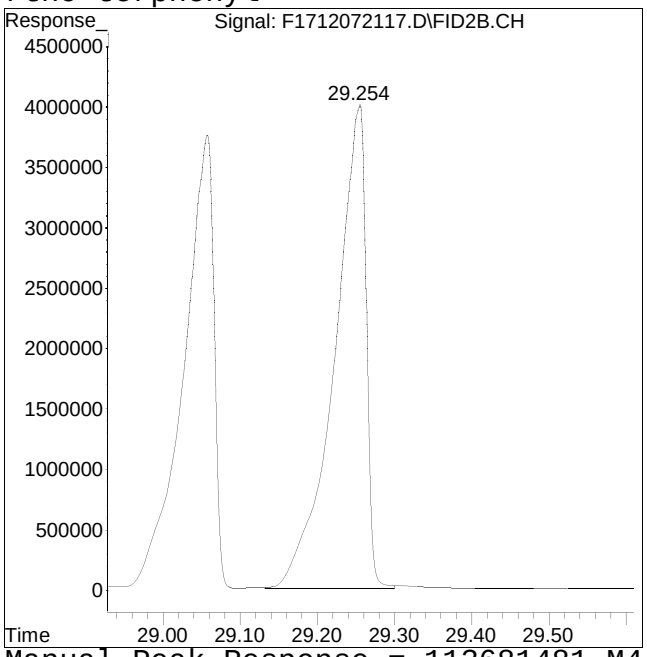
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #19: ortho-terphenyl



Original Peak Response = 113932559



Manual Peak Response = 113681481 M4

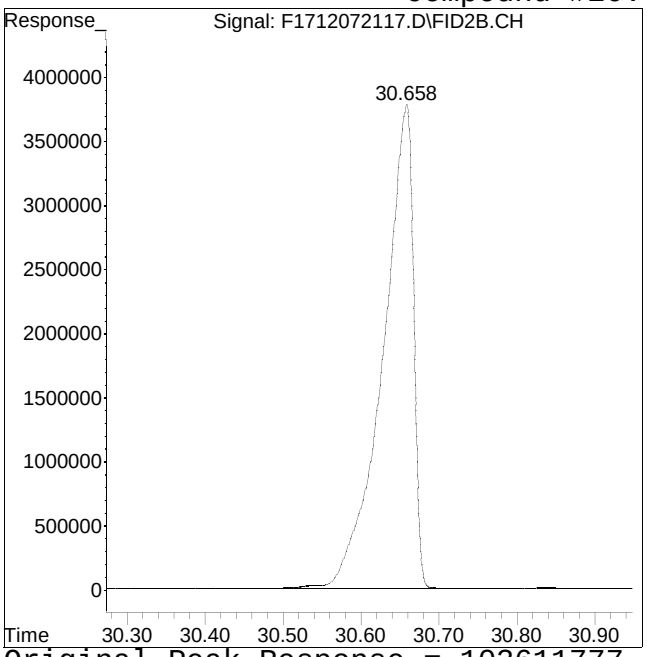
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

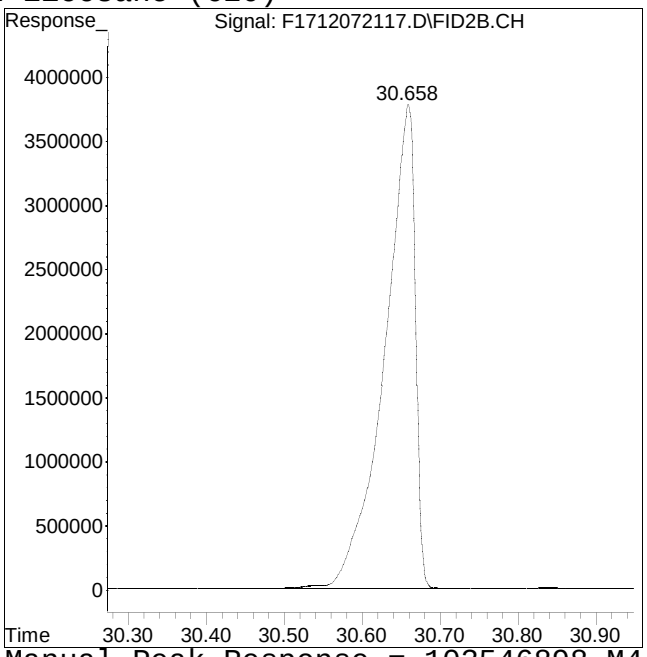
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 103611777



Manual Peak Response = 103546898 M4

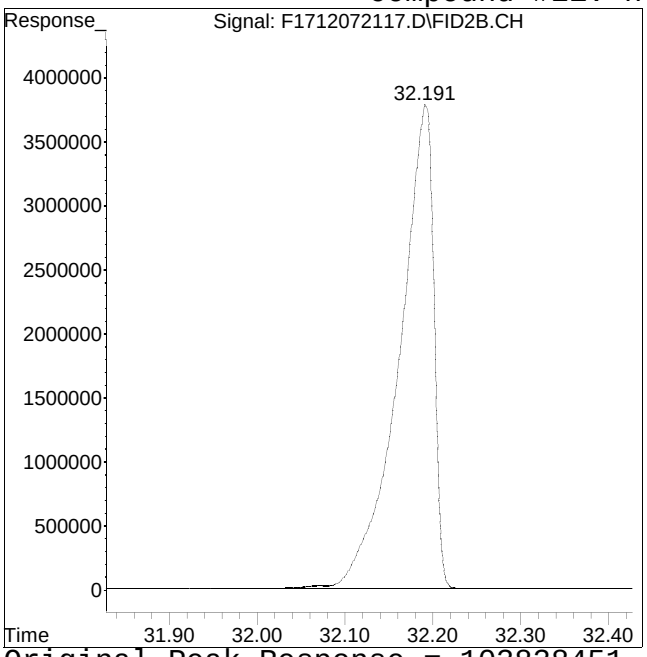
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

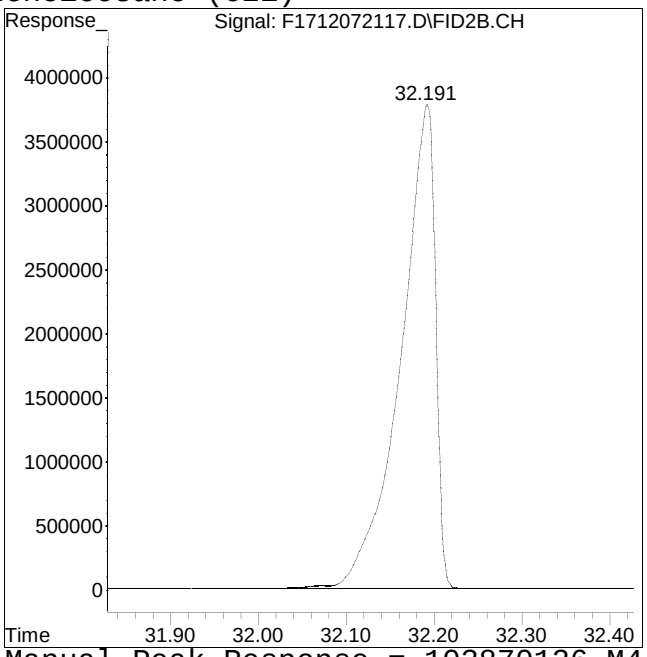
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 103838451



Manual Peak Response = 103870126 M4

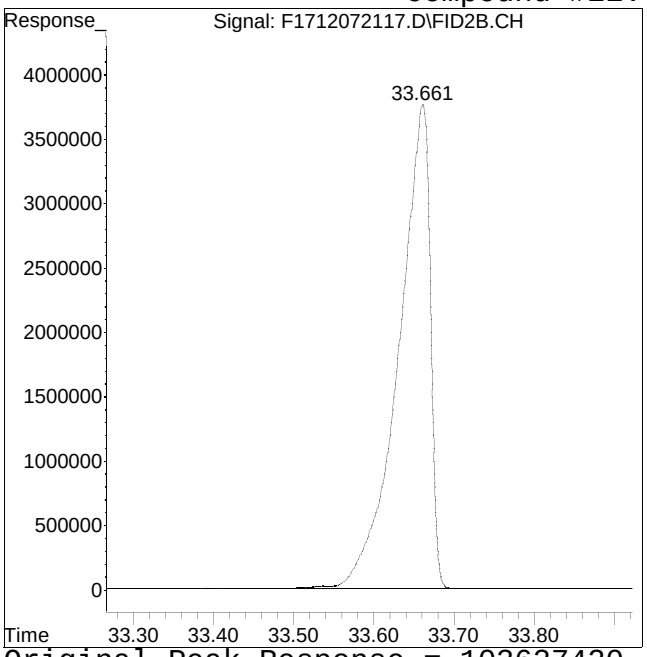
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

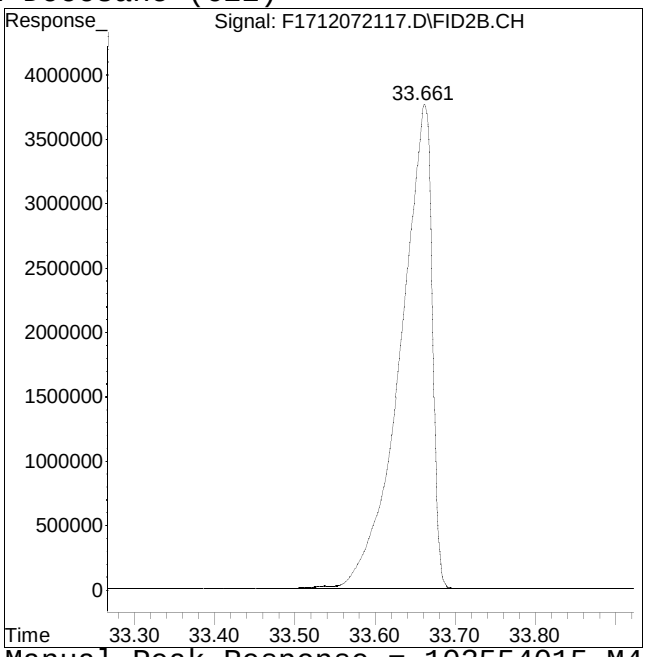
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 103627420



Manual Peak Response = 103554015 M4

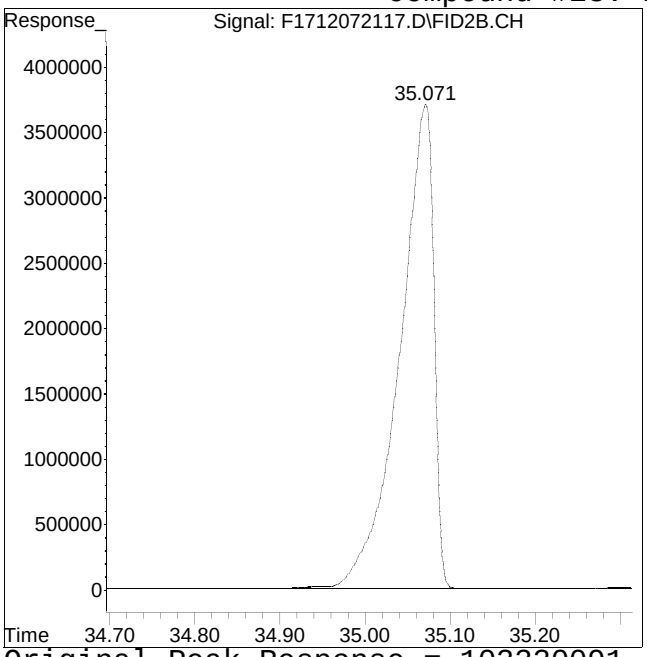
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

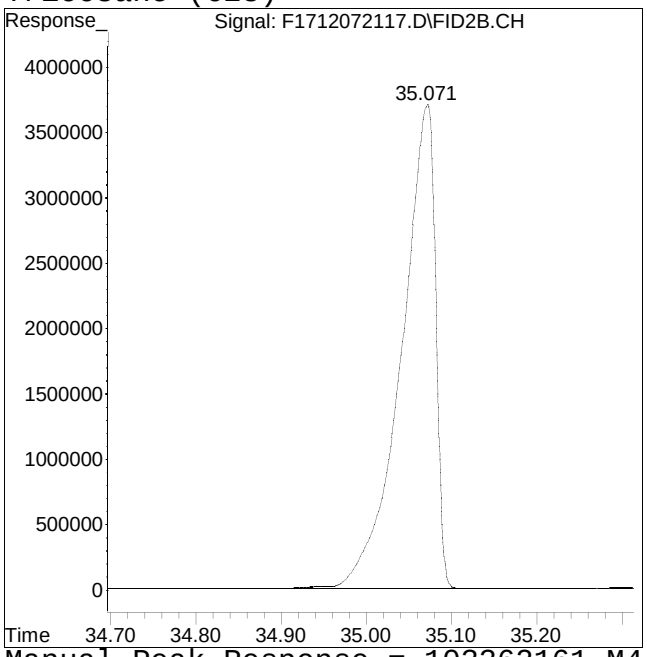
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 103330091



Manual Peak Response = 103362161 M4

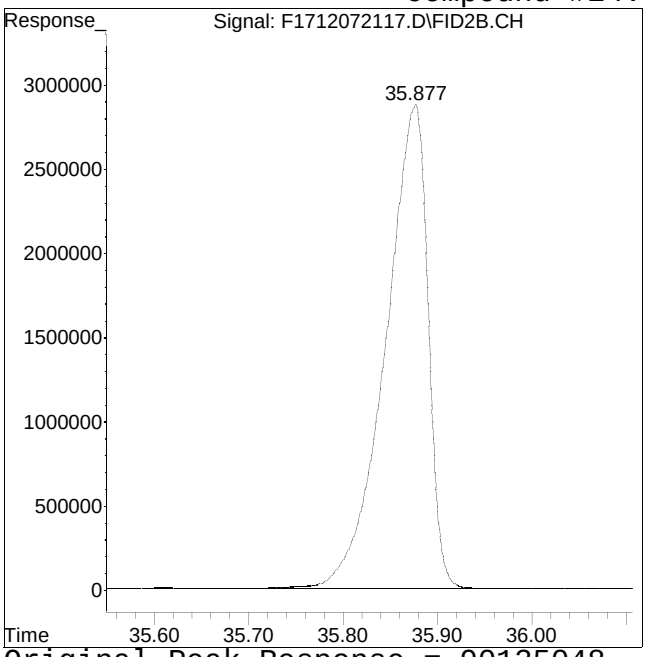
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

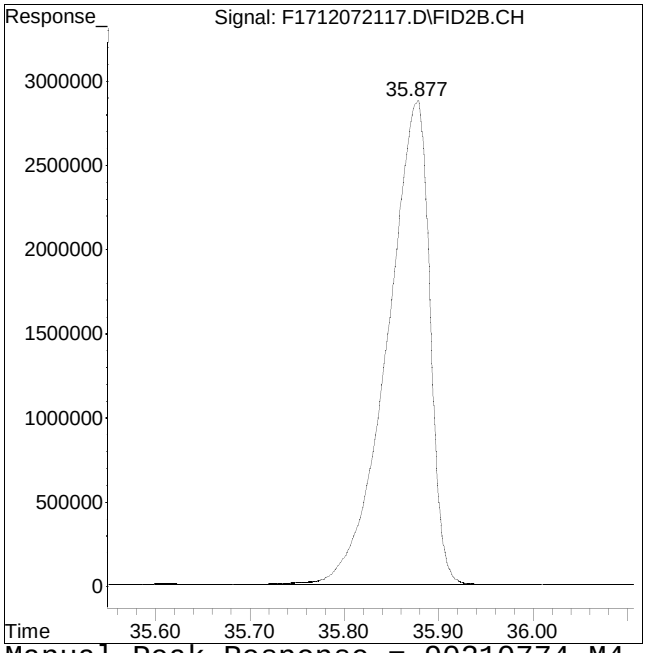
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #24: d50-Tetracosane



Original Peak Response = 90135048



Manual Peak Response = 90210774 M4

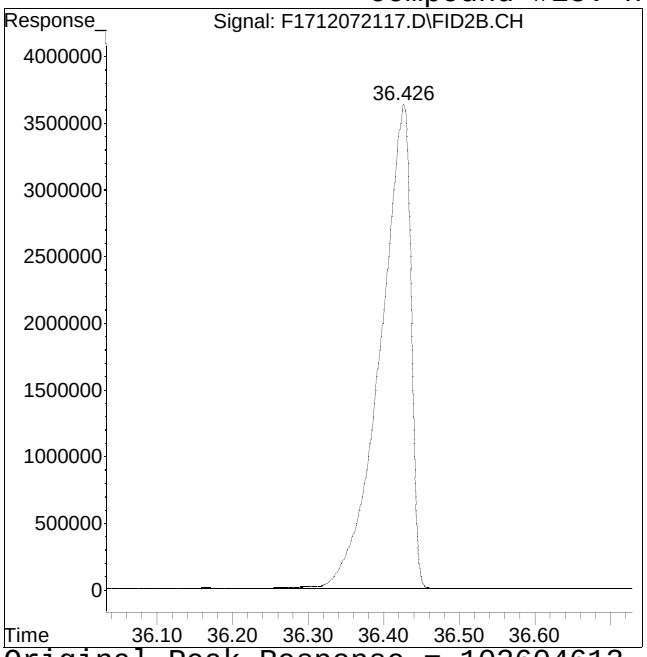
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

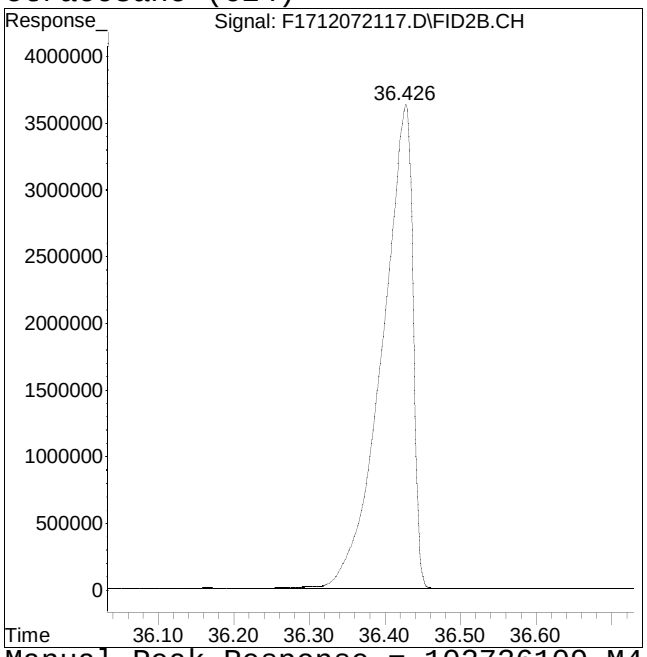
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 102604613



Manual Peak Response = 102736109 M4

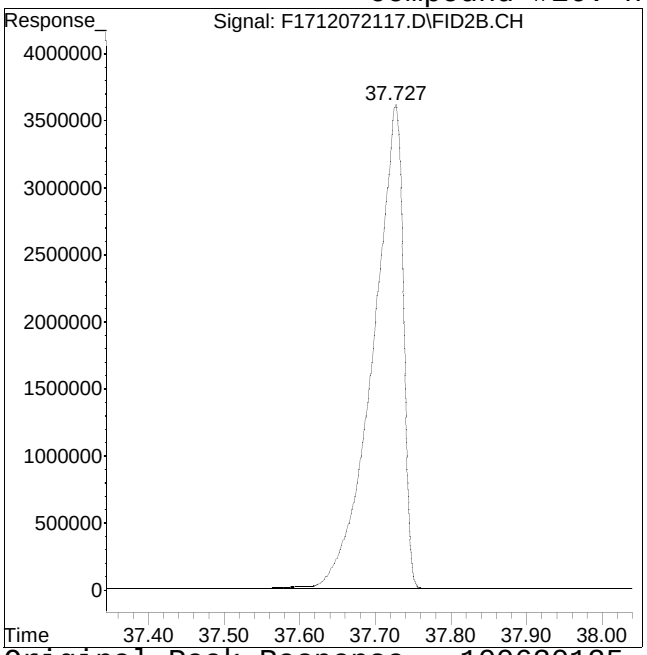
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

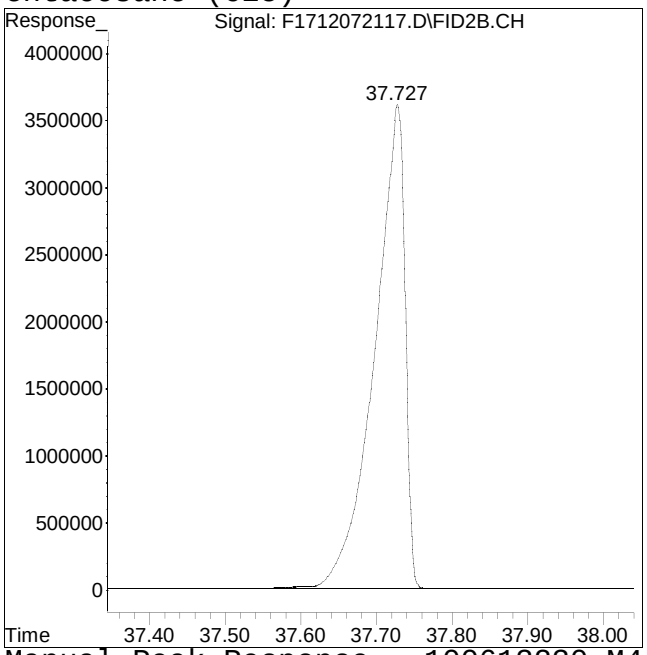
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 100630125



Manual Peak Response = 100613230 M4

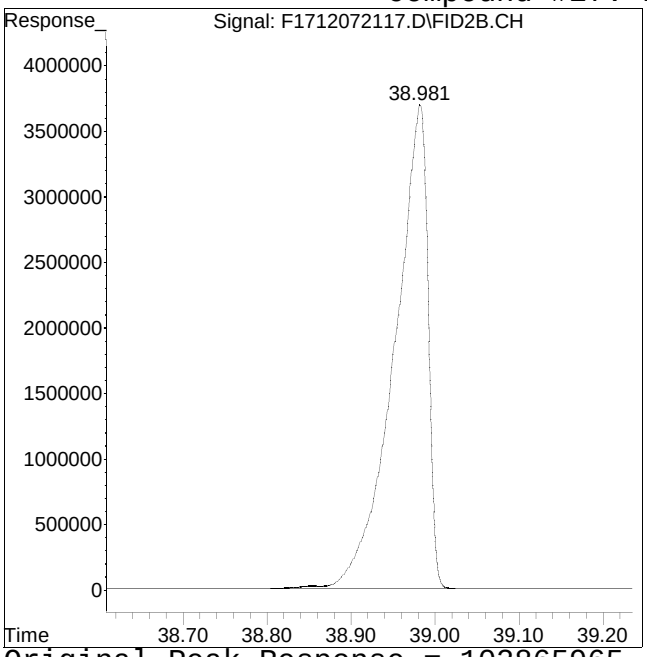
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

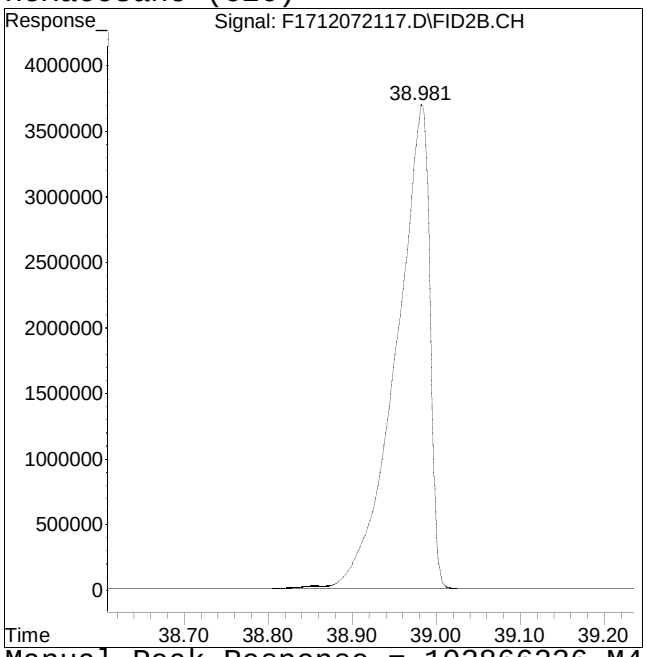
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 102865965



Manual Peak Response = 102866236 M4

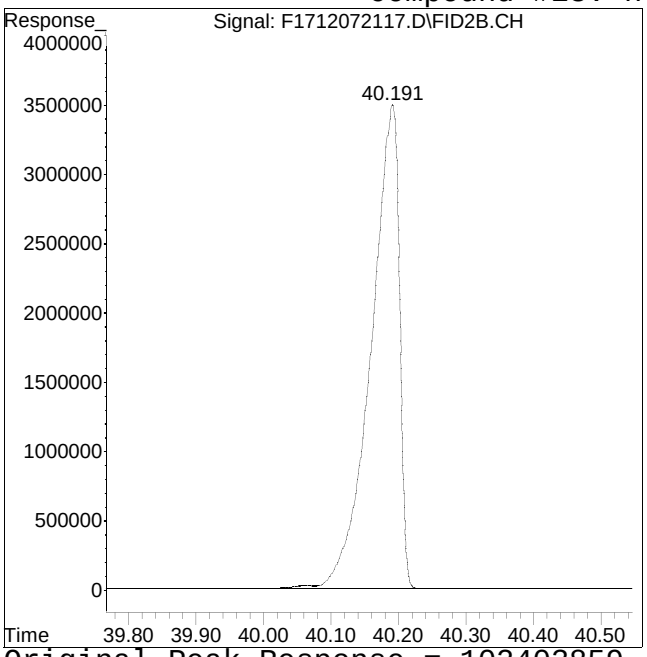
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

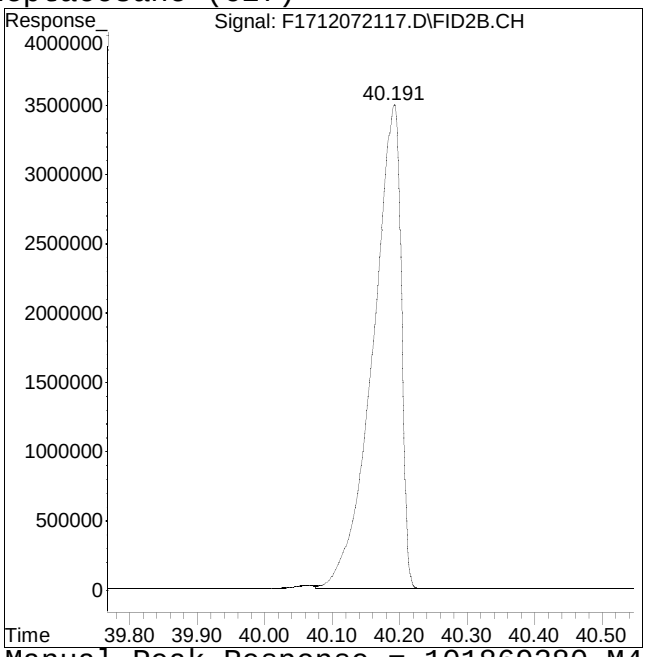
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 102403859



Manual Peak Response = 101869380 M4

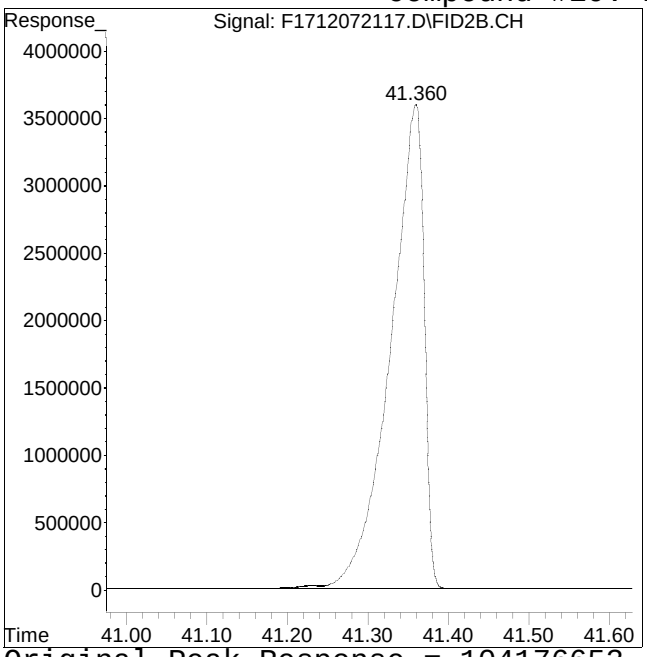
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

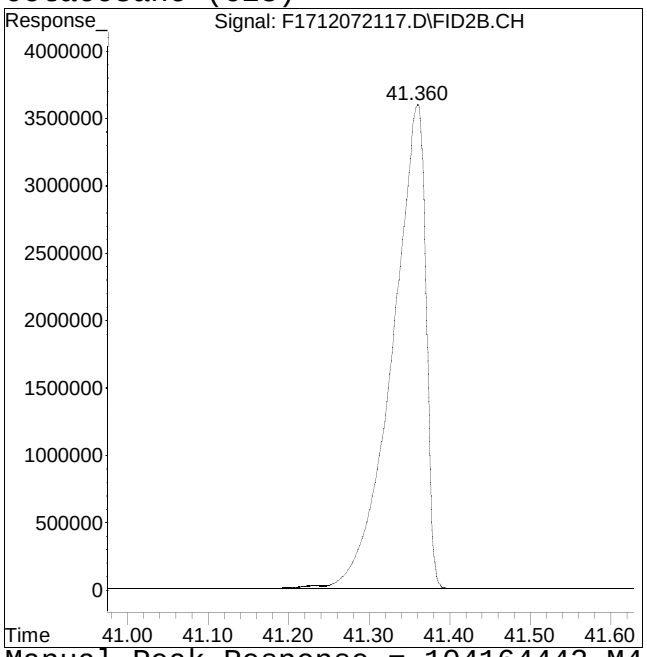
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 104176653



Manual Peak Response = 104164442 M4

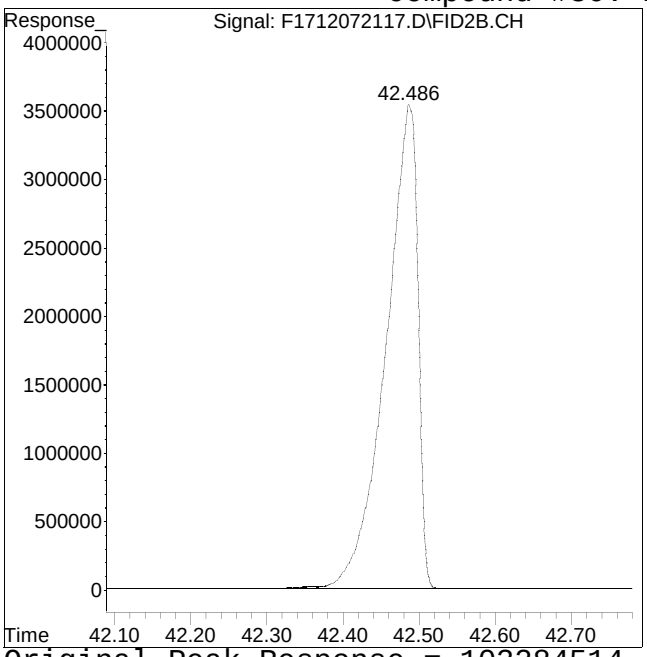
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

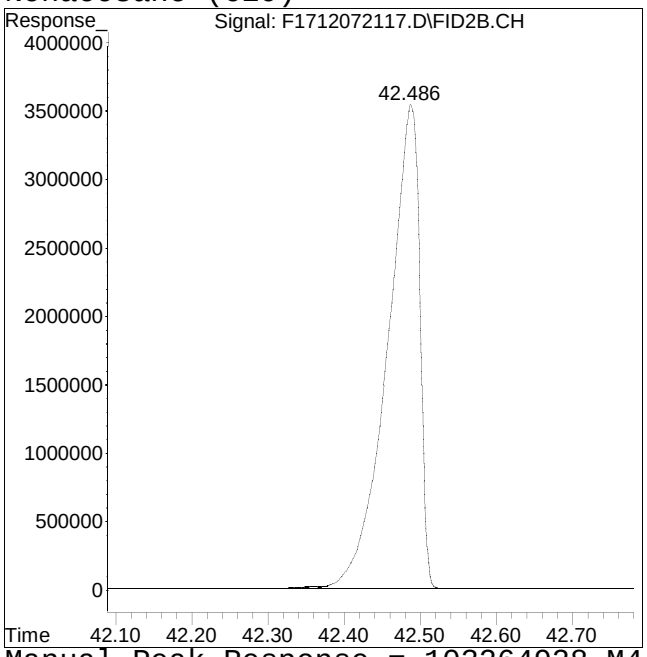
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 103284514



Manual Peak Response = 103264928 M4

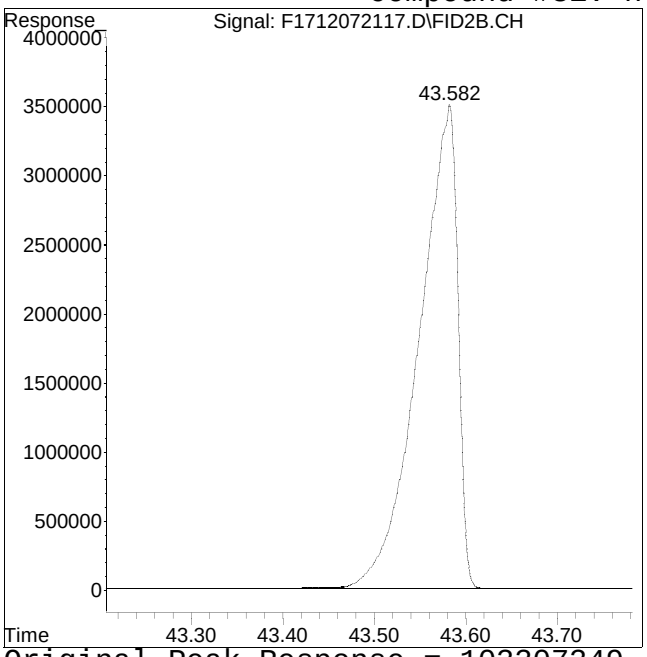
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

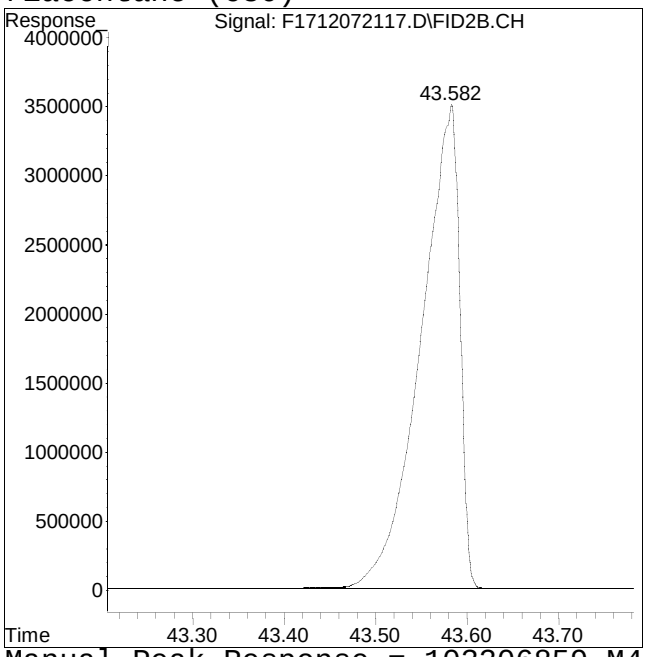
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 103307349



Manual Peak Response = 103306859 M4

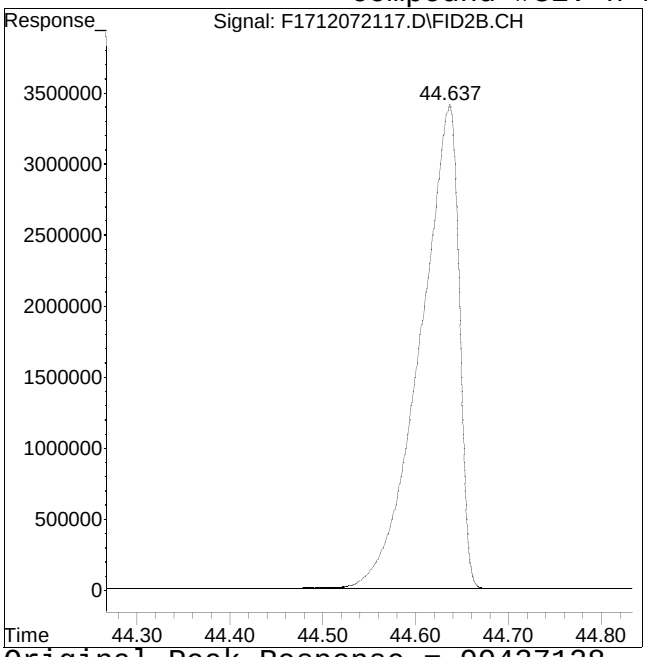
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

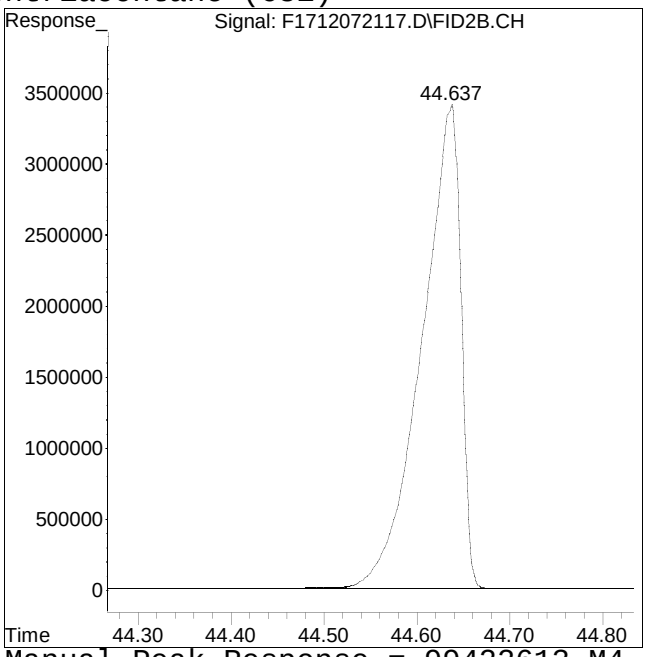
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 99437128



Manual Peak Response = 99422613 M4

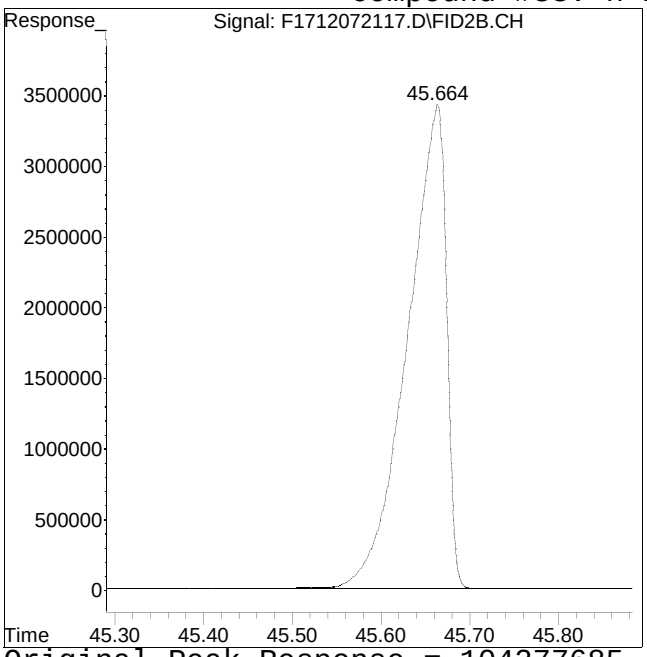
M4 = Poor automated baseline construction.

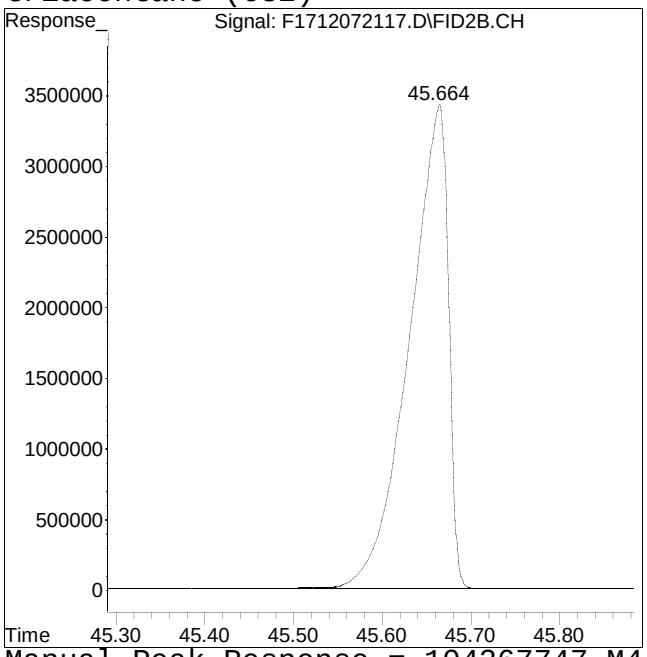
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #33: n-Dotriacontane (C32)





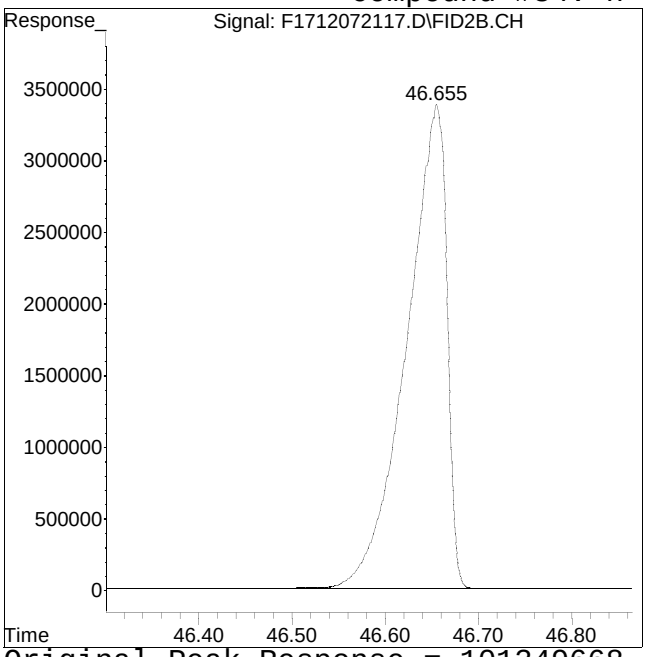
Original Peak Response = 104277685 Manual Peak Response = 104267747 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

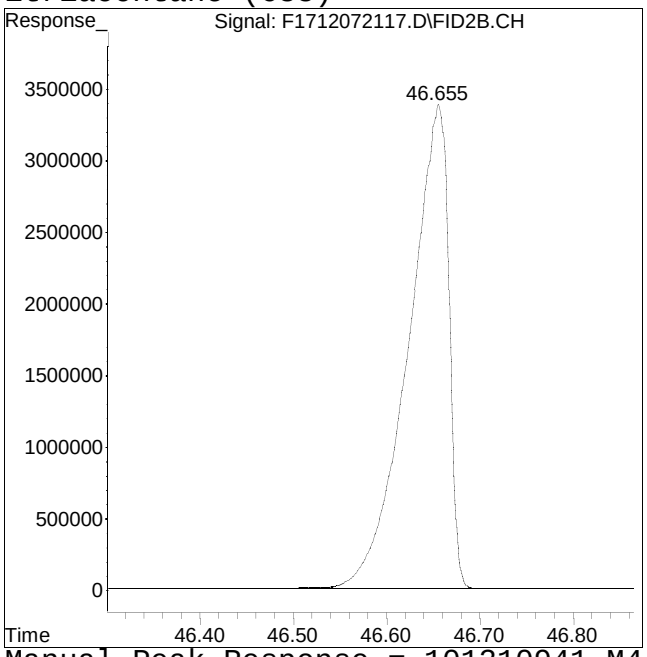
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 101349668



Manual Peak Response = 101310941 M4

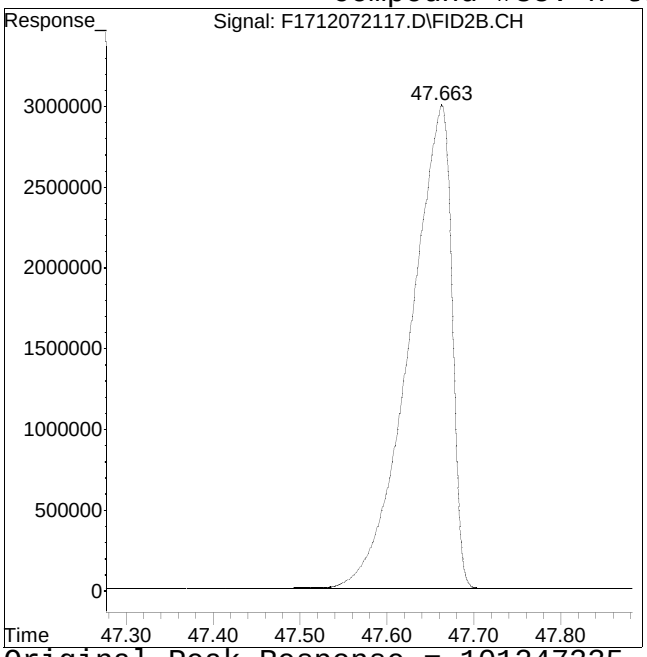
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

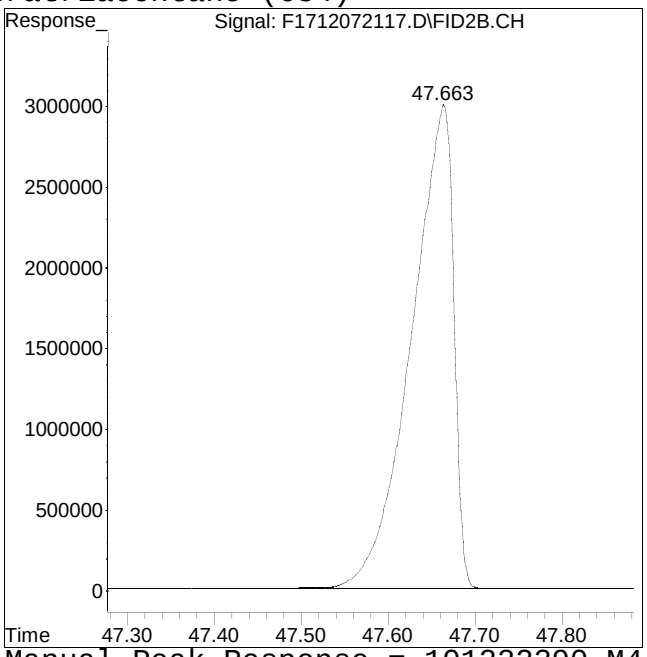
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 101247335



Manual Peak Response = 101222390 M4

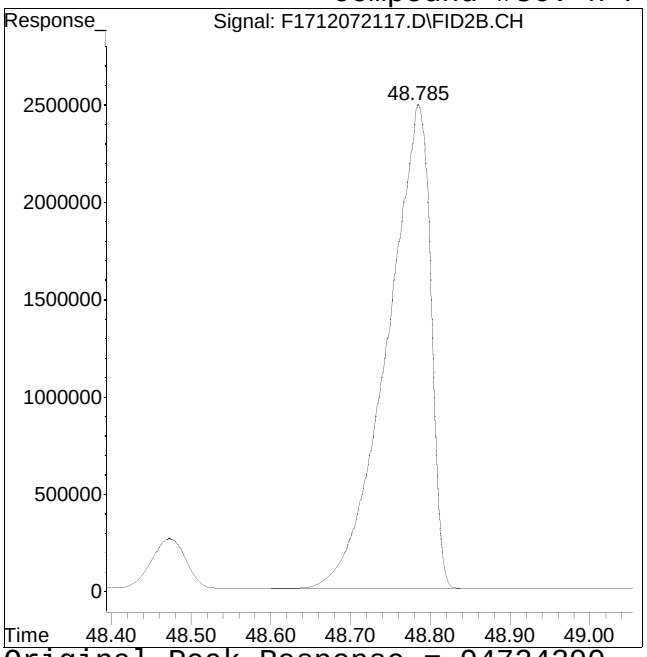
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

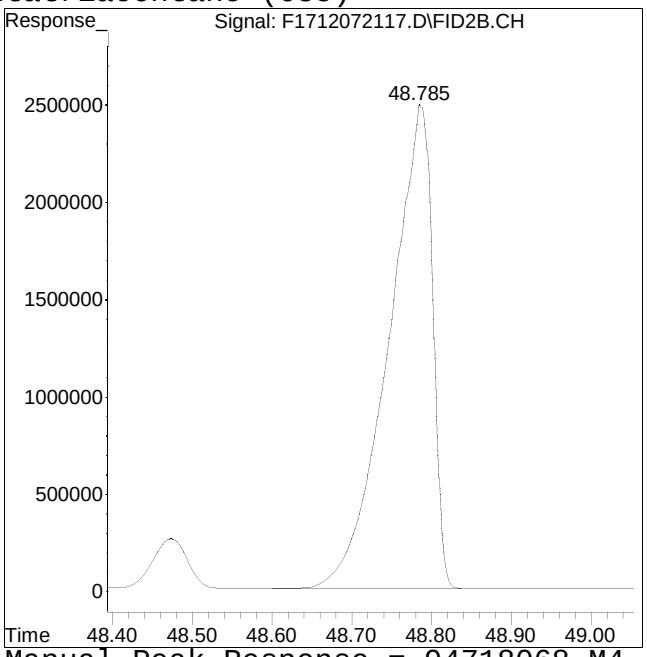
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 94724390



Manual Peak Response = 94718068 M4

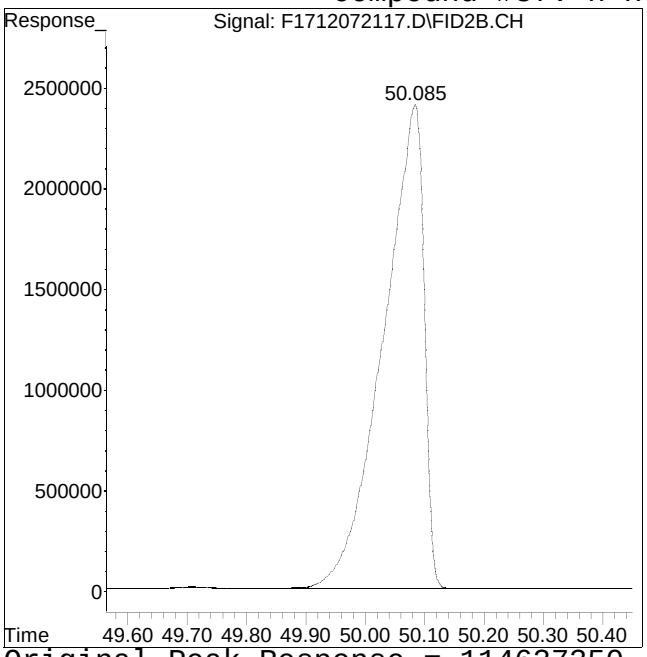
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

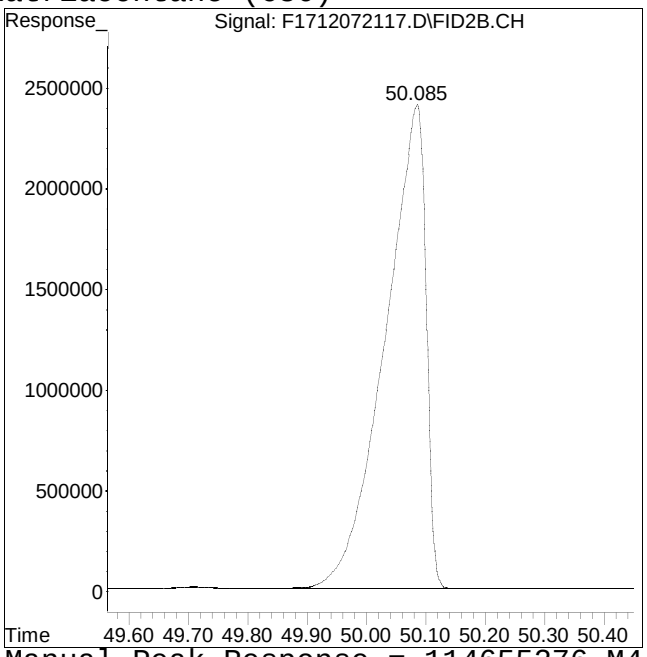
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 114637350



Manual Peak Response = 114655276 M4

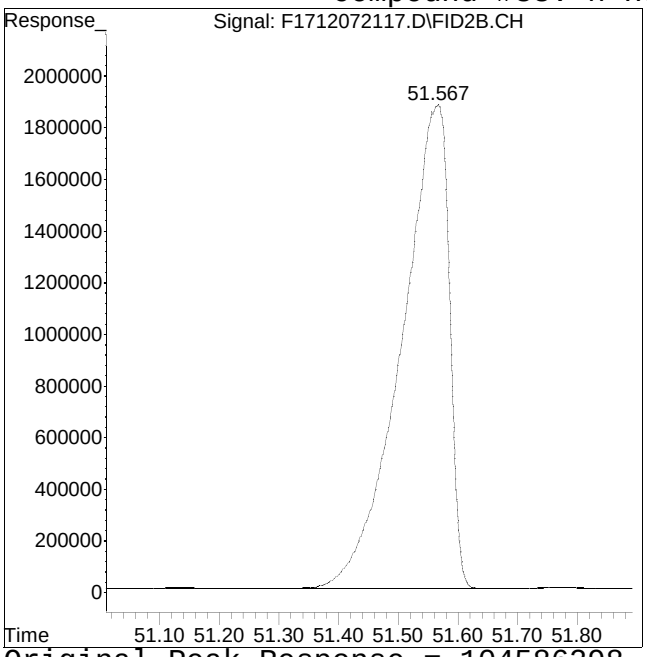
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

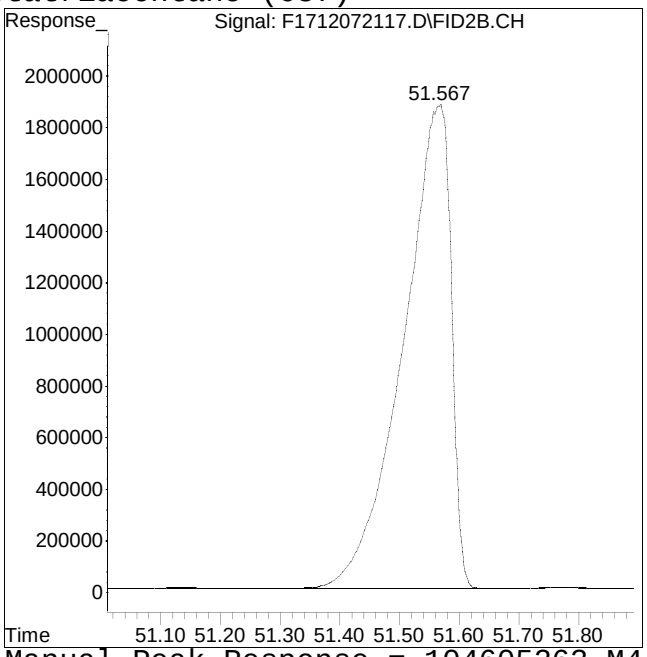
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 104586298



Manual Peak Response = 104605263 M4

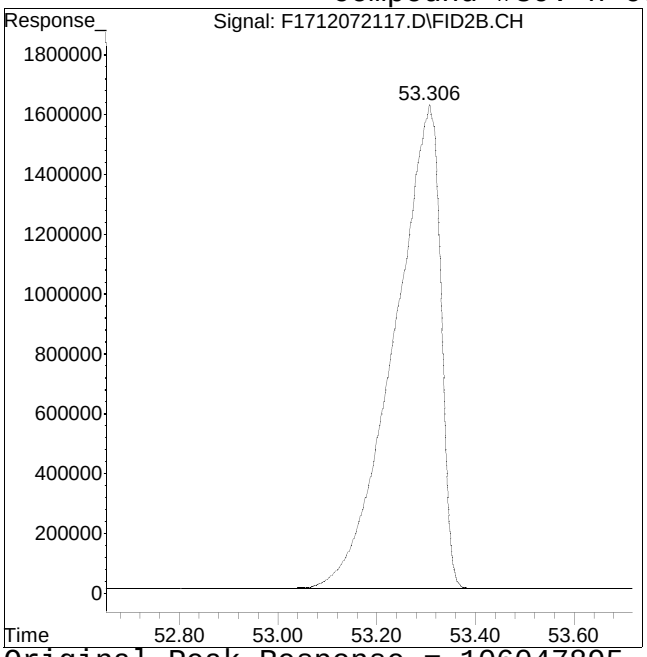
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

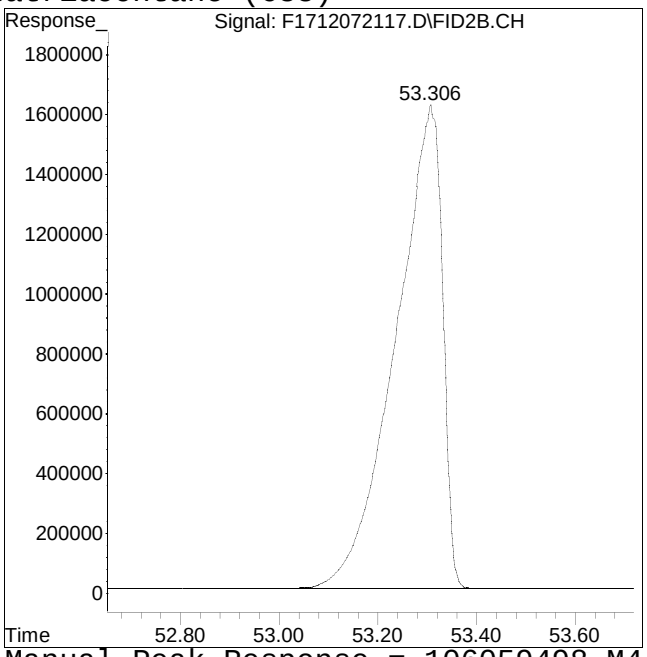
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 106047895



Manual Peak Response = 106059498 M4

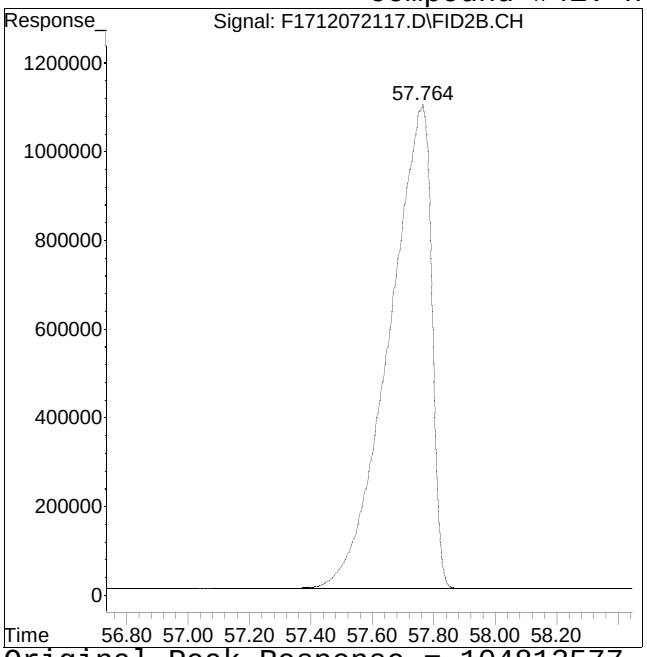
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

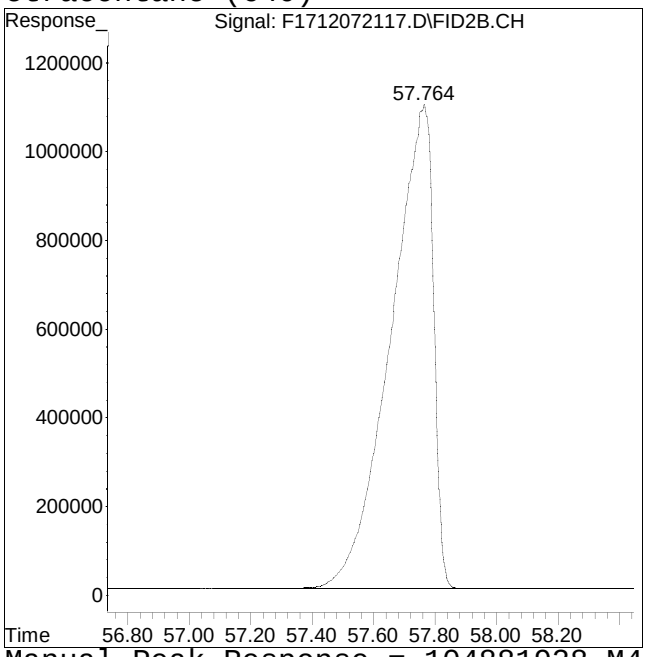
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072117.D
Date Inj'd : 12/7/2021 9:19 pm
Sample : I1712072104R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 3:50 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 104813577



Manual Peak Response = 104881928 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072119.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 10:48 pm
Operator : FID17:WR
Sample : I1712072105R
Misc : WG1581826,FRBD80,200ug/ml
ALS Vial : 60 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:13:04 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 15:57:32 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.253	54258262	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.279	223472597	183.759	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 367.52%#			
24) s	d50-Tetracosane	35.897	178412011	181.707	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 363.41%#			
	Target Compounds					
2) t	n-Octane (C8)	5.720	174509233	200.272	ug/mL	M4
3) t	n-Nonane (C9)	7.887	172819296	189.399	ug/mL	M4
4) t	n-Decane (C10)	10.354	185416507	201.853	ug/mL	M4
5) t	n-Undecane (C11)	12.853	186096862	196.848	ug/mL	M4
6) t	n-Dodecane (C12)	15.274	188682531	193.696	ug/mL	M4
7) t	n-Tridecane (C13)	17.577	189491610	188.975	ug/mL	M4
9) t	n-Tetradecane (C14)	19.757	194585862	188.363	ug/mL	M4
11) t	n-Pentadecane (C15)	21.819	196194265	189.956	ug/mL	M4
12) t	n-Hexadecane (C16)	23.773	194944165	186.187	ug/mL	M4
14) t	n-Heptadecane (C17)	25.635	199856326	196.534	ug/mL	M4
15) t	Pristane	25.745	198807170	178.155	ug/mL	M4
16) t	n-Octadecane (C18)	27.399	200091114	187.344	ug/mL	M4
17) t	Phytane	27.558	187504434	185.193	ug/mL	M4
18) t	n-Nonadecane (C19)	29.080	200396705	187.130	ug/mL	M4
20) t	n-Eicosane (C20)	30.682	201863330	185.592	ug/mL	M4
21) t	n-Heneicosane (C21)	32.214	202707187	185.722	ug/mL	M4
22) t	n-Docosane (C22)	33.686	202298881	184.020	ug/mL	M4
23) t	n-Tricosane (C23)	35.096	202108428	182.821	ug/mL	M4
25) t	n-Tetracosane (C24)	36.452	201051507	184.022	ug/mL	M4
26) t	n-Pentacosane (C25)	37.754	197641351	182.232	ug/mL	M4
27) t	n-Hexacosane (C26)	39.010	202633361	181.978	ug/mL	M4
28) t	n-Heptacosane (C27)	40.216	202334870	183.381	ug/mL	M4
29) t	n-Octacosane (C28)	41.390	206561490	181.851	ug/mL	M4
30) t	n-Nonacosane (C29)	42.517	205500799	182.904	ug/mL	M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072119.D
Signal(s) : FID2B.CH
Acq On : 07 Dec 2021 10:48 pm
Operator : FID17:WR
Sample : I1712072105R
Misc : WG1581826,FRBD80,200ug/ml
ALS Vial : 60 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:13:04 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 15:57:32 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

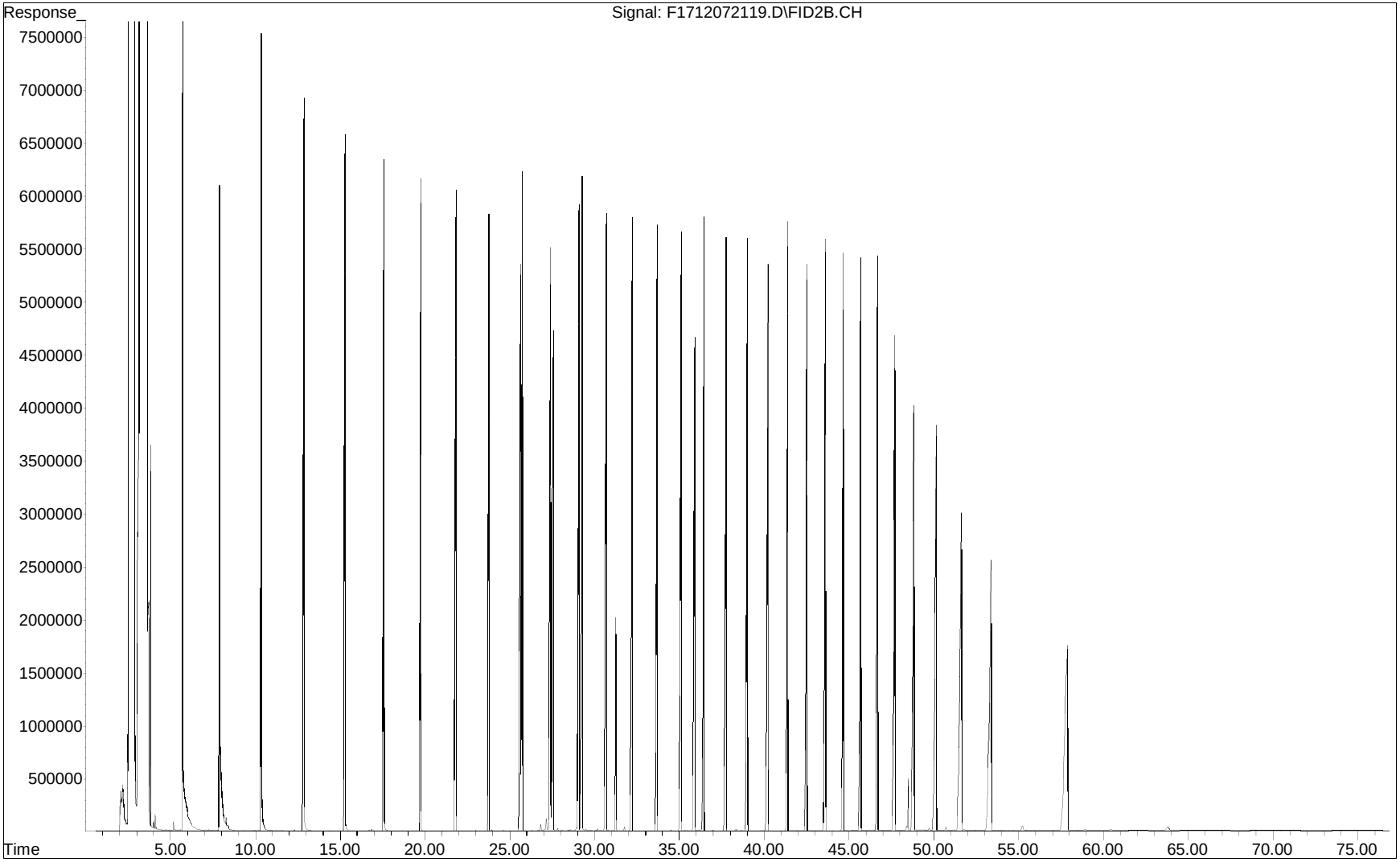
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.607	206152179	183.132 ug/mL M4
32) t	n-Hentriacontane (C31)	44.666	198947869	182.679 ug/mL M4
33) t	n-Dotriacontane (C32)	45.694	208986159	183.556 ug/mL M4
34) t	n-Tritriacontane (C33)	46.686	203337992	184.467 ug/mL M4
35) t	n-tetratriacontane (C34)	47.697	203144813	184.869 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.826	190356691	182.017 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.133	230576885	187.772 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.619	210744106	187.659 ug/mL M4
39) t	n-Octatriacontane (C38)	53.381	214038442	187.216 ug/mL M4
41) t	n-Tetracontane (C40)	57.855	212243218	187.791 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

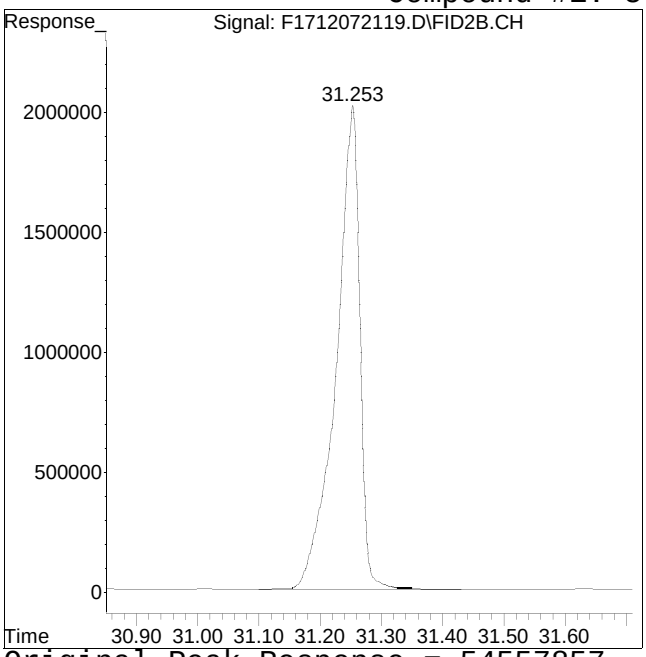
File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072119.D
Operator : FID17:WR
Acquired : 07 Dec 2021 10:48 pm using AcqMethod FID17A.M
Sample Name: I1712072105R
Instrument: FID17
Misc Info : WG1581826,FRBD80,200ug/ml
Vial Number: 60
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M

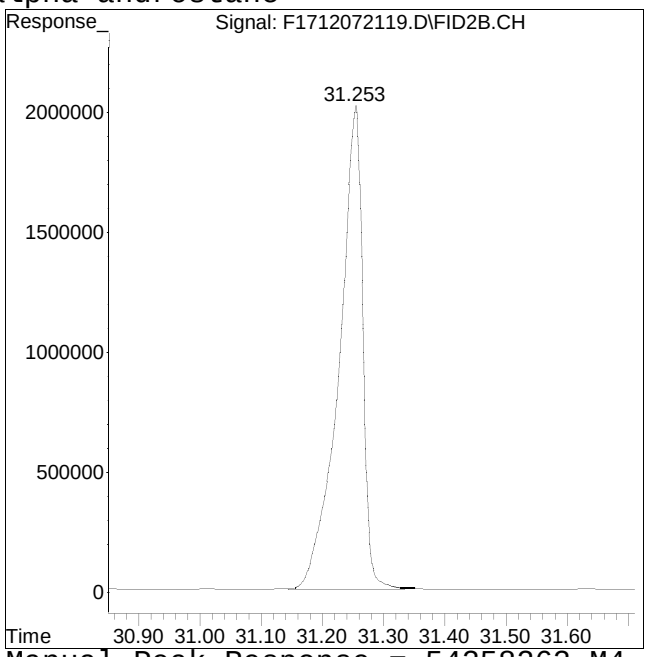


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17120721R_DRO.M
Data File : F1712072119.D Operator : FID17:WR
Date Inj'd : 12/7/2021 10:48 pm Instrument : FID17
Sample : I1712072105R Quant Date : 12/9/2021 4:05 pm

Compound #1: 5-alpha-androstane





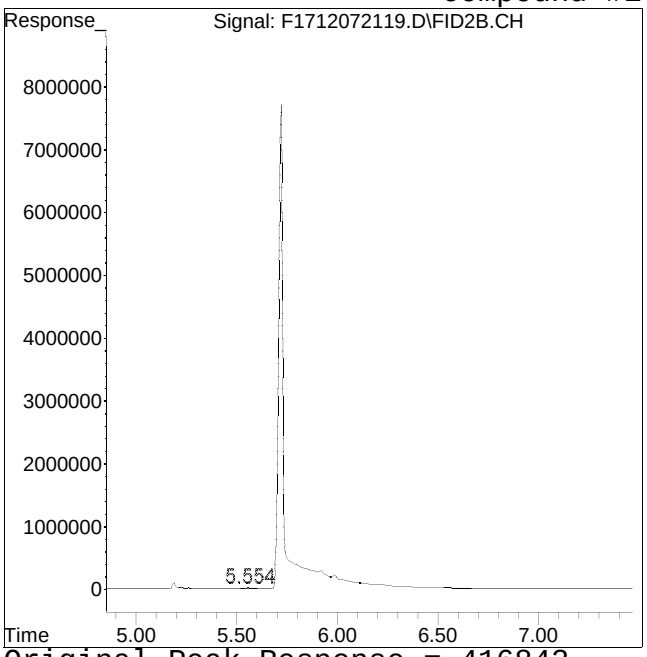
Original Peak Response = 54557857 Manual Peak Response = 54258262 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

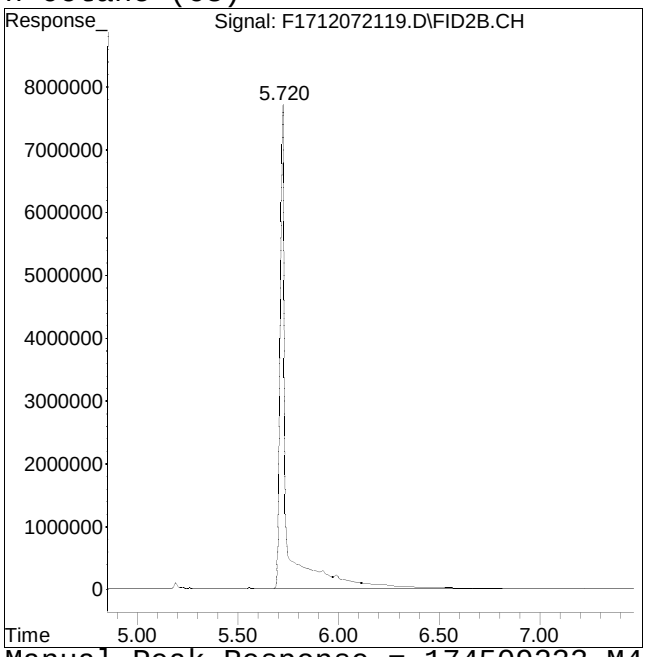
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #2: n-Octane (C8)



Original Peak Response = 416842



Manual Peak Response = 174509233 M4

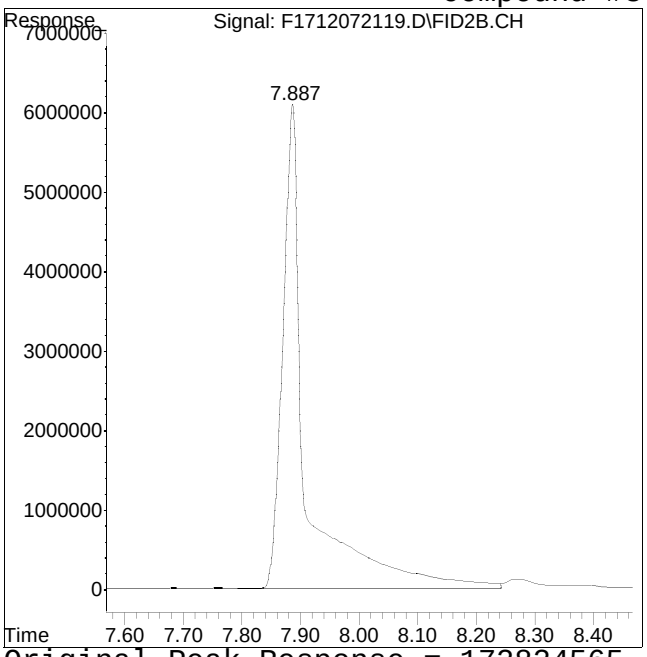
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

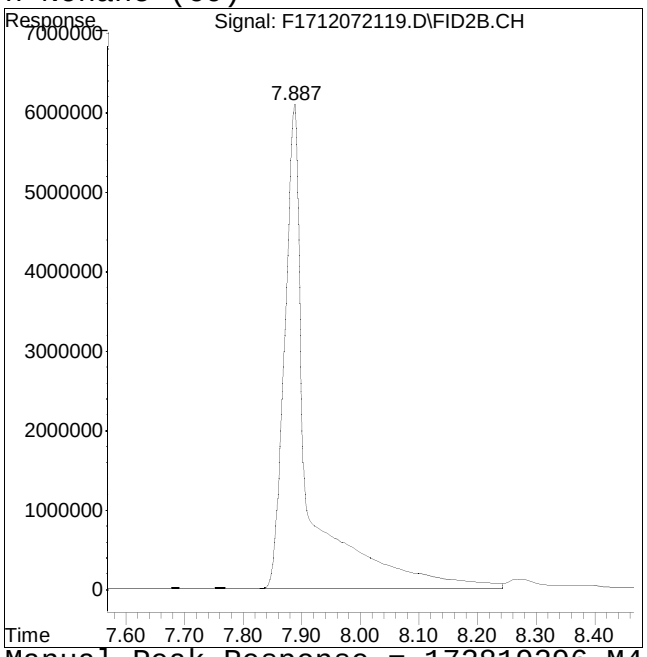
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 172824565



Manual Peak Response = 172819296 M4

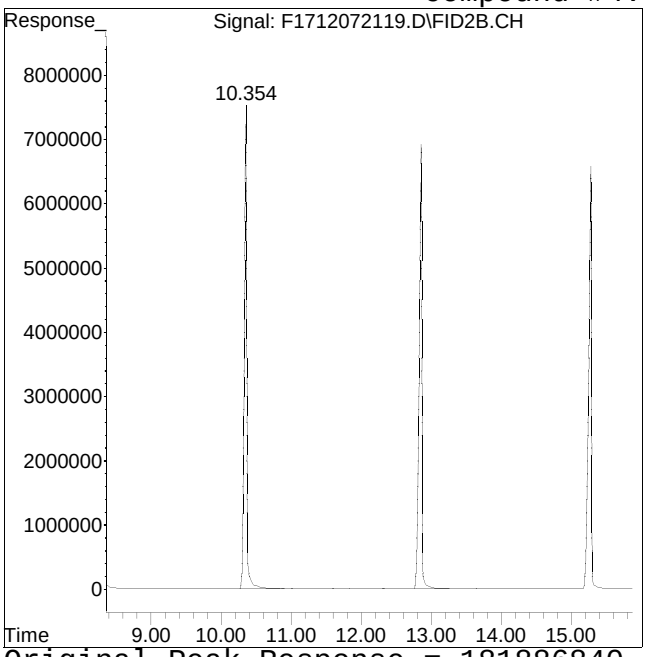
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

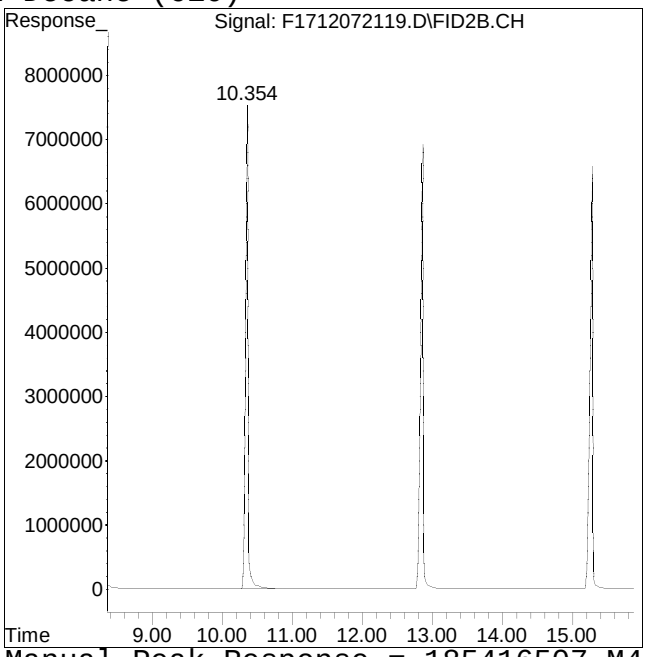
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #4: n-Decane (C10)



Original Peak Response = 181886840



Manual Peak Response = 185416507 M4

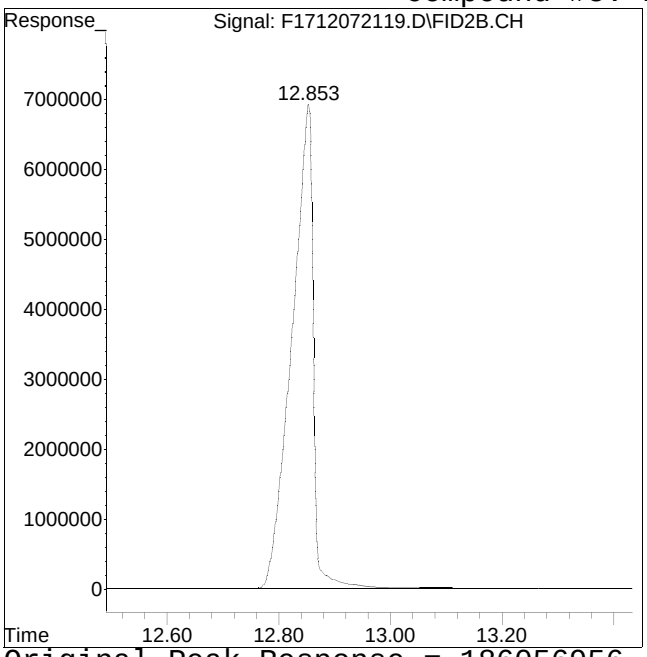
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

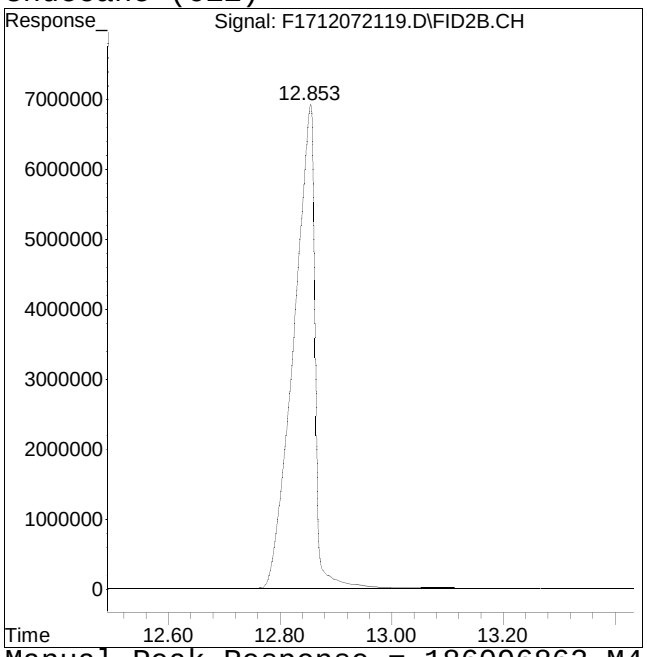
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 186056956



Manual Peak Response = 186096862 M4

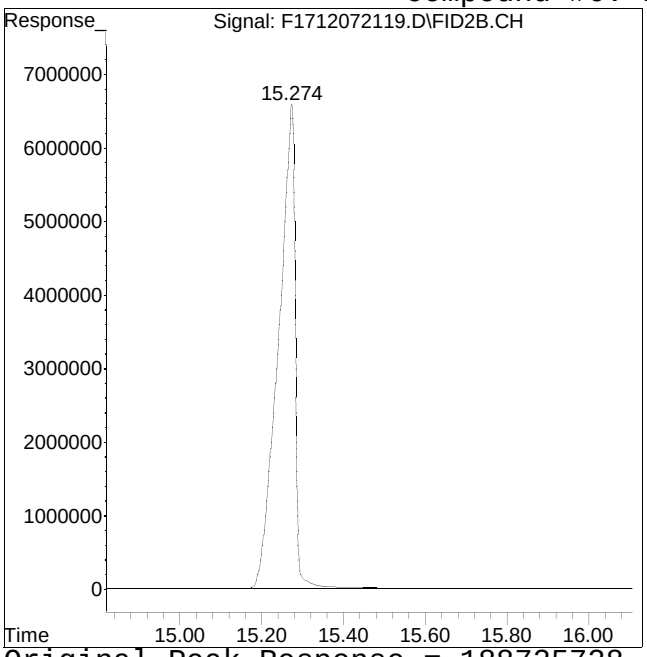
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

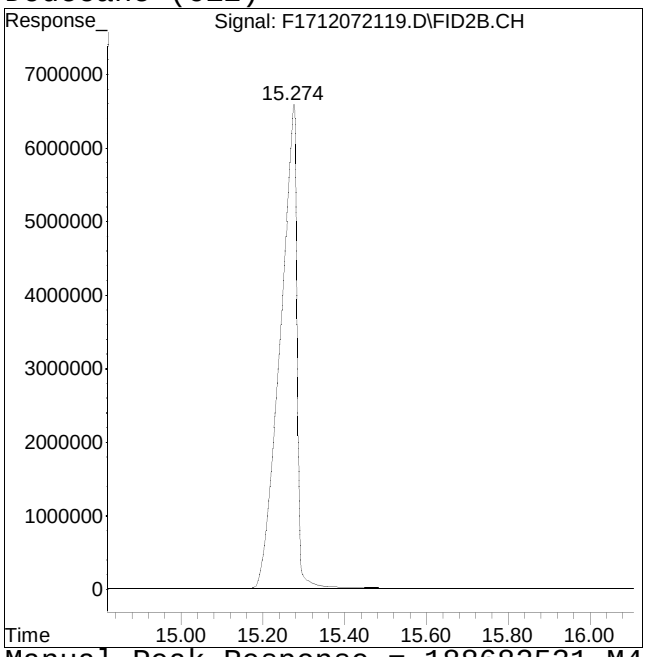
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 188725728



Manual Peak Response = 188682531 M4

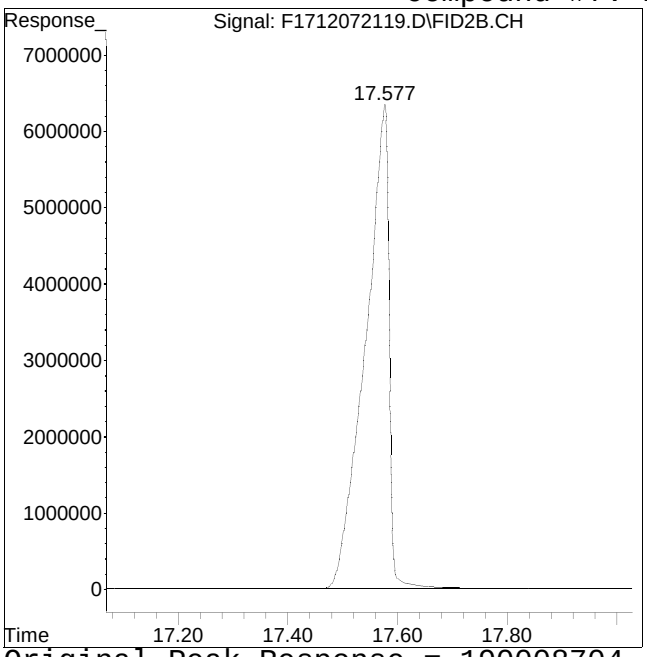
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

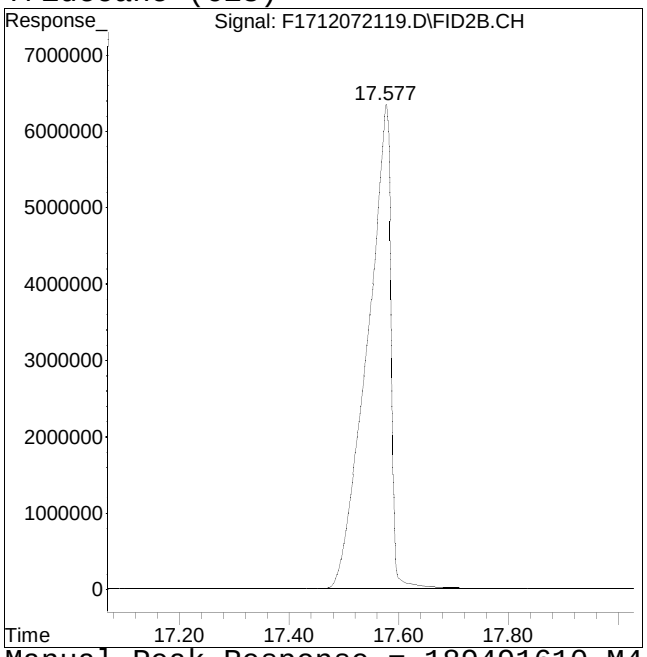
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 190008704



Manual Peak Response = 189491610 M4

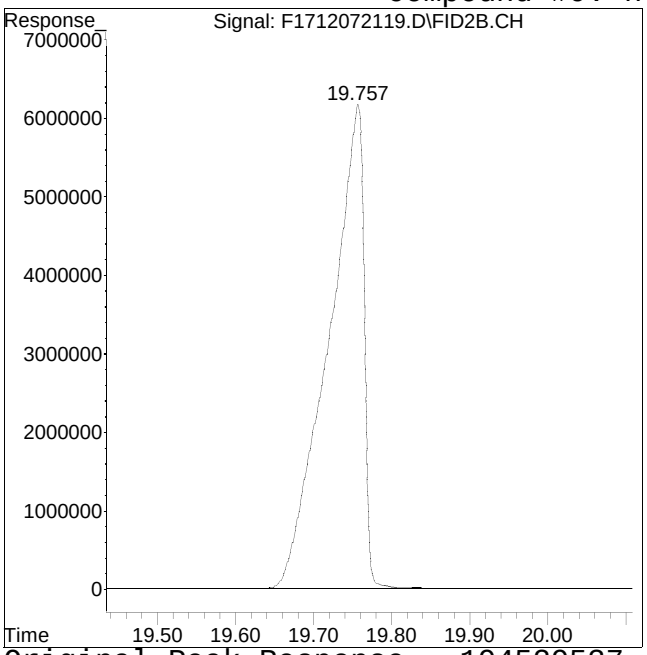
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

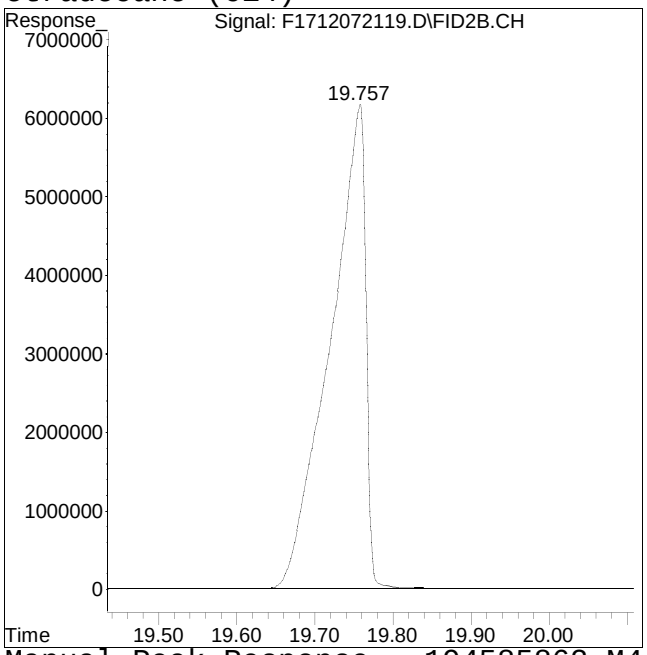
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 194529537



Manual Peak Response = 194585862 M4

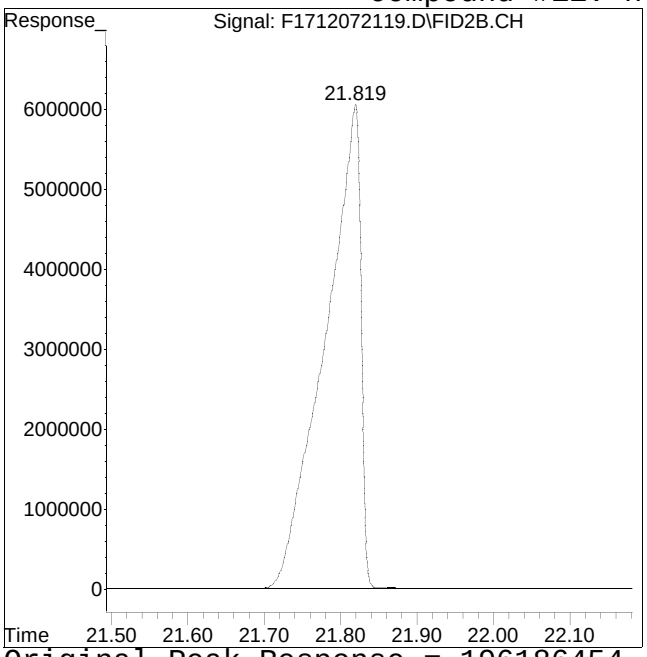
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

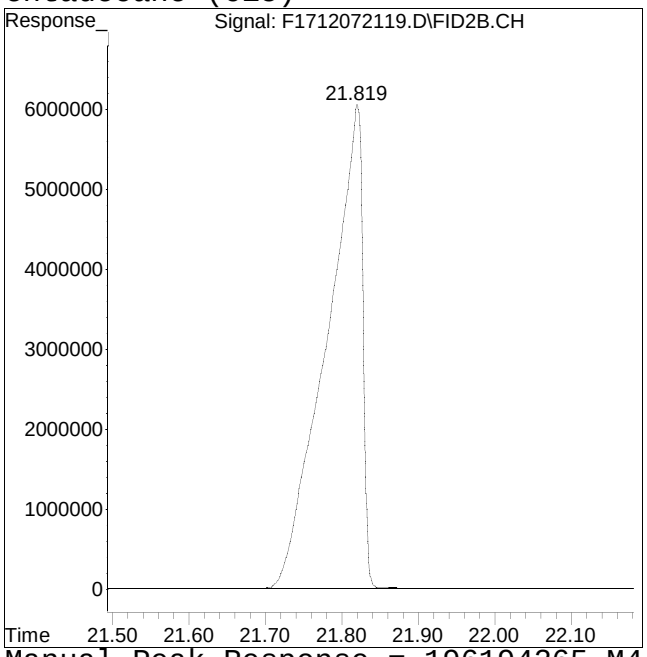
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 196186454



Manual Peak Response = 196194265 M4

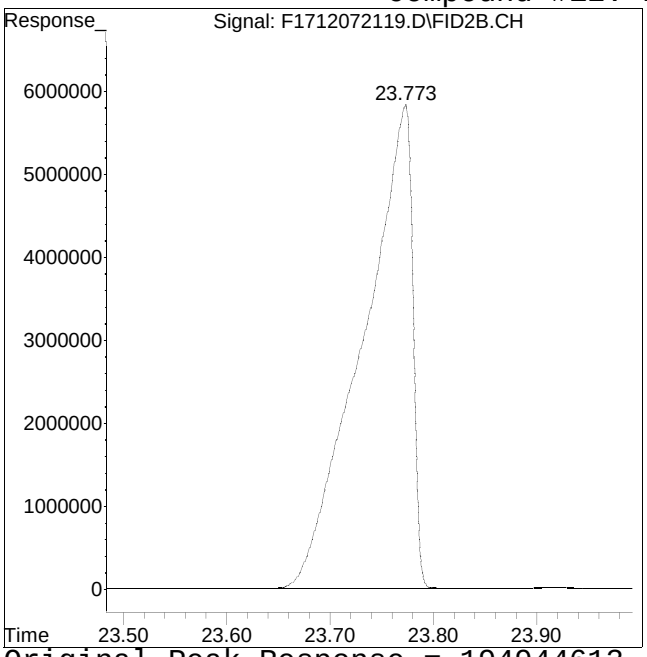
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

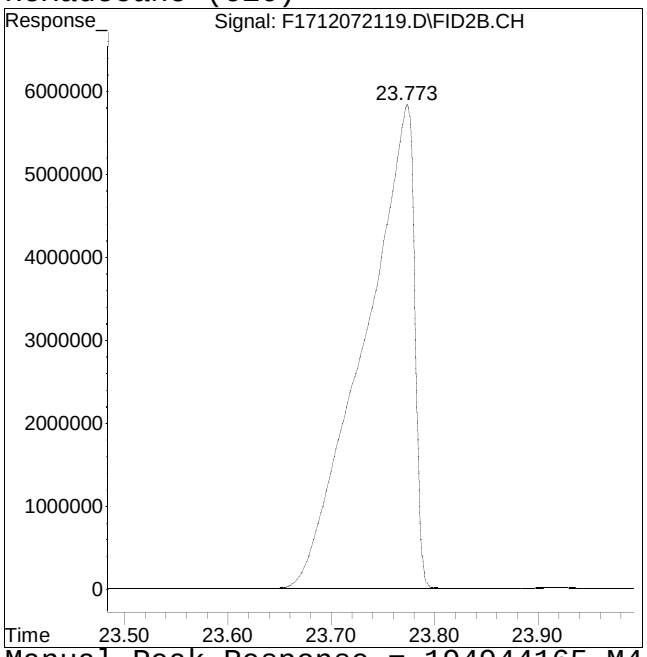
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 194944613



Manual Peak Response = 194944165 M4

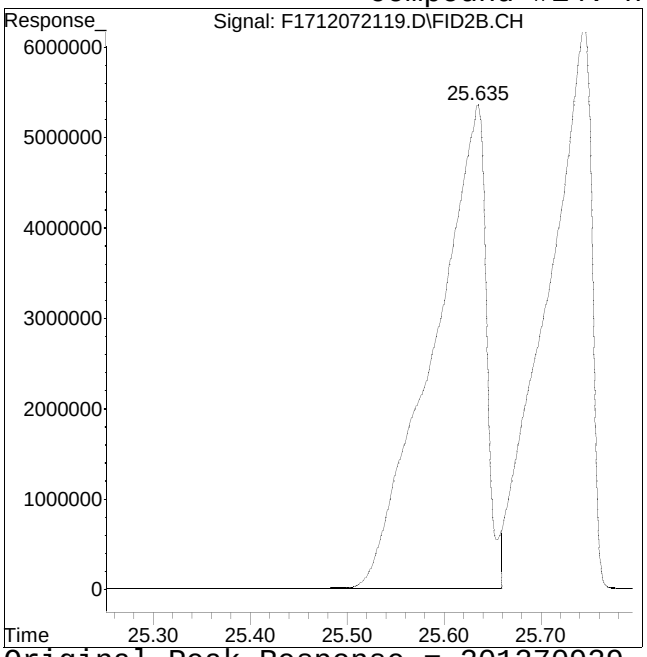
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

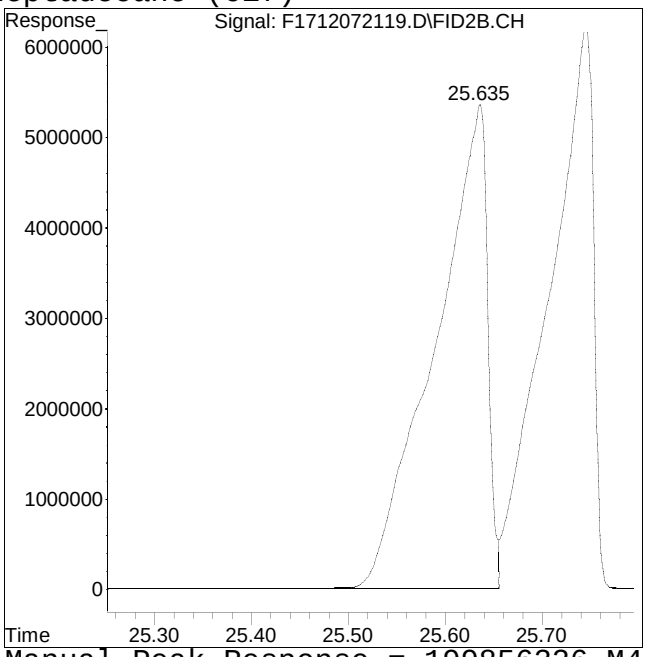
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 201270929



Manual Peak Response = 199856326 M4

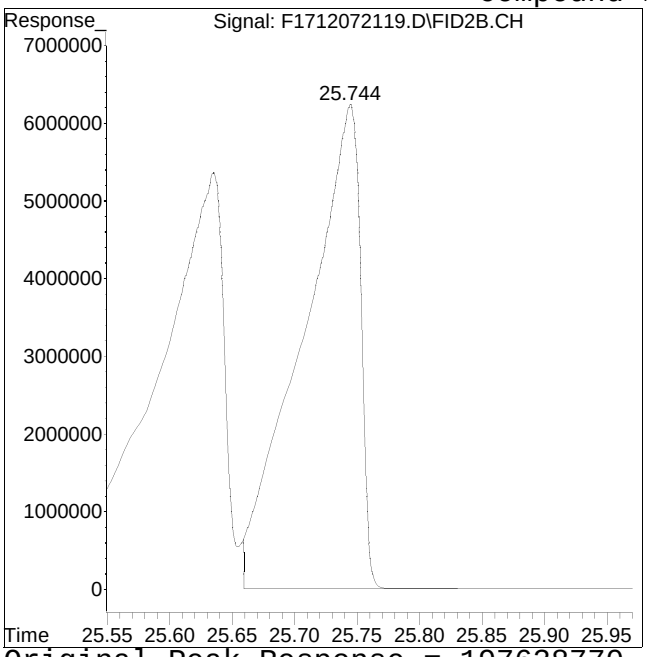
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

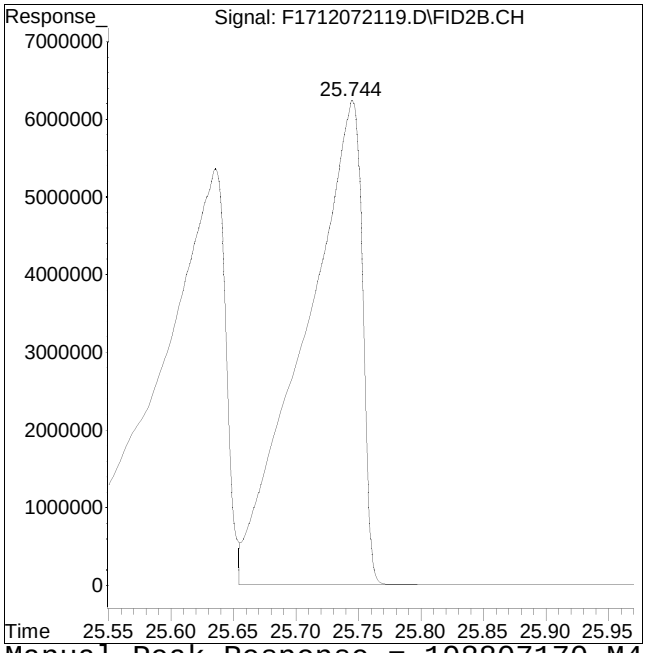
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #15: Pristane



Original Peak Response = 197638770



Manual Peak Response = 198807170 M4

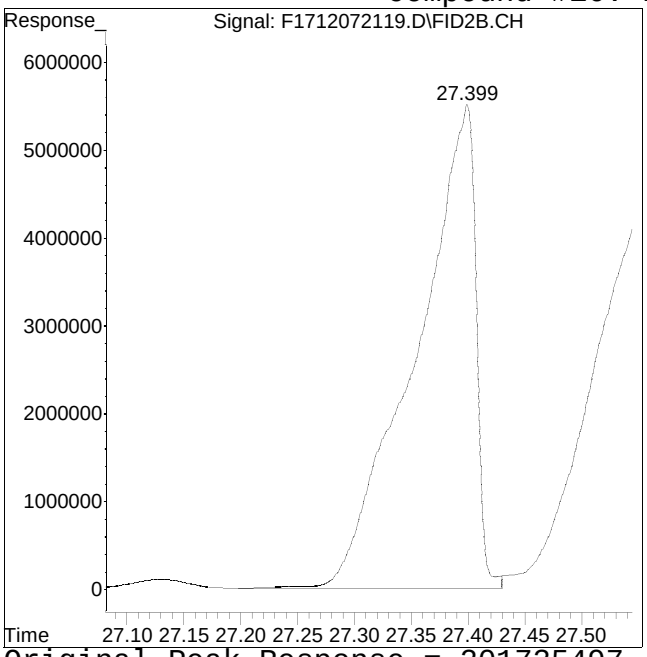
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

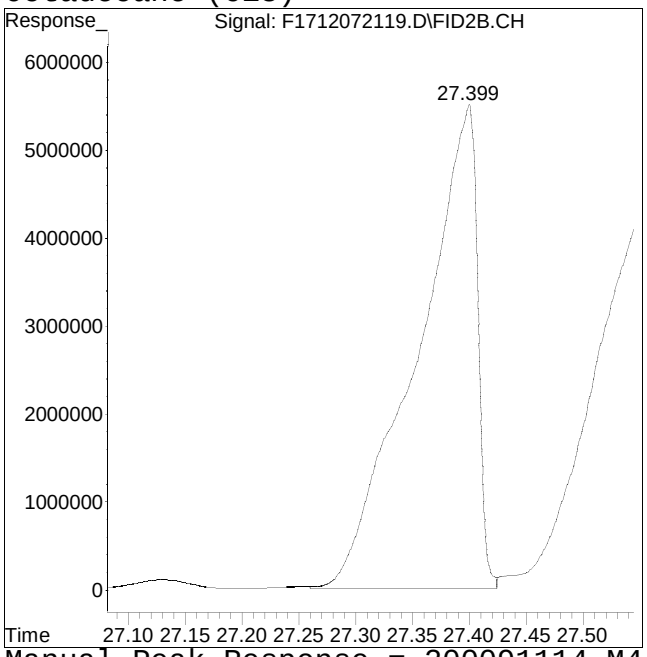
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 201735497



Manual Peak Response = 200091114 M4

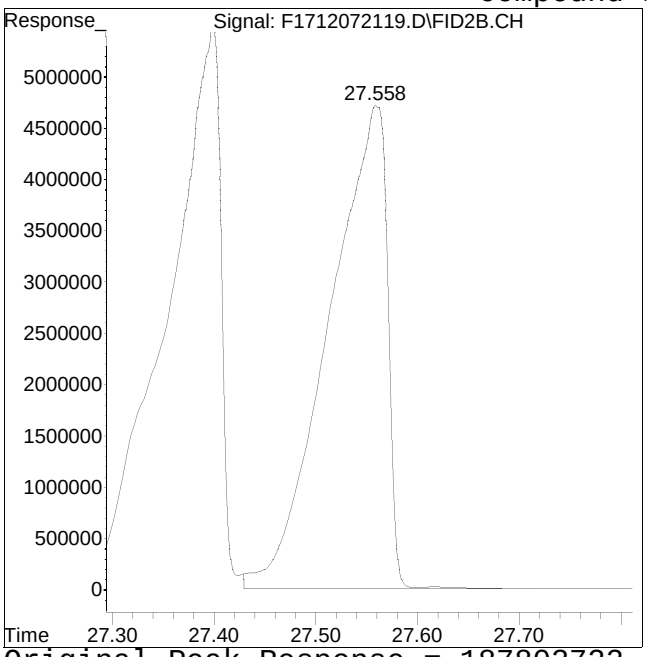
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

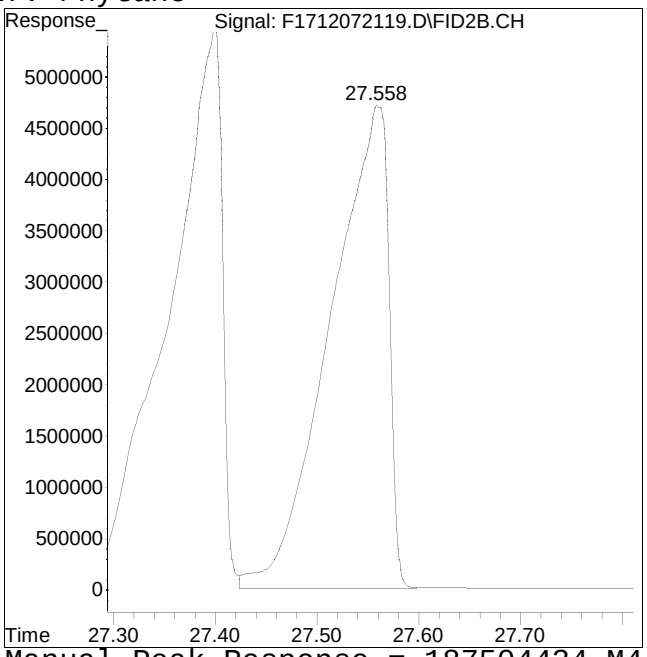
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #17: Phytane



Original Peak Response = 187802722



Manual Peak Response = 187504434 M4

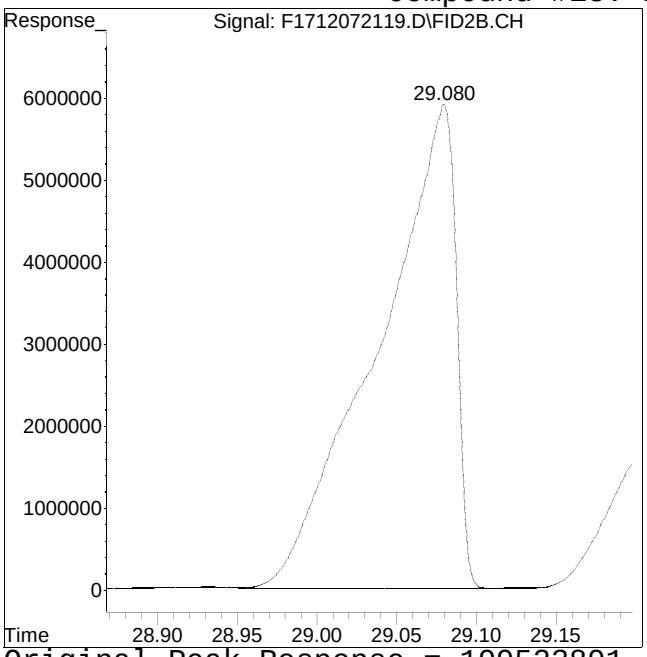
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

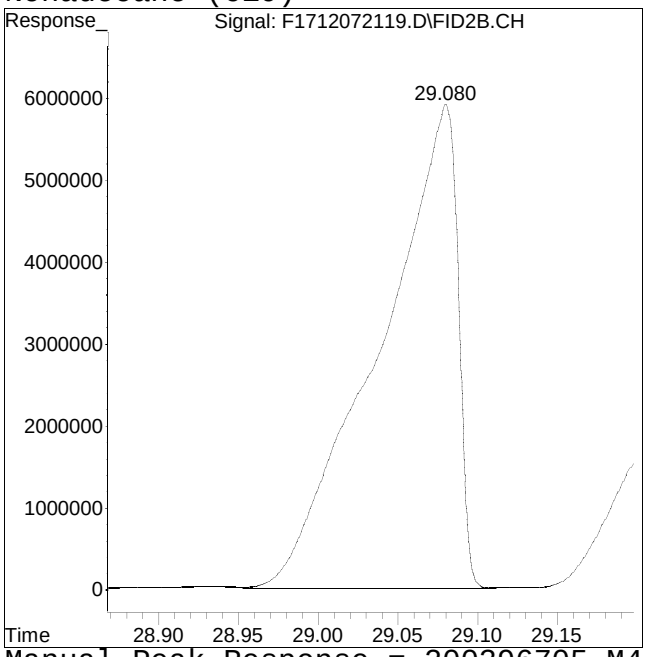
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 199523891



Manual Peak Response = 200396705 M4

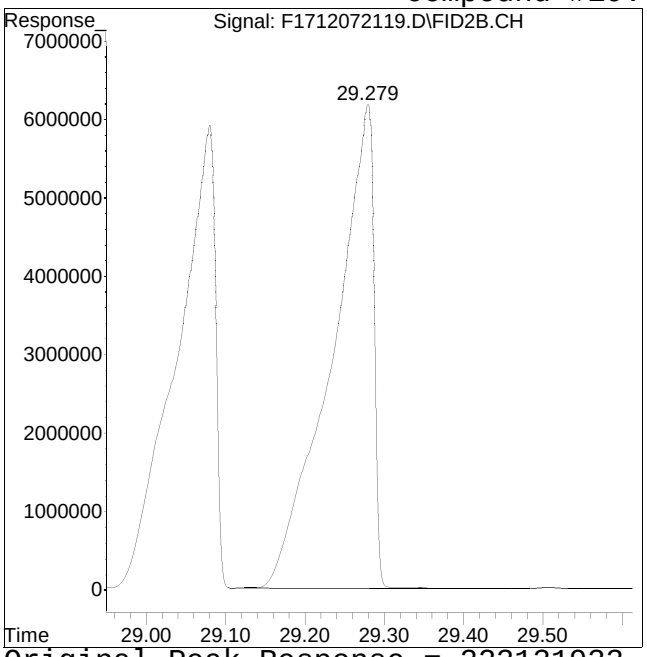
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

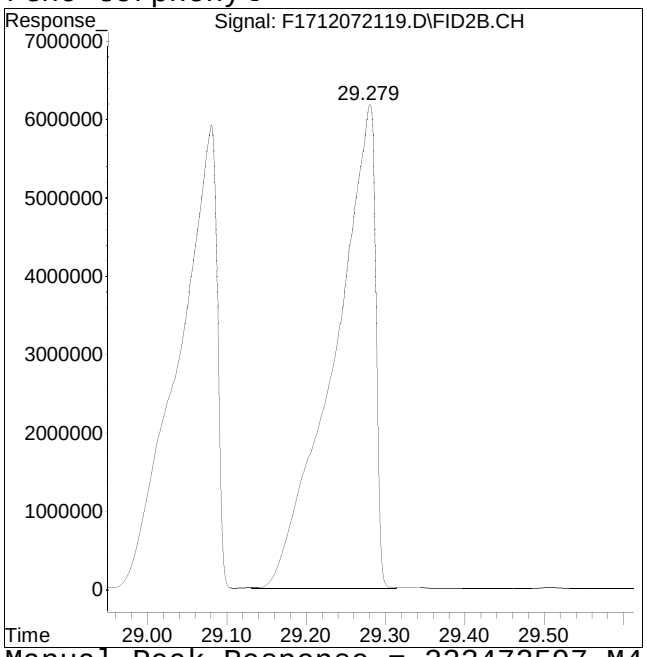
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #19: ortho-terphenyl



Original Peak Response = 223131933



Manual Peak Response = 223472597 M4

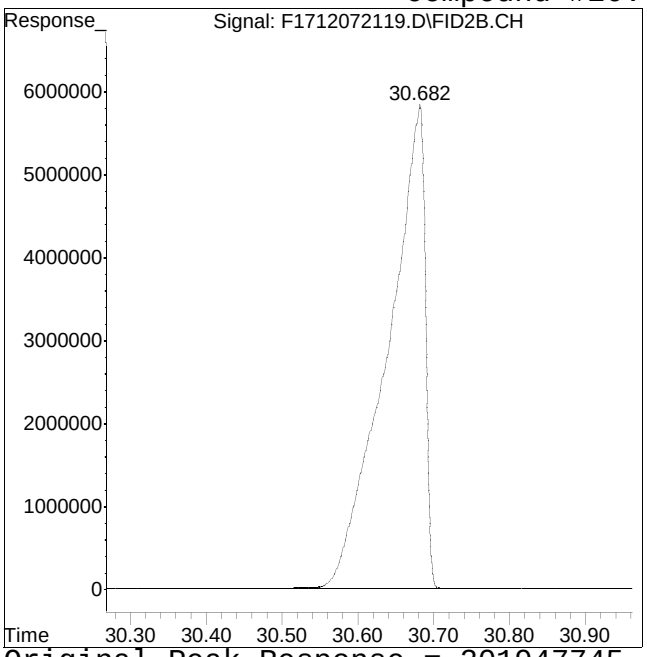
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

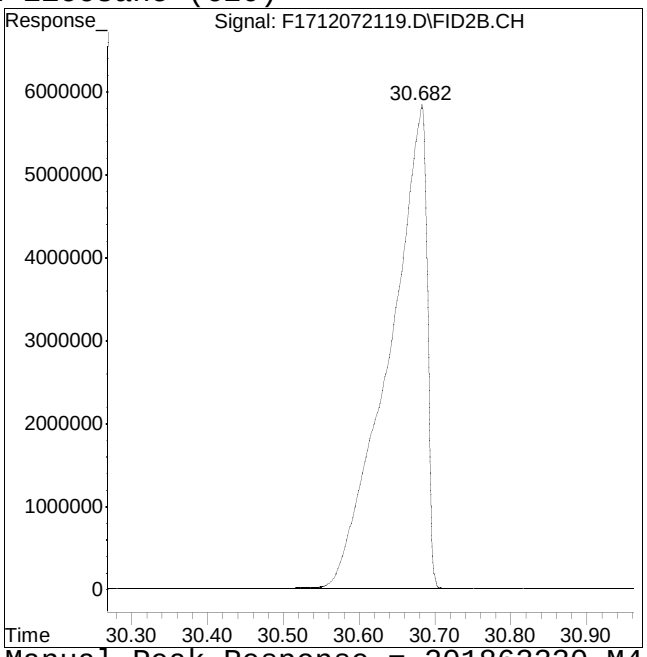
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 201947745



Manual Peak Response = 201863330 M4

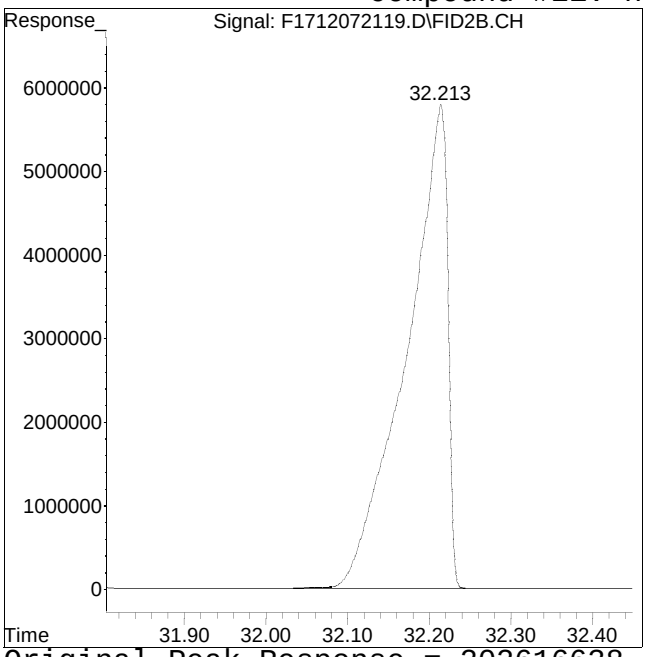
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

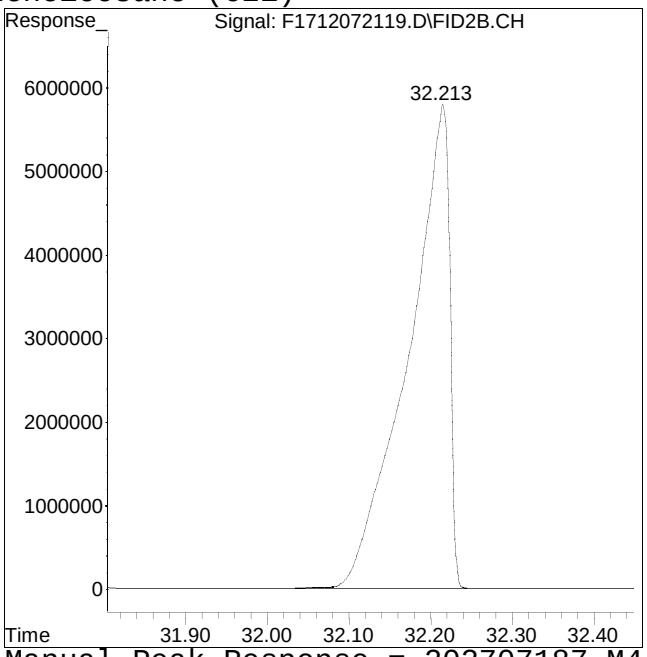
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 202616638



Manual Peak Response = 202707187 M4

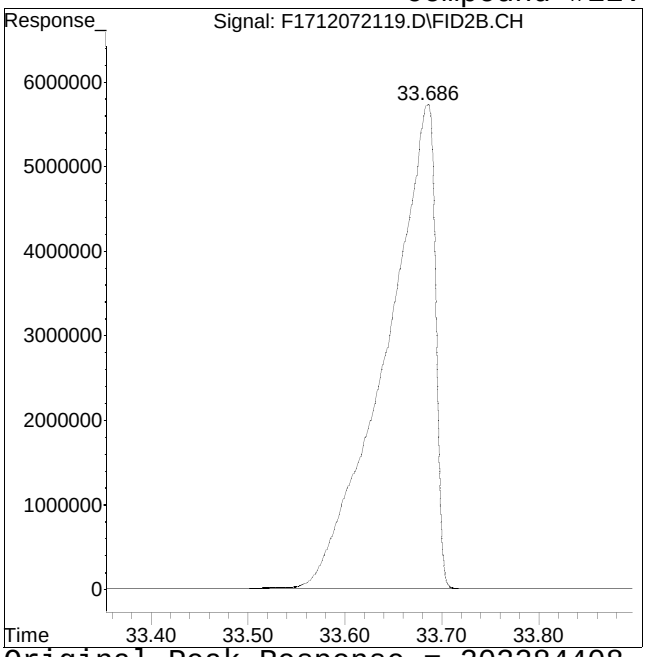
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

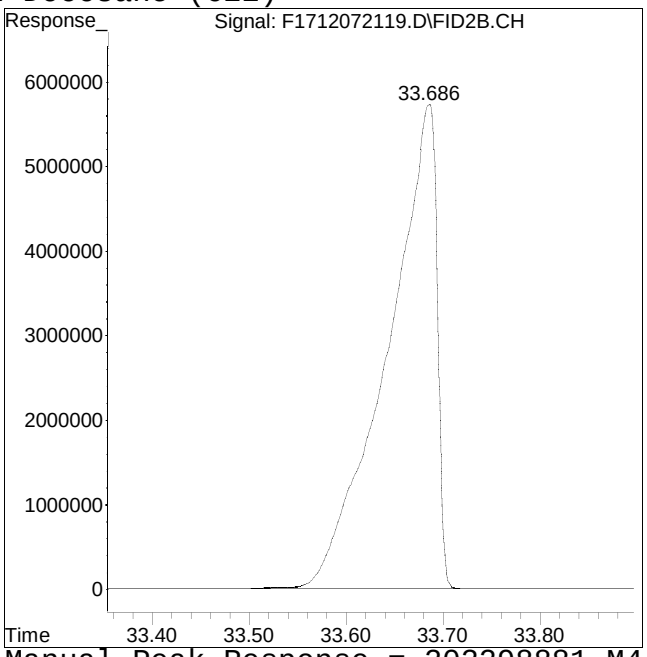
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 202284408



Manual Peak Response = 202298881 M4

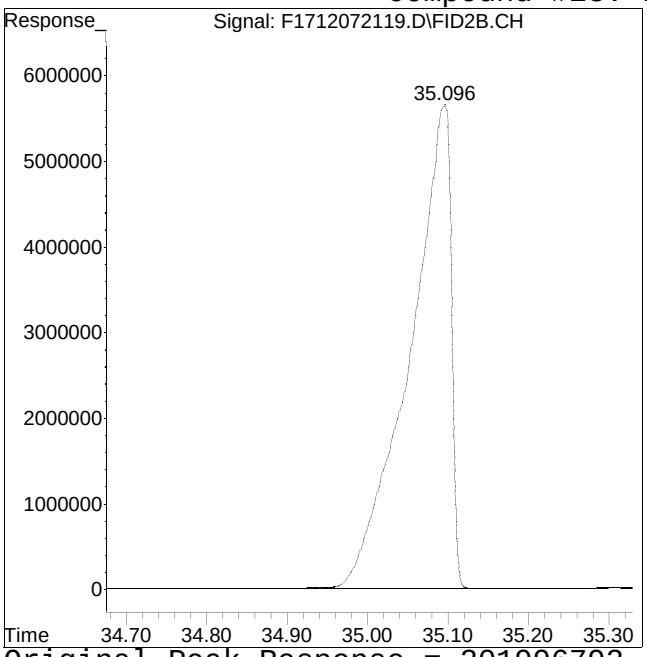
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

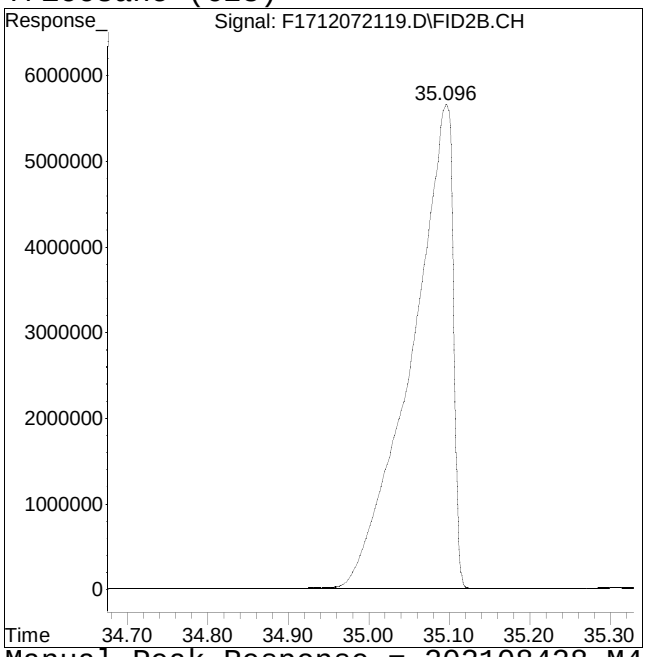
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 201996792



Manual Peak Response = 202108428 M4

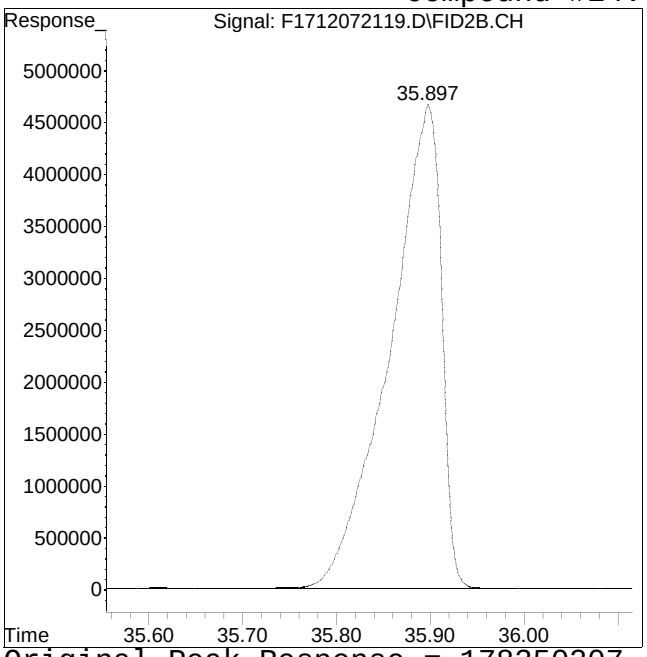
M4 = Poor automated baseline construction.

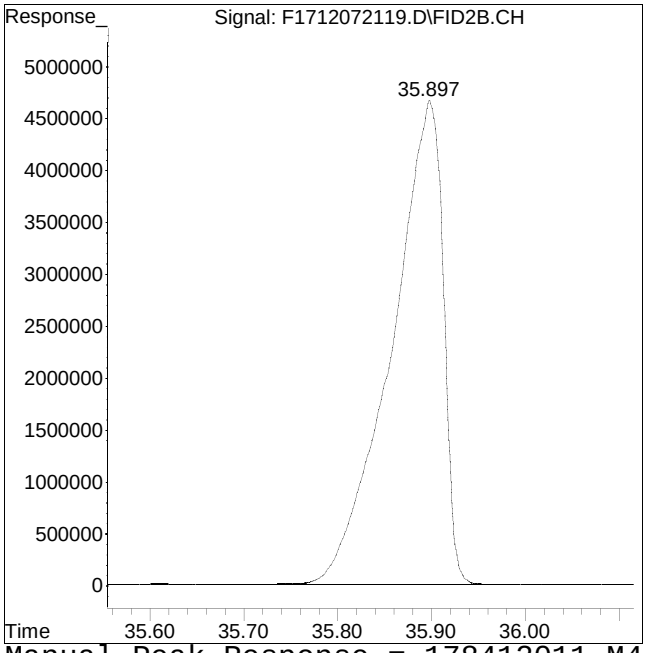
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #24: d50-Tetracosane





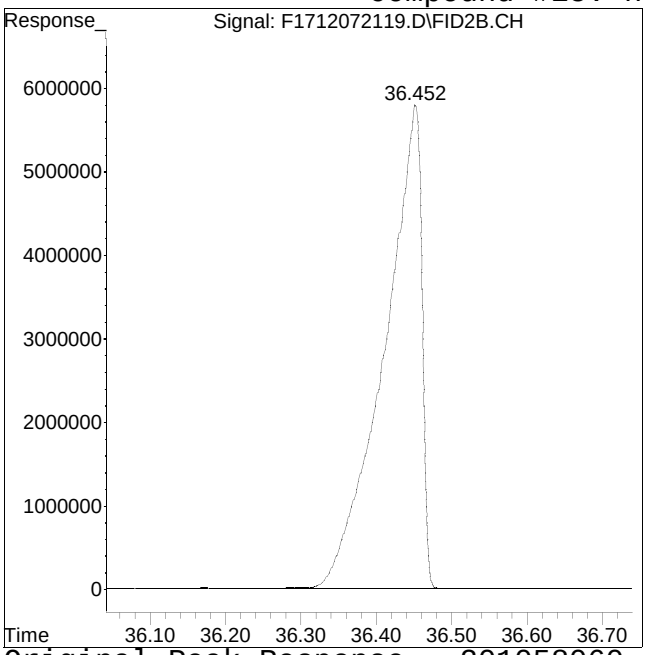
Original Peak Response = 178350207 Manual Peak Response = 178412011 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

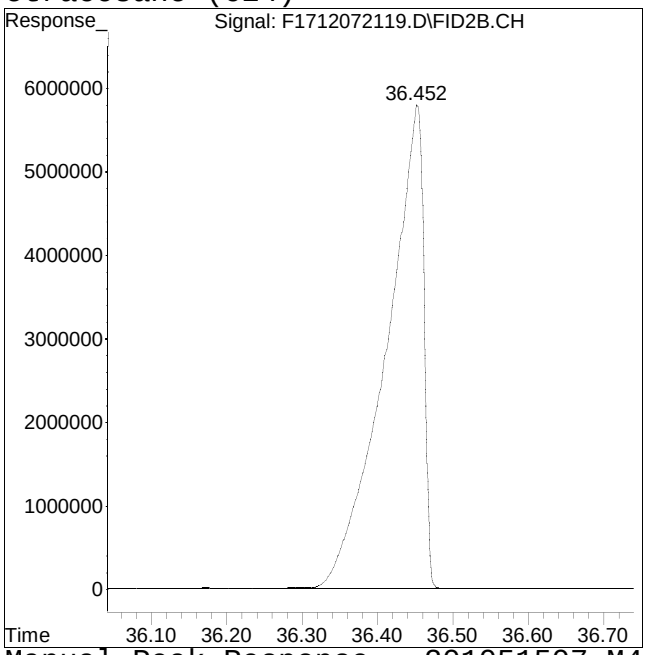
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 201058060



Manual Peak Response = 201051507 M4

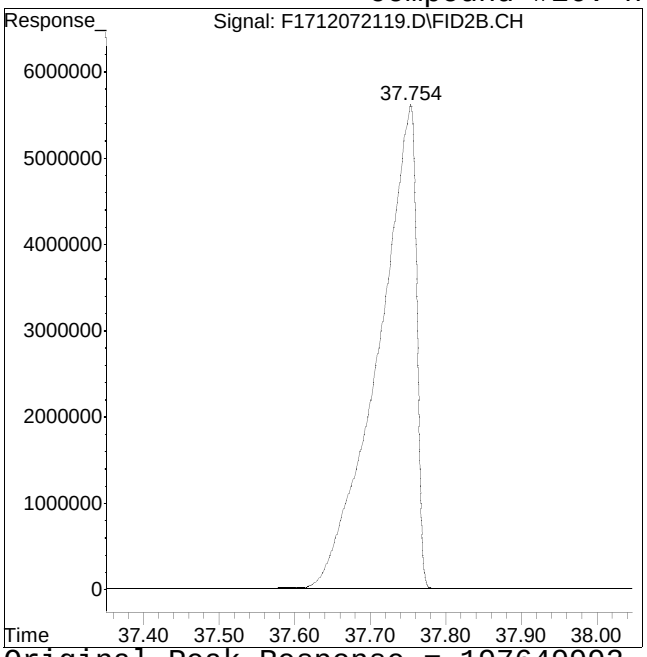
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

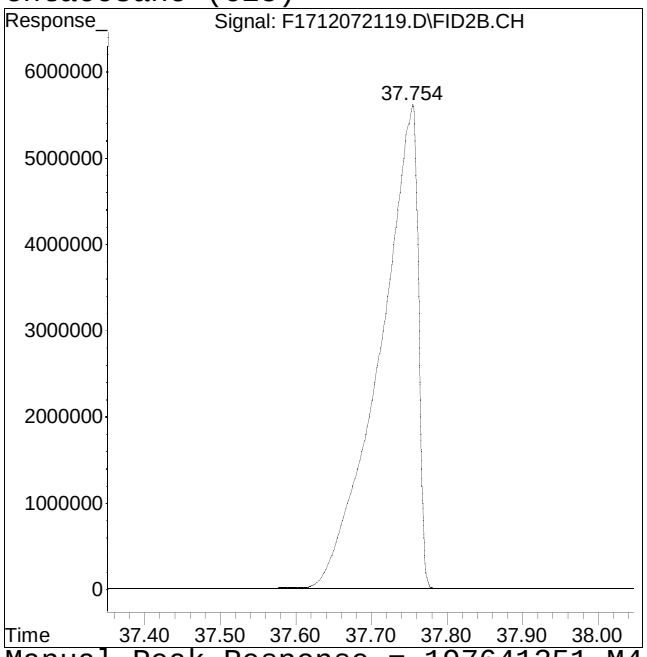
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 197649992



Manual Peak Response = 197641351 M4

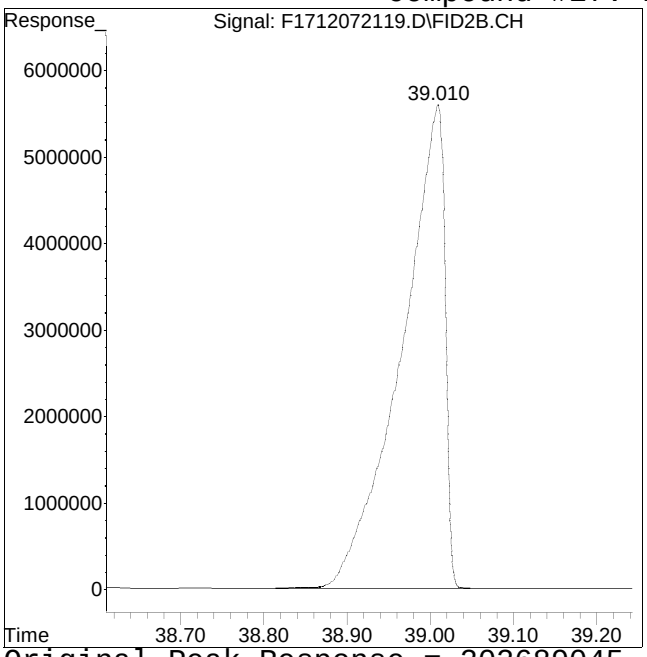
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

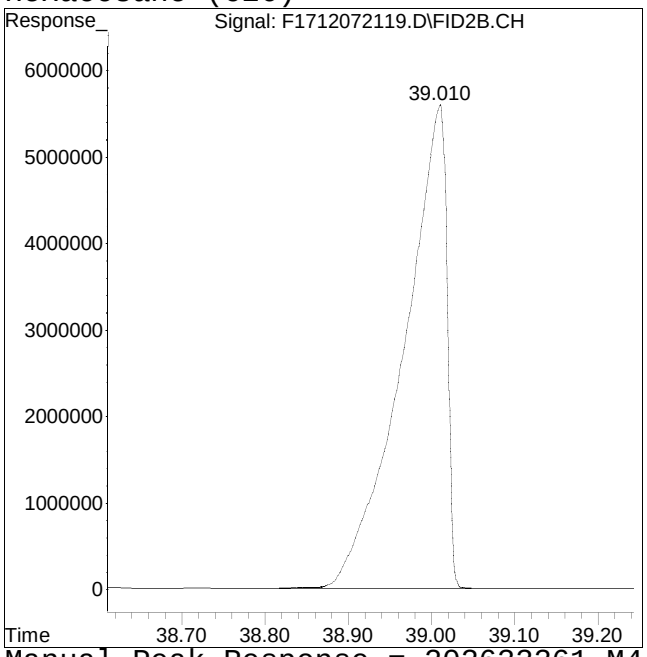
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 202689045



Manual Peak Response = 202633361 M4

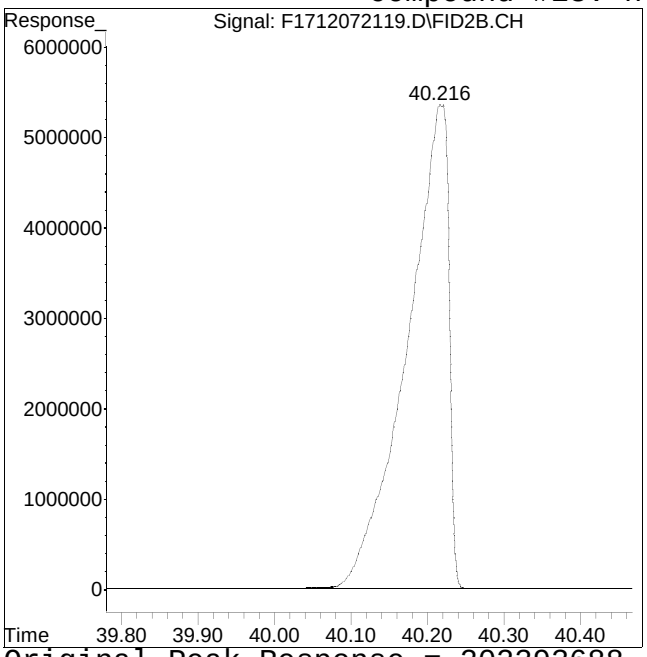
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

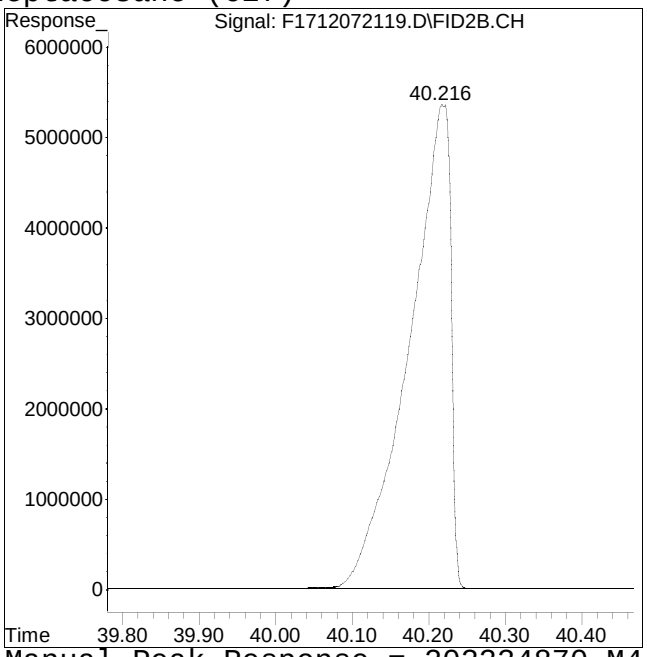
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 202393688



Manual Peak Response = 202334870 M4

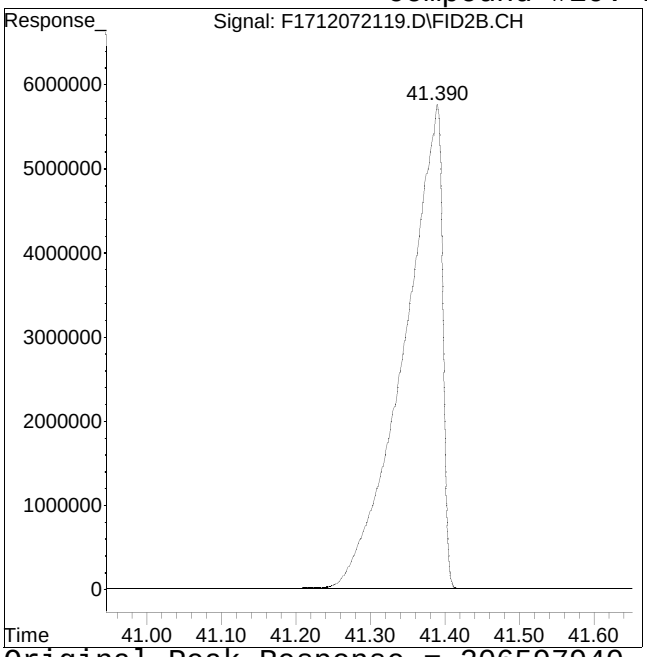
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

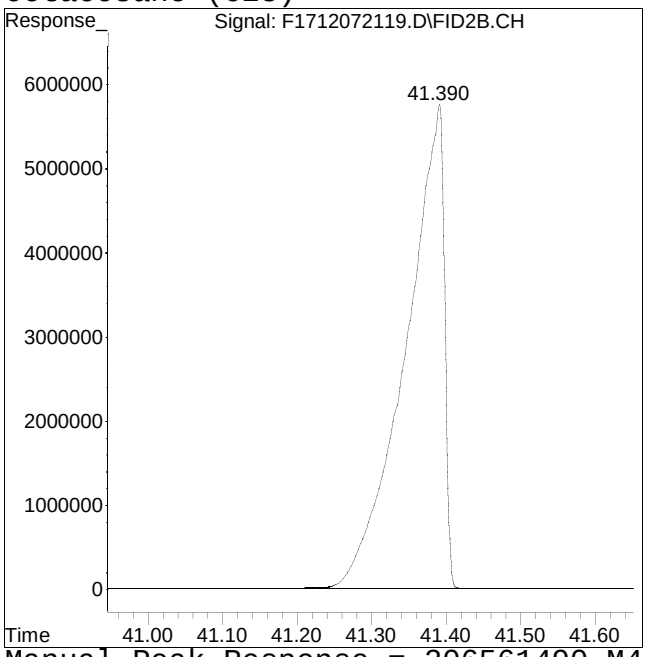
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 206597940



Manual Peak Response = 206561490 M4

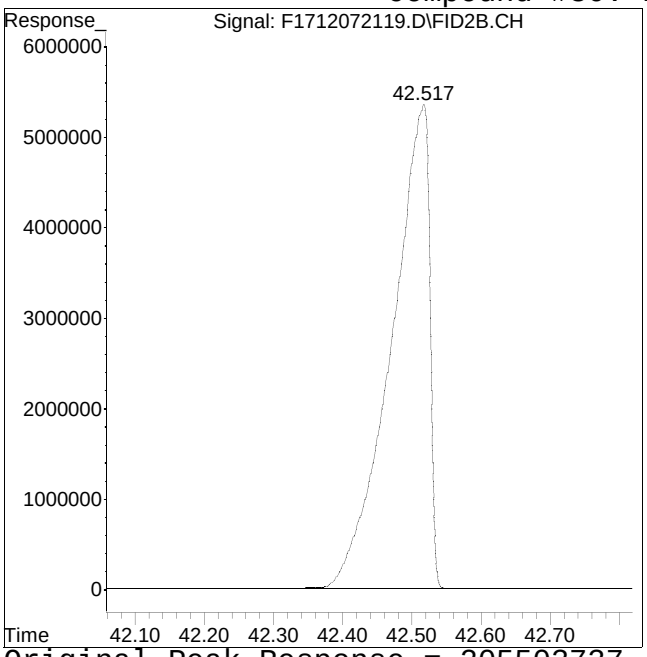
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

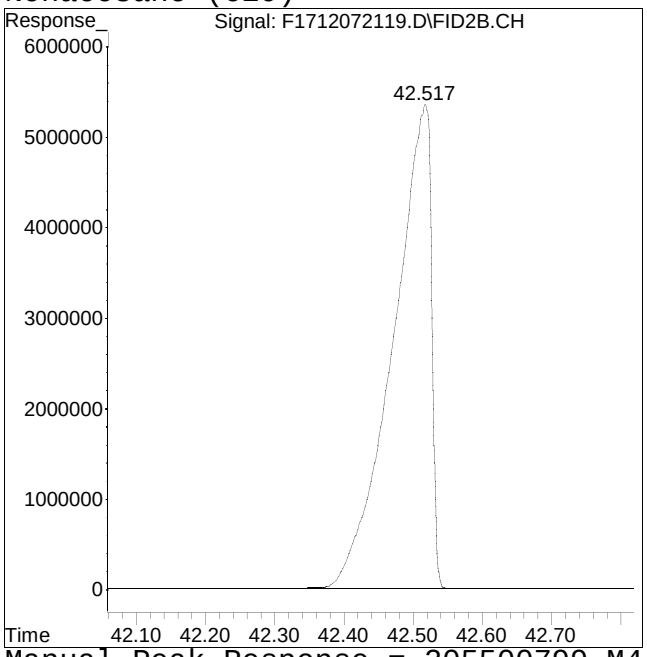
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 205503737



Manual Peak Response = 205500799 M4

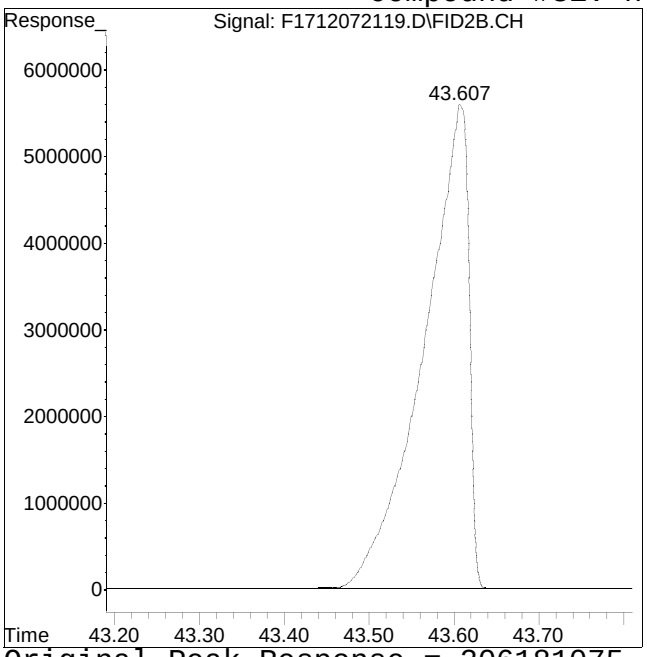
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

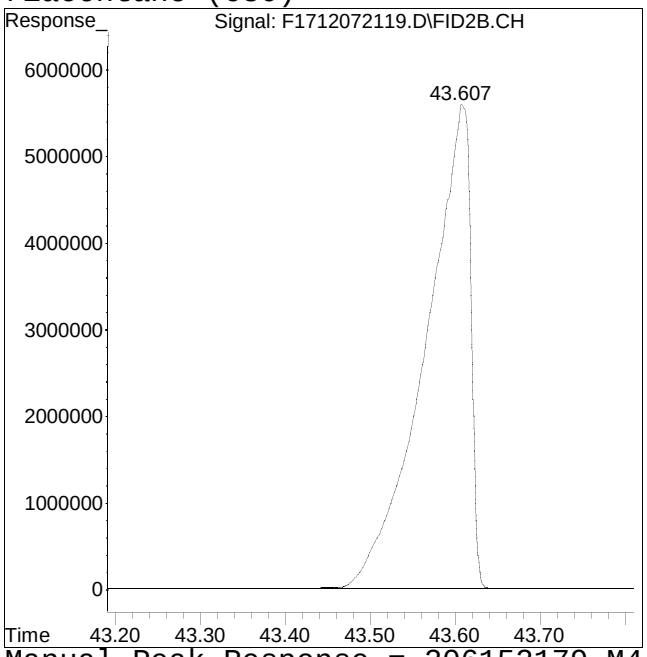
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 206181075



Manual Peak Response = 206152179 M4

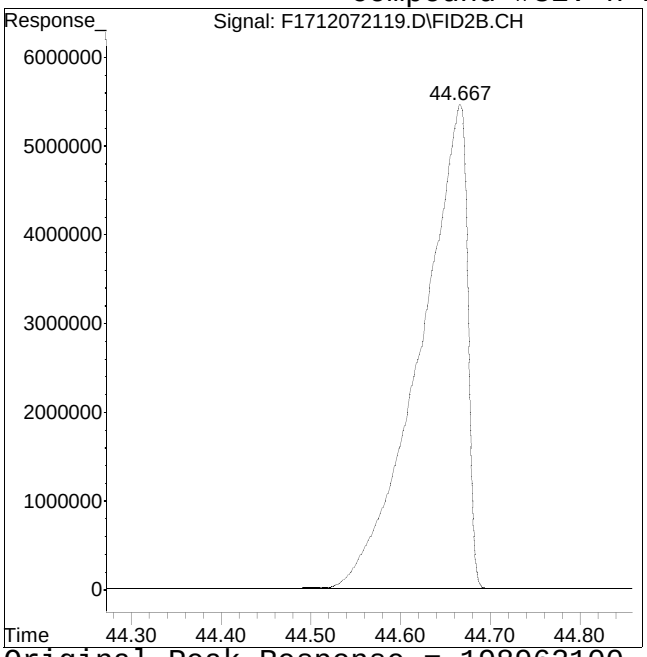
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

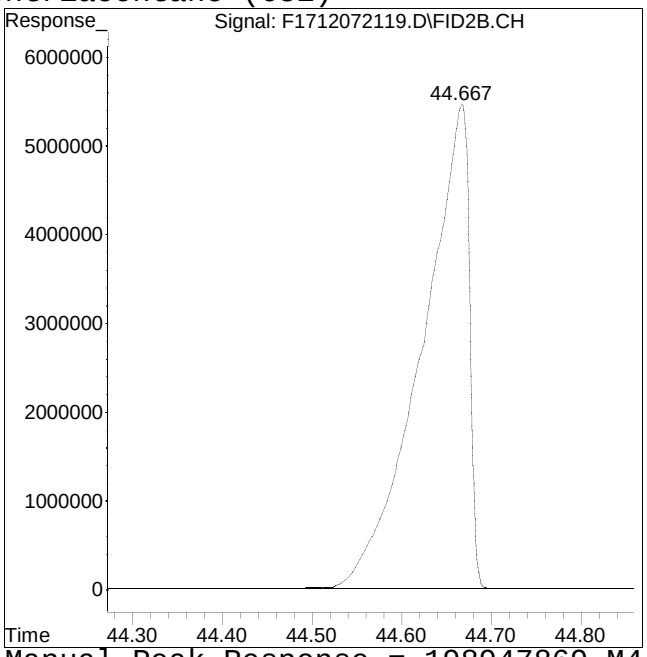
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 198962100



Manual Peak Response = 198947869 M4

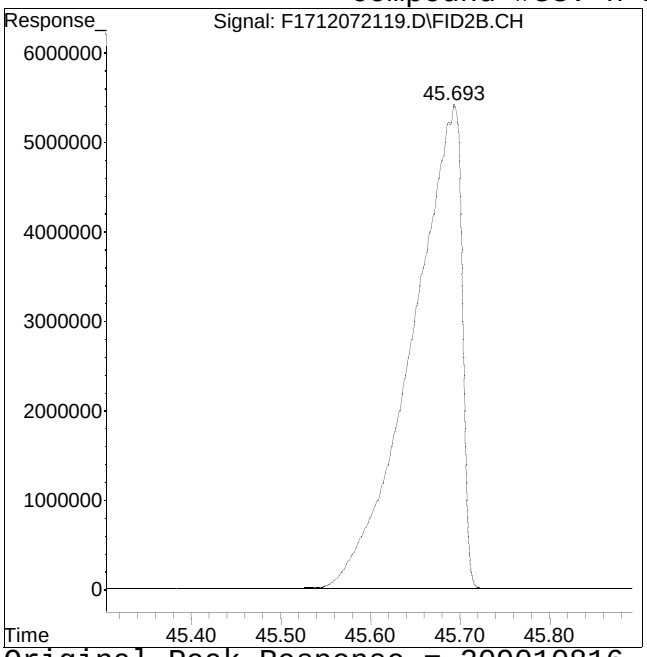
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

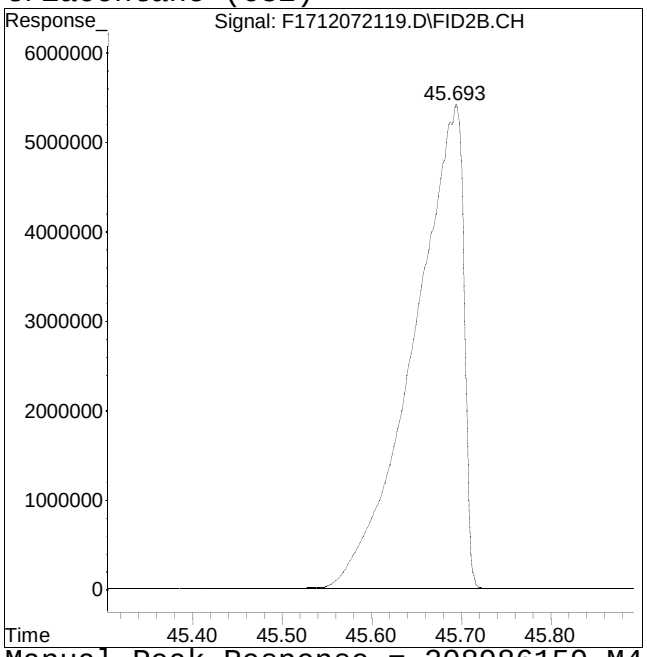
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 209010816



Manual Peak Response = 208986159 M4

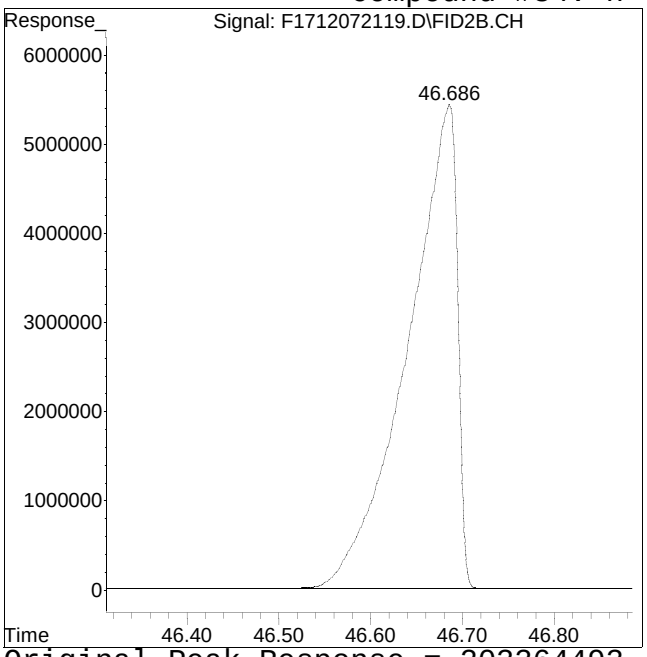
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

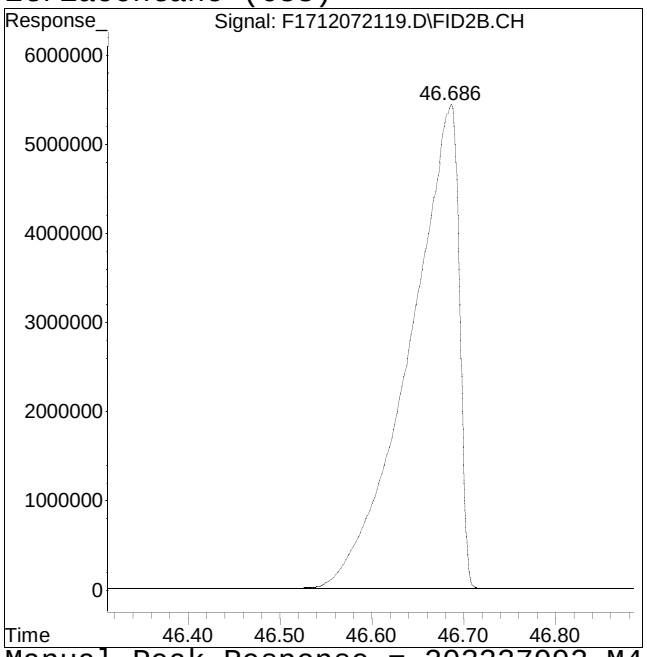
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 203364493



Manual Peak Response = 203337992 M4

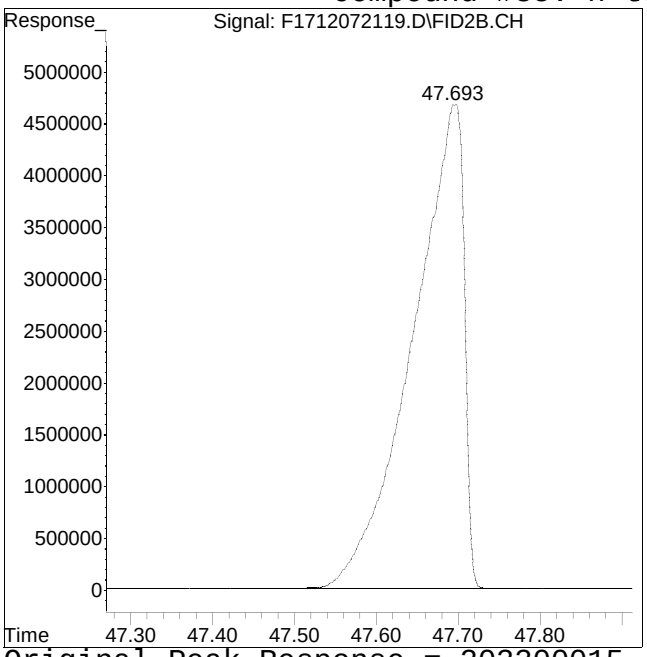
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

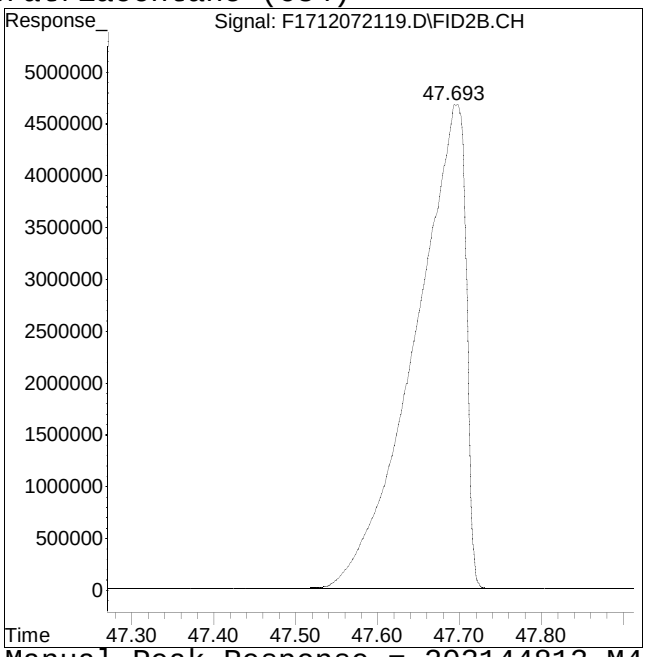
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 203300015



Manual Peak Response = 203144813 M4

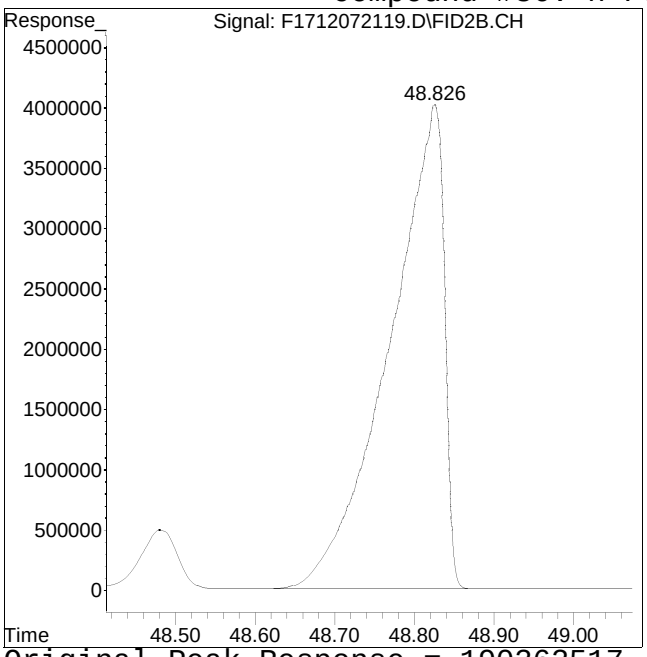
M4 = Poor automated baseline construction.

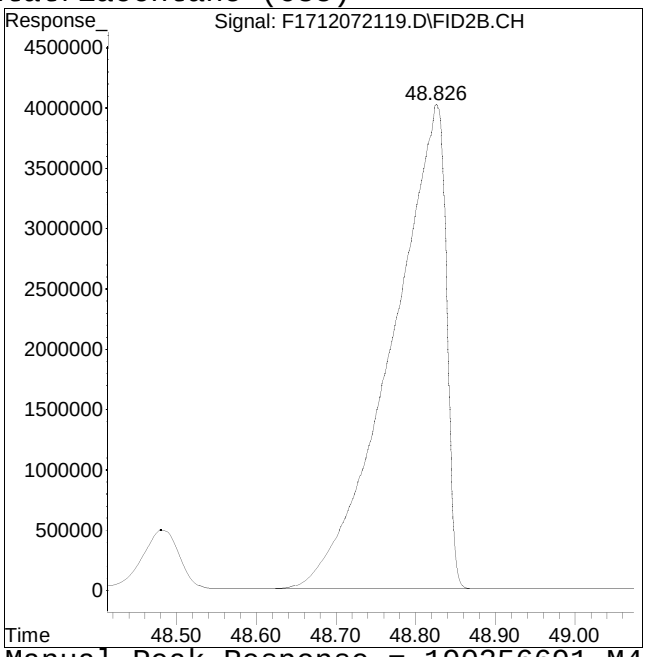
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #36: n-Pentatriacontane (C35)





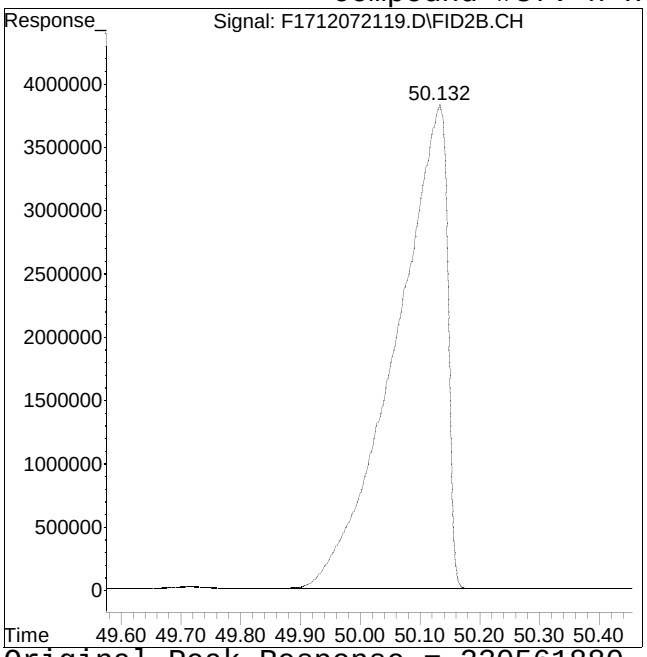
Original Peak Response = 190362517 Manual Peak Response = 190356691 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

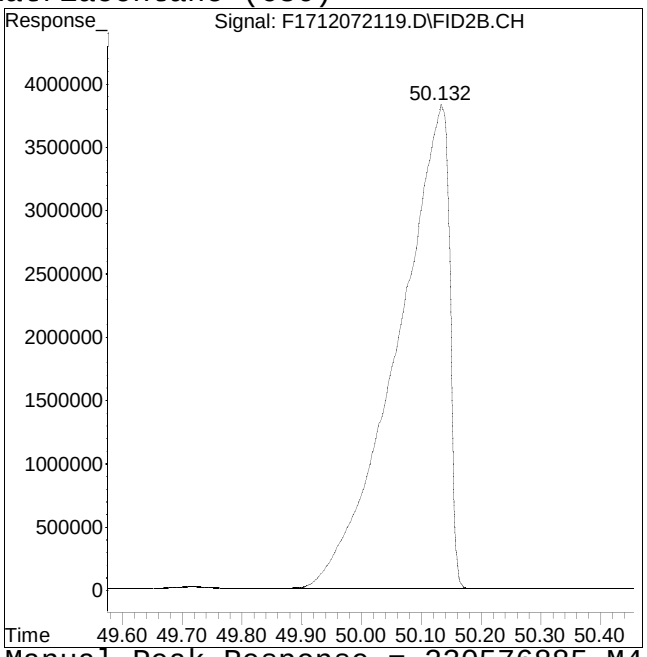
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 230561880



Manual Peak Response = 230576885 M4

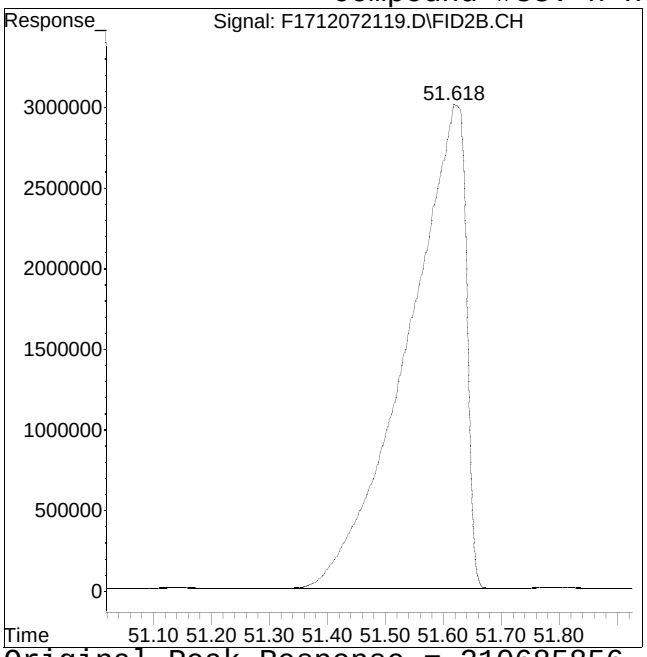
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

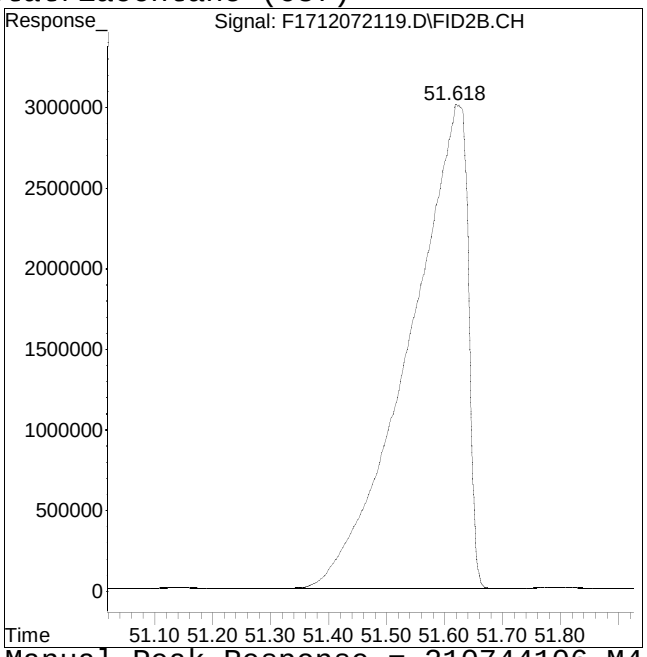
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 210685856



Manual Peak Response = 210744106 M4

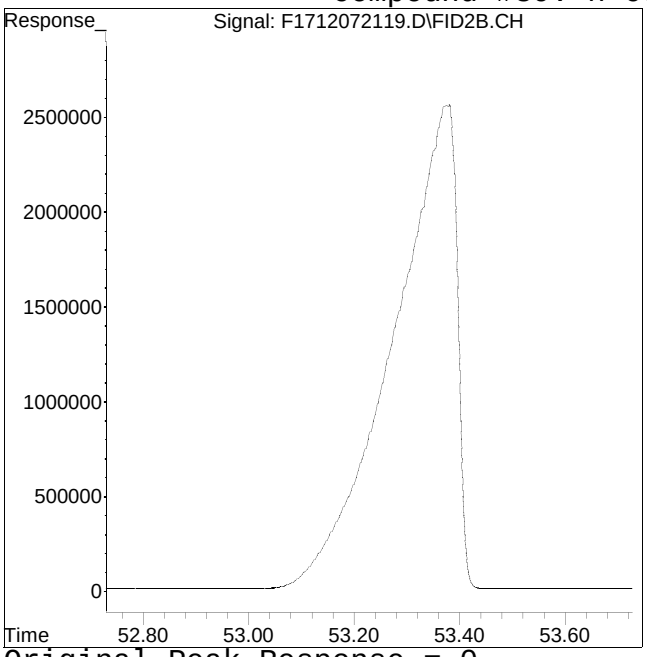
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

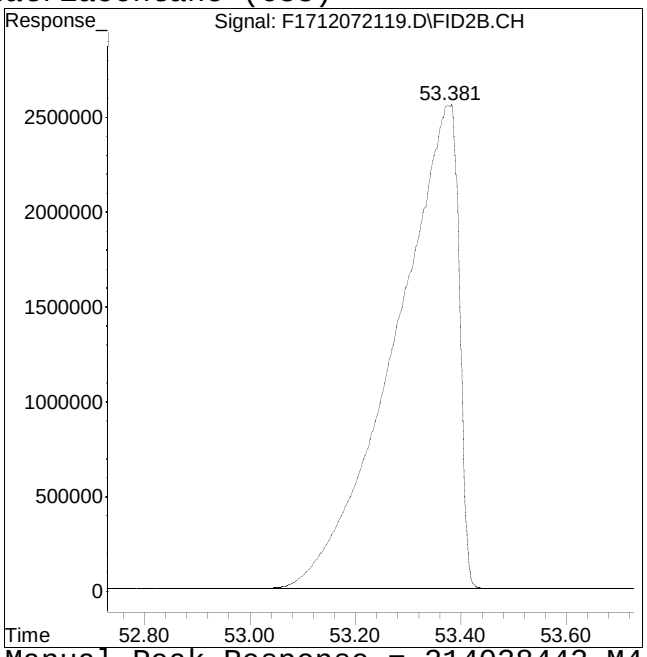
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 0



Manual Peak Response = 214038442 M4

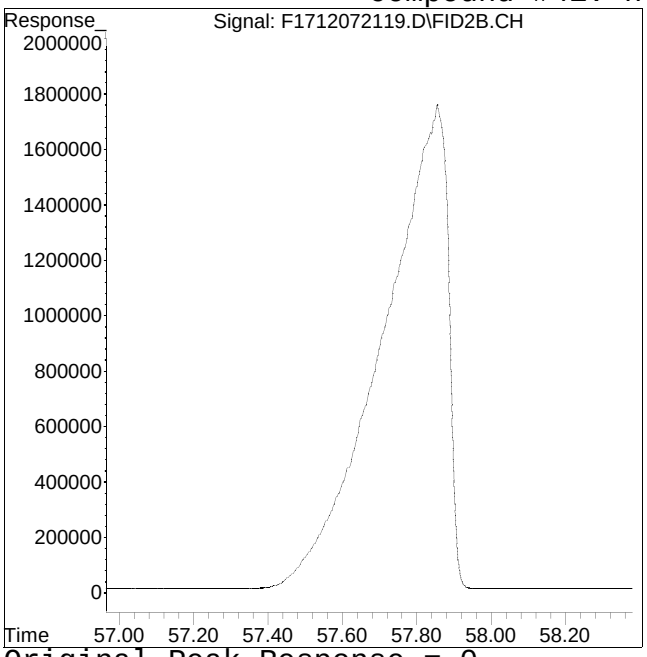
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

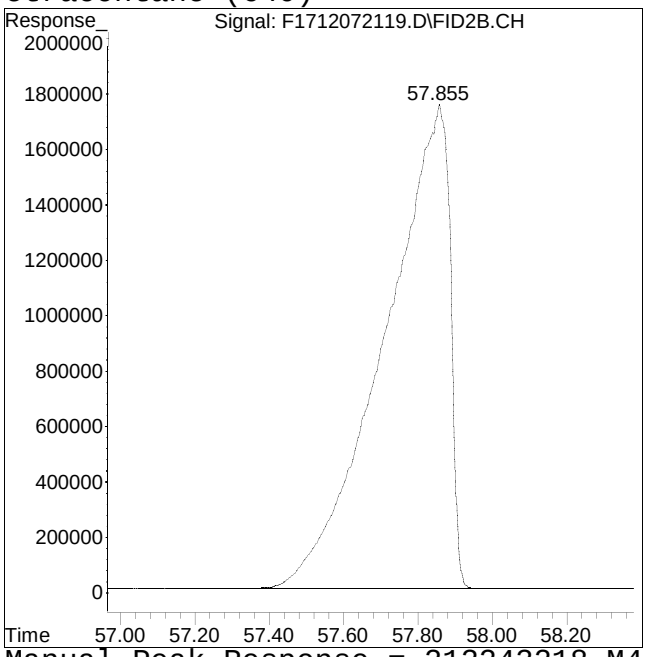
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072119.D
Date Inj'd : 12/7/2021 10:48 pm
Sample : I1712072105R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:05 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 0



Manual Peak Response = 212243218 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072121.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 12:16 am
Operator : FID17:WR
Sample : I1712072106R
Misc : WG1581826,FRBD81,500ug/ml
ALS Vial : 61 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:20:53 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:13:20 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.243	53494924	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	29.330	595345843	504.728	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 1009.46%#			
24) s	d50-Tetracosane	35.949	478683167	503.695	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery = 1007.39%#			
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	d
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	d
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	d
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072121.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 12:16 am
Operator : FID17:WR
Sample : I1712072106R
Misc : WG1581826,FRBD81,500ug/ml
ALS Vial : 61 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:20:53 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:13:20 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

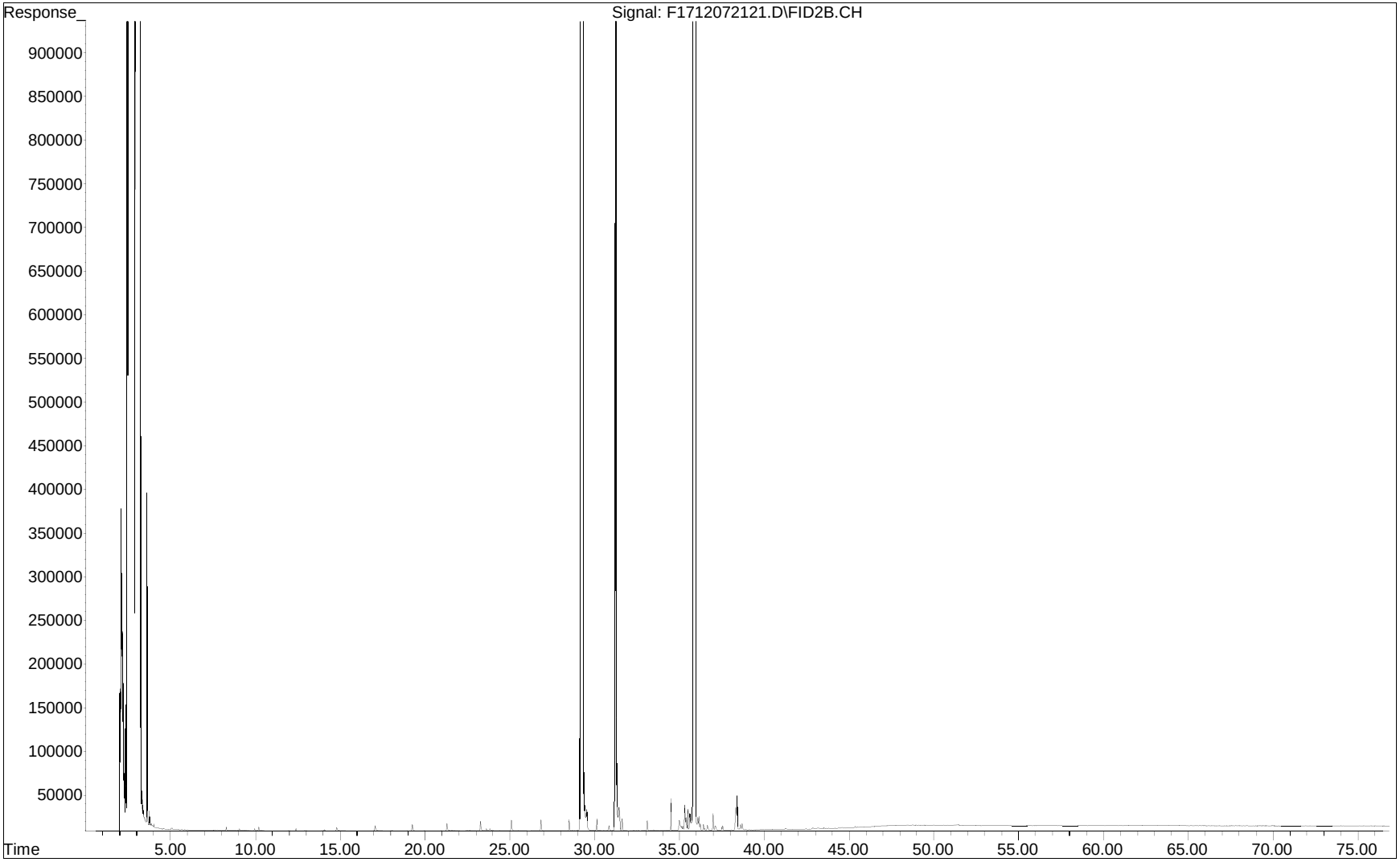
	Compound	R.T.	Response	Conc	Units	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	d
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	d
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072121.D
Operator : FID17:WR
Acquired : 08 Dec 2021 12:16 am using AcqMethod FID17A.M
Sample Name: I1712072106R
Instrument: FID17
Misc Info : WG1581826,FRBD81,500ug/ml
Vial Number: 61
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M

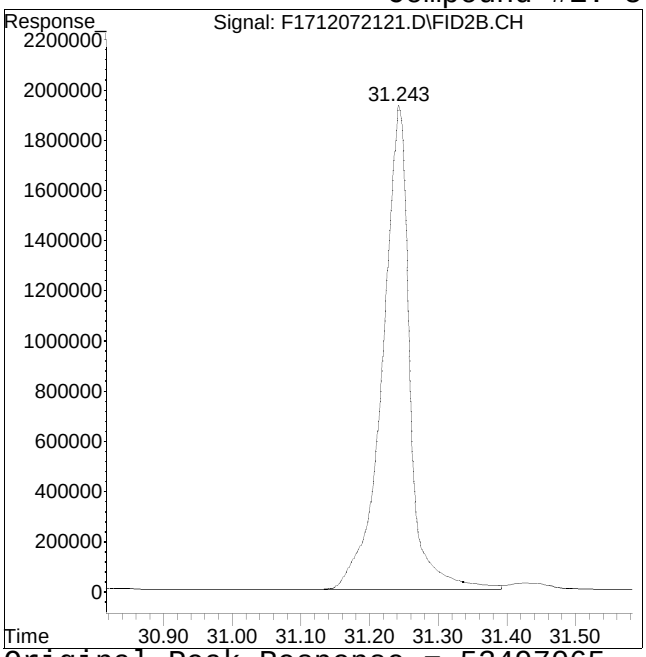


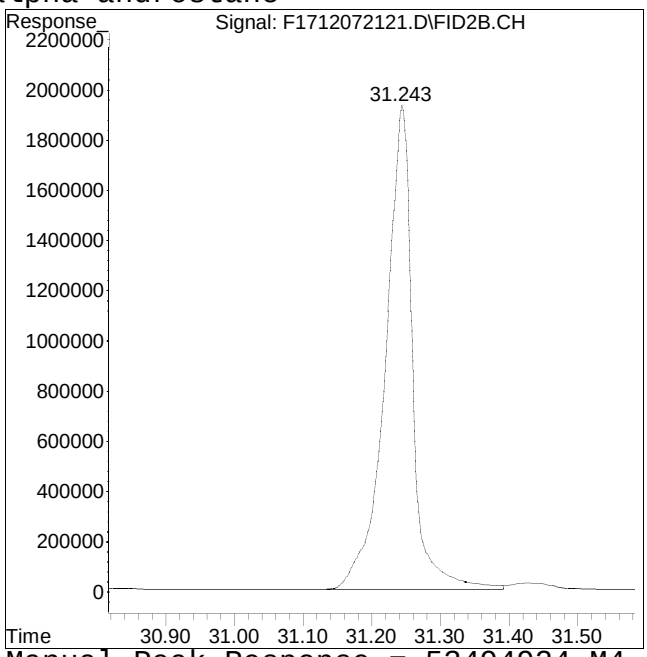
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072121.D
Date Inj'd : 12/8/2021 12:16 am
Sample : I1712072106R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:13 pm

Compound #1: 5-alpha-androstane





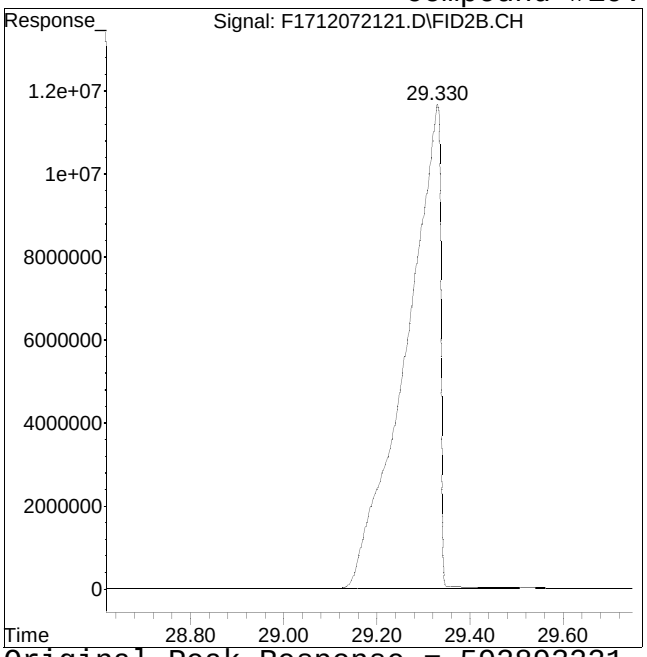
Original Peak Response = 53497065 Manual Peak Response = 53494924 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

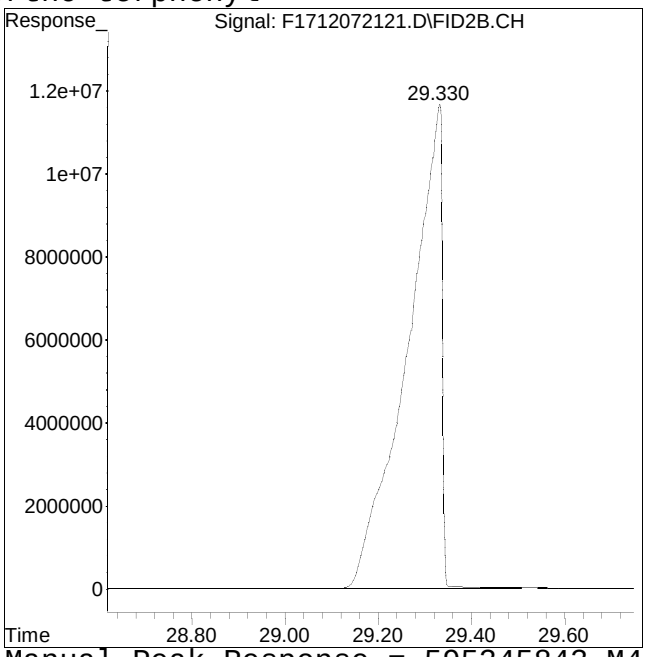
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072121.D
Date Inj'd : 12/8/2021 12:16 am
Sample : I1712072106R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:13 pm

Compound #19: ortho-terphenyl



Original Peak Response = 592893221



Manual Peak Response = 595345843 M4

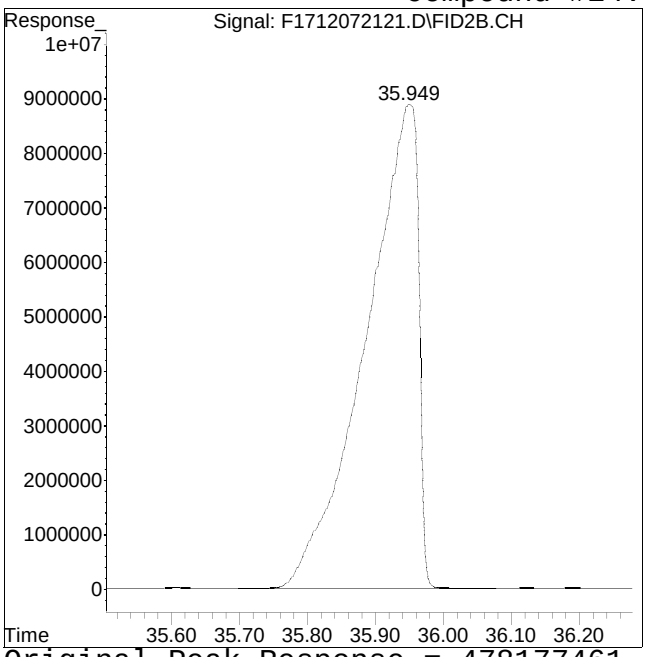
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

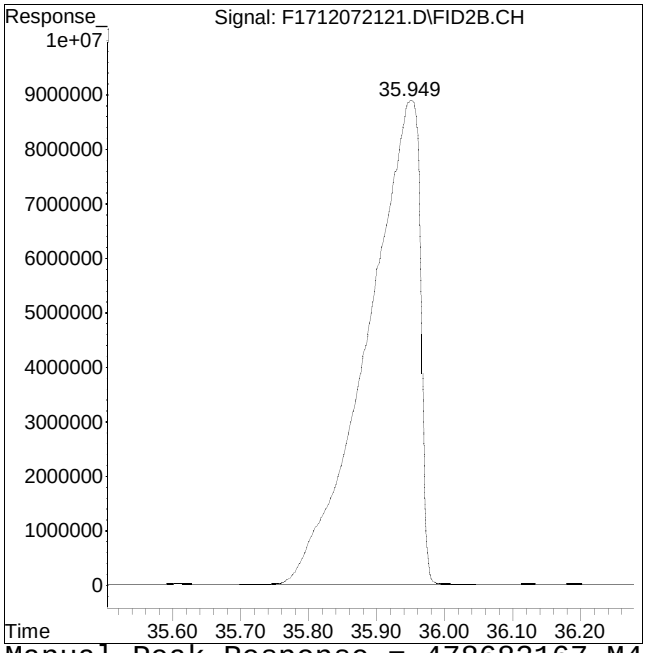
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072121.D
Date Inj'd : 12/8/2021 12:16 am
Sample : I1712072106R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:13 pm

Compound #24: d50-Tetracosane



Original Peak Response = 478177461



Manual Peak Response = 478683167 M4

M4 = Poor automated baseline construction.

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072125.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 3:13 am
Operator : FID17:WR
Sample : CQ1712072101R
Misc : WG1581826,FRBD82,50ug/ml
ALS Vial : 63 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 14:35:49 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:29:21 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	109	0.00
2	t	n-Octane (C8)	0.803	0.778	3.1	104	0.00
3	t	n-Nonane (C9)	0.832	0.828	0.5	105	0.00
4	t	n-Decane (C10)	0.848	0.855	-0.8	106	0.00
5	t	n-Undecane (C11)	0.868	0.903	-4.0	106	0.00
6	t	n-Dodecane (C12)	0.892	0.927	-3.9	108	0.00
7	t	n-Tridecane (C13)	0.914	0.919	-0.5	106	0.00
9	t	n-Tetradecane (C14)	0.941	0.939	0.2	106	0.00
11	t	n-Pentadecane (C15)	0.942	0.943	-0.1	107	0.00
12	t	n-Hexadecane (C16)	0.952	0.959	-0.7	107	0.00
14	t	n-Heptadecane (C17)	0.934	0.924	1.1	102	0.00
15	t	Pristane	1.006	0.959	4.7	104	0.00
16	t	n-Octadecane (C18)	0.972	0.958	1.4	104	0.00
17	t	Phytane	0.919	0.864	6.0	100	0.00
18	t	n-Nonadecane (C19)	0.974	0.961	1.3	105	0.00
19	s	ortho-terphenyl	1.104	1.101	0.3	97	0.00
20	t	n-Eicosane (C20)	0.988	0.972	1.6	105	0.00
21	t	n-Heneicosane (C21)	0.991	0.973	1.8	106	0.00
22	t	n-Docosane (C22)	0.997	1.000	-0.3	107	0.00
23	t	n-Tricosane (C23)	1.001	0.949	5.2	101	0.00
24	s	d50-Tetracosane	0.889	0.872	1.9	97	0.00
25	t	n-Tetracosane (C24)	0.991	0.969	2.2	109	0.00
26	t	n-Pentacosane (C25)	0.982	0.958	2.4	104	0.00
27	t	n-Hexacosane (C26)	1.008	0.980	2.8	104	0.00
28	t	n-Heptacosane (C27)	1.000	0.942	5.8	103	0.00
29	t	n-Octacosane (C28)	1.028	0.981	4.6	103	0.00
30	t	n-Nonacosane (C29)	1.018	0.958	5.9	102	0.00
31	t	n-Triacontane (C30)	1.020	0.960	5.9	102	0.00
32	t	n-Hentriacontane (C31)	0.986	0.942	4.5	104	0.00
33	t	n-Dotriacontane (C32)	1.032	0.941	8.8	99	0.00
34	t	n-Tritriacontane (C33)	1.000	0.939	6.1	103	0.00
35	t	n-tetratriacontane (C34)	0.997	0.956	4.1	106	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072125.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 3:13 am
Operator : FID17:WR
Sample : CQ1712072101R
Misc : WG1581826,FRBD82,50ug/ml
ALS Vial : 63 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 14:35:49 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:29:21 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.946	0.929	1.8	102	0.00
37 t	n-Hexatriacontane (C36)	1.118	0.990	11.4	101	0.00
38 t	n-Heptatriacontane (C37)	1.022	0.945	7.5	105	0.00
39 t	n-Octatriacontane (C38)	1.040	0.983	5.5	106	0.00
41 t	n-Tetracontane (C40)	1.029	0.897	12.8	96	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.02	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072125.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 3:13 am
Operator : FID17:WR
Sample : CQ1712072101R
Misc : WG1581826,FRBD82,50ug/ml
ALS Vial : 63 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 14:35:49 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:29:21 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.245	58005079	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.233	63847661	49.842 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	99.68%
24) s	d50-Tetracosane	35.860	50568321	49.013 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	98.03%
	Target Compounds			
2) t	n-Octane (C8)	5.636	45128248	48.432 ug/mL M4
3) t	n-Nonane (C9)	7.832	48000595	49.735 ug/mL M4
4) t	n-Decane (C10)	10.310	49596625	50.412 ug/mL M4
5) t	n-Undecane (C11)	12.816	52356716	51.968 ug/mL M4
6) t	n-Dodecane (C12)	15.240	53783751	51.974 ug/mL M4
7) t	n-Tridecane (C13)	17.542	53299788	50.275 ug/mL M4
9) t	n-Tetradecane (C14)	19.723	54489310	49.921 ug/mL M4
11) t	n-Pentadecane (C15)	21.783	54712400	50.054 ug/mL M4
12) t	n-Hexadecane (C16)	23.735	55635727	50.400 ug/mL M4
14) t	n-Heptadecane (C17)	25.594	53587633	49.464 ug/mL M4
15) t	Pristane	25.701	55615786	47.660 ug/mL M4
16) t	n-Octadecane (C18)	27.357	55590021	49.311 ug/mL M4
17) t	Phytane	27.517	50097097	46.979 ug/mL M4
18) t	n-Nonadecane (C19)	29.036	55727860	49.312 ug/mL M4
20) t	n-Eicosane (C20)	30.640	56358121	49.177 ug/mL M4
21) t	n-Heneicosane (C21)	32.171	56421698	49.055 ug/mL M4
22) t	n-Docosane (C22)	33.644	57986714	50.141 ug/mL M4
23) t	n-Tricosane (C23)	35.052	55026459	47.374 ug/mL M4
25) t	n-Tetracosane (C24)	36.407	56218373	48.914 ug/mL M4
26) t	n-Pentacosane (C25)	37.708	55561611	48.787 ug/mL M4
27) t	n-Hexacosane (C26)	38.963	56872301	48.653 ug/mL M4
28) t	n-Heptacosane (C27)	40.171	54621811	47.090 ug/mL M4
29) t	n-Octacosane (C28)	41.340	56880677	47.707 ug/mL M4
30) t	n-Nonacosane (C29)	42.466	55592685	47.089 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072125.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 3:13 am
Operator : FID17:WR
Sample : CQ1712072101R
Misc : WG1581826,FRBD82,50ug/ml
ALS Vial : 63 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 10 14:35:49 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:29:21 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

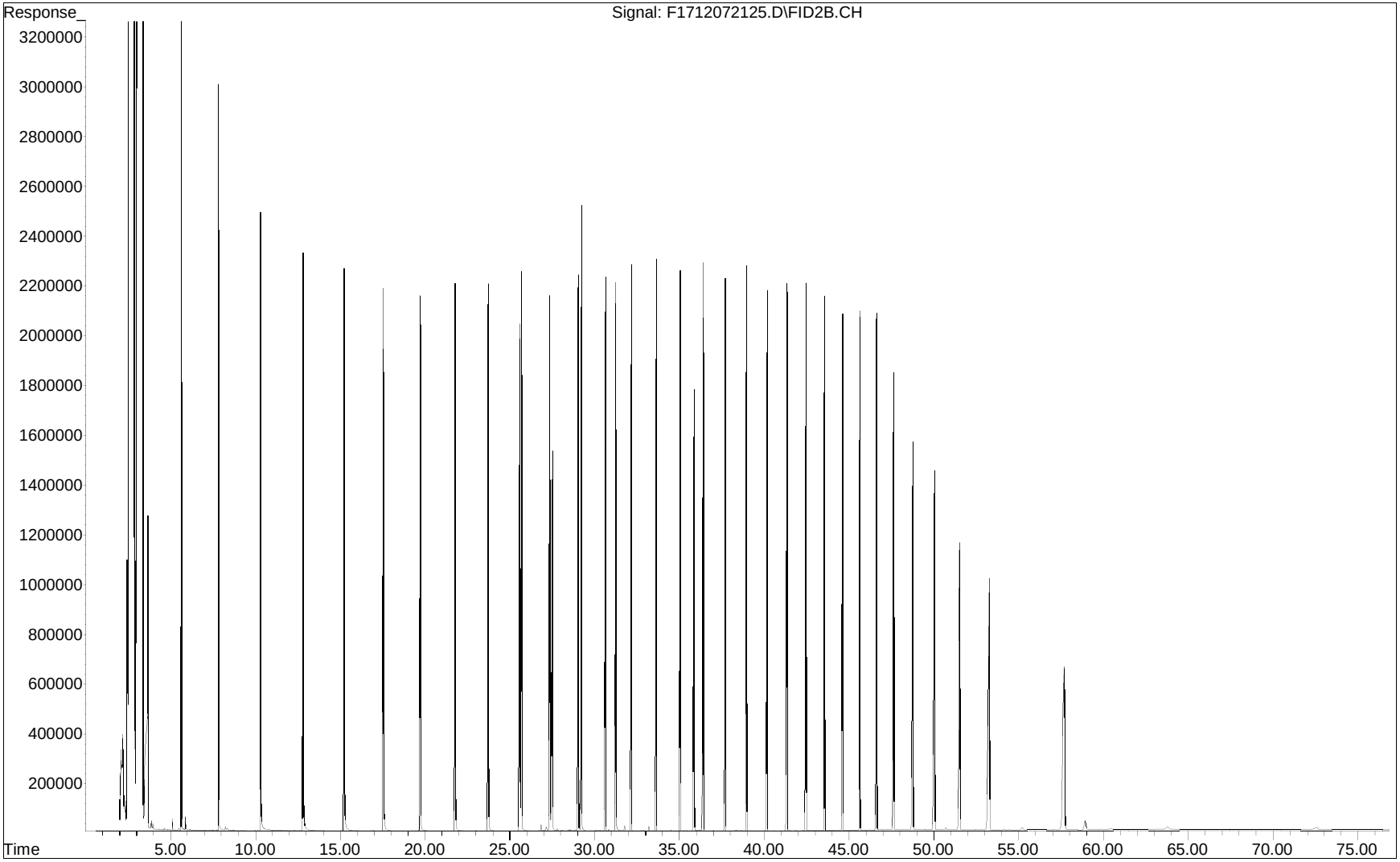
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.559	55712578	47.089 ug/mL M4
32) t	n-Hentriacontane (C31)	44.615	54612850	47.735 ug/mL M4
33) t	n-Dotriacontane (C32)	45.639	54581186	45.593 ug/mL M4
34) t	n-Tritriacontane (C33)	46.634	54474625	46.956 ug/mL M4
35) t	n-tetratriacontane (C34)	47.638	55451240	47.928 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.761	53914139	49.105 ug/mL M4
37) t	n-Hexatriacontane (C36)	50.044	57435876	44.294 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.522	54824617	46.236 ug/mL M4
39) t	n-Octatriacontane (C38)	53.256	56994723	47.236 ug/mL M4
41) t	n-Tetracontane (C40)	57.686	52019474	43.586 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

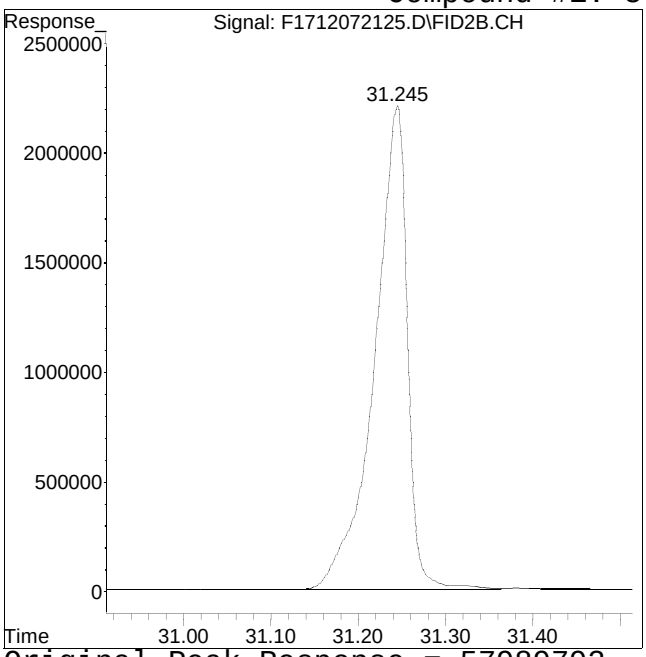
File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072125.D
Operator : FID17:WR
Acquired : 08 Dec 2021 3:13 am using AcqMethod FID17A.M
Sample Name: CQ1712072101R
Instrument: FID17
Misc Info : WG1581826,FRBD82,50ug/ml
Vial Number: 63
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M

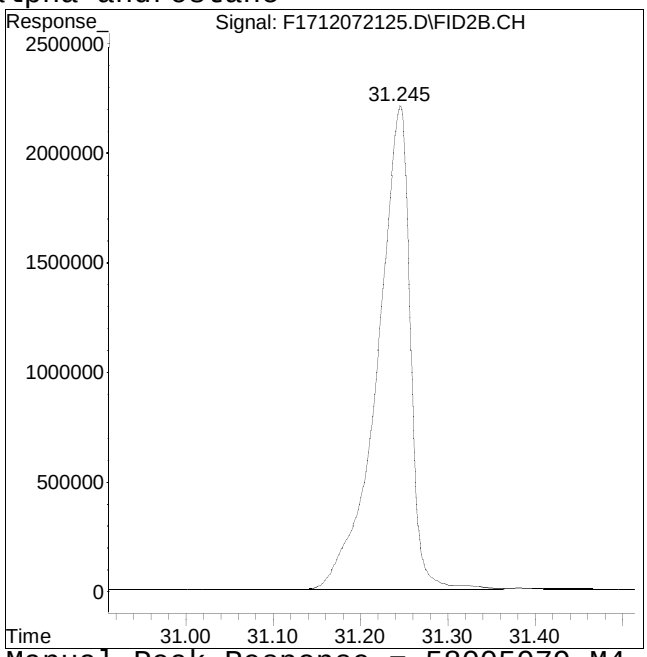


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17120721R_DRO.M
Data File : F1712072125.D Operator : FID17:WR
Date Inj'd : 12/8/2021 3:13 am Instrument : FID17
Sample : CQ1712072101R Quant Date : 12/9/2021 4:31 pm

Compound #1: 5-alpha-androstane





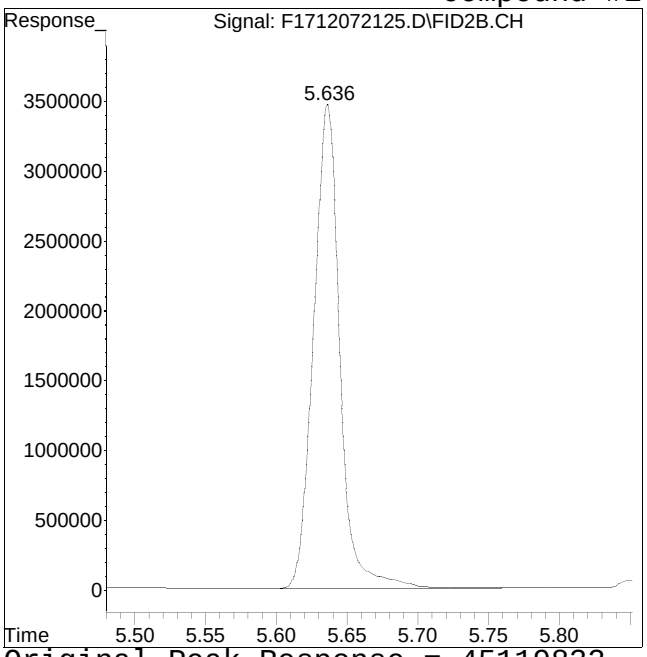
Original Peak Response = 57989792 Manual Peak Response = 58005079 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

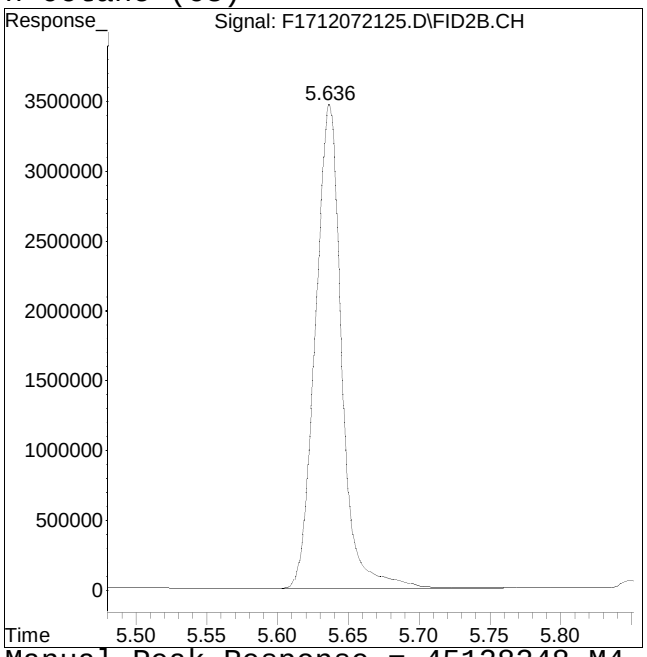
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #2: n-Octane (C8)



Original Peak Response = 45119832



Manual Peak Response = 45128248 M4

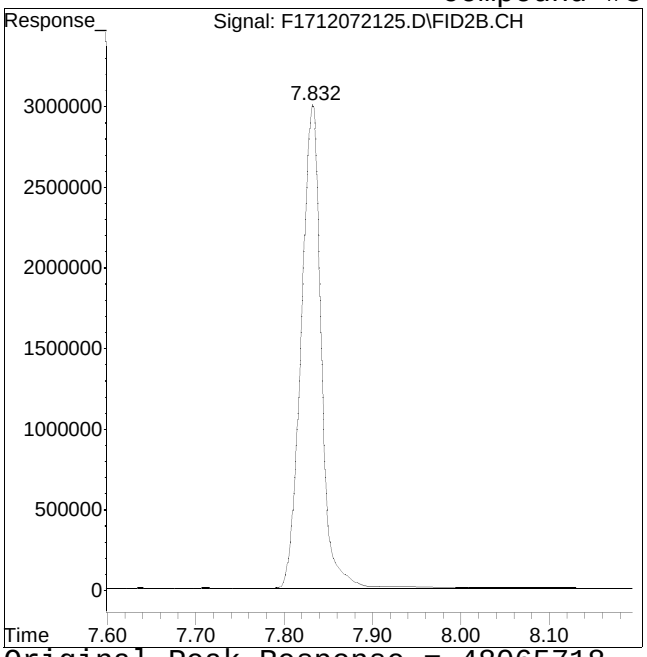
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

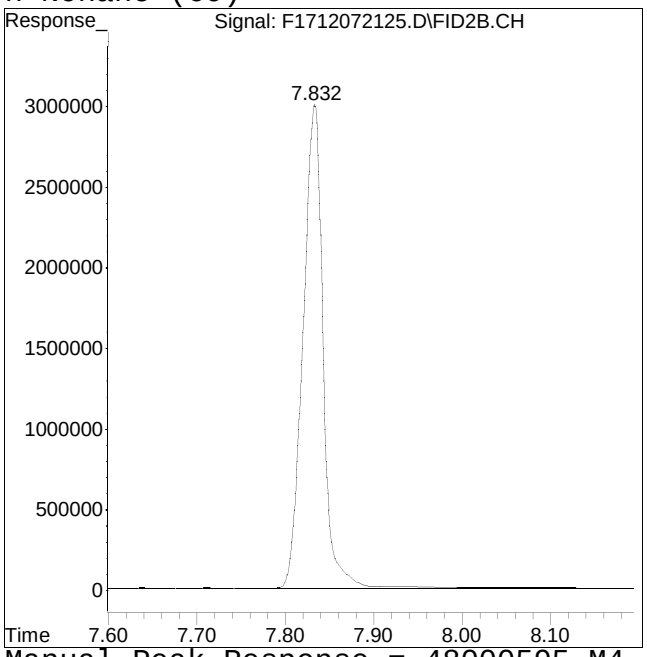
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 48065718



Manual Peak Response = 48000595 M4

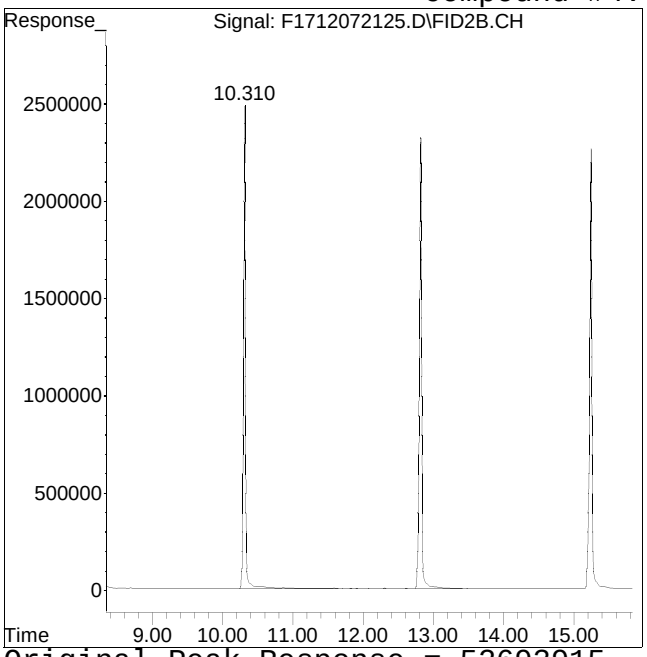
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

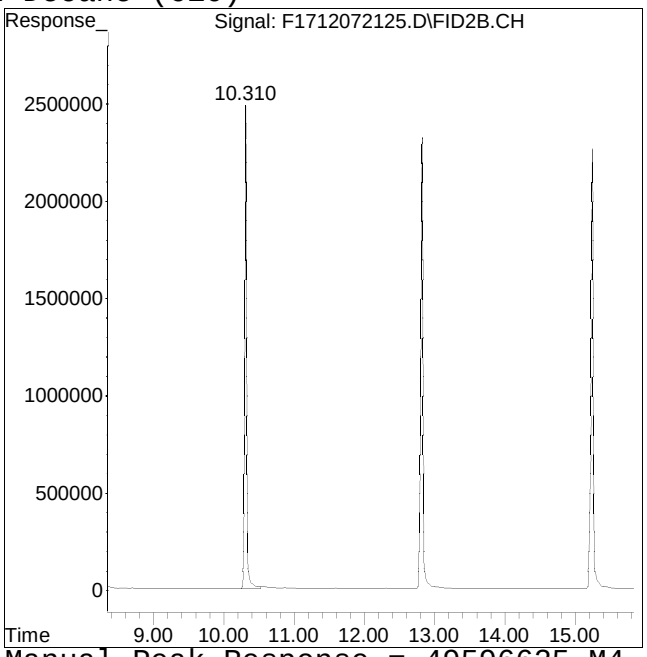
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #4: n-Decane (C10)



Original Peak Response = 52693915



Manual Peak Response = 49596625 M4

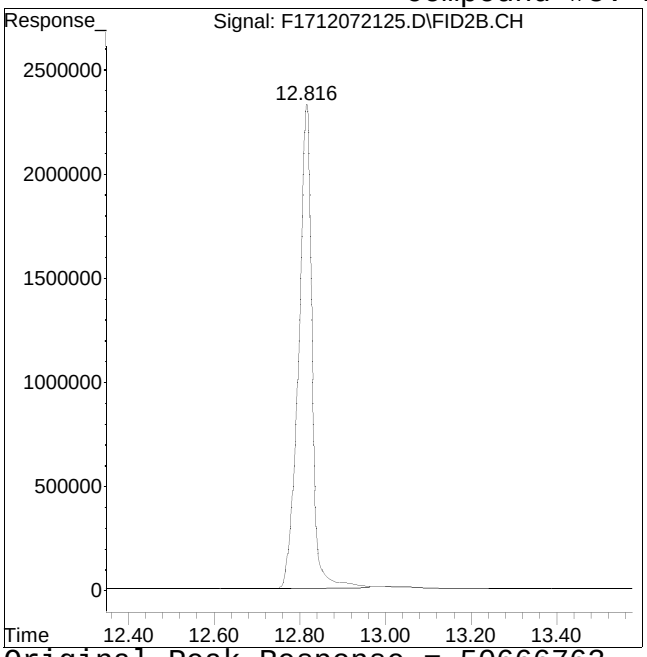
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

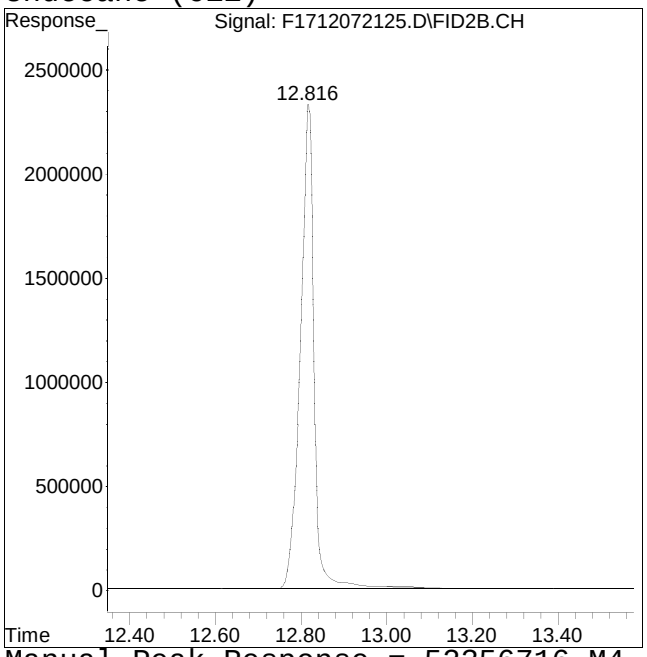
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 50666763



Manual Peak Response = 52356716 M4

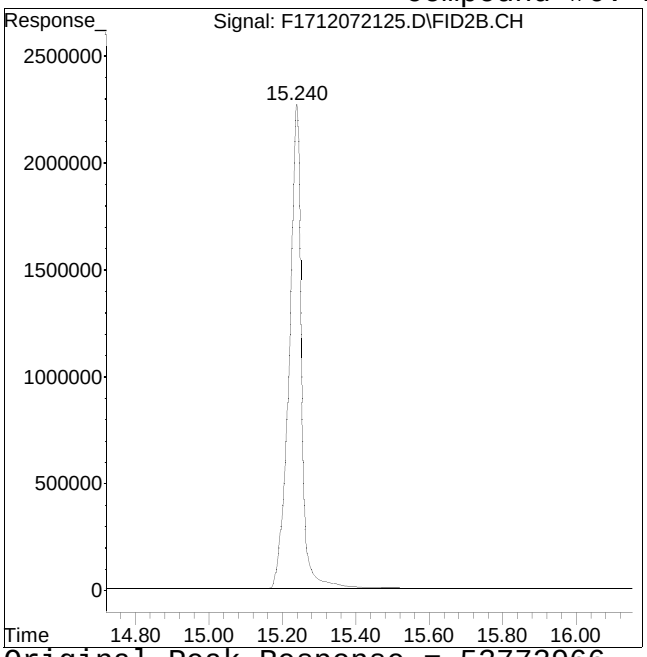
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

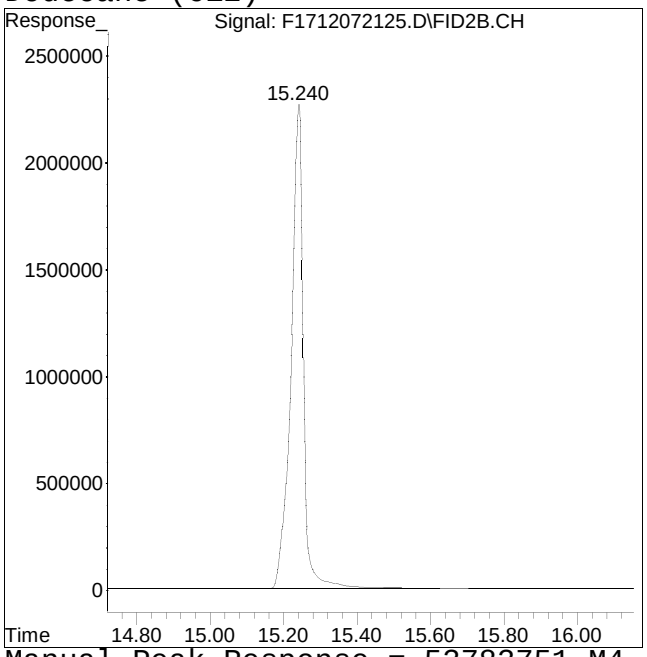
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 53773966



Manual Peak Response = 53783751 M4

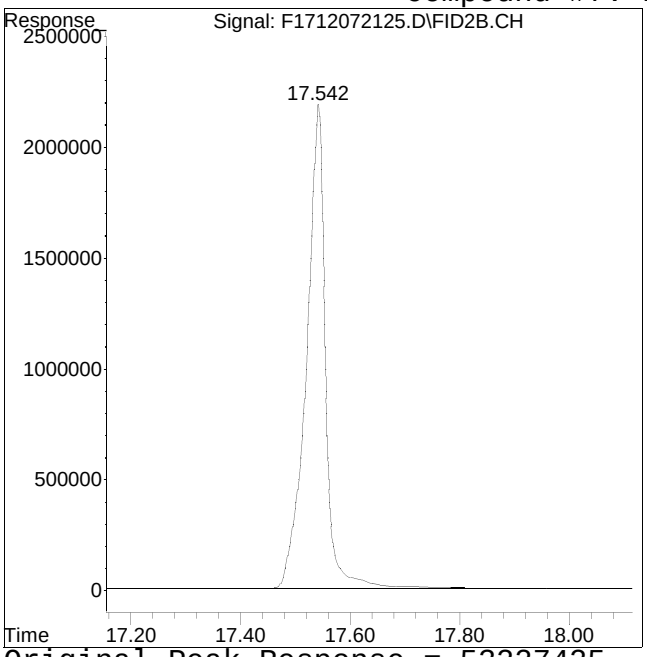
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

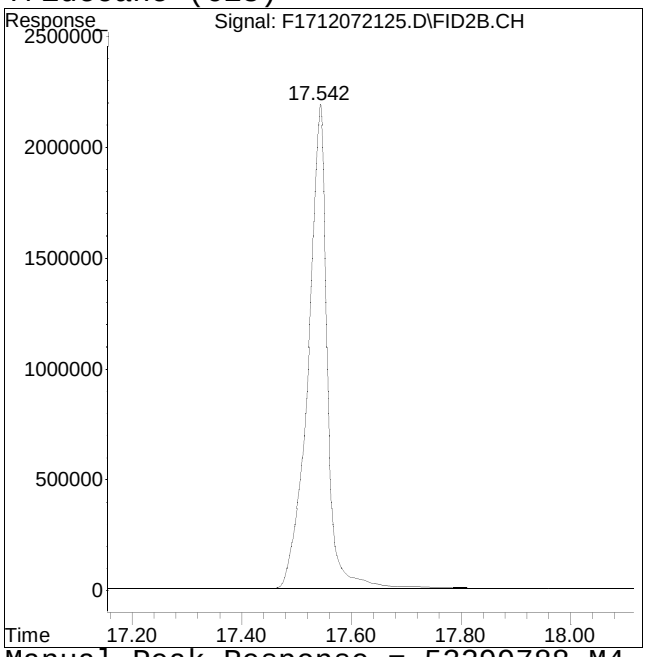
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 53227425



Manual Peak Response = 53299788 M4

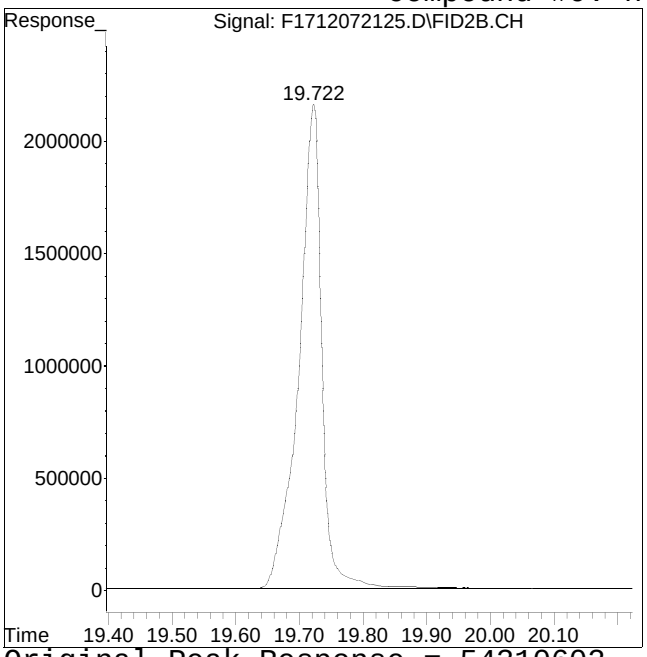
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

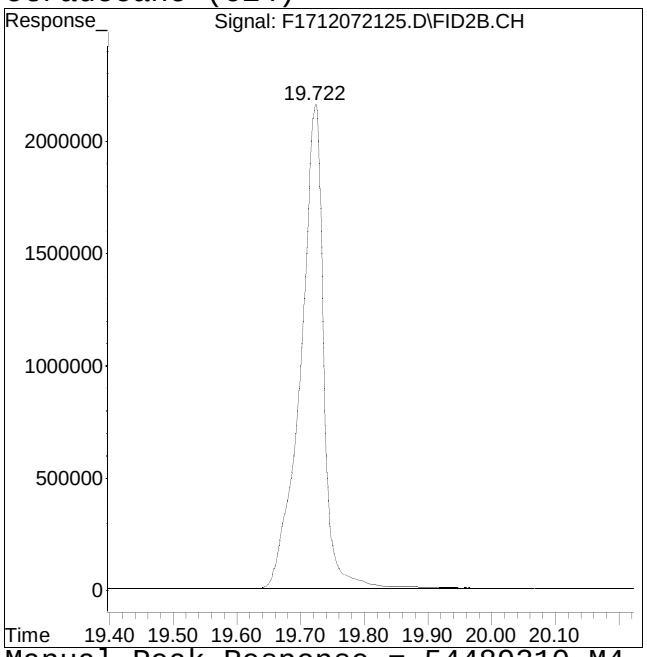
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 54310602



Manual Peak Response = 54489310 M4

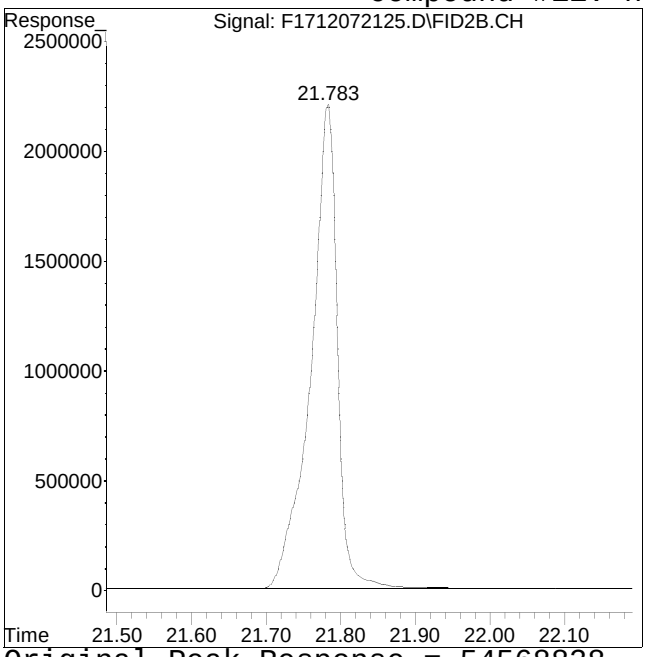
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

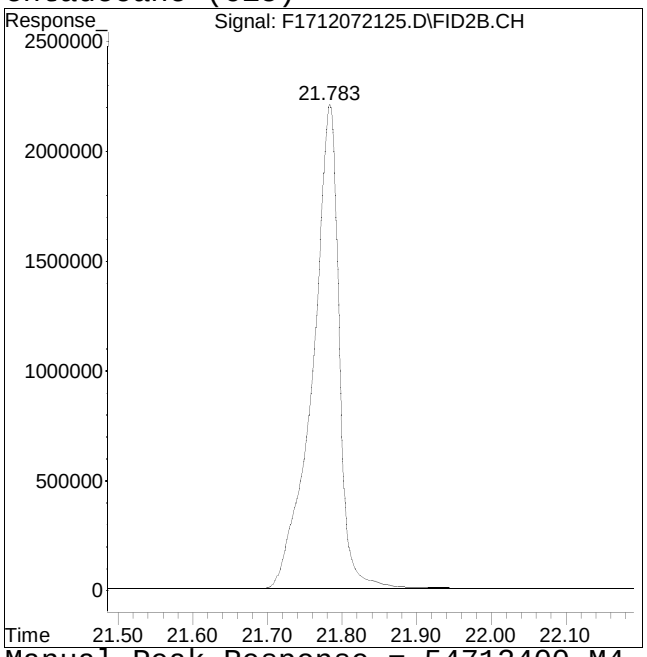
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 54568838



Manual Peak Response = 54712400 M4

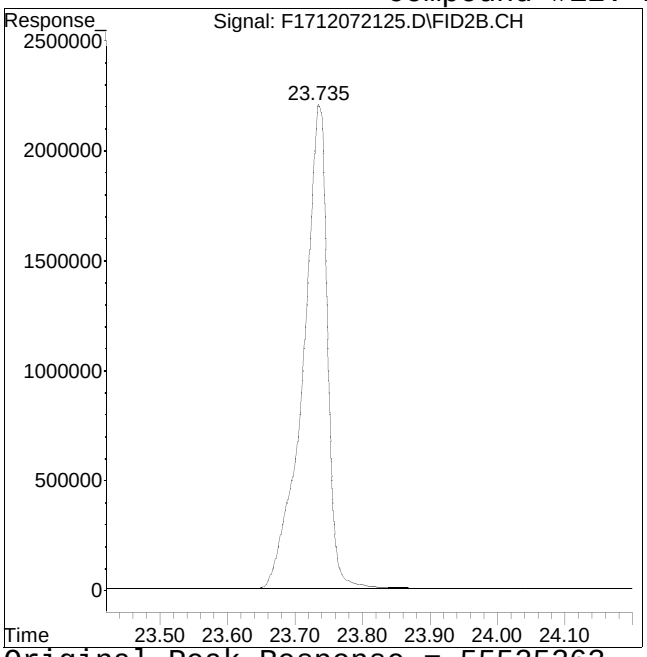
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

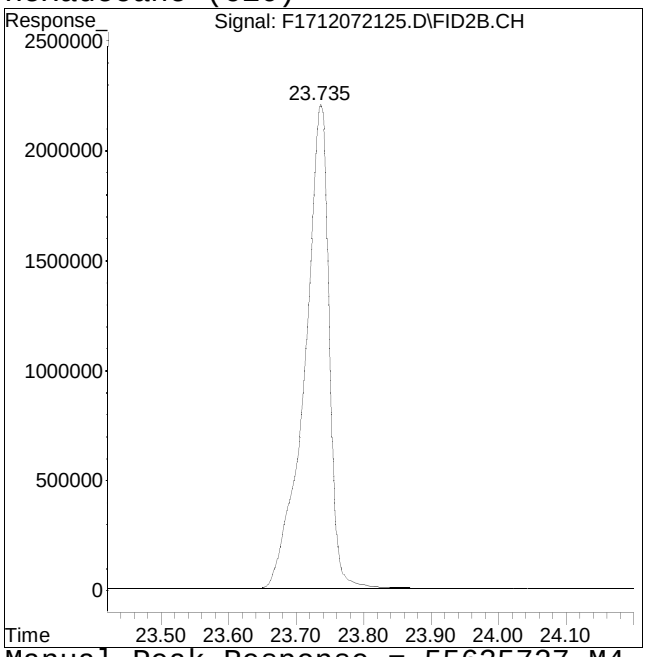
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 55525263



Manual Peak Response = 55635727 M4

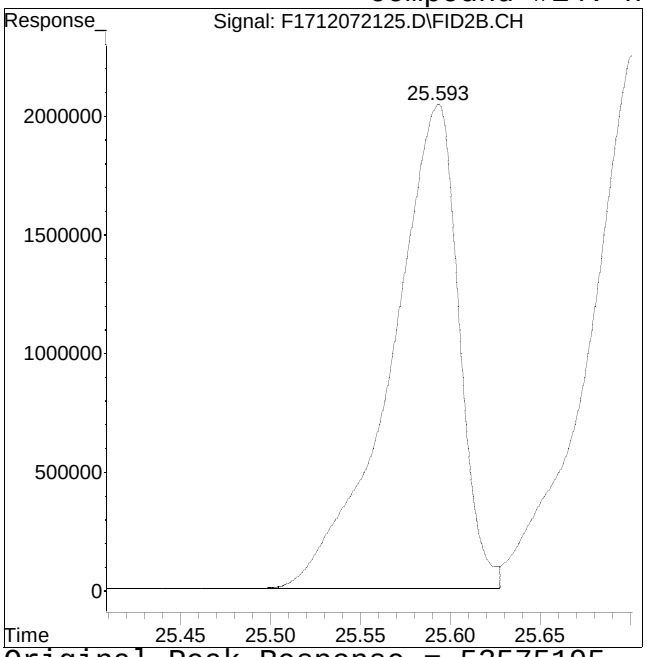
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

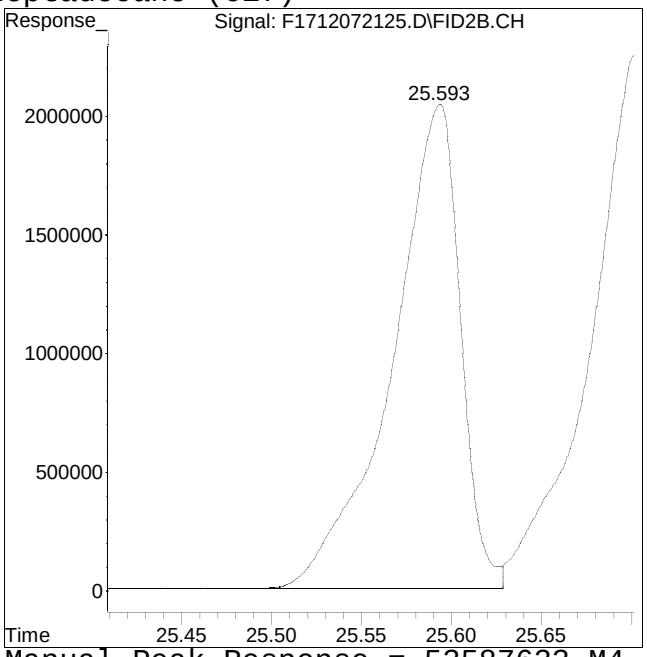
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 53575195



Manual Peak Response = 53587633 M4

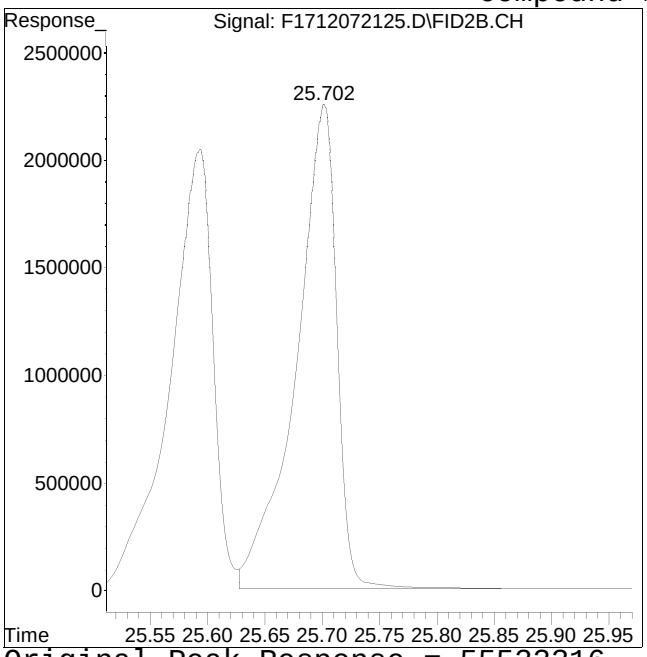
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

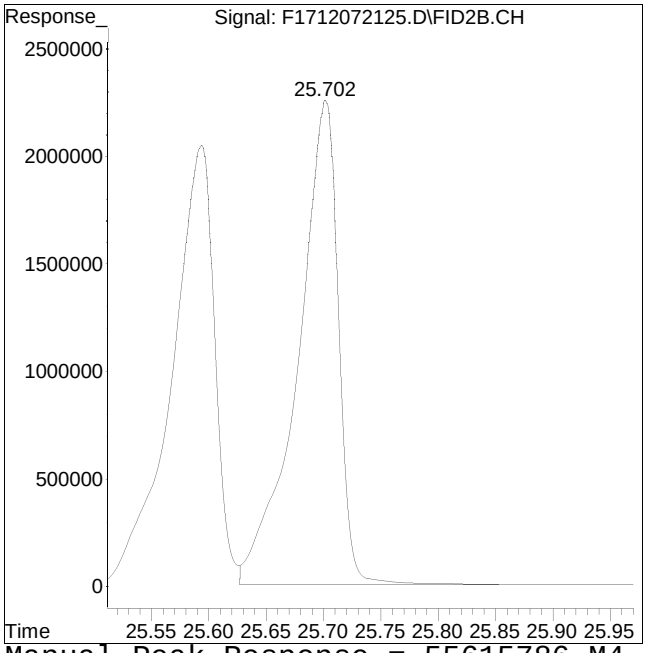
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #15: Pristane



Original Peak Response = 55533316



Manual Peak Response = 55615786 M4

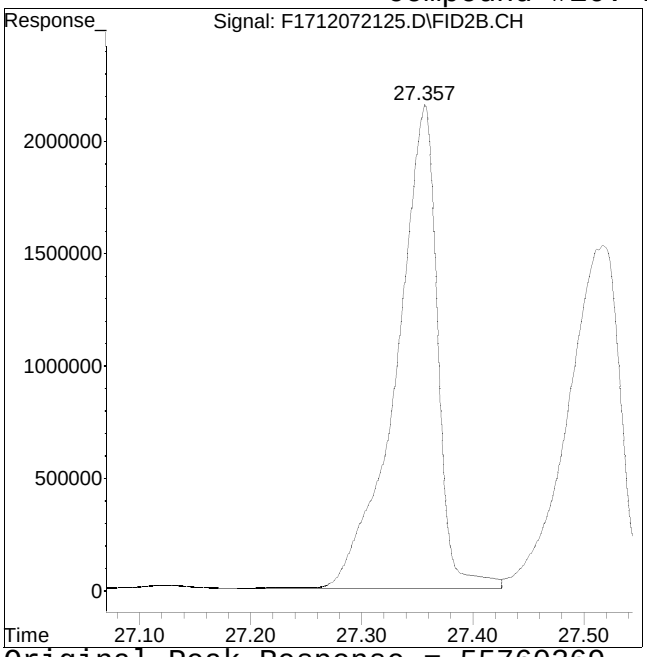
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

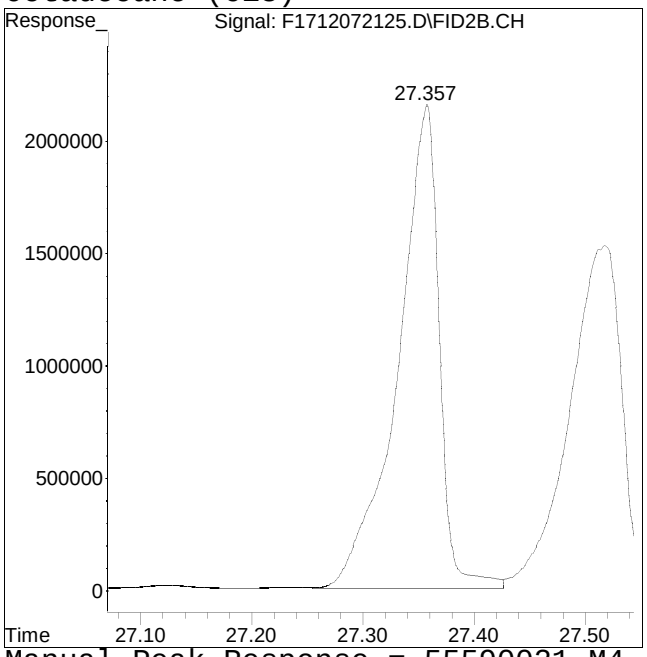
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 55760369



Manual Peak Response = 55590021 M4

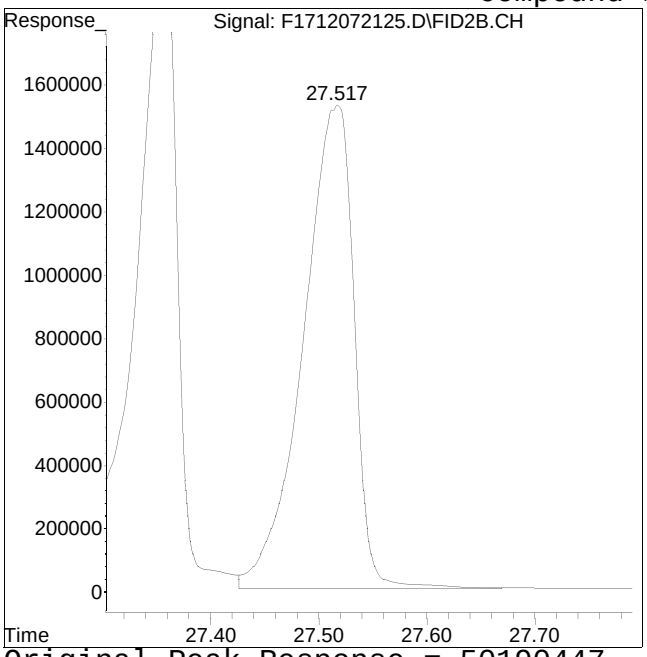
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

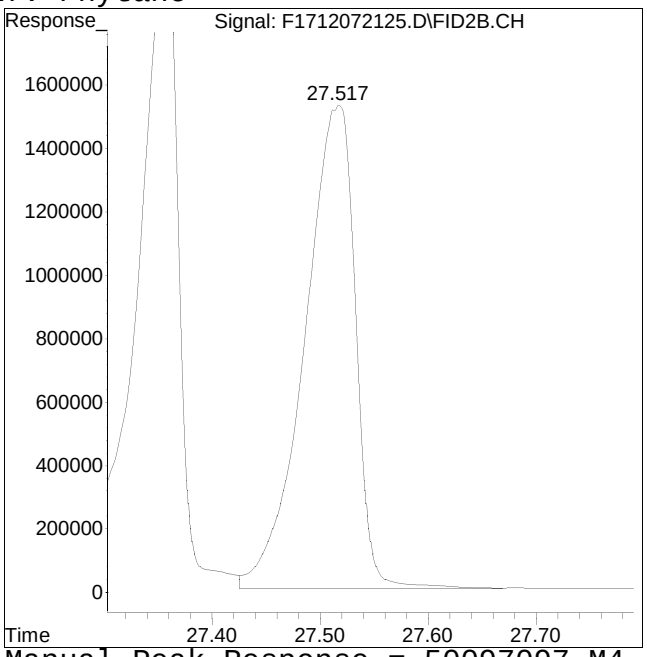
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #17: Phytane



Original Peak Response = 50190447



Manual Peak Response = 50097097 M4

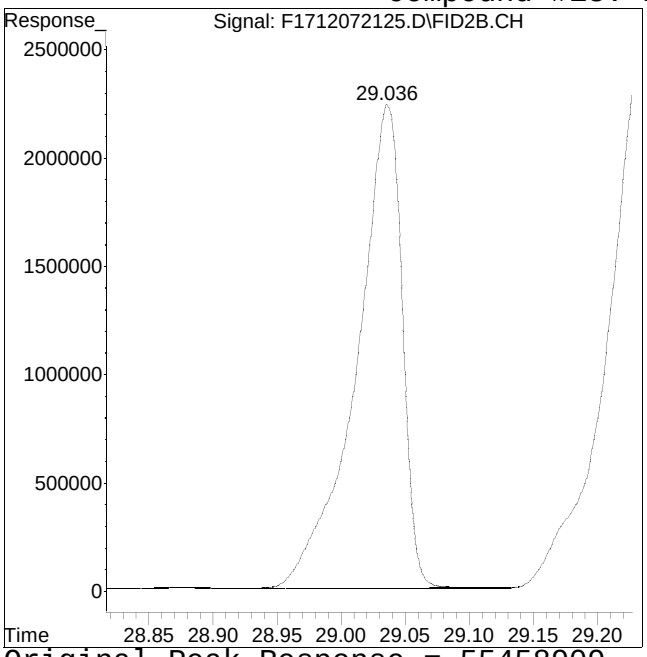
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

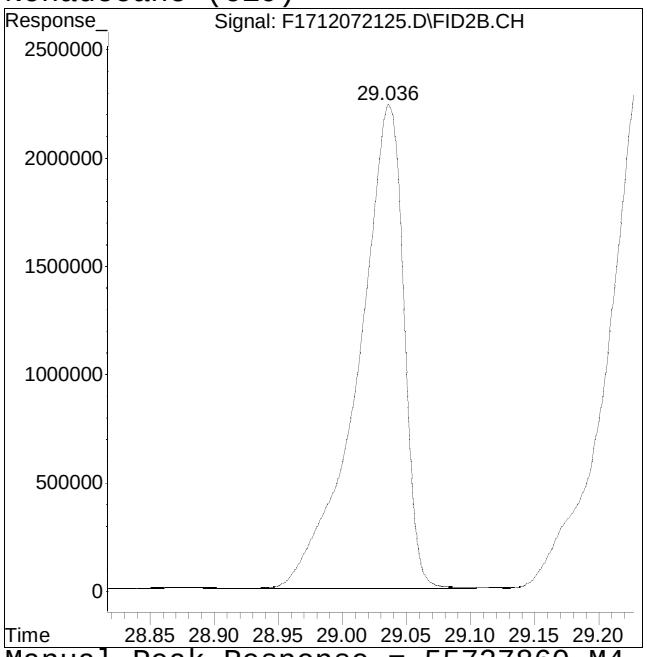
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 55458909



Manual Peak Response = 55727860 M4

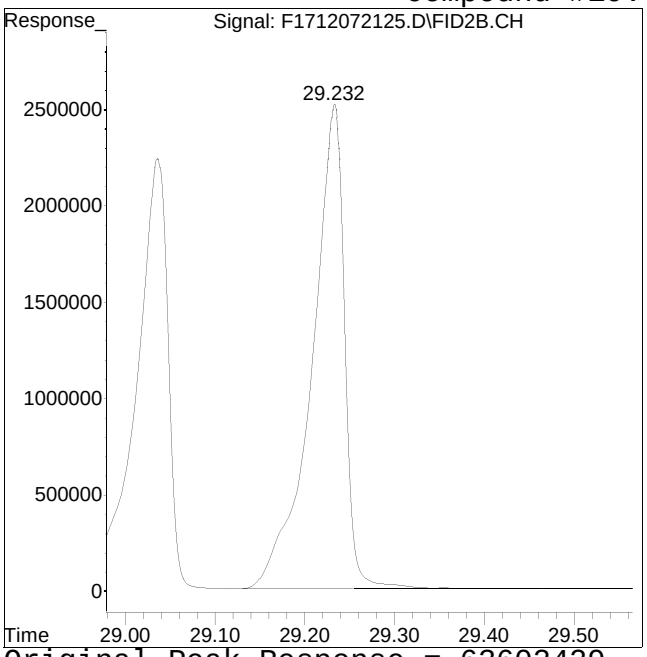
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

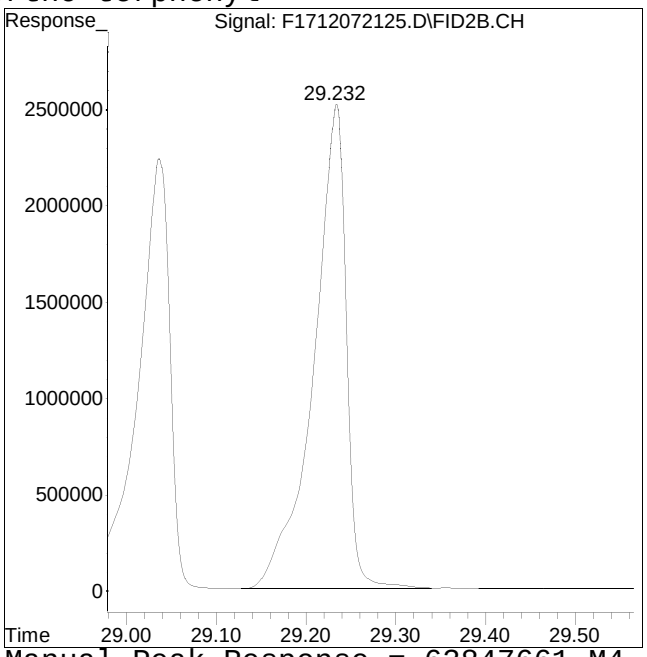
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #19: ortho-terphenyl



Original Peak Response = 63602429



Manual Peak Response = 63847661 M4

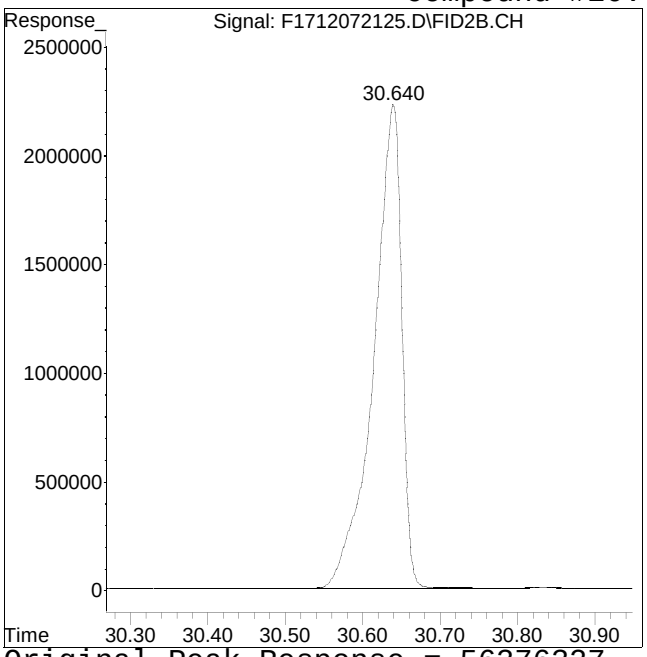
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

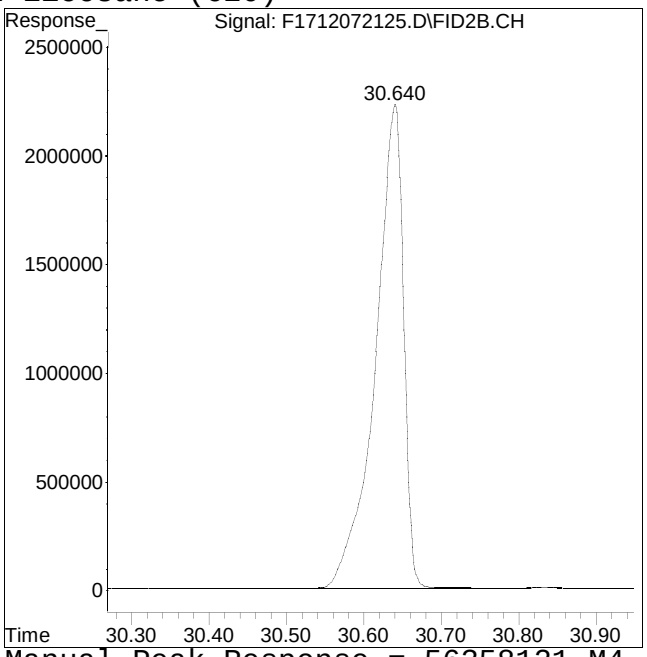
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 56376327



Manual Peak Response = 56358121 M4

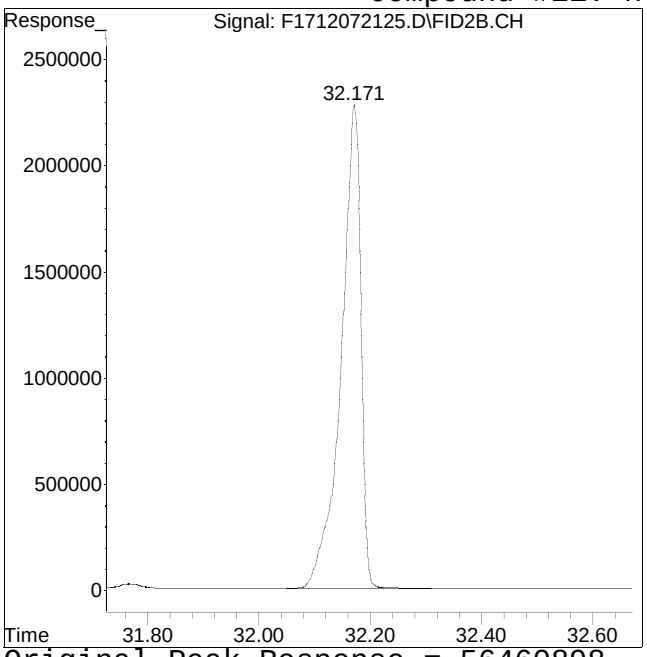
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

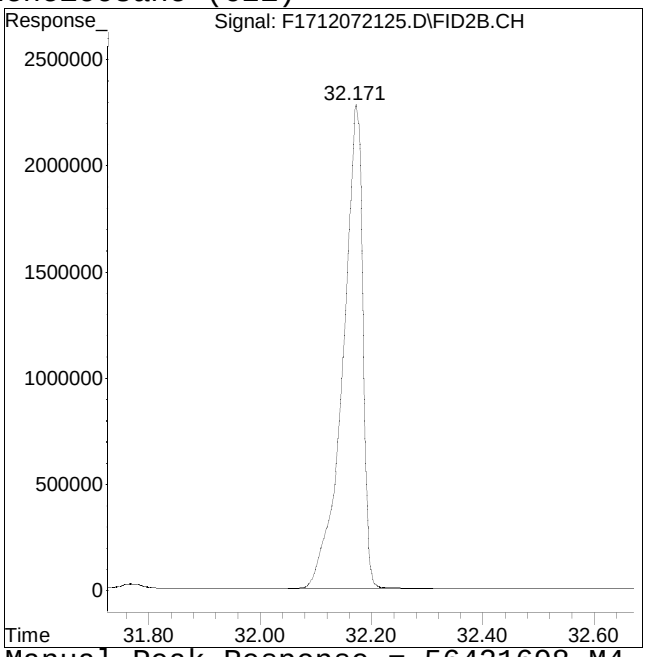
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 56460898



Manual Peak Response = 56421698 M4

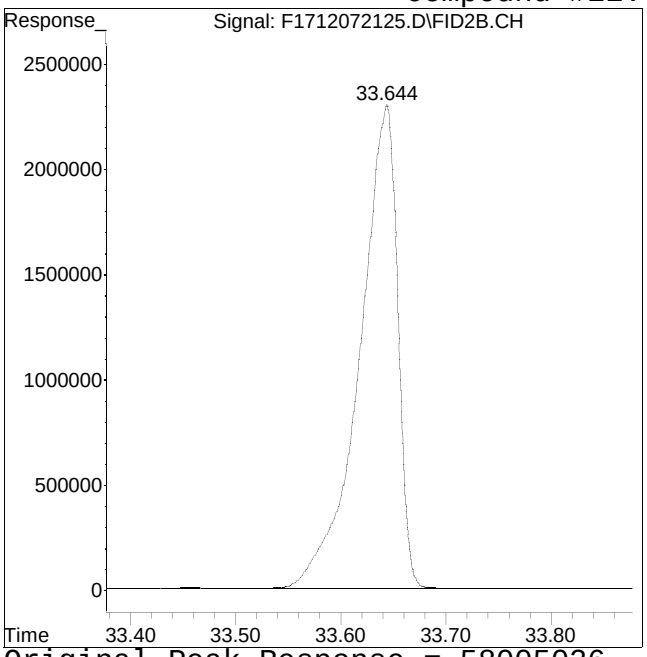
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

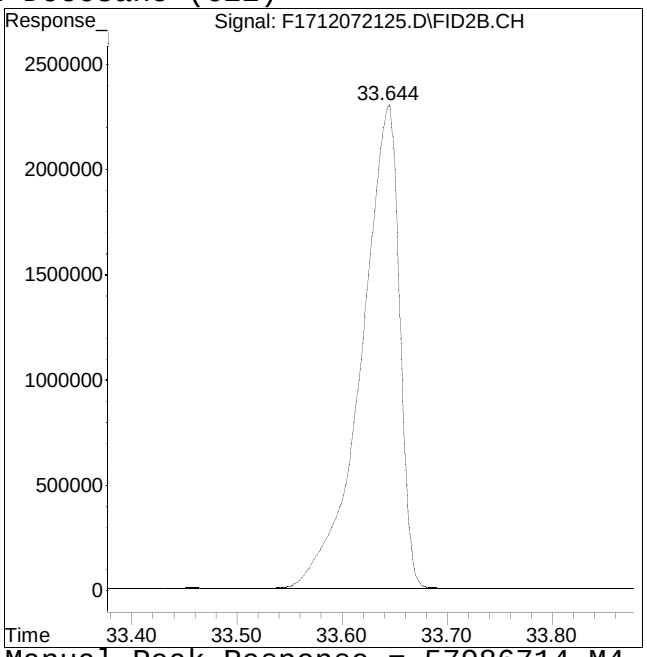
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 58005026



Manual Peak Response = 57986714 M4

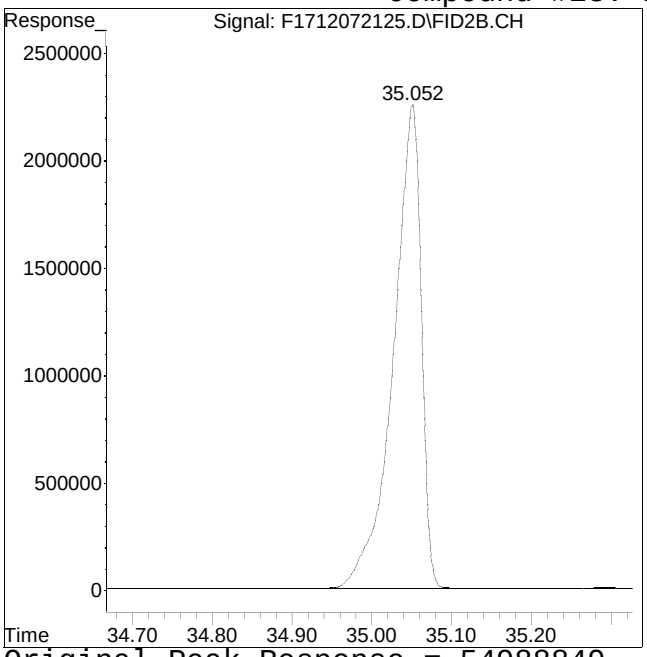
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

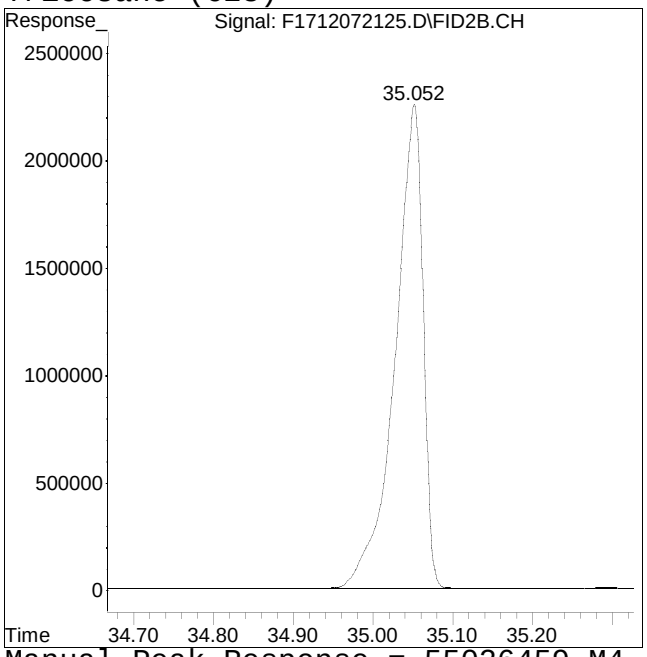
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 54988849



Manual Peak Response = 55026459 M4

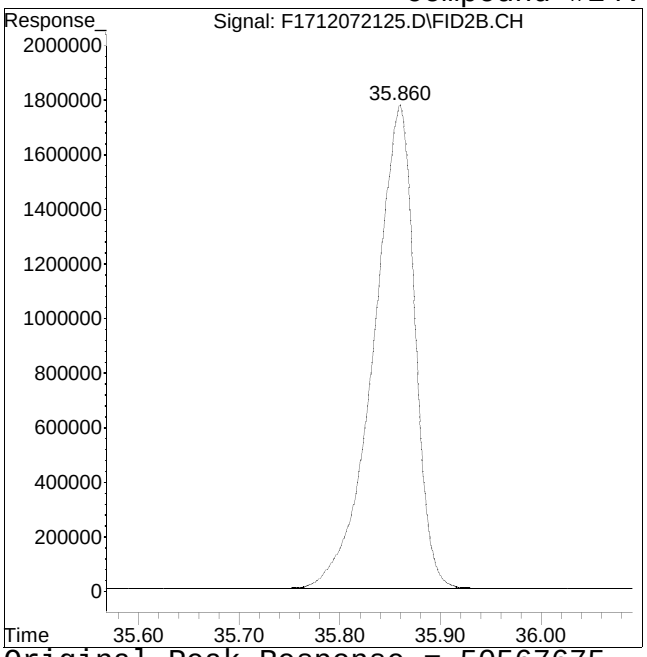
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

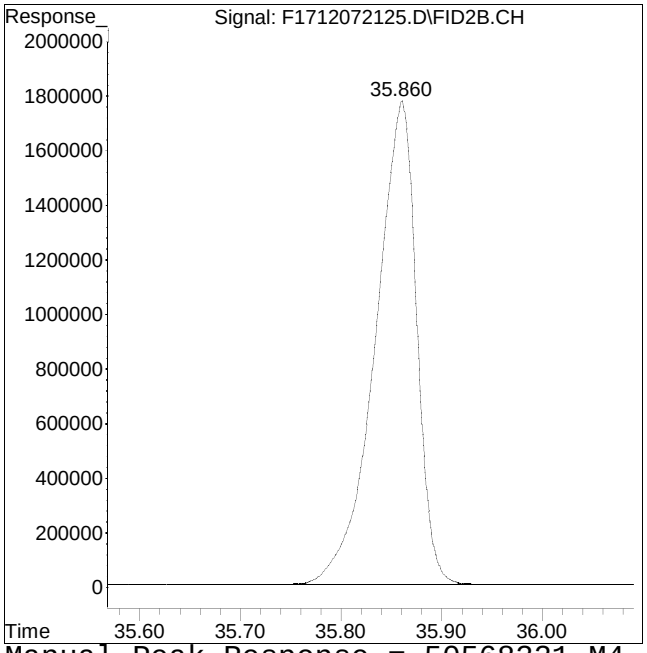
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #24: d50-Tetracosane



Original Peak Response = 50567675



Manual Peak Response = 50568321 M4

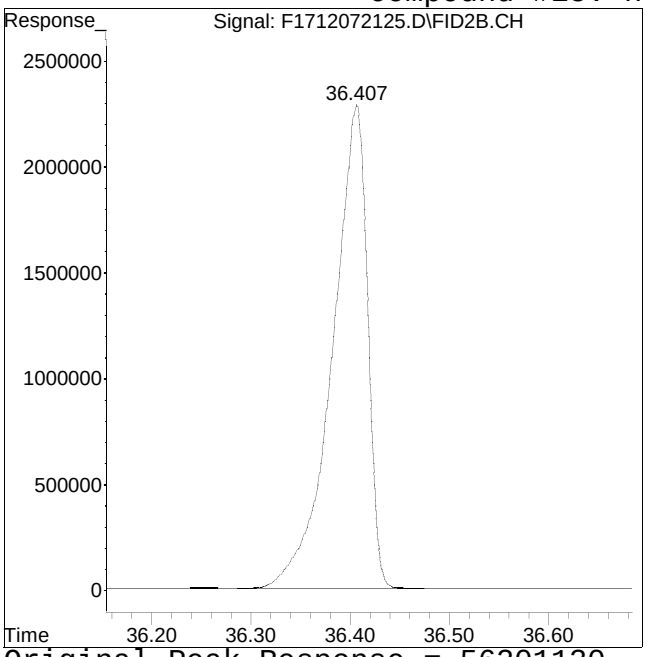
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

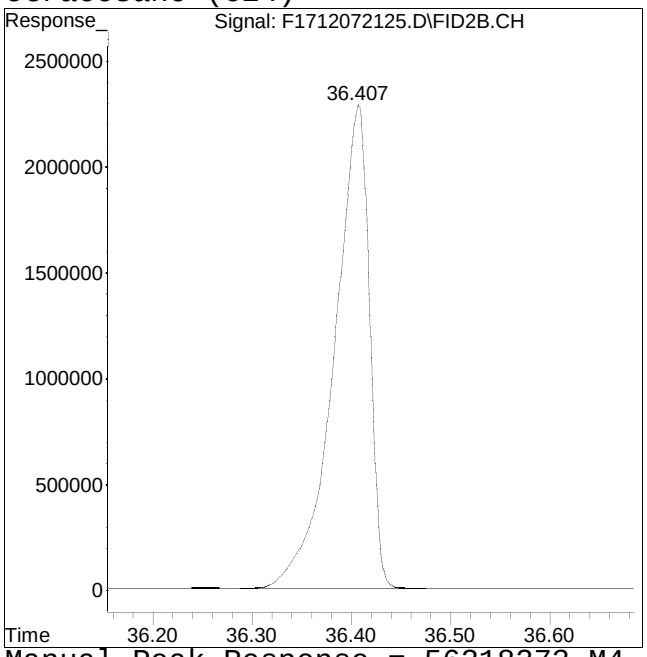
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 56201130



Manual Peak Response = 56218373 M4

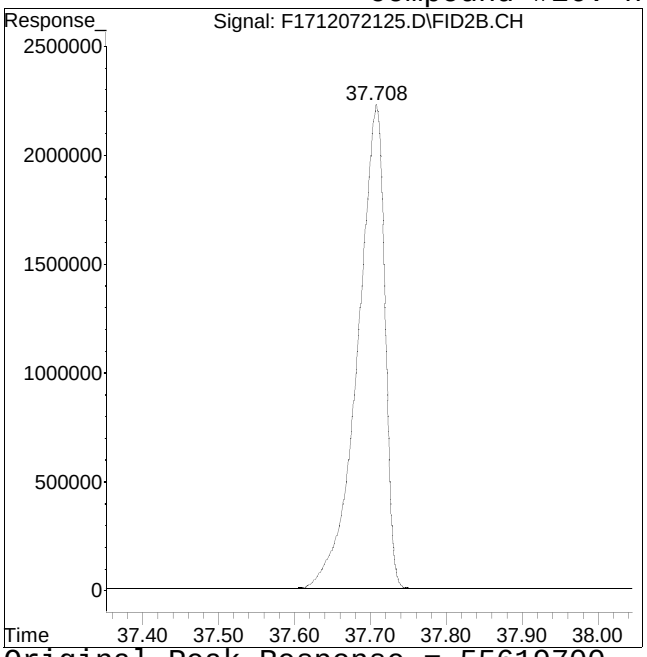
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

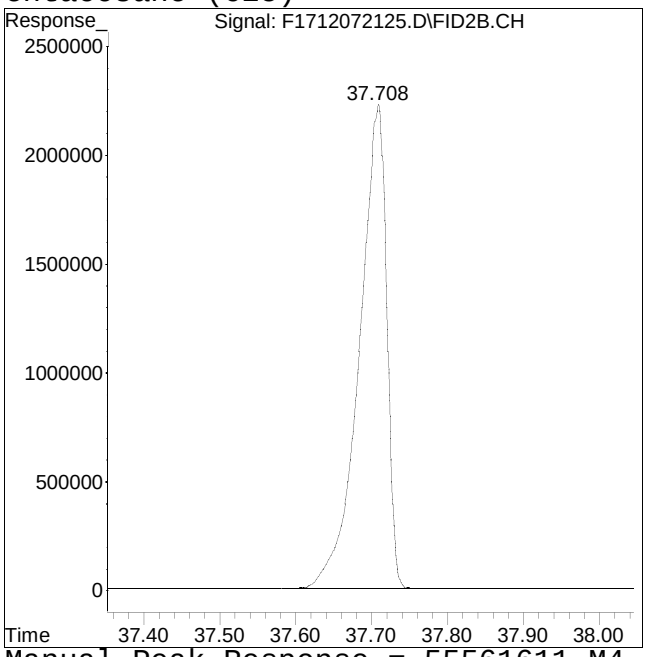
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 55619700



Manual Peak Response = 55561611 M4

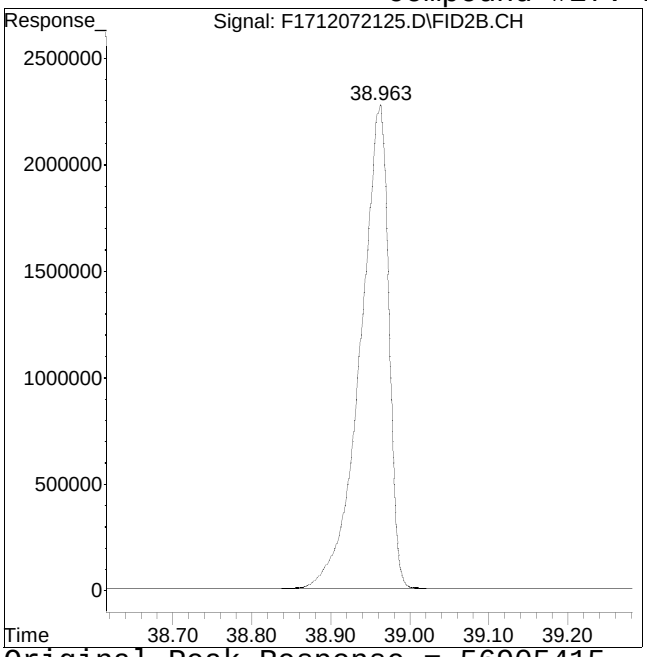
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

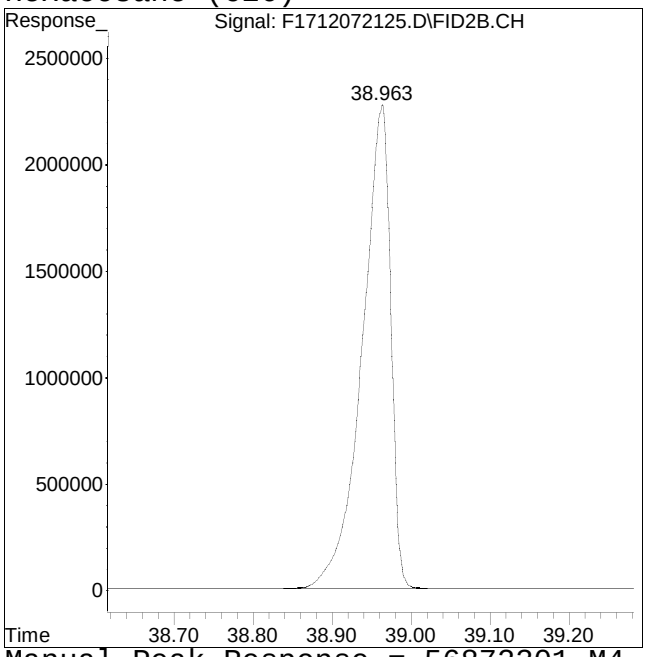
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 56905415



Manual Peak Response = 56872301 M4

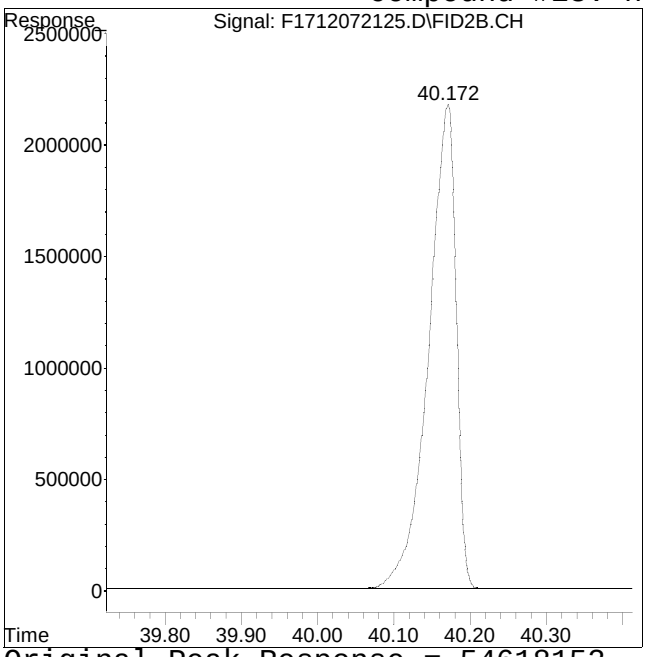
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

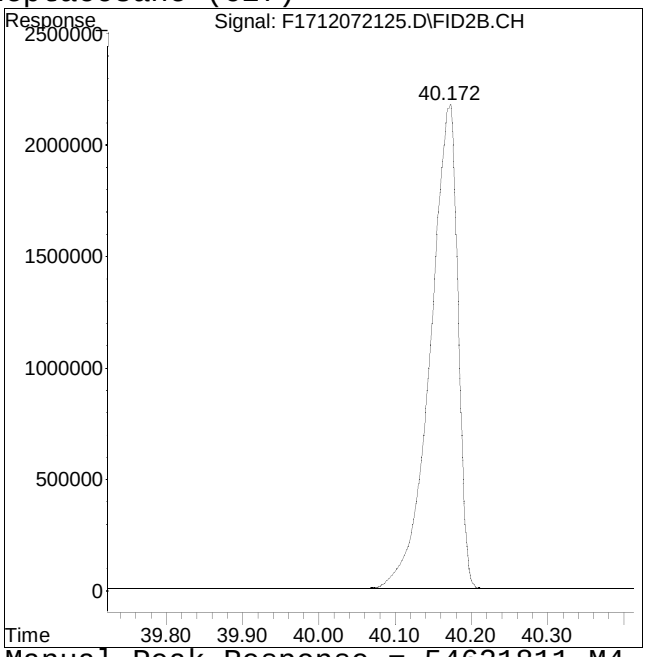
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 54618152



Manual Peak Response = 54621811 M4

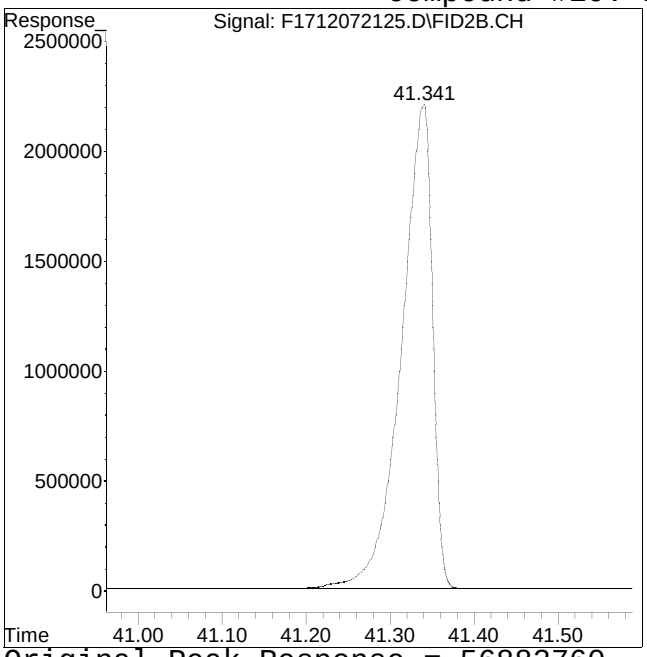
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

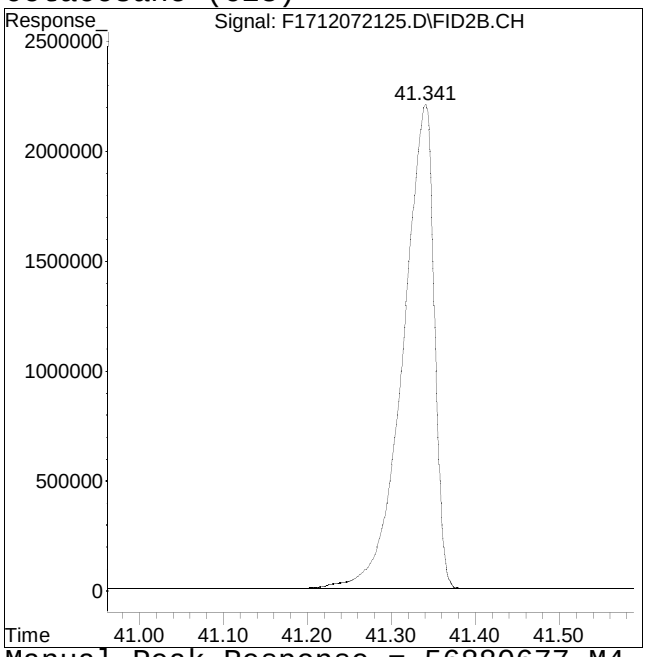
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 56882760



Manual Peak Response = 56880677 M4

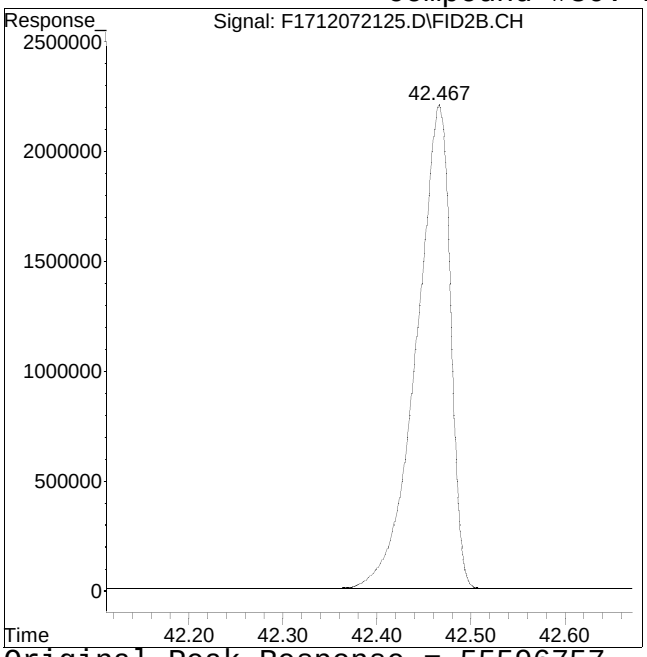
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

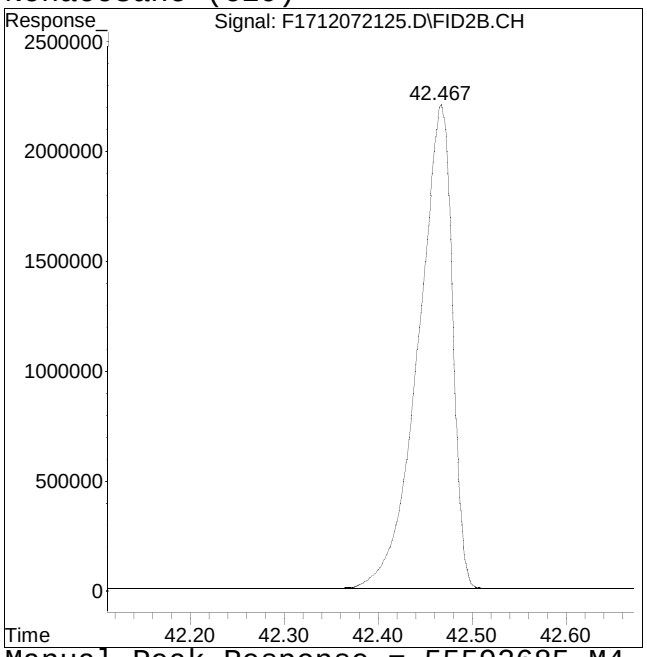
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 55596757



Manual Peak Response = 55592685 M4

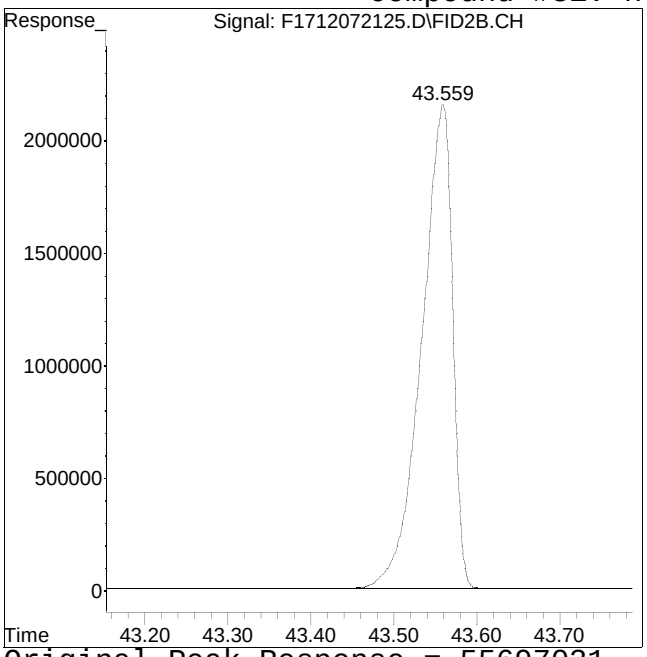
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

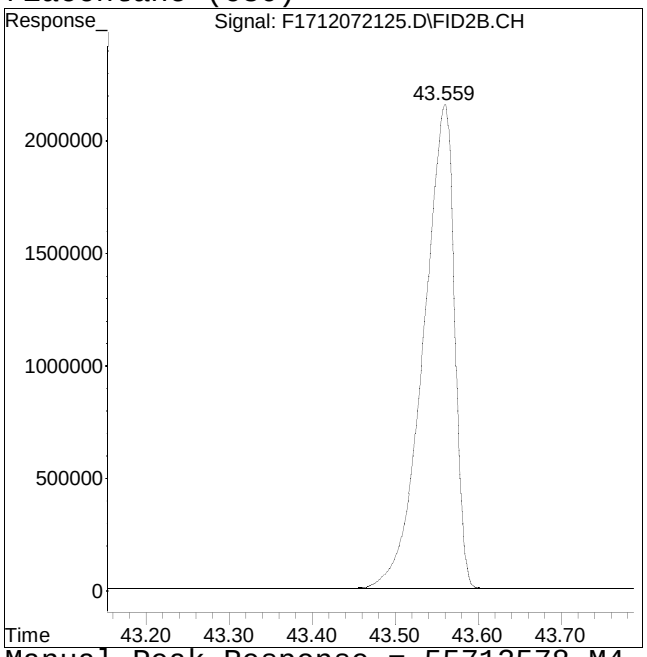
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 55697031



Manual Peak Response = 55712578 M4

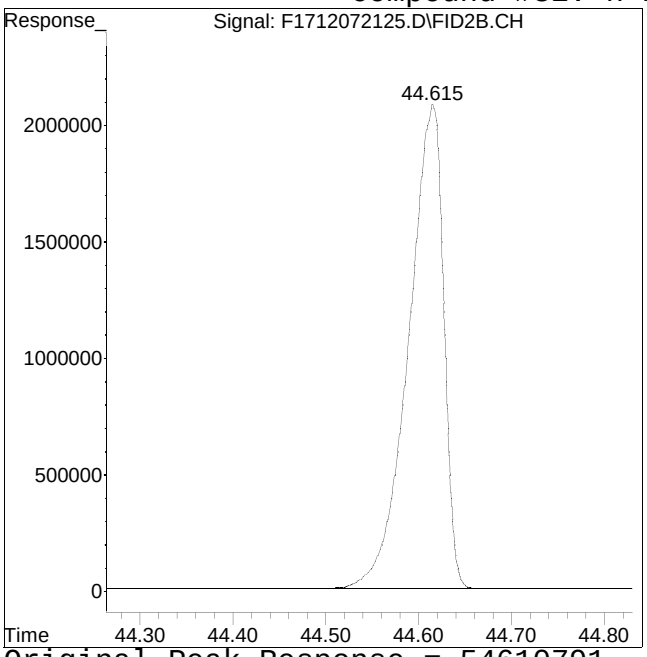
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

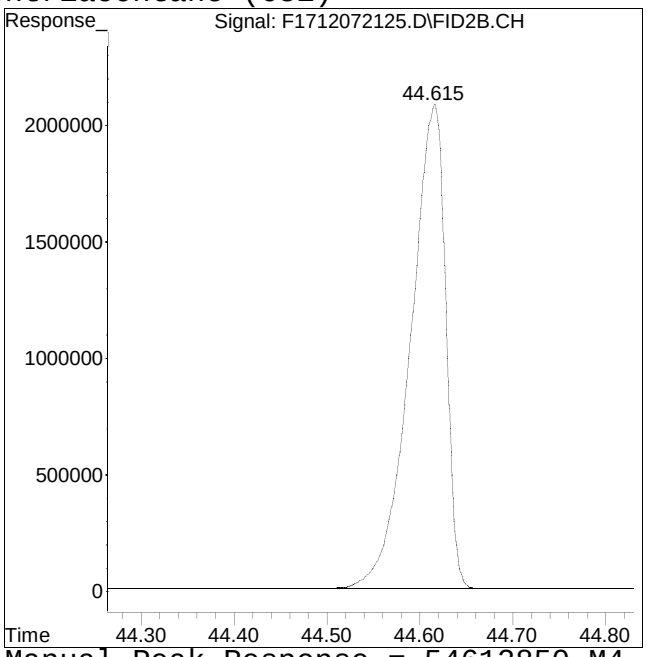
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 54610791



Manual Peak Response = 54612850 M4

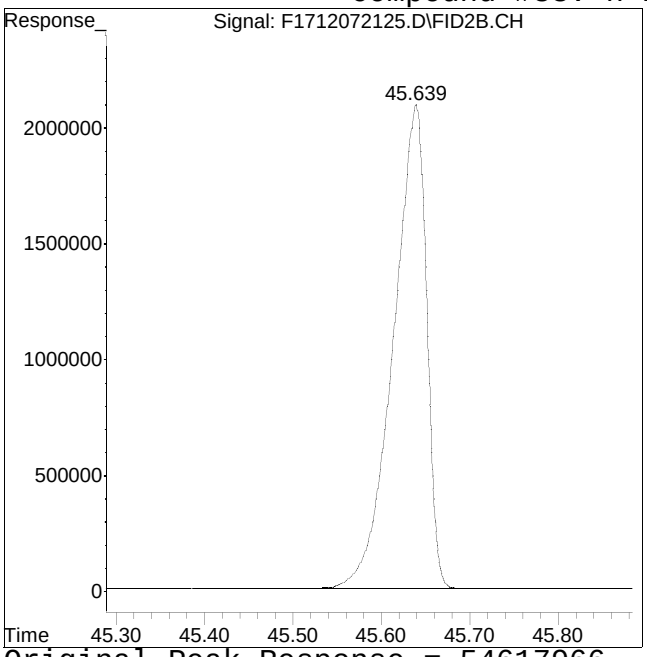
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

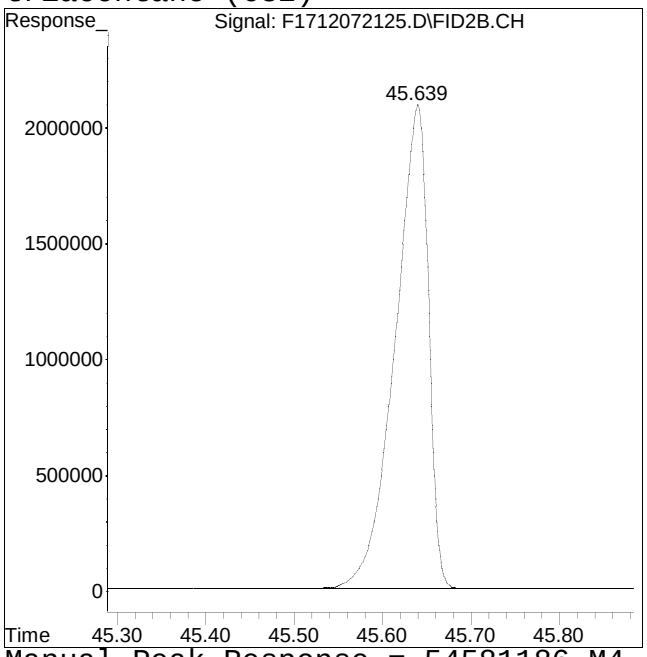
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 54617966



Manual Peak Response = 54581186 M4

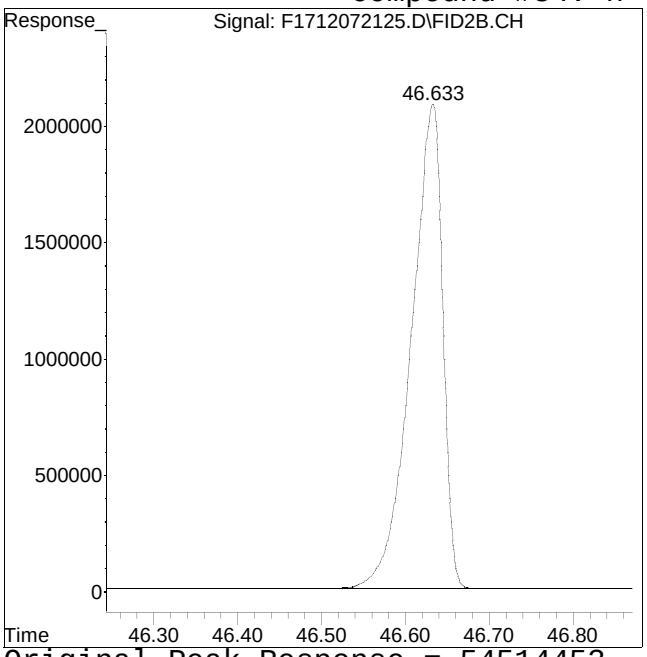
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

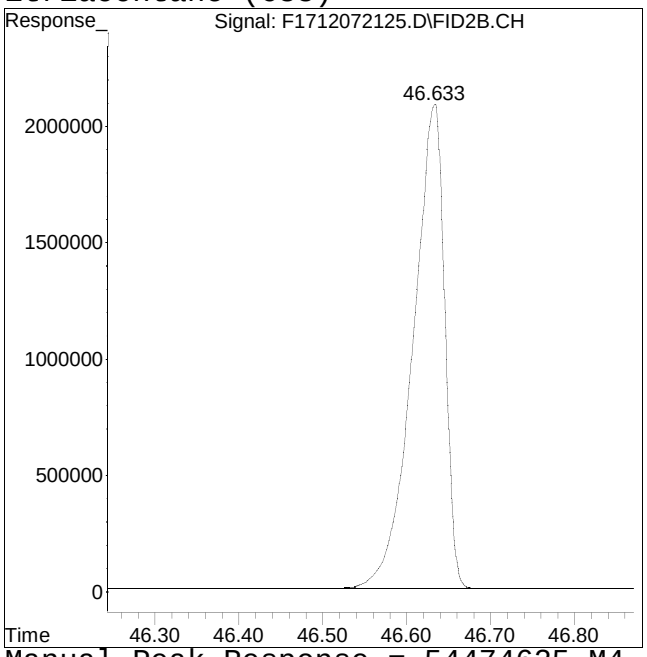
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 54514453



Manual Peak Response = 54474625 M4

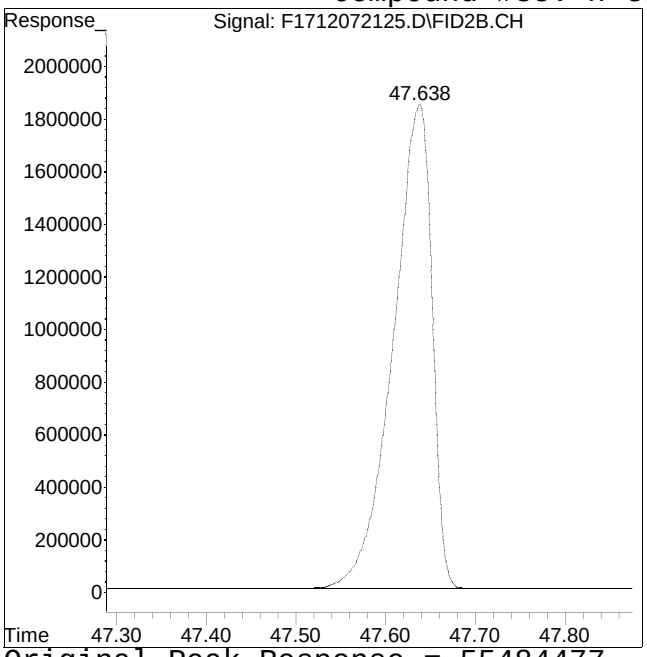
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

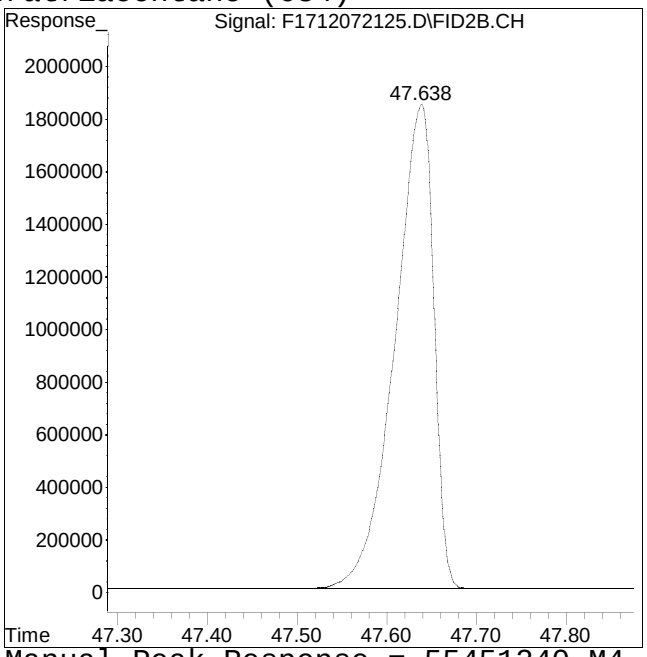
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 55484477



Manual Peak Response = 55451240 M4

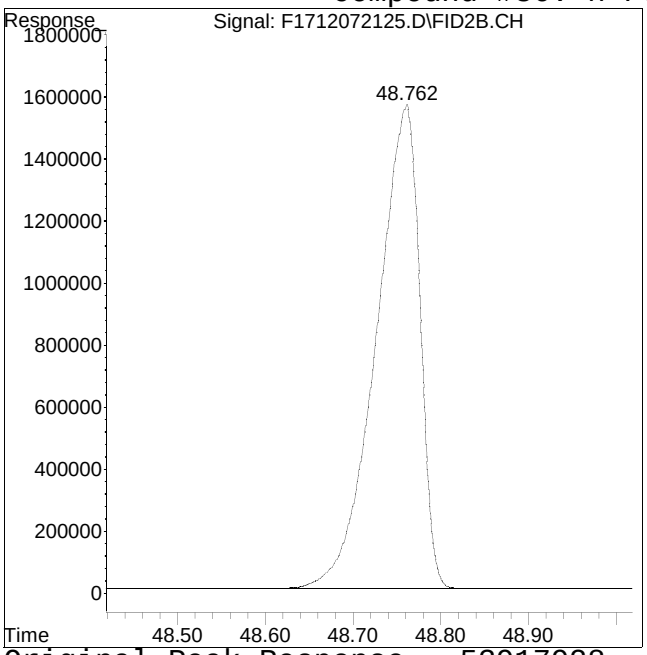
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

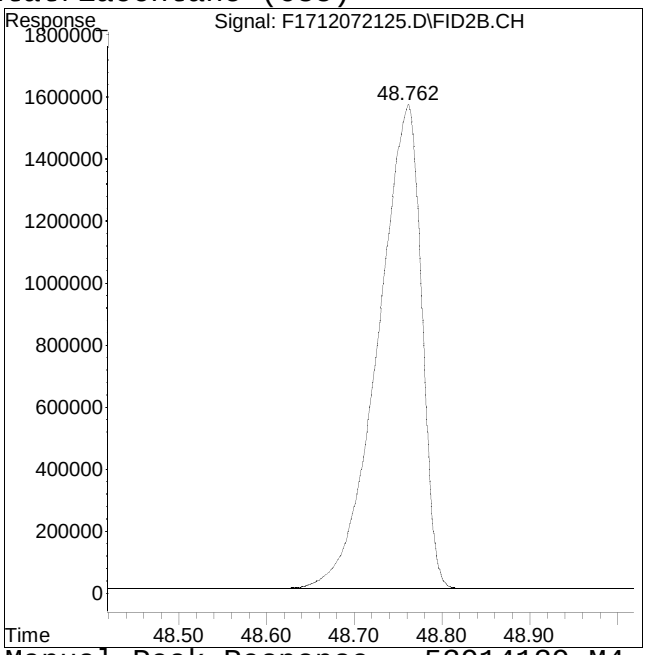
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 53917928



Manual Peak Response = 53914139 M4

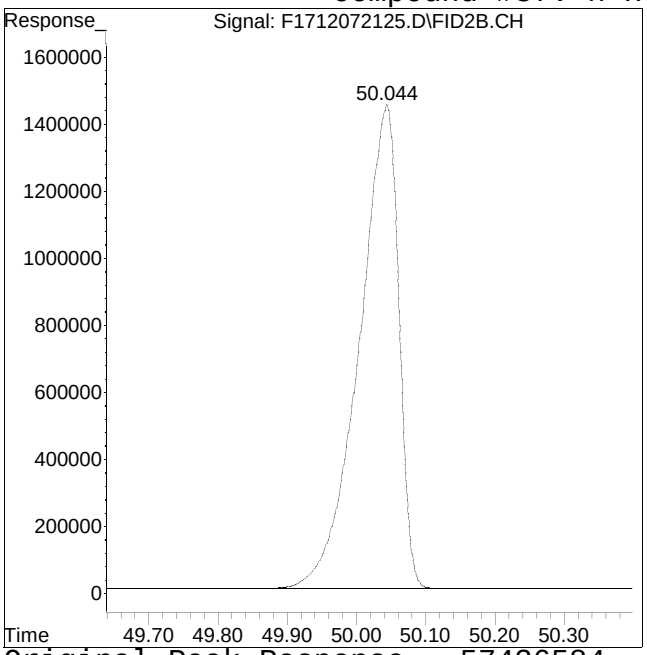
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

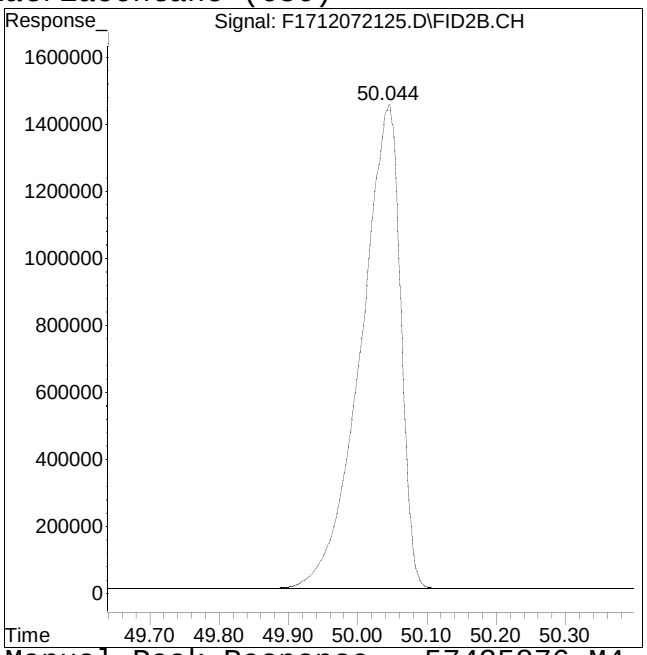
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 57436584



Manual Peak Response = 57435876 M4

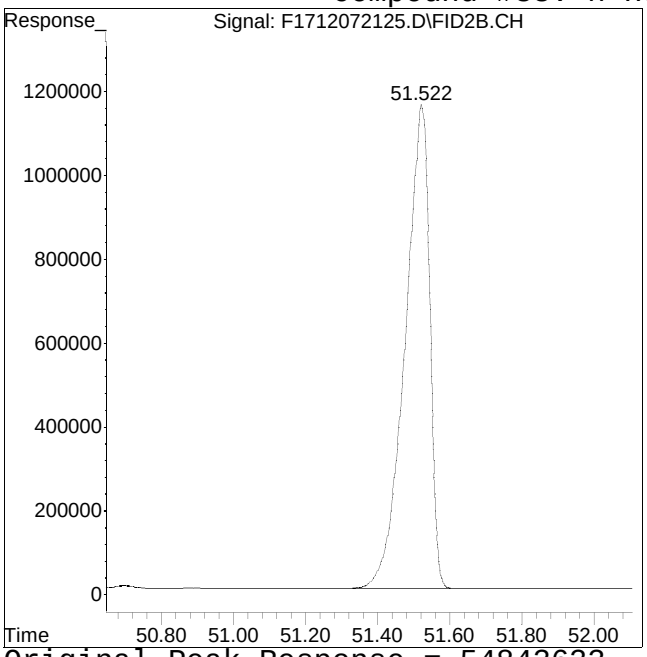
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

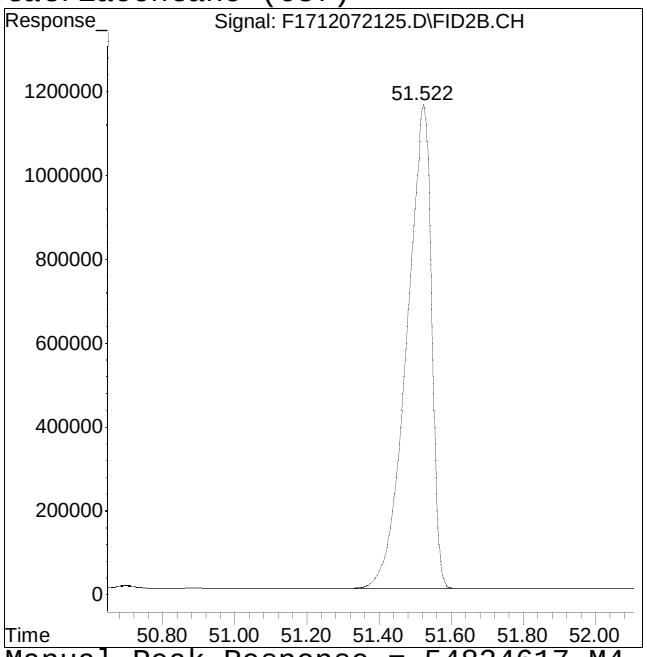
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #38: n-Heptatriacontane (C37)



Original Peak Response = 54843633



Manual Peak Response = 54824617 M4

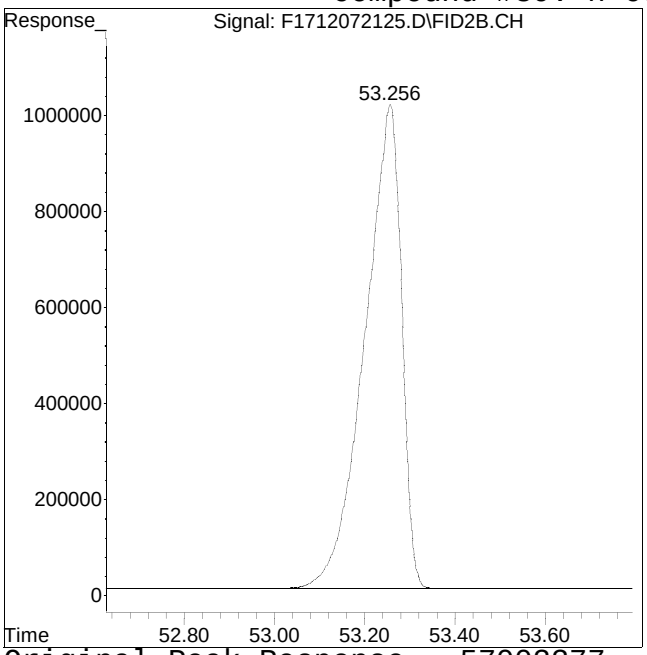
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

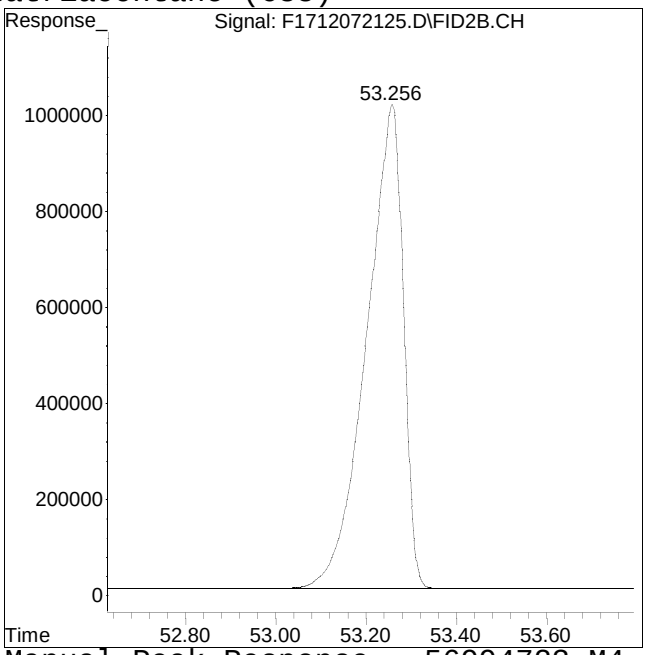
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 57003377



Manual Peak Response = 56994723 M4

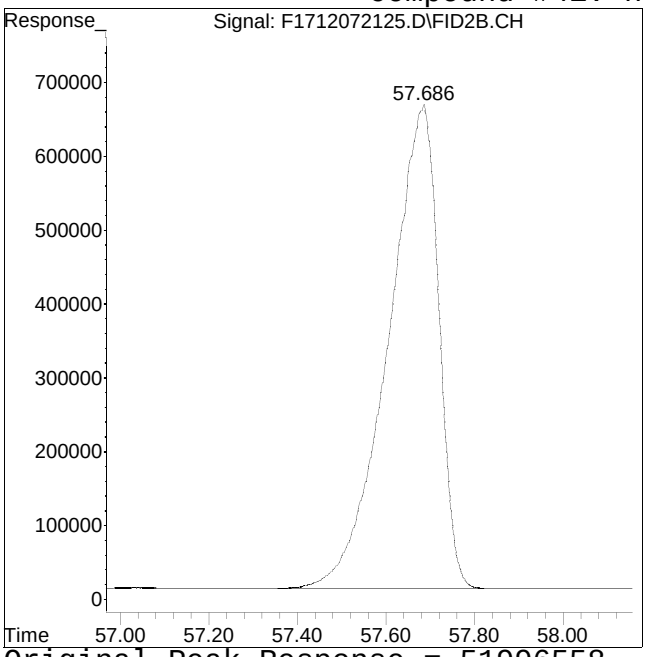
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

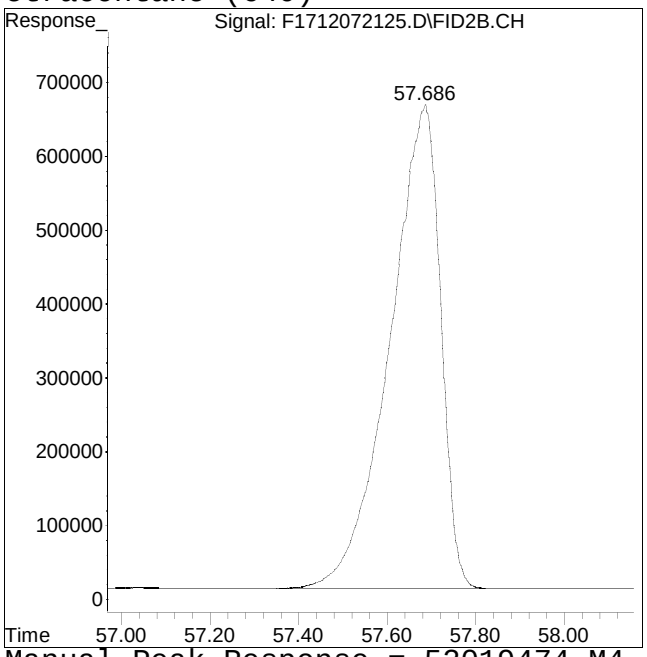
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072125.D
Date Inj'd : 12/8/2021 3:13 am
Sample : CQ1712072101R

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:31 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 51996558



Manual Peak Response = 52019474 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072129.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 6:09 am
Operator : FID17:WR
Sample : WG1581826-1,0.1008
Misc : WG1581826,FRBD96
ALS Vial : 65 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:45:57 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:29:21 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB171272101R
Blank File : F1712072127.D

Sub List : SHC - SHC

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.251	63112175	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.237	66697132	47.853 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 95.71%	
24) s d50-Tetracosane	35.863	52649031	46.900 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 93.80%	
Target Compounds			
2) t n-Octane (C8)	5.605	86003461	84.831 ug/mL M4
3) t n-Nonane (C9)	7.819	65769469	62.631 ug/mL M4
4) t n-Decane (C10)	10.306	54534929	50.946 ug/mL M4
5) t n-Undecane (C11)	12.816	50006610	45.619 ug/mL M4
6) t n-Dodecane (C12)	15.238	47795505	42.450 ug/mL M4
7) t n-Tridecane (C13)	17.541	42866675	37.162 ug/mL M4
8) t 1380	19.211	10137101	8.536 ug/mL M4
9) t n-Tetradecane (C14)	19.720	41384094	34.846 ug/mL M4
10) t 1470	20.999	15059387	12.662 ug/mL M4
11) t n-Pentadecane (C15)	21.780	47614695	40.035 ug/mL M4
12) t n-Hexadecane (C16)	23.733	38560006	32.105 ug/mL M4
13) t 1650	24.635	13264505	11.253 ug/mL M4
14) t n-Heptadecane (C17)	25.587	33371990	28.311 ug/mL M4
15) t Pristane	25.680	28126426	22.153 ug/mL M4
16) t n-Octadecane (C18)	27.351	29439336	24.001 ug/mL M4
17) t Phytane	27.509	14298835	12.324 ug/mL M4
18) t n-Nonadecane (C19)	29.030	28115166	22.865 ug/mL M4
20) t n-Eicosane (C20)	30.633	28972118	23.235 ug/mL M4
21) t n-Heneicosane (C21)	32.164	24925949	19.918 ug/mL M4
22) t n-Docosane (C22)	33.635	23117271	18.372 ug/mL M4
23) t n-Tricosane (C23)	35.044	21283238	16.841 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072129.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 6:09 am
Operator : FID17:WR
Sample : WG1581826-1,0.1008
Misc : WG1581826,FRBD96
ALS Vial : 65 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:45:57 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:29:21 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB171272101R
Blank File : F1712072127.D

Sub List : SHC - SHC

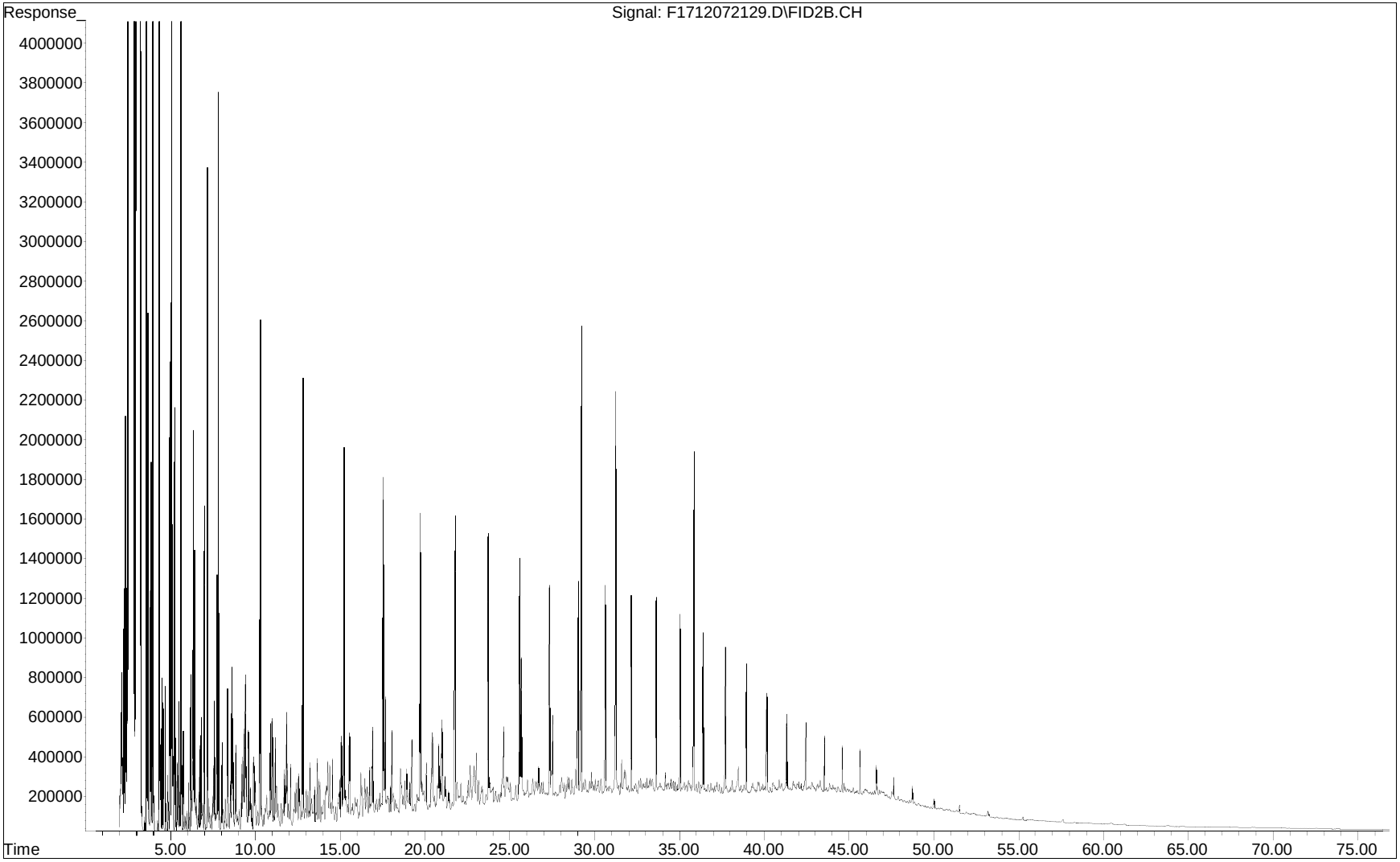
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	36.398	20053228	16.036	ug/mL	M4
26) t	n-Pentacosane (C25)	37.697	19678484	15.881	ug/mL	M4
27) t	n-Hexacosane (C26)	38.949	16373111	12.873	ug/mL	M4
28) t	n-Heptacosane (C27)	40.159	12493769	9.899	ug/mL	M4
29) t	n-Octacosane (C28)	41.325	9320076	7.184	ug/mL	M4
30) t	n-Nonacosane (C29)	42.453	8834610	6.878	ug/mL	M4
31) t	n-Triacontane (C30)	43.541	7102545	5.517	ug/mL	M4
32) t	n-Hentriacontane (C31)	44.598	5935544	4.768	ug/mL	M4
33) t	n-Dotriacontane (C32)	45.623	6167652	4.735	ug/mL	M4
34) t	n-Tritriacontane (C33)	46.612	3568346	2.827	ug/mL	M4
35) t	n-tetratriacontane (C34)	47.612	3658603	2.906	ug/mL	M4
36) t	n-Pentatriacontane (C35)	48.732	3084550	2.582	ug/mL	M4
37) t	n-Hexatriacontane (C36)	50.011	1941783	1.376	ug/mL	M4
38) t	n-Heptatriacontane (C37)	51.481	1919377	1.488	ug/mL	M4
39) t	n-Octatriacontane (C38)	53.196	1644317	1.252	ug/mL	M4
40) t	n-Nonatriacontane (C39)	55.209	1216433	0.937	ug/mL	M4
41) t	n-Tetracontane (C40)	57.621	994876	0.766	ug/mL	M4
42) h	C9-C44 Total Petroleu...	40.222	6715413620	5454.616	ug/mL	m
42) h	C9-C44 Total Petroleu BS	40.222	6593488259	5355.581	ug/mL	m
46) h	Total Resolved Hydroc...	37.870	2168830569	1761.639	ug/mL	m

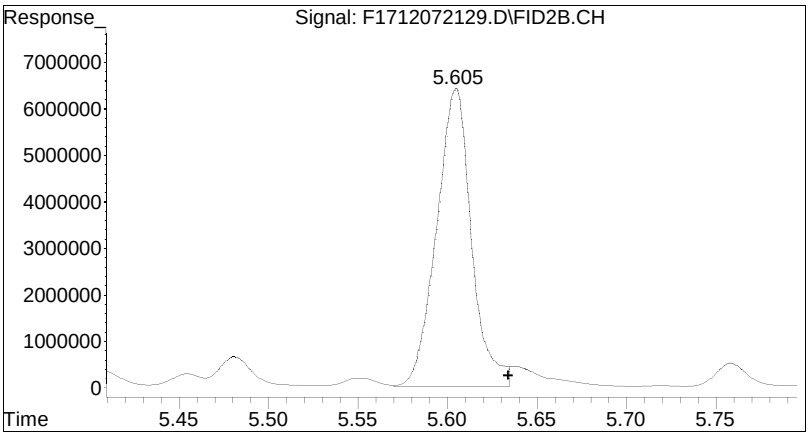
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

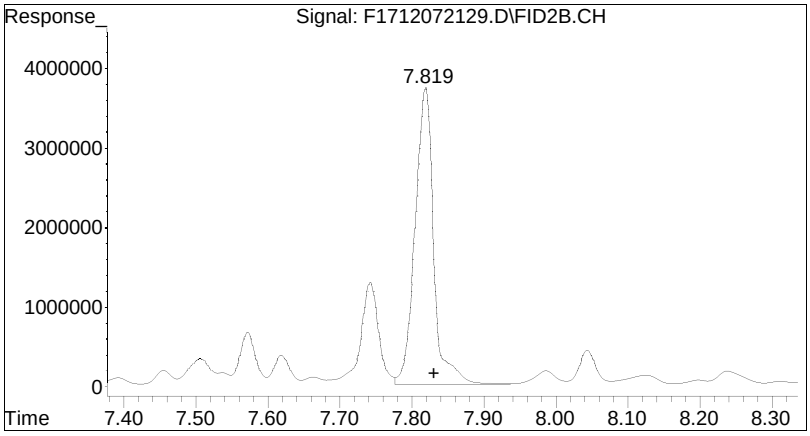
File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072129.D
Operator : FID17:WR
Acquired : 08 Dec 2021 6:09 am using AcqMethod FID17A.M
Sample Name: WG1581826-1,0.1008
Instrument: FID17
Misc Info : WG1581826,FRBD96
Vial Number: 65
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M





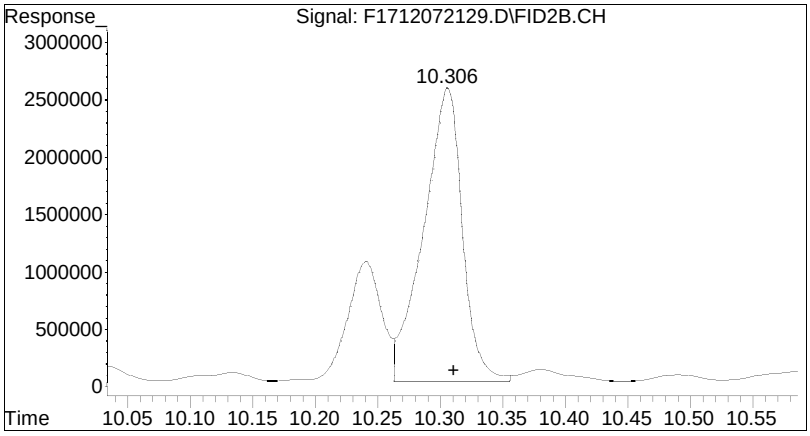
#2 n-Octane (C8)

R.T.:	5.605 min
Delta R.T.:	-0.029 min
Response:	86003461
Conc:	84.83 ug/mL M4



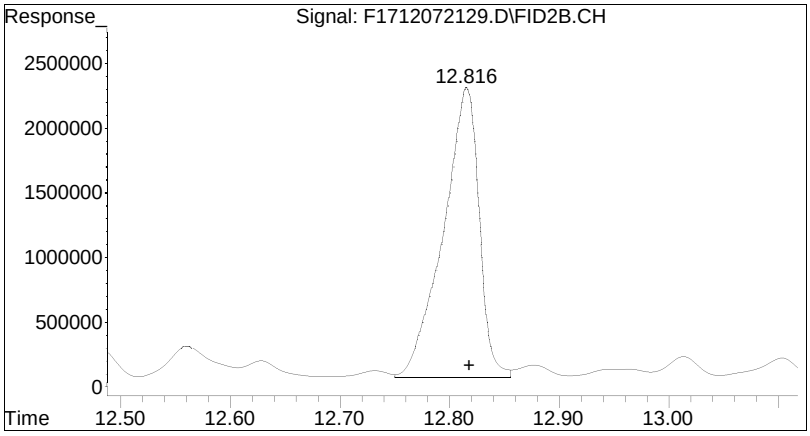
#3 n-Nonane (C9)

R.T.: 7.819 min
Delta R.T.: -0.012 min
Response: 65769469
Conc: 62.63 ug/mL M4



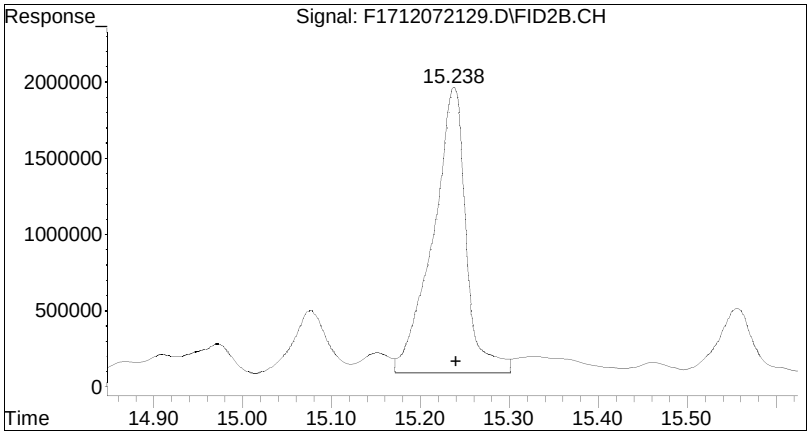
#4 n-Decane (C10)

R.T.:	10.306 min
Delta R.T.:	-0.005 min
Response:	54534929
Conc:	50.95 ug/mL M4



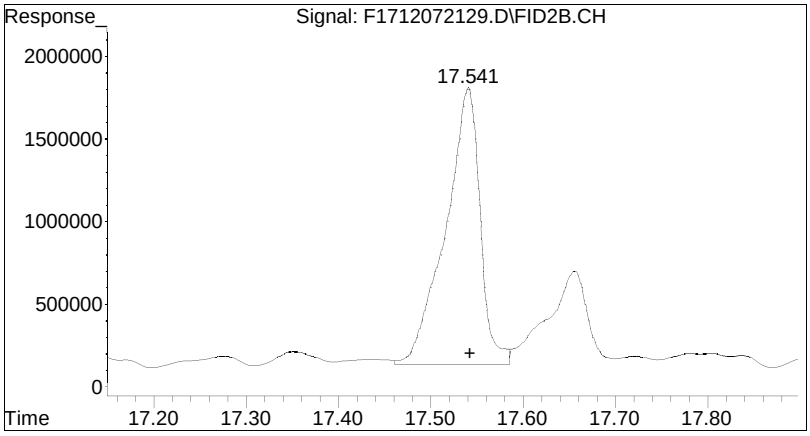
#5 n-Undecane (C11)

R.T.: 12.816 min
Delta R.T.: -0.002 min
Response: 50006610
Conc: 45.62 ug/mL M4



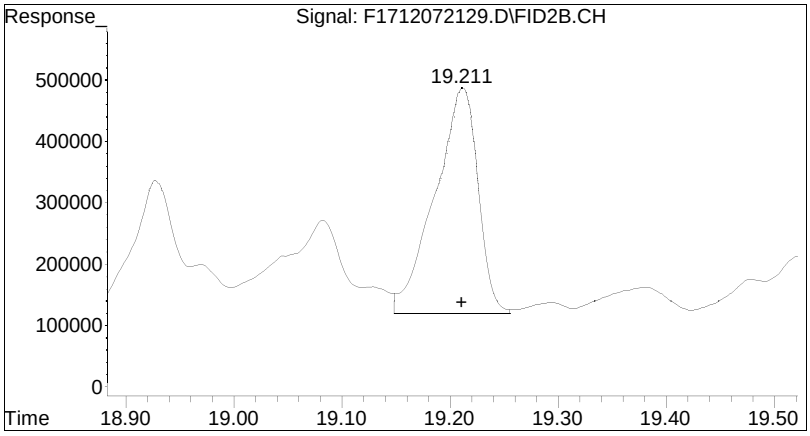
#6 n-Dodecane (C12)

R.T.: 15.238 min
Delta R.T.: -0.002 min
Response: 47795505
Conc: 42.45 ug/mL M4



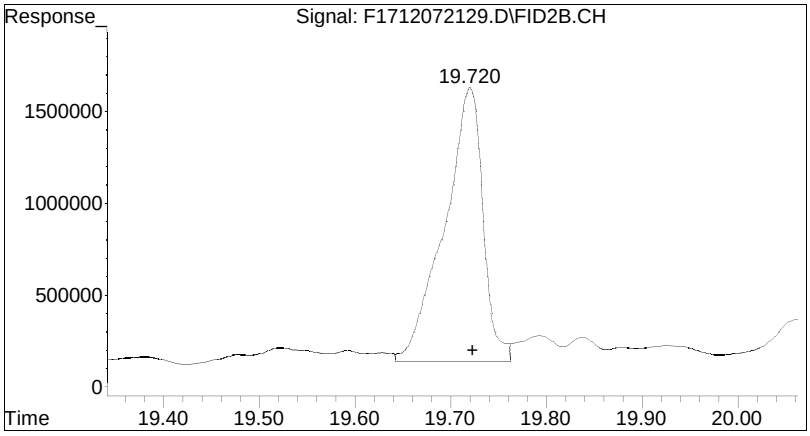
#7 n-Tridecane (C13)

R.T.: 17.541 min
Delta R.T.: -0.002 min
Response: 42866675
Conc: 37.16 ug/mL M4



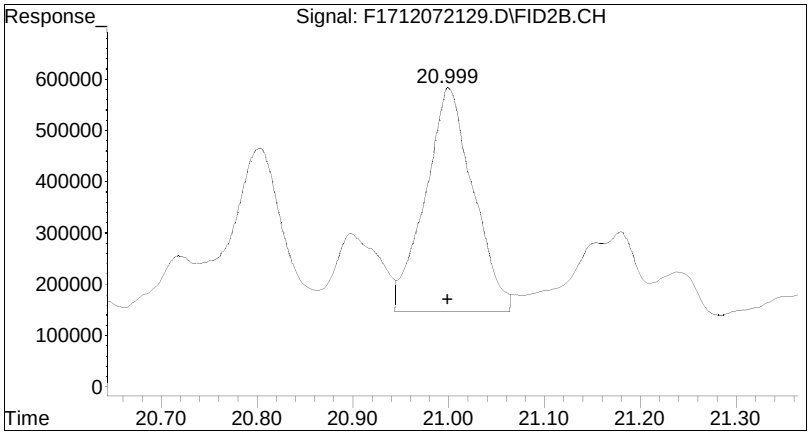
#8 1380

R.T.: 19.211 min
Delta R.T.: 0.000 min
Response: 10137101
Conc: 8.54 ug/mL M4



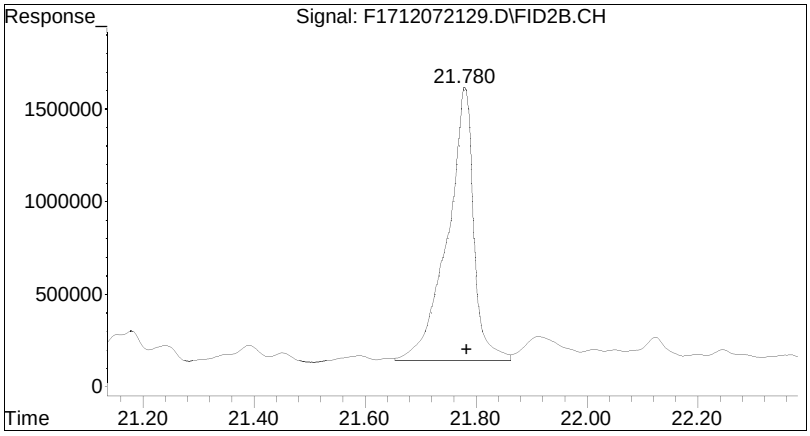
#9 n-Tetradecane (C14)

R.T.: 19.720 min
Delta R.T.: -0.003 min
Response: 41384094
Conc: 34.85 ug/mL M4



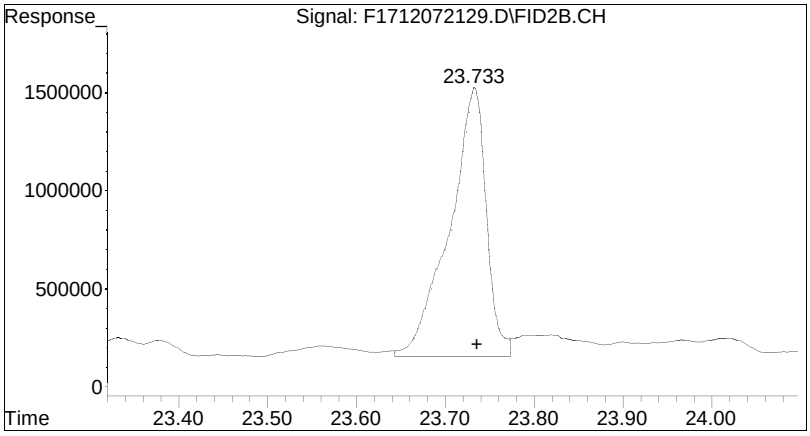
#10 1470

R.T.: 20.999 min
Delta R.T.: 0.000 min
Response: 15059387
Conc: 12.66 ug/mL M4



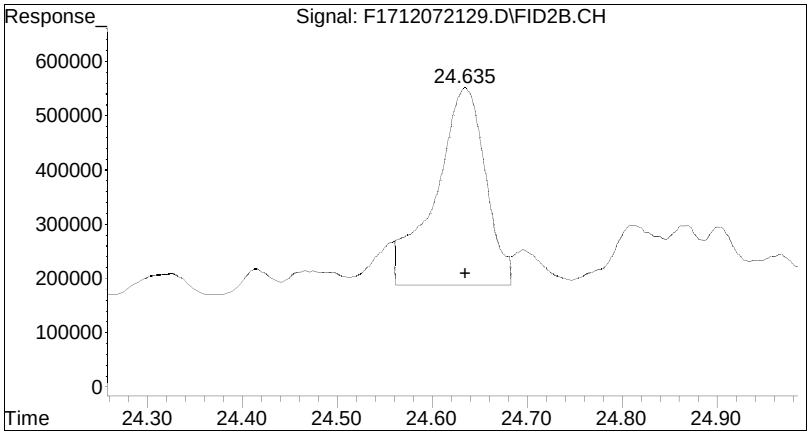
#11 n-Pentadecane (C15)

R.T.:	21.780 min
Delta R.T.:	-0.004 min
Response:	47614695
Conc:	40.04 ug/mL M4



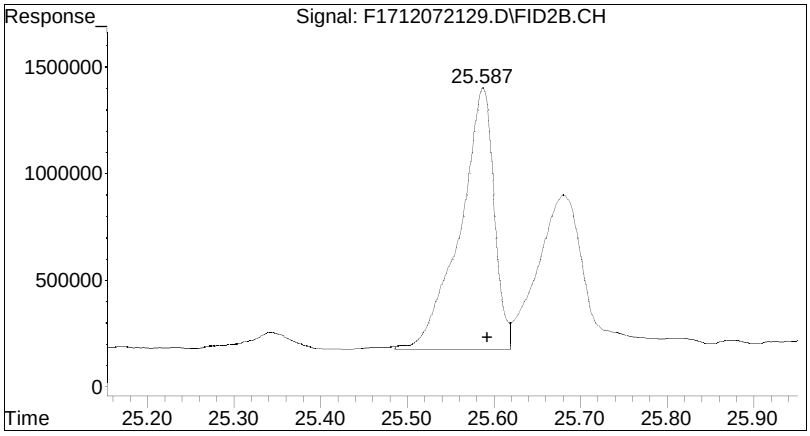
#12 n-Hexadecane (C16)

R.T.: 23.733 min
Delta R.T.: -0.003 min
Response: 38560006
Conc: 32.10 ug/mL M4



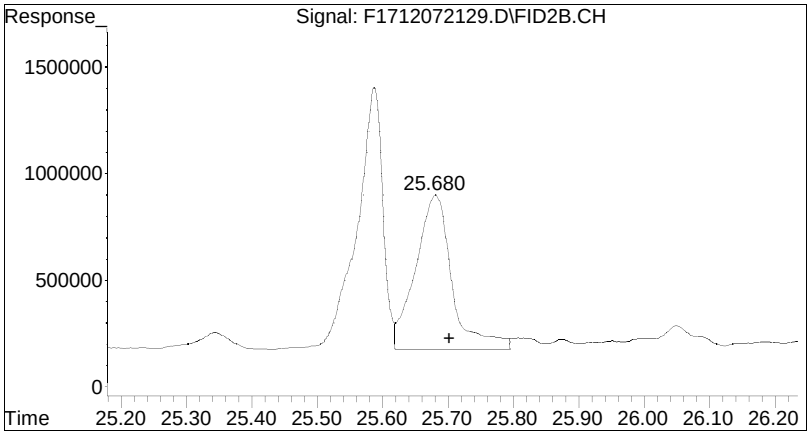
#13 1650

R.T.: 24.635 min
Delta R.T.: 0.000 min
Response: 13264505
Conc: 11.25 ug/mL M4



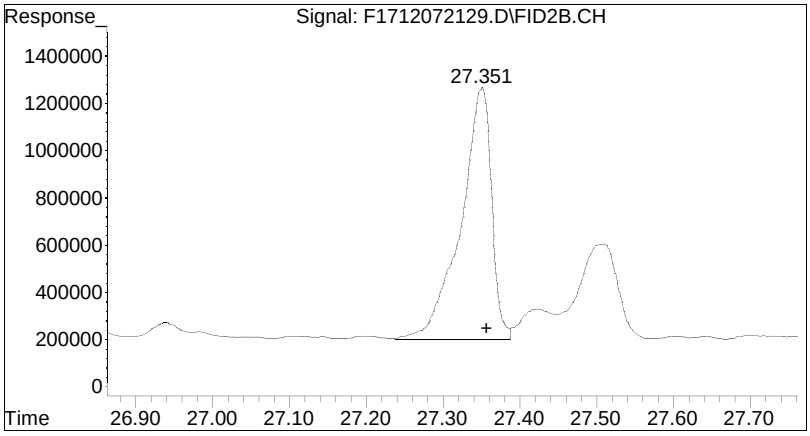
#14 n-Heptadecane (C17)

R.T.: 25.587 min
Delta R.T.: -0.006 min
Response: 33371990
Conc: 28.31 ug/mL M4



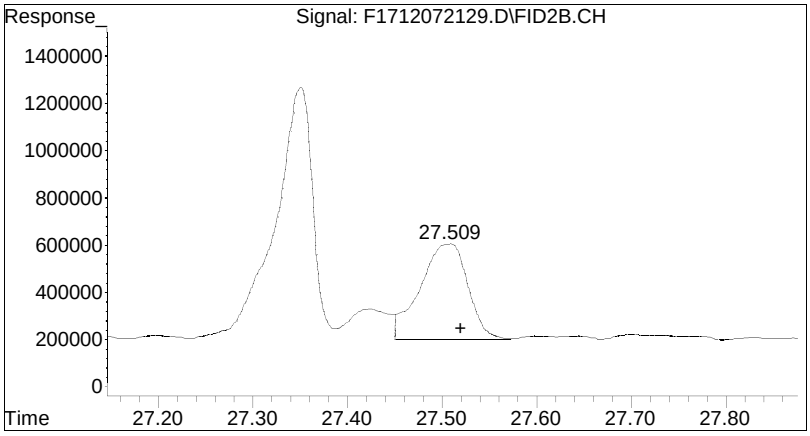
#15 Pristane

R.T.: 25.680 min
Delta R.T.: -0.022 min
Response: 28126426
Conc: 22.15 ug/mL M4



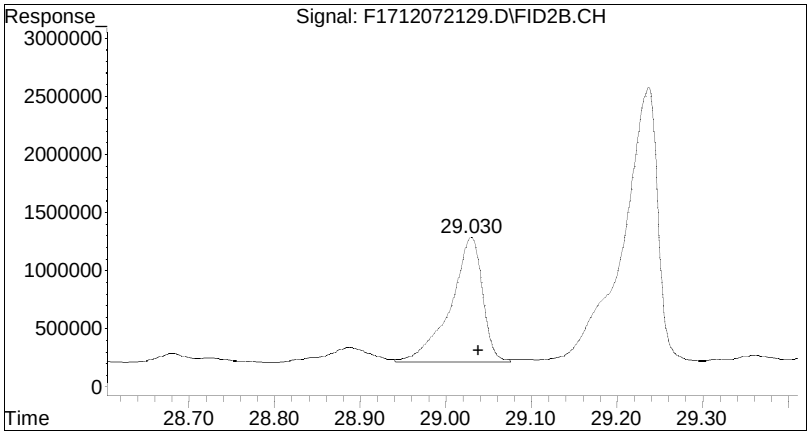
#16 n-Octadecane (C18)

R.T.: 27.351 min
Delta R.T.: -0.006 min
Response: 29439336
Conc: 24.00 ug/mL M4



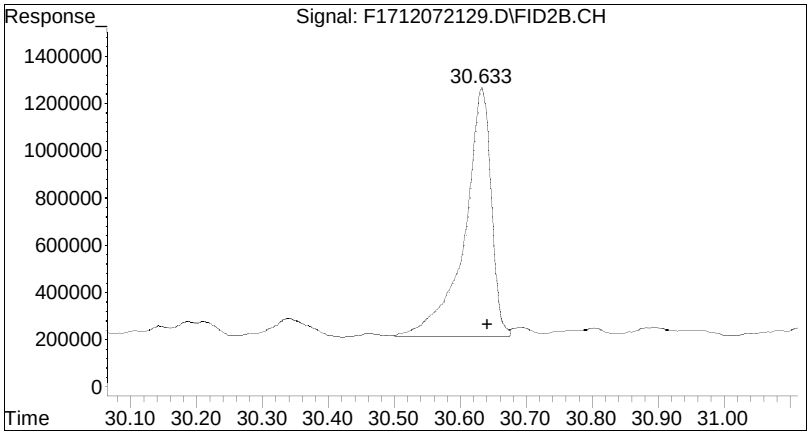
#17 Phytane

R.T.: 27.509 min
Delta R.T.: -0.011 min
Response: 14298835
Conc: 12.32 ug/mL M4



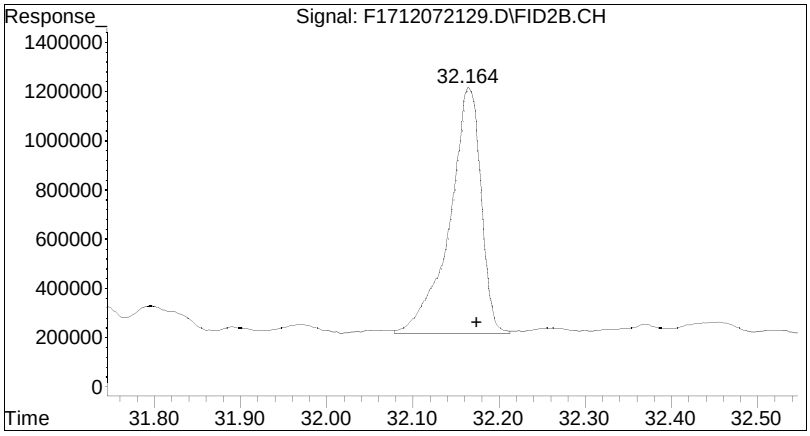
#18 n-Nonadecane (C19)

R.T.: 29.030 min
Delta R.T.: -0.008 min
Response: 28115166
Conc: 22.86 ug/mL M4



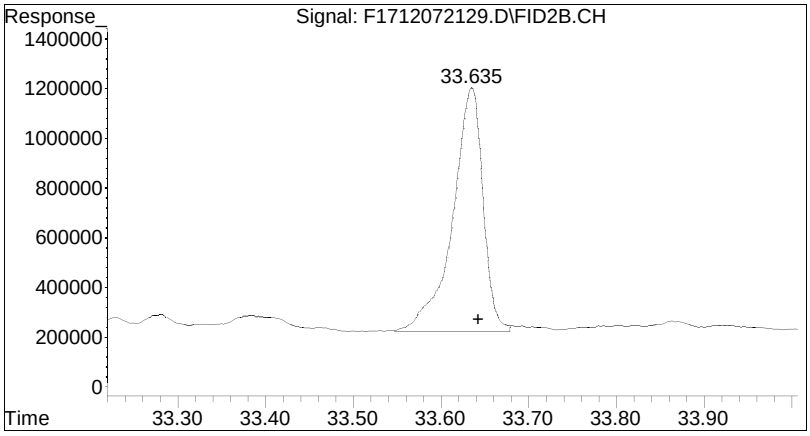
#20 n-Eicosane (C20)

R.T.: 30.633 min
Delta R.T.: -0.008 min
Response: 28972118
Conc: 23.23 ug/mL M4



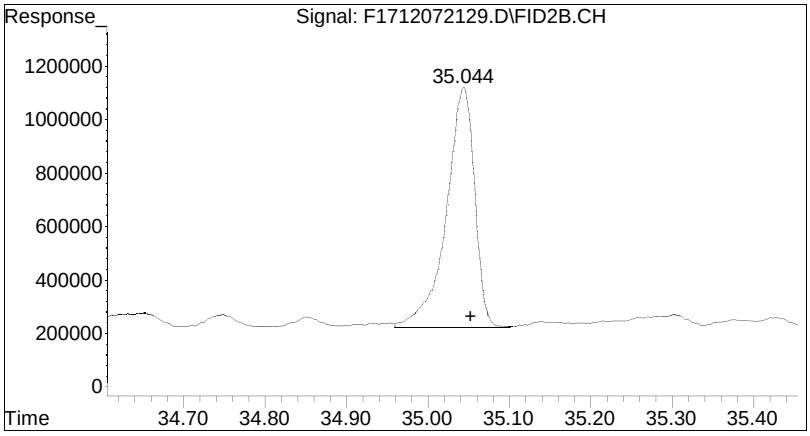
#21 n-Heneicosane (C21)

R.T.: 32.164 min
Delta R.T.: -0.010 min
Response: 24925949
Conc: 19.92 ug/mL M4



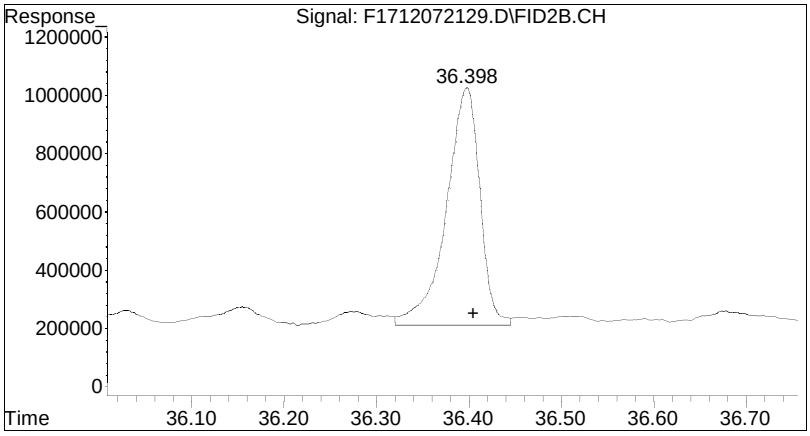
#22 n-Docosane (C22)

R.T.: 33.635 min
Delta R.T.: -0.008 min
Response: 23117271
Conc: 18.37 ug/mL M4



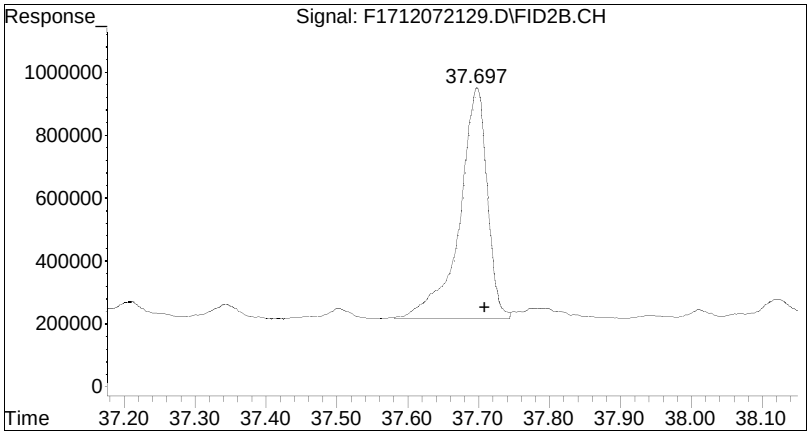
#23 n-Tricosane (C23)

R.T.:	35.044 min
Delta R.T.:	-0.009 min
Response:	21283238
Conc:	16.84 ug/mL M4



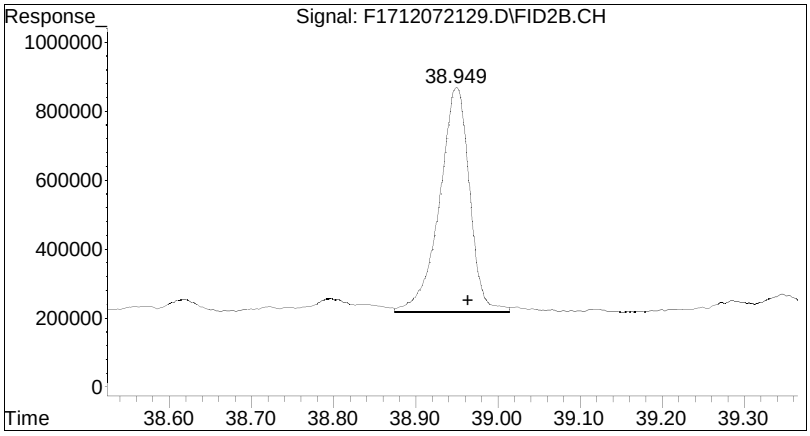
#25 n-Tetracosane (C24)

R.T.:	36.398 min
Delta R.T.:	-0.007 min
Response:	20053228
Conc:	16.04 ug/mL M4



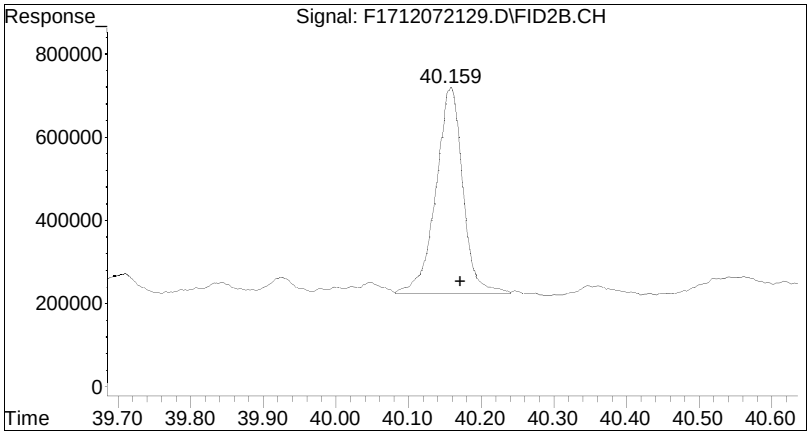
#26 n-Pentacosane (C25)

R.T.: 37.697 min
Delta R.T.: -0.012 min
Response: 19678484
Conc: 15.88 ug/mL M4



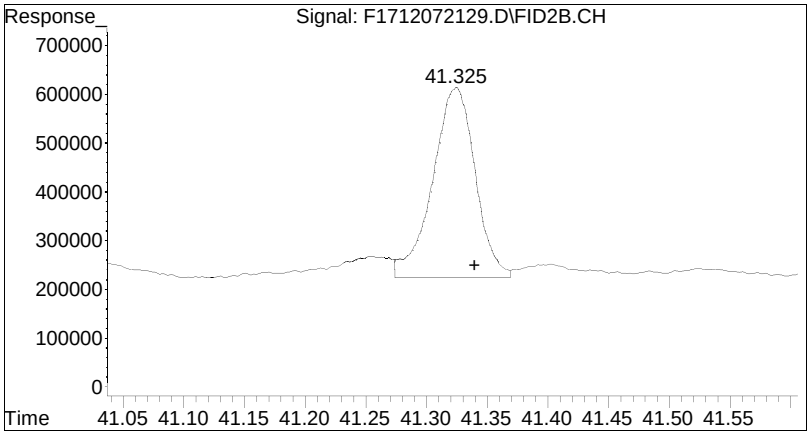
#27 n-Hexacosane (C26)

R.T.: 38.949 min
Delta R.T.: -0.015 min
Response: 16373111
Conc: 12.87 ug/mL M4



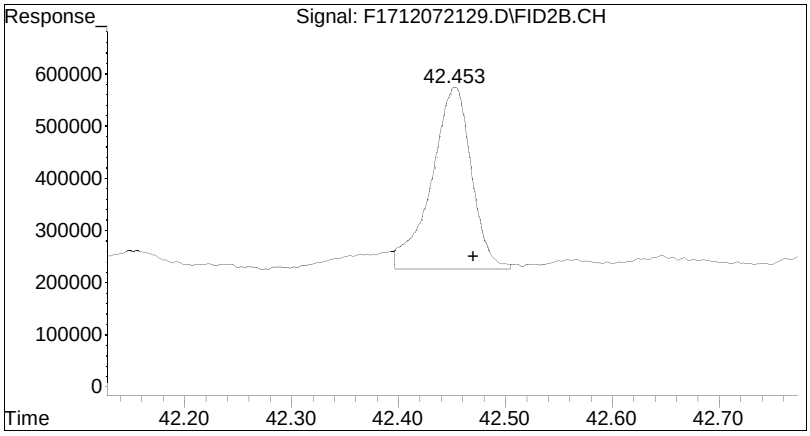
#28 n-Heptacosane (C27)

R.T.:	40.159 min
Delta R.T.:	-0.013 min
Response:	12493769
Conc:	9.90 ug/mL M4



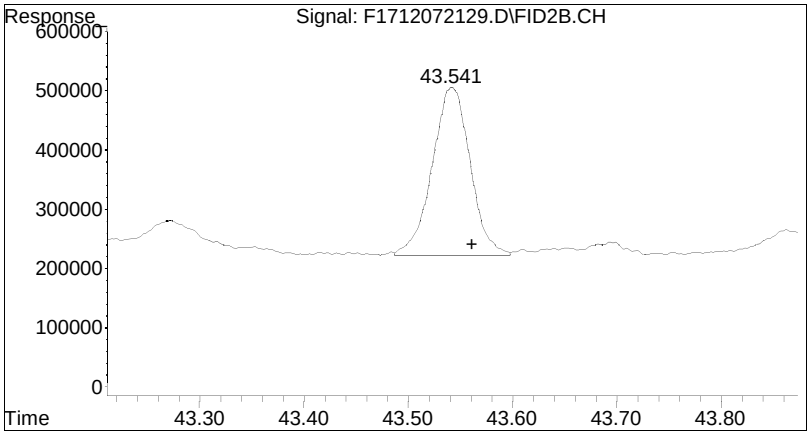
#29 n-Octacosane (C28)

R.T.:	41.325 min
Delta R.T.:	-0.016 min
Response:	9320076
Conc:	7.18 ug/mL M4



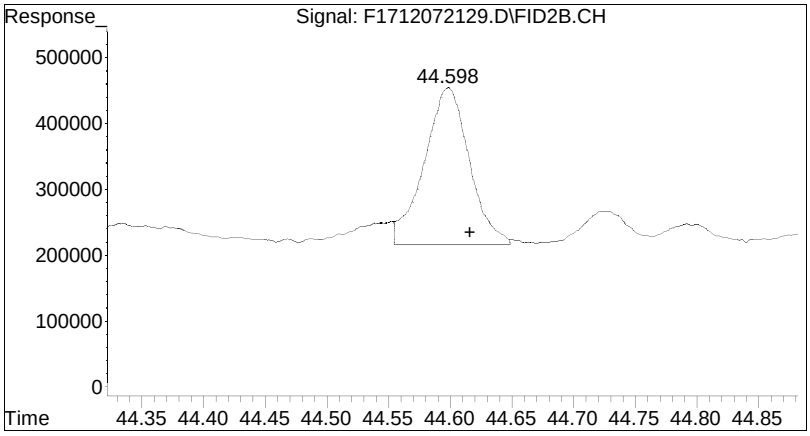
#30 n-Nonacosane (C29)

R.T.:	42.453 min
Delta R.T.:	-0.017 min
Response:	8834610
Conc:	6.88 ug/mL M4



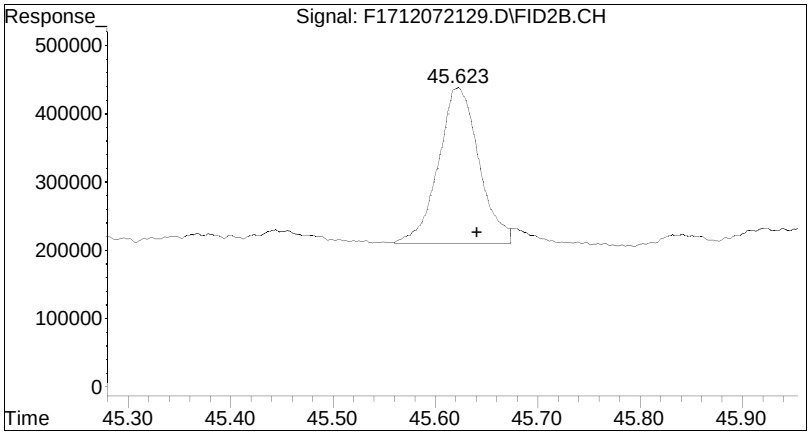
#31 n-Triacontane (C30)

R.T.:	43.541 min
Delta R.T.:	-0.020 min
Response:	7102545
Conc:	5.52 ug/mL M4



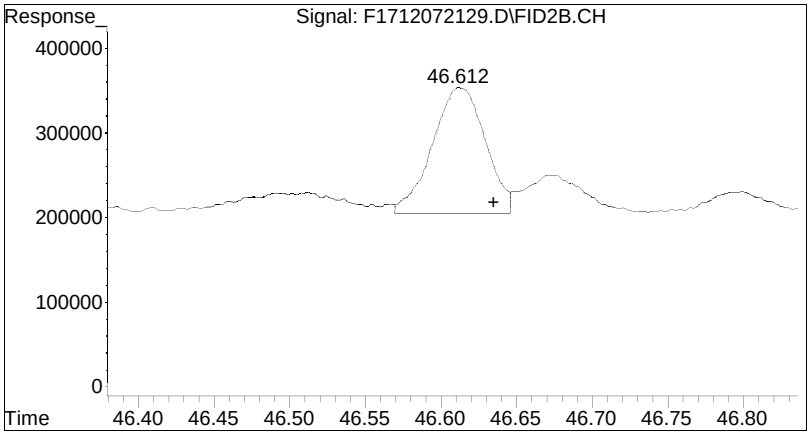
#32 n-Hentriacontane (C31)

R.T.:	44.598 min
Delta R.T.:	-0.018 min
Response:	5935544
Conc:	4.77 ug/mL M4



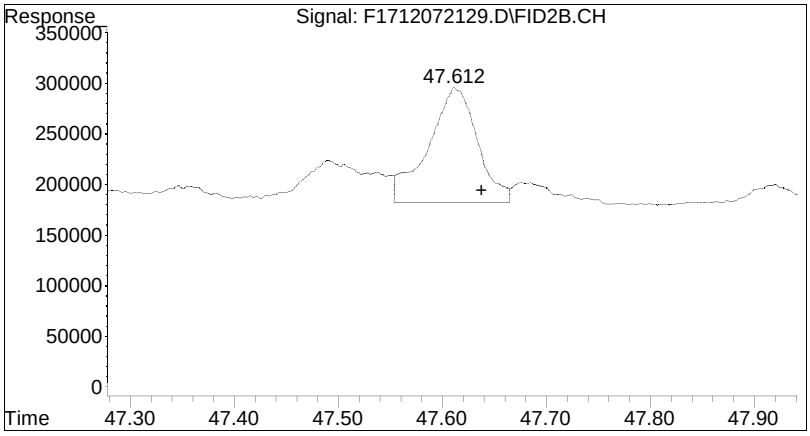
#33 n-Dotriacontane (C32)

R.T.:	45.623 min
Delta R.T.:	-0.018 min
Response:	6167652
Conc:	4.74 ug/mL M4



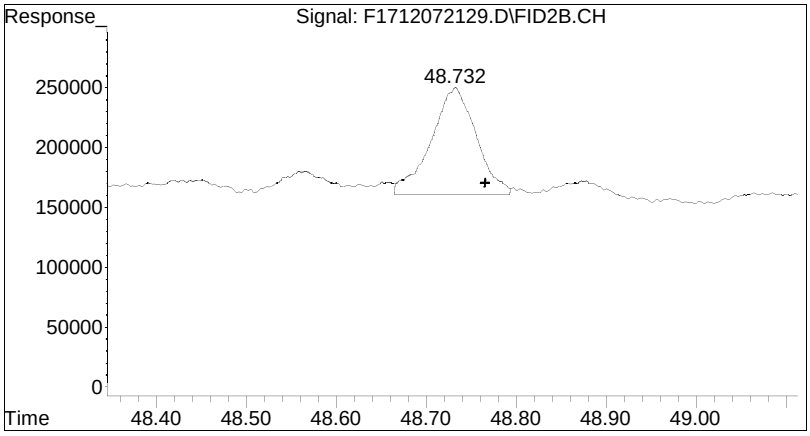
#34 n-Tritriacontane (C33)

R.T.:	46.612 min
Delta R.T.:	-0.023 min
Response:	3568346
Conc:	2.83 ug/mL M4



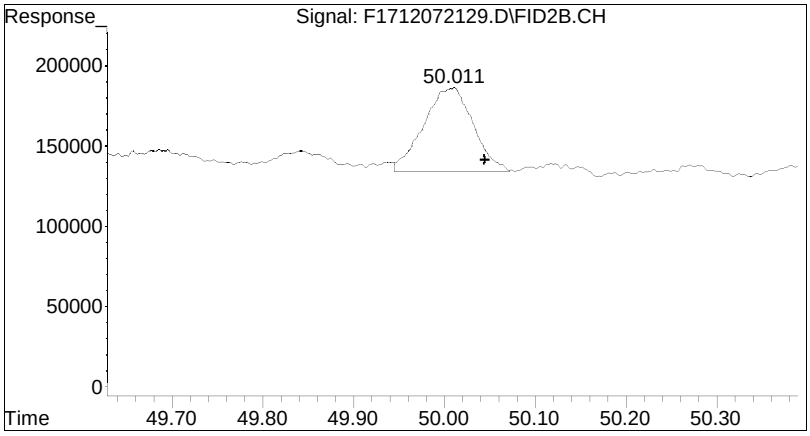
#35 n-tetratriacontane (C34)

R.T.:	47.612 min
Delta R.T.:	-0.026 min
Response:	3658603
Conc:	2.91 ug/mL M4



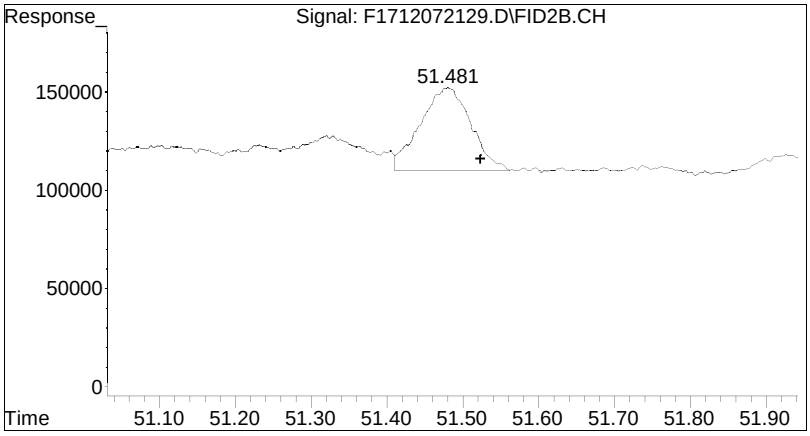
#36 n-Pentatriacontane (C35)

R.T.:	48.732 min
Delta R.T.:	-0.033 min
Response:	3084550
Conc:	2.58 ug/mL M4



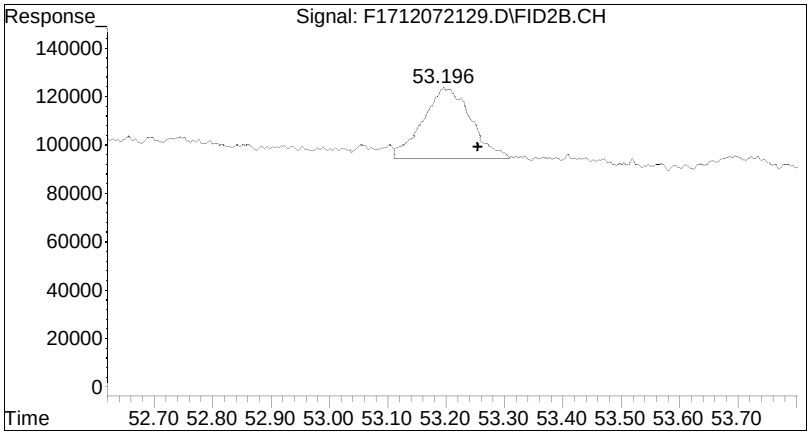
#37 n-Hexatriacontane (C36)

R.T.:	50.011 min
Delta R.T.:	-0.033 min
Response:	1941783
Conc:	1.38 ug/mL M4



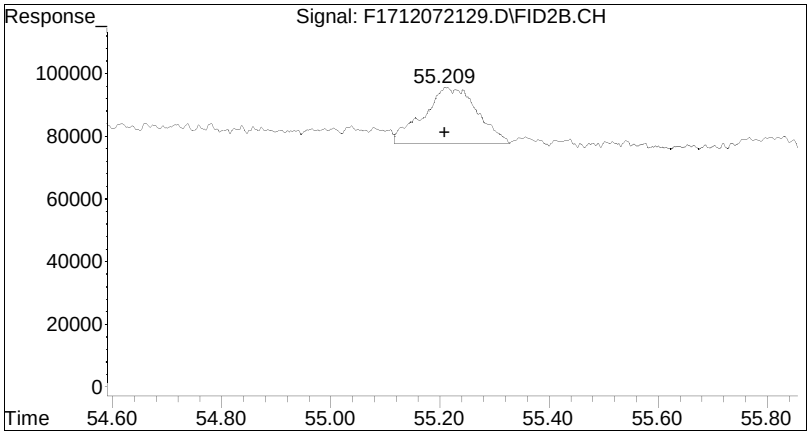
#38 n-Heptatriacontane (C37)

R.T.:	51.481 min
Delta R.T.:	-0.043 min
Response:	1919377
Conc:	1.49 ug/mL M4



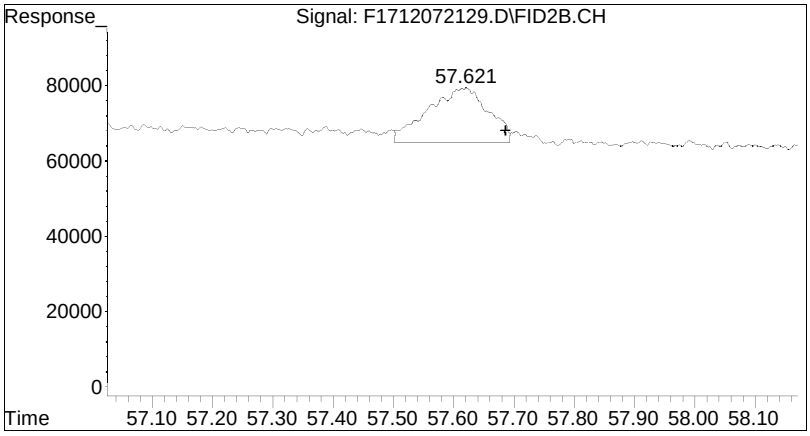
#39 n-Octatriacontane (C38)

R.T.:	53.196 min
Delta R.T.:	-0.058 min
Response:	1644317
Conc:	1.25 ug/mL M4



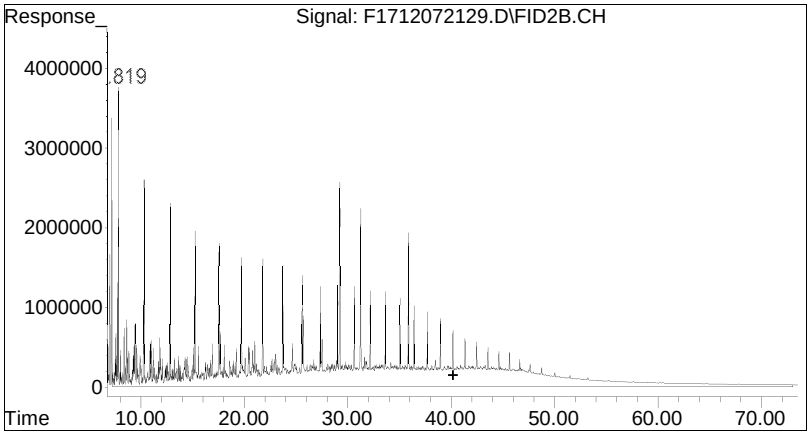
#40 n-Nonatriacontane (C39)

R.T.:	55.209 min
Delta R.T.:	0.000 min
Response:	1216433
Conc:	0.94 ug/mL M4



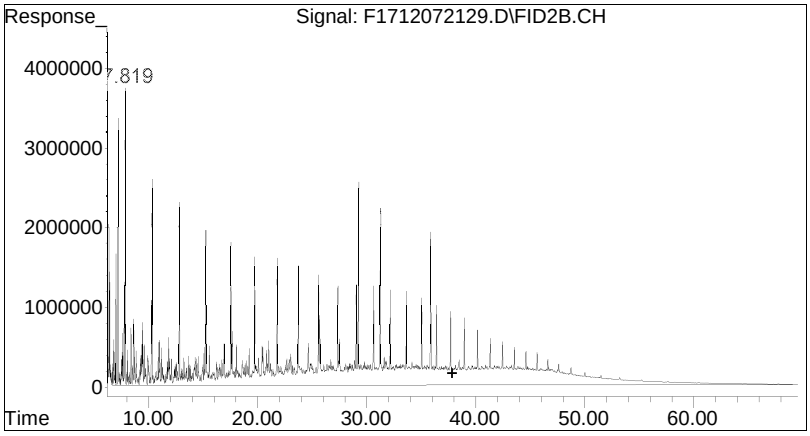
#41 n-Tetracontane (C40)

R.T.:	57.621 min
Delta R.T.:	-0.065 min
Response:	994876
Conc:	0.77 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 40.222 min
Delta R.T.: 0.000 min
Response: 6715413620
Conc: 5454.62 ug/mL m



#46 Total Resolved Hydrocarbo

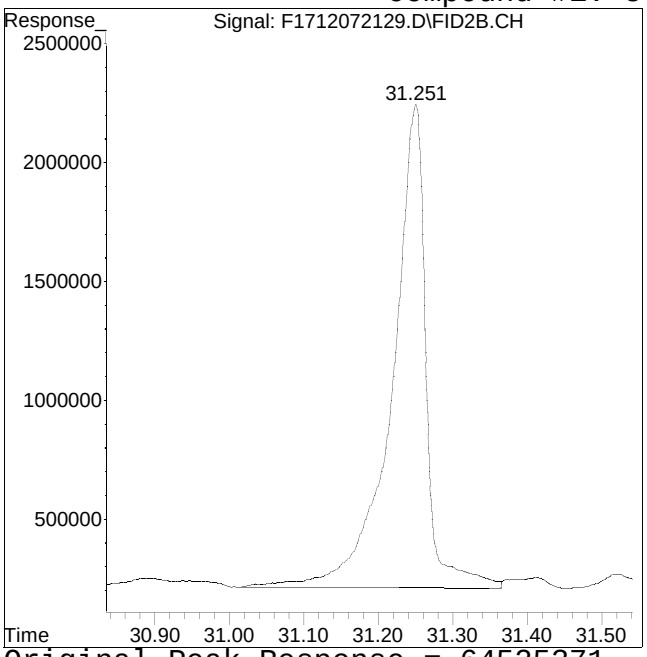
R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 2168830569
Conc: 1761.64 ug/mL m

Manual Integration/Negative Proof Report

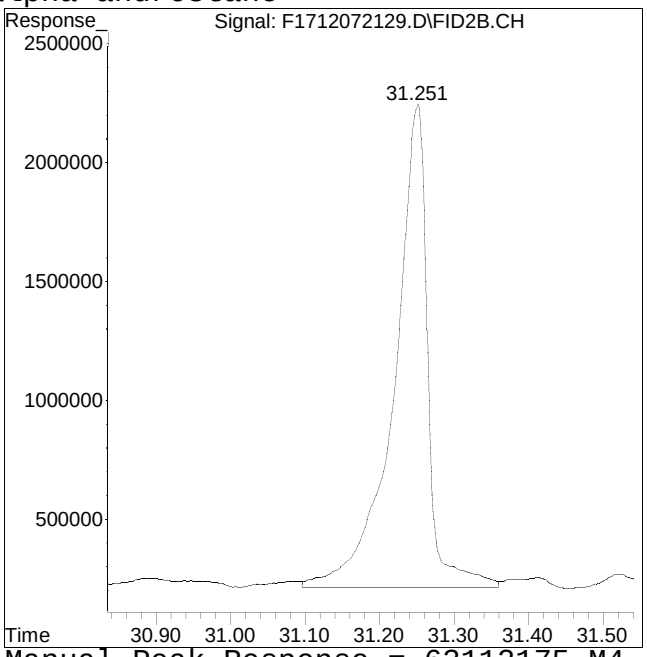
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #1: 5-alpha-androstane



Original Peak Response = 64525371



Manual Peak Response = 63112175 M4

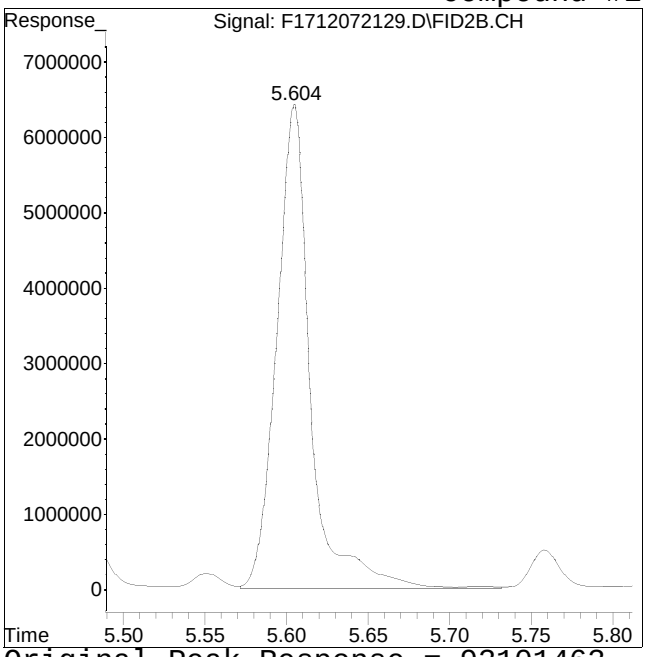
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

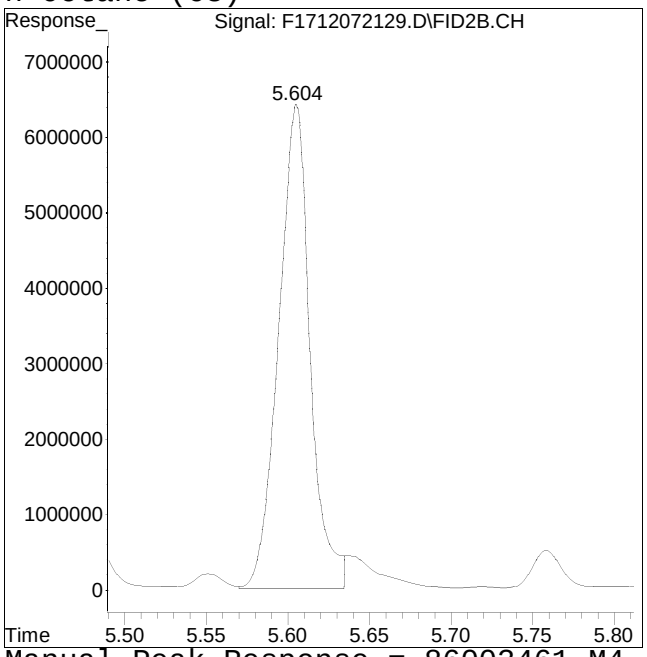
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #2: n-Octane (C8)



Original Peak Response = 93101463



Manual Peak Response = 86003461 M4

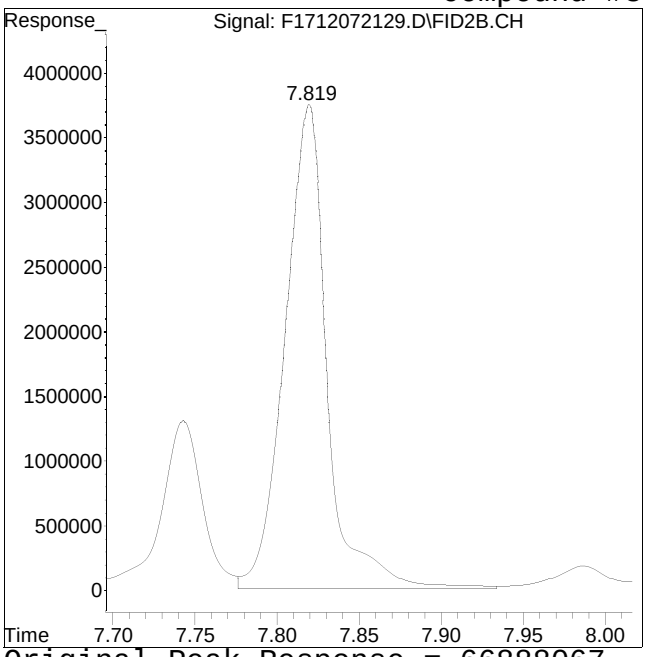
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

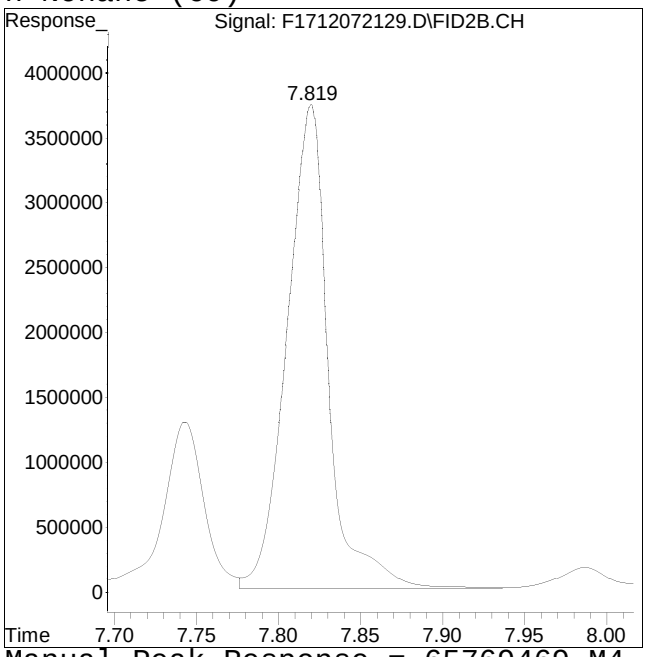
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #3: n-Nonane (C9)



Original Peak Response = 66888067



Manual Peak Response = 65769469 M4

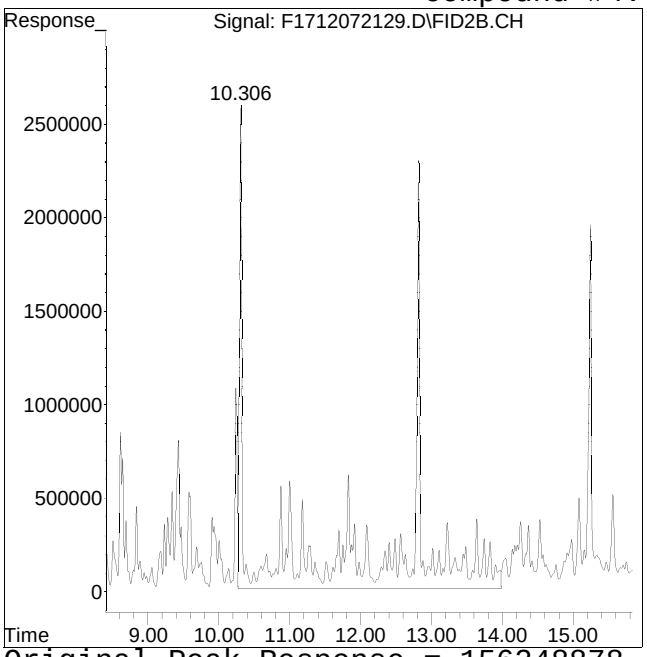
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

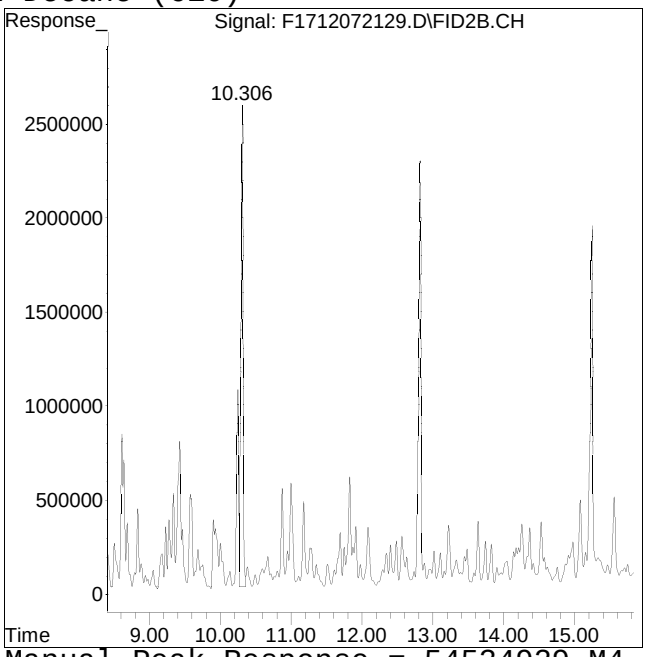
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #4: n-Decane (C10)



Original Peak Response = 156248878



Manual Peak Response = 54534929 M4

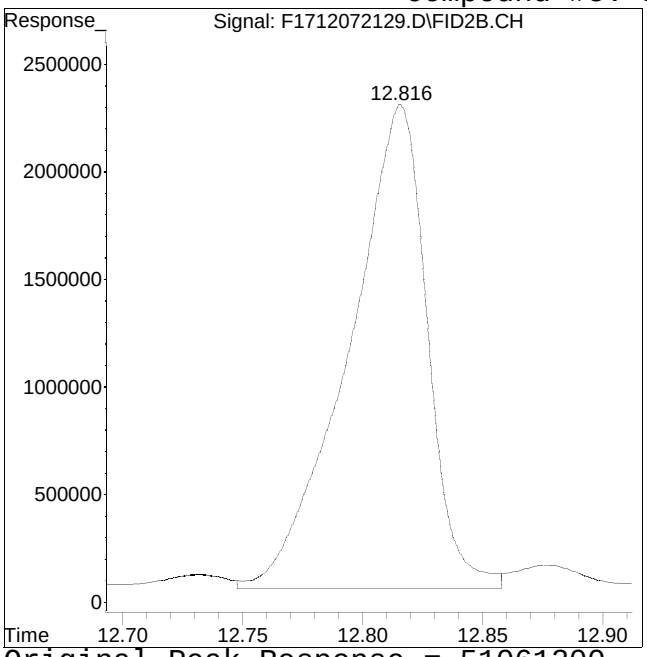
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

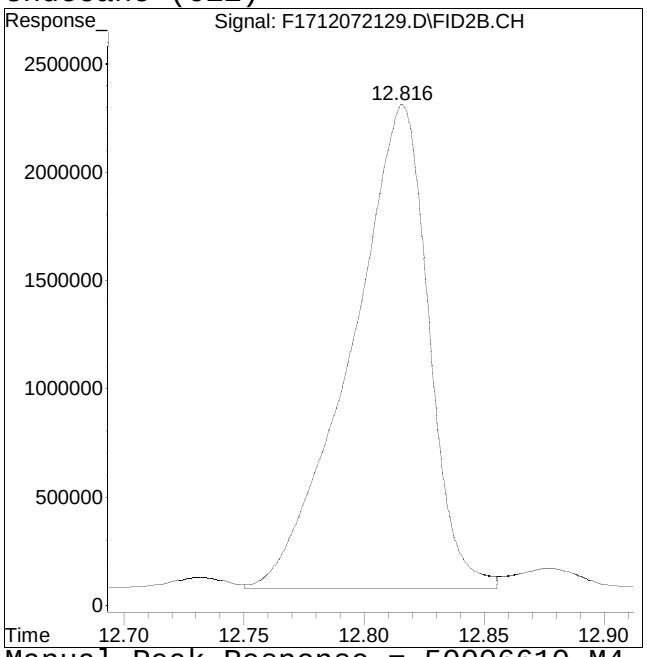
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #5: n-Undecane (C11)



Original Peak Response = 51061200



Manual Peak Response = 50006610 M4

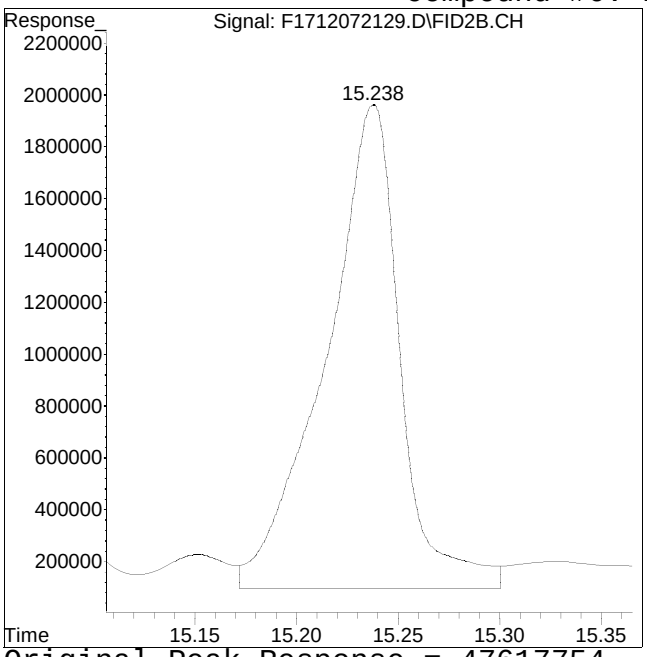
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

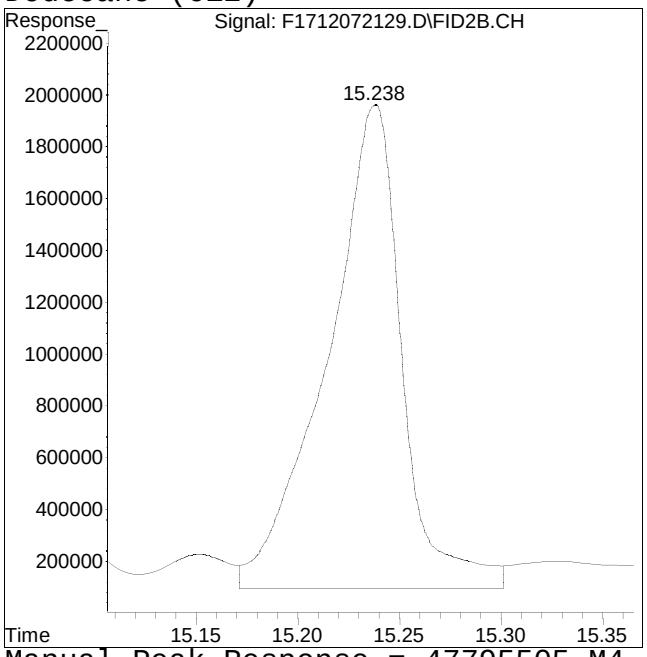
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #6: n-Dodecane (C12)



Original Peak Response = 47617754



Manual Peak Response = 47795505 M4

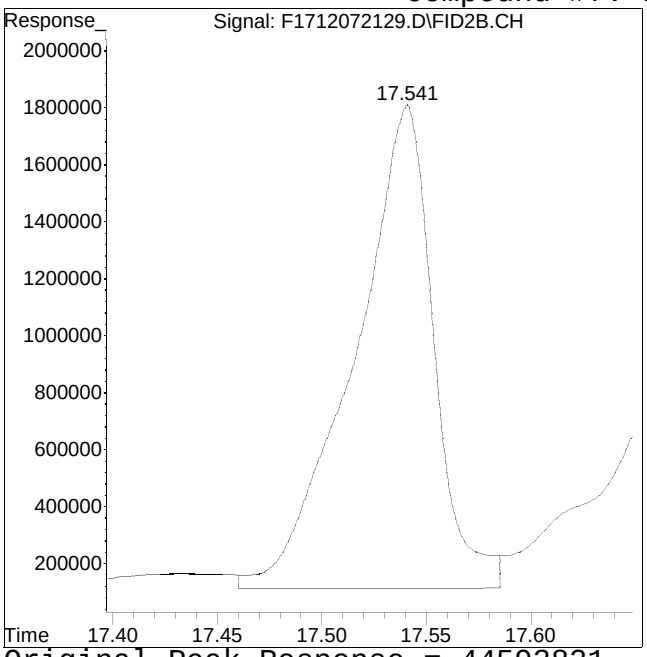
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

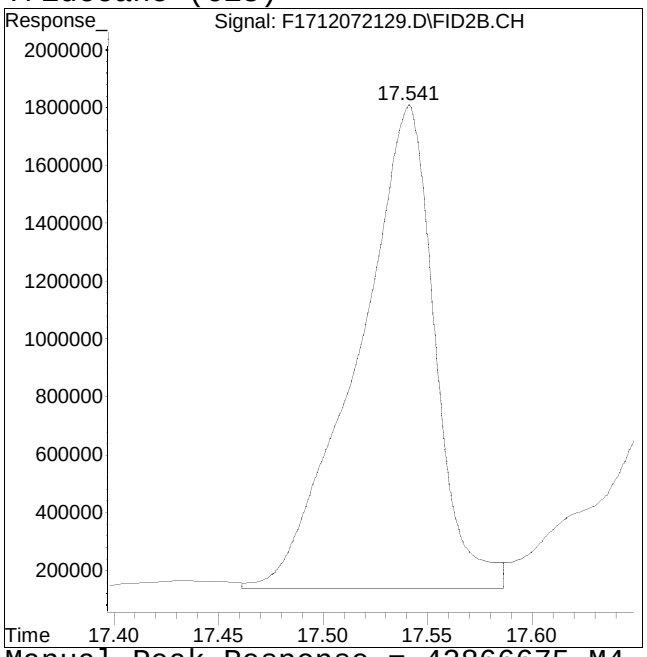
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #7: n-Tridecane (C13)



Original Peak Response = 44593821



Manual Peak Response = 42866675 M4

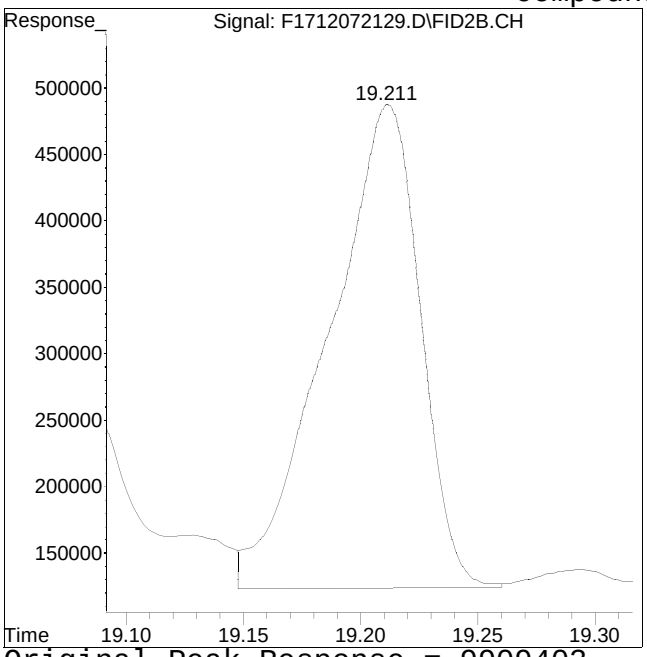
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

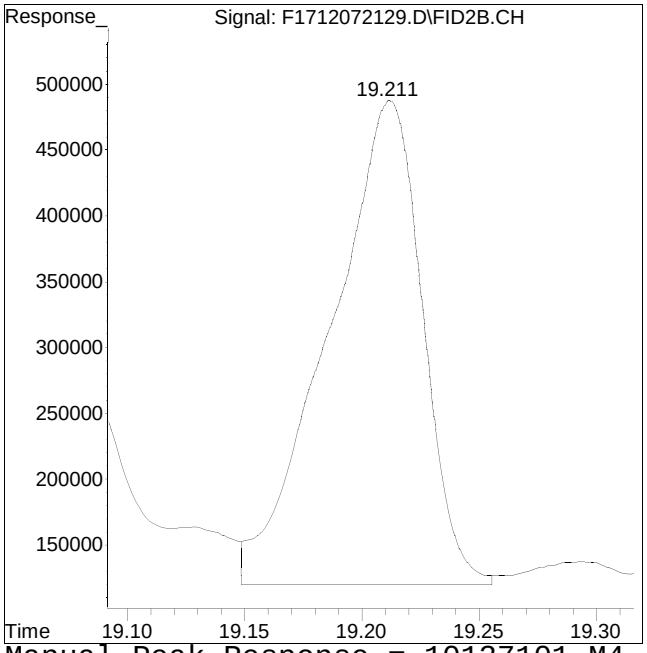
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #8: 1380



Original Peak Response = 9909403



Manual Peak Response = 10137101 M4

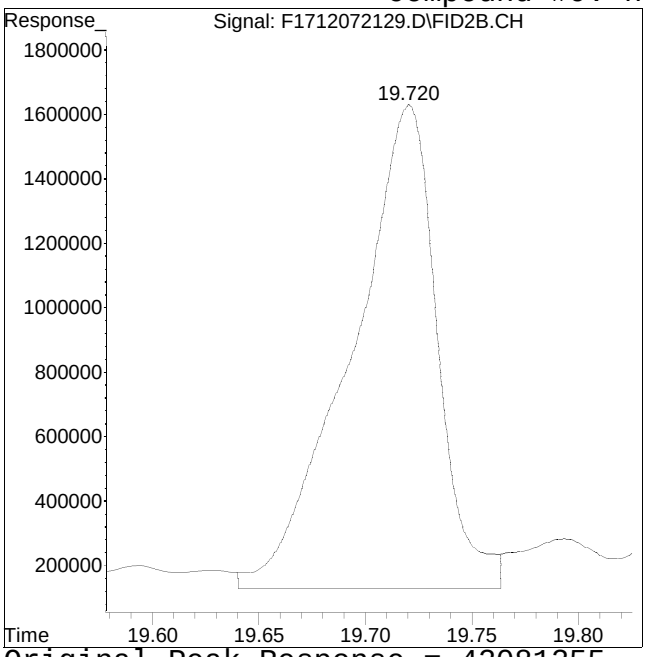
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

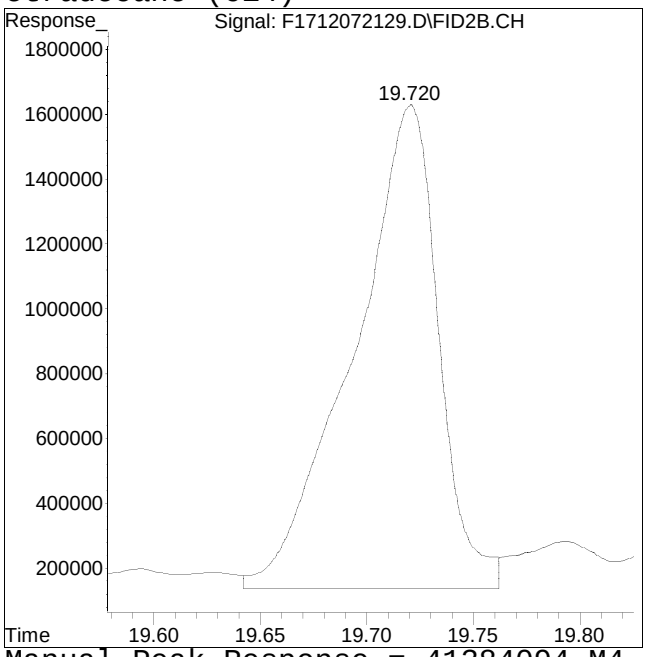
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #9: n-Tetradecane (C14)



Original Peak Response = 42081255



Manual Peak Response = 41384094 M4

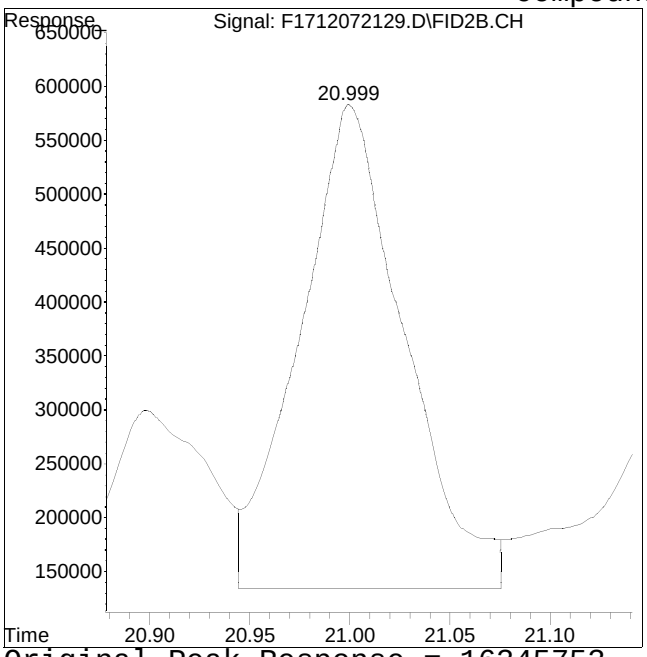
M4 = Poor automated baseline construction.

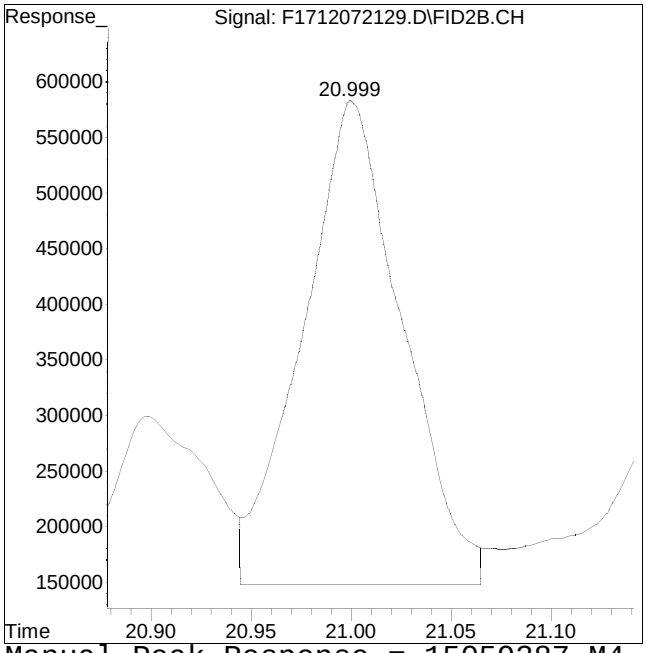
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #10: 1470





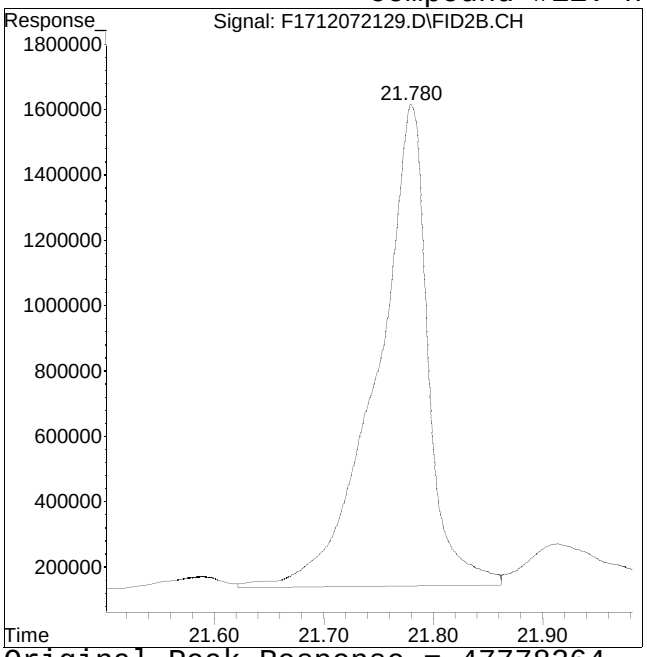
Original Peak Response = 16345753 Manual Peak Response = 15059387 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

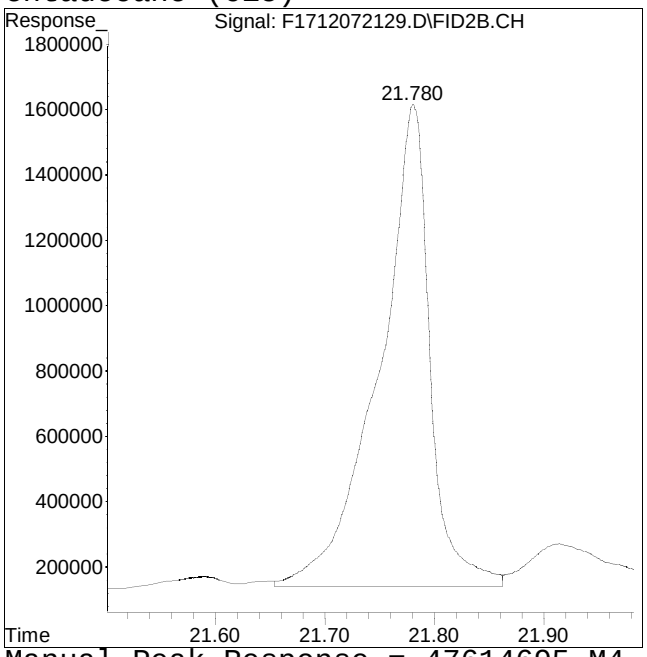
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #11: n-Pentadecane (C15)



Original Peak Response = 47778264



Manual Peak Response = 47614695 M4

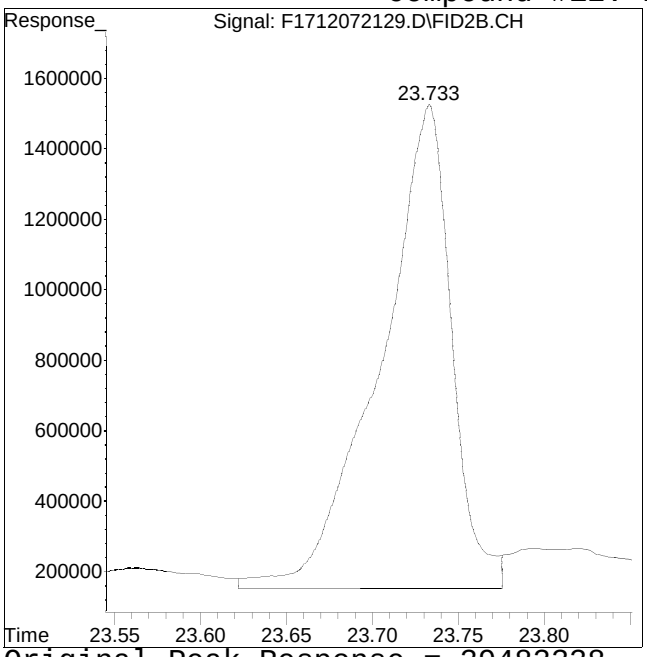
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

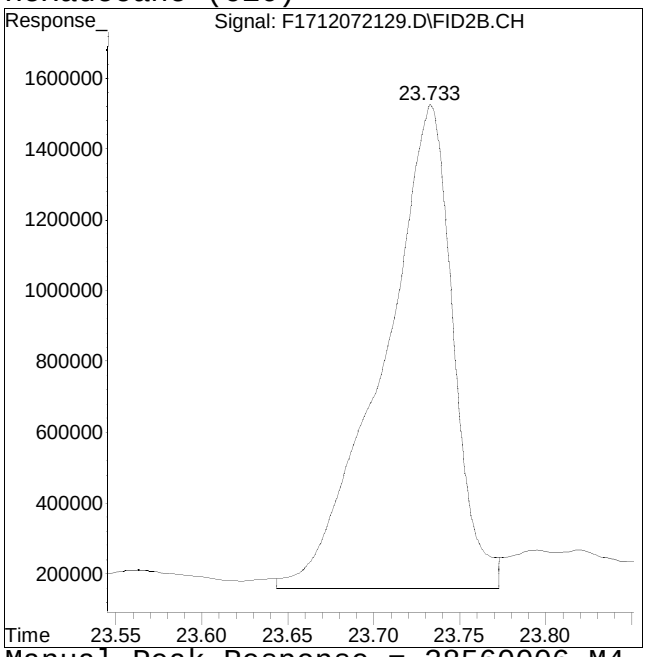
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #12: n-Hexadecane (C16)



Original Peak Response = 39483338



Manual Peak Response = 38560006 M4

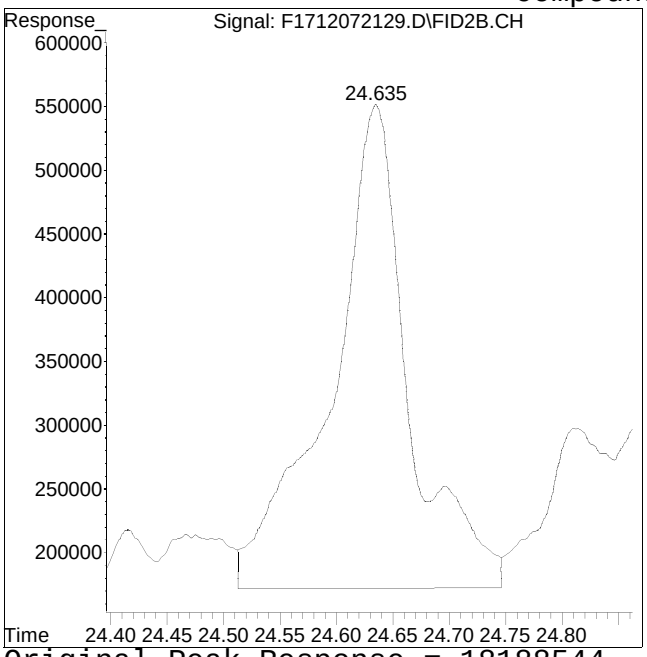
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

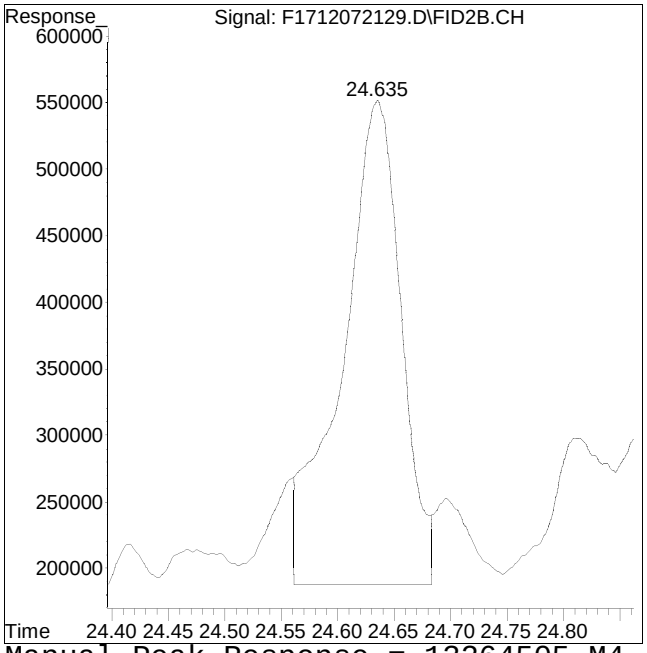
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #13: 1650



Original Peak Response = 18188544



Manual Peak Response = 13264505 M4

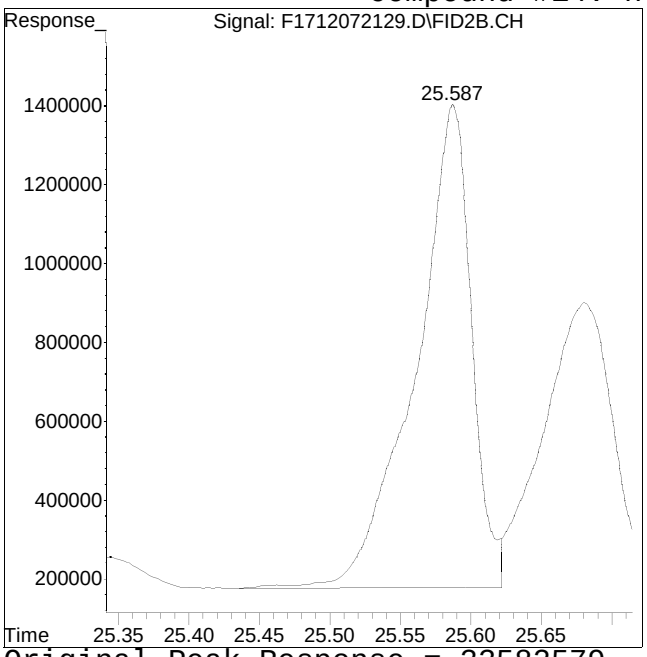
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

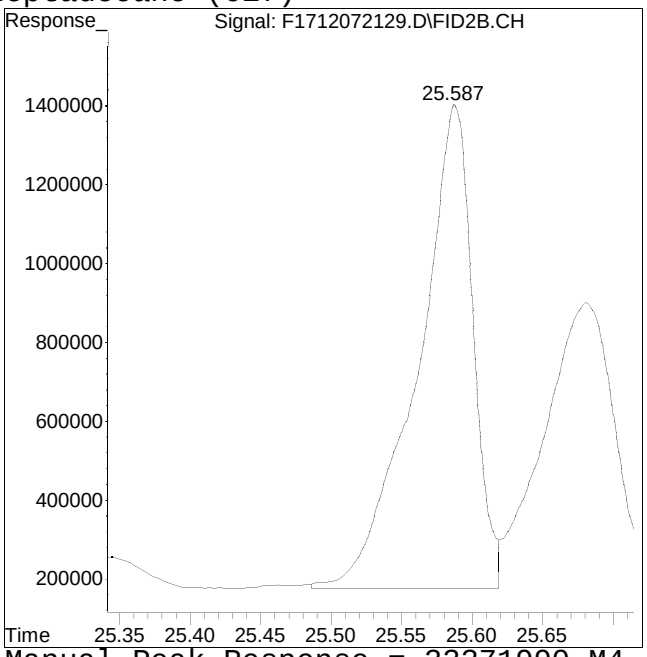
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #14: n-Heptadecane (C17)



Original Peak Response = 33582579



Manual Peak Response = 33371990 M4

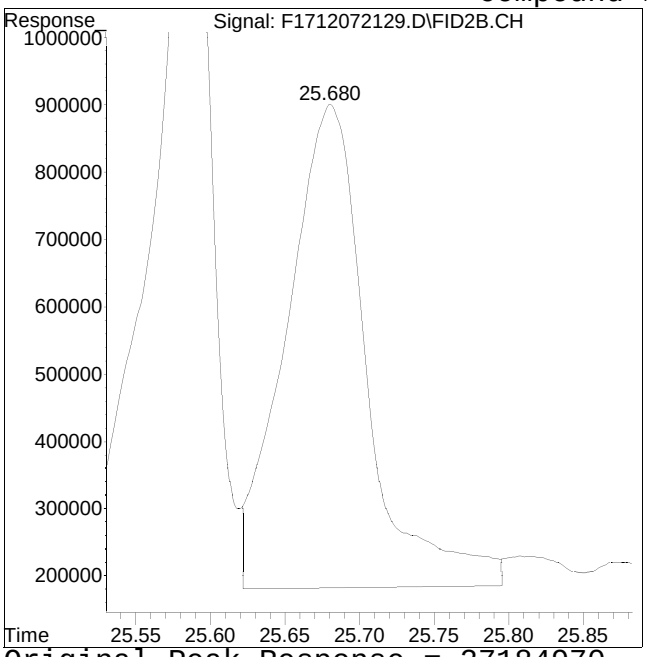
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

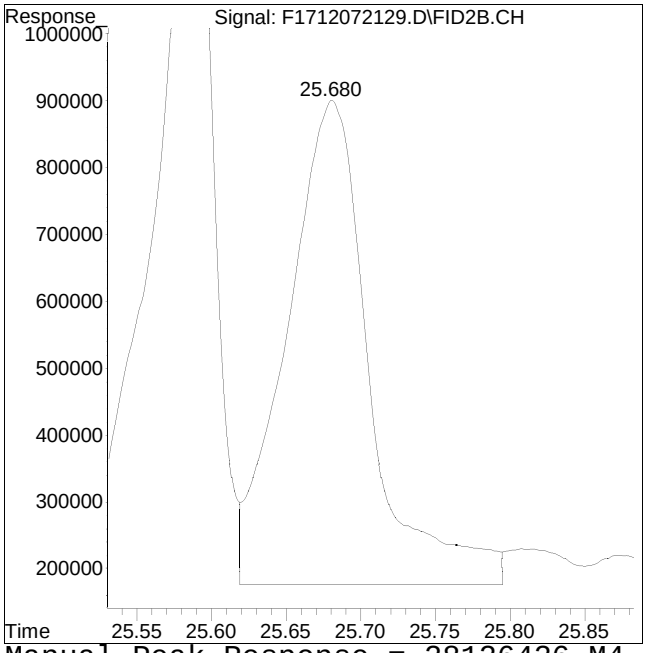
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #15: Pristane



Original Peak Response = 27184970



Manual Peak Response = 28126426 M4

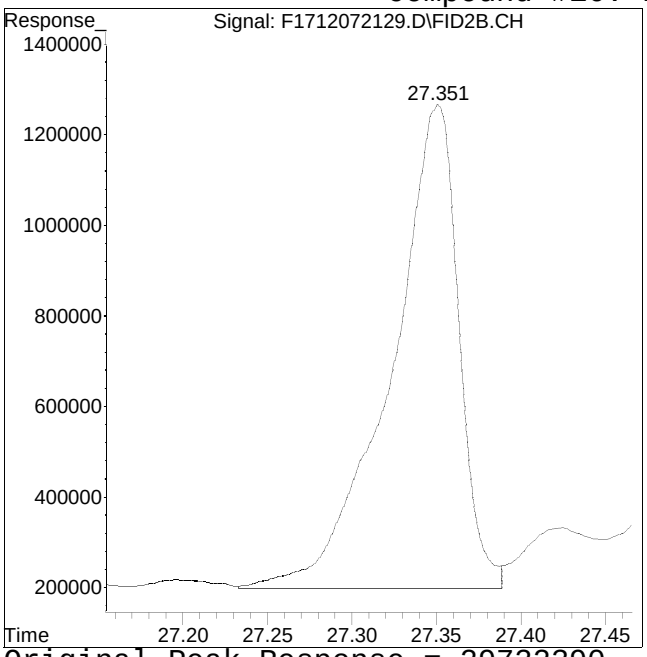
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

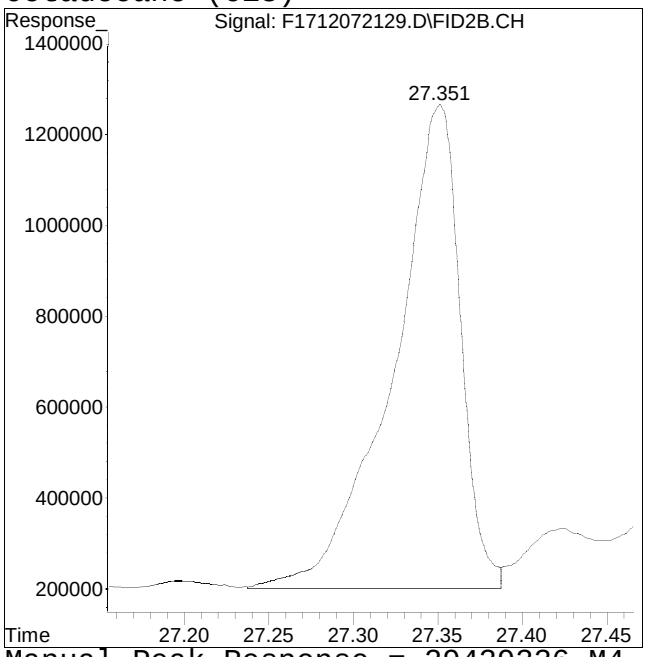
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #16: n-Octadecane (C18)



Original Peak Response = 29732390



Manual Peak Response = 29439336 M4

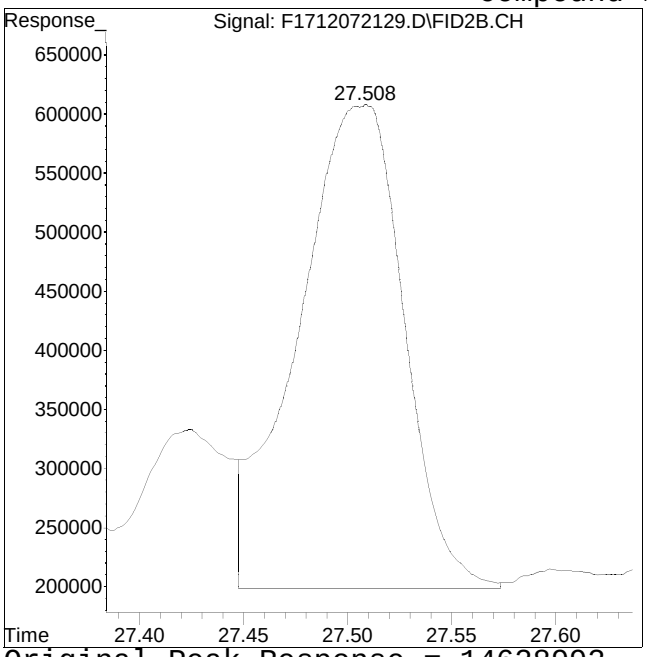
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

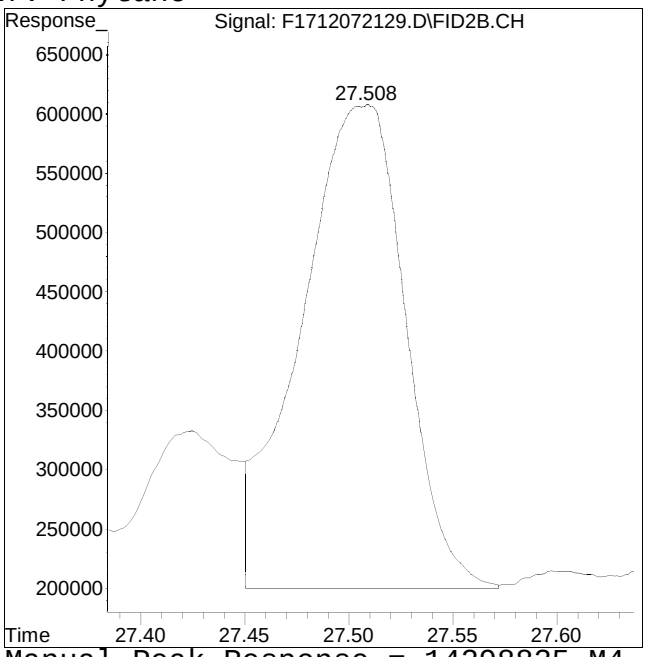
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #17: Phytane



Original Peak Response = 14628992



Manual Peak Response = 14298835 M4

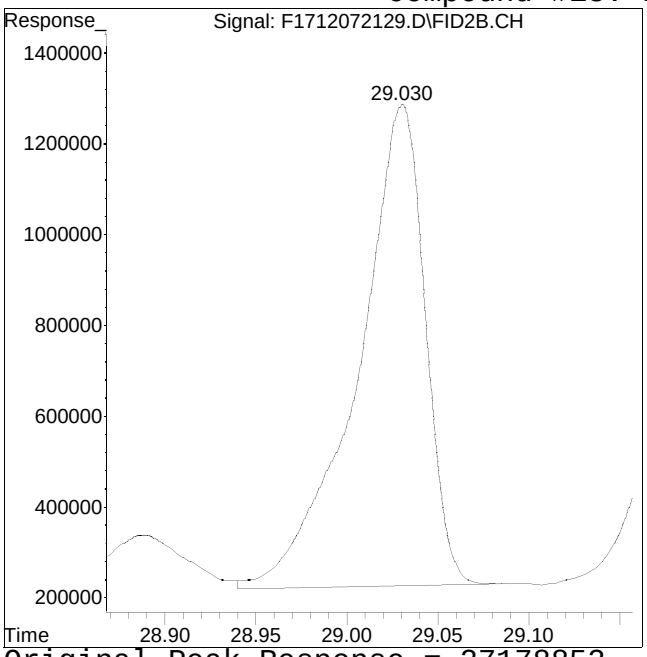
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

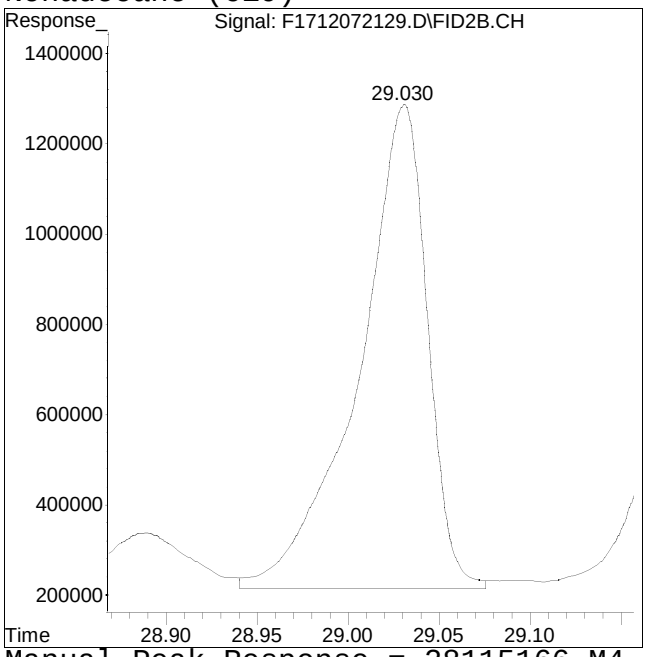
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #18: n-Nonadecane (C19)



Original Peak Response = 27178852



Manual Peak Response = 28115166 M4

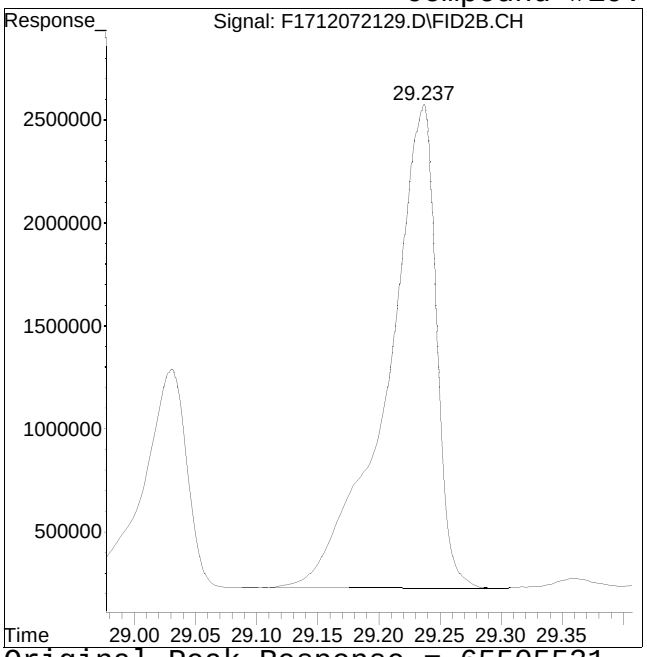
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

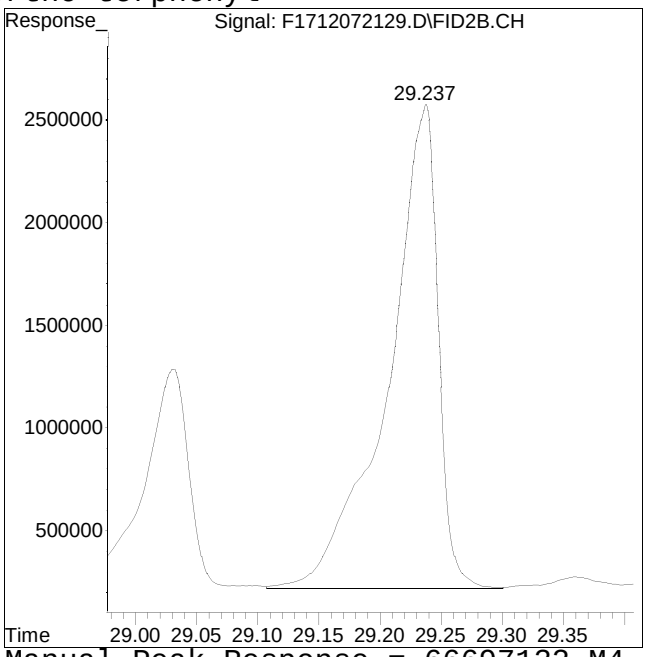
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #19: ortho-terphenyl



Original Peak Response = 65505531



Manual Peak Response = 66697132 M4

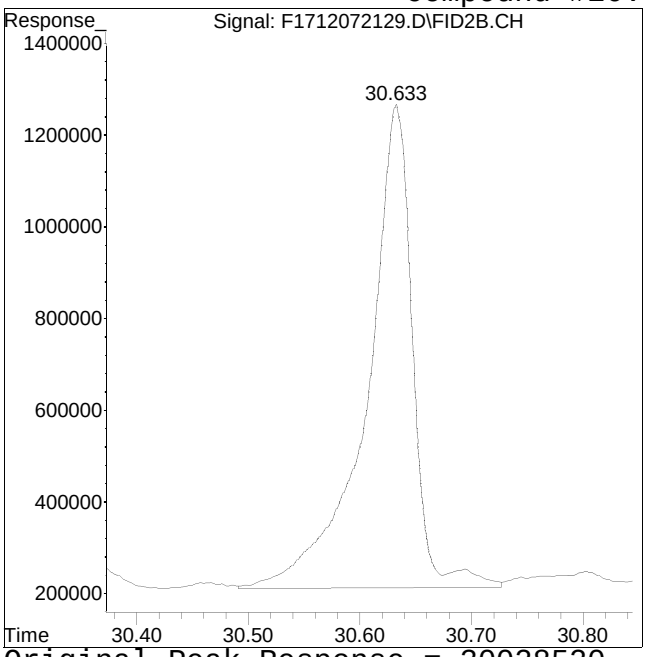
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

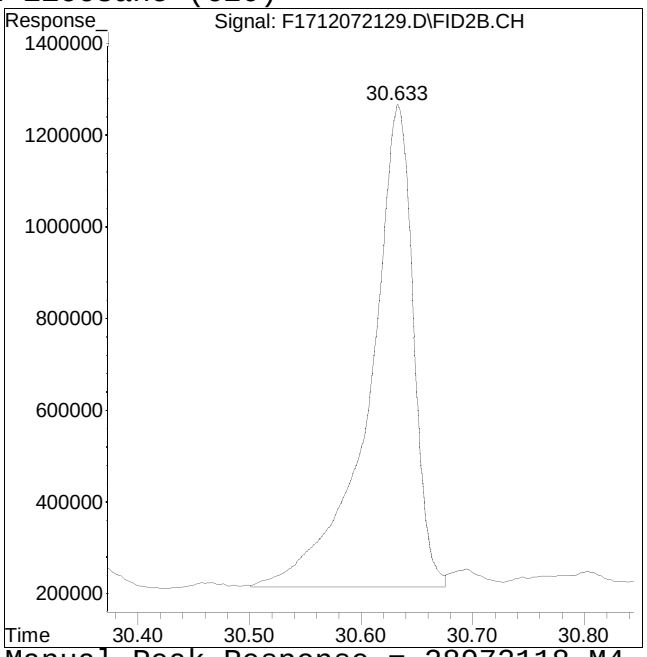
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #20: n-Eicosane (C20)



Original Peak Response = 30028520



Manual Peak Response = 28972118 M4

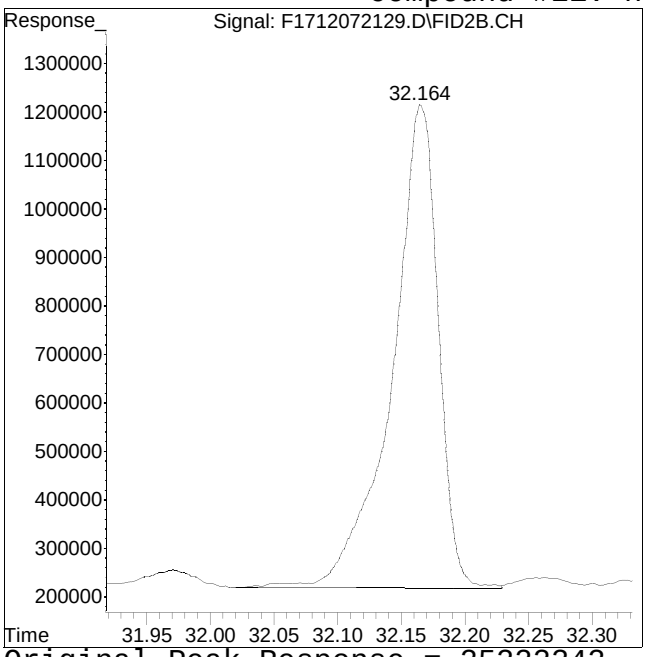
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

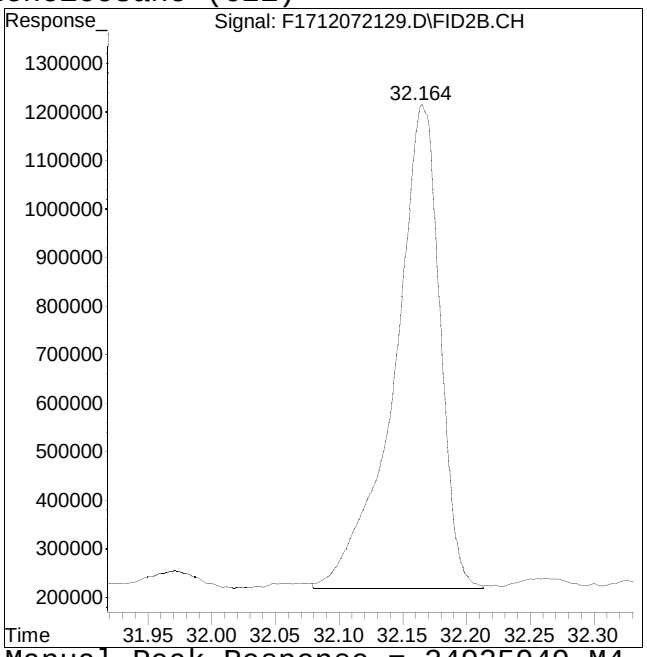
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #21: n-Heneicosane (C21)



Original Peak Response = 25222242



Manual Peak Response = 24925949 M4

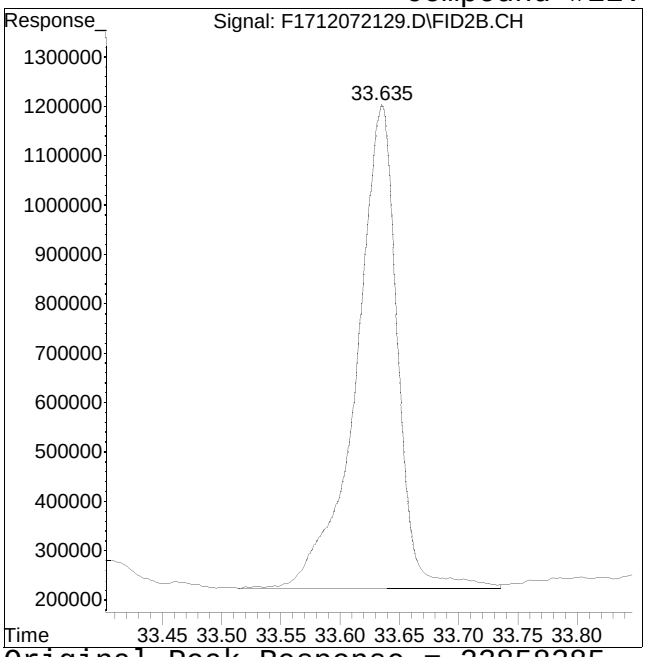
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

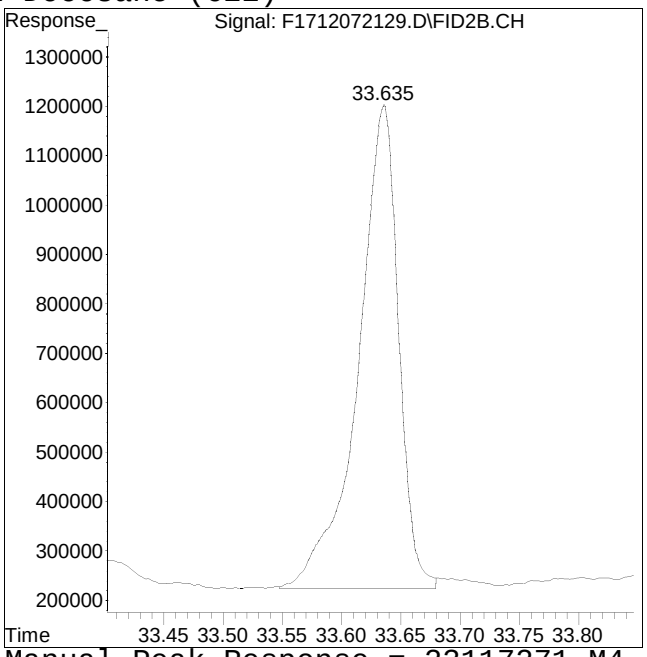
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #22: n-Docosane (C22)



Original Peak Response = 23858385



Manual Peak Response = 23117271 M4

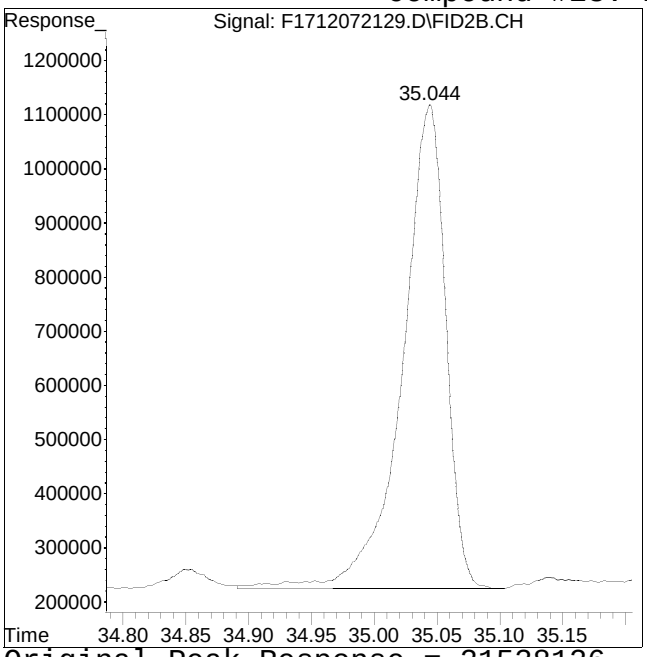
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

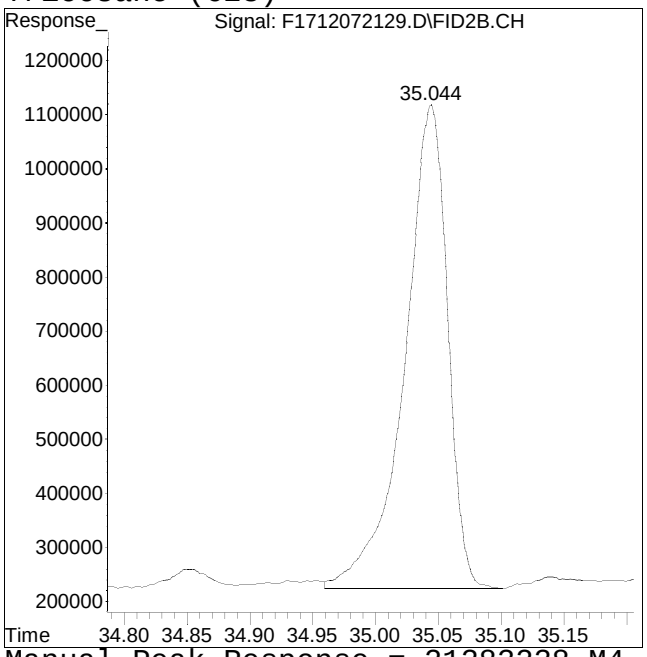
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #23: n-Tricosane (C23)



Original Peak Response = 21538126



Manual Peak Response = 21283238 M4

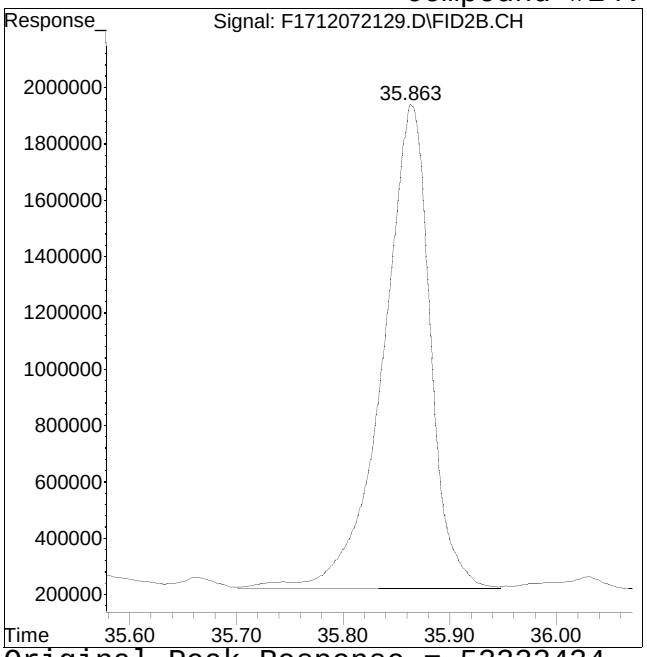
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

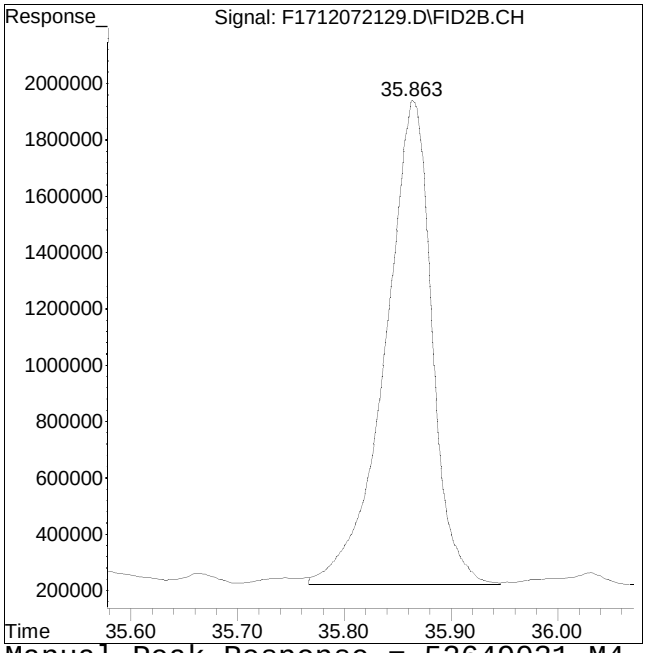
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #24: d50-Tetracosane



Original Peak Response = 53333434



Manual Peak Response = 52649031 M4

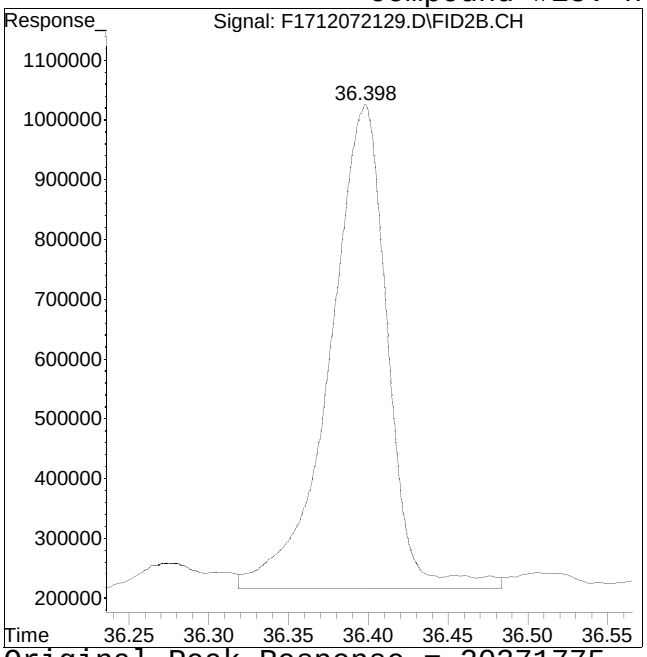
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

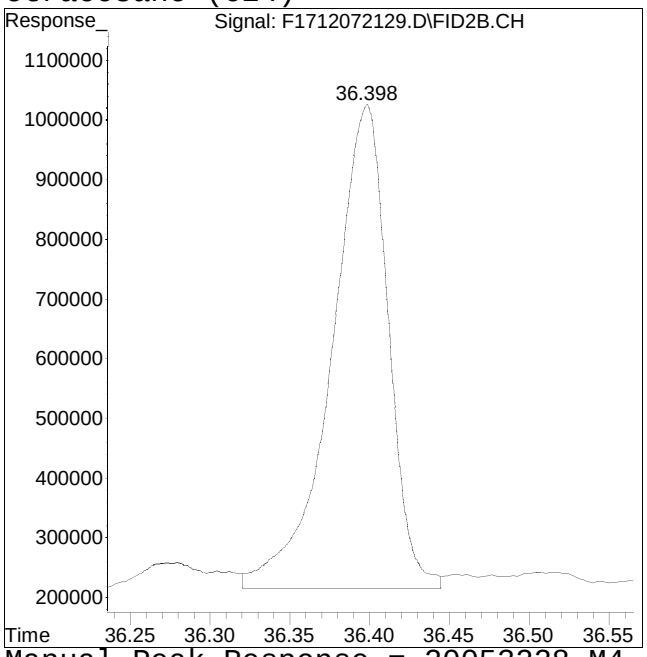
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #25: n-Tetracosane (C24)



Original Peak Response = 20371775



Manual Peak Response = 20053228 M4

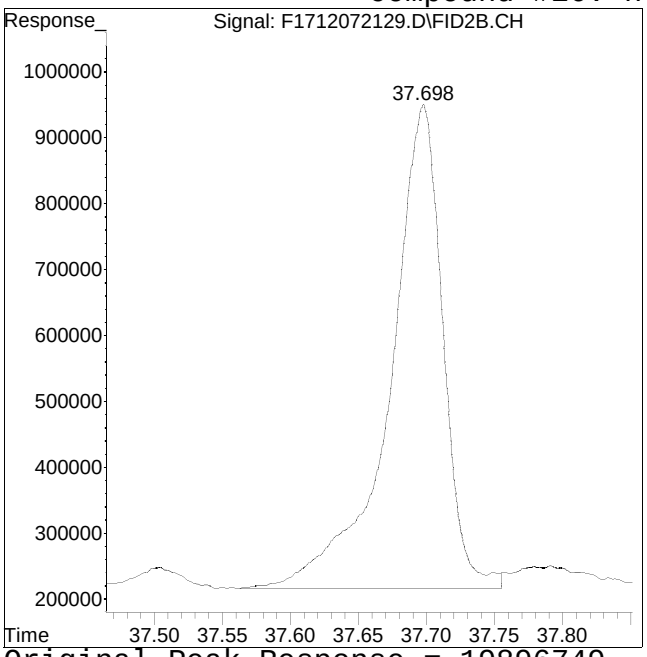
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

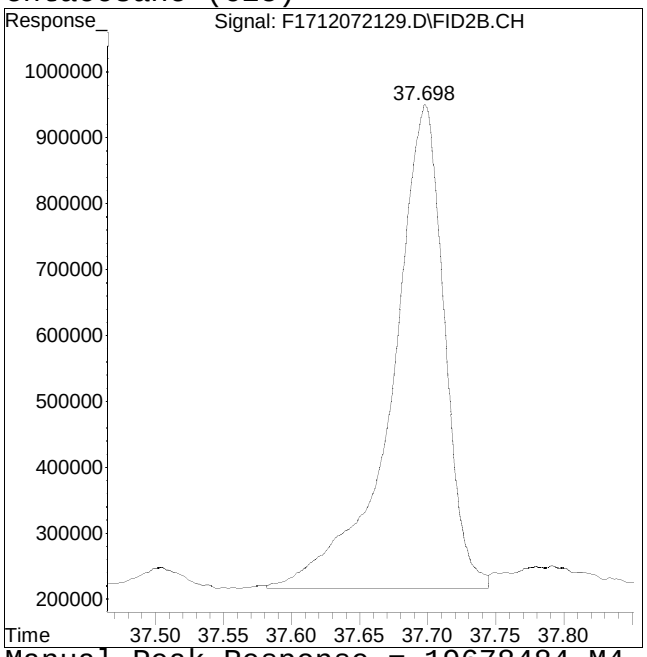
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #26: n-Pentacosane (C25)



Original Peak Response = 19896749



Manual Peak Response = 19678484 M4

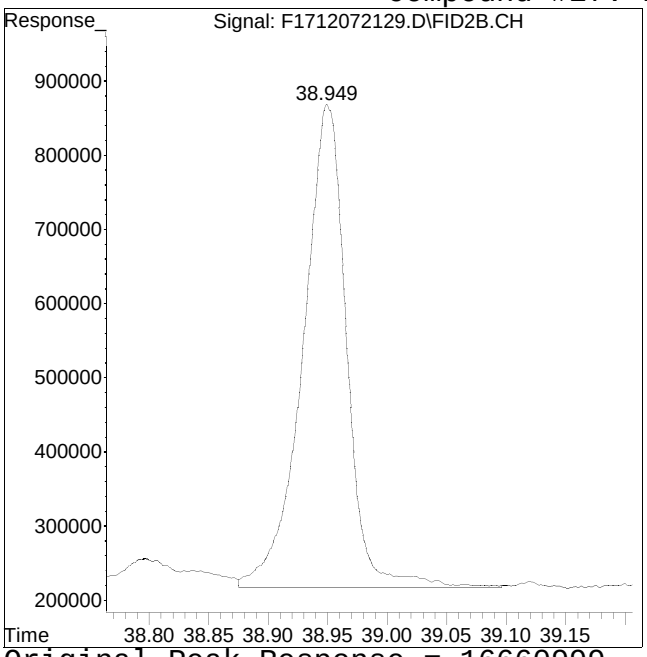
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

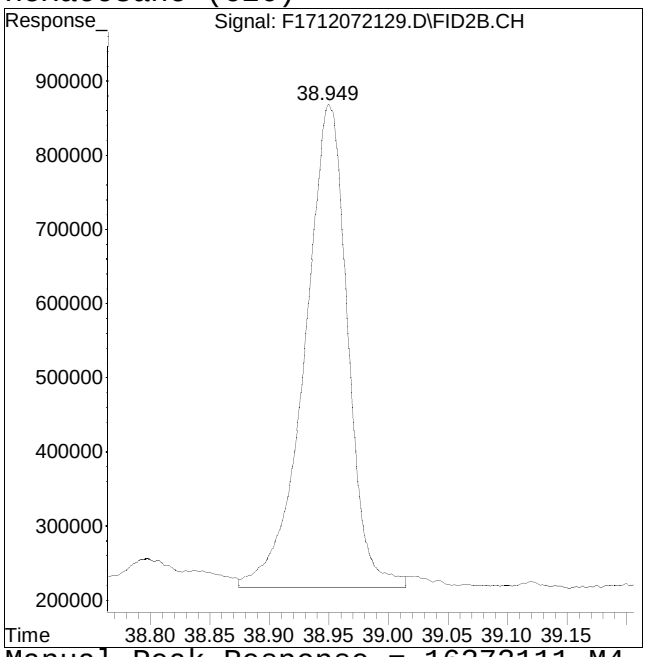
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #27: n-Hexacosane (C26)



Original Peak Response = 16660999



Manual Peak Response = 16373111 M4

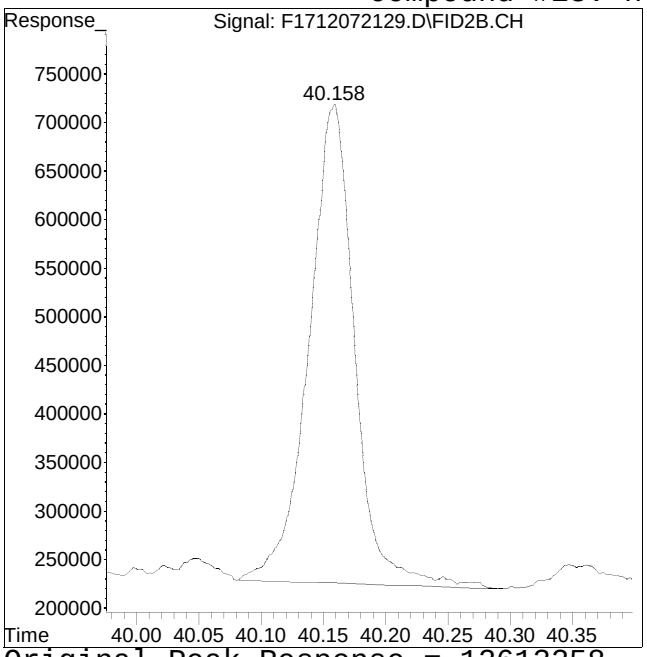
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

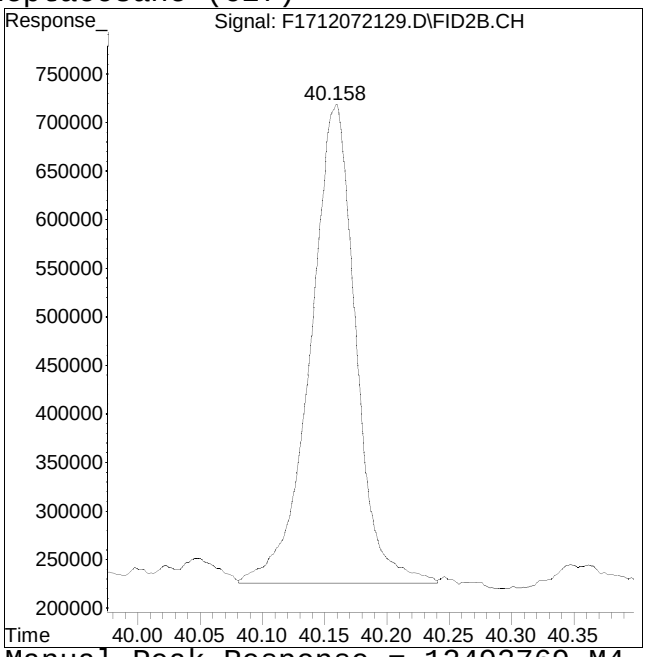
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #28: n-Heptacosane (C27)



Original Peak Response = 12613258



Manual Peak Response = 12493769 M4

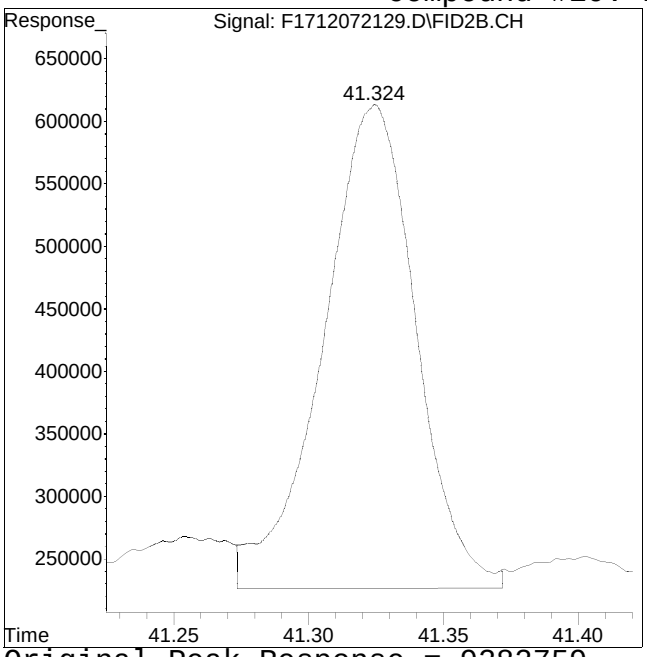
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

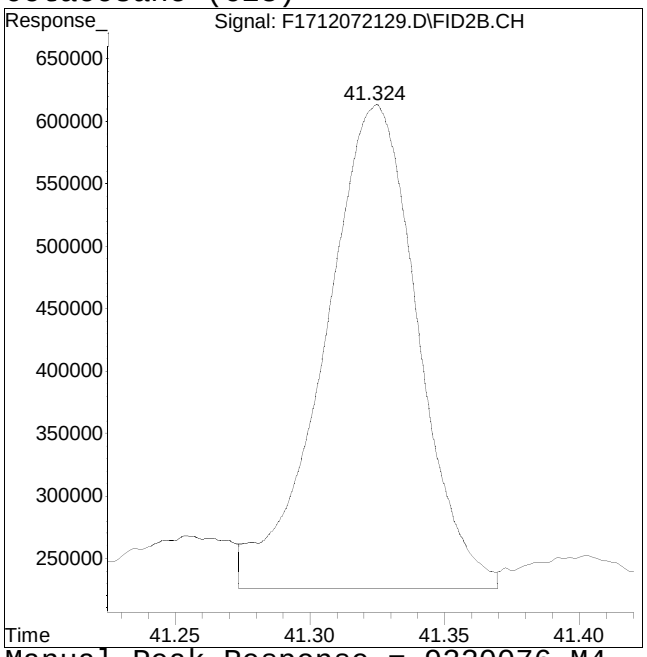
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #29: n-Octacosane (C28)



Original Peak Response = 9282759



Manual Peak Response = 9320076 M4

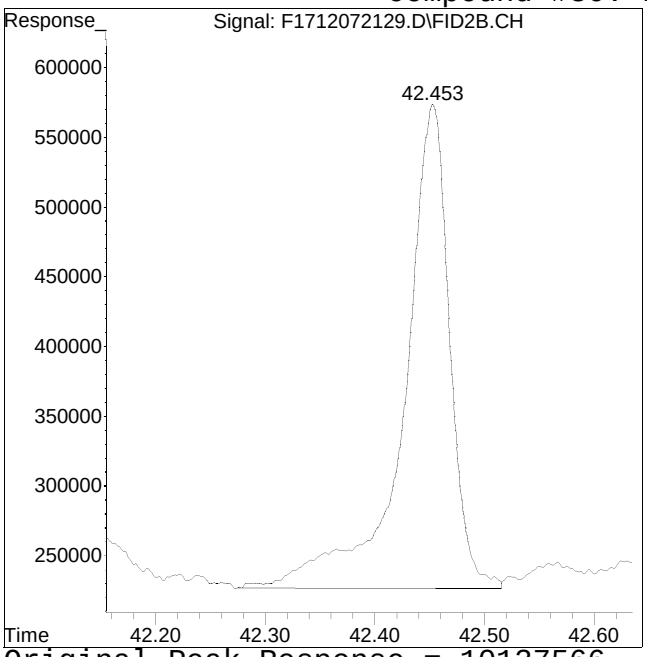
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

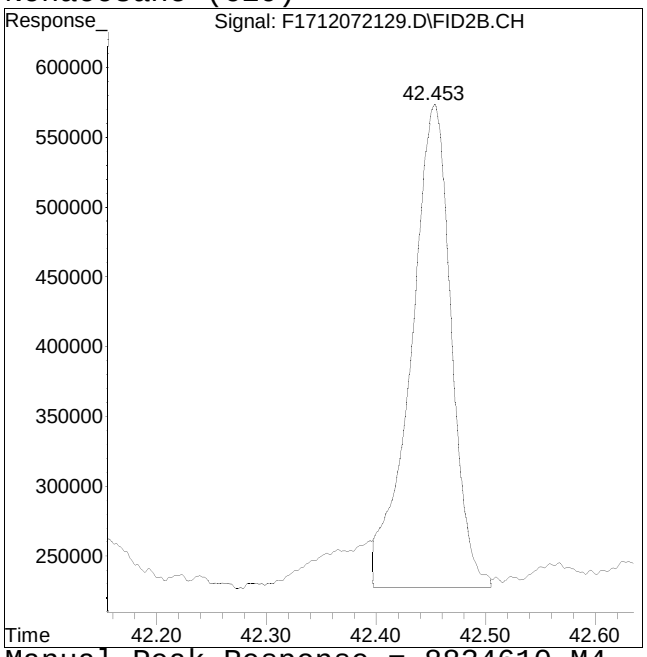
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #30: n-Nonacosane (C29)



Original Peak Response = 10137566



Manual Peak Response = 8834610 M4

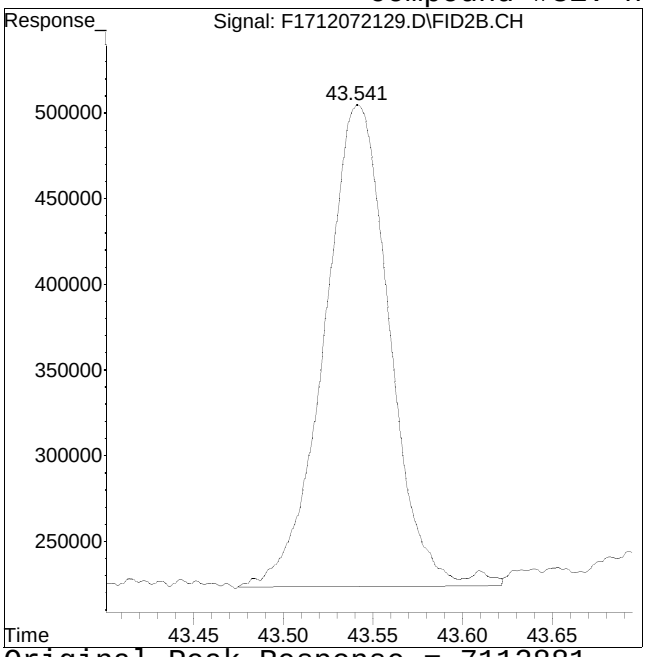
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

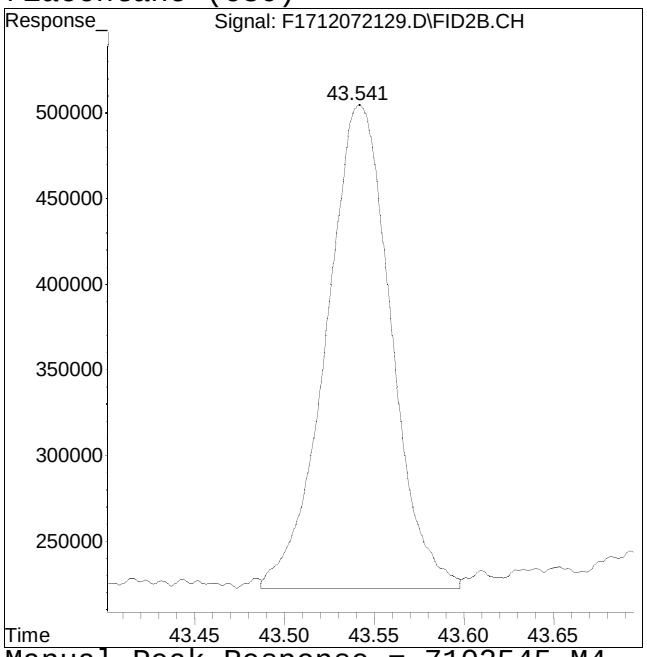
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #31: n-Triacontane (C30)



Original Peak Response = 7112881



Manual Peak Response = 7102545 M4

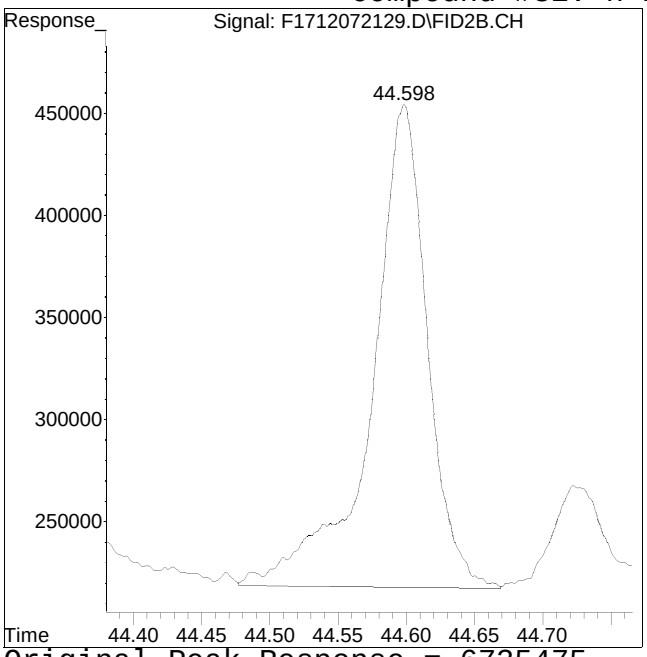
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

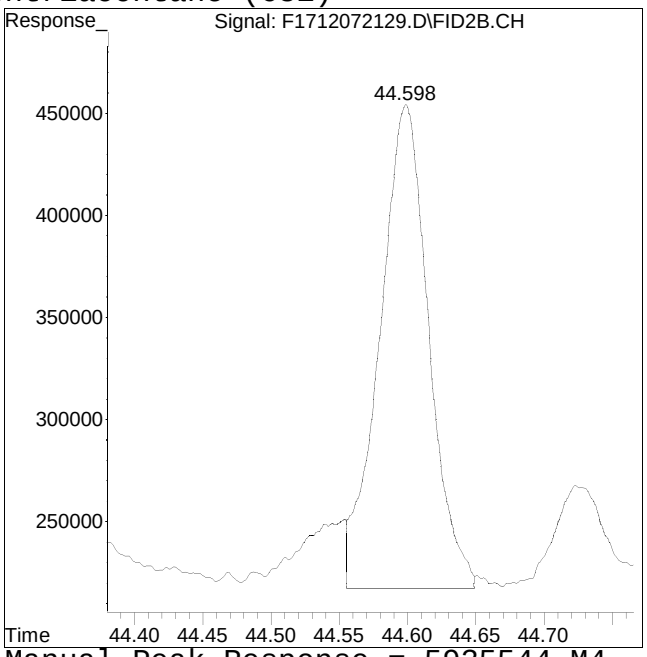
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #32: n-Hentriacontane (C31)



Original Peak Response = 6735475



Manual Peak Response = 5935544 M4

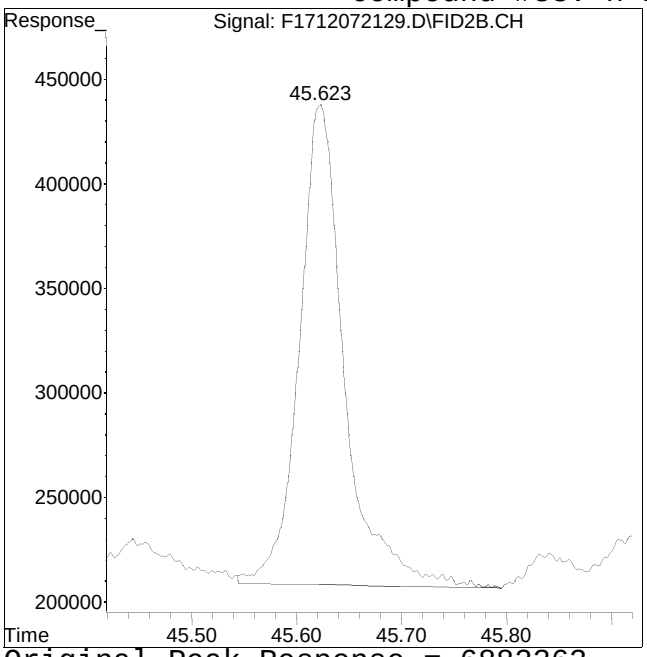
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

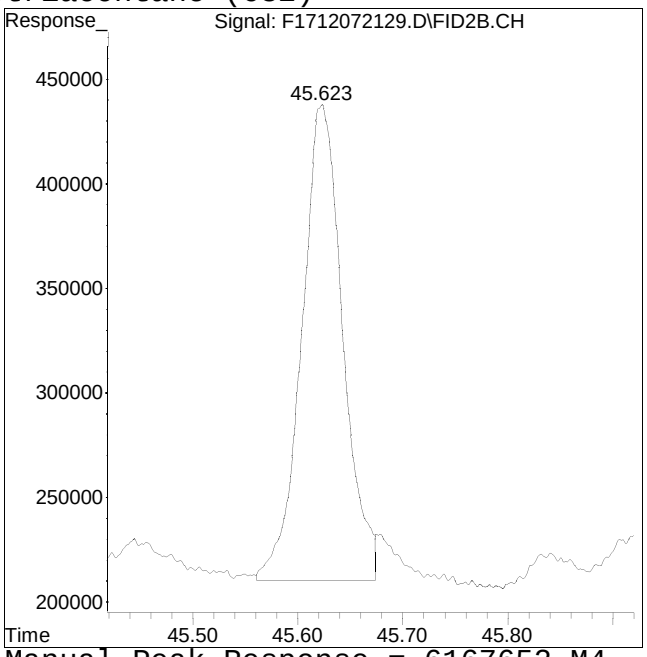
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #33: n-Dotriacontane (C32)



Original Peak Response = 6882363



Manual Peak Response = 6167652 M4

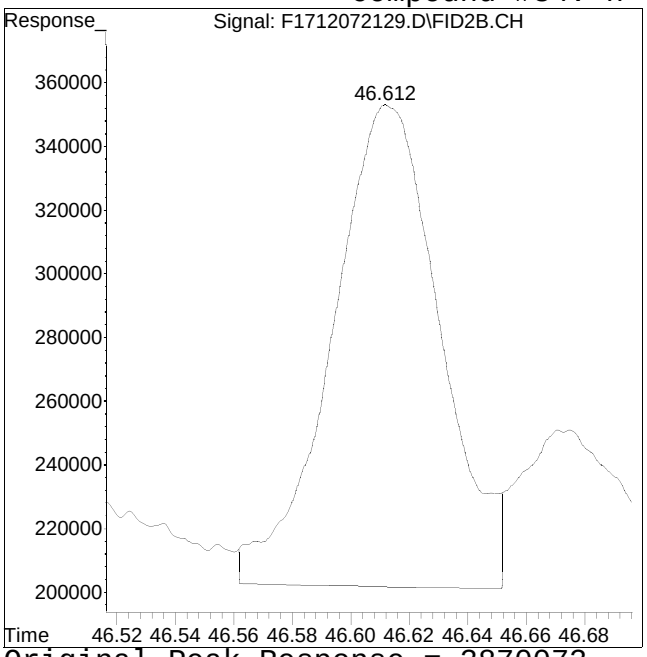
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

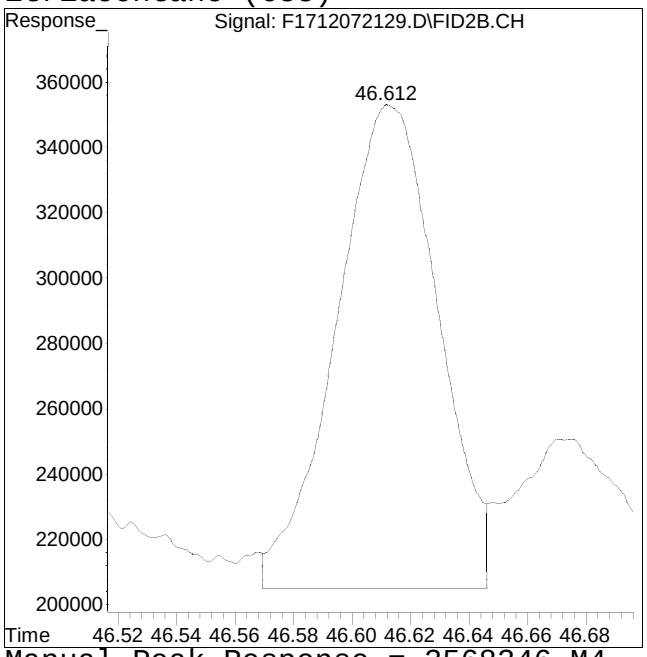
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #34: n-Tritriacontane (C33)



Original Peak Response = 3870073



Manual Peak Response = 3568346 M4

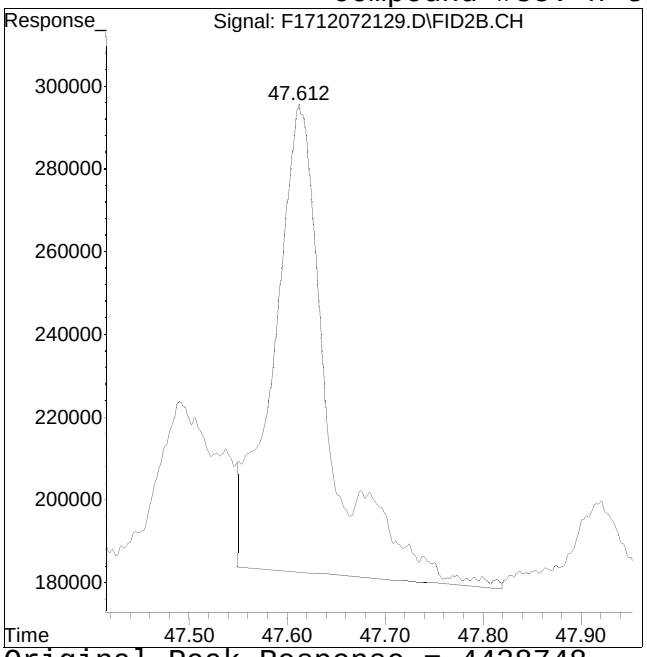
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

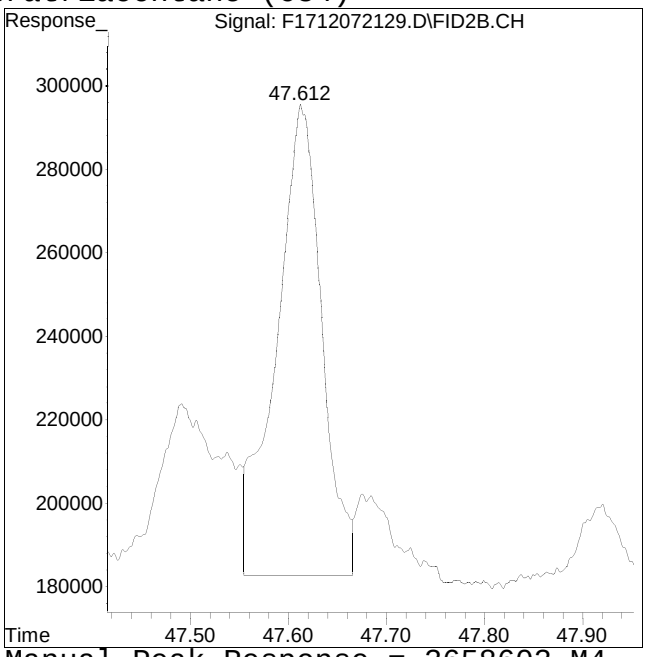
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #35: n-tetratriacontane (C34)



Original Peak Response = 4438748



Manual Peak Response = 3658603 M4

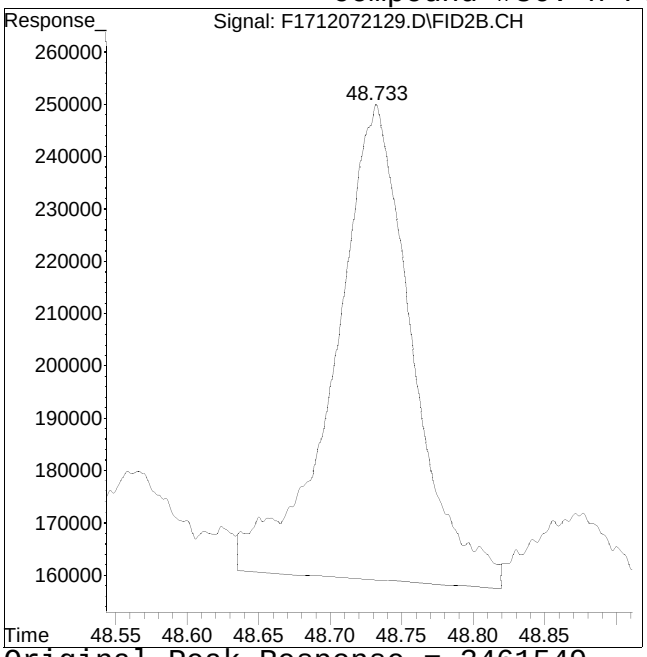
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

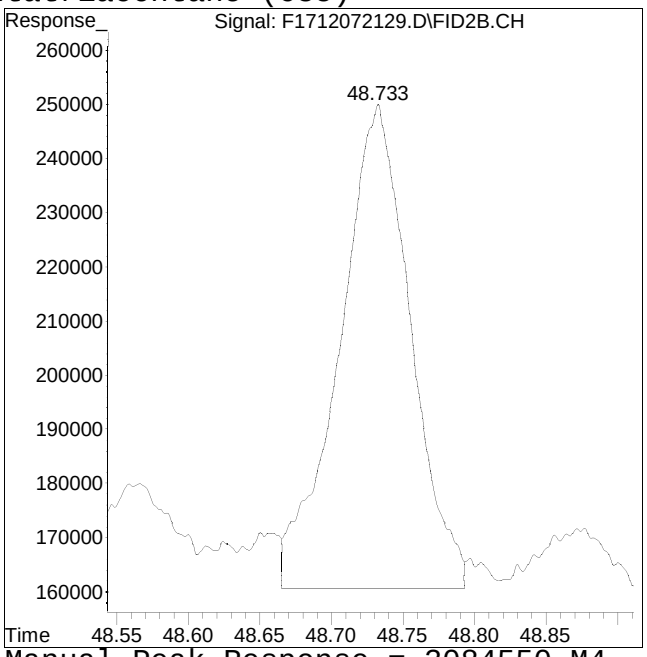
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #36: n-Pentatriacontane (C35)



Original Peak Response = 3461549



Manual Peak Response = 3084550 M4

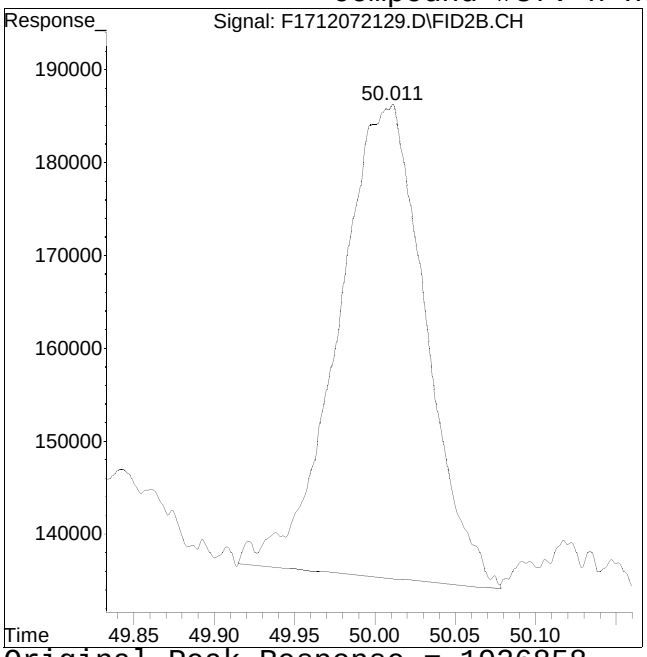
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

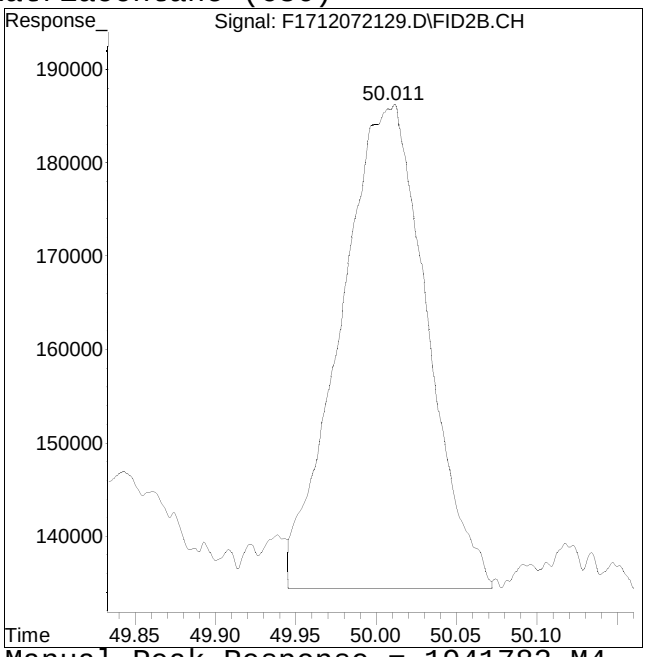
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #37: n-Hexatriacontane (C36)



Original Peak Response = 1926858



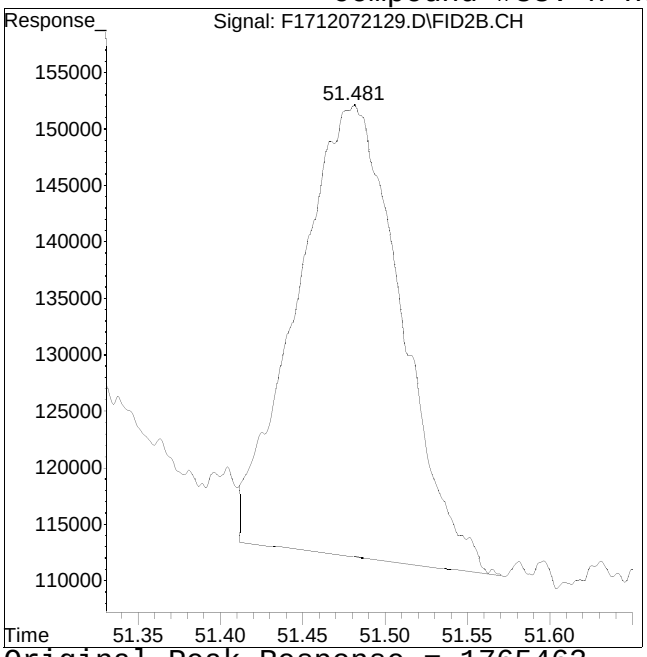
Manual Peak Response = 1941783 M4

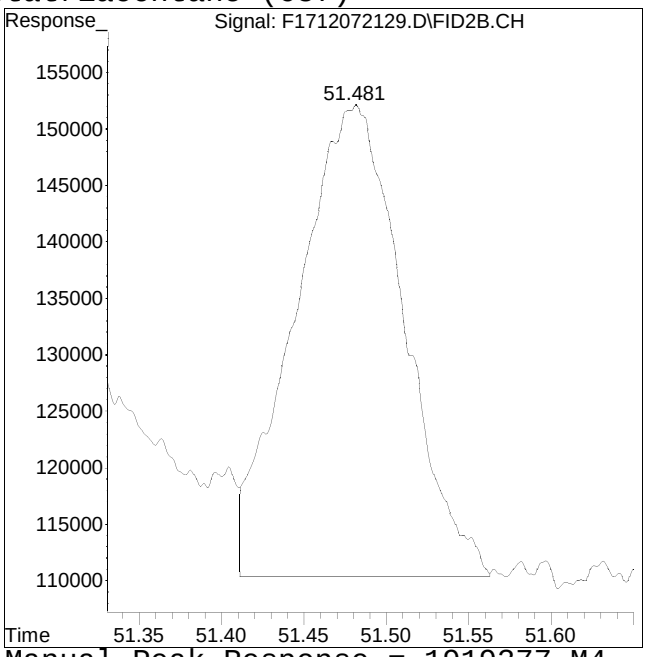
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\FID17\202QMethod : HC17120721R_DRO.M
Data File : F1712072129.D Operator : FID17:WR
Date Inj'd : 12/8/2021 6:09 am Instrument : FID17
Sample : WG1581826-1,0.1008 Quant Date : 12/9/2021 4:38 pm

Compound #38: n-Heptatriacontane (C37)





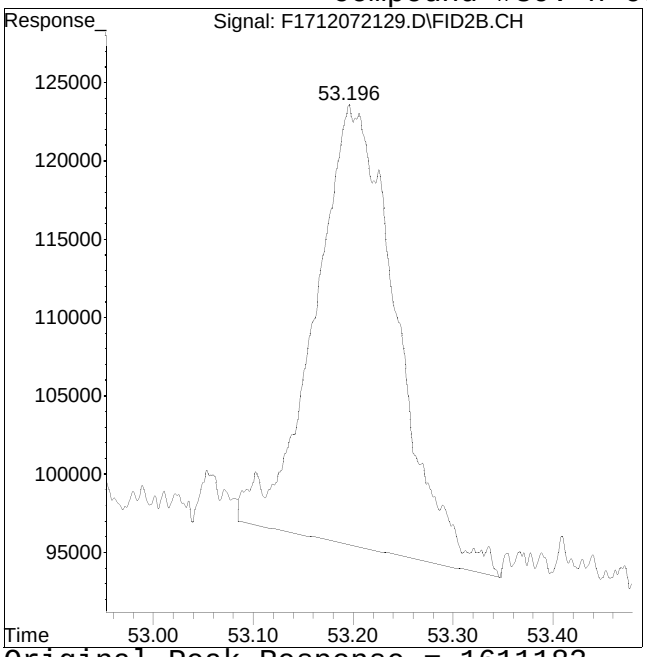
Original Peak Response = 1765463 Manual Peak Response = 1919377 M4
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

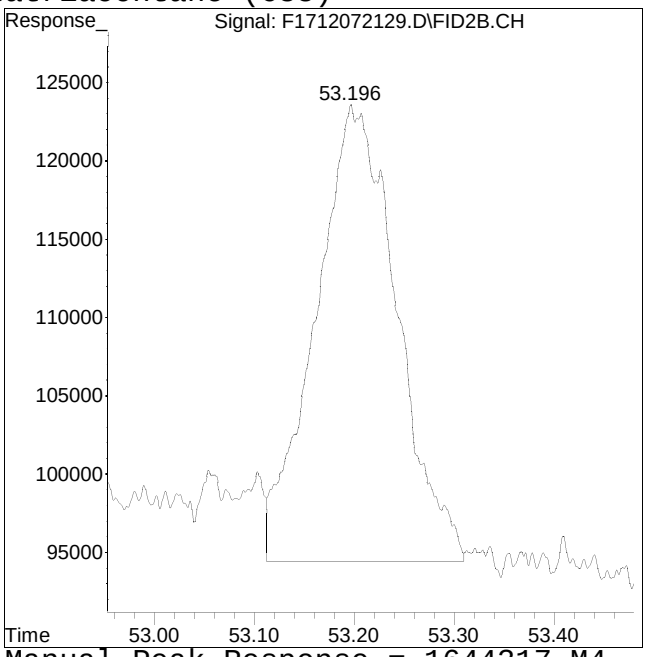
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #39: n-Octatriacontane (C38)



Original Peak Response = 1611183



Manual Peak Response = 1644317 M4

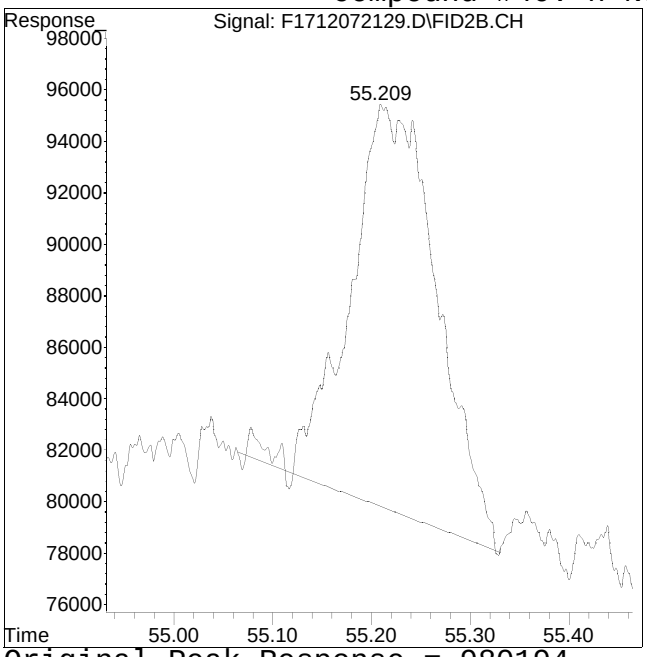
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

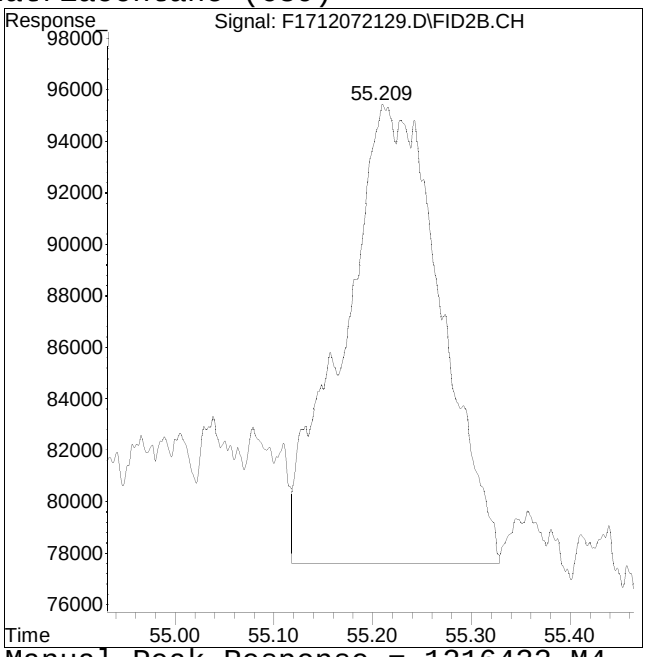
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #40: n-Nonatriacontane (C39)



Original Peak Response = 980194



Manual Peak Response = 1216433 M4

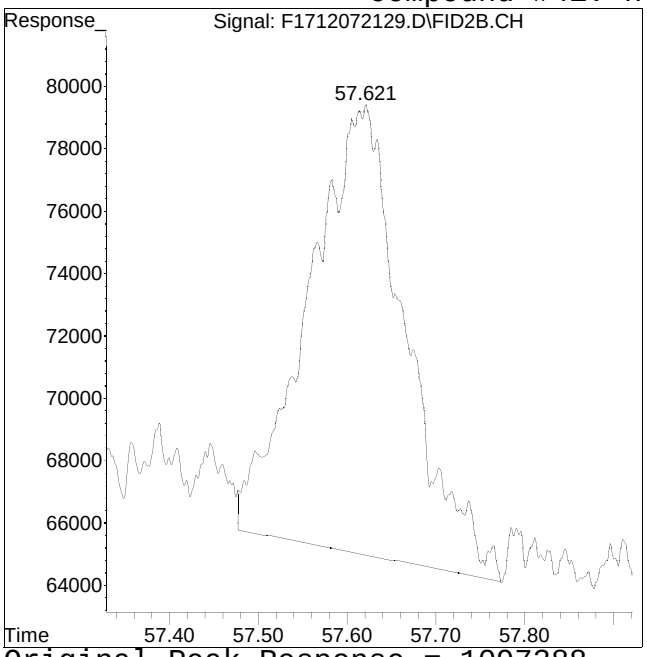
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

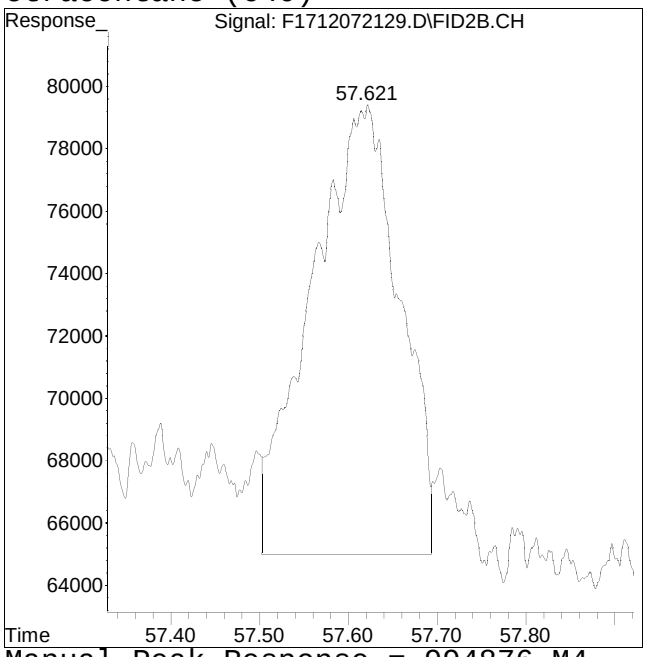
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #41: n-Tetracontane (C40)



Original Peak Response = 1097388



Manual Peak Response = 994876 M4

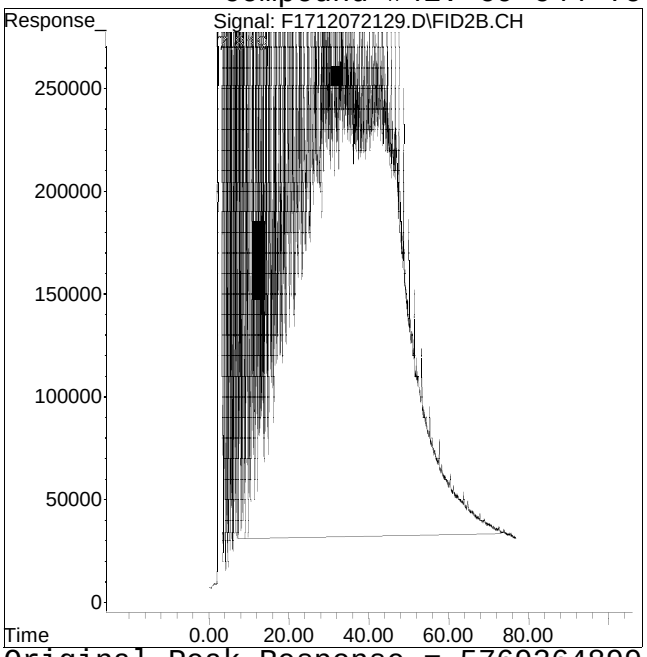
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

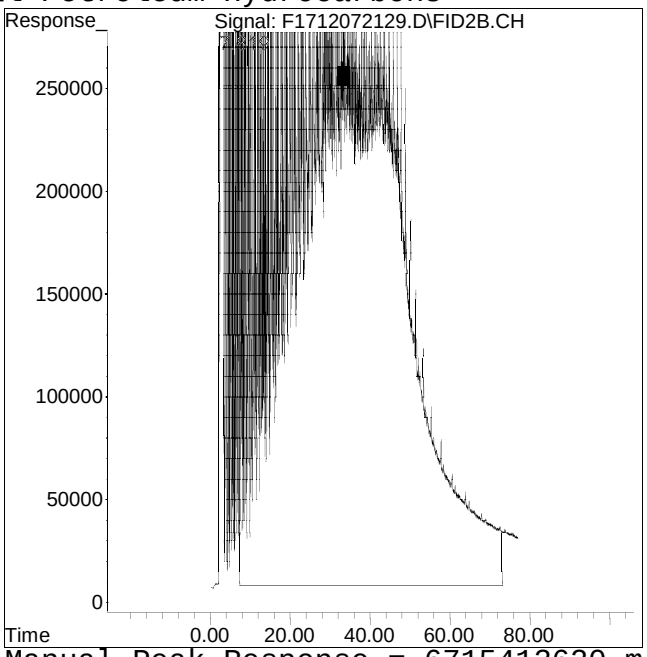
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #42: C9-C44 Total Petroleum Hydrocarbons



Original Peak Response = 5769364899



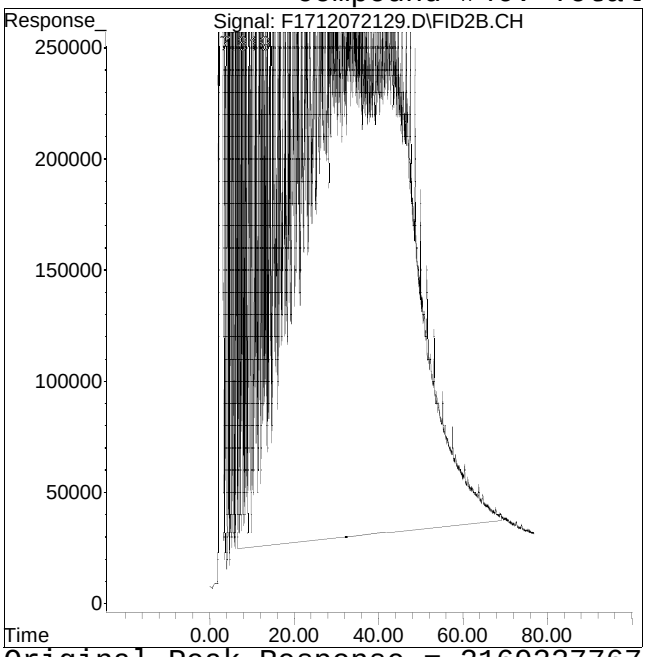
Manual Peak Response = 6715413620 m

Manual Integration/Negative Proof Report

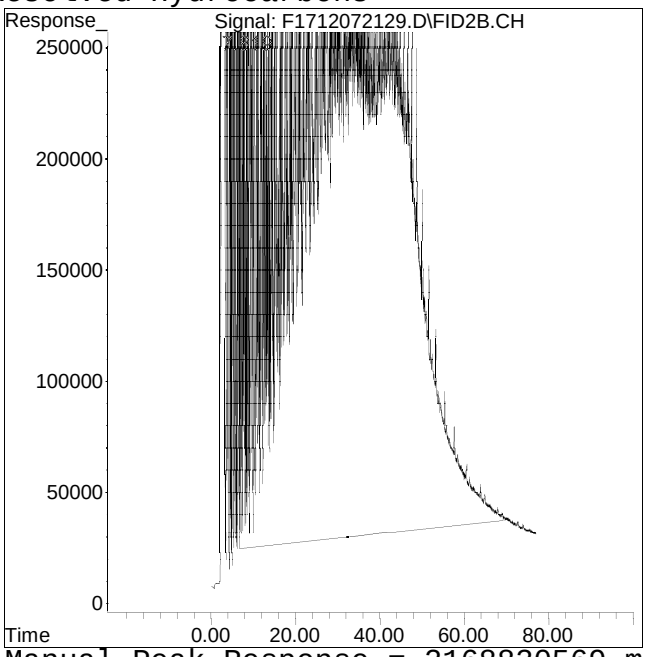
Data Path : O:\Forensics\Data\FID17\202Q
Data File : F1712072129.D
Date Inj'd : 12/8/2021 6:09 am
Sample : WG1581826-1,0.1008

Method : HC17120721R_DRO.M
Operator : FID17:WR
Instrument : FID17
Quant Date : 12/9/2021 4:38 pm

Compound #46: Total Resolved Hydrocarbons



Original Peak Response = 2169337767



Manual Peak Response = 2168830569 m

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\
Data File : F1712072127.D
Signal(s) : FID2B.CH
Acq On : 08 Dec 2021 4:41 am
Operator : FID17:WR
Sample : IB171272101R
Misc :
ALS Vial : 64 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Dec 09 16:41:10 2021
Quant Method : O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Thu Dec 09 16:29:21 2021
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

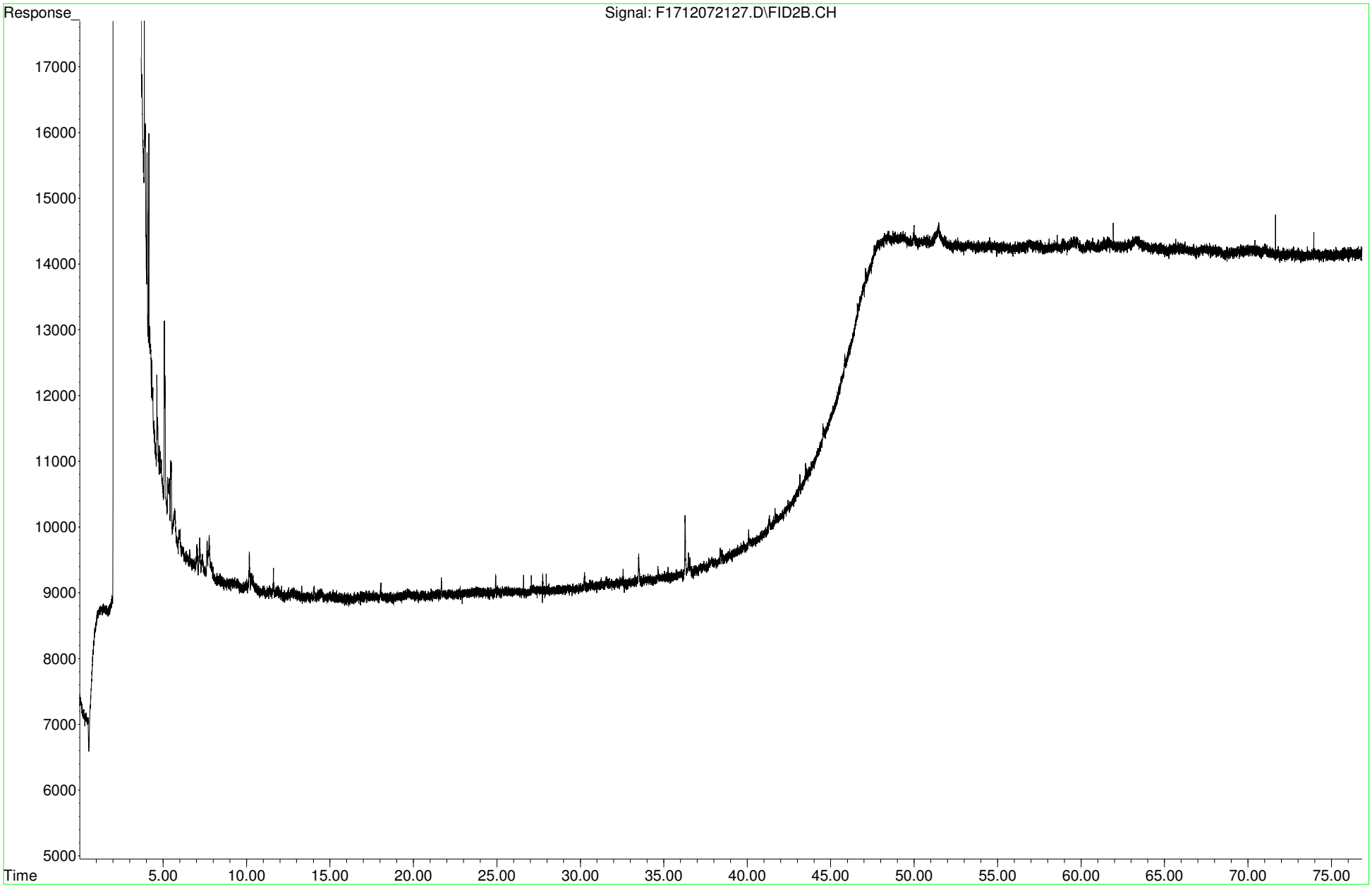
Sub List : TPH - TPH

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.254	4604	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
24) s	d50-Tetracosane	0.000	0	N.D.	ug/mL	
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#		
	Target Compounds					
42) h	C9-C44 Total Petroleu...	40.222	121925361	1357586.929	ug/mL	M5
46) h	Total Resolved Hydroc...	37.870	1204378	13410.241	ug/mL	m
	SemiQuant Compounds - Not Calibrated on this Instrument					

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\F1712072127.D
Operator : FID17:WR
Acquired : 08 Dec 2021 4:41 am using AcqMethod FID17A.M
Sample Name: IB171272101R
Instrument: FID17
Misc Info :
Vial Number: 64
CurrentMeth: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\HC17120721R_DRO.M



Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Jan 18 2022, 03:17 pm

Work Group: WG1594071 for Department: 2 Organic Preparation

Created: 14-JAN-22 Due: Operator: ba

Sample	Client ID	C	Product	Matrix	Stat	UA	HOLD	DUE	PR	Location
L2200971-01	ERH2371	S	A2-SHC	OIL	DONE	U		0106 0118	2E	Vial-A-20
WG1594071-1	Laboratory Method Bl	S	A2-SHC	OIL	DONE	U				
WG1594071-2	Laboratory Control S	S	A2-SHC	OIL	DONE	U				
WG1594071-3	LCS Duplicate	S	A2-SHC	OIL	DONE	U				

Comments:

WG1594071-3 WG1594071-2

Sequence Logs

Analysis log File

Total Files Reported in Log : 29
Log Generated From Directory: O:\Forensics\Data\FID17\2021\DEC\DEC07.SEC\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1712072101.D	FID17A.M	LL		12/7/2021 9:33 am
2	F1712072103.D	FID17A.M	ANS		12/7/2021 11:01 am
3	F1712072105.D	FID17A.M	CCV		12/7/2021 12:29 pm
4	F1712072107.D	FID17A.M	DCM		12/7/2021 1:58 pm
5	F1712072109.D	FID17A.M	DCM		12/7/2021 3:26 pm
6	F1712072111.D	FID17A.M	I1712072101R	WG1581826,FRBD77,..	12/7/2021 4:55 pm
7	F1712072113.D	FID17A.M	I1712072102R	WG1581826,FRBD78,..	12/7/2021 6:23 pm
8	F1712072115.D	FID17A.M	I1712072103R	WG1581826,FRBE37,..	12/7/2021 7:51 pm
9	F1712072117.D	FID17A.M	I1712072104R	WG1581826,FRBD79,..	12/7/2021 9:19 pm
10	F1712072119.D	FID17A.M	I1712072105R	WG1581826,FRBD80,..	12/7/2021 10:48 pm
11	F1712072121.D	FID17A.M	I1712072106R	WG1581826,FRBD81,..	12/8/2021 12:16 am
12	F1712072123.D	FID17A.M	dcm		12/8/2021 1:44 am
13	F1712072125.D	FID17A.M	CQ1712072101R	WG1581826,FRBD82,..	12/8/2021 3:13 am
14	F1712072127.D	FID17A.M	IB171272101R		12/8/2021 4:41 am
15	F1712072129.D	FID17A.M	WG1581826-1,0.1008	WG1581826,FRBD96	12/8/2021 6:09 am
16	F1712072131.D	FID17A.M	dcm		12/8/2021 7:37 am
17	F1712072133.D	FID17A.M	dcm		12/8/2021 9:05 am
18	F1712072135.D	FID17A.M			12/8/2021 10:33 am
19	F1712072137.D	FID17A.M			12/8/2021 12:02 pm
20	F1712072139.D	FID17A.M			12/8/2021 1:31 pm
21	F1712072141.D	FID17A.M			12/8/2021 2:59 pm
22	F1712072143.D	FID17A.M			12/8/2021 4:28 pm
23	F1712072145.D	FID17A.M			12/8/2021 5:57 pm
24	F1712072147.D	FID17A.M			12/8/2021 7:26 pm
25	F1712072149.D	FID17A.M			12/8/2021 8:54 pm
26	F1712072151.D	FID17A.M			12/8/2021 10:22 pm
27	F1712072153.D	FID17A.M			12/8/2021 11:51 pm
28	F1712072155.D	FID17A.M			12/9/2021 1:19 am
29	F1712072157.D	FID17A.M			12/9/2021 2:47 am

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 53
Log Generated From Directory: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1701122201.D	FID17A.M	LL		1/12/2022 3:35 pm
2	F1701122203.D	FID17A.M	ANS		1/12/2022 5:03 pm
3	F1701122205.D	FID17A.M	WG1593355-1	WG1593355,FRBE45,..	1/12/2022 6:32 pm
4	F1701122207.D	FID17A.M	DCM		1/12/2022 8:01 pm
5	F1701122209.D	FID17A.M	IB1701122201R		1/12/2022 9:30 pm
6	F1701122211.D	FID17A.M	WG1592783-1,42,,	WG1593355,WG15927..	1/12/2022 10:58 pm
7	F1701122213.D	FID17A.M	WG1592783-2,42,,	WG1593355,WG15927..	1/13/2022 12:27 am
8	F1701122215.D	FID17A.M	WG1592783-3,42,,	WG1593355,WG15927..	1/13/2022 1:56 am
9	F1701122217.D	FID17A.M	DCM		1/13/2022 3:24 am
10	F1701122219.D	FID17A.M	l2200484-01,42,,,pri	WG1593355,WG15927..	1/13/2022 4:53 am
11	F1701122221.D	FID17A.M	12200963-01,42,,,pri	WG1593355,WG15927..	1/13/2022 6:22 am
12	F1701122223.D	FID17A.M	WG1593355-2	WG1593355,FRBE45,..	1/13/2022 7:50 am
13	F1701122225.D	FID17A.M	DCM		1/13/2022 9:18 am
14	F1701122227.D	FID17A.M	I		1/13/2022 10:47 am
15	F1701122229.D	FID17A.M			1/13/2022 12:52 pm
16	F1701122231.D	FID17A.M	WG1593355-3	WG1593355,FRBE45,..	1/13/2022 2:20 pm
17	F1701122233.D	FID17A.M	DCM		1/13/2022 3:49 pm
18	F1701122235.D	FID17A.M	IB1701122202R		1/13/2022 5:18 pm
19	F1701122237.D	FID17A.M	DCM		1/13/2022 6:46 pm
20	F1701122239.D	FID17A.M	l2162711-04D,42,4	WG1593355,WG15835..	1/13/2022 8:15 pm
21	F1701122241.D	FID17A.M	12165378-06,42,,	WG1593355,WG15835..	1/13/2022 9:44 pm
22	F1701122243.D	FID17A.M	l2165378-09,42,	WG1593355,WG15835..	1/13/2022 11:13 pm
23	F1701122245.D	FID17A.M	DCM		1/14/2022 12:42 am
24	F1701122247.D	FID17A.M	L2200963-01D,42,25	WG1593355,WG15927..	1/14/2022 2:10 am
25	F1701122249.D	FID17A.M	WG1593355-4	WG1593355,FRBE45,..	1/14/2022 3:39 am
26	F1701122251.D	FID17A.M	DCM		1/14/2022 5:07 am
27	F1701122253.D	FID17A.M	IB		1/14/2022 6:36 am
28	F1701122255.D	FID17A.M			1/14/2022 11:38 am
29	F1701122257.D	FID17A.M	WG1593355-5	WG1593355,FRBE45,..	1/14/2022 1:07 pm
30	F1701122259.D	FID17A.M	DCM		1/14/2022 2:36 pm
31	F1701122261.D	FID17A.M	IB1701122203R		1/14/2022 4:04 pm
32	F1701122263.D	FID17A.M	WG1594071-1,42,,	WG1593355,WG15940..	1/14/2022 5:33 pm
33	F1701122265.D	FID17A.M	WG1594071-2,42,,	WG1593355,WG15940..	1/14/2022 7:02 pm
34	F1701122267.D	FID17A.M	WG1594071-3,42,,	WG1593355,WG15940..	1/14/2022 8:31 pm
35	F1701122269.D	FID17A.M	DCM		1/14/2022 10:00 pm
36	F1701122271.D	FID17A.M	l2200971-01,42,,	WG1593355,WG15940..	1/14/2022 11:28 pm
37	F1701122273.D	FID17A.M	WG1593355-6	WG1593355,FRBE45,..	1/15/2022 12:57 am
38	F1701122275.D	FID17A.M	IB1701122204R		1/15/2022 2:26 am
39	F1701122277.D	FID17A.M	WG1592689-1,42,,		1/15/2022 3:54 am
40	F1701122279.D	FID17A.M	wG1%92689-2,32,,		1/15/2022 5:22 am
41	F1701122281.D	FID17A.M	wg!592689-3,32,,		1/15/2022 6:49 am
42	F1701122283.D	FID17A.M	DCM		1/15/2022 8:17 am
43	F1701122285.D	FID17A.M	12162573-01,42,,		1/15/2022 9:45 am
44	F1701122287.D	FID17A.M	12162573-02,42,,	see RX	1/15/2022 11:13 am
45	F1701122289.D	FID17A.M	l2162573-03,42,,		1/15/2022 12:41 pm
46	F1701122291.D	FID17A.M	l2162573-04,42,,	see RX	1/15/2022 2:09 pm
47	F1701122293.D	FID17A.M	l2162573-05,42,,		1/15/2022 3:38 pm
48	F1701122295.D	FID17A.M	12162573-06,42,,		1/15/2022 5:06 pm
49	F1701122297.D	FID17A.M	WG1593355-7	WG1593355,FRBE45,..	1/15/2022 6:34 pm

Printed: 01/18/22

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 53
Log Generated From Directory: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
50	F1701122299.D	FID17A.M	DCM		1/15/2022 8:02 pm
51	F1701122301.D	FID17A.M			1/15/2022 9:30 pm
52	F1701122303.D	FID17A.M			1/15/2022 10:58 pm
53	F1701122305.D	FID17A.M			1/16/2022 12:26 am

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analysis log File

Total Files Reported in Log : 10
Log Generated From Directory: O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\

No.	DATA FILE	INJ METH	SAMPLE NAME	MISC	DATE INJ'D
1	F1701172201.D	FID17A.M	LL		1/17/2022 10:34 am
2	F1701172203.D	FID17A.M	ANS		1/17/2022 12:03 pm
3	F1701172205.D	FID17A.M	WG1593355-8	WG1593355,FRBE45,..	1/17/2022 1:32 pm
4	F1701172207.D	FID17A.M	DCM		1/17/2022 3:01 pm
5	F1701172209.D	FID17A.M	IB1701172201R		1/17/2022 4:30 pm
6	F1701172211.D	FID17A.M	L2200971-01D,42,5	WG1593355,WG15940..	1/17/2022 5:59 pm
7	F1701172213.D	FID17A.M	WG1593355-9	WG1593355,FRBE45,..	1/17/2022 7:28 pm
8	F1701172215.D	FID17A.M	DCM		1/17/2022 8:56 pm
9	F1701172217.D	FID17A.M	ANS		1/17/2022 10:25 pm
10	F1701172219.D	FID17A.M	DCM		1/17/2022 11:54 pm

SeqLog 1.0 - (c) 2009 Abacus Database Applications

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122257.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 1:07 pm
Operator : FID17:WR
Sample : WG1593355-5
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 79 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 09:34:40 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	101	0.00
2	t	n-Octane (C8)	0.803	0.853	-6.2	106	0.01
3	t	n-Nonane (C9)	0.832	0.874	-5.0	103	0.00
4	t	n-Decane (C10)	0.848	0.912	-7.5	105	0.00
5	t	n-Undecane (C11)	0.868	0.923	-6.3	100	0.00
6	t	n-Dodecane (C12)	0.892	0.925	-3.7	100	0.00
7	t	n-Tridecane (C13)	0.914	0.939	-2.7	100	0.00
9	t	n-Tetradecane (C14)	0.941	0.961	-2.1	101	0.00
11	t	n-Pentadecane (C15)	0.942	0.953	-1.2	100	0.00
12	t	n-Hexadecane (C16)	0.952	0.969	-1.8	100	0.00
14	t	n-Heptadecane (C17)	0.934	0.970	-3.9	100	0.00
15	t	Pristane	1.006	1.009	-0.3	101	0.00
16	t	n-Octadecane (C18)	0.972	0.999	-2.8	100	0.00
17	t	Phytane	0.919	0.937	-2.0	101	0.00
18	t	n-Nonadecane (C19)	0.974	0.984	-1.0	100	0.00
19	s	ortho-terphenyl	1.104	1.085	1.7	89	0.00
20	t	n-Eicosane (C20)	0.988	1.007	-1.9	101	0.00
21	t	n-Heneicosane (C21)	0.991	1.001	-1.0	101	0.00
22	t	n-Docosane (C22)	0.997	1.015	-1.8	101	0.00
23	t	n-Tricosane (C23)	1.001	1.015	-1.4	101	0.00
24	s	d50-Tetracosane	0.889	0.862	3.0	89	0.00
25	t	n-Tetracosane (C24)	0.991	0.960	3.1	100	0.00
26	t	n-Pentacosane (C25)	0.982	0.994	-1.2	100	0.00
27	t	n-Hexacosane (C26)	1.008	1.020	-1.2	100	0.00
28	t	n-Heptacosane (C27)	1.000	0.984	1.6	100	0.00
29	t	n-Octacosane (C28)	1.028	1.025	0.3	100	0.00
30	t	n-Nonacosane (C29)	1.018	1.018	0.0	101	0.00
31	t	n-Triacontane (C30)	1.020	1.021	-0.1	101	0.00
32	t	n-Hentriacontane (C31)	0.986	0.989	-0.3	101	0.01
33	t	n-Dotriacontane (C32)	1.032	1.038	-0.6	102	0.00
34	t	n-Tritriacontane (C33)	1.000	1.004	-0.4	102	0.00
35	t	n-tetratriacontane (C34)	0.997	0.999	-0.2	102	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122257.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 1:07 pm
Operator : FID17:WR
Sample : WG1593355-5
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 79 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 09:34:40 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.946	1.009	-6.7	103	0.00
37 t	n-Hexatriacontane (C36)	1.118	1.082	3.2	103	0.01
38 t	n-Heptatriacontane (C37)	1.022	0.991	3.0	103	0.02
39 t	n-Octatriacontane (C38)	1.040	1.017	2.2	102	0.02
41 t	n-Tetracontane (C40)	1.029	0.993	3.5	99	0.03

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.07	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122257.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 1:07 pm
Operator : FID17:WR
Sample : WG1593355-5
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 79 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 09:34:40 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.010	53913131	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.008	58481480	49.118 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	98.24%
24) s	d50-Tetracosane	35.639	46495386	48.486 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	96.97%
	Target Compounds			
2) t	n-Octane (C8)	5.493	45981325	53.093 ug/mL M4
3) t	n-Nonane (C9)	7.667	47146210	52.557 ug/mL M4
4) t	n-Decane (C10)	10.133	49148245	53.748 ug/mL M4
5) t	n-Undecane (C11)	12.633	49763485	53.143 ug/mL M4
6) t	n-Dodecane (C12)	15.050	49873046	51.853 ug/mL M4
7) t	n-Tridecane (C13)	17.350	50603413	51.355 ug/mL M4
9) t	n-Tetradecane (C14)	19.525	51787261	51.046 ug/mL M4
11) t	n-Pentadecane (C15)	21.583	51405576	50.598 ug/mL M4
12) t	n-Hexadecane (C16)	23.535	52263070	50.938 ug/mL M4
14) t	n-Heptadecane (C17)	25.388	52279141	51.919 ug/mL M4
15) t	Pristane	25.496	54385290	50.143 ug/mL M4
16) t	n-Octadecane (C18)	27.149	53867892	51.410 ug/mL M4
17) t	Phytane	27.310	50501900	50.953 ug/mL M4
18) t	n-Nonadecane (C19)	28.827	53056479	50.511 ug/mL M4
20) t	n-Eicosane (C20)	30.429	54292142	50.970 ug/mL M4
21) t	n-Heneicosane (C21)	31.957	53963582	50.479 ug/mL M4
22) t	n-Docosane (C22)	33.427	54705103	50.894 ug/mL M4
23) t	n-Tricosane (C23)	34.833	54748115	50.712 ug/mL M4
25) t	n-Tetracosane (C24)	36.185	51756644	48.450 ug/mL M4
26) t	n-Pentacosane (C25)	37.486	53580372	50.619 ug/mL M4
27) t	n-Hexacosane (C26)	38.739	55001486	50.623 ug/mL M4
28) t	n-Heptacosane (C27)	39.944	53034212	49.191 ug/mL M4
29) t	n-Octacosane (C28)	41.110	55250963	49.858 ug/mL M4
30) t	n-Nonacosane (C29)	42.236	54867216	50.001 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122257.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 1:07 pm
Operator : FID17:WR
Sample : WG1593355-5
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 79 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 09:34:40 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

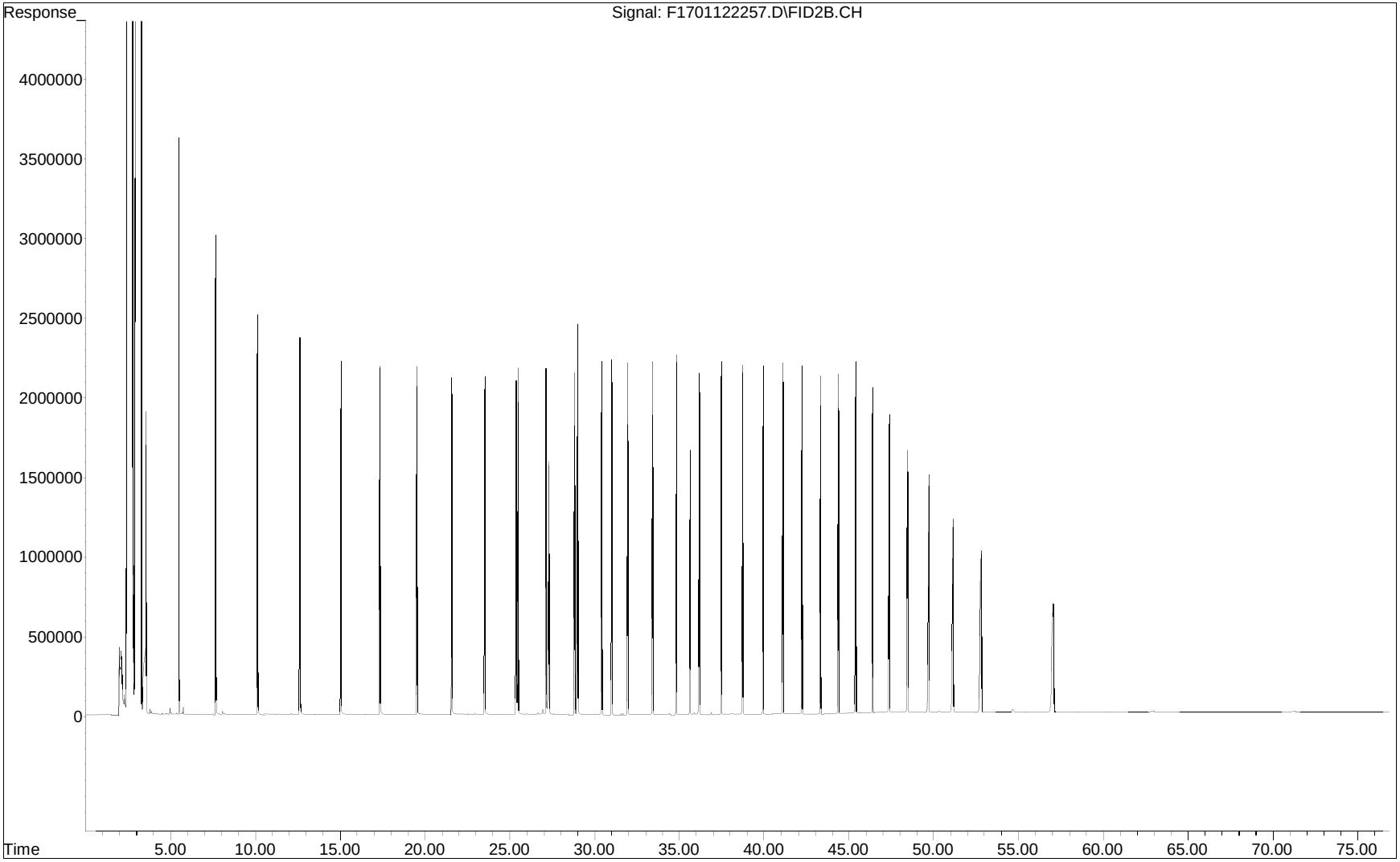
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.326	55029942	50.042 ug/mL M4
32) t	n-Hentriacontane (C31)	44.382	53326998	50.148 ug/mL M4
33) t	n-Dotriacontane (C32)	45.405	55975507	50.306 ug/mL M4
34) t	n-Tritriacontane (C33)	46.395	54107797	50.180 ug/mL M4
35) t	n-tetratriacontane (C34)	47.375	53833413	50.061 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.458	54395084	53.303 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.699	58307486	48.379 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.123	53436533	48.486 ug/mL M4
39) t	n-Octatriacontane (C38)	52.781	54851843	48.910 ug/mL M4
41) t	n-Tetracontane (C40)	57.039	53549294	48.273 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122257.D
Operator : FID17:WR
Acquired : 14 Jan 2022 1:07 pm using AcqMethod FID17A.M
Sample Name: WG1593355-5
Instrument: FID17
Misc Info : WG1593355,FRBE45,ICAL18568
Vial Number: 79
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122273.D
Signal(s) : FID2B.CH
Acq On : 15 Jan 2022 12:57 am
Operator : FID17:WR
Sample : WG1593355-6
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 87 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 10:05:58 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	101	0.00
2	t	n-Octane (C8)	0.803	0.830	-3.4	103	0.00
3	t	n-Nonane (C9)	0.832	0.847	-1.8	99	0.00
4	t	n-Decane (C10)	0.848	0.897	-5.8	103	0.00
5	t	n-Undecane (C11)	0.868	0.919	-5.9	100	0.00
6	t	n-Dodecane (C12)	0.892	0.925	-3.7	100	0.00
7	t	n-Tridecane (C13)	0.914	0.940	-2.8	100	0.00
9	t	n-Tetradecane (C14)	0.941	0.962	-2.2	100	0.00
11	t	n-Pentadecane (C15)	0.942	0.955	-1.4	100	0.00
12	t	n-Hexadecane (C16)	0.952	0.970	-1.9	100	0.00
14	t	n-Heptadecane (C17)	0.934	0.969	-3.7	99	0.00
15	t	Pristane	1.006	1.015	-0.9	102	0.00
16	t	n-Octadecane (C18)	0.972	0.998	-2.7	100	0.00
17	t	Phytane	0.919	0.941	-2.4	101	0.00
18	t	n-Nonadecane (C19)	0.974	0.985	-1.1	100	0.00
19	s	ortho-terphenyl	1.104	1.085	1.7	89	0.00
20	t	n-Eicosane (C20)	0.988	1.010	-2.2	101	0.00
21	t	n-Heneicosane (C21)	0.991	1.004	-1.3	101	0.00
22	t	n-Docosane (C22)	0.997	1.017	-2.0	100	0.00
23	t	n-Tricosane (C23)	1.001	1.018	-1.7	101	0.00
24	s	d50-Tetracosane	0.889	0.863	2.9	89	0.00
25	t	n-Tetracosane (C24)	0.991	0.961	3.0	100	0.00
26	t	n-Pentacosane (C25)	0.982	0.996	-1.4	100	0.00
27	t	n-Hexacosane (C26)	1.008	1.021	-1.3	100	0.00
28	t	n-Heptacosane (C27)	1.000	0.984	1.6	100	0.00
29	t	n-Octacosane (C28)	1.028	1.028	0.0	100	0.00
30	t	n-Nonacosane (C29)	1.018	1.017	0.1	100	0.00
31	t	n-Triacontane (C30)	1.020	1.020	0.0	101	0.00
32	t	n-Hentriacontane (C31)	0.986	0.989	-0.3	101	0.00
33	t	n-Dotriacontane (C32)	1.032	1.036	-0.4	101	0.00
34	t	n-Tritriacontane (C33)	1.000	1.001	-0.1	102	0.00
35	t	n-tetratriacontane (C34)	0.997	0.996	0.1	102	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122273.D
Signal(s) : FID2B.CH
Acq On : 15 Jan 2022 12:57 am
Operator : FID17:WR
Sample : WG1593355-6
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 87 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 10:05:58 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.946	1.005	-6.2	102	0.00
37 t	n-Hexatriacontane (C36)	1.118	1.076	3.8	102	0.00
38 t	n-Heptatriacontane (C37)	1.022	0.984	3.7	102	0.00
39 t	n-Octatriacontane (C38)	1.040	1.007	3.2	101	0.01
41 t	n-Tetracontane (C40)	1.029	0.967	6.0	96	0.01

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.07	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122273.D
Signal(s) : FID2B.CH
Acq On : 15 Jan 2022 12:57 am
Operator : FID17:WR
Sample : WG1593355-6
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 87 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 10:05:58 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.005	53748236	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	29.004	58296536	49.113 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	98.23%
24) s	d50-Tetracosane	35.638	46396487	48.531 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	97.06%
	Target Compounds			
2) t	n-Octane (C8)	5.492	44610454	51.668 ug/mL M4
3) t	n-Nonane (C9)	7.664	45523198	50.904 ug/mL M4
4) t	n-Decane (C10)	10.130	48237355	52.914 ug/mL M4
5) t	n-Undecane (C11)	12.629	49401850	52.919 ug/mL M4
6) t	n-Dodecane (C12)	15.046	49706863	51.839 ug/mL M4
7) t	n-Tridecane (C13)	17.346	50513141	51.420 ug/mL M4
9) t	n-Tetradecane (C14)	19.522	51722142	51.138 ug/mL M4
11) t	n-Pentadecane (C15)	21.580	51321448	50.670 ug/mL M4
12) t	n-Hexadecane (C16)	23.529	52115240	50.950 ug/mL M4
14) t	n-Heptadecane (C17)	25.383	52072897	51.873 ug/mL M4
15) t	Pristane	25.491	54572850	50.470 ug/mL M4
16) t	n-Octadecane (C18)	27.145	53627315	51.337 ug/mL M4
17) t	Phytane	27.305	50566659	51.175 ug/mL M4
18) t	n-Nonadecane (C19)	28.825	52926315	50.542 ug/mL M4
20) t	n-Eicosane (C20)	30.423	54271423	51.107 ug/mL M4
21) t	n-Heneicosane (C21)	31.955	53963063	50.633 ug/mL M4
22) t	n-Docosane (C22)	33.422	54671405	51.019 ug/mL M4
23) t	n-Tricosane (C23)	34.830	54699617	50.822 ug/mL M4
25) t	n-Tetracosane (C24)	36.181	51644325	48.493 ug/mL M4
26) t	n-Pentacosane (C25)	37.482	53518909	50.716 ug/mL M4
27) t	n-Hexacosane (C26)	38.734	54880845	50.667 ug/mL M4
28) t	n-Heptacosane (C27)	39.940	52885716	49.204 ug/mL M4
29) t	n-Octacosane (C28)	41.105	55226934	49.989 ug/mL M4
30) t	n-Nonacosane (C29)	42.234	54682941	49.986 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122273.D
Signal(s) : FID2B.CH
Acq On : 15 Jan 2022 12:57 am
Operator : FID17:WR
Sample : WG1593355-6
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 87 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 10:05:58 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

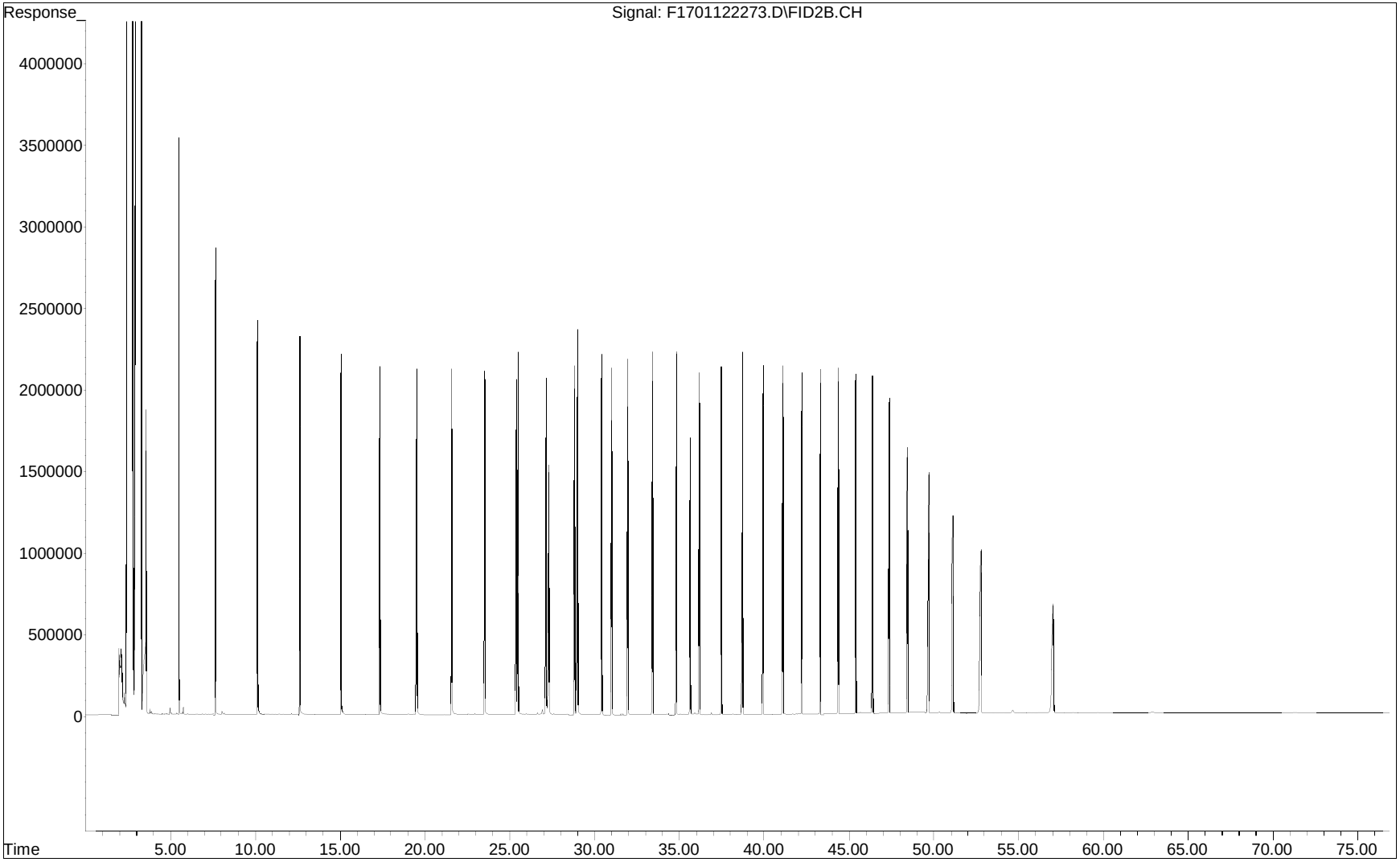
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.323	54827476	50.011 ug/mL M4
32) t	n-Hentriacontane (C31)	44.377	53164189	50.149 ug/mL M4
33) t	n-Dotriacontane (C32)	45.399	55681646	50.195 ug/mL M4
34) t	n-Tritriacontane (C33)	46.391	53799731	50.047 ug/mL M4
35) t	n-tetratriacontane (C34)	47.369	53546394	49.947 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.453	53993976	53.073 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.693	57849387	48.146 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.115	52879230	48.128 ug/mL M4
39) t	n-Octatriacontane (C38)	52.777	54113171	48.400 ug/mL M4
41) t	n-Tetracontane (C40)	57.019	51983967	47.005 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122273.D
Operator : FID17:WR
Acquired : 15 Jan 2022 12:57 am using AcqMethod FID17A.M
Sample Name: WG1593355-6
Instrument: FID17
Misc Info : WG1593355,FRBE45,ICAL18568
Vial Number: 87
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122271.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 11:28 pm
Operator : FID17:WR
Sample : l2200971-01,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 86 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:42:16 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : Default - All compounds listed

Compound	R.T.	Response	Conc	Units	
Internal Standards					
1) I 5-alpha-androstane	31.004	51968804	50.000	ug/mL	M4
System Monitoring Compounds					
19) s ortho-terphenyl	28.985	14139082	12.320	ug/mL	M4
Spiked Amount 50.000 Range 50 - 130		Recovery = 24.64%#			
24) s d50-Tetracosane	35.619	11224663	12.143	ug/mL	M4
Spiked Amount 50.000 Range 50 - 130		Recovery = 24.29%#			
Target Compounds					
2) t n-Octane (C8)	5.458	3469329	4.156	ug/mL	M4
3) t n-Nonane (C9)	7.646	23279815	26.923	ug/mL	M4
4) t n-Decane (C10)	10.142	102653069	116.460	ug/mL	M4
5) t n-Undecane (C11)	12.677	238083409	263.764	ug/mL	M4
6) t n-Dodecane (C12)	15.101	233997730	252.389	ug/mL	M4
7) t n-Tridecane (C13)	17.394	179480876	188.961	ug/mL	M4
8) t 1380	19.035	33003439	33.748	ug/mL	M4
9) t n-Tetradecane (C14)	19.554	107487643	109.913	ug/mL	M4
10) t 1470	20.809	25842294	26.388	ug/mL	M4
11) t n-Pentadecane (C15)	21.585	41843253	42.727	ug/mL	M4
12) t n-Hexadecane (C16)	23.517	8721427	8.818	ug/mL	M4
13) t 1650	24.423	1089819	1.123	ug/mL	M4
14) t n-Heptadecane (C17)	25.367	1708216	1.760	ug/mL	M4
15) t Pristane	25.464	939010	0.898	ug/mL	M4
16) t n-Octadecane (C18)	27.132	790804	0.783	ug/mL	M4
17) t Phytane	27.287	198042	0.207	ug/mL	M4
18) t n-Nonadecane (C19)	28.804	162605	0.161	ug/mL	M4
20) t n-Eicosane (C20)	30.427	56400	0.055	ug/mL	M4
21) t n-Heneicosane (C21)	31.960	31304	0.030	ug/mL	M4
22) t n-Docosane (C22)	33.427	21427	0.021	ug/mL	M4
23) t n-Tricosane (C23)	0.000	0	N.D.	ug/mL	d

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122271.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 11:28 pm
Operator : FID17:WR
Sample : l2200971-01,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 86 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:42:16 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : Default - All compounds listed

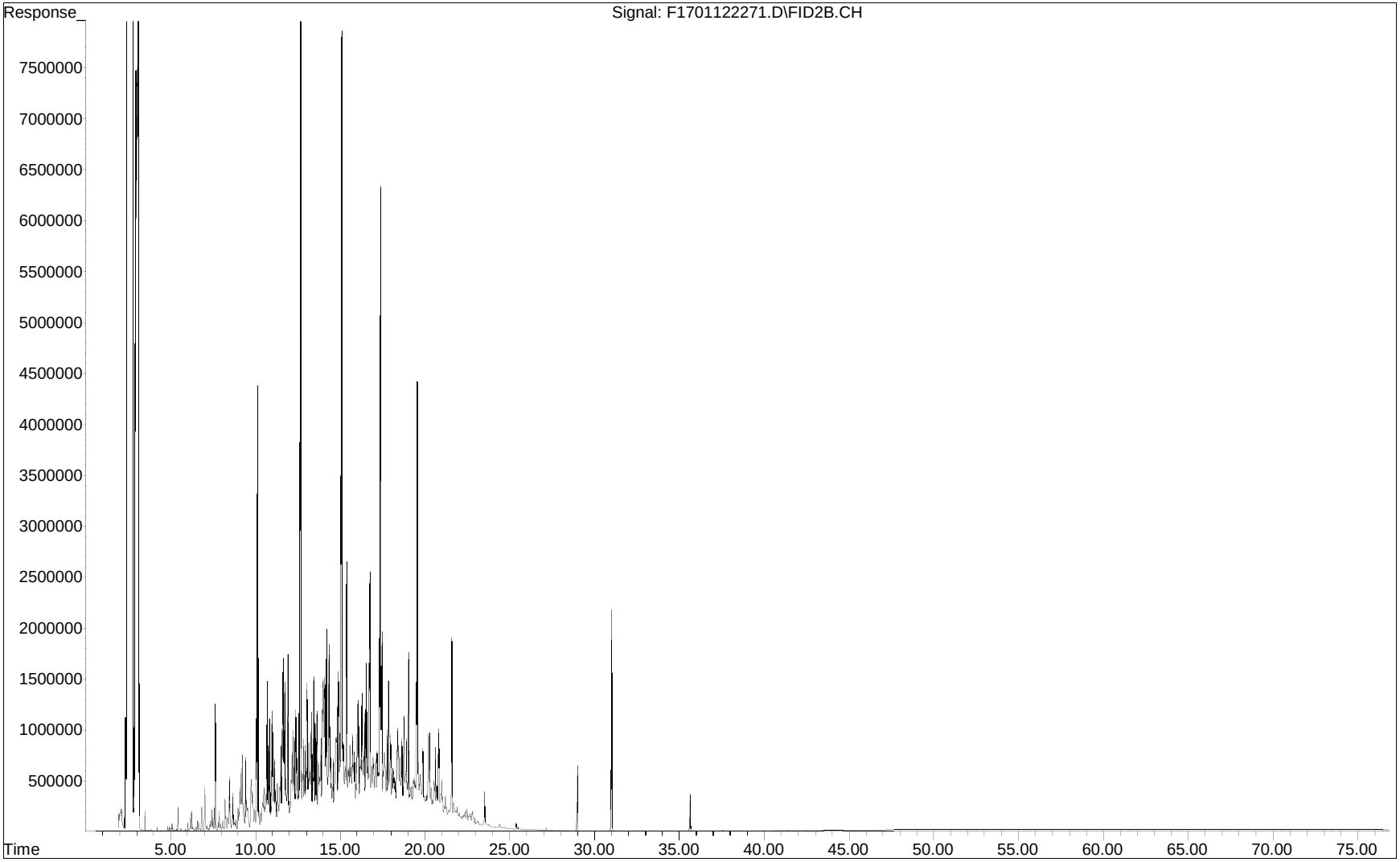
	Compound	R.T.	Response	Conc	Units	
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	37.550	808270C	0.792	ug/mL	M4
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	39.408	5649951271	5573.224	ug/mL	m
42) h	C9-C44 Total Petroleu BS	39.408	5332513273	5260.097	ug/mL	m
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
43) h	C9-C40 Total Petroleu BS	0.000	-114718724	N.D.	ug/mld	
44) h	C10-C28 DRO	25.609	5176591721	5193.185	ug/mL	m
44) h	C10-C28 DRO BS	25.609	5145980679	5162.476	ug/mL	m
45) h	C28-C40 ORO	49.014	104191333	98.244	ug/mL	m
45) h	C28-C40 ORO BS	49.014	-20544734	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	37.870	3933273412	3879.859	ug/mL	m

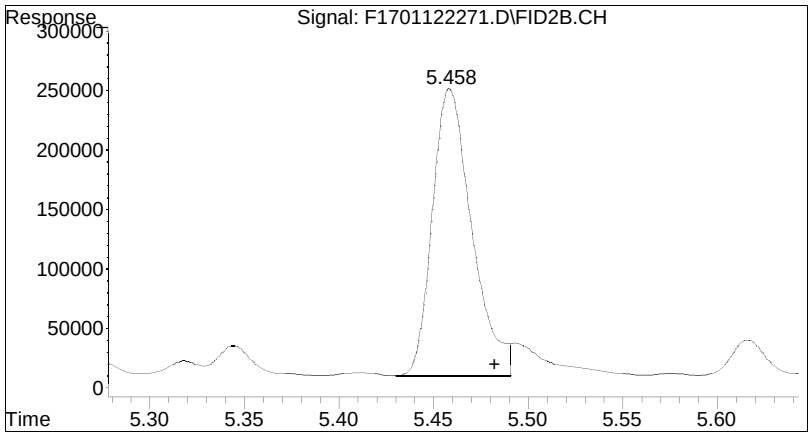
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

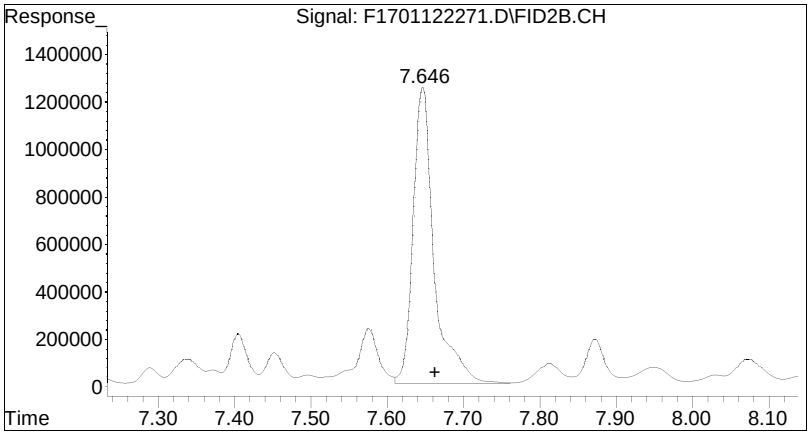
File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122271.D
Operator : FID17:WR
Acquired : 14 Jan 2022 11:28 pm using AcqMethod FID17A.M
Sample Name: l2200971-01,42,,
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 86
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M





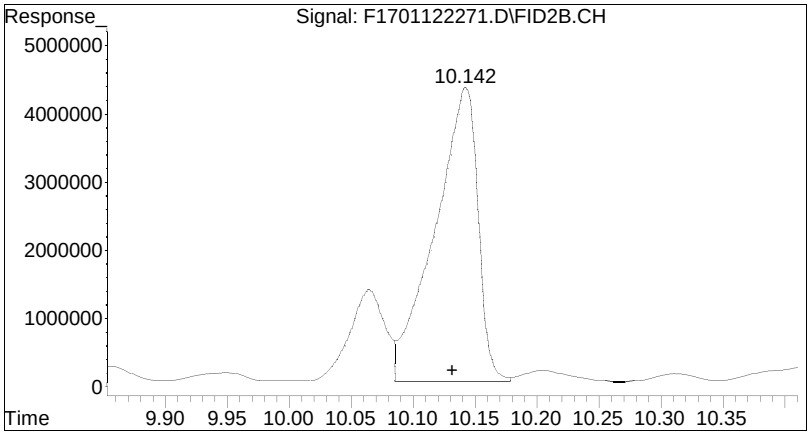
#2 n-Octane (C8)

R.T.:	5.458 min
Delta R.T.:	-0.024 min
Response:	3469329
Conc:	4.16 ug/mL M4



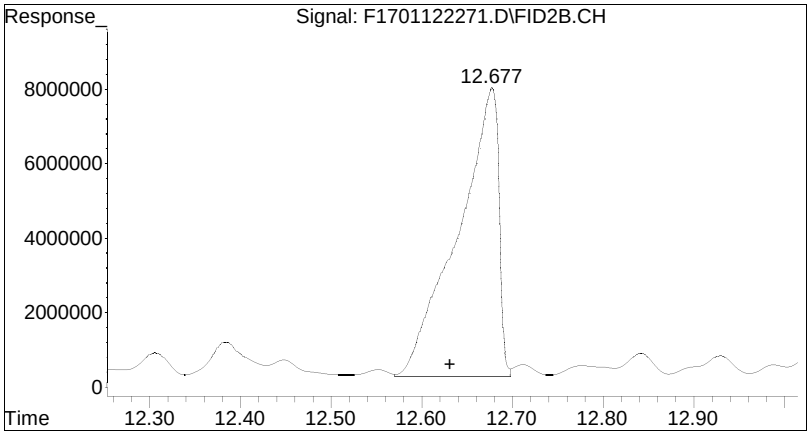
#3 n-Nonane (C9)

R.T.: 7.646 min
Delta R.T.: -0.017 min
Response: 23279815
Conc: 26.92 ug/mL M4



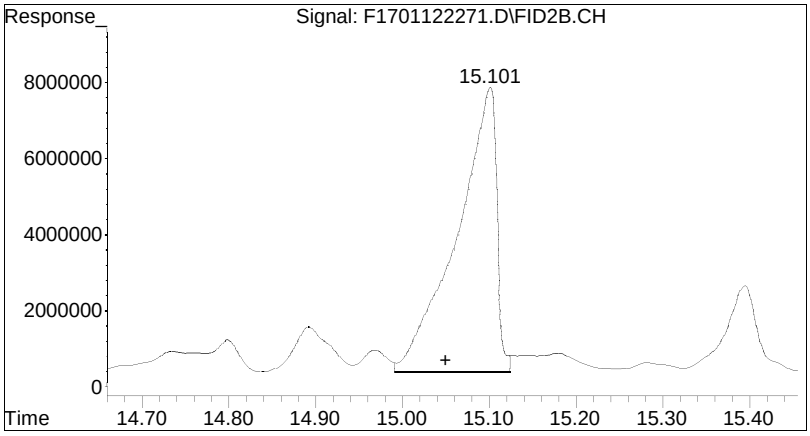
#4 n-Decane (C10)

R.T.: 10.142 min
Delta R.T.: 0.011 min
Response: 102653069
Conc: 116.46 ug/mL M4



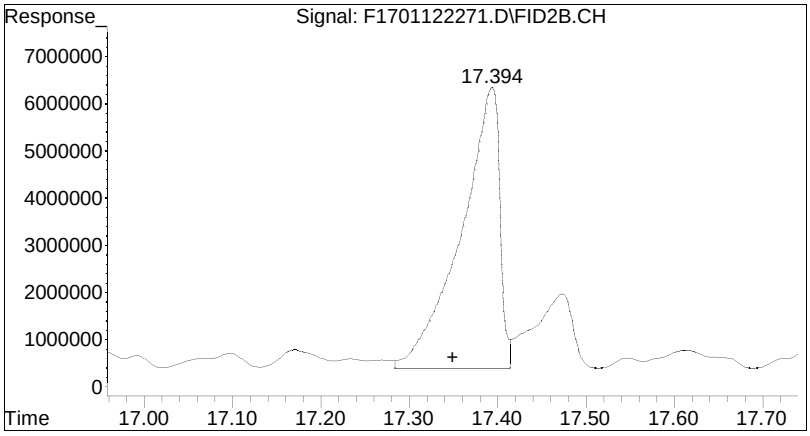
#5 n-Undecane (C11)

R.T.: 12.677 min
Delta R.T.: 0.046 min
Response: 238083409
Conc: 263.76 ug/mL M4



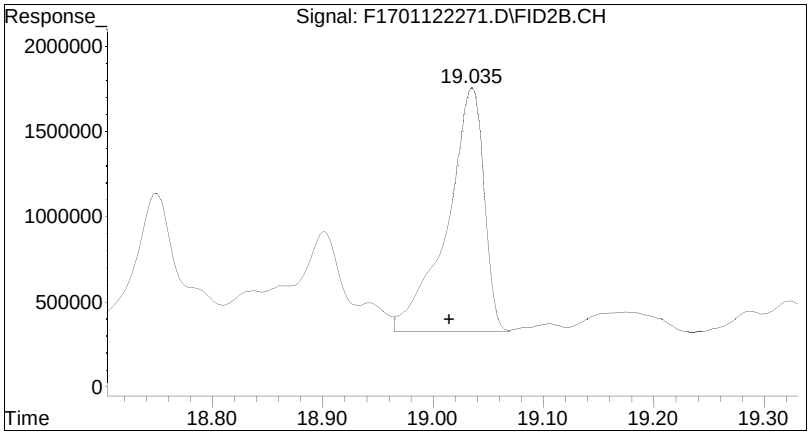
#6 n-Dodecane (C12)

R.T.: 15.101 min
Delta R.T.: 0.051 min
Response: 233997730
Conc: 252.39 ug/mL M4



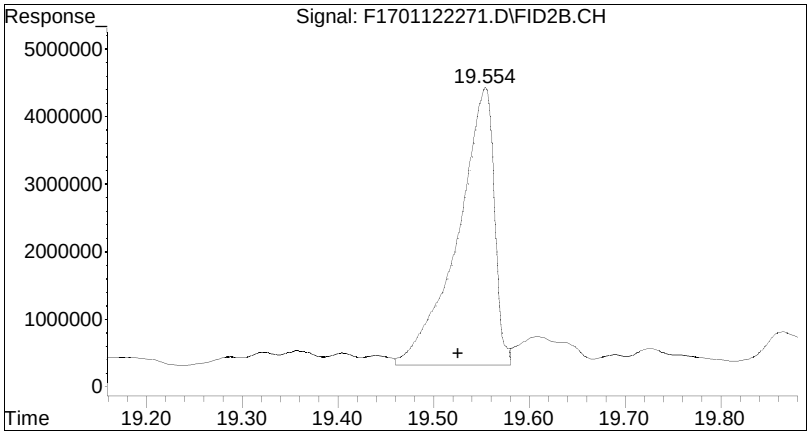
#7 n-Tridecane (C13)

R.T.: 17.394 min
Delta R.T.: 0.045 min
Response: 179480876
Conc: 188.96 ug/mL M4



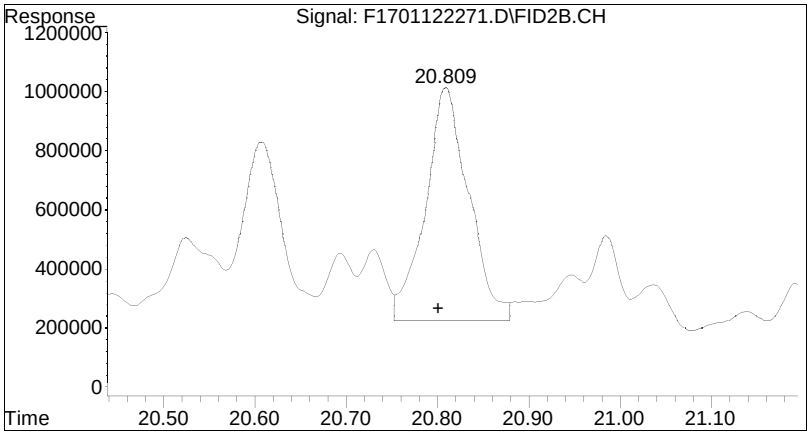
#8 1380

R.T.: 19.035 min
Delta R.T.: 0.020 min
Response: 33003439
Conc: 33.75 ug/mL M4



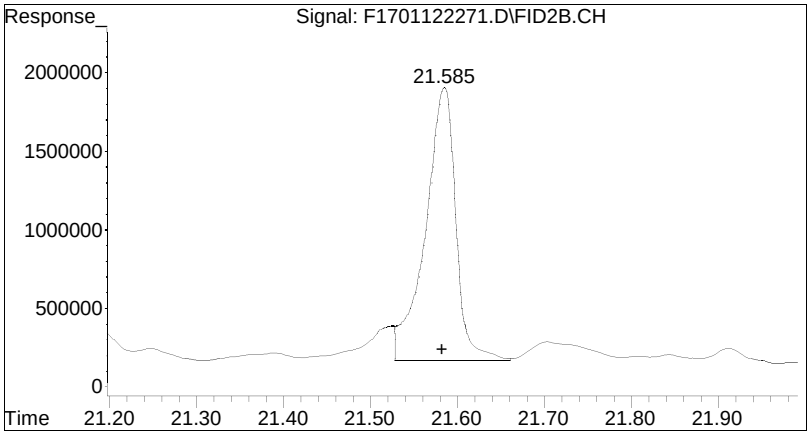
#9 n-Tetradecane (C14)

R.T.: 19.554 min
Delta R.T.: 0.028 min
Response: 107487643
Conc: 109.91 ug/mL M4



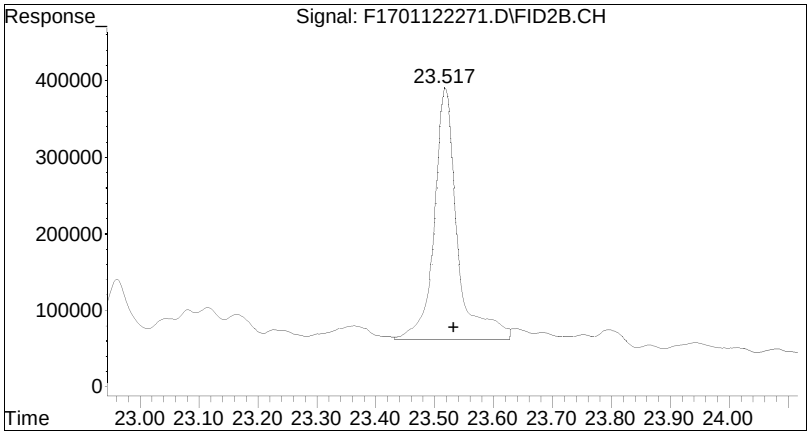
#10 1470

R.T.: 20.809 min
Delta R.T.: 0.008 min
Response: 25842294
Conc: 26.39 ug/mL M4



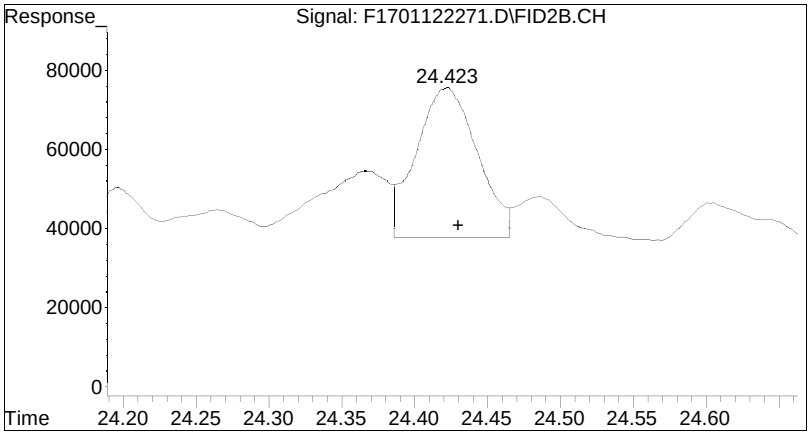
#11 n-Pentadecane (C15)

R.T.: 21.585 min
Delta R.T.: 0.003 min
Response: 41843253
Conc: 42.73 ug/mL M4



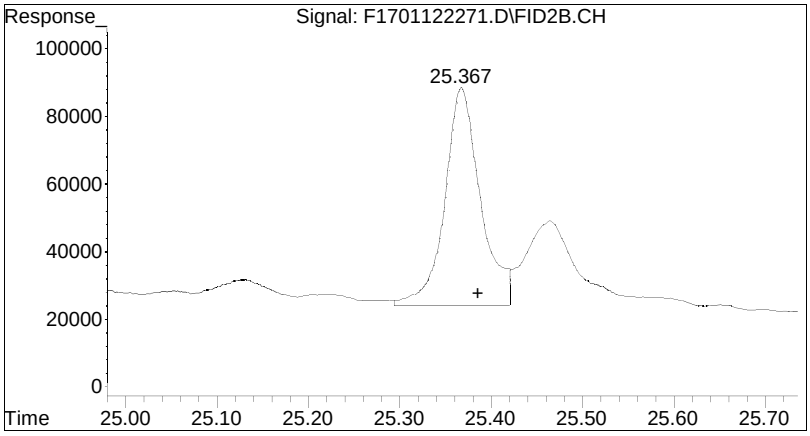
#12 n-Hexadecane (C16)

R.T.:	23.517 min
Delta R.T.:	-0.016 min
Response:	8721427
Conc:	8.82 ug/mL M4



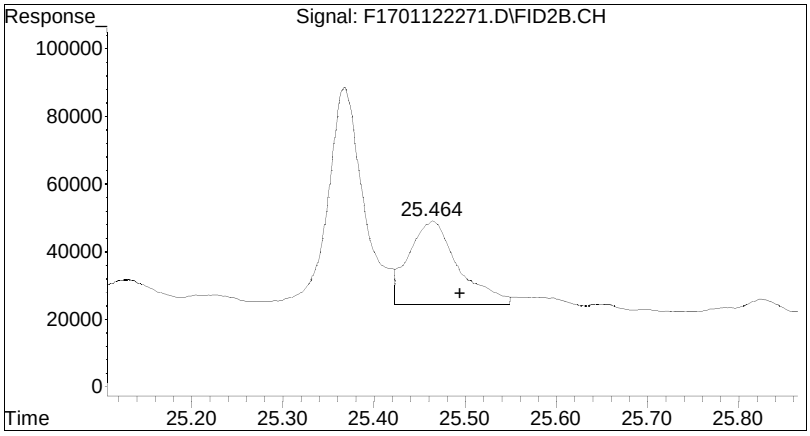
#13 1650

R.T.: 24.423 min
Delta R.T.: -0.007 min
Response: 1089819
Conc: 1.12 ug/mL M4



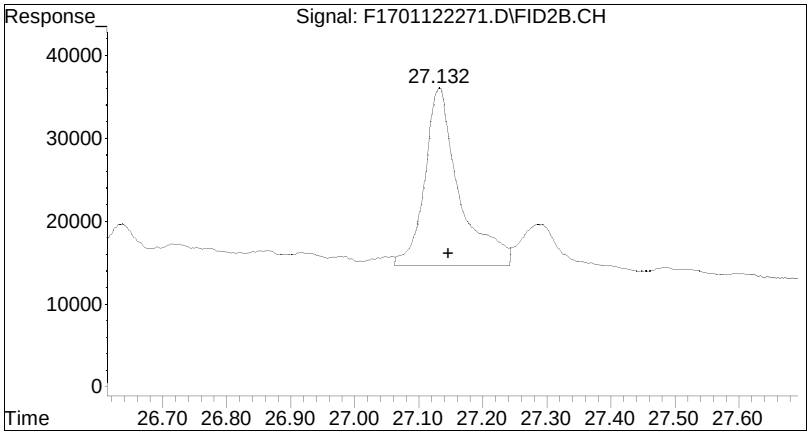
#14 n-Heptadecane (C17)

R.T.:	25.367 min
Delta R.T.:	-0.019 min
Response:	1708216
Conc:	1.76 ug/mL M4



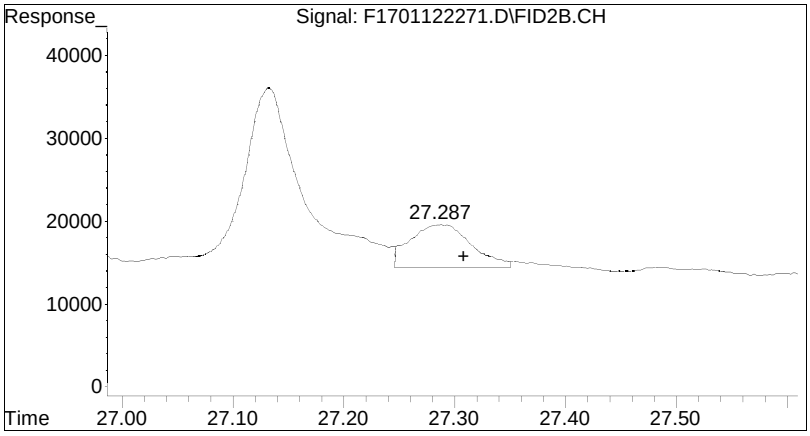
#15 Pristane

R.T.:	25.464 min
Delta R.T.:	-0.031 min
Response:	939010
Conc:	0.90 ug/mL M4



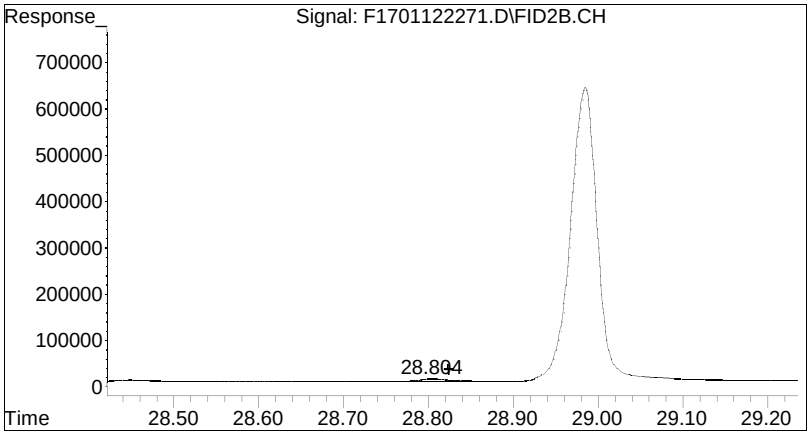
#16 n-Octadecane (C18)

R.T.:	27.132 min
Delta R.T.:	-0.014 min
Response:	790804
Conc:	0.78 ug/mL M4



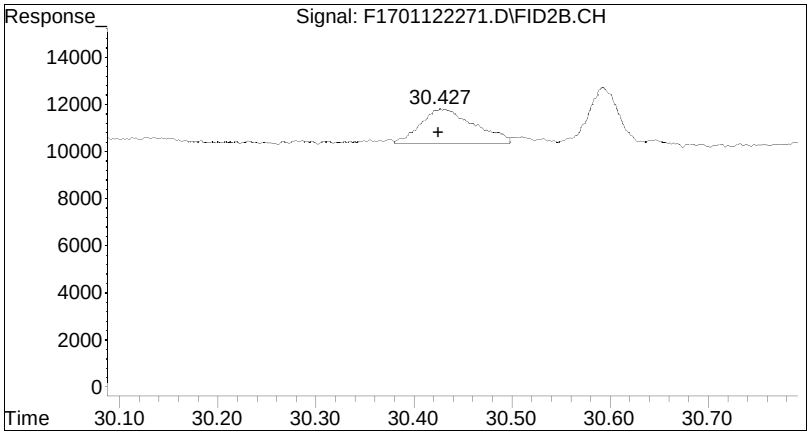
#17 Phytane

R.T.:	27.287 min
Delta R.T.:	-0.021 min
Response:	198042
Conc:	0.21 ug/mL M4



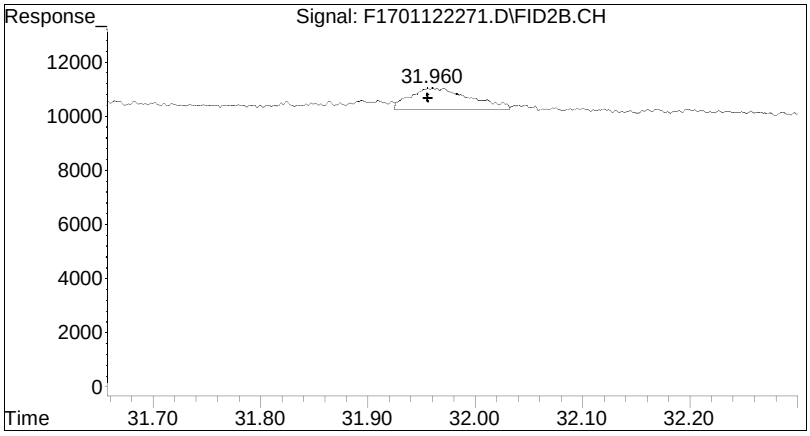
#18 n-Nonadecane (C19)

R.T.:	28.804 min
Delta R.T.:	-0.021 min
Response:	162605
Conc:	0.16 ug/mL M4



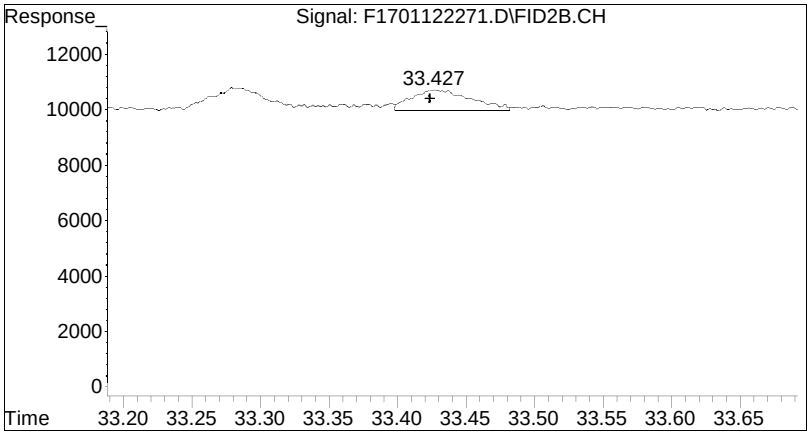
#20 n-Eicosane (C20)

R.T.:	30.427 min
Delta R.T.:	0.002 min
Response:	56400
Conc:	0.05 ug/mL M4



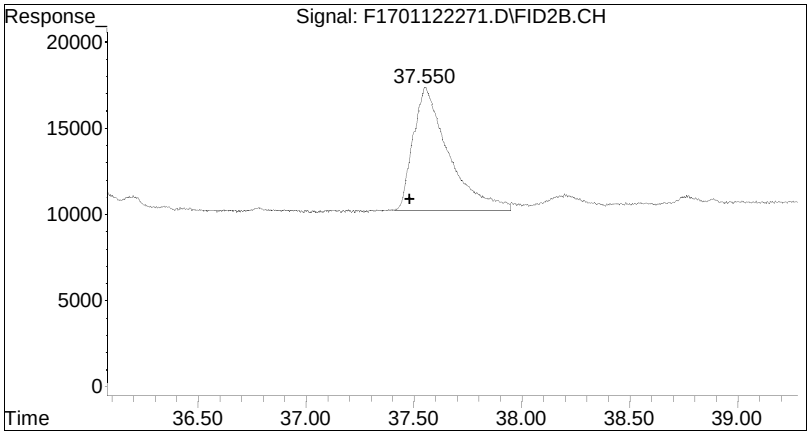
#21 n-Heneicosane (C21)

R.T.:	31.960 min
Delta R.T.:	0.004 min
Response:	31304
Conc:	0.03 ug/mL M4



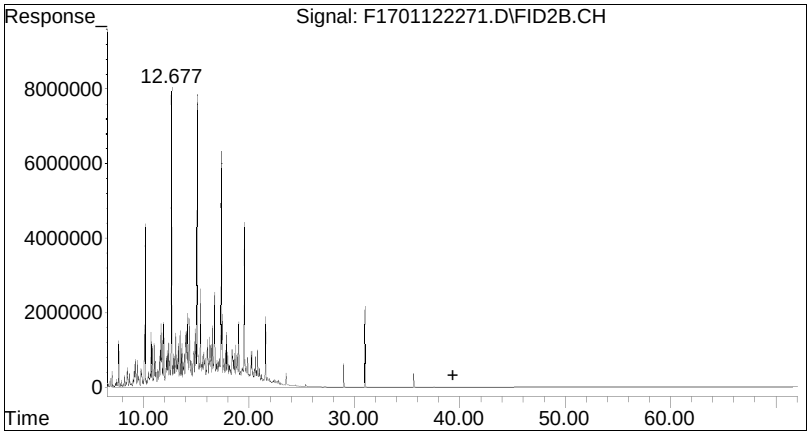
#22 n-Docosane (C22)

R.T.:	33.427 min
Delta R.T.:	0.003 min
Response:	21427
Conc:	0.02 ug/mL M4



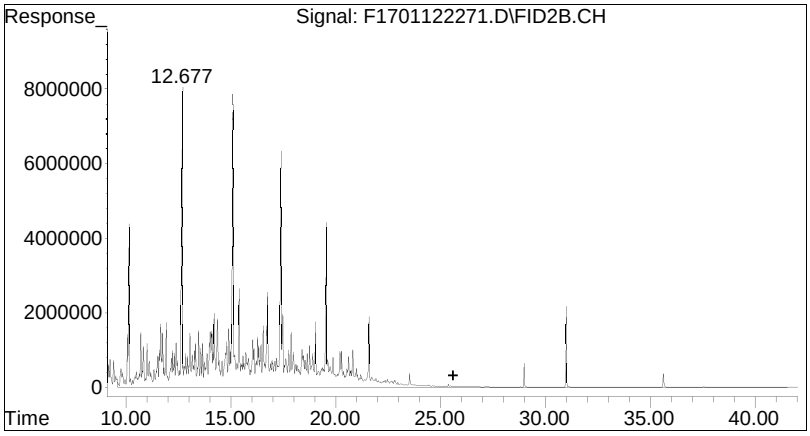
#26 n-Pentacosane (C25)

R.T.:	37.550 min
Delta R.T.:	0.070 min
Response:	808270
Conc:	0.79 ug/mL M4



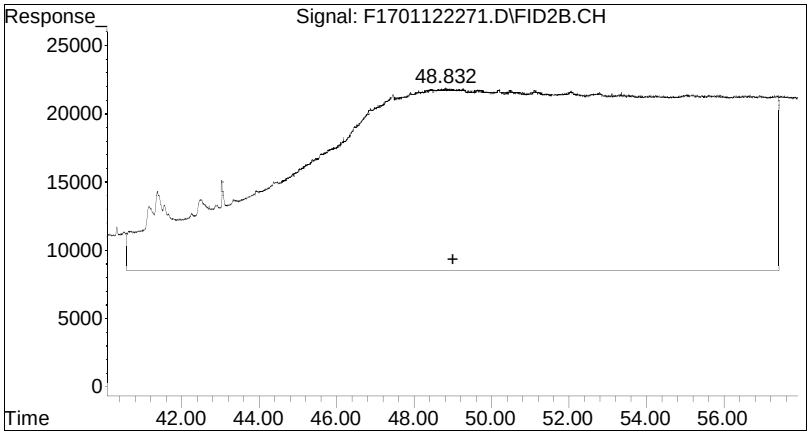
#42 C9-C44 Total Petroleum Hy

R.T.: 39.408 min
Delta R.T.: 0.000 min
Response: 5649951271
Conc: 5573.22 ug/mL m



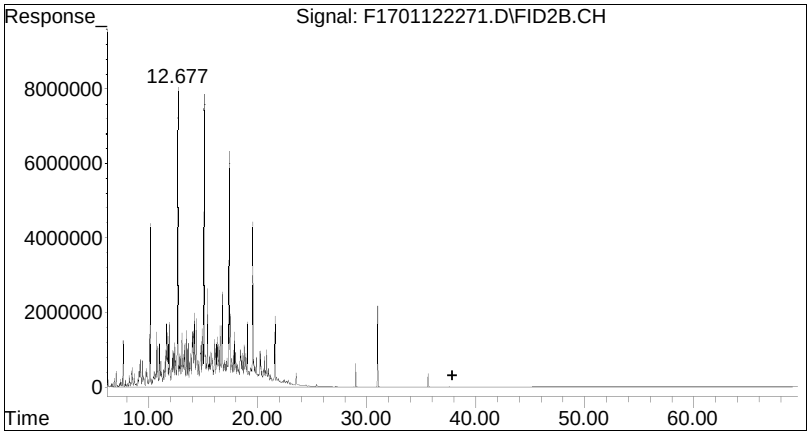
#44 C10-C28 DRO

R.T.: 25.609 min
Delta R.T.: 0.000 min
Response: 5176591721
Conc: 5193.19 ug/mL m



#45 C28-C40 ORO

R.T.: 49.014 min
Delta R.T.: 0.000 min
Response: 104191333
Conc: 98.24 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 3933273412
Conc: 3879.86 ug/mL m

Analytical Event

Continuing Calibration

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172205.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 1:32 pm
Operator : FID17:WR
Sample : WG1593355-8
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 10:56:46 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	104	0.00
2	t	n-Octane (C8)	0.803	0.854	-6.4	109	0.00
3	t	n-Nonane (C9)	0.832	0.881	-5.9	106	0.00
4	t	n-Decane (C10)	0.848	0.913	-7.7	107	0.00
5	t	n-Undecane (C11)	0.868	0.913	-5.2	102	0.00
6	t	n-Dodecane (C12)	0.892	0.929	-4.1	103	0.00
7	t	n-Tridecane (C13)	0.914	0.946	-3.5	104	0.00
9	t	n-Tetradecane (C14)	0.941	0.966	-2.7	104	0.00
11	t	n-Pentadecane (C15)	0.942	0.958	-1.7	103	0.00
12	t	n-Hexadecane (C16)	0.952	0.972	-2.1	103	0.00
14	t	n-Heptadecane (C17)	0.934	0.967	-3.5	102	0.00
15	t	Pristane	1.006	1.017	-1.1	105	0.00
16	t	n-Octadecane (C18)	0.972	0.999	-2.8	103	0.00
17	t	Phytane	0.919	0.942	-2.5	104	0.00
18	t	n-Nonadecane (C19)	0.974	0.986	-1.2	103	0.00
19	s	ortho-terphenyl	1.104	1.087	1.5	92	0.00
20	t	n-Eicosane (C20)	0.988	1.009	-2.1	103	0.00
21	t	n-Heneicosane (C21)	0.991	1.006	-1.5	104	0.00
22	t	n-Docosane (C22)	0.997	1.020	-2.3	104	0.00
23	t	n-Tricosane (C23)	1.001	1.020	-1.9	104	0.00
24	s	d50-Tetracosane	0.889	0.866	2.6	92	0.00
25	t	n-Tetracosane (C24)	0.991	0.964	2.7	103	0.00
26	t	n-Pentacosane (C25)	0.982	0.999	-1.7	103	0.00
27	t	n-Hexacosane (C26)	1.008	1.026	-1.8	103	0.00
28	t	n-Heptacosane (C27)	1.000	0.988	1.2	103	0.00
29	t	n-Octacosane (C28)	1.028	1.029	-0.1	103	0.00
30	t	n-Nonacosane (C29)	1.018	1.022	-0.4	104	0.00
31	t	n-Triacontane (C30)	1.020	1.022	-0.2	104	0.00
32	t	n-Hentriacontane (C31)	0.986	0.988	-0.2	104	0.00
33	t	n-Dotriacontane (C32)	1.032	1.035	-0.3	104	0.00
34	t	n-Tritriacontane (C33)	1.000	1.000	0.0	105	0.00
35	t	n-tetratriacontane (C34)	0.997	0.996	0.1	105	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172205.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 1:32 pm
Operator : FID17:WR
Sample : WG1593355-8
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 10:56:46 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.946	1.004	-6.1	105	0.00
37 t	n-Hexatriacontane (C36)	1.118	1.078	3.6	105	0.00
38 t	n-Heptatriacontane (C37)	1.022	0.989	3.2	105	0.00
39 t	n-Octatriacontane (C38)	1.040	1.016	2.3	104	0.00
41 t	n-Tetracontane (C40)	1.029	0.990	3.8	101	0.00

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.07	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172205.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 1:32 pm
Operator : FID17:WR
Sample : WG1593355-8
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 10:56:46 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.017	55291733	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.015	60117309	49.233 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 98.47%	
24) s d50-Tetracosane	35.650	47867816	48.672 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 97.34%	
Target Compounds			
2) t n-Octane (C8)	5.491	47195295	53.136 ug/mL M4
3) t n-Nonane (C9)	7.666	48721896	52.960 ug/mL M4
4) t n-Decane (C10)	10.132	50482910	53.831 ug/mL M4
5) t n-Undecane (C11)	12.633	50474714	52.558 ug/mL M4
6) t n-Dodecane (C12)	15.051	51375677	52.083 ug/mL M4
7) t n-Tridecane (C13)	17.351	52294436	51.748 ug/mL M4
9) t n-Tetradecane (C14)	19.527	53426167	51.349 ug/mL M4
11) t n-Pentadecane (C15)	21.586	52943063	50.812 ug/mL M4
12) t n-Hexadecane (C16)	23.538	53752889	51.084 ug/mL M4
14) t n-Heptadecane (C17)	25.392	53462026	51.770 ug/mL M4
15) t Pristane	25.501	56255939	50.575 ug/mL M4
16) t n-Octadecane (C18)	27.155	55230947	51.396 ug/mL M4
17) t Phytane	27.315	52064036	51.220 ug/mL M4
18) t n-Nonadecane (C19)	28.832	54493936	50.586 ug/mL M4
20) t n-Eicosane (C20)	30.435	55806110	51.085 ug/mL M4
21) t n-Heneicosane (C21)	31.967	55618799	50.730 ug/mL M4
22) t n-Docosane (C22)	33.434	56372465	51.138 ug/mL M4
23) t n-Tricosane (C23)	34.842	56382607	50.923 ug/mL M4
25) t n-Tetracosane (C24)	36.195	53273775	48.627 ug/mL M4
26) t n-Pentacosane (C25)	37.495	55242791	50.888 ug/mL M4
27) t n-Hexacosane (C26)	38.747	56737288	50.919 ug/mL M4
28) t n-Heptacosane (C27)	39.955	54607801	49.388 ug/mL M4
29) t n-Octacosane (C28)	41.120	56902691	50.068 ug/mL M4
30) t n-Nonacosane (C29)	42.247	56500083	50.206 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172205.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 1:32 pm
Operator : FID17:WR
Sample : WG1593355-8
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 53 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 10:56:46 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

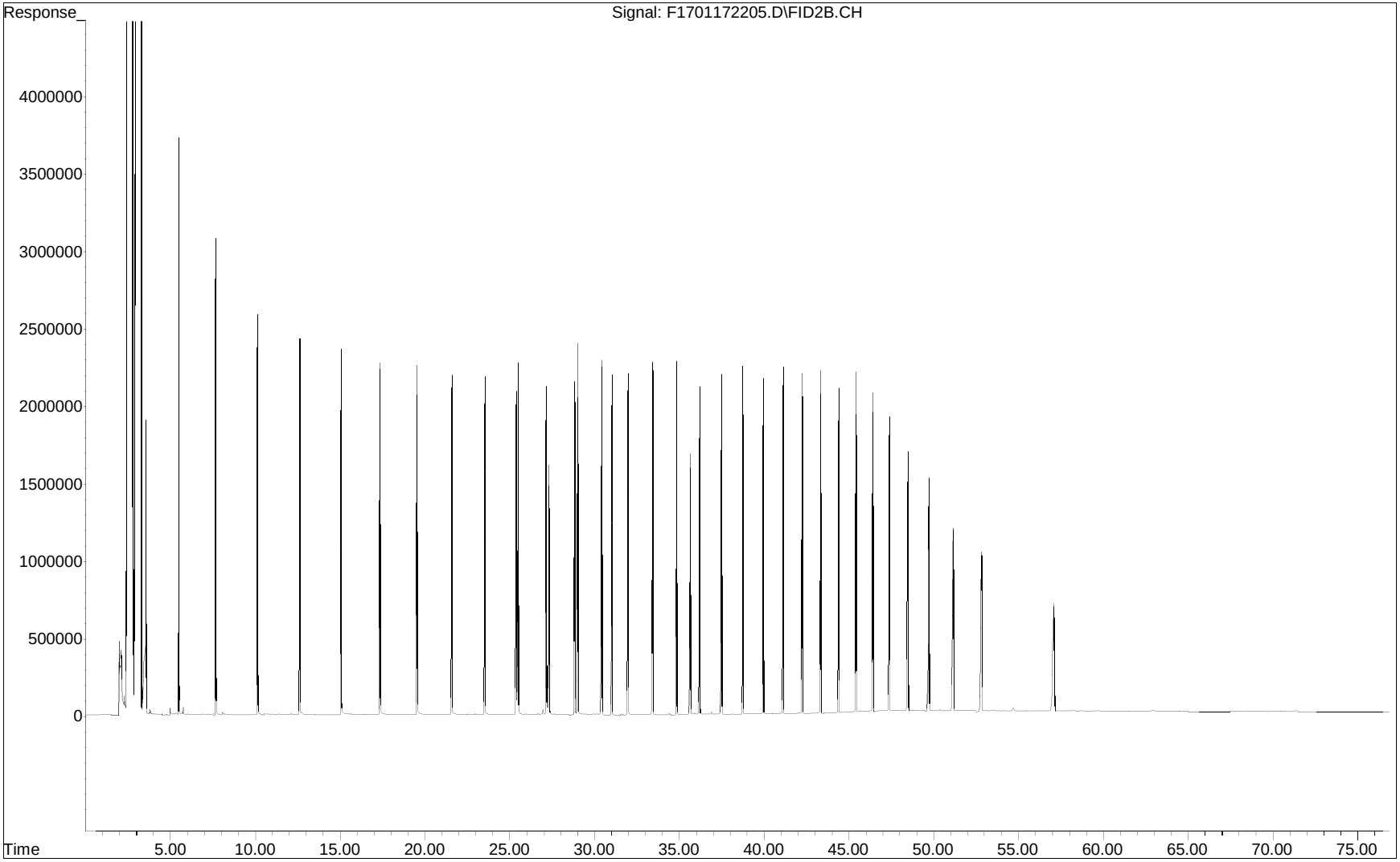
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.338	56525988	50.121 ug/mL M4
32) t	n-Hentriacontane (C31)	44.393	54652359	50.113 ug/mL M4
33) t	n-Dotriacontane (C32)	45.419	57221224	50.143 ug/mL M4
34) t	n-Tritriacontane (C33)	46.408	55269178	49.979 ug/mL M4
35) t	n-tetratriacontane (C34)	47.390	55045102	49.912 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.476	55489342	53.020 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.718	59602491	48.220 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.145	54659631	48.359 ug/mL M4
39) t	n-Octatriacontane (C38)	52.810	56171792	48.839 ug/mL M4
41) t	n-Tetracontane (C40)	57.073	54732459	48.109 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\F1701172205.D
Operator : FID17:WR
Acquired : 17 Jan 2022 1:32 pm using AcqMethod FID17A.M
Sample Name: WG1593355-8
Instrument: FID17
Misc Info : WG1593355,FRBE45,ICAL18568
Vial Number: 53
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M



Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172213.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 7:28 pm
Operator : FID17:WR
Sample : WG1593355-9
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 57 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 11:09:50 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	5-alpha-androstane	1.000	1.000	0.0	101	0.00
2	t	n-Octane (C8)	0.803	0.858	-6.8	107	0.00
3	t	n-Nonane (C9)	0.832	0.877	-5.4	103	0.00
4	t	n-Decane (C10)	0.848	0.915	-7.9	105	0.00
5	t	n-Undecane (C11)	0.868	0.930	-7.1	101	0.00
6	t	n-Dodecane (C12)	0.892	0.937	-5.0	101	0.00
7	t	n-Tridecane (C13)	0.914	0.946	-3.5	101	0.00
9	t	n-Tetradecane (C14)	0.941	0.966	-2.7	101	0.00
11	t	n-Pentadecane (C15)	0.942	0.956	-1.5	100	0.00
12	t	n-Hexadecane (C16)	0.952	0.969	-1.8	100	0.00
14	t	n-Heptadecane (C17)	0.934	0.963	-3.1	99	0.00
15	t	Pristane	1.006	1.017	-1.1	102	0.00
16	t	n-Octadecane (C18)	0.972	0.995	-2.4	100	0.00
17	t	Phytane	0.919	0.945	-2.8	102	0.00
18	t	n-Nonadecane (C19)	0.974	0.984	-1.0	100	0.00
19	s	ortho-terphenyl	1.104	1.086	1.6	89	0.00
20	t	n-Eicosane (C20)	0.988	1.011	-2.3	101	0.00
21	t	n-Heneicosane (C21)	0.991	1.006	-1.5	101	0.00
22	t	n-Docosane (C22)	0.997	1.021	-2.4	101	0.00
23	t	n-Tricosane (C23)	1.001	1.023	-2.2	101	0.00
24	s	d50-Tetracosane	0.889	0.867	2.5	89	0.00
25	t	n-Tetracosane (C24)	0.991	0.966	2.5	101	0.00
26	t	n-Pentacosane (C25)	0.982	1.000	-1.8	101	0.00
27	t	n-Hexacosane (C26)	1.008	1.029	-2.1	101	0.00
28	t	n-Heptacosane (C27)	1.000	0.991	0.9	101	0.00
29	t	n-Octacosane (C28)	1.028	1.033	-0.5	101	0.00
30	t	n-Nonacosane (C29)	1.018	1.025	-0.7	101	0.00
31	t	n-Triacontane (C30)	1.020	1.027	-0.7	101	0.00
32	t	n-Hentriacontane (C31)	0.986	0.995	-0.9	102	0.00
33	t	n-Dotriacontane (C32)	1.032	1.040	-0.8	102	0.00
34	t	n-Tritriacontane (C33)	1.000	1.003	-0.3	102	0.00
35	t	n-tetratriacontane (C34)	0.997	0.997	0.0	102	0.00

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172213.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 7:28 pm
Operator : FID17:WR
Sample : WG1593355-9
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 57 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 11:09:50 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
36 t	n-Pentatriacontane (C35)	0.946	1.003	-6.0	102	0.00
37 t	n-Hexatriacontane (C36)	1.118	1.073	4.0	102	0.00
38 t	n-Heptatriacontane (C37)	1.022	0.982	3.9	102	0.00
39 t	n-Octatriacontane (C38)	1.040	1.003	3.6	100	0.00
41 t	n-Tetracontane (C40)	1.029	0.959	6.8	96	-0.01

Evaluate Continuing Calibration Report - Not Founds

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Mass Discrimination (Response)	Ratio	Range Limits
n-Hexatriacontane (C36) to n-Eicosane (C20)	1.06	0.70 - 1.30

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172213.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 7:28 pm
Operator : FID17:WR
Sample : WG1593355-9
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 57 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 11:09:50 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I 5-alpha-androstane	31.014	53823683	50.000 ug/mL M4
System Monitoring Compounds			
19) s ortho-terphenyl	29.011	58434781	49.160 ug/mL m
Spiked Amount 50.000	Range 50 - 130	Recovery = 98.32%	
24) s d50-Tetracosane	35.645	46679230	48.758 ug/mL M4
Spiked Amount 50.000	Range 50 - 130	Recovery = 97.52%	
Target Compounds			
2) t n-Octane (C8)	5.490	46176626	53.407 ug/mL M4
3) t n-Nonane (C9)	7.664	47214257	52.721 ug/mL M4
4) t n-Decane (C10)	10.130	49231434	53.929 ug/mL M4
5) t n-Undecane (C11)	12.631	50031986	53.518 ug/mL M4
6) t n-Dodecane (C12)	15.049	50435350	52.525 ug/mL M4
7) t n-Tridecane (C13)	17.349	50934481	51.777 ug/mL M4
9) t n-Tetradecane (C14)	19.526	51969373	51.311 ug/mL M4
11) t n-Pentadecane (C15)	21.585	51436365	50.712 ug/mL M4
12) t n-Hexadecane (C16)	23.535	52155528	50.918 ug/mL M4
14) t n-Heptadecane (C17)	25.390	51820843	51.550 ug/mL M4
15) t Pristane	25.499	54746981	50.561 ug/mL M4
16) t n-Octadecane (C18)	27.152	53569648	51.210 ug/mL M4
17) t Phytane	27.313	50869903	51.410 ug/mL M4
18) t n-Nonadecane (C19)	28.832	52965579	50.508 ug/mL M4
20) t n-Eicosane (C20)	30.431	54434833	51.189 ug/mL M4
21) t n-Heneicosane (C21)	31.962	54134213	50.723 ug/mL M4
22) t n-Docosane (C22)	33.432	54965434	51.221 ug/mL M4
23) t n-Tricosane (C23)	34.839	55058223	51.084 ug/mL M4
25) t n-Tetracosane (C24)	36.192	51971912	48.732 ug/mL M4
26) t n-Pentacosane (C25)	37.493	53836844	50.945 ug/mL M4
27) t n-Hexacosane (C26)	38.744	55359896	51.038 ug/mL M4
28) t n-Heptacosane (C27)	39.949	53362470	49.578 ug/mL M4
29) t n-Octacosane (C28)	41.117	55592708	50.249 ug/mL M4
30) t n-Nonacosane (C29)	42.243	55178173	50.368 ug/mL M4

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172213.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 7:28 pm
Operator : FID17:WR
Sample : WG1593355-9
Misc : WG1593355,FRBE45,ICAL18568
ALS Vial : 57 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 11:09:50 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

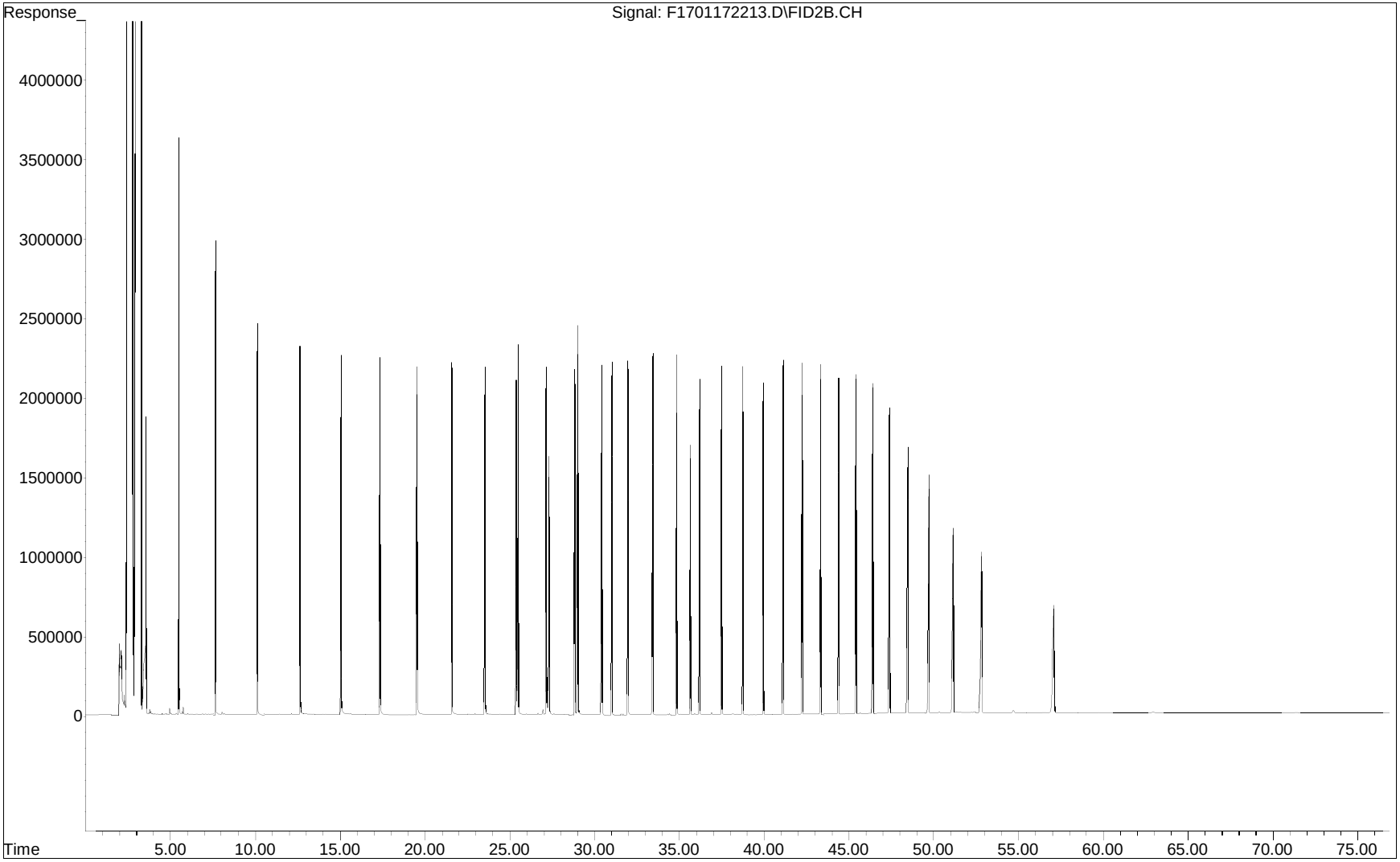
	Compound	R.T.	Response	Conc Units
31) t	n-Triacontane (C30)	43.334	55268219	50.342 ug/mL M4
32) t	n-Hentriacontane (C31)	44.387	53555340	50.447 ug/mL M4
33) t	n-Dotriacontane (C32)	45.410	56001318	50.413 ug/mL M4
34) t	n-Tritriacontane (C33)	46.404	53983764	50.148 ug/mL M4
35) t	n-tetratriacontane (C34)	47.384	53675122	49.997 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.470	53992408	52.997 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.712	57778998	48.020 ug/mL M4
38) t	n-Heptatriacontane (C37)	51.137	52863496	48.046 ug/mL M4
39) t	n-Octatriacontane (C38)	52.806	53960058	48.195 ug/mL M4
41) t	n-Tetracontane (C40)	57.061	51599792	46.593 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\F1701172213.D
Operator : FID17:WR
Acquired : 17 Jan 2022 7:28 pm using AcqMethod FID17A.M
Sample Name: WG1593355-9
Instrument: FID17
Misc Info : WG1593355,FRBE45,ICAL18568
Vial Number: 57
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M



Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172211.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 5:59 pm
Operator : FID17:WR
Sample : L2200971-01D,42,5
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 56 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 11:02:29 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701172201R
Blank File : F1701172209.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.010	52941201	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	28.984	2637186	2.256	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	4.51%#		
24) s	d50-Tetracosane	35.636	2016687	2.142	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	4.28%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	d
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	d
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	d
5) t	n-Undecane (C11)	12.629	43782912	47.615	ug/mL	M4
6) t	n-Dodecane (C12)	15.048	43131285	45.667	ug/mL	M4
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	d
8) t	1380	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	d
10) t	1470	0.000	0	N.D.	ug/mL	d
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	d
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	d
13) t	1650	0.000	0	N.D.	ug/mL	d
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	d
15) t	Pristane	0.000	0	N.D.	ug/mL	d
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	d
17) t	Phytane	0.000	0	N.D.	ug/mL	d
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	d
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	d
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	d
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	d

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172211.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 5:59 pm
Operator : FID17:WR
Sample : L2200971-01D,42,5
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 56 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 11:02:29 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701172201R
Blank File : F1701172209.D

Sub List : Default - All compounds listed

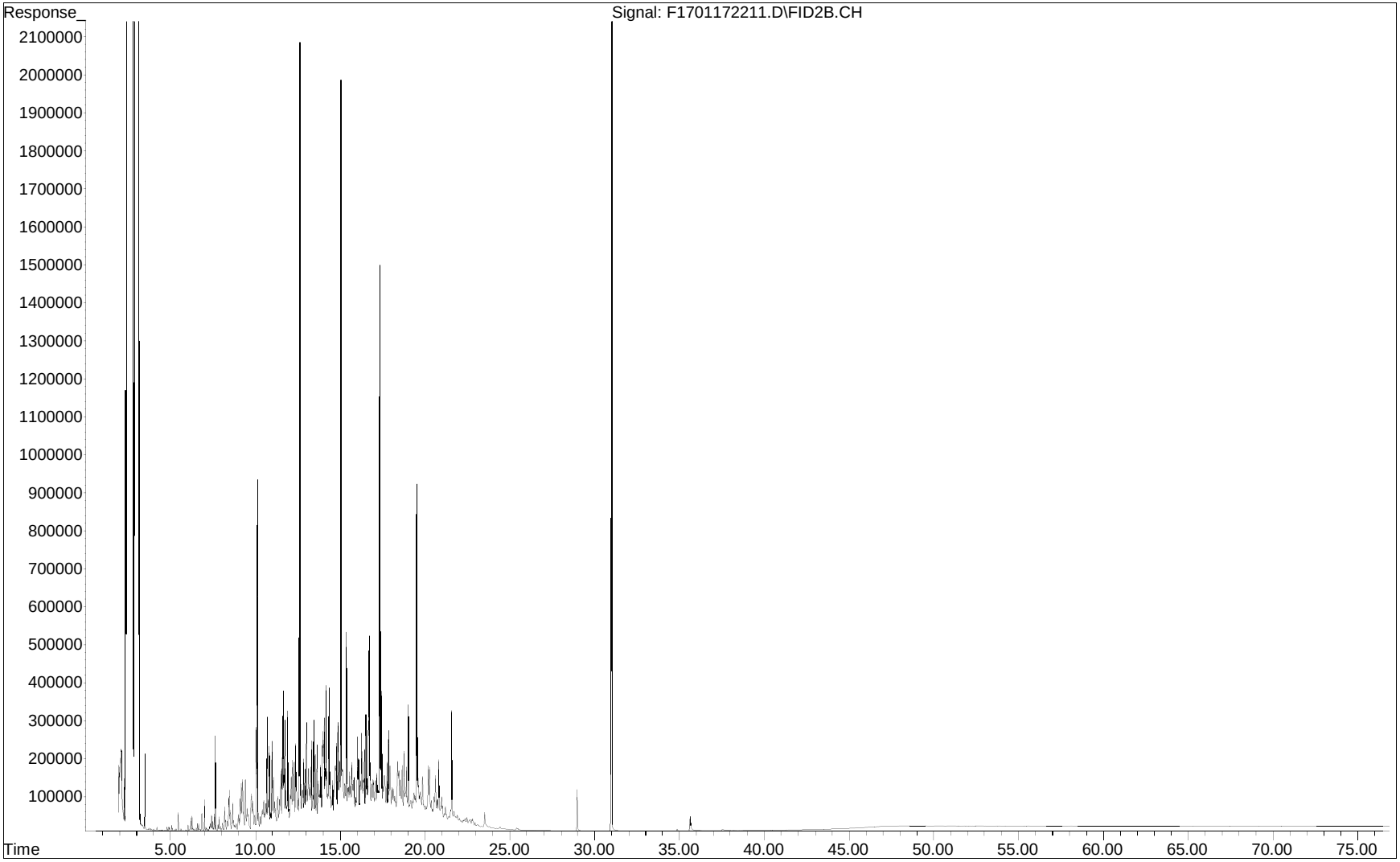
	Compound	R.T.	Response	Conc	Units
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL d
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL d
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL d
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL d
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL d
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL d
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL d
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL d
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL d
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL d
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL d
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL d
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL d
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL
42) h	C9-C44 Total Petroleu...	39.505	1287310474	1246.505	ug/mL m
42) h	C9-C44 Total Petroleu BS	39.505	990445390	959.050	ug/mLm
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml d
43) h	C9-C40 Total Petroleu BS	0.000	-110767550	N.D.	ug/mld
44) h	C10-C28 DRO	25.616	988854527	973.803	ug/mL m
44) h	C10-C28 DRO BS	25.616	969005560	954.256	ug/mLm
45) h	C28-C40 ORO	49.057	100959883	93.449	ug/mL m
45) h	C28-C40 ORO BS	49.057	-11805957	N.D.	ug/mLm
46) h	Total Resolved Hydroc...	37.870	721286534	698.423	ug/mL m

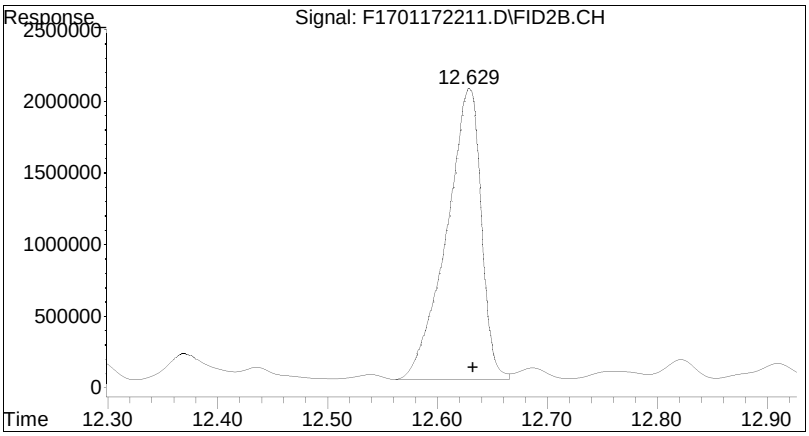
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

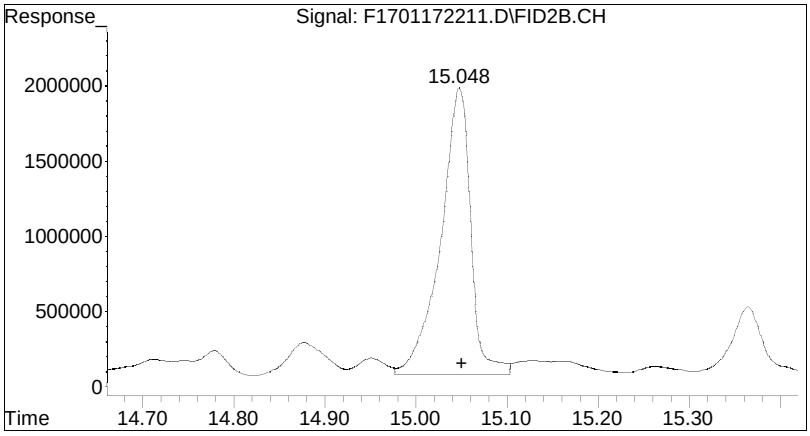
File :O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\F1701172211.D
Operator : FID17:WR
Acquired : 17 Jan 2022 5:59 pm using AcqMethod FID17A.M
Sample Name: L2200971-01D,42,5
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 56
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M





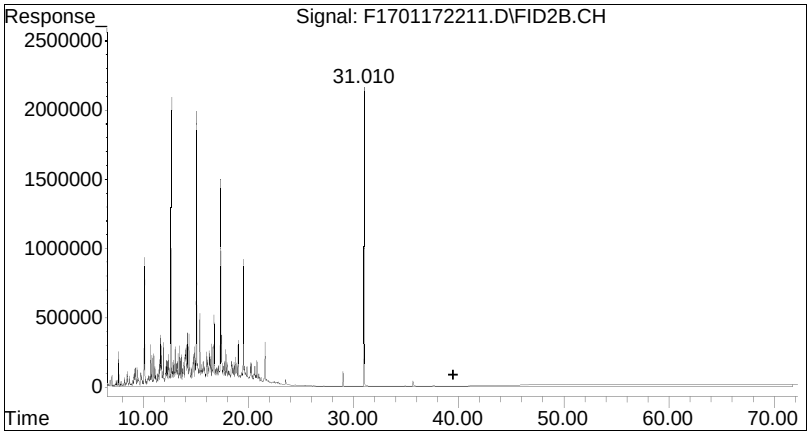
#5 n-Undecane (C11)

R.T.: 12.629 min
Delta R.T.: -0.004 min
Response: 43782912
Conc: 47.61 ug/mL M4



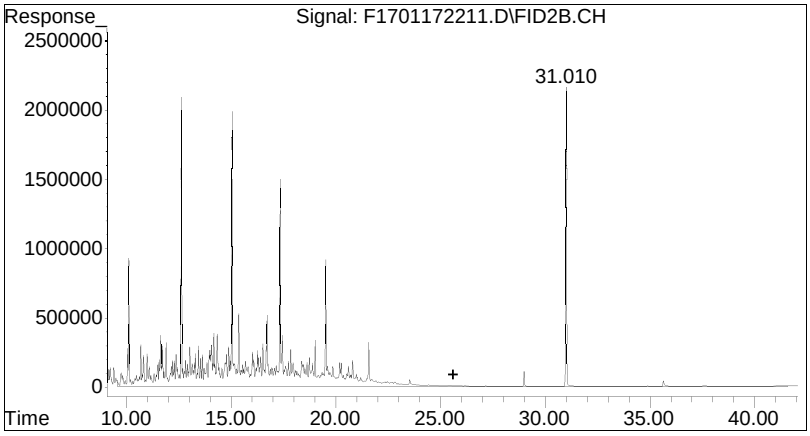
#6 n-Dodecane (C12)

R.T.: 15.048 min
Delta R.T.: -0.003 min
Response: 43131285
Conc: 45.67 ug/mL M4



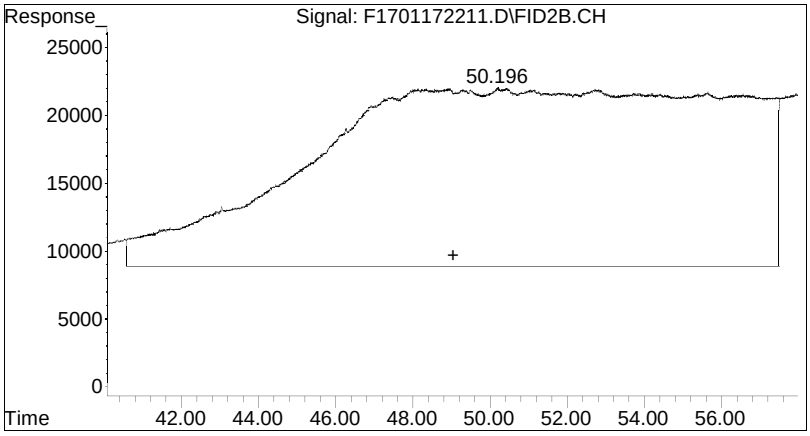
#42 C9-C44 Total Petroleum Hy

R.T.: 39.505 min
Delta R.T.: 0.000 min
Response: 1287310474
Conc: 1246.51 ug/mL m



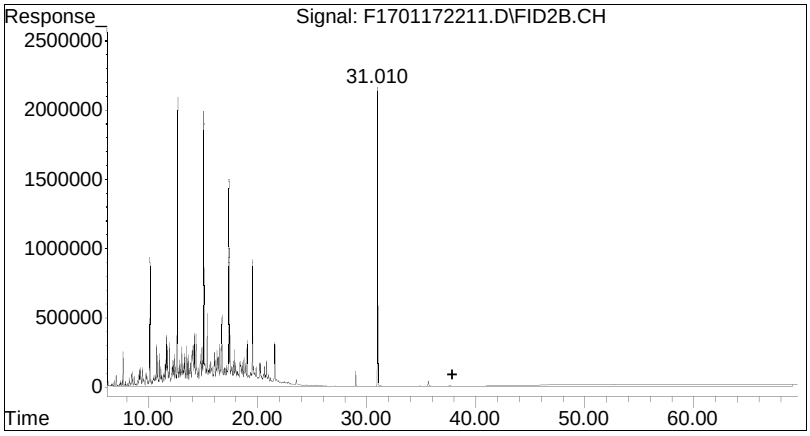
#44 C10-C28 DRO

R.T.: 25.616 min
Delta R.T.: 0.000 min
Response: 988854527
Conc: 973.80 ug/mL m



#45 C28-C40 ORO

R.T.: 49.057 min
Delta R.T.: 0.000 min
Response: 100959883
Conc: 93.45 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 721286534
Conc: 698.42 ug/mL m

Batch Quality Control

Method Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122263.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 5:33 pm
Operator : FID17:WR
Sample : WG1594071-1,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 82 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 12:29:51 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.006	50175713	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	28.989	15624566	14.100	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	28.20%#		
24) s	d50-Tetracosane	35.623	12306975	13.790	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	27.58%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	27.150	249816C	0.256	ug/mL	M4
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	d

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122263.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 5:33 pm
Operator : FID17:WR
Sample : WG1594071-1,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 82 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 12:29:51 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : Default - All compounds listed

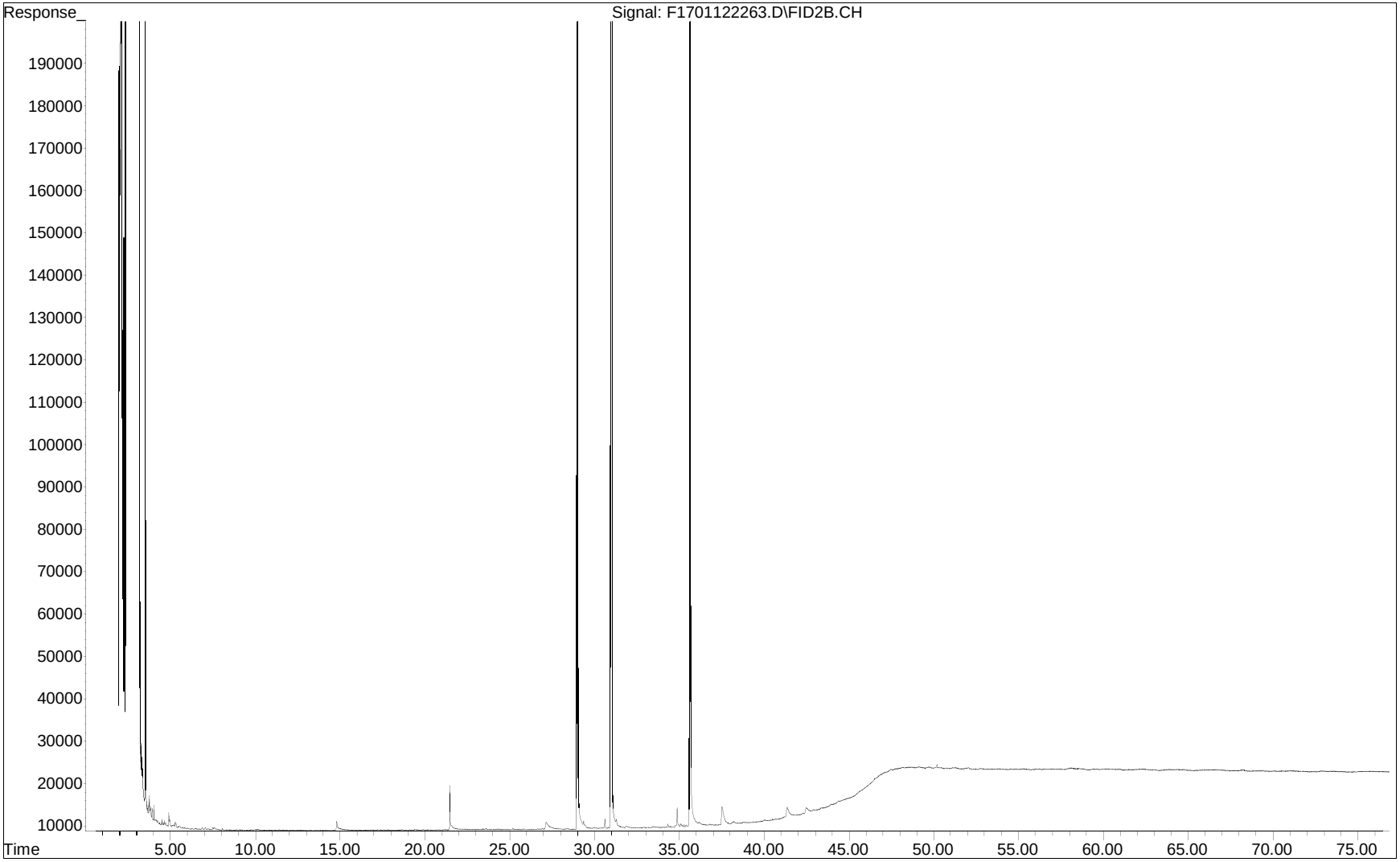
		Compound	R.T.	Response	Conc	Units	
25)	t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26)	t	n-Pentacosane (C25)	37.547	540108C	0.548	ug/mL	M4
27)	t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28)	t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29)	t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30)	t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31)	t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32)	t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33)	t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34)	t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35)	t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36)	t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37)	t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38)	t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39)	t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40)	t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41)	t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42)	h	C9-C44 Total Petroleu...	39.408	309504568	316.212	ug/mL	m
42)	h	C9-C44 Total Petroleu BS	39.408	-7933430	N.D.	ug/mL	m
43)	h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d
43)	h	C9-C40 Total Petroleu BS	0.000	-114718724	N.D.	ug/mld	
44)	h	C10-C28 DRO	25.609	34507693	35.855	ug/mL	m
44)	h	C10-C28 DRO BS	25.609	3896651	4.049	ug/mL	m
45)	h	C28-C40 ORO	49.014	119005483	116.223	ug/mL	m
45)	h	C28-C40 ORO BS	49.014	-5730584	N.D.	ug/mL	m
46)	h	Total Resolved Hydroc...	37.870	3796471	3.879	ug/mL	m

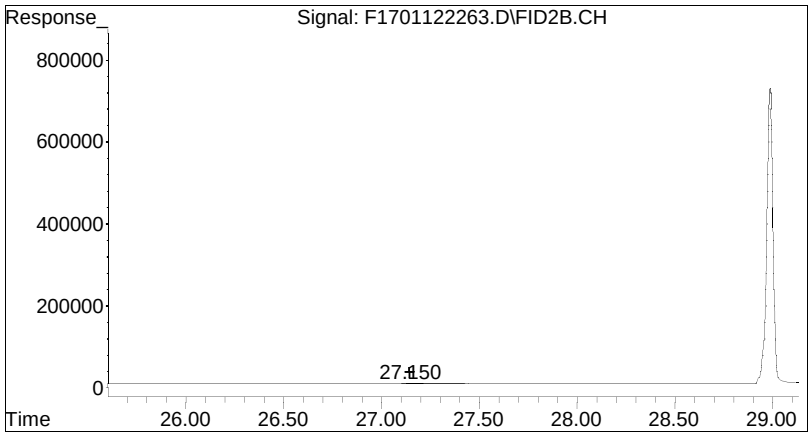
SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

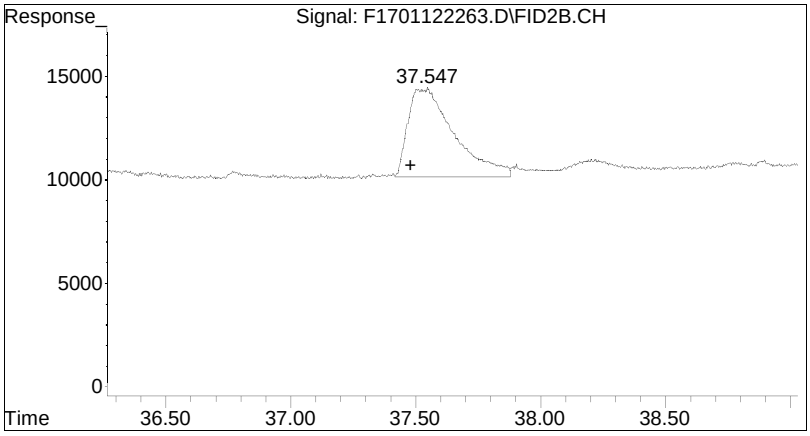
File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122263.D
Operator : FID17:WR
Acquired : 14 Jan 2022 5:33 pm using AcqMethod FID17A.M
Sample Name: WG1594071-1,42,,
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 82
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M





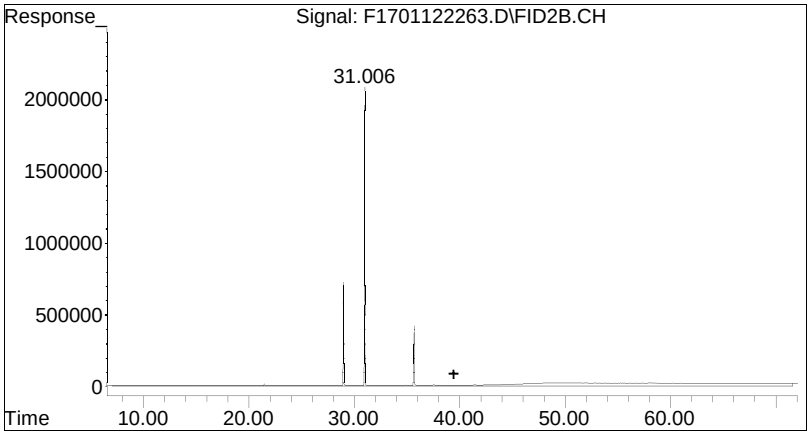
#16 n-Octadecane (C18)

R.T.:	27.150 min
Delta R.T.:	0.004 min
Response:	249816
Conc:	0.26 ug/mL M4



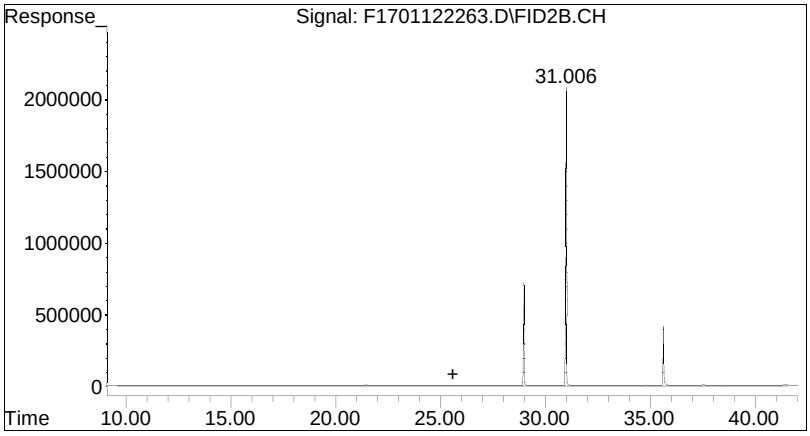
#26 n-Pentacosane (C25)

R.T.:	37.547 min
Delta R.T.:	0.067 min
Response:	540108
Conc:	0.55 ug/mL M4



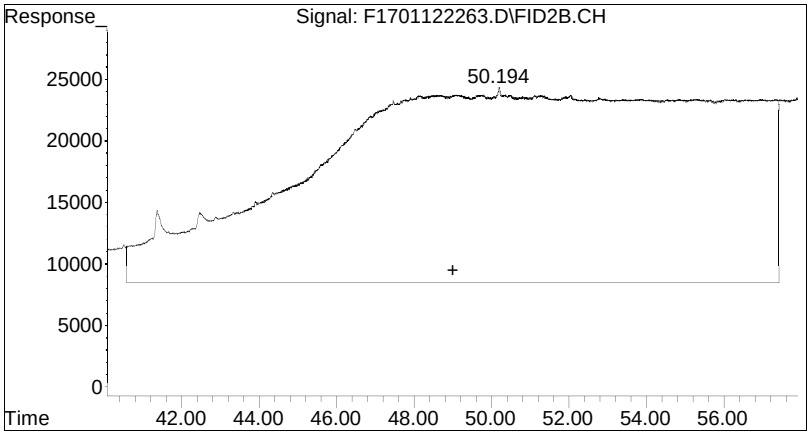
#42 C9-C44 Total Petroleum Hy

R.T.: 39.408 min
Delta R.T.: 0.000 min
Response: 309504568
Conc: 316.21 ug/mL m



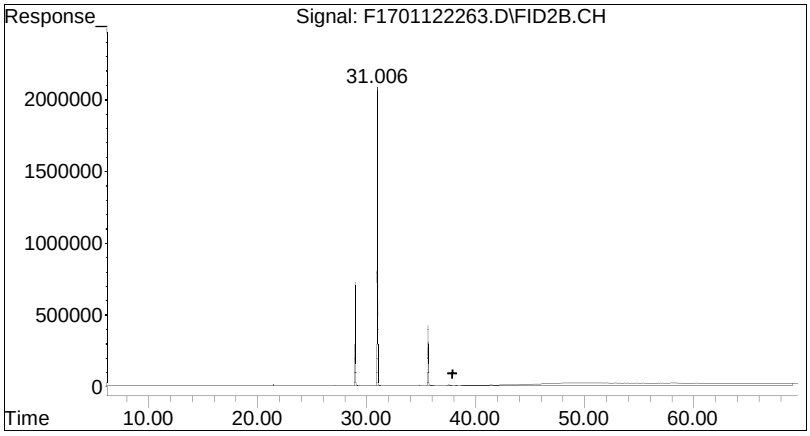
#44 C10-C28 DRO

R.T.:	25.609 min
Delta R.T.:	0.000 min
Response:	34507693
Conc:	35.86 ug/mL m



#45 C28-C40 ORO

R.T.: 49.014 min
Delta R.T.: 0.000 min
Response: 119005483
Conc: 116.22 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.:	37.870 min
Delta R.T.:	0.000 min
Response:	3796471
Conc:	3.88 ug/mL m

LCS Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122265.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 7:02 pm
Operator : FID17:WR
Sample : WG1594071-2,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 83 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:41:22 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.004	50291344	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	28.986	16168952	14.558 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	29.12%#
24) s	d50-Tetracosane	35.623	12641828	14.132 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	28.26%#
	Target Compounds			
3) t	n-Nonane (C9)	7.641	4743126	5.668 ug/mL M4
4) t	n-Decane (C10)	10.114	4532830	5.314 ug/mL M4
6) t	n-Dodecane (C12)	15.035	4896966	5.458 ug/mL M4
9) t	n-Tetradecane (C14)	19.509	5116389	5.406 ug/mL M4
12) t	n-Hexadecane (C16)	23.518	5638870	5.892 ug/mL M4
16) t	n-Octadecane (C18)	27.130	5874263	6.010 ug/mL M4
18) t	n-Nonadecane (C19)	28.805	5340248	5.450 ug/mL M4
20) t	n-Eicosane (C20)	30.407	5424311	5.459 ug/mL M4
22) t	n-Docosane (C22)	33.406	5668135	5.653 ug/mL M4
25) t	n-Tetracosane (C24)	36.162	5825569	5.846 ug/mL M4
27) t	n-Hexacosane (C26)	38.713	5770441	5.694 ug/mL M4
29) t	n-Octacosane (C28)	41.084	5803113	5.614 ug/mL M4
31) t	n-Triacontane (C30)	43.300	5755681	5.611 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.657	5257027	4.676 ug/mL M4
42) h	C9-C44 Total Petroleu...	39.408	382450214	389.840 ug/mL m
42) h	C9-C44 Total Petroleu BS	39.408	65012216	66.268 ug/mLm
46) h	Total Resolved Hydroc...	37.870	83254476	84.863 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122265.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 7:02 pm
Operator : FID17:WR
Sample : WG1594071-2,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 83 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:41:22 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

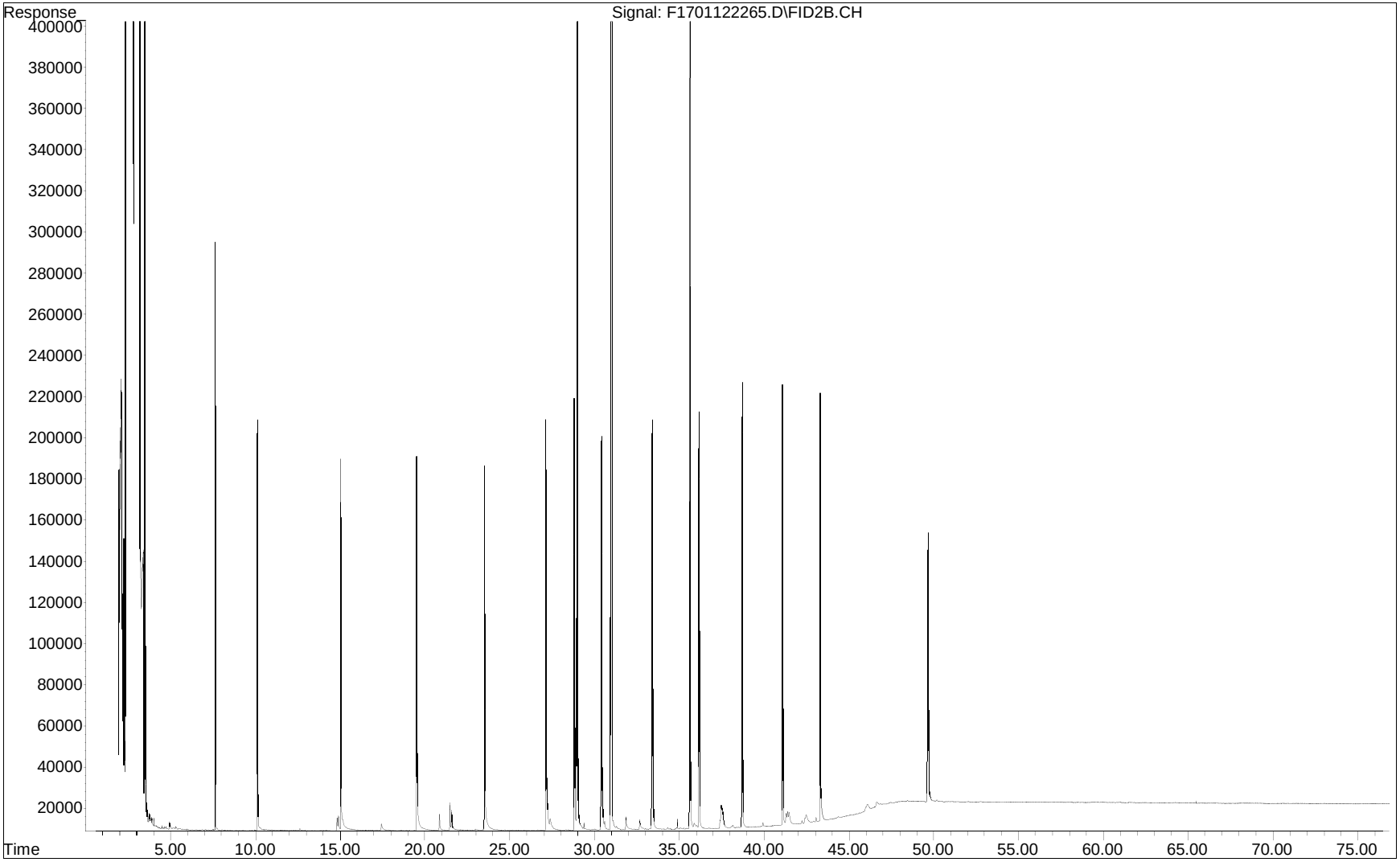
Sub List : SHC_QC_Samples - SHC_QC_Samples

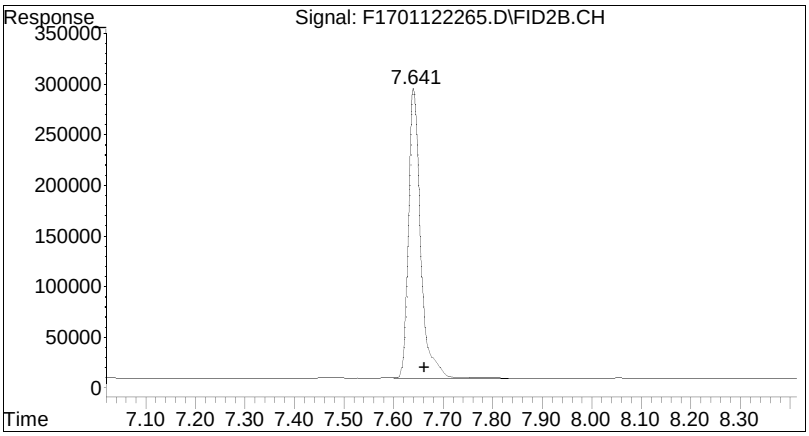
Compound	R.T.	Response	Conc	Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

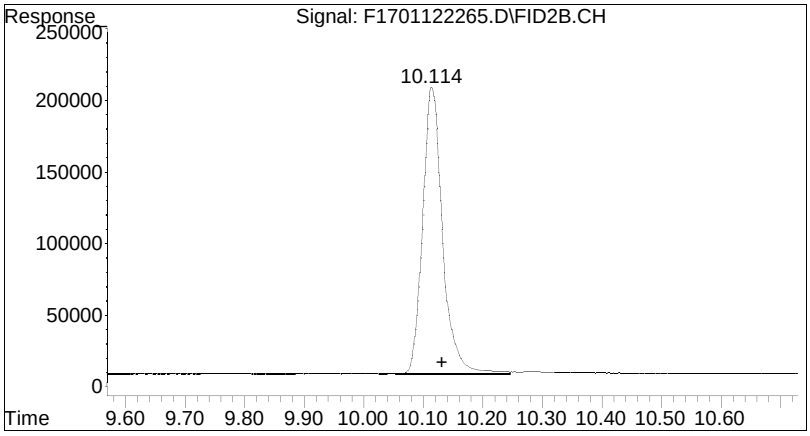
File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122265.D
Operator : FID17:WR
Acquired : 14 Jan 2022 7:02 pm using AcqMethod FID17A.M
Sample Name: WG1594071-2,42,,
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 83
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M





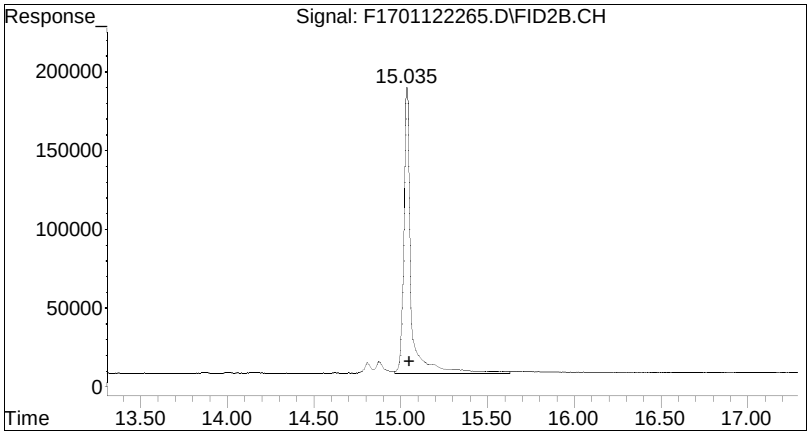
#3 n-Nonane (C9)

R.T.:	7.641 min
Delta R.T.:	-0.022 min
Response:	4743126
Conc:	5.67 ug/mL M4



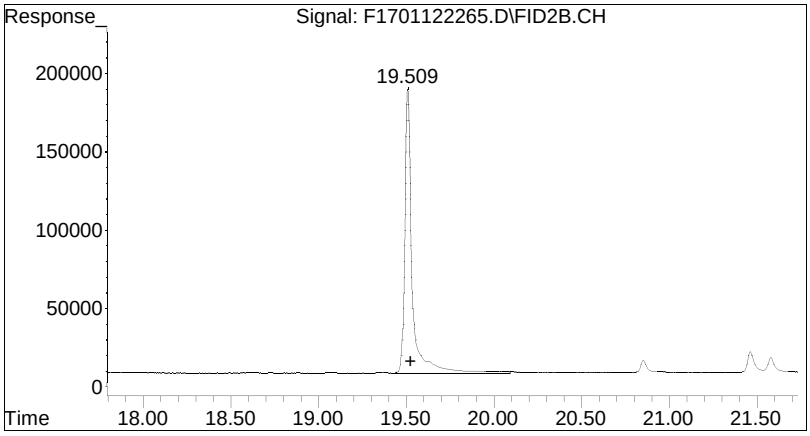
#4 n-Decane (C10)

R.T.:	10.114 min
Delta R.T.:	-0.017 min
Response:	4532830
Conc:	5.31 ug/mL M4



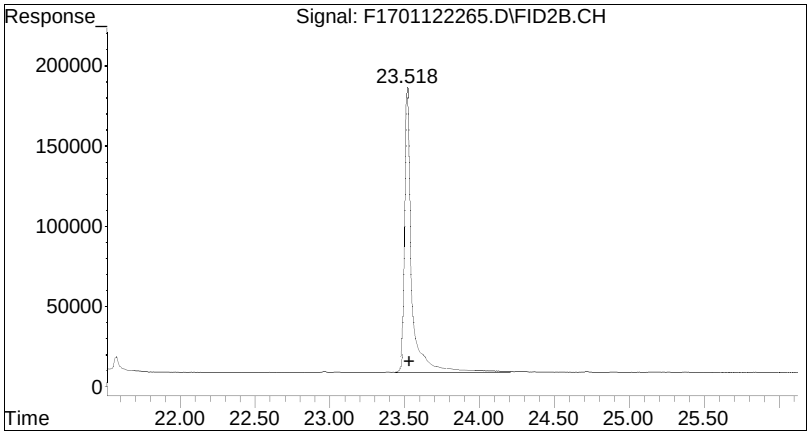
#6 n-Dodecane (C12)

R.T.:	15.035 min
Delta R.T.:	-0.016 min
Response:	4896966
Conc:	5.46 ug/mL M4



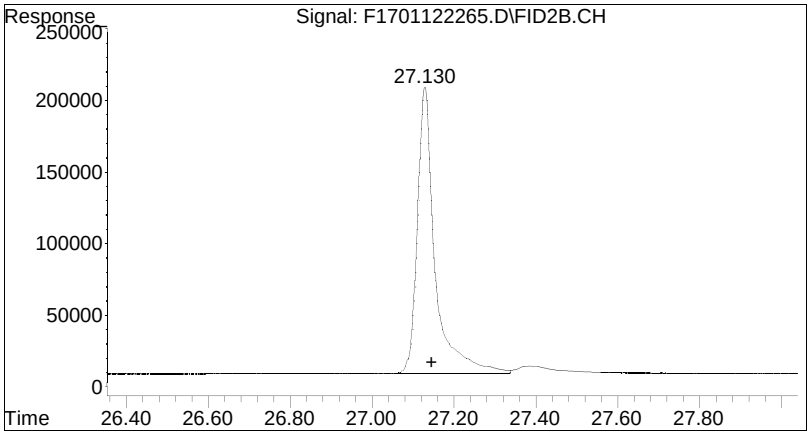
#9 n-Tetradecane (C14)

R.T.:	19.509 min
Delta R.T.:	-0.017 min
Response:	5116389
Conc:	5.41 ug/mL M4



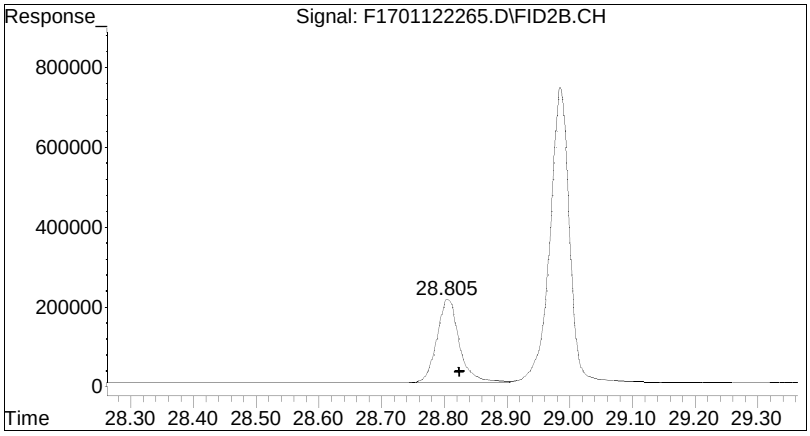
#12 n-Hexadecane (C16)

R.T.:	23.518 min
Delta R.T.:	-0.015 min
Response:	5638870
Conc:	5.89 ug/mL M4



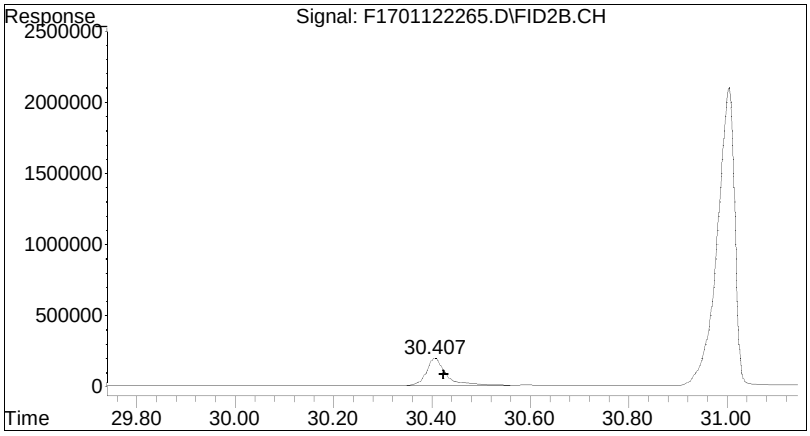
#16 n-Octadecane (C18)

R.T.:	27.130 min
Delta R.T.:	-0.017 min
Response:	5874263
Conc:	6.01 ug/mL M4



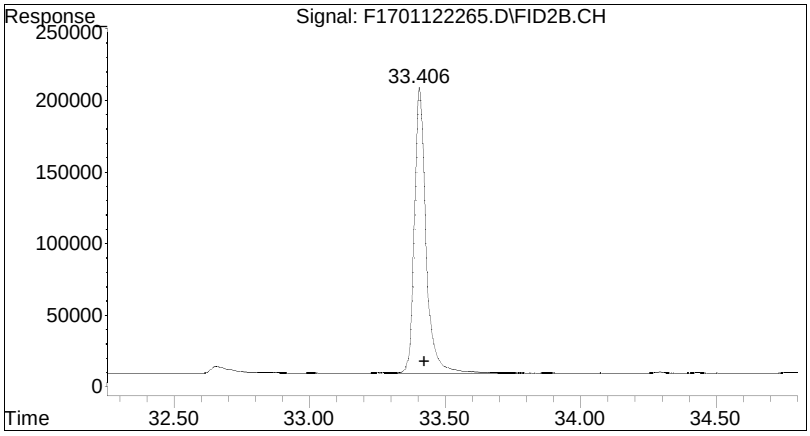
#18 n-Nonadecane (C19)

R.T.:	28.805 min
Delta R.T.:	-0.020 min
Response:	5340248
Conc:	5.45 ug/mL M4



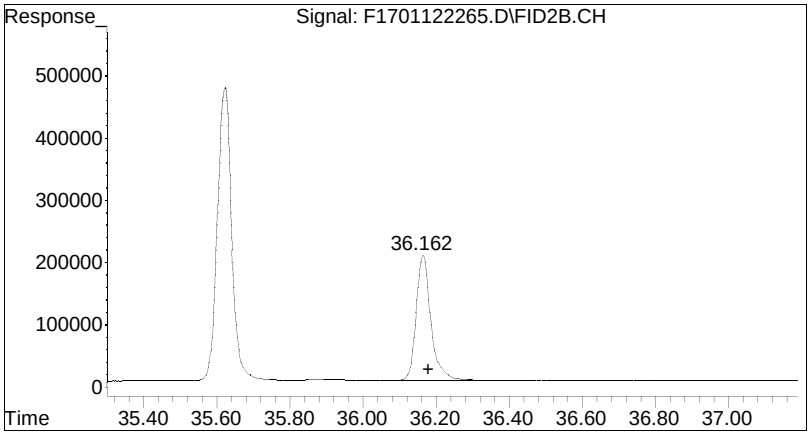
#20 n-Eicosane (C20)

R.T.:	30.407 min
Delta R.T.:	-0.017 min
Response:	5424311
Conc:	5.46 ug/mL M4



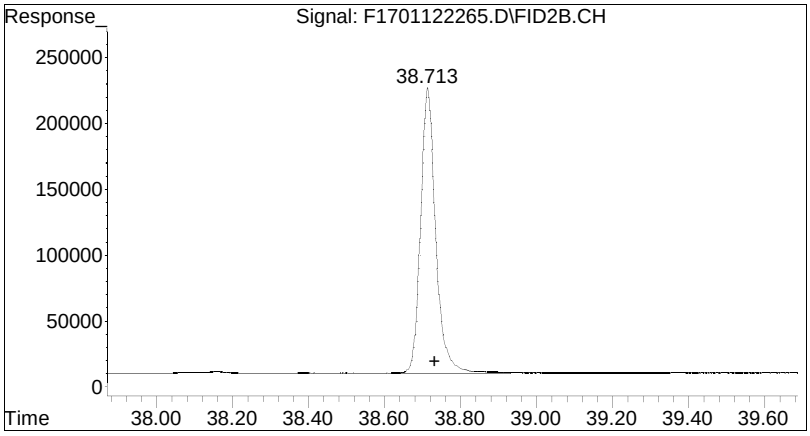
#22 n-Docosane (C22)

R.T.:	33.406 min
Delta R.T.:	-0.018 min
Response:	5668135
Conc:	5.65 ug/mL M4



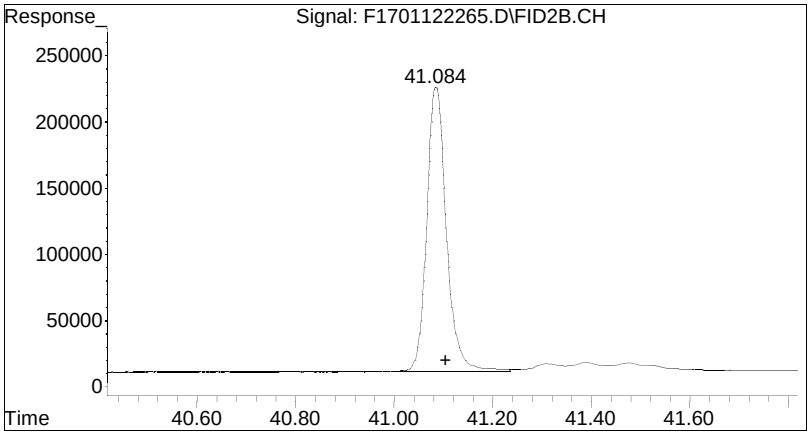
#25 n-Tetracosane (C24)

R.T.:	36.162 min
Delta R.T.:	-0.018 min
Response:	5825569
Conc:	5.85 ug/mL M4



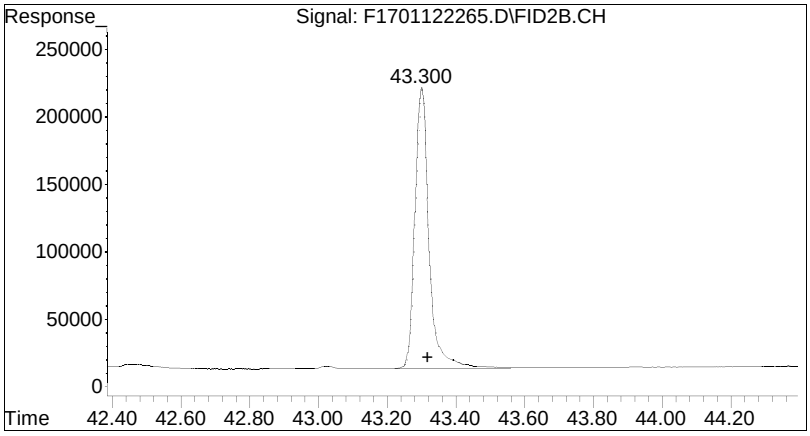
#27 n-Hexacosane (C26)

R.T.:	38.713 min
Delta R.T.:	-0.019 min
Response:	5770441
Conc:	5.69 ug/mL M4



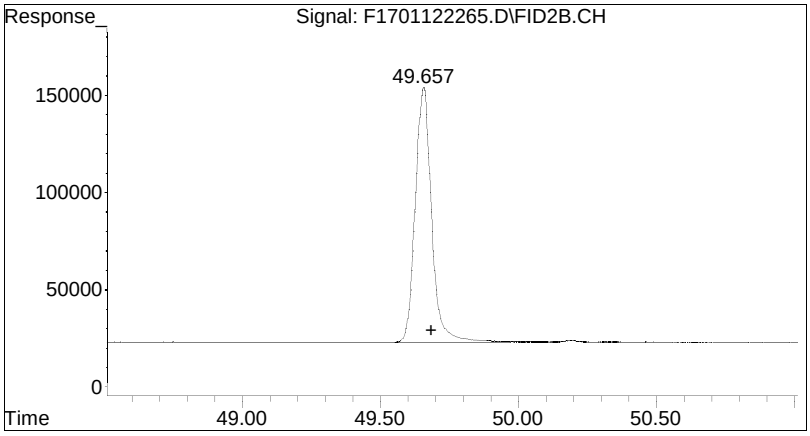
#29 n-Octacosane (C28)

R.T.:	41.084 min
Delta R.T.:	-0.020 min
Response:	5803113
Conc:	5.61 ug/mL M4



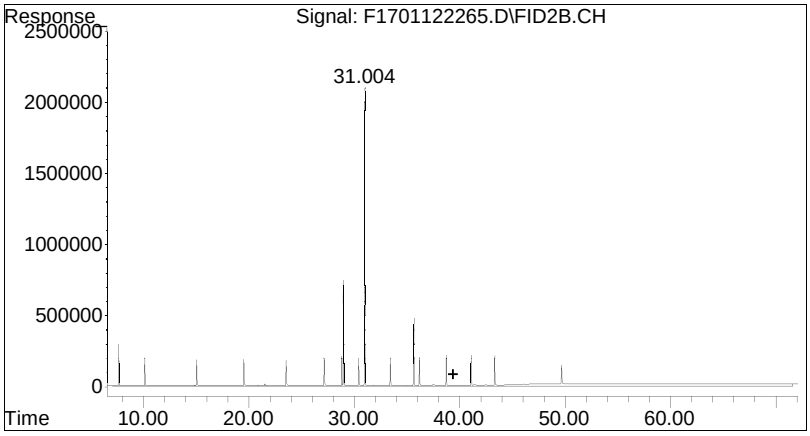
#31 n-Triacontane (C30)

R.T.:	43.300 min
Delta R.T.:	-0.018 min
Response:	5755681
Conc:	5.61 ug/mL M4



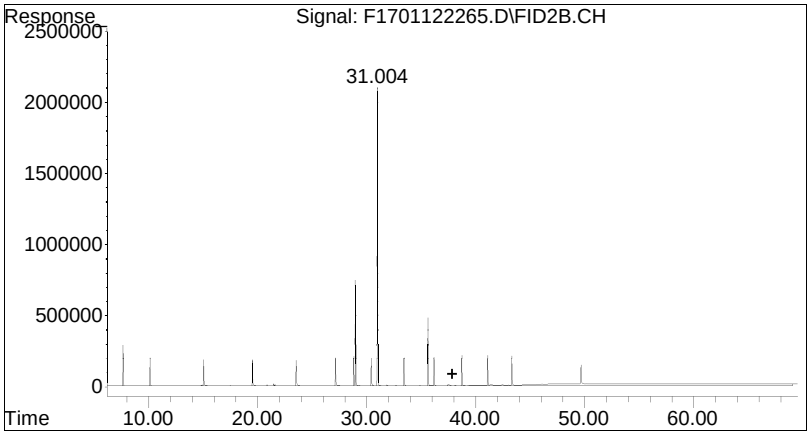
#37 n-Hexatriacontane (C36)

R.T.:	49.657 min
Delta R.T.:	-0.028 min
Response:	5257027
Conc:	4.68 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 39.408 min
Delta R.T.: 0.000 min
Response: 382450214
Conc: 389.84 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 83254476
Conc: 84.86 ug/mL m

LCS Duplicate Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122267.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 8:31 pm
Operator : FID17:WR
Sample : WG1594071-3,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 84 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:41:24 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.006	53064851	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	28.986	14926109	12.737 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	25.47%#
24) s	d50-Tetracosane	35.623	11653549	12.347 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	24.69%#
	Target Compounds			
3) t	n-Nonane (C9)	7.639	4467089	5.059 ug/mL M4
4) t	n-Decane (C10)	10.113	4254348	4.727 ug/mL M4
6) t	n-Dodecane (C12)	15.034	4017481	4.244 ug/mL M4
9) t	n-Tetradecane (C14)	19.509	4784439	4.791 ug/mL M4
12) t	n-Hexadecane (C16)	23.517	5289172	5.238 ug/mL M4
16) t	n-Octadecane (C18)	27.128	5519682	5.352 ug/mL M4
18) t	n-Nonadecane (C19)	28.805	5022579	4.858 ug/mL M4
20) t	n-Eicosane (C20)	30.408	5113789	4.878 ug/mL M4
22) t	n-Docosane (C22)	33.405	5327026	5.035 ug/mL M4
25) t	n-Tetracosane (C24)	36.164	5421711	5.156 ug/mL M4
27) t	n-Hexacosane (C26)	38.713	5423444	5.072 ug/mL M4
29) t	n-Octacosane (C28)	41.087	5391999	4.943 ug/mL M4
31) t	n-Triacontane (C30)	43.300	5410327	4.999 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.652	4865198	4.101 ug/mL M4
42) h	C9-C44 Total Petroleu...	39.408	365337138	352.932 ug/mL m
42) h	C9-C44 Total Petroleu BS	39.408	47899140	46.273 ug/mLm
46) h	Total Resolved Hydroc...	37.870	75980231	73.400 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122267.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 8:31 pm
Operator : FID17:WR
Sample : WG1594071-3,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 84 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:41:24 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

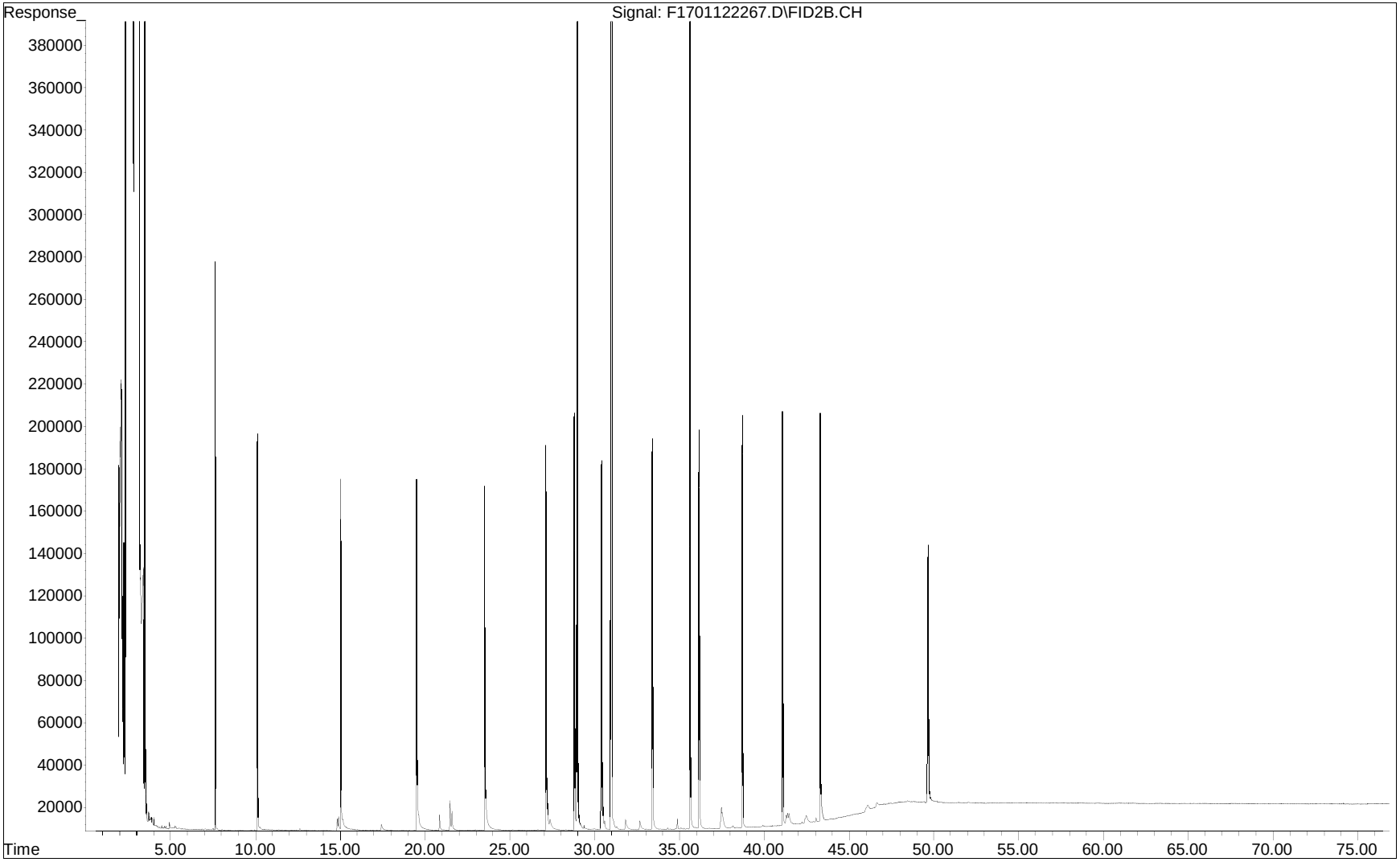
Sub List : SHC_QC_Samples - SHC_QC_Samples

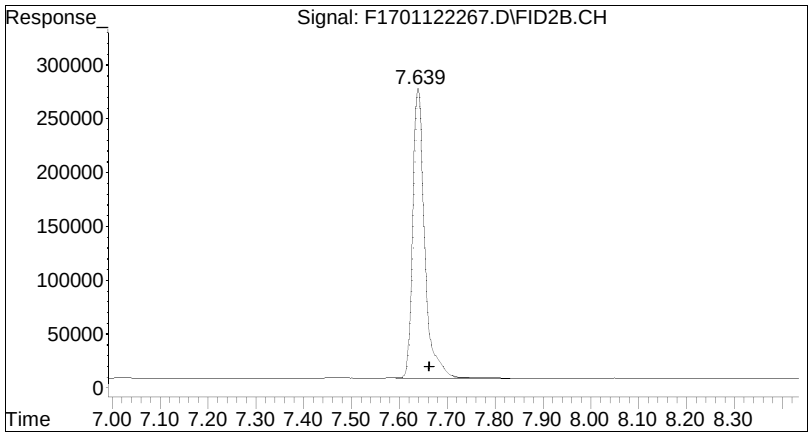
Compound	R.T.	Response	Conc Units

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

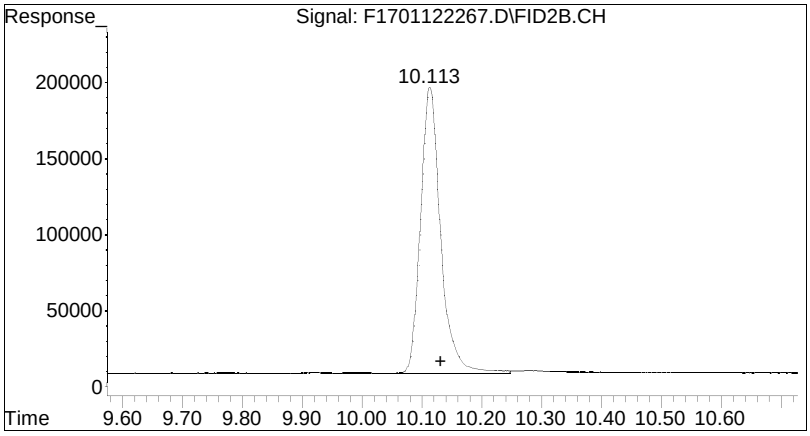
File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122267.D
Operator : FID17:WR
Acquired : 14 Jan 2022 8:31 pm using AcqMethod FID17A.M
Sample Name: WG1594071-3,42,,
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 84
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M





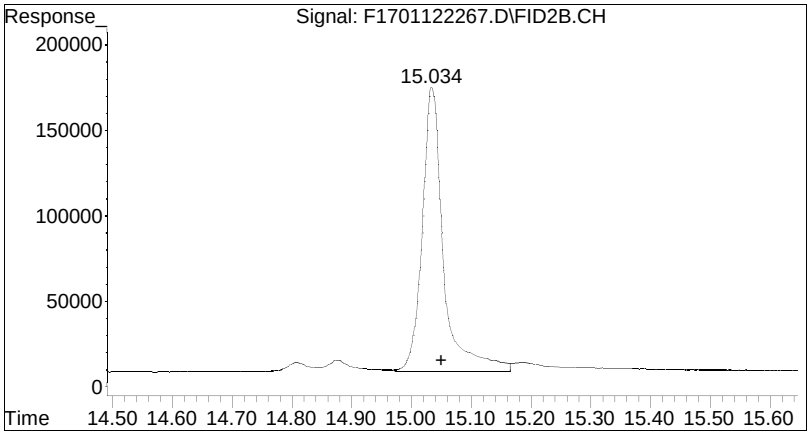
#3 n-Nonane (C9)

R.T.:	7.639 min
Delta R.T.:	-0.024 min
Response:	4467089
Conc:	5.06 ug/mL M4



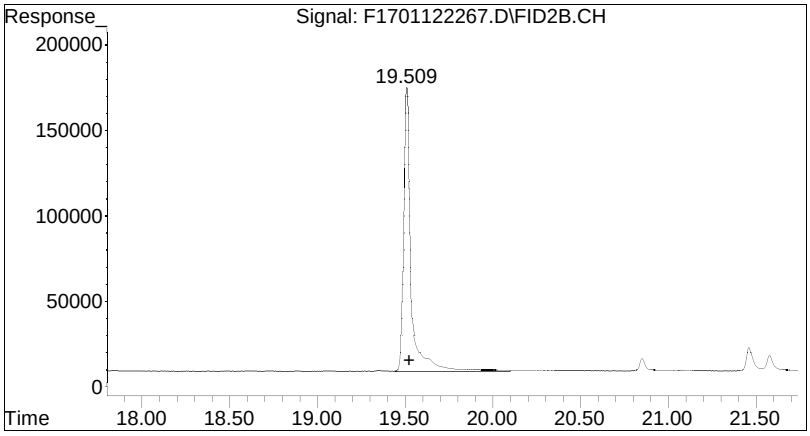
#4 n-Decane (C10)

R.T.:	10.113 min
Delta R.T.:	-0.019 min
Response:	4254348
Conc:	4.73 ug/mL M4



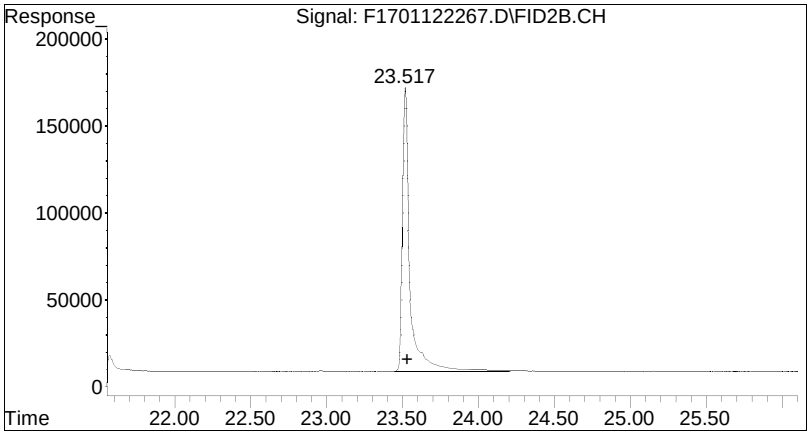
#6 n-Dodecane (C12)

R.T.:	15.034 min
Delta R.T.:	-0.016 min
Response:	4017481
Conc:	4.24 ug/mL M4



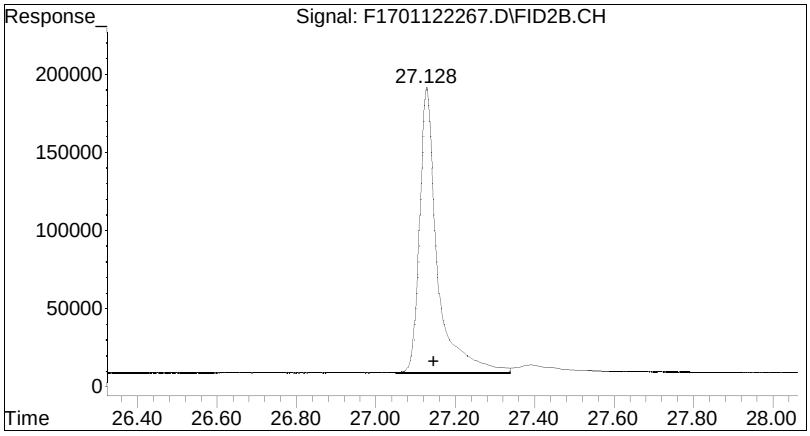
#9 n-Tetradecane (C14)

R.T.:	19.509 min
Delta R.T.:	-0.017 min
Response:	4784439
Conc:	4.79 ug/mL M4



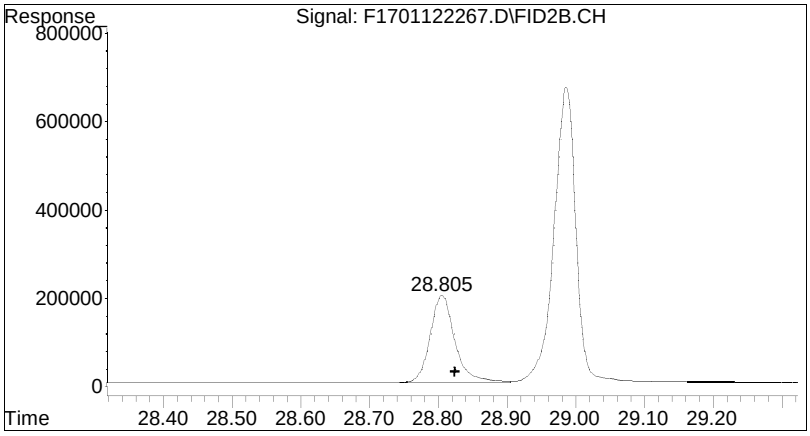
#12 n-Hexadecane (C16)

R.T.:	23.517 min
Delta R.T.:	-0.016 min
Response:	5289172
Conc:	5.24 ug/mL M4



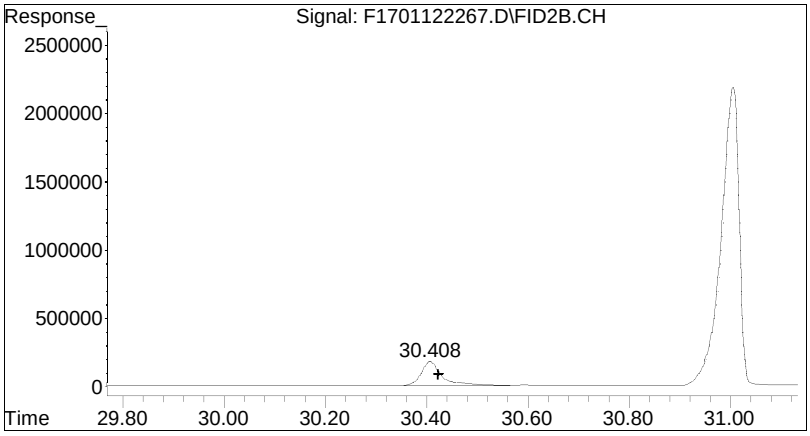
#16 n-Octadecane (C18)

R.T.:	27.128 min
Delta R.T.:	-0.018 min
Response:	5519682
Conc:	5.35 ug/mL M4



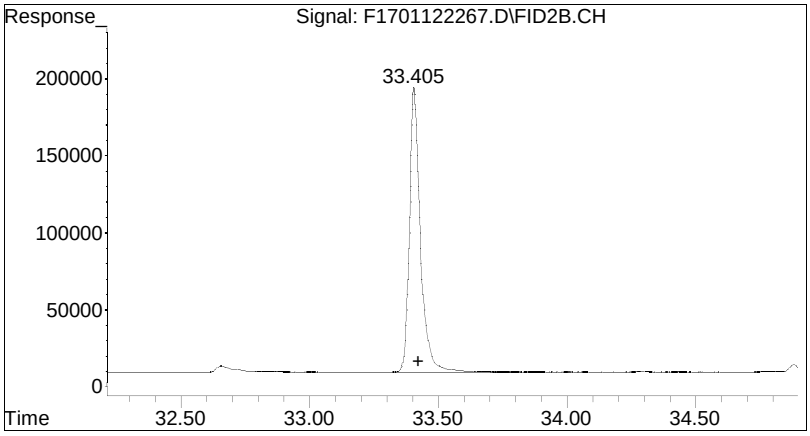
#18 n-Nonadecane (C19)

R.T.:	28.805 min
Delta R.T.:	-0.019 min
Response:	5022579
Conc:	4.86 ug/mL M4



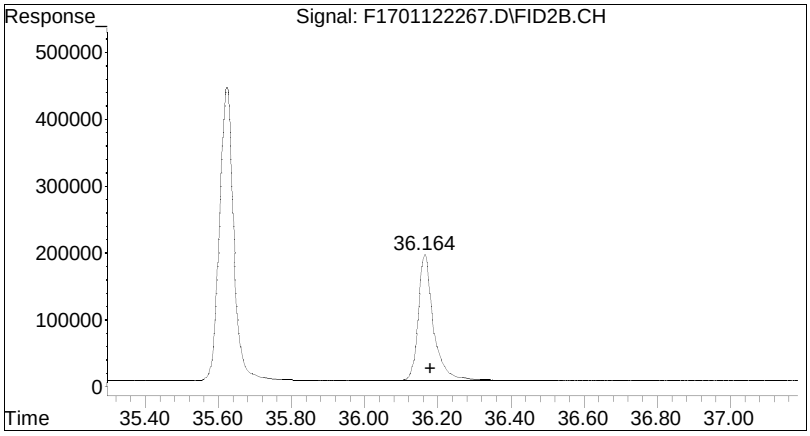
#20 n-Eicosane (C20)

R.T.:	30.408 min
Delta R.T.:	-0.017 min
Response:	5113789
Conc:	4.88 ug/mL M4



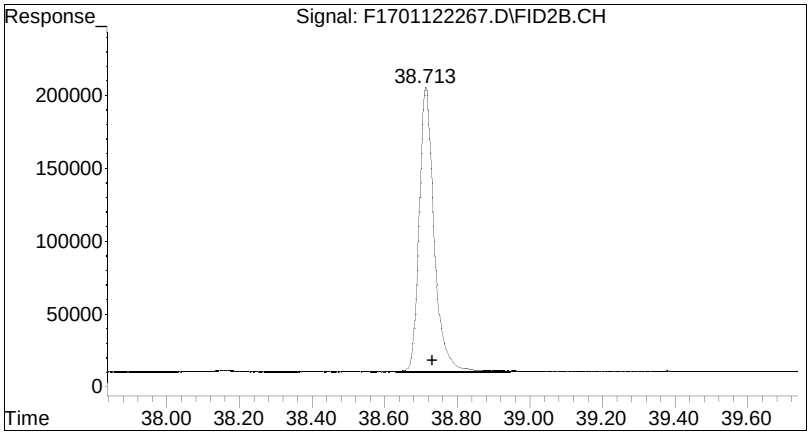
#22 n-Docosane (C22)

R.T.:	33.405 min
Delta R.T.:	-0.018 min
Response:	5327026
Conc:	5.04 ug/mL M4



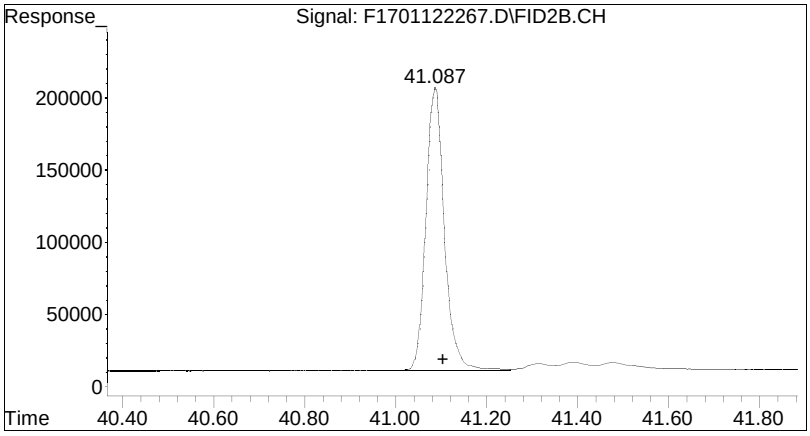
#25 n-Tetracosane (C24)

R.T.:	36.164 min
Delta R.T.:	-0.016 min
Response:	5421711
Conc:	5.16 ug/mL M4



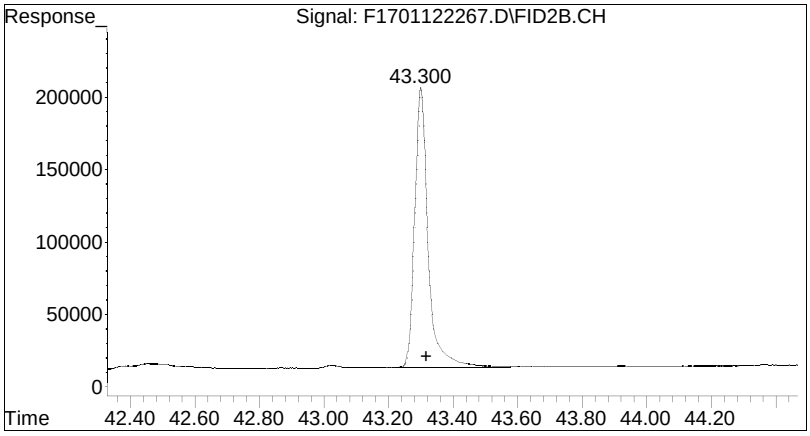
#27 n-Hexacosane (C26)

R.T.:	38.713 min
Delta R.T.:	-0.019 min
Response:	5423444
Conc:	5.07 ug/mL M4



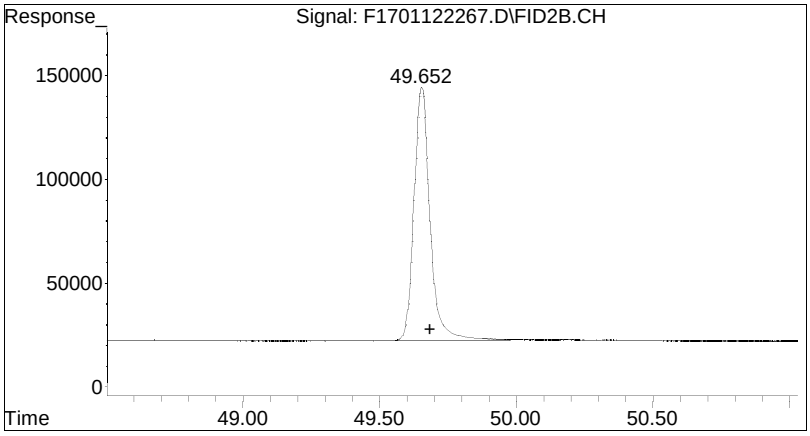
#29 n-Octacosane (C28)

R.T.:	41.087 min
Delta R.T.:	-0.017 min
Response:	5391999
Conc:	4.94 ug/mL M4



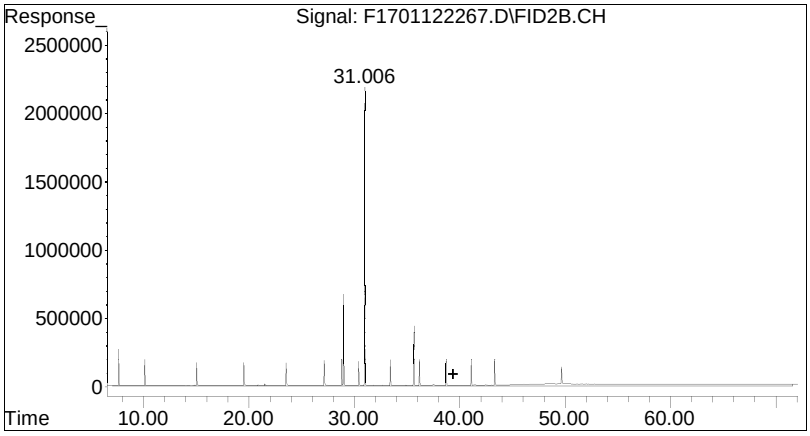
#31 n-Triacontane (C30)

R.T.:	43.300 min
Delta R.T.:	-0.018 min
Response:	5410327
Conc:	5.00 ug/mL M4



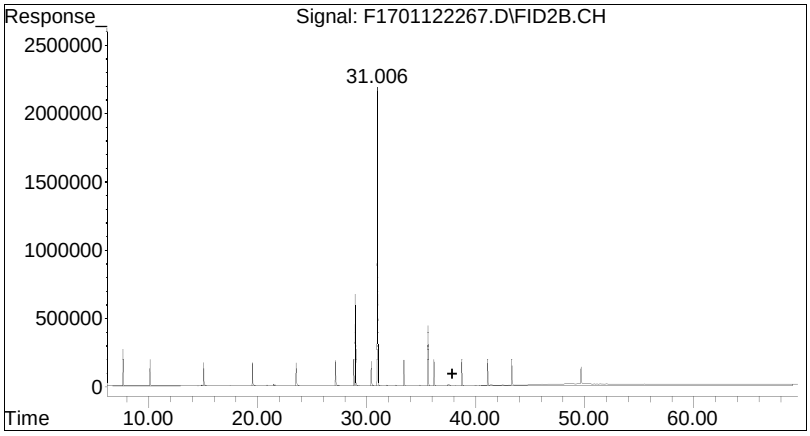
#37 n-Hexatriacontane (C36)

R.T.:	49.652 min
Delta R.T.:	-0.033 min
Response:	4865198
Conc:	4.10 ug/mL M4



#42 C9-C44 Total Petroleum Hy

R.T.: 39.408 min
Delta R.T.: 0.000 min
Response: 365337138
Conc: 352.93 ug/mL m



#46 Total Resolved Hydrocarbo

R.T.: 37.870 min
Delta R.T.: 0.000 min
Response: 75980231
Conc: 73.40 ug/mL m

Instrument Blank
Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122261.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 4:04 pm
Operator : FID17:WR
Sample : IB1701122203R
Misc :
ALS Vial : 81 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:40:50 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

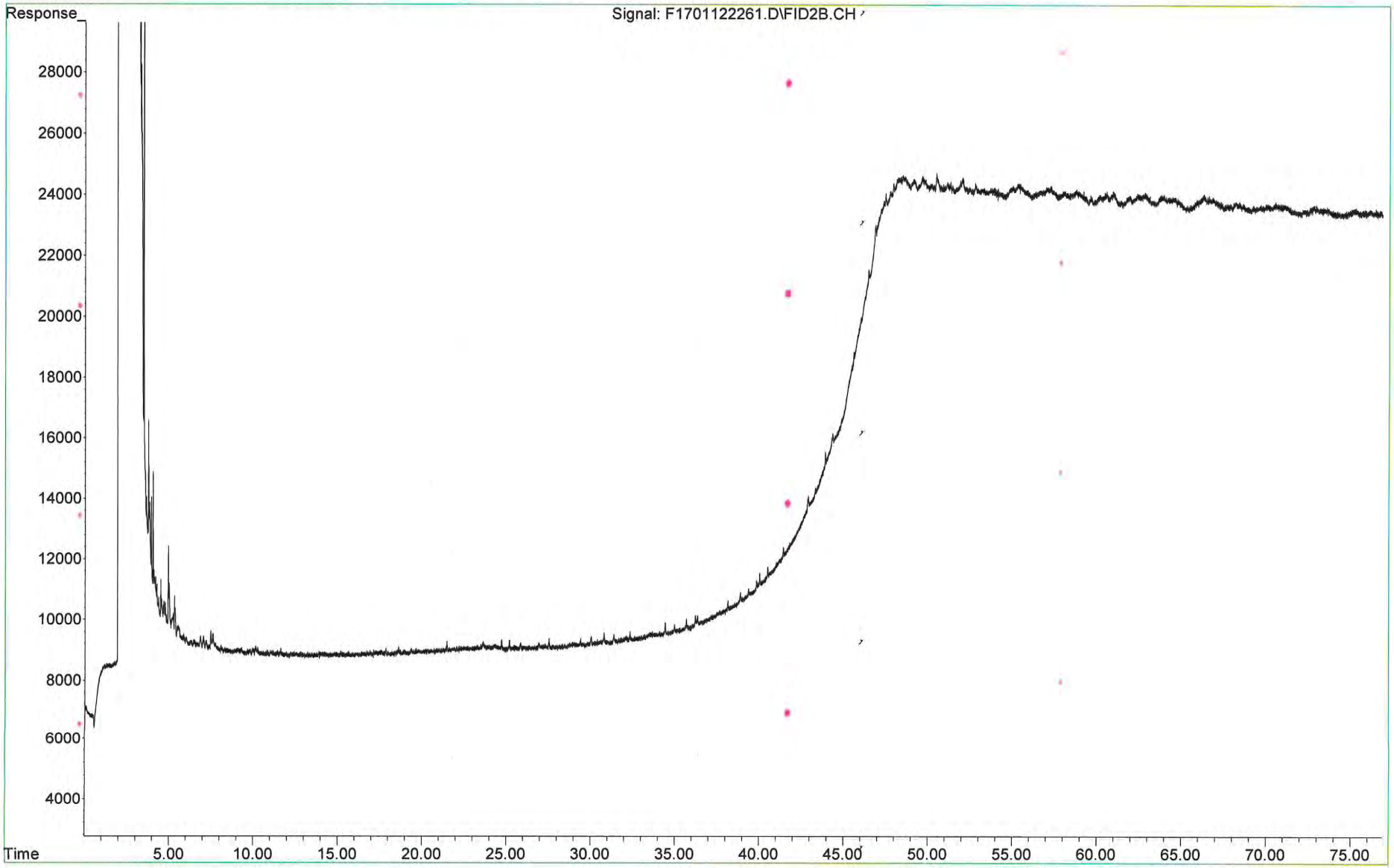
Sub List : TPH_DRO_ORO - IS,SURR & RANGES

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	5-alpha-androstane	30.883f	10375	50.000	ug/mL M4
	System Monitoring Compounds				
19) s	ortho-terphenyl	0.000	0	N.D.	ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#	
24) s	d50-Tetracosane	0.000	0	N.D.	ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#	
	Target Compounds				
42) h	C9-C44 Total Petroleu...	39.408	317437998	1568487.391	ug/mL M5
44) h	C10-C28 DRO	25.609	30611042	153825.504	ug/mL M5
45) h	C28-C40 ORO	49.014	124736067	589151.936	ug/mL M5
46) h	Total Resolved Hydroc...	37.870	2602776	12860.532	ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122261.D
Operator : FID17:WR
Acquired : 14 Jan 2022 4:04 pm using AcqMethod FID17A.M
Sample Name: IB1701122203R
Instrument: FID17
Misc Info :
Vial Number: 81
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172209.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 4:30 pm
Operator : FID17:WR
Sample : IB1701172201R
Misc :
ALS Vial : 55 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 10:59:13 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

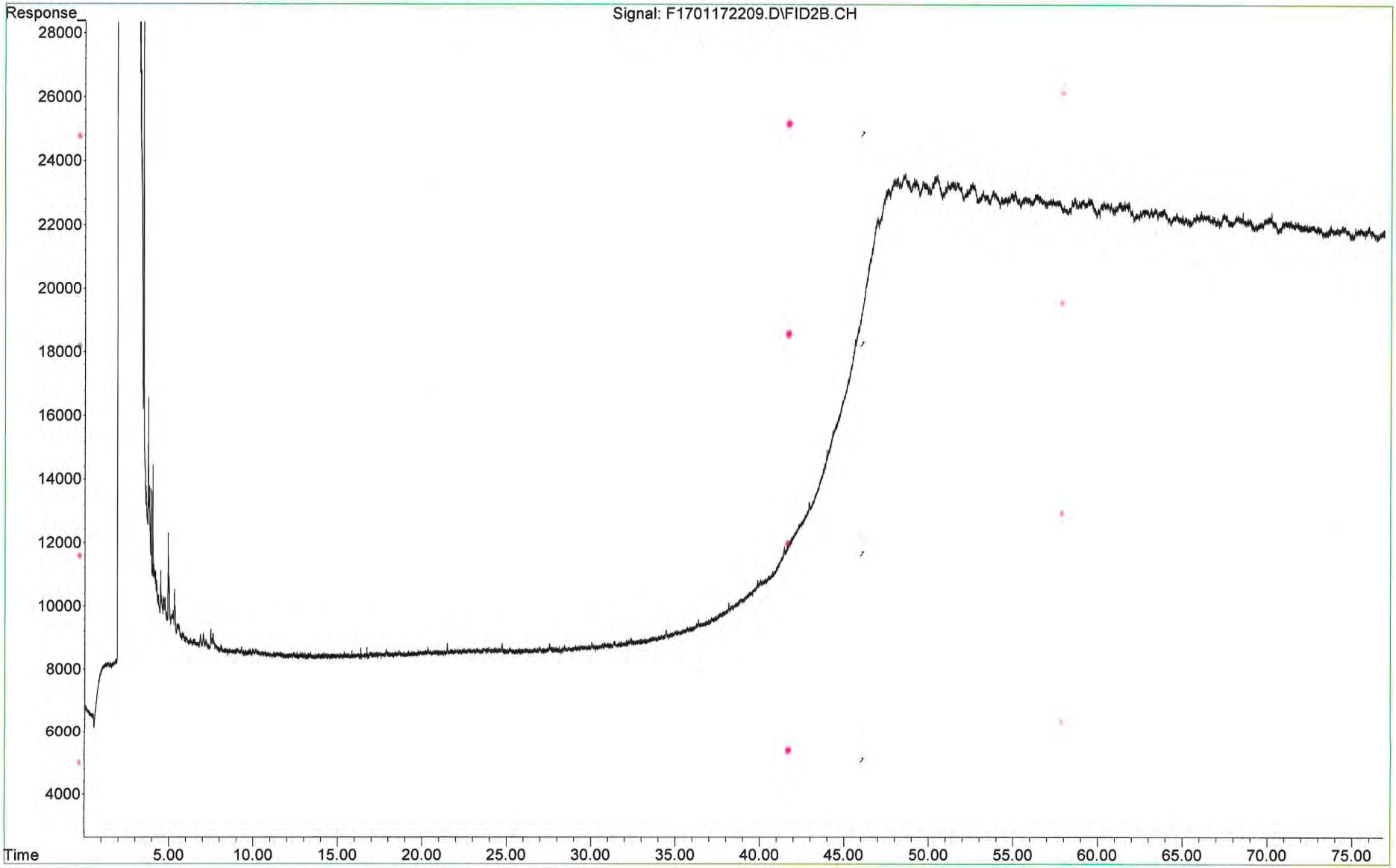
Sub List : TPH_DRO_ORO - IS,SURR & RANGES

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	5-alpha-androstane	30.987	6503	50.000	ug/mL M4
	System Monitoring Compounds				
19) s	ortho-terphenyl	0.000	0	N.D.	ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#	
24) s	d50-Tetracosane	0.000	0	N.D.	ug/mL
Spiked Amount	50.000	Range 50 - 130	Recovery =	0.00%#	
	Target Compounds				
42) h	C9-C44 Total Petroleu...	39.505	296865084	2340042.769	ug/mL M5
44) h	C10-C28 DRO	25.616	19848967	159122.170	ug/mL M5
45) h	C28-C40 ORO	49.057	112765840	849679.961	ug/mL M5
46) h	Total Resolved Hydroc...	37.870	3063952	24151.637	ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument				

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\F1701172209.D
Operator : FID17:WR
Acquired : 17 Jan 2022 4:30 pm using AcqMethod FID17A.M
Sample Name: IB1701172201R
Instrument: FID17
Misc Info :
Vial Number: 55
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M



Sample Preparation

ORGANIC ELN REPORT

Workgroup: WG1594071

Prep Method: EPA 3580A
Solvent Type: DCM **Lot #:** EC849-US
Surrogate Type: A2-PAH/SHC **Lot #:** FRBE42
Spike Type: A2-PAH/SHC **Lot #:** FRBE40
Spike Verify by: NA
Lims Spikelot: A2-PAH/SHC

Additional Reagents/Stds

RIS	FRBE38

Conc.Method:
Solvent Type:
Lot #:

Additional Reagents/Stds

Cleanup 1

Cleanup Method 1:
Cleanup Method 2:
Solvent Type: **Lot #:**

Additional Reagents/Stds

Sample/ Type	Extraction: Extract Date	Analyst	Sample Weight g	Balance Id	Extract Vol ml	Split Vol ml	Surr Amt ml	Spike Amt ml	Is Amt ml	Final Vol ml	Concentration
L2200971-01 SAMP	01/14/22 11:31	Brian Anderson	.1105	BAL23	10	10	.5		.1	20	
WG1594071-1 BLANK	01/14/22 11:31	Brian Anderson	.1	BAL23	10	10	.5		.1	20	
WG1594071-2 LCS	01/14/22 11:31	Brian Anderson	.1	BAL23	10	10	.5	.5	.1	20	
WG1594071-3 LCSD	01/14/22 11:31	Brian Anderson	.1	BAL23	10	10	.5	.5	.1	20	

Reported: 18-JAN-22 03:18 PM

Alpha Report

ANALYTICAL REPORT

Lab Number:	L2200971
Client:	GSI Environmental Inc. 2211 Norfolk Suite 1000 Houston, TX 77098
ATTN:	Ileana Rhodes
Phone:	(713) 522-6300
Project Name:	Not Specified
Project Number:	Not Specified
Report Date:	01/18/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2200971-01	ERH2371	OIL	Not Specified	01/06/22 11:00	01/10/22

Project Name:	Not Specified	**Lab Number:**	L2200971
Project Number:	Not Specified	**Report Date:**	01/18/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	Not Specified	**Lab Number:**	L2200971
Project Number:	Not Specified	**Report Date:**	01/18/22

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PIANO Volatile Organics

L2200971-01D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L2200971-01D2: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

Saturated Hydrocarbons

L2200971-01: The sample was extracted and then analyzed using a gas chromatograph equipped with a flame ionization detector (GC/FID). The temperature program and associated experimental conditions were optimized to obtain maximum resolution in an eighty minute chromatographic run representative of hydrocarbons in the n-Octane (C8) to n-Tetracontane (C40) range. Qualitative evaluation of the sample was conducted by reviewing the sample chromatogram in conjunction with a chromatogram of a normal alkane series generated with the same chromatographic conditions. Chromatograms of hydrocarbon reference materials obtained from our library of 82 reference standards were also utilized to provide the best possible sample match. Quantitative determination of the sample's hydrocarbon concentration was performed in accordance with EPA Method 8015M. The sample's total hydrocarbon concentration and all associated quality control data are included in the report.

The following qualitative information is based on a tentative interpretation of chromatographic pattern recognition and boiling point ranges:

Total Petroleum Hydrocarbon Identification

L2200971-01 contains hydrocarbons eluting in the range of n-Octane (C8) to after the elution of n-Eicosane

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Case Narrative (continued)

(C20).

Based on the data generated, L2200971-01 contains material eluting in the low to mid weight ranges of the chromatogram which is similar to a JP-5 Jet Fuel / Kerosene type product.

L2200971-01: Alkane summation from n-Decane (C10) to n-Tetracosane (C24) resulted in (169,000mg/kg).

Summation of alkanes from n-Pentacosane (C25) to n-Tetracontane (C40) resulted in (143mg/kg).

L2200971-01D: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 01/18/22

ORGANICS

VOLATILES

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L2200971
Report Date: 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01 D2
Client ID: ERH2371
Sample Location: Not Specified
Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8260B
Analytical Date: 01/12/22 15:40
Analyst: RY
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	21900		mg/kg	1870	253.	200
Undecane	43900		mg/kg	1870	207.	200
Dodecane (C12)	33200		mg/kg	4670	613.	200
Tridecane	22500		mg/kg	4670	1300	200
Tetradecane (C14)	14100		mg/kg	4670	571.	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	94		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	103		70-130

Project Name: Not Specified **Lab Number:** L2200971

Project Number: Not Specified **Report Date:** 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01 D
Client ID: ERH2371
Sample Location: Not Specified

Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8260B
Analytical Date: 01/12/22 13:17
Analyst: RY
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3-Methyl-1-butene	ND		mg/kg	93.4	13.9	10
Isopentane	ND		mg/kg	93.4	17.1	10
1-Pentene	ND		mg/kg	93.4	17.0	10
2-Methyl-1-Butene	ND		mg/kg	93.4	14.5	10
Pentane	ND		mg/kg	93.4	29.1	10
trans-2-Pentene	ND		mg/kg	93.4	12.6	10
Isoprene	ND		mg/kg	93.4	16.7	10
cis-2-Pentene	ND		mg/kg	93.4	15.0	10
Tertiary Butanol	ND		mg/kg	1170	151.	10
2,2-Dimethylbutane	ND		mg/kg	93.4	28.8	10
4-Methyl-1-pentene	ND		mg/kg	93.4	14.5	10
Cyclopentane	ND		mg/kg	93.4	24.2	10
2,3-Dimethylbutane	ND		mg/kg	93.4	38.6	10
2-Methylpentane	ND		mg/kg	93.4	25.3	10
Methyl tert butyl ether	ND		mg/kg	93.4	19.2	10
3-Methylpentane	ND		mg/kg	93.4	14.8	10
1-Hexene	ND		mg/kg	93.4	13.1	10
n-Hexane	30.0	J	mg/kg	93.4	15.4	10
Isopropyl Ether	ND		mg/kg	93.4	11.3	10
trans-2-Hexene	ND		mg/kg	93.4	12.2	10
2-Methyl-2-pentene	ND		mg/kg	93.4	14.3	10
cis-2-Hexene	ND		mg/kg	93.4	12.6	10
Ethyl-Tert-Butyl-Ether	ND		mg/kg	93.4	14.1	10
2,2-Dimethylpentane	ND		mg/kg	93.4	12.6	10
Methylcyclopentane	ND		mg/kg	93.4	12.5	10
2,4-Dimethylpentane	ND		mg/kg	93.4	11.5	10
2,2,3-Trimethylbutane	ND		mg/kg	93.4	12.6	10
1,2-Dichloroethane	ND		mg/kg	93.4	13.8	10

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01 D
Client ID: ERH2371
Sample Location: Not Specified

Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		mg/kg	93.4	17.4	10
Cyclohexane	ND		mg/kg	93.4	11.5	10
2-Methylhexane	ND		mg/kg	93.4	14.7	10
Benzene	ND		mg/kg	93.4	14.2	10
2,3-Dimethylpentane	ND		mg/kg	93.4	12.4	10
Thiophene	ND		mg/kg	93.4	13.2	10
1,1-Dimethylcyclopentane	ND		mg/kg	93.4	11.2	10
3-Methylhexane	ND		mg/kg	93.4	14.9	10
Tertiary-Amyl Methyl Ether	ND		mg/kg	93.4	11.5	10
1,3-Dimethylcyclopentane (cis)	ND		mg/kg	93.4	14.0	10
3-Ethylpentane	ND		mg/kg	93.4	13.5	10
1-Heptene/1,2-DMCP (trans)	ND		mg/kg	187	27.3	10
Isooctane	ND		mg/kg	93.4	10.2	10
trans-3-Heptene	ND		mg/kg	93.4	14.5	10
Heptane	53.9	J	mg/kg	93.4	16.2	10
trans-2-Heptene	ND		mg/kg	93.4	12.0	10
cis-2-Heptene	ND		mg/kg	93.4	18.1	10
2,2-Dimethylhexane	ND		mg/kg	93.4	13.5	10
Methylcyclohexane	128		mg/kg	93.4	12.6	10
2,5-Dimethylhexane	ND		mg/kg	93.4	16.2	10
2,4-Dimethylhexane	ND		mg/kg	93.4	11.3	10
Ethylcyclopentane	ND		mg/kg	93.4	12.4	10
2,2,3-Trimethylpentane	ND		mg/kg	93.4	16.2	10
2,3,4-Trimethylpentane	ND		mg/kg	93.4	12.2	10
Xylene (Total)[1]	2160		mg/kg	93.4	9.76	10
2,3,3-Trimethylpentane	ND		mg/kg	93.4	18.5	10
2,3-Dimethylhexane	ND		mg/kg	93.4	22.6	10
2-Methylheptane	146		mg/kg	93.4	15.8	10
4-Methylheptane	ND		mg/kg	93.4	16.0	10
3-Methylheptane	105		mg/kg	93.4	13.3	10
3-Ethylhexane	ND		mg/kg	93.4	16.7	10
Toluene	104		mg/kg	93.4	12.6	10
2-Methylthiophene	ND		mg/kg	93.4	7.94	10
1,4-Dimethylcyclohexane (trans)	88.4	J	mg/kg	93.4	12.1	10
3-Methylthiophene	ND		mg/kg	93.4	10.9	10
1-Octene	ND		mg/kg	233	14.3	10
Octane	729		mg/kg	93.4	11.0	10

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01 D
Client ID: ERH2371
Sample Location: Not Specified

Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dimethylcyclohexane (trans)	199		mg/kg	93.4	13.7	10
1,2-Dibromoethane	ND		mg/kg	93.4	14.9	10
cis-2-Octene	ND		mg/kg	93.4	10.7	10
Isopropylcyclopentane	ND		mg/kg	93.4	13.7	10
1,2-Dimethylcyclohexane (cis)	121		mg/kg	93.4	27.1	10
2,5-Dimethylheptane	198		mg/kg	93.4	15.6	10
3,5-Dimethylheptane	45.8	J	mg/kg	93.4	13.2	10
3,3-Dimethylheptane	19.7	J	mg/kg	93.4	11.3	10
1,1,4-Trimethylcyclohexane	ND		mg/kg	93.4	9.29	10
2,3-Dimethylheptane	378		mg/kg	93.4	10.6	10
3,4-Dimethylheptane	160		mg/kg	93.4	15.9	10
4-Methyloctane	408		mg/kg	93.4	15.6	10
2-Methyloctane	581		mg/kg	93.4	23.9	10
Ethylbenzene	273		mg/kg	93.4	10.1	10
2-Ethylthiophene	ND		mg/kg	93.4	8.22	10
3-Methyloctane	739		mg/kg	93.4	10.4	10
3,3-Diethylpentane	ND		mg/kg	93.4	10.9	10
p/m-Xylene	1380		mg/kg	187	17.8	10
1-Nonene	ND		mg/kg	233	12.6	10
trans-3-Nonene	ND		mg/kg	93.4	11.1	10
cis-3-Nonene	ND		mg/kg	93.4	17.5	10
Nonane (C9)	4430		mg/kg	93.4	14.5	10
Styrene	ND		mg/kg	93.4	9.43	10
o-Xylene	782		mg/kg	93.4	9.76	10
2-Nonene	ND		mg/kg	233	11.8	10
Isopropylcyclohexane	521		mg/kg	93.4	9.90	10
Isopropylbenzene	235		mg/kg	93.4	8.73	10
3,3-Dimethyloctane	158		mg/kg	93.4	9.43	10
n-Propylbenzene	698		mg/kg	93.4	8.26	10
2-Methylnonane	2210		mg/kg	93.4	13.2	10
3-Methylnonane	2160		mg/kg	93.4	13.0	10
1-Methyl-3-Ethylbenzene	1780		mg/kg	93.4	14.8	10
1-Methyl-4-Ethylbenzene	943		mg/kg	93.4	13.2	10
1,3,5-Trimethylbenzene	1480		mg/kg	93.4	10.7	10
1-Decene	ND		mg/kg	93.4	12.1	10
Isobutylcyclohexane	ND		mg/kg	93.4	7.61	10
1-Methyl-2-Ethylbenzene	1250		mg/kg	93.4	7.94	10

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L2200971
Report Date: 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01 D
Client ID: ERH2371
Sample Location: Not Specified
Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Decane (C10)	18700	E	mg/kg	93.4	12.6	10
tert-Butylbenzene	34.8	J	mg/kg	93.4	9.85	10
1,2,4-Trimethylbenzene	4990		mg/kg	93.4	9.66	10
Isobutylbenzene	266		mg/kg	93.4	12.6	10
sec-Butylbenzene	661		mg/kg	93.4	12.1	10
1-Methyl-3-Isopropylbenzene	881		mg/kg	93.4	12.0	10
1-Methyl-4-Isopropylbenzene	707		mg/kg	93.4	9.90	10
1,2,3-Trimethylbenzene	2770		mg/kg	93.4	10.4	10
1-Methyl-2-Isopropylbenzene	165		mg/kg	93.4	10.1	10
Indane	430		mg/kg	93.4	5.74	10
1,3-Diethylbenzene	829		mg/kg	93.4	11.6	10
1-Methyl-3-N-Propylbenzene	2540		mg/kg	93.4	9.43	10
Indene	92.0	J	mg/kg	93.4	5.42	10
1-Methyl-4-N-Propylbenzene	1230		mg/kg	93.4	11.7	10
n-Butylbenzene	1210		mg/kg	93.4	9.20	10
1,2-Dimethyl-4-Ethylbenzene	2070		mg/kg	93.4	11.4	10
1,2-Diethylbenzene	491		mg/kg	93.4	13.8	10
1-Methyl-2-N-Propylbenzene	2180		mg/kg	93.4	11.6	10
1,4-Dimethyl-2-Ethylbenzene	1980		mg/kg	93.4	8.73	10
Undecane	33200	E	mg/kg	93.4	10.4	10
1,3-Dimethyl-4-Ethylbenzene	2440		mg/kg	93.4	9.06	10
1,3-Dimethyl-5-Ethylbenzene	2590		mg/kg	93.4	11.0	10
1,3-Dimethyl-2-Ethylbenzene	408		mg/kg	93.4	6.96	10
1,2-Dimethyl-3-Ethylbenzene	1350		mg/kg	93.4	5.93	10
1,2,4,5-Tetramethylbenzene	1460		mg/kg	93.4	7.24	10
1,2,3,5-Tetramethylbenzene	2700		mg/kg	93.4	7.10	10
N-Pentylbenzene	740		mg/kg	93.4	11.6	10
1,2,3,4-Tetramethylbenzene	2470		mg/kg	93.4	9.99	10
1,3-Dimethyl-5-tert-Butylbenzene	ND		mg/kg	93.4	13.3	10
Dodecane (C12)	24200	E	mg/kg	233	30.7	10
1,3,5-Triethylbenzene	ND		mg/kg	93.4	17.7	10
Naphthalene	2850		mg/kg	93.4	39.0	10
Benzothiophene	ND		mg/kg	93.4	49.3	10
1,2,4-Triethylbenzene	259		mg/kg	93.4	15.9	10
Hexylbenzene	630		mg/kg	93.4	18.0	10
MMT	ND		mg/kg	233	60.0	10
Tridecane	15400	E	mg/kg	233	65.0	10

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L2200971
Report Date: 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01 D
Client ID: ERH2371
Sample Location: Not Specified
Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
2-Methylnaphthalene	5270		mg/kg	233	61.7	10
1-Methylnaphthalene	3510		mg/kg	233	68.5	10
Tetradecane (C14)	8420	E	mg/kg	233	28.6	10
Pentadecane	2440		mg/kg	233	52.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	96		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 01/12/22 01:12
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1593474-6					
3-Methyl-1-butene	ND		mg/kg	10.0	1.48
Isopentane	ND		mg/kg	10.0	1.83
1-Pentene	ND		mg/kg	10.0	1.82
2-Methyl-1-Butene	ND		mg/kg	10.0	1.56
Pentane	ND		mg/kg	10.0	3.12
trans-2-Pentene	ND		mg/kg	10.0	1.35
Isoprene	ND		mg/kg	10.0	1.78
cis-2-Pentene	ND		mg/kg	10.0	1.61
Tertiary Butanol	ND		mg/kg	125	16.2
2,2-Dimethylbutane	ND		mg/kg	10.0	3.08
4-Methyl-1-pentene	ND		mg/kg	10.0	1.56
Cyclopentane	ND		mg/kg	10.0	2.60
2,3-Dimethylbutane	ND		mg/kg	10.0	4.13
2-Methylpentane	ND		mg/kg	10.0	2.71
Methyl tert butyl ether	ND		mg/kg	10.0	2.06
3-Methylpentane	ND		mg/kg	10.0	1.58
1-Hexene	ND		mg/kg	10.0	1.40
n-Hexane	ND		mg/kg	10.0	1.64
Isopropyl Ether	ND		mg/kg	10.0	1.21
trans-2-Hexene	ND		mg/kg	10.0	1.30
2-Methyl-2-pentene	ND		mg/kg	10.0	1.53
cis-2-Hexene	ND		mg/kg	10.0	1.36
Ethyl-Tert-Butyl-Ether	ND		mg/kg	10.0	1.52
2,2-Dimethylpentane	ND		mg/kg	10.0	1.34
Methylcyclopentane	ND		mg/kg	10.0	1.34
2,4-Dimethylpentane	ND		mg/kg	10.0	1.24
2,2,3-Trimethylbutane	ND		mg/kg	10.0	1.35
1,2-Dichloroethane	ND		mg/kg	10.0	1.48
3,3-Dimethylpentane	ND		mg/kg	10.0	1.86

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 01/12/22 01:12
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1593474-6					
Cyclohexane	ND		mg/kg	10.0	1.24
2-Methylhexane	ND		mg/kg	10.0	1.58
Benzene	ND		mg/kg	10.0	1.52
2,3-Dimethylpentane	ND		mg/kg	10.0	1.32
Thiophene	ND		mg/kg	10.0	1.42
1,1-Dimethylcyclopentane	ND		mg/kg	10.0	1.20
3-Methylhexane	ND		mg/kg	10.0	1.60
Tertiary-Amyl Methyl Ether	ND		mg/kg	10.0	1.23
1,3-Dimethylcyclopentane (cis)	ND		mg/kg	10.0	1.50
3-Ethylpentane	ND		mg/kg	10.0	1.44
1-Heptene/1,2-DMCP (trans)	ND		mg/kg	20.0	2.92
Isooctane	ND		mg/kg	10.0	1.09
trans-3-Heptene	ND		mg/kg	10.0	1.56
Heptane	ND		mg/kg	10.0	1.74
trans-2-Heptene	ND		mg/kg	10.0	1.28
cis-2-Heptene	ND		mg/kg	10.0	1.94
2,2-Dimethylhexane	ND		mg/kg	10.0	1.45
Methylcyclohexane	ND		mg/kg	10.0	1.35
2,5-Dimethylhexane	ND		mg/kg	10.0	1.74
2,4-Dimethylhexane	ND		mg/kg	10.0	1.22
Ethylcyclopentane	ND		mg/kg	10.0	1.32
2,2,3-Trimethylpentane	ND		mg/kg	10.0	1.74
2,3,4-Trimethylpentane	ND		mg/kg	10.0	1.30
Xylene (Total)[1]	ND		mg/kg	10.0	1.04
2,3,3-Trimethylpentane	ND		mg/kg	10.0	1.98
2,3-Dimethylhexane	ND		mg/kg	10.0	2.42
2-Methylheptane	ND		mg/kg	10.0	1.69
4-Methylheptane	ND		mg/kg	10.0	1.72
3-Methylheptane	ND		mg/kg	10.0	1.42

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 01/12/22 01:12
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1593474-6					
3-Ethylhexane	ND		mg/kg	10.0	1.79
Toluene	ND		mg/kg	10.0	1.36
2-Methylthiophene	ND		mg/kg	10.0	0.850
1,4-Dimethylcyclohexane (trans)	ND		mg/kg	10.0	1.30
3-Methylthiophene	ND		mg/kg	10.0	1.17
1-Octene	ND		mg/kg	25.0	1.54
Octane	ND		mg/kg	10.0	1.18
1,2-Dimethylcyclohexane (trans)	ND		mg/kg	10.0	1.47
1,2-Dibromoethane	ND		mg/kg	10.0	1.60
cis-2-Octene	ND		mg/kg	10.0	1.14
Isopropylcyclopentane	ND		mg/kg	10.0	1.46
1,2-Dimethylcyclohexane (cis)	ND		mg/kg	10.0	2.90
2,5-Dimethylheptane	ND		mg/kg	10.0	1.68
3,5-Dimethylheptane	ND		mg/kg	10.0	1.41
3,3-Dimethylheptane	ND		mg/kg	10.0	1.21
1,1,4-Trimethylcyclohexane	ND		mg/kg	10.0	0.995
2,3-Dimethylheptane	ND		mg/kg	10.0	1.14
3,4-Dimethylheptane	ND		mg/kg	10.0	1.70
4-Methyloctane	ND		mg/kg	10.0	1.67
2-Methyloctane	ND		mg/kg	10.0	2.56
Ethylbenzene	ND		mg/kg	10.0	1.08
2-Ethylthiophene	ND		mg/kg	10.0	0.880
3-Methyloctane	ND		mg/kg	10.0	1.12
3,3-Diethylpentane	ND		mg/kg	10.0	1.16
p/m-Xylene	ND		mg/kg	20.0	1.90
1-Nonene	ND		mg/kg	25.0	1.35
trans-3-Nonene	ND		mg/kg	10.0	1.18
cis-3-Nonene	ND		mg/kg	10.0	1.87
Nonane (C9)	ND		mg/kg	10.0	1.56

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 01/12/22 01:12
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1593474-6					
Styrene	ND		mg/kg	10.0	1.01
o-Xylene	ND		mg/kg	10.0	1.04
2-Nonene	ND		mg/kg	25.0	1.27
Isopropylcyclohexane	ND		mg/kg	10.0	1.06
Isopropylbenzene	ND		mg/kg	10.0	0.935
3,3-Dimethyloctane	ND		mg/kg	10.0	1.01
n-Propylbenzene	ND		mg/kg	10.0	0.885
2-Methylnonane	ND		mg/kg	10.0	1.42
3-Methylnonane	ND		mg/kg	10.0	1.40
1-Methyl-3-Ethylbenzene	ND		mg/kg	10.0	1.58
1-Methyl-4-Ethylbenzene	ND		mg/kg	10.0	1.41
1,3,5-Trimethylbenzene	ND		mg/kg	10.0	1.15
1-Decene	ND		mg/kg	10.0	1.30
Isobutylcyclohexane	ND		mg/kg	10.0	0.815
1-Methyl-2-Ethylbenzene	ND		mg/kg	10.0	0.850
Decane (C10)	ND		mg/kg	10.0	1.36
tert-Butylbenzene	ND		mg/kg	10.0	1.06
1,2,4-Trimethylbenzene	ND		mg/kg	10.0	1.04
Isobutylbenzene	ND		mg/kg	10.0	1.35
sec-Butylbenzene	ND		mg/kg	10.0	1.30
1-Methyl-3-Isopropylbenzene	ND		mg/kg	10.0	1.29
1-Methyl-4-Isopropylbenzene	ND		mg/kg	10.0	1.06
1,2,3-Trimethylbenzene	ND		mg/kg	10.0	1.12
1-Methyl-2-Isopropylbenzene	ND		mg/kg	10.0	1.08
Indane	ND		mg/kg	10.0	0.615
1,3-Diethylbenzene	ND		mg/kg	10.0	1.24
1-Methyl-3-N-Propylbenzene	ND		mg/kg	10.0	1.01
Indene	ND		mg/kg	10.0	0.580
1-Methyl-4-N-Propylbenzene	ND		mg/kg	10.0	1.25

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 01/12/22 01:12
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1593474-6					
n-Butylbenzene	ND		mg/kg	10.0	0.985
1,2-Dimethyl-4-Ethylbenzene	ND		mg/kg	10.0	1.22
1,2-Diethylbenzene	ND		mg/kg	10.0	1.48
1-Methyl-2-N-Propylbenzene	ND		mg/kg	10.0	1.24
1,4-Dimethyl-2-Ethylbenzene	ND		mg/kg	10.0	0.935
Undecane	ND		mg/kg	10.0	1.11
1,3-Dimethyl-4-Ethylbenzene	ND		mg/kg	10.0	0.970
1,3-Dimethyl-5-Ethylbenzene	ND		mg/kg	10.0	1.18
1,3-Dimethyl-2-Ethylbenzene	ND		mg/kg	10.0	0.745
1,2-Dimethyl-3-Ethylbenzene	ND		mg/kg	10.0	0.635
1,2,4,5-Tetramethylbenzene	ND		mg/kg	10.0	0.775
1,2,3,5-Tetramethylbenzene	ND		mg/kg	10.0	0.760
N-Pentylbenzene	ND		mg/kg	10.0	1.24
1,2,3,4-Tetramethylbenzene	ND		mg/kg	10.0	1.07
1,3-Dimethyl-5-tert-Butylbenzene	ND		mg/kg	10.0	1.42
Dodecane (C12)	ND		mg/kg	25.0	3.28
1,3,5-Triethylbenzene	ND		mg/kg	10.0	1.90
Naphthalene	ND		mg/kg	10.0	4.18
Benzothiophene	ND		mg/kg	10.0	5.28
1,2,4-Triethylbenzene	ND		mg/kg	10.0	1.70
Hexylbenzene	ND		mg/kg	10.0	1.92
MMT	ND		mg/kg	25.0	6.43
Tridecane	ND		mg/kg	25.0	6.96
2-Methylnaphthalene	ND		mg/kg	25.0	6.61
1-Methylnaphthalene	ND		mg/kg	25.0	7.34
Tetradecane (C14)	ND		mg/kg	25.0	3.06
Pentadecane	ND		mg/kg	25.0	5.58

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 01/12/22 01:12
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01 Batch: WG1593474-6					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	97		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2200971

Report Date: 01/18/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01 Batch: WG1593474-3 WG1593474-4								
1-Pentene	93		93		50-130	0		30
Pentane	79		77		50-130	3		30
Tertiary Butanol	68		67		50-130	1		30
Cyclopentane	90		89		50-130	1		30
2-Methylpentane	94		95		50-130	1		30
Methyl tert butyl ether	91		97		50-130	6		30
3-Methylpentane	101		103		50-130	2		30
1-Hexene	100		101		50-130	1		30
n-Hexane	94		96		50-130	2		30
Isopropyl Ether	97		102		50-130	5		30
Ethyl-Tert-Butyl-Ether	99		101		50-130	2		30
Methylcyclopentane	104		107		50-130	3		30
2,4-Dimethylpentane	101		103		50-130	2		30
Cyclohexane	108		112		50-130	4		30
2-Methylhexane	102		104		50-130	2		30
Benzene	98		100		50-130	2		30
2,3-Dimethylpentane	103		105		50-130	2		30
3-Methylhexane	96		100		50-130	4		30
Tertiary-Amyl Methyl Ether	87		88		50-130	1		30
Isooctane	109		112		50-130	3		30
Heptane	113		118		50-130	4		30
Methylcyclohexane	108		110		50-130	2		30
2-Methylheptane	106		111		50-130	5		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01 Batch: WG1593474-3 WG1593474-4								
3-Methylheptane	106		108		50-130	2		30
Toluene	98		100		50-130	2		30
Octane	112		115		50-130	3		30
Ethylbenzene	99		101		50-130	2		30
p/m-Xylene	101		103		50-130	2		30
Nonane (C9)	97		101		50-130	4		30
o-Xylene	102		105		50-130	3		30
Isopropylbenzene	106		108		50-130	2		30
n-Propylbenzene	106		108		50-130	2		30
1-Methyl-3-Ethylbenzene	105		107		50-130	2		30
1-Methyl-4-Ethylbenzene	108		110		50-130	2		30
1,3,5-Trimethylbenzene	110		110		50-130	0		30
1-Decene	94		98		50-130	4		30
1-Methyl-2-Ethylbenzene	107		109		50-130	2		30
Decane (C10)	117		122		50-130	4		30
1,2,4-Trimethylbenzene	104		105		50-130	1		30
sec-Butylbenzene	114		116		50-130	2		30
1-Methyl-4-N-Propylbenzene	109		110		50-130	1		30
n-Butylbenzene	111		111		50-130	0		30
1,2-Diethylbenzene	109		109		50-130	0		30
Undecane	112		115		50-130	3		30
N-Pentylbenzene	114		116		50-130	2		30
Dodecane (C12)	115		118		50-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2200971

Report Date: 01/18/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01 Batch: WG1593474-3 WG1593474-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Dibromofluoromethane	102		99		70-130
Toluene-d8	98		100		70-130
4-Bromofluorobenzene	105		104		70-130

PETROLEUM HYDROCARBONS

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01
Client ID: ERH2371
Sample Location: Not Specified

Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8015D(M)
Analytical Date: 01/14/22 23:28
Analyst: WR
Percent Solids:

Extraction Method: EPA 3580A
Extraction Date: 01/14/22 11:31

Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Nonane (C9)	4870		mg/kg	181	53.7	1
n-Decane (C10)	21100		mg/kg	181	57.7	1
n-Undecane (C11)	47700	E	mg/kg	181	54.0	1
n-Dodecane (C12)	45700	E	mg/kg	181	39.4	1
n-Tridecane (C13)	34200		mg/kg	181	49.7	1
2,6,10-Trimethyldodecane (1380)	6110		mg/kg	181	27.2	1
n-Tetradecane (C14)	19900		mg/kg	181	27.2	1
2,6,10-Trimethyltridecane (1470)	4780		mg/kg	181	21.6	1
n-Pentadecane (C15)	7730		mg/kg	181	21.6	1
n-Hexadecane (C16)	1600		mg/kg	181	27.2	1
Norpristane (1650)	203		mg/kg	181	59.7	1
n-Heptadecane (C17)	318		mg/kg	181	59.7	1
Pristane	162	J	mg/kg	181	38.7	1
n-Octadecane (C18)	142	J	mg/kg	181	36.3	1
Phytane	37.5	J	mg/kg	181	22.7	1
n-Nonadecane (C19)	ND		mg/kg	181	46.5	1
n-Eicosane (C20)	ND		mg/kg	181	25.6	1
n-Heneicosane (C21)	ND		mg/kg	181	21.7	1
n-Docosane (C22)	ND		mg/kg	181	18.9	1
n-Tricosane (C23)	ND		mg/kg	181	23.0	1
n-Tetracosane (C24)	ND		mg/kg	181	30.3	1
n-Pentacosane (C25)	143	JC	mg/kg	181	95.8	1
n-Hexacosane (C26)	ND		mg/kg	181	26.6	1
n-Heptacosane (C27)	ND		mg/kg	181	21.8	1
n-Octacosane (C28)	ND		mg/kg	181	38.8	1
n-Nonacosane (C29)	ND		mg/kg	181	120.	1
n-Triacontane (C30)	ND		mg/kg	181	20.8	1
n-Hentriacontane (C31)	ND		mg/kg	181	25.6	1

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01
Client ID: ERH2371
Sample Location: Not Specified

Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dotriacontane (C32)	ND		mg/kg	181	22.8	1
n-Tritriacontane (C33)	ND		mg/kg	181	25.5	1
n-Tetratriacontane (C34)	ND		mg/kg	181	28.8	1
n-Pentatriacontane (C35)	ND		mg/kg	181	31.6	1
n-Hexatriacontane (C36)	ND		mg/kg	181	36.0	1
n-Heptatriacontane (C37)	ND		mg/kg	181	40.2	1
n-Octatriacontane (C38)	ND		mg/kg	181	42.2	1
n-Nonatriacontane (C39)	ND		mg/kg	181	58.8	1
n-Tetracontane (C40)	ND		mg/kg	181	58.8	1
C9-C44 Total Petroleu	952000		mg/kg	5970	1310	1
C10-C28 DRO	934000		mg/kg	3800	783.	1
C28-C40 ORO	ND		mg/kg	1990	452.	1
Total Saturated Hydrocarbons	186000	J	mg/kg	181	18.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	99		50-130
d50-Tetracosane	97		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

SAMPLE RESULTS

Lab ID: L2200971-01 D
Client ID: ERH2371
Sample Location: Not Specified

Date Collected: 01/06/22 11:00
Date Received: 01/10/22
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8015D(M)
Analytical Date: 01/17/22 17:59
Analyst: WR
Percent Solids:

Extraction Method: EPA 3580A
Extraction Date: 01/14/22 11:31

Results reported on an 'AS RECEIVED' basis.

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Undecane (C11)	43100		mg/kg	905	270.	5
n-Dodecane (C12)	41300		mg/kg	905	197.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	90		50-130
d50-Tetracosane	86		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 01/14/22 17:33
Analyst: WR

Extraction Method: EPA 3580A
Extraction Date: 01/14/22 11:31

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01 Batch: WG1594071-1					
n-Nonane (C9)	ND		mg/kg	200	59.3
n-Decane (C10)	ND		mg/kg	200	63.8
n-Undecane (C11)	ND		mg/kg	200	59.7
n-Dodecane (C12)	ND		mg/kg	200	43.6
n-Tridecane (C13)	ND		mg/kg	200	54.9
2,6,10-Trimethyldodecane (1380)	ND		mg/kg	200	30.1
n-Tetradecane (C14)	ND		mg/kg	200	30.1
2,6,10-Trimethyltridecane (1470)	ND		mg/kg	200	23.9
n-Pentadecane (C15)	ND		mg/kg	200	23.9
n-Hexadecane (C16)	ND		mg/kg	200	30.1
Norpristane (1650)	ND		mg/kg	200	66.0
n-Heptadecane (C17)	ND		mg/kg	200	66.0
Pristane	ND		mg/kg	200	42.7
n-Octadecane (C18)	51.2	JC	mg/kg	200	40.1
Phytane	ND		mg/kg	200	25.1
n-Nonadecane (C19)	ND		mg/kg	200	51.4
n-Eicosane (C20)	ND		mg/kg	200	28.3
n-Heneicosane (C21)	ND		mg/kg	200	23.9
n-Docosane (C22)	ND		mg/kg	200	20.9
n-Tricosane (C23)	ND		mg/kg	200	25.4
n-Tetracosane (C24)	ND		mg/kg	200	33.5
n-Pentacosane (C25)	110	JC	mg/kg	200	106.
n-Hexacosane (C26)	ND		mg/kg	200	29.4
n-Heptacosane (C27)	ND		mg/kg	200	24.1
n-Octacosane (C28)	ND		mg/kg	200	42.9
n-Nonacosane (C29)	ND		mg/kg	200	133.
n-Triacontane (C30)	ND		mg/kg	200	22.9
n-Hentriacontane (C31)	ND		mg/kg	200	28.3
n-Dotriacontane (C32)	ND		mg/kg	200	25.2

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 01/14/22 17:33
Analyst: WR

Extraction Method: EPA 3580A
Extraction Date: 01/14/22 11:31

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01 Batch: WG1594071-1					
n-Tritriacontane (C33)	ND		mg/kg	200	28.1
n-Tetratriacontane (C34)	ND		mg/kg	200	31.8
n-Pentatriacontane (C35)	ND		mg/kg	200	34.9
n-Hexatriacontane (C36)	ND		mg/kg	200	39.8
n-Heptatriacontane (C37)	ND		mg/kg	200	44.4
n-Octatriacontane (C38)	ND		mg/kg	200	46.6
n-Nonatriacontane (C39)	ND		mg/kg	200	64.9
n-Tetracontane (C40)	ND		mg/kg	200	64.9
C9-C44 Total Petroleu	ND		mg/kg	6600	1450
C10-C28 DRO	ND		mg/kg	4200	866.
C28-C40 ORO	ND		mg/kg	2200	500.
Total Saturated Hydrocarbons	161	J	mg/kg	200	20.9

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	113		50-130
d50-Tetracosane	110		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L2200971

Report Date: 01/18/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 01 Batch: WG1594071-2 WG1594071-3								
Nonane (C9)	113		101		50-130	11		30
n-Decane (C10)	106		94		50-130	12		30
n-Dodecane (C12)	109		85		50-130	25		30
n-Tetradecane (C14)	108		96		50-130	12		30
n-Hexadecane (C16)	118		105		50-130	12		30
n-Octadecane (C18)	120		107		50-130	11		30
n-Nonadecane (C19)	109		97		50-130	12		30
n-Eicosane (C20)	109		98		50-130	11		30
n-Docosane (C22)	113		101		50-130	11		30
n-Tetracosane (C24)	117		103		50-130	13		30
n-Hexacosane (C26)	114		101		50-130	12		30
n-Octacosane (C28)	112		99		50-130	12		30
n-Triacontane (C30)	112		100		50-130	11		30
n-Hexatriacontane (C36)	94		82		50-130	14		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	116		102		50-130
d50-Tetracosane	113		99		50-130

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L2200971
Report Date: 01/18/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2200971-01A	Vial unpreserved 20ml hard-cap	A	NA		1.2	Y	Absent		A2-PIANO8260(365),A2-SHC(365)
L2200971-01B	Vial unpreserved 20ml hard-cap	A	NA		1.2	Y	Absent		A2-PIANO8260(365),A2-SHC(365)
L2200971-01C	Vial unpreserved 20ml hard-cap	A	NA		1.2	Y	Absent		A2-PIANO8260(365),A2-SHC(365)
L2200971-01D	Vial unpreserved 20ml hard-cap	A	NA		1.2	Y	Absent		A2-PIANO8260(365),A2-SHC(365)
L2200971-01E	Vial unpreserved 20ml hard-cap	A	NA		1.2	Y	Absent		A2-PIANO8260(365),A2-SHC(365)
L2200971-01F	Vial unpreserved 20ml hard-cap	A	NA		1.2	Y	Absent		A2-PIANO8260(365),A2-SHC(365)

*Values in parentheses indicate holding time in days

Project Name: Not Specified **Lab Number:** L2200971

Project Number: Not Specified **Report Date:** 01/18/22

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	Not Specified	**Lab Number:**	L2200971
Project Number:	Not Specified	**Report Date:**	01/18/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	Not Specified	**Lab Number:**	L2200971
Project Number:	Not Specified	**Report Date:**	01/18/22

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: Not Specified
Project Number: Not Specified
Lab Number: L2200971
Report Date: 01/18/22

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

COC#202201-24 NOI

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 1/10/22

ALPHA Job #: L2200971

Client Information

Client: Ileana Rhodes GSI Environmental Inc.
Address: 2211 Norfolk Suite 1000
Houston, TX 77098-5669
Phone: 281-703-5669
Fax:
Email: ilrhodes@gsienv.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:
Project Location:
Project #:
Project Manager: Susan O'Neil
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Please analyze product and samples for TPH-d/o and w/ silica gel cleanup (SGC) extended run. TPH-d/o range, C10 to C24, C24 to C40. Include carbon marker and sample surrogate for TPH-d/o and w/ SGC. Analyze same as L2165245, ERH1967 excluding EPA 8270D.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials
00971-01	ERH2371	01/06/21	1100	Product	~~GD~~ NL

EPA 8015D(M) SHC ☒
PHI w/ Qualitative Narrative ☒
EPA 8015D(M) SHC+SGC ☒

01/06/22

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

Container Type	V	V	V	-	-	-	-	-	-	-	-	-
Preservative	A	A	A	-	-	-	-	-	-	-	-	-

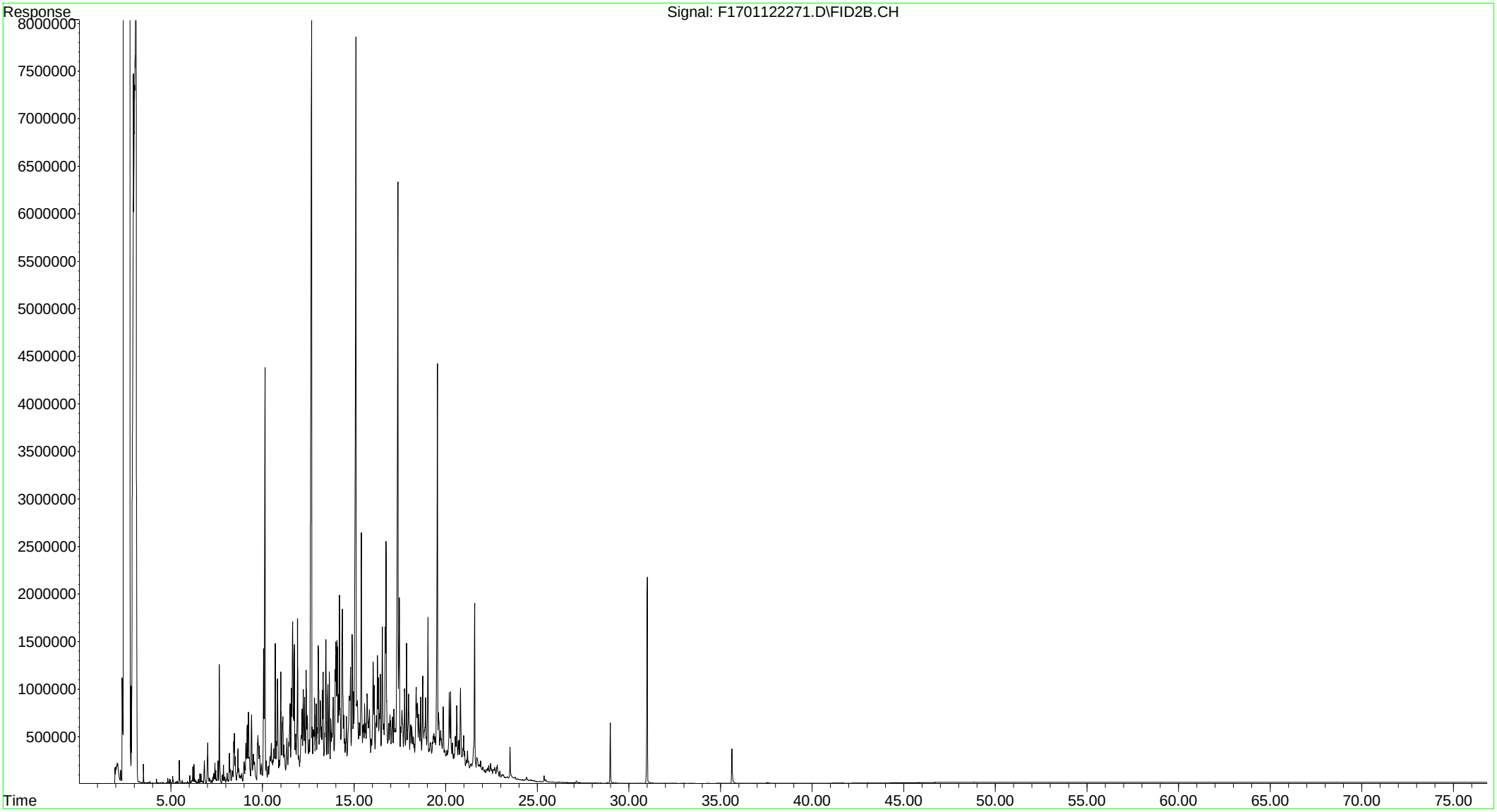
Relinquished By:	Date/Time	Received By:	Date/Time
CHRIS WOMACK	01/06/22 1500	FEDEX	01/06/22 1505
FEDEX	1/10/22 10:01		1/10/22 10:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

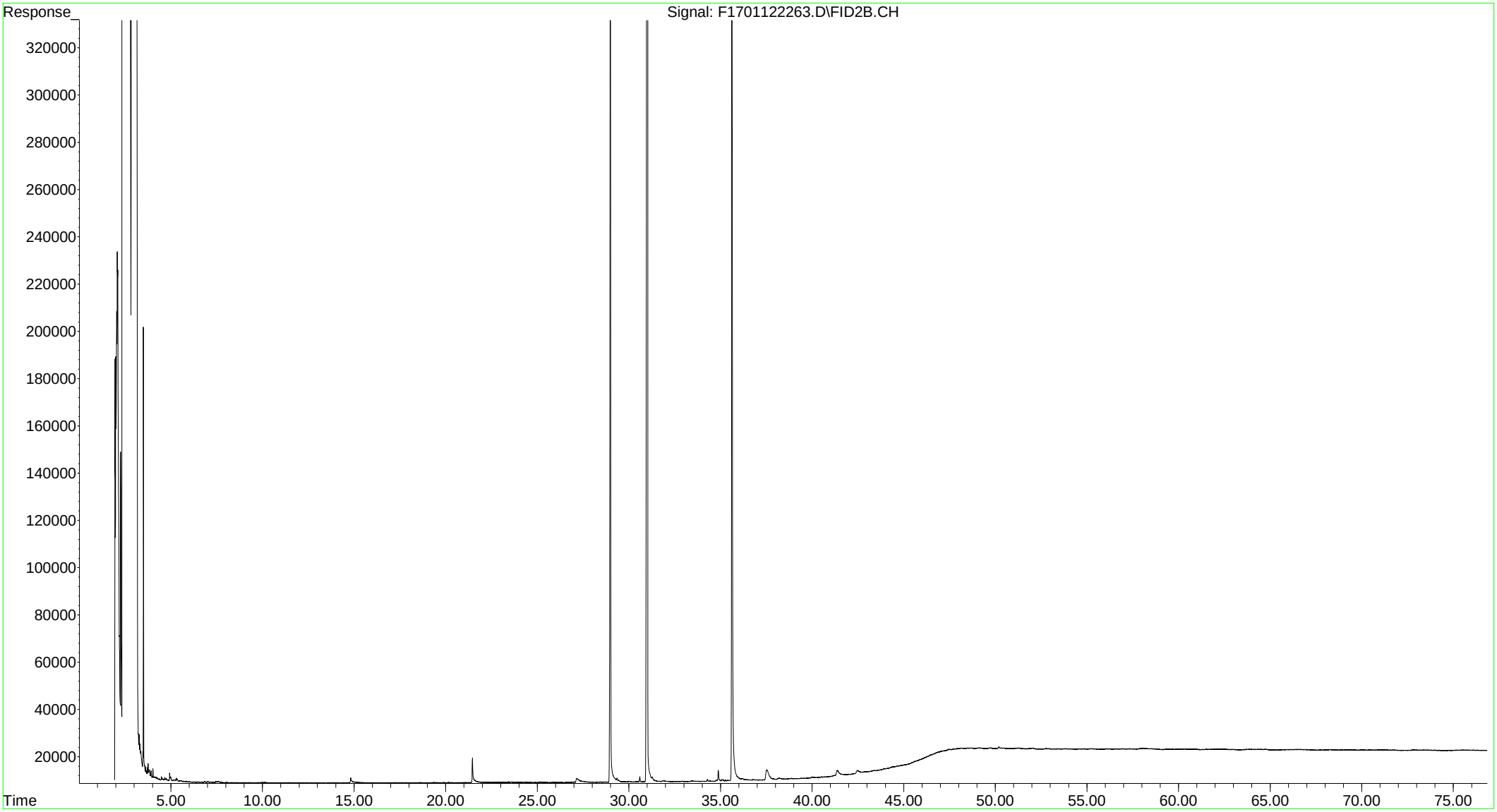

ORIGIN ID:HOUA (346) 342-8444
BEA LI ,JOB # 4902-120
GSI ENVIRONMENTAL INC
2211 NORFOLK ST STE 1000
HOUSTON, TX 77098
UNITED STATES US
SHIP DATE: 08JAN22
ACTWGT: 19.45 LB
CAD: 8996029/SSF02220
DIMS: 15x12x11 IN
BILL THIRD PARTY
TO ATTN: SUSAN O NEIL
ALPHA LAB
320 FORBES BLVD
JOB # 4902-120
MANSFIELD MA 02048
(508) 822-9300
INV:
PO:
REF:
DEPT:
FedEx
Express
TRK# 0201 2885 2269 1047
MON - 10 JAN 9:00A
FIRST OVERNIGHT
DSR AHS
02048
MA-US BOS
X1 PYMA

GC-FID Chromatogram

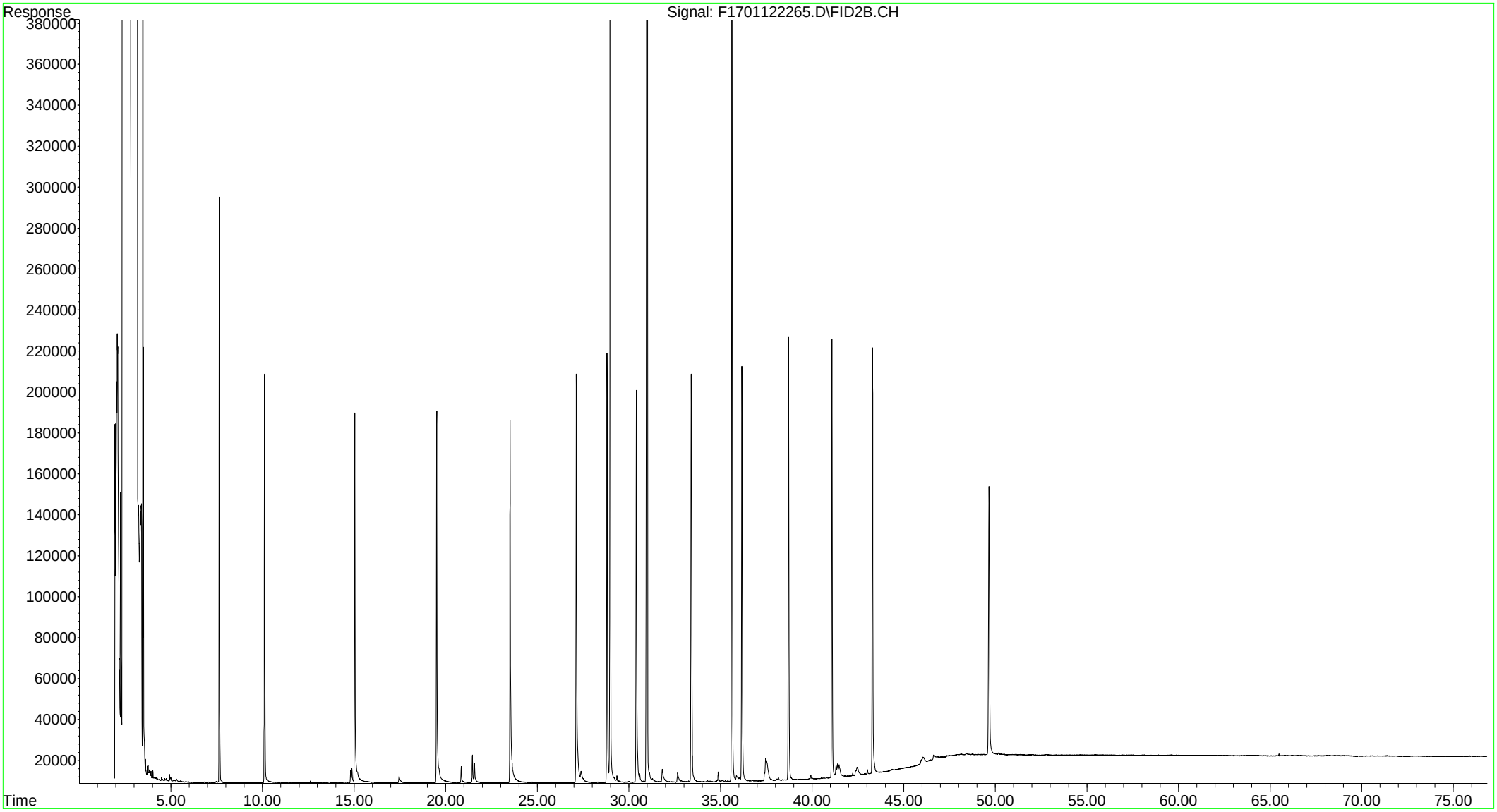
File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122271.D
Operator : FID17:WR
Acquired : 14 Jan 2022 11:28 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: l2200971-01,42,,
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 86



File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122263.D
Operator : FID17:WR
Acquired : 14 Jan 2022 5:33 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1594071-1,42,,
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 82



File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122265.D
Operator : FID17:WR
Acquired : 14 Jan 2022 7:02 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1594071-2,42,,
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 83



Petroleum Reference Standards

```
File       :O:\Forensics\LIBRARY\Hydrocarbon Reference Standards\JP-5 Fu
...         el.D
Operator  : PAH2:AC
Instrument :   PAH 2
Acquired  : 19 Nov 2011   4:22 pm using AcqMethod FRNC2AF.M
Sample    : JP-5 FUEL
Misc Info : F042710P
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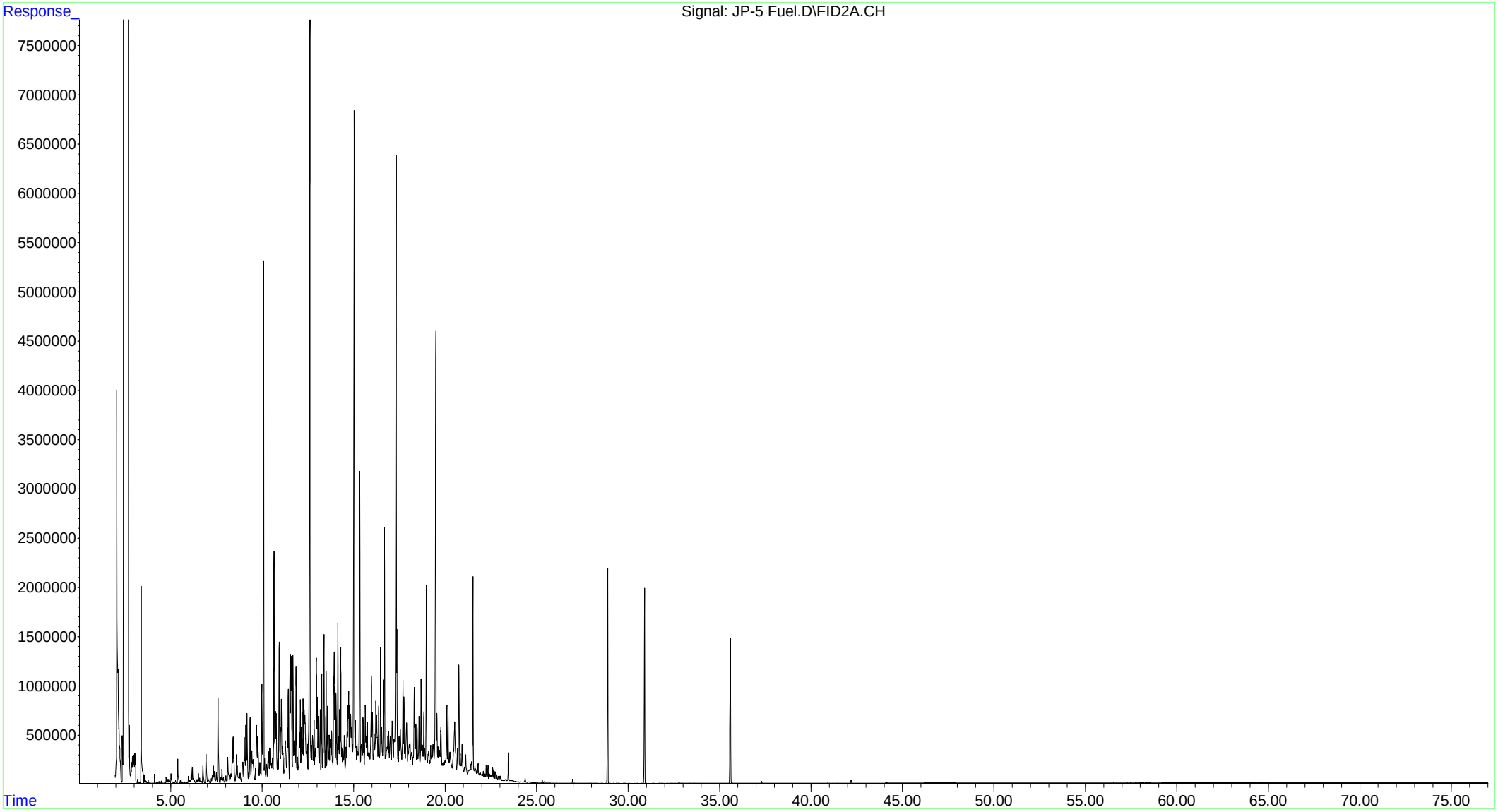

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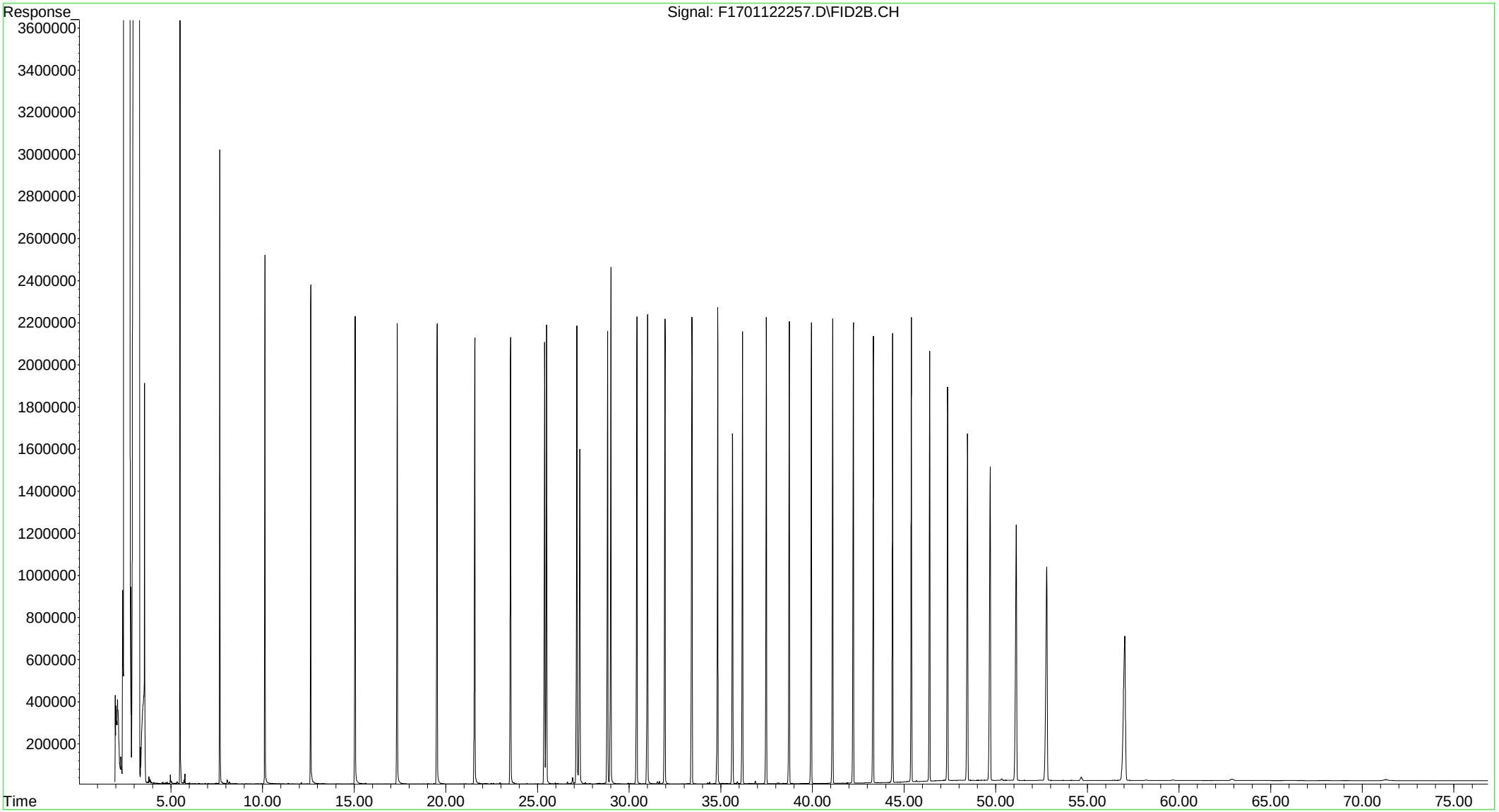
Operator : FID17:WR
Acquired : 14 Jan 2022 1:07 pm using AcqMethod FID17A.M
Instrument : FID17
Sample Name: WG1593355-5
Misc Info : WG1593355,FRBE45,ICAL18568
Vial Number: 79



Total Saturated Hydrocarbons by GC/FID

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122271.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 11:28 pm
Operator : FID17:WR
Sample : l2200971-01,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 86 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 12:27:10 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.004	51968804	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	28.985	14139082	12.320	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	24.64%#		
24) s	d50-Tetracosane	35.619	11224663	12.143	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	24.29%#		
	Target Compounds					
2) t	n-Octane (C8)	5.458	3469329	4.156	ug/mL	M4
3) t	n-Nonane (C9)	7.646	23279815	26.923	ug/mL	M4
4) t	n-Decane (C10)	10.142	102653069	116.460	ug/mL	M4
5) t	n-Undecane (C11)	12.677	238083409	263.764	ug/mL	M4
6) t	n-Dodecane (C12)	15.101	233997730	252.389	ug/mL	M4
7) t	n-Tridecane (C13)	17.394	179480876	188.961	ug/mL	M4
8) t	1380	19.035	33003439	33.748	ug/mL	M4
9) t	n-Tetradecane (C14)	19.554	107487643	109.913	ug/mL	M4
10) t	1470	20.809	25842294	26.388	ug/mL	M4
11) t	n-Pentadecane (C15)	21.585	41843253	42.727	ug/mL	M4
12) t	n-Hexadecane (C16)	23.517	7845524	7.933	ug/mL	M4
13) t	1650	24.423	1089819	1.123	ug/mL	M4
14) t	n-Heptadecane (C17)	25.367	1708216	1.760	ug/mL	M4
15) t	Pristane	25.464	939010	0.898	ug/mL	M4
16) t	n-Octadecane (C18)	27.132	790804	0.783	ug/mL	M4
17) t	Phytane	27.287	198042	0.207	ug/mL	M4
18) t	n-Nonadecane (C19)	28.804	162605	0.161	ug/mL	M4
20) t	n-Eicosane (C20)	30.427	56400	0.055	ug/mL	M4
21) t	n-Heneicosane (C21)	31.960	31304	0.030	ug/mL	M4
22) t	n-Docosane (C22)	33.427	21427	0.021	ug/mL	M4
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	d
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	37.550	808270C	0.792	ug/mL	M4
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	39.408	5649951271	5573.224	ug/mL	m
42) h	C9-C44 Total Petroleu BS	39.408	5332513273	5260.097	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122271.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 11:28 pm
Operator : FID17:WR
Sample : l2200971-01,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 86 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 12:27:10 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : Default - All compounds listed

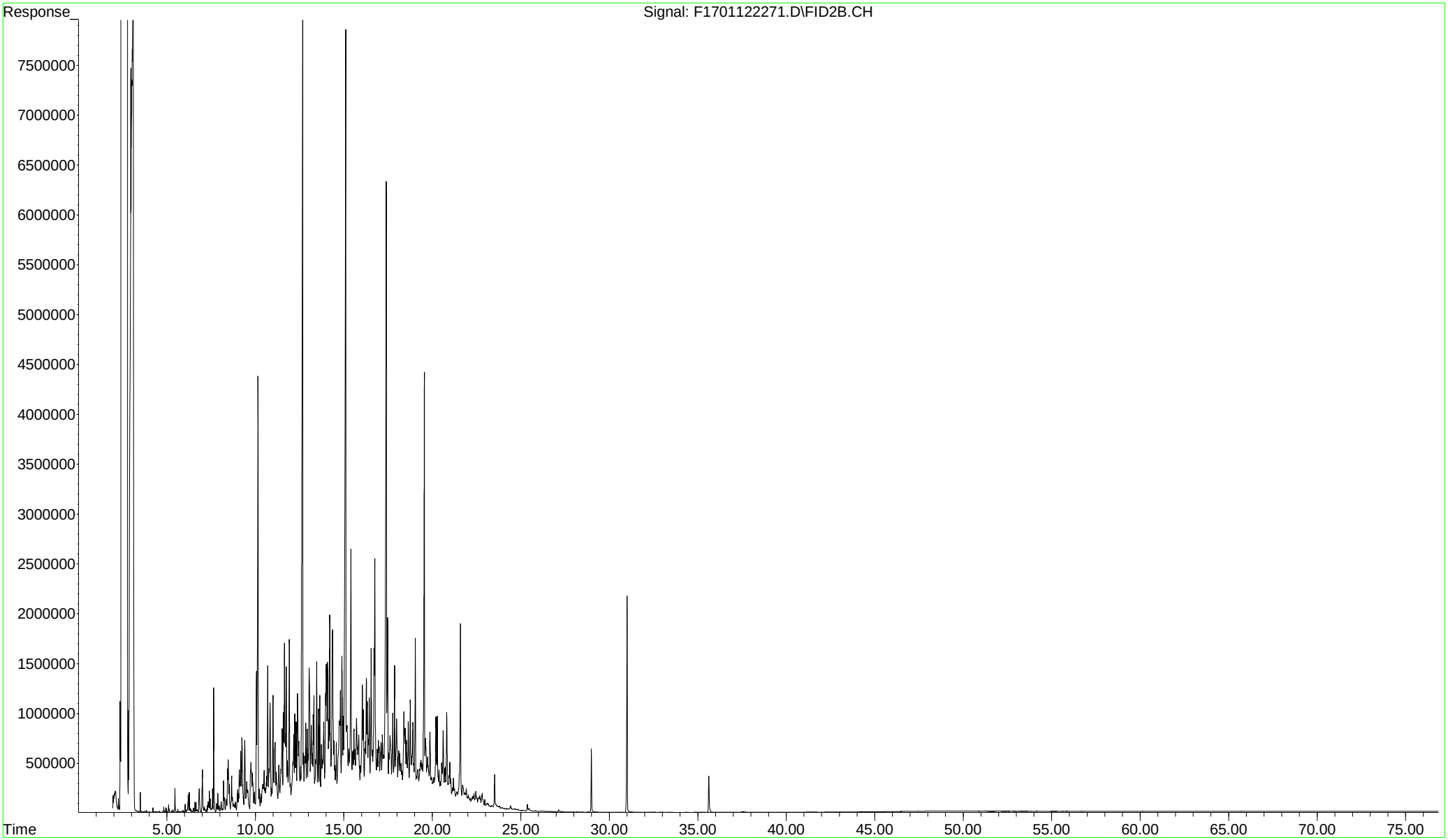
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	25.609	5176591721	5193.185	ug/mL	m
44) h	C10-C28 DRO BS	25.609	5145980679	5162.476	ug/mL	m
45) h	C28-C40 ORO	49.014	104191333	98.244	ug/mL	m
45) h	C28-C40 ORO BS	49.014	-20544734	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	37.870	3933273412	3879.859	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122271.D
Operator : FID17:WR
Acquired : 14 Jan 2022 11:28 pm using AcqMethod FID17A.M
Sample Name: l2200971-01,42,,
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 86
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M



Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172211.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 5:59 pm
Operator : FID17:WR
Sample : L2200971-01D,42,5
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 56 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 11:02:29 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701172201R
Blank File : F1701172209.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.010	52941201	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	28.984	2637186	2.256	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	4.51%#		
24) s	d50-Tetracosane	35.636	2016687	2.142	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	4.28%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	d
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	d
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	d
5) t	n-Undecane (C11)	12.629	43782912	47.615	ug/mL	M4
6) t	n-Dodecane (C12)	15.048	43131285	45.667	ug/mL	M4
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	d
8) t	1380	0.000	0	N.D.	ug/mL	d
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	d
10) t	1470	0.000	0	N.D.	ug/mL	d
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	d
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	d
13) t	1650	0.000	0	N.D.	ug/mL	d
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	d
15) t	Pristane	0.000	0	N.D.	ug/mL	d
16) t	n-Octadecane (C18)	0.000	0	N.D.	ug/mL	d
17) t	Phytane	0.000	0	N.D.	ug/mL	d
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	d
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	d
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	d
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	d
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	d
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	d
26) t	n-Pentacosane (C25)	0.000	0	N.D.	ug/mL	d
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	d
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	d
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	d
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	d
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	d
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	d
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	d
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	d
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	d
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	d
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	d
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	d
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	39.505	1287310474	1246.505	ug/mL	m
42) h	C9-C44 Total Petroleu BS	39.505	990445390	959.050	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\
Data File : F1701172211.D
Signal(s) : FID2B.CH
Acq On : 17 Jan 2022 5:59 pm
Operator : FID17:WR
Sample : L2200971-01D,42,5
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 56 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 11:02:29 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Tue Jan 18 10:48:39 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701172201R
Blank File : F1701172209.D

Sub List : Default - All compounds listed

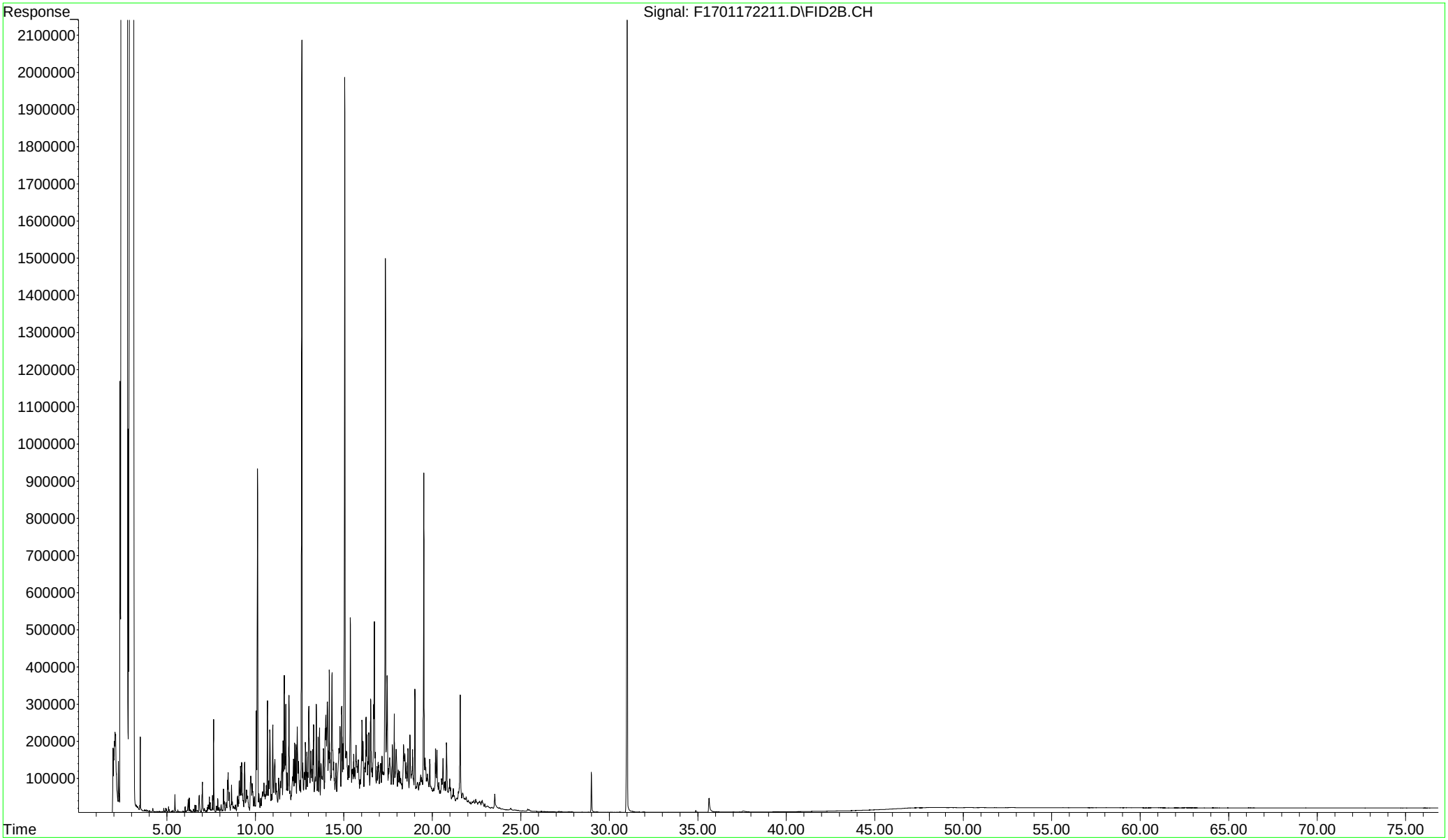
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	25.616	988854527	973.803	ug/mL	m
44) h	C10-C28 DRO BS	25.616	969005560	954.256	ug/mL	m
45) h	C28-C40 ORO	49.057	100959883	93.449	ug/mL	m
45) h	C28-C40 ORO BS	49.057	-11805957	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	37.870	721286534	698.423	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\F1701172211.D
Operator : FID17:WR
Acquired : 17 Jan 2022 5:59 pm using AcqMethod FID17A.M
Sample Name: L2200971-01D,42,5
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 56
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN17.SEC\HC17120721R_DRO.M



Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122263.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 5:33 pm
Operator : FID17:WR
Sample : WG1594071-1,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 82 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 12:29:51 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : Default - All compounds listed

	Compound	R.T.	Response	Conc	Units	
	Internal Standards					
1) I	5-alpha-androstane	31.006	50175713	50.000	ug/mL	M4
	System Monitoring Compounds					
19) s	ortho-terphenyl	28.989	15624566	14.100	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	28.20%#		
24) s	d50-Tetracosane	35.623	12306975	13.790	ug/mL	M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	27.58%#		
	Target Compounds					
2) t	n-Octane (C8)	0.000	0	N.D.	ug/mL	
3) t	n-Nonane (C9)	0.000	0	N.D.	ug/mL	
4) t	n-Decane (C10)	0.000	0	N.D.	ug/mL	
5) t	n-Undecane (C11)	0.000	0	N.D.	ug/mL	
6) t	n-Dodecane (C12)	0.000	0	N.D.	ug/mL	
7) t	n-Tridecane (C13)	0.000	0	N.D.	ug/mL	
8) t	1380	0.000	0	N.D.	ug/mL	
9) t	n-Tetradecane (C14)	0.000	0	N.D.	ug/mL	
10) t	1470	0.000	0	N.D.	ug/mL	
11) t	n-Pentadecane (C15)	0.000	0	N.D.	ug/mL	
12) t	n-Hexadecane (C16)	0.000	0	N.D.	ug/mL	
13) t	1650	0.000	0	N.D.	ug/mL	
14) t	n-Heptadecane (C17)	0.000	0	N.D.	ug/mL	
15) t	Pristane	0.000	0	N.D.	ug/mL	
16) t	n-Octadecane (C18)	27.150	249816C	0.256	ug/mL	M4
17) t	Phytane	0.000	0	N.D.	ug/mL	
18) t	n-Nonadecane (C19)	0.000	0	N.D.	ug/mL	
20) t	n-Eicosane (C20)	0.000	0	N.D.	ug/mL	
21) t	n-Heneicosane (C21)	0.000	0	N.D.	ug/mL	
22) t	n-Docosane (C22)	0.000	0	N.D.	ug/mL	
23) t	n-Tricosane (C23)	0.000	0	N.D.	ug/mL	d
25) t	n-Tetracosane (C24)	0.000	0	N.D.	ug/mL	
26) t	n-Pentacosane (C25)	37.547	540108C	0.548	ug/mL	M4
27) t	n-Hexacosane (C26)	0.000	0	N.D.	ug/mL	
28) t	n-Heptacosane (C27)	0.000	0	N.D.	ug/mL	
29) t	n-Octacosane (C28)	0.000	0	N.D.	ug/mL	
30) t	n-Nonacosane (C29)	0.000	0	N.D.	ug/mL	
31) t	n-Triacontane (C30)	0.000	0	N.D.	ug/mL	
32) t	n-Hentriacontane (C31)	0.000	0	N.D.	ug/mL	
33) t	n-Dotriacontane (C32)	0.000	0	N.D.	ug/mL	
34) t	n-Tritriacontane (C33)	0.000	0	N.D.	ug/mL	
35) t	n-tetratriacontane (C34)	0.000	0	N.D.	ug/mL	d
36) t	n-Pentatriacontane (C35)	0.000	0	N.D.	ug/mL	
37) t	n-Hexatriacontane (C36)	0.000	0	N.D.	ug/mL	
38) t	n-Heptatriacontane (C37)	0.000	0	N.D.	ug/mL	
39) t	n-Octatriacontane (C38)	0.000	0	N.D.	ug/mL	
40) t	n-Nonatriacontane (C39)	0.000	0	N.D.	ug/mL	
41) t	n-Tetracontane (C40)	0.000	0	N.D.	ug/mL	
42) h	C9-C44 Total Petroleu...	39.408	309504568	316.212	ug/mL	m
42) h	C9-C44 Total Petroleu BS	39.408	-7933430	N.D.	ug/mLm	
43) h	C9-C40 Total Petroleu...	0.000	0	N.D.	ug/ml	d

Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122263.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 5:33 pm
Operator : FID17:WR
Sample : WG1594071-1,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 82 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 18 12:29:51 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

Sub List : Default - All compounds listed

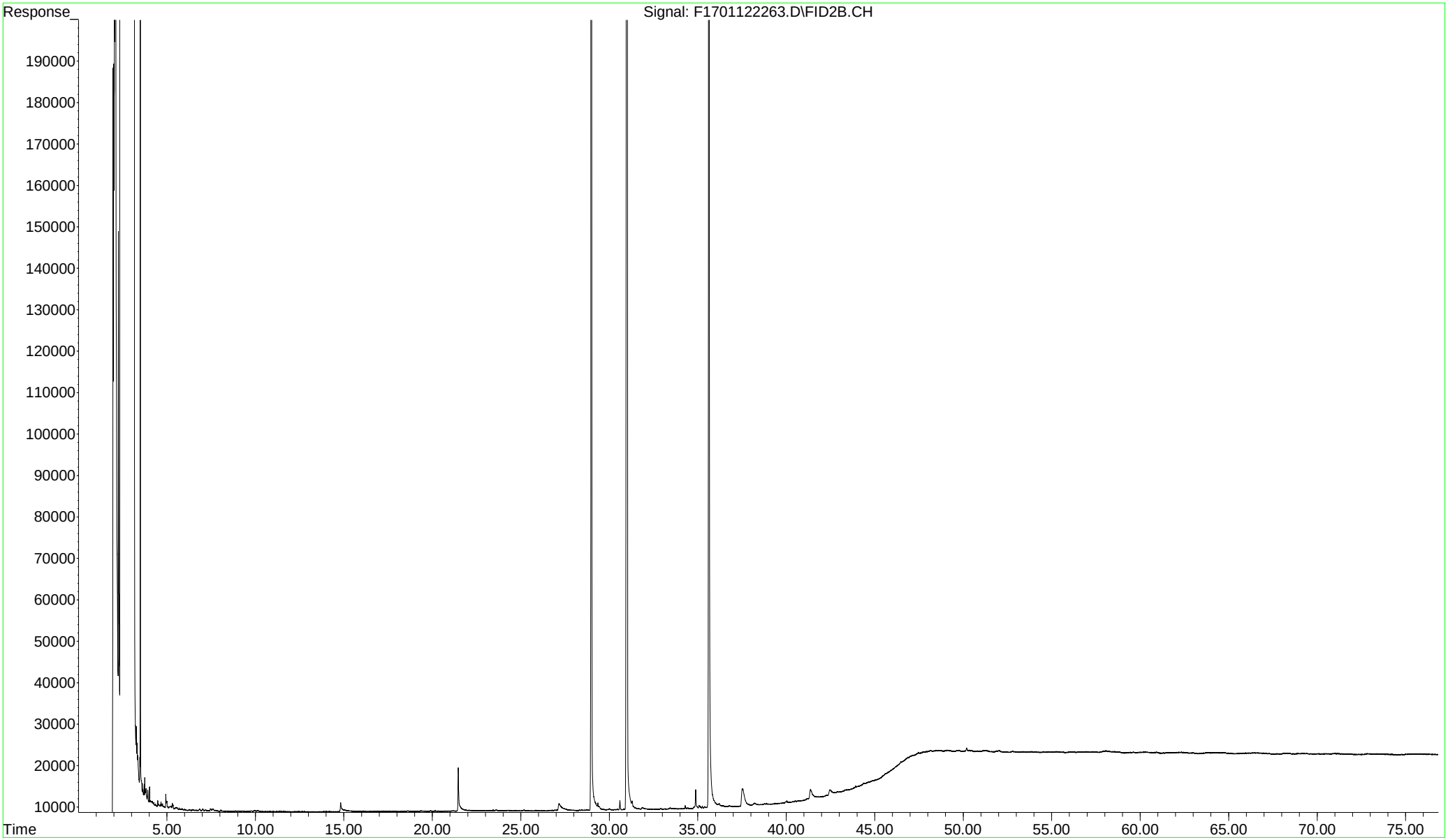
	Compound	R.T.	Response	Conc	Units	
44) h	C10-C28 DRO	25.609	34507693	35.855	ug/mL	m
44) h	C10-C28 DRO BS	25.609	3896651	4.049	ug/mL	m
45) h	C28-C40 ORO	49.014	119005483	116.223	ug/mL	m
45) h	C28-C40 ORO BS	49.014	-5730584	N.D.	ug/mL	m
46) h	Total Resolved Hydroc...	37.870	3796471	3.879	ug/mL	m

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122263.D
Operator : FID17:WR
Acquired : 14 Jan 2022 5:33 pm using AcqMethod FID17A.M
Sample Name: WG1594071-1,42,,
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 82
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M



Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122265.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 7:02 pm
Operator : FID17:WR
Sample : WG1594071-2,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 83 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:41:22 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

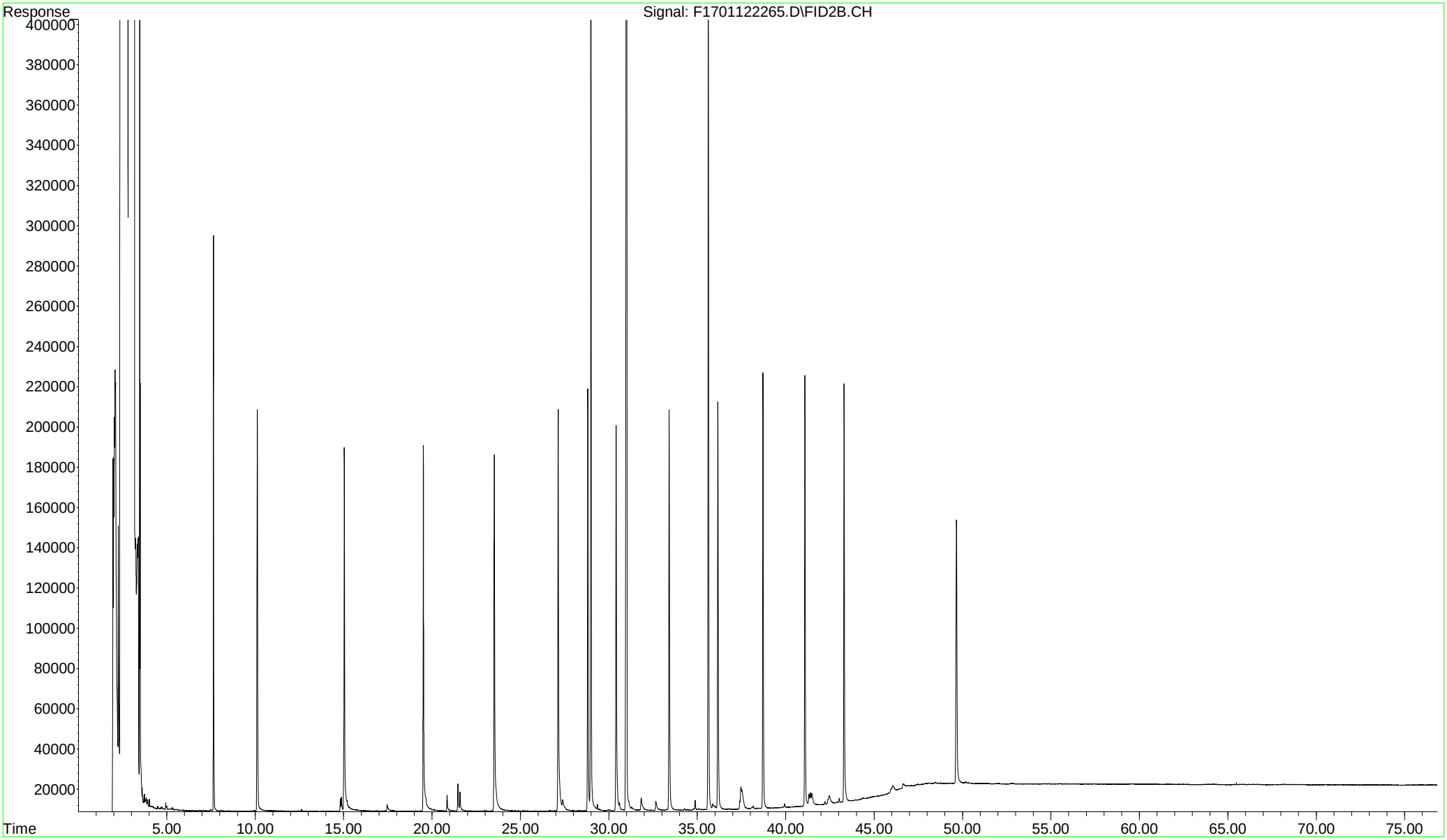
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.004	50291344	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	28.986	16168952	14.558 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	29.12%#
24) s	d50-Tetracosane	35.623	12641828	14.132 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	28.26%#
	Target Compounds			
3) t	n-Nonane (C9)	7.641	4743126	5.668 ug/mL M4
4) t	n-Decane (C10)	10.114	4532830	5.314 ug/mL M4
6) t	n-Dodecane (C12)	15.035	4896966	5.458 ug/mL M4
9) t	n-Tetradecane (C14)	19.509	5116389	5.406 ug/mL M4
12) t	n-Hexadecane (C16)	23.518	5638870	5.892 ug/mL M4
16) t	n-Octadecane (C18)	27.130	5874263	6.010 ug/mL M4
18) t	n-Nonadecane (C19)	28.805	5340248	5.450 ug/mL M4
20) t	n-Eicosane (C20)	30.407	5424311	5.459 ug/mL M4
22) t	n-Docosane (C22)	33.406	5668135	5.653 ug/mL M4
25) t	n-Tetracosane (C24)	36.162	5825569	5.846 ug/mL M4
27) t	n-Hexacosane (C26)	38.713	5770441	5.694 ug/mL M4
29) t	n-Octacosane (C28)	41.084	5803113	5.614 ug/mL M4
31) t	n-Triacontane (C30)	43.300	5755681	5.611 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.657	5257027	4.676 ug/mL M4
42) h	C9-C44 Total Petroleu...	39.408	382450214	389.840 ug/mL m
42) h	C9-C44 Total Petroleu BS	39.408	65012216	66.268 ug/mLm
46) h	Total Resolved Hydroc...	37.870	83254476	84.863 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122265.D
Operator : FID17:WR
Acquired : 14 Jan 2022 7:02 pm using AcqMethod FID17A.M
Sample Name: WG1594071-2,42,,
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 83
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M



Data Path : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\
Data File : F1701122267.D
Signal(s) : FID2B.CH
Acq On : 14 Jan 2022 8:31 pm
Operator : FID17:WR
Sample : WG1594071-3,42,,
Misc : WG1593355,WG1594071,ICAL18568
ALS Vial : 84 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Jan 17 16:41:24 2022
Quant Method : O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M
Quant Title : FID Forensics
QLast Update : Fri Jan 14 09:40:01 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Blank Name : IB1701122203R
Blank File : F1701122261.D

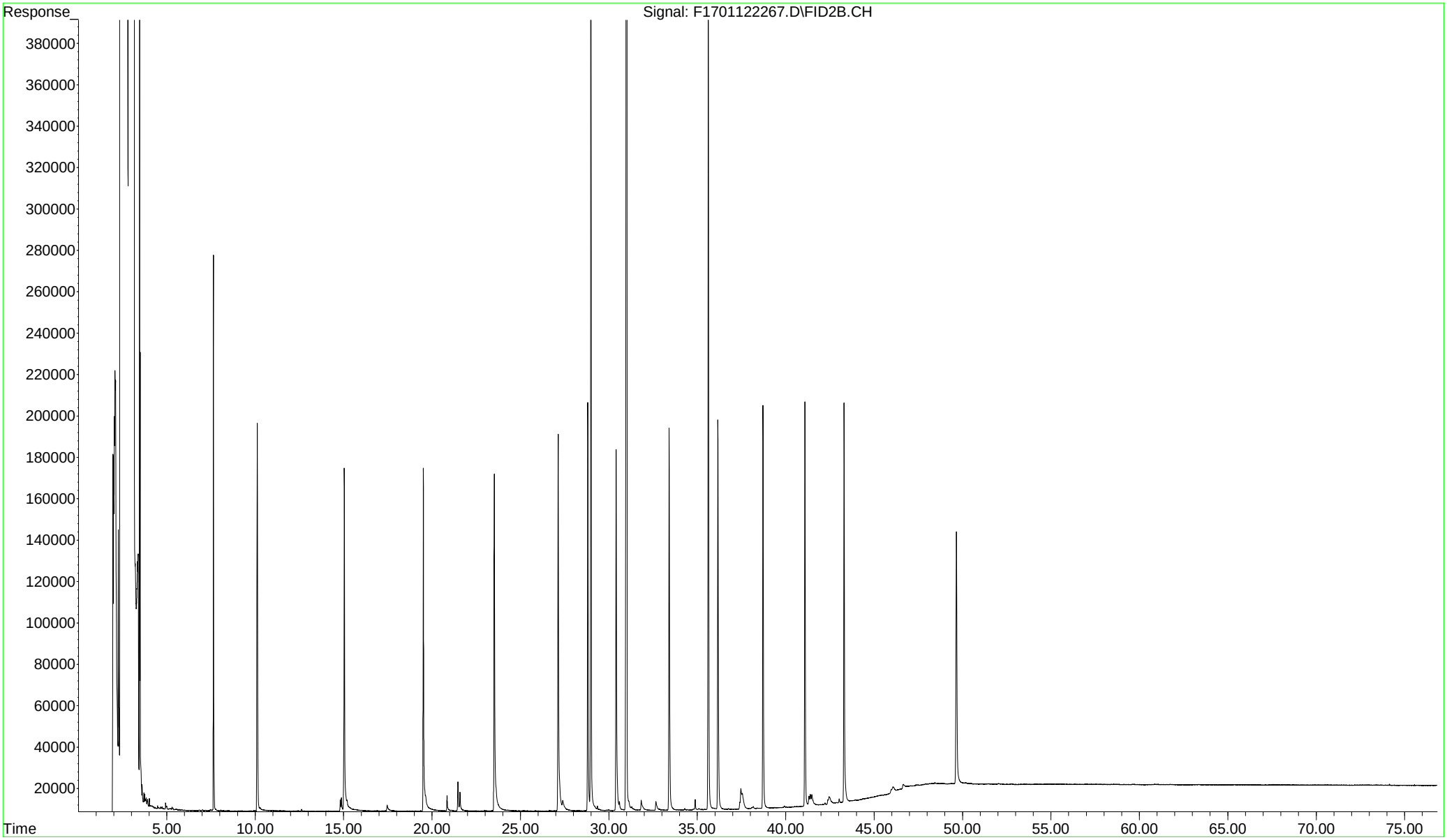
Sub List : SHC_QC_Samples - SHC_QC_Samples

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	31.006	53064851	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	28.986	14926109	12.737 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	25.47%#
24) s	d50-Tetracosane	35.623	11653549	12.347 ug/mL M4
Spiked Amount	50.000	Range 50 - 130	Recovery =	24.69%#
	Target Compounds			
3) t	n-Nonane (C9)	7.639	4467089	5.059 ug/mL M4
4) t	n-Decane (C10)	10.113	4254348	4.727 ug/mL M4
6) t	n-Dodecane (C12)	15.034	4017481	4.244 ug/mL M4
9) t	n-Tetradecane (C14)	19.509	4784439	4.791 ug/mL M4
12) t	n-Hexadecane (C16)	23.517	5289172	5.238 ug/mL M4
16) t	n-Octadecane (C18)	27.128	5519682	5.352 ug/mL M4
18) t	n-Nonadecane (C19)	28.805	5022579	4.858 ug/mL M4
20) t	n-Eicosane (C20)	30.408	5113789	4.878 ug/mL M4
22) t	n-Docosane (C22)	33.405	5327026	5.035 ug/mL M4
25) t	n-Tetracosane (C24)	36.164	5421711	5.156 ug/mL M4
27) t	n-Hexacosane (C26)	38.713	5423444	5.072 ug/mL M4
29) t	n-Octacosane (C28)	41.087	5391999	4.943 ug/mL M4
31) t	n-Triacontane (C30)	43.300	5410327	4.999 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.652	4865198	4.101 ug/mL M4
42) h	C9-C44 Total Petroleu...	39.408	365337138	352.932 ug/mL m
42) h	C9-C44 Total Petroleu BS	39.408	47899140	46.273 ug/mLm
46) h	Total Resolved Hydroc...	37.870	75980231	73.400 ug/mL m
	SemiQuant Compounds - Not Calibrated on this Instrument			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

File :O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\F1701122267.D
Operator : FID17:WR
Acquired : 14 Jan 2022 8:31 pm using AcqMethod FID17A.M
Sample Name: WG1594071-3,42,,
Instrument: FID17
Misc Info : WG1593355,WG1594071,ICAL18568
Vial Number: 84
CurrentMeth: O:\Forensics\Data\FID17\2022\JAN\JAN12.SEC\HC17120721R_DRO.M



Alpha
Summary Forms

Organic Summary Forms

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01D	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/12/22 13:17
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001011	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	93.4	13.9	U
78-78-4	Isopentane	ND	93.4	17.1	U
109-67-1	1-Pentene	ND	93.4	17.0	U
563-46-2	2-Methyl-1-Butene	ND	93.4	14.5	U
109-66-0	Pentane	ND	93.4	29.1	U
646-04-8	trans-2-Pentene	ND	93.4	12.6	U
78-79-5	Isoprene	ND	93.4	16.7	U
627-20-3	cis-2-Pentene	ND	93.4	15.0	U
75-65-0	Tertiary Butanol	ND	1170	151.	U
75-83-2	2,2-Dimethylbutane	ND	93.4	28.8	U
691-37-2	4-Methyl-1-pentene	ND	93.4	14.5	U
287-92-3	Cyclopentane	ND	93.4	24.2	U
79-29-8	2,3-Dimethylbutane	ND	93.4	38.6	U
107-83-5	2-Methylpentane	ND	93.4	25.3	U
1634-04-4	Methyl tert butyl ether	ND	93.4	19.2	U
96-14-0	3-Methylpentane	ND	93.4	14.8	U
592-41-6	1-Hexene	ND	93.4	13.1	U
110-54-3	n-Hexane	30.0	93.4	15.4	J
108-20-3	Isopropyl Ether	ND	93.4	11.3	U
4050-45-7	trans-2-Hexene	ND	93.4	12.2	U
625-27-4	2-Methyl-2-pentene	ND	93.4	14.3	U
7688-21-3	cis-2-Hexene	ND	93.4	12.6	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	93.4	14.1	U
590-35-2	2,2-Dimethylpentane	ND	93.4	12.6	U
96-37-7	Methylcyclopentane	ND	93.4	12.5	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01D	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/12/22 13:17
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001011	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	93.4	11.5	U
464-06-2	2,2,3-Trimethylbutane	ND	93.4	12.6	U
107-06-2	1,2-Dichloroethane	ND	93.4	13.8	U
562-49-2	3,3-Dimethylpentane	ND	93.4	17.4	U
110-82-7	Cyclohexane	ND	93.4	11.5	U
591-76-4	2-Methylhexane	ND	93.4	14.7	U
71-43-2	Benzene	ND	93.4	14.2	U
565-59-3	2,3-Dimethylpentane	ND	93.4	12.4	U
110-02-1	Thiophene	ND	93.4	13.2	U
1638-26-2	1,1-Dimethylcyclopentane	ND	93.4	11.2	U
589-34-4	3-Methylhexane	ND	93.4	14.9	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	93.4	11.5	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	93.4	14.0	U
617-78-7	3-Ethylpentane	ND	93.4	13.5	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	187	27.3	U
540-84-1	Isooctane	ND	93.4	10.2	U
14686-14-7	trans-3-Heptene	ND	93.4	14.5	U
142-82-5	Heptane	53.9	93.4	16.2	J
14686-13-6	trans-2-Heptene	ND	93.4	12.0	U
6443-92-1	cis-2-Heptene	ND	93.4	18.1	U
590-73-8	2,2-Dimethylhexane	ND	93.4	13.5	U
108-87-2	Methylcyclohexane	128	93.4	12.6	
592-13-2	2,5-Dimethylhexane	ND	93.4	16.2	U
589-43-5	2,4-Dimethylhexane	ND	93.4	11.3	U
1640-89-7	Ethylcyclopentane	ND	93.4	12.4	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01D	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/12/22 13:17
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001011	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
564-02-3	2,2,3-Trimethylpentane	ND	93.4	16.2	U
565-75-3	2,3,4-Trimethylpentane	ND	93.4	12.2	U
1330-20-7	Xylene (Total)	2160	93.4	9.76	
560-21-4	2,3,3-Trimethylpentane	ND	93.4	18.5	U
584-94-1	2,3-Dimethylhexane	ND	93.4	22.6	U
592-27-8	2-Methylheptane	146	93.4	15.8	
589-53-7	4-Methylheptane	ND	93.4	16.0	U
589-81-1	3-Methylheptane	105	93.4	13.3	
619-99-8	3-Ethylhexane	ND	93.4	16.7	U
108-88-3	Toluene	104	93.4	12.6	
554-14-3	2-Methylthiophene	ND	93.4	7.94	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	88.4	93.4	12.1	J
616-44-4	3-Methylthiophene	ND	93.4	10.9	U
111-66-0	1-Octene	ND	233	14.3	U
111-65-9	Octane	729	93.4	11.0	
6876-23-9	1,2-Dimethylcyclohexane (trans)	199	93.4	13.7	
106-93-4	1,2-Dibromoethane	ND	93.4	14.9	U
7642-04-8	cis-2-Octene	ND	93.4	10.7	U
3875-51-2	Isopropylcyclopentane	ND	93.4	13.7	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	121	93.4	27.1	
2216-30-0	2,5-Dimethylheptane	198	93.4	15.6	
926-82-9	3,5-Dimethylheptane	45.8	93.4	13.2	J
4032-86-4	3,3-Dimethylheptane	19.7	93.4	11.3	J
7094-27-1	1,1,4-Trimethylcyclohexane	ND	93.4	9.29	U
3074-71-3	2,3-Dimethylheptane	378	93.4	10.6	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01D	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/12/22 13:17
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001011	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
922-28-1	3,4-Dimethylheptane	160	93.4	15.9	
2216-34-4	4-Methyloctane	408	93.4	15.6	
3221-61-2	2-Methyloctane	581	93.4	23.9	
100-41-4	Ethylbenzene	273	93.4	10.1	
872-55-9	2-Ethylthiophene	ND	93.4	8.22	U
2216-33-3	3-Methyloctane	739	93.4	10.4	
1067-20-5	3,3-Diethylpentane	ND	93.4	10.9	U
179601-23-1	p/m-Xylene	1380	187	17.8	
124-11-8	1-Nonene	ND	233	12.6	U
20063-92-7	trans-3-Nonene	ND	93.4	11.1	U
20237-46-1	cis-3-Nonene	ND	93.4	17.5	U
111-84-2	Nonane (C9)	4430	93.4	14.5	
100-42-5	Styrene	ND	93.4	9.43	U
95-47-6	o-Xylene	782	93.4	9.76	
6434-77-1	2-Nonene	ND	233	11.8	U
696-29-7	Isopropylcyclohexane	521	93.4	9.90	
98-82-8	Isopropylbenzene	235	93.4	8.73	
4110-44-5	3,3-Dimethyloctane	158	93.4	9.43	
103-65-1	n-Propylbenzene	698	93.4	8.26	
871-83-0	2-Methylnonane	2210	93.4	13.2	
5911-04-6	3-Methylnonane	2160	93.4	13.0	
620-14-4	1-Methyl-3-Ethylbenzene	1780	93.4	14.8	
622-96-8	1-Methyl-4-Ethylbenzene	943	93.4	13.2	
108-67-8	1,3,5-Trimethylbenzene	1480	93.4	10.7	
872-05-9	1-Decene	ND	93.4	12.1	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01D	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/12/22 13:17
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001011	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1678-98-4	Isobutylcyclohexane	ND	93.4	7.61	U
611-14-3	1-Methyl-2-Ethylbenzene	1250	93.4	7.94	
124-18-5	Decane (C10)	18700	93.4	12.6	E
98-06-6	tert-Butylbenzene	34.8	93.4	9.85	J
95-63-6	1,2,4-Trimethylbenzene	4990	93.4	9.66	
538-93-2	Isobutylbenzene	266	93.4	12.6	
135-98-8	sec-Butylbenzene	661	93.4	12.1	
535-77-3	1-Methyl-3-Isopropylbenzene	881	93.4	12.0	
99-87-6	1-Methyl-4-Isopropylbenzene	707	93.4	9.90	
526-73-8	1,2,3-Trimethylbenzene	2770	93.4	10.4	
527-84-4	1-Methyl-2-Isopropylbenzene	165	93.4	10.1	
496-11-7	Indane	430	93.4	5.74	
141-93-5	1,3-Diethylbenzene	829	93.4	11.6	
1074-43-7	1-Methyl-3-N-Propylbenzene	2540	93.4	9.43	
95-13-6	Indene	92.0	93.4	5.42	J
1074-55-1	1-Methyl-4-N-Propylbenzene	1230	93.4	11.7	
104-51-8	n-Butylbenzene	1210	93.4	9.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	2070	93.4	11.4	
135-01-3	1,2-Diethylbenzene	491	93.4	13.8	
1074-17-5	1-Methyl-2-N-Propylbenzene	2180	93.4	11.6	
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	1980	93.4	8.73	
1120-21-4	Undecane	33200	93.4	10.4	E
874-41-9	1,3-Dimethyl-4-Ethylbenzene	2440	93.4	9.06	
934-74-7	1,3-Dimethyl-5-Ethylbenzene	2590	93.4	11.0	
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	408	93.4	6.96	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01D	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/12/22 13:17
Sample Matrix	: OIL	**Dilution Factor**	: 10
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001011	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
933-98-2	1,2-Dimethyl-3-Ethylbenzene	1350	93.4	5.93	
95-93-2	1,2,4,5-Tetramethylbenzene	1460	93.4	7.24	
527-53-7	1,2,3,5-Tetramethylbenzene	2700	93.4	7.10	
538-68-1	N-Pentylbenzene	740	93.4	11.6	
488-23-3	1,2,3,4-Tetramethylbenzene	2470	93.4	9.99	
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	93.4	13.3	U
112-40-3	Dodecane (C12)	24200	233	30.7	E
102-25-0	1,3,5-Triethylbenzene	ND	93.4	17.7	U
91-20-3	Naphthalene	2850	93.4	39.0	
95-15-8	Benzothiophene	ND	93.4	49.3	U
877-44-1	1,2,4-Triethylbenzene	259	93.4	15.9	
1077-16-3	Hexylbenzene	630	93.4	18.0	
12108-13-3	MMT	ND	233	60.0	U
629-50-5	Tridecane	15400	233	65.0	E
91-57-6	2-Methylnaphthalene	5270	233	61.7	
90-12-0	1-Methylnaphthalene	3510	233	68.5	
629-59-4	Tetradecane (C14)	8420	233	28.6	E
629-62-9	Pentadecane	2440	233	52.0	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01D2	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/12/22 15:40
Sample Matrix	: OIL	**Dilution Factor**	: 200
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001013	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: 100
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
124-18-5	Decane (C10)	21900	1870	253.	
1120-21-4	Undecane	43900	1870	207.	
112-40-3	Dodecane (C12)	33200	4670	613.	
629-50-5	Tridecane	22500	4670	1300	
629-59-4	Tetradecane (C14)	14100	4670	571.	

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: WG1593474-6	**Date Collected**	: NA
Client ID	: WG1593474-6BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/12/22 01:12
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001009	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
563-45-1	3-Methyl-1-butene	ND	10.0	1.48	U
78-78-4	Isopentane	ND	10.0	1.83	U
109-67-1	1-Pentene	ND	10.0	1.82	U
563-46-2	2-Methyl-1-Butene	ND	10.0	1.56	U
109-66-0	Pentane	ND	10.0	3.12	U
646-04-8	trans-2-Pentene	ND	10.0	1.35	U
78-79-5	Isoprene	ND	10.0	1.78	U
627-20-3	cis-2-Pentene	ND	10.0	1.61	U
75-65-0	Tertiary Butanol	ND	125	16.2	U
75-83-2	2,2-Dimethylbutane	ND	10.0	3.08	U
691-37-2	4-Methyl-1-pentene	ND	10.0	1.56	U
287-92-3	Cyclopentane	ND	10.0	2.60	U
79-29-8	2,3-Dimethylbutane	ND	10.0	4.13	U
107-83-5	2-Methylpentane	ND	10.0	2.71	U
1634-04-4	Methyl tert butyl ether	ND	10.0	2.06	U
96-14-0	3-Methylpentane	ND	10.0	1.58	U
592-41-6	1-Hexene	ND	10.0	1.40	U
110-54-3	n-Hexane	ND	10.0	1.64	U
108-20-3	Isopropyl Ether	ND	10.0	1.21	U
4050-45-7	trans-2-Hexene	ND	10.0	1.30	U
625-27-4	2-Methyl-2-pentene	ND	10.0	1.53	U
7688-21-3	cis-2-Hexene	ND	10.0	1.36	U
637-92-3	Ethyl-Tert-Butyl-Ether	ND	10.0	1.52	U
590-35-2	2,2-Dimethylpentane	ND	10.0	1.34	U
96-37-7	Methylcyclopentane	ND	10.0	1.34	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: WG1593474-6	**Date Collected**	: NA
Client ID	: WG1593474-6BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/12/22 01:12
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001009	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-08-7	2,4-Dimethylpentane	ND	10.0	1.24	U
464-06-2	2,2,3-Trimethylbutane	ND	10.0	1.35	U
107-06-2	1,2-Dichloroethane	ND	10.0	1.48	U
562-49-2	3,3-Dimethylpentane	ND	10.0	1.86	U
110-82-7	Cyclohexane	ND	10.0	1.24	U
591-76-4	2-Methylhexane	ND	10.0	1.58	U
71-43-2	Benzene	ND	10.0	1.52	U
565-59-3	2,3-Dimethylpentane	ND	10.0	1.32	U
110-02-1	Thiophene	ND	10.0	1.42	U
1638-26-2	1,1-Dimethylcyclopentane	ND	10.0	1.20	U
589-34-4	3-Methylhexane	ND	10.0	1.60	U
994-05-8	Tertiary-Amyl Methyl Ether	ND	10.0	1.23	U
2532-58-3	1,3-Dimethylcyclopentane (cis)	ND	10.0	1.50	U
617-78-7	3-Ethylpentane	ND	10.0	1.44	U
592-76-7/822-50-4	1-Heptene/1,2-DMCP (trans)	ND	20.0	2.92	U
540-84-1	Isooctane	ND	10.0	1.09	U
14686-14-7	trans-3-Heptene	ND	10.0	1.56	U
142-82-5	Heptane	ND	10.0	1.74	U
14686-13-6	trans-2-Heptene	ND	10.0	1.28	U
6443-92-1	cis-2-Heptene	ND	10.0	1.94	U
590-73-8	2,2-Dimethylhexane	ND	10.0	1.45	U
108-87-2	Methylcyclohexane	ND	10.0	1.35	U
592-13-2	2,5-Dimethylhexane	ND	10.0	1.74	U
589-43-5	2,4-Dimethylhexane	ND	10.0	1.22	U
1640-89-7	Ethylcyclopentane	ND	10.0	1.32	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: WG1593474-6	**Date Collected**	: NA
Client ID	: WG1593474-6BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/12/22 01:12
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001009	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
564-02-3	2,2,3-Trimethylpentane	ND	10.0	1.74	U
565-75-3	2,3,4-Trimethylpentane	ND	10.0	1.30	U
1330-20-7	Xylene (Total)	ND	10.0	1.04	U
560-21-4	2,3,3-Trimethylpentane	ND	10.0	1.98	U
584-94-1	2,3-Dimethylhexane	ND	10.0	2.42	U
592-27-8	2-Methylheptane	ND	10.0	1.69	U
589-53-7	4-Methylheptane	ND	10.0	1.72	U
589-81-1	3-Methylheptane	ND	10.0	1.42	U
619-99-8	3-Ethylhexane	ND	10.0	1.79	U
108-88-3	Toluene	ND	10.0	1.36	U
554-14-3	2-Methylthiophene	ND	10.0	0.850	U
2207-04-7	1,4-Dimethylcyclohexane (trans)	ND	10.0	1.30	U
616-44-4	3-Methylthiophene	ND	10.0	1.17	U
111-66-0	1-Octene	ND	25.0	1.54	U
111-65-9	Octane	ND	10.0	1.18	U
6876-23-9	1,2-Dimethylcyclohexane (trans)	ND	10.0	1.47	U
106-93-4	1,2-Dibromoethane	ND	10.0	1.60	U
7642-04-8	cis-2-Octene	ND	10.0	1.14	U
3875-51-2	Isopropylcyclopentane	ND	10.0	1.46	U
2207-01-4	1,2-Dimethylcyclohexane (cis)	ND	10.0	2.90	U
2216-30-0	2,5-Dimethylheptane	ND	10.0	1.68	U
926-82-9	3,5-Dimethylheptane	ND	10.0	1.41	U
4032-86-4	3,3-Dimethylheptane	ND	10.0	1.21	U
7094-27-1	1,1,4-Trimethylcyclohexane	ND	10.0	0.995	U
3074-71-3	2,3-Dimethylheptane	ND	10.0	1.14	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: WG1593474-6	**Date Collected**	: NA
Client ID	: WG1593474-6BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/12/22 01:12
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001009	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
922-28-1	3,4-Dimethylheptane	ND	10.0	1.70	U
2216-34-4	4-Methyloctane	ND	10.0	1.67	U
3221-61-2	2-Methyloctane	ND	10.0	2.56	U
100-41-4	Ethylbenzene	ND	10.0	1.08	U
872-55-9	2-Ethylthiophene	ND	10.0	0.880	U
2216-33-3	3-Methyloctane	ND	10.0	1.12	U
1067-20-5	3,3-Diethylpentane	ND	10.0	1.16	U
179601-23-1	p/m-Xylene	ND	20.0	1.90	U
124-11-8	1-Nonene	ND	25.0	1.35	U
20063-92-7	trans-3-Nonene	ND	10.0	1.18	U
20237-46-1	cis-3-Nonene	ND	10.0	1.87	U
111-84-2	Nonane (C9)	ND	10.0	1.56	U
100-42-5	Styrene	ND	10.0	1.01	U
95-47-6	o-Xylene	ND	10.0	1.04	U
6434-77-1	2-Nonene	ND	25.0	1.27	U
696-29-7	Isopropylcyclohexane	ND	10.0	1.06	U
98-82-8	Isopropylbenzene	ND	10.0	0.935	U
4110-44-5	3,3-Dimethyloctane	ND	10.0	1.01	U
103-65-1	n-Propylbenzene	ND	10.0	0.885	U
871-83-0	2-Methylnonane	ND	10.0	1.42	U
5911-04-6	3-Methylnonane	ND	10.0	1.40	U
620-14-4	1-Methyl-3-Ethylbenzene	ND	10.0	1.58	U
622-96-8	1-Methyl-4-Ethylbenzene	ND	10.0	1.41	U
108-67-8	1,3,5-Trimethylbenzene	ND	10.0	1.15	U
872-05-9	1-Decene	ND	10.0	1.30	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: WG1593474-6	**Date Collected**	: NA
Client ID	: WG1593474-6BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/12/22 01:12
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001009	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1678-98-4	Isobutylcyclohexane	ND	10.0	0.815	U
611-14-3	1-Methyl-2-Ethylbenzene	ND	10.0	0.850	U
124-18-5	Decane (C10)	ND	10.0	1.36	U
98-06-6	tert-Butylbenzene	ND	10.0	1.06	U
95-63-6	1,2,4-Trimethylbenzene	ND	10.0	1.04	U
538-93-2	Isobutylbenzene	ND	10.0	1.35	U
135-98-8	sec-Butylbenzene	ND	10.0	1.30	U
535-77-3	1-Methyl-3-Isopropylbenzene	ND	10.0	1.29	U
99-87-6	1-Methyl-4-Isopropylbenzene	ND	10.0	1.06	U
526-73-8	1,2,3-Trimethylbenzene	ND	10.0	1.12	U
527-84-4	1-Methyl-2-Isopropylbenzene	ND	10.0	1.08	U
496-11-7	Indane	ND	10.0	0.615	U
141-93-5	1,3-Diethylbenzene	ND	10.0	1.24	U
1074-43-7	1-Methyl-3-N-Propylbenzene	ND	10.0	1.01	U
95-13-6	Indene	ND	10.0	0.580	U
1074-55-1	1-Methyl-4-N-Propylbenzene	ND	10.0	1.25	U
104-51-8	n-Butylbenzene	ND	10.0	0.985	U
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	10.0	1.22	U
135-01-3	1,2-Diethylbenzene	ND	10.0	1.48	U
1074-17-5	1-Methyl-2-N-Propylbenzene	ND	10.0	1.24	U
1758-88-9	1,4-Dimethyl-2-Ethylbenzene	ND	10.0	0.935	U
1120-21-4	Undecane	ND	10.0	1.11	U
874-41-9	1,3-Dimethyl-4-Ethylbenzene	ND	10.0	0.970	U
934-74-7	1,3-Dimethyl-5-Ethylbenzene	ND	10.0	1.18	U
2870-04-4	1,3-Dimethyl-2-Ethylbenzene	ND	10.0	0.745	U

Results Summary
Form 1
PIANO Volatile Organics by GC/MS

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: WG1593474-6	**Date Collected**	: NA
Client ID	: WG1593474-6BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/12/22 01:12
Sample Matrix	: OIL	**Dilution Factor**	: 1
Analytical Method	: 1,8260B	**Analyst**	: RY
Lab File ID	: V9001009	**Instrument ID**	: VOA9
Sample Amount	: 0.1 g	**GC Column**	: DB-VRX
Level	: LOW	**%Solids**	: NA
Extract Volume (MeOH)	: NA	**Injection Volume**	: 0.100 ml
Comments	:		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
933-98-2	1,2-Dimethyl-3-Ethylbenzene	ND	10.0	0.635	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	10.0	0.775	U
527-53-7	1,2,3,5-Tetramethylbenzene	ND	10.0	0.760	U
538-68-1	N-Pentylbenzene	ND	10.0	1.24	U
488-23-3	1,2,3,4-Tetramethylbenzene	ND	10.0	1.07	U
98-19-1	1,3-Dimethyl-5-tert-Butylbenzene	ND	10.0	1.42	U
112-40-3	Dodecane (C12)	ND	25.0	3.28	U
102-25-0	1,3,5-Triethylbenzene	ND	10.0	1.90	U
91-20-3	Naphthalene	ND	10.0	4.18	U
95-15-8	Benzothiophene	ND	10.0	5.28	U
877-44-1	1,2,4-Triethylbenzene	ND	10.0	1.70	U
1077-16-3	Hexylbenzene	ND	10.0	1.92	U
12108-13-3	MMT	ND	25.0	6.43	U
629-50-5	Tridecane	ND	25.0	6.96	U
91-57-6	2-Methylnaphthalene	ND	25.0	6.61	U
90-12-0	1-Methylnaphthalene	ND	25.0	7.34	U
629-59-4	Tetradecane (C14)	ND	25.0	3.06	U
629-62-9	Pentadecane	ND	25.0	5.58	U

Surrogate Recovery Summary
Form 2
Volatiles

Client: GSI Environmental Inc.
Project Name:

Lab Number: L2200971
Project Number:
Matrix: Oil

CLIENT ID (LAB SAMPLE NO.)	S1 (DBFM)	S2 (TOL)	S3 (BFB)	S4 ()	S5 ()	S6 ()	TOT OUT
ERH2371 (L2200971-01D)	96	99	100	--	--	--	0
ERH2371 (L2200971-01D2)	94	98	103	--	--	--	0
WG1593474-3LCS	102	98	105	--	--	--	0
WG1593474-4LCSD	99	100	104	--	--	--	0
WG1593474-6BLANK	97	96	102	--	--	--	0

QC LIMITS
(70-130) DBFM = DIBROMOFLUOROMETHANE
(70-130) TOL = TOLUENE-D8
(70-130) BFB = 4-BROMOFLUOROBENZENE

*** Values outside of QC limits**

FORM II A2-PIANO8260

Laboratory Control Sample Summary
Form 3
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Matrix	: OIL		
LCS Sample ID	: WG1593474-3	**Analysis Date** : 01/11/22 21:38	**File ID** : V9001006
LCSD Sample ID	: WG1593474-4	**Analysis Date** : 01/11/22 22:49	**File ID** : V9001007

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/kg)	Found (mg/kg)	%R	True (mg/kg)	Found (mg/kg)	%R	RPD	Recovery Limits	RPD Limit
1-Pentene	100	92.7	93	100	92.6	93	0	50-130	30
Pentane	100	78.7	79	100	77.2	77	3	50-130	30
Tertiary Butanol	500	340	68	500	335	67	1	50-130	30
Cyclopentane	100	90.4	90	100	89.4	89	1	50-130	30
2-Methylpentane	100	93.8	94	100	95.2	95	1	50-130	30
Methyl tert butyl ether	100	91.3	91	100	97.2	97	6	50-130	30
3-Methylpentane	100	101	101	100	103	103	2	50-130	30
1-Hexene	100	99.5	100	100	101	101	1	50-130	30
n-Hexane	100	94.5	94	100	95.8	96	2	50-130	30
Isopropyl Ether	100	96.6	97	100	102	102	5	50-130	30
Ethyl-Tert-Butyl-Ether	100	98.7	99	100	101	101	2	50-130	30
Methylcyclopentane	100	104	104	100	107	107	3	50-130	30
2,4-Dimethylpentane	100	101	101	100	103	103	2	50-130	30
Cyclohexane	100	108	108	100	112	112	4	50-130	30
2-Methylhexane	100	102	102	100	104	104	2	50-130	30
Benzene	100	98.2	98	100	100	100	2	50-130	30
2,3-Dimethylpentane	100	103	103	100	105	105	2	50-130	30
3-Methylhexane	100	95.5	96	100	99.5	100	4	50-130	30
Tertiary-Amyl Methyl Ether	100	86.8	87	100	88.4	88	1	50-130	30
Isooctane	100	109	109	100	112	112	3	50-130	30
Heptane	100	113	113	100	118	118	4	50-130	30
Methylcyclohexane	100	108	108	100	110	110	2	50-130	30
2-Methylheptane	100	106	106	100	111	111	5	50-130	30
3-Methylheptane	100	106	106	100	108	108	2	50-130	30
Toluene	100	98.0	98	100	100	100	2	50-130	30
Octane	100	112	112	100	115	115	3	50-130	30

Laboratory Control Sample Summary
Form 3
Volatiles

Client : GSI Environmental Inc. **Lab Number** : L2200971
Project Name : **Project Number** :
Matrix : OIL
LCS Sample ID : WG1593474-3 **Analysis Date** : 01/11/22 21:38 **File ID** : V9001006
LCSD Sample ID : WG1593474-4 **Analysis Date** : 01/11/22 22:49 **File ID** : V9001007

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/kg)	Found (mg/kg)	%R	True (mg/kg)	Found (mg/kg)	%R	RPD	Recovery Limits	RPD Limit
Ethylbenzene	100	98.8	99	100	101	101	2	50-130	30
p/m-Xylene	200	203	101	200	207	103	2	50-130	30
Nonane (C9)	100	96.9	97	100	101	101	4	50-130	30
o-Xylene	100	102	102	100	105	105	3	50-130	30
Isopropylbenzene	100	106	106	100	108	108	2	50-130	30
n-Propylbenzene	100	106	106	100	108	108	2	50-130	30
1-Methyl-3-Ethylbenzene	100	105	105	100	107	107	2	50-130	30
1-Methyl-4-Ethylbenzene	100	108	108	100	110	110	2	50-130	30
1,3,5-Trimethylbenzene	100	110	110	100	110	110	0	50-130	30
1-Decene	100	93.6	94	100	98.1	98	4	50-130	30
1-Methyl-2-Ethylbenzene	100	107	107	100	109	109	2	50-130	30
Decane (C10)	100	117	117	100	122	122	4	50-130	30
1,2,4-Trimethylbenzene	100	104	104	100	105	105	1	50-130	30
sec-Butylbenzene	100	114	114	100	116	116	2	50-130	30
1-Methyl-4-N-Propylbenzene	100	109	109	100	110	110	1	50-130	30
n-Butylbenzene	100	111	111	100	111	111	0	50-130	30
1,2-Diethylbenzene	100	109	109	100	109	109	0	50-130	30
Undecane	100	112	112	100	115	115	3	50-130	30
N-Pentylbenzene	100	114	114	100	116	116	2	50-130	30
Dodecane (C12)	100	115	115	100	118	118	3	50-130	30

Method Blank Summary
Form 4
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab Sample ID	: WG1593474-6	**Lab File ID**	: V9001009
Instrument ID	: VOA9		
Matrix	: OIL	**Analysis Date**	: 01/12/22 01:12

Client Sample No.	Lab Sample ID	Analysis Date
WG1593474-3LCS	WG1593474-3	01/11/22 21:38
WG1593474-4LCSD	WG1593474-4	01/11/22 22:49
ERH2371	L2200971-01D	01/12/22 13:17
ERH2371	L2200971-01D2	01/12/22 15:40

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 12/20/21 10:16
Tune Standard	: WG1586099-1	**Tune File ID**	: V9000823_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	19.8
75	30.0 - 60.0% of mass 95	50.6
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	1 (1.2)1
174	Greater than 50.0 of mass 95	81
175	5.0 - 9.0% of mass 174	6.3 (7.8)1
176	95.0 - 101% of mass 174	79.1 (97.7)1
177	5.0 - 9.0% of mass 176	5.2 (6.6)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
2	R1515413-1	V9000824	12/20/21 10:46
5	R1515413-2	V9000825	12/20/21 11:57
20	R1515413-3	V9000826	12/20/21 13:09
50	R1515413-4	V9000827	12/20/21 14:20
100	R1515413-5	V9000828	12/20/21 15:31
200	R1515413-6	V9000833	12/21/21 10:15

Instrument Performance Check (Tune) Summary
Form 5
Volatiles
Bromofluorobenzene (BFB)

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 01/11/22 19:56
Tune Standard	: WG1593474-1	**Tune File ID**	: V9001004_tune

m/e	Ion Abundance Criteria	%Relative Abundance
50	15.0 - 40.0% of mass 95	19
75	30.0 - 60.0% of mass 95	51.3
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.9 (1)1
174	Greater than 50.0 of mass 95	87.6
175	5.0 - 9.0% of mass 174	6.5 (7.4)1
176	95.0 - 101% of mass 174	83.4 (95.1)1
177	5.0 - 9.0% of mass 176	5.7 (6.8)2

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

Client Sample ID	Lab Sample ID	File ID	Analysis Date/Time
WG1593474-2CCAL	WG1593474-2	V9001005	01/11/22 20:27
WG1593474-3LCS	WG1593474-3	V9001006	01/11/22 21:38
WG1593474-4LCSD	WG1593474-4	V9001007	01/11/22 22:49
WG1593474-6BLANK	WG1593474-6	V9001009	01/12/22 01:12
ERH2371	L2200971-01D	V9001011	01/12/22 13:17
ERH2371	L2200971-01D2	V9001013	01/12/22 15:40

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2200971**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18591**
Calibration dates	**: 12/20/21 10:46 12/21/21 10:15**		

Calibration Files

2 =V9000824.D 5 =V9000825.D 50 =V9000827.D 100 =V9000828.D 200 =V9000833.D 20 =V9000826.D

		Compound	2	5	50	100	200	20	Avg	%RSD
1)	I	Chlorobenzene-D5 [IS]	----------ISTD----------							
2)		3-Methyl-1-butene	0.328	0.366	0.377	0.370	0.494	0.395	0.3885	14.45
3)		Isopentane	0.227	0.222	0.214	0.200	0.254	0.228	0.2242	7.88
4)		1-Pentene	0.224	0.242	0.248	0.226	0.283	0.252	0.2459	8.85
5)		2-Methyl-1-butene	0.365	0.365	0.394	0.357	0.442	0.397	0.3867	8.18
6)		Pentane	0.381	0.409	0.366	0.334	0.408	0.395	0.3821	7.48
7)		trans-2-Pentene	0.374	0.391	0.426	0.389	0.484	0.427	0.4153	9.66
8)		2-Methyl-1,3-butadiene	0.224	0.238	0.284	0.260	0.321	0.279	0.2675	13.04
9)		cis-2-Pentene	0.347	0.372	0.404	0.362	0.456	0.401	0.3905	9.93
10)		Tertiary butanol		0.071	0.074	0.078	0.120	0.078	0.0841#	24.31
11)		2,2-Dimethylbutane	0.206	0.243	0.247	0.219	0.266	0.254	0.2392	9.38
12)		4-Methyl-1-pentene	0.269	0.267	0.319	0.290	0.331	0.313	0.2983	8.92
13)		Cyclopentane	0.138	0.153	0.176	0.159	0.207	0.172	0.1676	14.24
14)		2,3-Dimethylbutane	0.101	0.109	0.124	0.113	0.125	0.123	0.1159	8.43
15)		2-Methylpentane	0.420	0.394	0.452	0.405	0.465	0.445	0.4302	6.51
16)		MTBE	0.557	0.543	0.640	0.620	0.784	0.621	0.6275	13.68
17)		3-Methylpentane	0.337	0.362	0.408	0.366	0.388	0.398	0.3763	6.98
18)		1-Hexene	0.204	0.193	0.234	0.218	0.250	0.224	0.2206	9.41
19)		Hexane	0.323	0.321	0.357	0.328	0.340	0.351	0.3367	4.50
20)		Diisopropyl ether	0.533	0.549	0.669	0.637	0.709	0.629	0.6210	10.95
21)		trans-2-Hexene	0.311	0.335	0.407	0.372	0.385	0.392	0.3670	10.02
22)		2-Methyl-2-pentene	0.336	0.362	0.405	0.376	0.386	0.392	0.3764	6.48
23)		cis-2-Hexene	0.287	0.309	0.367	0.344	0.344	0.352	0.3338	8.91
24)	S	Dibromofluoromethane (surr)	0.259	0.259	0.244	0.257	0.273	0.257	0.2581	3.56
25)		Ethyl tertiary butyl ether	0.538	0.565	0.661	0.640	0.703	0.634	0.6235	9.85
26)		2,2-Dimethylpentane	0.441	0.455	0.513	0.466	0.449	0.512	0.4727	6.73
27)		Methylcyclopentane	0.386	0.394	0.446	0.405	0.406	0.434	0.4117	5.63
28)		2,4-Dimethylpentane	0.357	0.358	0.402	0.381	0.384	0.407	0.3817	5.49
29)		2,2,3-Trimethylbutane	0.365	0.399	0.464	0.428	0.381	0.446	0.4140	9.33
30)		1,2-Dichloroethane	0.286	0.281	0.302	0.290	0.348	0.273	0.2966	9.14
31)		3,3-Dimethylpentane	0.443	0.465	0.523	0.484	0.435	0.513	0.4774	7.55
32)		Cyclohexane	0.321	0.331	0.371	0.349	0.322	0.364	0.3432	6.29
33)		2-Methylhexane	0.398	0.396	0.462	0.428	0.379	0.454	0.4195	8.04
34)	M	Benzene	0.843	0.821	0.897	0.886	0.897	0.870	0.8692	3.57
35)		2,3-Dimethylpentane	0.331	0.326	0.377	0.349	0.321	0.371	0.3457	6.90
36)		Thiophene	0.364	0.391	0.477	0.479	0.497	0.461	0.4448	12.14

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2200971**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18591**
Calibration dates	**: 12/20/21 10:46 12/21/21 10:15**		

Calibration Files

2 =V9000824.D 5 =V9000825.D 50 =V9000827.D 100 =V9000828.D 200 =V9000833.D 20 =V9000826.D

		Compound	2	5	50	100	200	20	Avg	%RSD
37)		1,1-Dimethylcyclopentane	0.187	0.202	0.252	0.235	0.212	0.245	0.2222	11.52
38)		3-Methylhexane	0.384	0.331	0.392	0.364	0.308	0.375	0.3589	9.17
39)		TAME	0.866	0.706	0.702	0.659	0.719	0.632	0.7139	11.40
40)		cis-1,3-Dimethylcyclopentane	0.286	0.276	0.317	0.299	0.250	0.292	0.2866	7.87
41)		3-Ethylpentane	0.423	0.447	0.514	0.476	0.402	0.504	0.4610	9.76
43)		1-Heptene/trans-1,2-DMCP	0.159	0.169	0.183	0.176	0.167	0.180	0.1724	5.16
44)		Isooctane	0.824	0.837	0.967	0.904	0.714	0.955	0.8668	10.98
45)		trans-3-Heptene	0.289	0.273	0.303	0.290	0.236	0.292	0.2805	8.47
46)		Heptane	0.283	0.304	0.348	0.325	0.261	0.345	0.3112	11.20
48)		trans-2-Heptene	0.218	0.244	0.298	0.279	0.229	0.282	0.2584	12.67
49)		cis-2-Heptene	0.186	0.214	0.262	0.254	0.204	0.252	0.2285	13.75
50)		2,2-Dimethylhexane	0.770	0.811	0.940	0.894	0.672	0.926	0.8355	12.45
51)		Methylcyclohexane	0.343	0.358	0.425	0.399	0.310	0.410	0.3741	11.87
52)		2,5-Dimethylhexane	0.394	0.420	0.467	0.445	0.338	0.465	0.4215	11.79
53)		2,4-Dimethylhexane	0.321	0.325	0.361	0.337	0.322	0.362	0.3381	5.68
54)		Ethylcyclopentane	0.286	0.307	0.350	0.337	0.256	0.344	0.3133	11.85
55)		2,2,3-Trimethylpentane	0.643	0.663	0.761	0.730	0.564	0.774	0.6890	11.67
57)		2,3,4-Trimethylpentane	0.438	0.473	0.531	0.512	0.365	0.531	0.4751	13.68
58)		2,3,3-Trimethylpentane	0.357	0.388	0.441	0.425	0.301	0.436	0.3914	13.96
59)		2,3-Dimethylhexane	0.402	0.420	0.488	0.464	0.352	0.488	0.4356	12.38
60)		2-Methylheptane	0.322	0.373	0.422	0.410	0.300	0.423	0.3751	14.18
61)		4-Methylheptane	0.418	0.475	0.530	0.509	0.369	0.519	0.4699	13.58
62)	S	Toluene-d8 (surr)	1.193	1.163	1.179	1.198	1.108	1.182	1.1705	2.82
63)		3-Methylheptane	0.470	0.382	0.367	0.365	0.269	0.387	0.3732	17.18
64)	S	2-Bromo-1-Chloropropane	0.243	0.254	0.349	0.338	0.385	0.322	0.3152	17.70
65)		3-Ethylhexane	0.488	0.537	0.572	0.548	0.427	0.595	0.5280	11.57
66)	M	Toluene	0.831	0.888	1.036	0.993	1.072	0.993	0.9687	9.43
67)		2-Methylthiophene	0.614	0.677	0.822	0.796	0.897	0.774	0.7634	13.41
68)		trans-1,4-Dimethylcyclohexane	0.382	0.415	0.476	0.466	0.318	0.472	0.4216	14.90
69)		3-Methylthiophene	0.633	0.673	0.836	0.807	0.879	0.769	0.7661	12.51
70)		1-Octene	0.129	0.163	0.196	0.199	0.142	0.197	0.1711	18.10
71)		Octane	0.321	0.391	0.441	0.444	0.321	0.441	0.3931	15.12
72)		trans-1,2-Dimethylcyclohexane	0.302	0.315	0.355	0.347	0.223	0.355	0.3163	15.97
73)		1,2-Dibromoethane	0.179	0.193	0.257	0.250	0.305	0.235	0.2367	19.37
75)		cis-2-Octene	0.223	0.236	0.298	0.300	0.208	0.290	0.2592	15.99
76)		Isopropylcyclopentane	0.322	0.369	0.411	0.418	0.254	0.430	0.3674	18.56

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2200971**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18591**
Calibration dates	**: 12/20/21 10:46 12/21/21 10:15**		

Calibration Files
2 =V9000824.D 5 =V9000825.D 50 =V9000827.D 100 =V9000828.D 200 =V9000833.D 20 =V9000826.D

	Compound	2	5	50	100	200	20	Avg	%RSD
77)	cis-1,2-Dimethylcyclohexane	0.305	0.317	0.353	0.357	0.282	0.351	0.3274	9.41
78)	2,5-Dimethylheptane	0.439	0.562	0.605	0.624	0.409	0.620	0.5430	17.57
79)	3,5-Dimethylheptane	0.643	0.673	0.738	0.768	0.675	0.764	0.7100	7.51
80)	3,3-Dimethylheptane	0.384	0.435	0.473	0.488	0.376	0.490	0.4409	11.58
81)	1,1,4-Trimethylcyclohexane	0.353	0.367	0.413	0.425	0.327	0.422	0.3846	10.69
82)	2,3-Dimethylheptane	0.463	0.494	0.531	0.557	0.431	0.549	0.5043	10.00
83)	3,4-Dimethylheptane	0.313	0.334	0.335	0.349	0.251	0.358	0.3233	11.86
84)	4-Methyloctane	0.425	0.454	0.500	0.519	0.339	0.517	0.4590	15.18
85)	2-Methyloctane	0.457	0.457	0.464	0.499	0.433	0.497	0.4679	5.49
86)	Ethylbenzene	0.917	1.012	1.201	1.165	1.032	1.135	1.0771	10.04
87) S	1-Chloro-2-Fluorobenzene	0.489	0.527	0.622	0.606	0.599	0.586	0.5716	9.06
88)	2-Ethylthiophene	0.617	0.721	0.899	0.869	0.803	0.834	0.7904	13.26
89)	3-Methyloctane	0.667	0.714	0.790	0.837	0.635	0.825	0.7447	11.39
90)	3,3-Diethylpentane	0.769	0.844	0.900	0.945	0.700	0.941	0.8498	11.66
91)	p/m-Xylene	0.681	0.769	0.921	0.885	0.768	0.862	0.8144	11.05
92)	1-Nonene	0.142	0.164	0.197	0.220	0.161	0.199	0.1805	16.31
93)	trans-3-Nonene	0.217	0.248	0.291	0.316	0.228	0.298	0.2662	15.44
94)	cis-3-Nonene	0.251	0.284	0.326	0.354	0.260	0.346	0.3036	14.61
95)	Nonane	0.380	0.428	0.438	0.480	0.354	0.476	0.4260	11.93
96)	Styrene	0.491	0.585	0.767	0.738	0.670	0.702	0.6587	15.69
97) S	1,4-Dichlorobutane (H/surr)	0.340	0.363	0.445	0.419	0.443	0.420	0.4050	10.66
98)	o-Xylene	0.714	0.800	0.944	0.898	0.769	0.881	0.8342	10.49
99)	2-Nonene	0.223	0.247	0.289	0.316	0.223	0.303	0.2667	15.33
100)	Isopropylcyclohexane	0.345	0.381	0.404	0.428	0.299	0.426	0.3807	13.32
101) S	4-Bromofluorobenzene (surr)	0.492	0.515	0.516	0.496	0.427	0.505	0.4918	6.71
102)	Isopropylbenzene	0.937	1.032	1.181	1.136	0.837	1.133	1.0424	12.85
103)	3,3-Dimethyloctane	0.530	0.597	0.629	0.689	0.456	0.665	0.5944	14.75
104)	n-Propylbenzene	1.007	1.145	1.405	1.365	0.952	1.339	1.2021	16.22
105)	2-Methylnonane	0.310	0.373	0.408	0.442	0.284	0.433	0.3749	17.50
106)	3-Methylnonane	0.371	0.453	0.489	0.535	0.341	0.517	0.4509	17.63
107)	1-Methyl-3-ethylbenzene	0.845	0.979	1.176	1.135	0.785	1.127	1.0078	16.33
108)	1-Methyl-4-ethylbenzene	0.827	0.928	1.123	1.089	0.751	1.079	0.9663	16.03
109)	1,3,5-Trimethylbenzene	0.695	0.808	0.975	0.945	0.638	0.938	0.8334	17.06
110)	1-Decene	0.155	0.192	0.222	0.243	0.151	0.234	0.1994	20.04
111)	Isobutylcyclohexane	0.370	0.423	0.433	0.471	0.288	0.477	0.4104	17.42
112)	1-Methyl-2-ethylbenzene	0.890	1.006	1.183	1.124	0.781	1.136	1.0201	15.50

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2200971**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18591**
Calibration dates	**: 12/20/21 10:46 12/21/21 10:15**		

Calibration Files
2 =V9000824.D 5 =V9000825.D 50 =V9000827.D 100 =V9000828.D 200 =V9000833.D 20 =V9000826.D

	Compound	2	5	50	100	200	20	Avg	%RSD
113)	Decane	0.302	0.371	0.393	0.422	0.260	0.423	0.3620	18.46
114)	tert-Butylbenzene	0.647	0.758	0.838	0.819	0.518	0.845	0.7375	17.71
115)	1,2,4-Trimethylbenzene	0.749	0.882	1.039	0.985	0.663	1.001	0.8866	17.11
116)	Isobutylbenzene	0.860	1.049	1.099	1.095	0.667	1.141	0.9853	18.75
117)	sec-Butylbenzene	0.951	1.125	1.220	1.203	0.734	1.270	1.0838	18.87
118)	1-Methyl-3-isopropylbenzene	0.769	0.917	1.025	1.013	0.616	1.046	0.8977	19.15
119)	1-Methyl-4-isopropylbenzene	0.776	0.933	1.017	1.021	0.610	1.059	0.9027	19.46
120)	1,2,3-Trimethylbenzene	0.747	0.907	1.063	0.991	0.666	1.024	0.8999	17.81
121)	1-Methyl-2-isopropylbenzene	0.791	0.948	1.039	1.013	0.620	1.064	0.9123	19.04
122)	Indan	0.710	0.861	1.017	0.928	0.646	0.961	0.8541	17.15
123)	1,3-Diethylbenzene	0.490	0.597	0.657	0.647	0.384	0.691	0.5777	20.38
124)	1-Methyl-3-propylbenzene	0.931	1.162	1.228	1.215	0.709	1.305	1.0919	20.75
125)	Indene	0.659	0.818	1.005	0.924	0.731	0.942	0.8465	15.81
126)	1-Methyl-4-propylbenzene	1.117	1.372	1.445	1.437	0.831	1.555	1.2928	20.84
127)	n-Butylbenzene	0.908	1.118	1.140	1.144	0.661	1.243	1.0357	20.65
128)	1,2-Dimethyl-4-ethylbenzene	0.795	0.994	1.056	1.032	0.611	1.127	0.9359	20.78
129)	1,2-Diethylbenzene	0.423	0.490	0.518	0.502	0.303	0.547	0.4640	19.17
130)	1-Methyl-2-propylbenzene	1.017	1.242	1.317	1.279	0.761	1.399	1.1693	20.29
131)	1,4-Dimethyl-2-ethylbenzene	0.744	0.920	1.007	0.973	0.576	1.058	0.8797	20.88
132)	Undecane	0.380	0.488	0.487	0.521	0.268	0.545	0.4481	23.40
133)	1,3-Dimethyl-4-ethylbenzene	0.916	1.159	1.206	1.161	0.684	1.294	1.0702	21.20
134)	1,3-Dimethyl-5-ethylbenzene	0.822	1.052	1.094	1.056	0.619	1.185	0.9714	21.62
135)	1,3-Dimethyl-2-ethylbenzene	0.925	1.134	1.220	1.157	0.694	1.293	1.0704	20.74
136)	1,2-Dimethyl-3-ethylbenzene	0.821	1.014	1.085	1.026	0.610	1.162	0.9530	21.27
137)	1,2,4,5-Tetramethylbenzene	0.863	1.062	1.145	1.090	0.631	1.243	1.0056	22.10
138)	1,2,3,5-Tetramethylbenzene	0.798	0.963	1.038	0.979	0.562	1.124	0.9105	22.13
139)	Pentylbenzene	0.734	0.955	0.921	0.958	0.497	1.101	0.8611	24.81
140)	1,2,3,4-Tetramethylbenzene	1.065	1.283	1.359	1.296	0.730	1.514	1.2076	22.79
141)	1,3-DM-5-tert-Butylbenzene	0.698	0.870	0.837	0.875	0.444	1.002	0.7877	24.69
142)	Dodecane	0.297	0.404	0.336	0.340		0.439	0.3631	15.72
143)	1,3,5-Triethylbenzene	0.432	0.529	0.514	0.556	0.274	0.632	0.4897	25.29#
144)	Naphthalene	1.079	1.201	1.448	1.251	0.934	1.438	1.2252	16.42
145)	Benzothiophene	0.665	0.732	0.912	0.785	0.637	0.886	0.7696	14.68
146)	1,2,4-Triethylbenzene	0.466	0.484	0.478	0.507	0.250	0.573	0.4596	23.82
147)	Hexylbenzene	0.633	0.818	0.780	0.851	0.436	0.950	0.7448	24.57
148)	MMT	0.368	0.397	0.505	0.439	0.277	0.511	0.4162	21.40

Initial Calibration Summary
Form 6
Volatiles

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2200971**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: VOA9**	**Ical Ref**	**: ICAL18591**
Calibration dates	**: 12/20/21 10:46 12/21/21 10:15**		

Calibration Files
2 =V9000824.D 5 =V9000825.D 50 =V9000827.D 100 =V9000828.D 200 =V9000833.D 20 =V9000826.D

	Compound	2	5	50	100	200	20	Avg	%RSD
149)	Tridecane	0.330	0.462	0.309	0.329		0.511	0.3880	23.62
150)	2-Methylnaphthalene	0.678	0.736	0.900	0.819	0.540	0.932	0.7674	19.10
151)	1-Methylnaphthalene	0.622	0.673	0.811	0.731	0.479	0.836	0.6921	19.03
152)	Tetradecane	0.301	0.377	0.210	0.254		0.374	0.3033	24.18
153)	Pentadecane	0.233	0.237	0.128	0.167		0.219	0.1970	24.10

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.		**Lab Number**	: L2200971	
Project Name	:		**Project Number**	:	
Instrument ID	: VOA9		**Calibration Date**	: 01/11/22 20:27	
Lab File ID	: V9001005		**Init. Calib. Date(s)**	: 12/20/21	12/21/21
Sample No	: WG1593474-2		**Init. Calib. Times**	: 10:46	10:15
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	88	0
3-Methyl-1-butene	0.389	0.422	.1	-8.5	25	99	-.12
Isopentane	0.224	0.233	.1	-4	25	96	-.12
1-Pentene	0.246	0.268	.1	-8.9	25	96	-.1
2-Methyl-1-butene	0.387	0.368	.1	4.9	25	83	-.1
Pentane	0.382	0.329	.1	13.9	25	80	-.1
trans-2-Pentene	0.415	0.401	.1	3.4	25	83	-.1
2-Methyl-1,3-butadiene	0.268	0.27	.1	-0.7	25	84	-.09
cis-2-Pentene	0.39	0.382	.1	2.1	25	84	-.1
Tertiary butanol	0.084	0.067*	.1	20.2	25	80	.06
2,2-Dimethylbutane	0.239	0.229	.1	4.2	25	82	-.08
4-Methyl-1-pentene	0.298	0.296	.1	0.7	25	82	-.08
Cyclopentane	0.168	0.16	.1	4.8	25	80	-.08
2,3-Dimethylbutane	0.116	0.117	.1	-0.9	25	83	-.08
2-Methylpentane	0.43	0.415	.1	3.5	25	81	-.07
MTBE	0.628	0.596	.1	5.1	25	82	-.04
3-Methylpentane	0.376	0.385	.1	-2.4	25	84	-.07
1-Hexene	0.221	0.222	.1	-0.5	25	84	-.07
Hexane	0.337	0.338	.1	-0.3	25	84	-.07
Diisopropyl ether	0.621	0.648	.1	-4.3	25	86	-.04
trans-2-Hexene	0.367	0.386	.1	-5.2	25	84	-.06
2-Methyl-2-pentene	0.376	0.391	.1	-4	25	85	-.06
cis-2-Hexene	0.334	0.353	.1	-5.7	25	85	-.06
Dibromofluoromethane (surr	0.258	0.235	.1	8.9	25	85	-.05
Ethyl tertiary butyl ether	0.623	0.647	.1	-3.9	25	87	-.02
2,2-Dimethylpentane	0.473	0.499	.1	-5.5	25	86	-.06
Methylcyclopentane	0.412	0.425	.1	-3.2	25	84	-.05
2,4-Dimethylpentane	0.382	0.392	.1	-2.6	25	86	-.05
2,2,3-Trimethylbutane	0.414	0.442	.1	-6.8	25	84	-.04
1,2-Dichloroethane	0.297	0.285	.1	4	25	83	-.03
3,3-Dimethylpentane	0.477	0.499	.1	-4.6	25	84	-.05
Cyclohexane	0.343	0.354	.1	-3.2	25	84	-.04
2-Methylhexane	0.42	0.443	.1	-5.5	25	85	-.05
Benzene	0.869	0.867	.1	0.2	25	85	-.04
2,3-Dimethylpentane	0.346	0.365	.1	-5.5	25	86	-.04
Thiophene	0.445	0.442	.1	0.7	25	82	-.04
1,1-Dimethylcyclopentane	0.222	0.235	.1	-5.9	25	82	-.04
3-Methylhexane	0.359	0.382	.1	-6.4	25	86	-.04
TAME	0.714	0.675	.1	5.5	25	85	-.02
cis-1,3-Dimethylcyclopenta	0.287	0.306	.1	-6.6	25	85	-.04
3-Ethylpentane	0.461	0.501	.1	-8.7	25	86	-.04
1-Heptene/trans-1,2-DMCP	0.172	0.184	.1	-7	25	89	-.04
Isooctane	0.867	0.935	.1	-7.8	25	86	-.03

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971		
Project Name	:	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 01/11/22 20:27		
Lab File ID	: V9001005	**Init. Calib. Date(s)**	: 12/20/21	12/21/21	
Sample No	: WG1593474-2	**Init. Calib. Times**	: 10:46	10:15	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Heptene	0.281	0.301	.1	-7.1	25	88	-.04
Heptane	0.311	0.341	.1	-9.6	25	86	-.04
trans-2-Heptene	0.258	0.286	.1	-10.9	25	85	-.03
cis-2-Heptene	0.228	0.263	.1	-15.4	25	89	-.02
2,2-Dimethylhexane	0.835	0.926	.1	-10.9	25	87	-.02
Methylcyclohexane	0.374	0.416	.1	-11.2	25	87	-.03
2,5-Dimethylhexane	0.421	0.456	.1	-8.3	25	86	-.03
2,4-Dimethylhexane	0.338	0.361	.1	-6.8	25	88	-.04
Ethylcyclopentane	0.313	0.348	.1	-11.2	25	88	-.04
2,2,3-Trimethylpentane	0.689	0.742	.1	-7.7	25	86	-.04
2,3,4-Trimethylpentane	0.475	0.526	.1	-10.7	25	87	-.02
2,3,3-Trimethylpentane	0.391	0.433	.1	-10.7	25	87	-.02
2,3-Dimethylhexane	0.436	0.481	.1	-10.3	25	87	-.02
2-Methylheptane	0.375	0.409	.1	-9.1	25	86	-.02
4-Methylheptane	0.47	0.524	.1	-11.5	25	88	-.02
Toluene-d8 (surr)	1.17	1.142	.1	2.4	25	86	-.01
3-Methylheptane	0.373	0.372	.1	0.3	25	90	-.02
3-Ethylhexane	0.528	0.538	.1	-1.9	25	83	-.02
Toluene	0.969	1.016	.1	-4.9	25	87	-.01
2-Methylthiophene	0.763	0.807	.1	-5.8	25	87	-.02
trans-1,4-Dimethylcyclohex	0.422	0.482	.1	-14.2	25	90	-.02
3-Methylthiophene	0.766	0.82	.1	-7	25	87	-.02
1-Octene	0.171	0.201	.1	-17.5	25	91	-.01
Octane	0.393	0.437	.1	-11.2	25	88	-.02
trans-1,2-Dimethylcyclohex	0.316	0.359	.1	-13.6	25	89	-.02
1,2-Dibromoethane	0.237	0.242	.1	-2.1	25	83	-.02
cis-2-Octene	0.259	0.303	.1	-17	25	90	-.01
Isopropylcyclopentane	0.367	0.435	.1	-18.5	25	94	-.02
cis-1,2-Dimethylcyclohexan	0.327	0.366	.1	-11.9	25	92	-.02
2,5-Dimethylheptane	0.543	0.592	.1	-9	25	87	-.02
3,5-Dimethylheptane	0.71	0.749	.1	-5.5	25	90	-.02
3,3-Dimethylheptane	0.441	0.478	.1	-8.4	25	89	-.01
1,1,4-Trimethylcyclohexane	0.385	0.428	.1	-11.2	25	91	0
2,3-Dimethylheptane	0.504	0.544	.1	-7.9	25	91	-.02
3,4-Dimethylheptane	0.323	0.345	.1	-6.8	25	91	-.01
4-Methyloctane	0.459	0.508	.1	-10.7	25	90	-.01
2-Methyloctane	0.468	0.483	.1	-3.2	25	92	-.02
Ethylbenzene	1.077	1.188	.1	-10.3	25	87	0
2-Ethylthiophene	0.79	0.899	.1	-13.8	25	88	-.01
3-Methyloctane	0.745	0.811	.1	-8.9	25	91	-.01
3,3-Diethylpentane	0.85	0.943	.1	-10.9	25	93	-.02
p/m-Xylene	0.814	0.897	.1	-10.2	25	86	0
1-Nonene	0.181	0.208	.1	-14.9	25	94	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971		
Project Name	:	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 01/11/22 20:27		
Lab File ID	: V9001005	**Init. Calib. Date(s)**	: 12/20/21	12/21/21	
Sample No	: WG1593474-2	**Init. Calib. Times**	: 10:46	10:15	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Nonene	0.266	0.307	.1	-15.4	25	93	0
cis-3-Nonene	0.304	0.353	.1	-16.1	25	96	-.01
Nonane	0.426	0.47	.1	-10.3	25	95	-.01
Styrene	0.659	0.743	.1	-12.7	25	86	-.01
o-Xylene	0.834	0.928	.1	-11.3	25	87	-.01
2-Nonene	0.267	0.309	.1	-15.7	25	95	-.01
Isopropylcyclohexane	0.381	0.441	.1	-15.7	25	96	0
4-Bromofluorobenzene (surr	0.492	0.515	.1	-4.7	25	88	0
Isopropylbenzene	1.042	1.195	.1	-14.7	25	89	0
3,3-Dimethyloctane	0.594	0.679	.1	-14.3	25	95	0
n-Propylbenzene	1.202	1.411	.1	-17.4	25	89	0
2-Methylnonane	0.375	0.442	.1	-17.9	25	96	0
3-Methylnonane	0.451	0.533	.1	-18.2	25	96	0
1-Methyl-3-ethylbenzene	1.008	1.178	.1	-16.9	25	89	0
1-Methyl-4-ethylbenzene	0.966	1.132	.1	-17.2	25	89	0
1,3,5-Trimethylbenzene	0.833	0.996	.1	-19.6	25	90	0
1-Decene	0.199	0.247	.1	-24.1	25	98	0
Isobutylcyclohexane	0.41	0.479	.1	-16.8	25	98	0
1-Methyl-2-ethylbenzene	1.02	1.186	.1	-16.3	25	89	0
Decane	0.362	0.431	.1	-19.1	25	97	0
tert-Butylbenzene	0.737	0.87	.1	-18	25	92	0
1,2,4-Trimethylbenzene	0.887	1.055	.1	-18.9	25	90	0
Isobutylbenzene	0.985	1.157	.1	-17.5	25	93	0
sec-Butylbenzene	1.084	1.283	.1	-18.4	25	93	0
1-Methyl-3-isopropylbenzen	0.898	1.08	.1	-20.3	25	93	0
1-Methyl-4-isopropylbenzen	0.903	1.089	.1	-20.6	25	95	0
1,2,3-Trimethylbenzene	0.9	1.074	.1	-19.3	25	89	0
1-Methyl-2-isopropylbenzen	0.912	1.089	.1	-19.4	25	93	0
Indan	0.854	1.001	.1	-17.2	25	87	0
1,3-Diethylbenzene	0.578	0.701	.1	-21.3	25	94	0
1-Methyl-3-propylbenzene	1.092	1.333	.1	-22.1	25	96	0
Indene	0.847	0.967	.1	-14.2	25	85	0
1-Methyl-4-propylbenzene	1.293	1.567	.1	-21.2	25	96	0
n-Butylbenzene	1.036	1.252	.1	-20.8	25	97	0
1,2-Dimethyl-4-ethylbenzen	0.936	1.139	.1	-21.7	25	95	0
1,2-Diethylbenzene	0.464	0.555	.1	-19.6	25	95	0
1-Methyl-2-propylbenzene	1.169	1.423	.1	-21.7	25	96	0
1,4-Dimethyl-2-ethylbenzen	0.88	1.087	.1	-23.5	25	95	0
Undecane	0.448	0.538	.1	-20.1	25	98	0
1,3-Dimethyl-4-ethylbenzen	1.07	1.307	.1	-22.1	25	96	0
1,3-Dimethyl-5-ethylbenzen	0.971	1.187	.1	-22.2	25	96	0
1,3-Dimethyl-2-ethylbenzen	1.07	1.299	.1	-21.4	25	94	0
1,2-Dimethyl-3-ethylbenzen	0.953	1.167	.1	-22.5	25	95	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.		**Lab Number**	: L2200971	
Project Name	:		**Project Number**	:	
Instrument ID	: VOA9		**Calibration Date**	: 01/11/22 20:27	
Lab File ID	: V9001005		**Init. Calib. Date(s)**	: 12/20/21	12/21/21
Sample No	: WG1593474-2		**Init. Calib. Times**	: 10:46	10:15
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2,4,5-Tetramethylbenzene	1.006	1.253	.1	-24.6	25	97	0
1,2,3,5-Tetramethylbenzene	0.911	1.12	.1	-22.9	25	95	0
Pentylbenzene	0.861	1.061	.1	-23.2	25	102	0
1,2,3,4-Tetramethylbenzene	1.208	1.492	.1	-23.5	25	97	0
1,3-DM-5-tert-Butylbenzene	0.788	0.973	.1	-23.5	25	103	0
Dodecane	0.363	0.387	.1	-6.6	25	102	0
1,3,5-Triethylbenzene	0.49	0.61	.1	-24.5	25	105	0
Naphthalene	1.225	1.389	.1	-13.4	25	85	0
Benzothiophene	0.77	0.841	.1	-9.2	25	82	0
1,2,4-Triethylbenzene	0.46	0.569	.1	-23.7	25	105	0
Hexylbenzene	0.745	0.931	.1	-25	25	106	0
MMT	0.416	0.508	.1	-22.1	25	89	0
Tridecane	0.388	0.38	.1	2.1	25	109	0
2-Methylnaphthalene	0.767	0.913	.1	-19	25	90	0
1-Methylnaphthalene	0.692	0.805	.1	-16.3	25	88	0
Tetradecane	0.303	0.286	.1	5.6	25	120	0
Pentadecane	0.197	0.206	.1	-4.6	25	142	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971		
Project Name	:	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 01/12/22 20:07		
Lab File ID	: V9001016	**Init. Calib. Date(s)**	: 12/20/21	12/21/21	
Sample No	: WG1593474-8	**Init. Calib. Times**	: 10:46	10:15	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Chlorobenzene-D5 [IS]	1	1	.1	0	25	98	-.01
3-Methyl-1-butene	0.389	0.355	.1	8.7	25	92	-.07
Isopentane	0.224	0.175	.1	21.9	25	80	-.07
1-Pentene	0.246	0.205	.1	16.7	25	81	-.05
2-Methyl-1-butene	0.387	0.335	.1	13.4	25	83	-.05
Pentane	0.382	0.296	.1	22.5	25	79	-.05
trans-2-Pentene	0.415	0.367	.1	11.6	25	84	-.05
2-Methyl-1,3-butadiene	0.268	0.248	.1	7.5	25	85	-.05
cis-2-Pentene	0.39	0.347	.1	11	25	84	-.05
Tertiary butanol	0.084	0.063*	.1	25	25	84	.04
2,2-Dimethylbutane	0.239	0.206	.1	13.8	25	82	-.04
4-Methyl-1-pentene	0.298	0.272	.1	8.7	25	83	-.05
Cyclopentane	0.168	0.15	.1	10.7	25	83	-.05
2,3-Dimethylbutane	0.116	0.109	.1	6	25	85	-.05
2-Methylpentane	0.43	0.384	.1	10.7	25	83	-.04
MTBE	0.628	0.579	.1	7.8	25	88	-.02
3-Methylpentane	0.376	0.354	.1	5.9	25	85	-.04
1-Hexene	0.221	0.208	.1	5.9	25	87	-.04
Hexane	0.337	0.317	.1	5.9	25	87	-.04
Diisopropyl ether	0.621	0.61	.1	1.8	25	89	-.02
trans-2-Hexene	0.367	0.362	.1	1.4	25	87	-.03
2-Methyl-2-pentene	0.376	0.362	.1	3.7	25	87	-.03
cis-2-Hexene	0.334	0.327	.1	2.1	25	87	-.03
Dibromofluoromethane (surr	0.258	0.233	.1	9.7	25	93	-.02
Ethyl tertiary butyl ether	0.623	0.643	.1	-3.2	25	95	-.02
2,2-Dimethylpentane	0.473	0.47	.1	0.6	25	90	-.04
Methylcyclopentane	0.412	0.394	.1	4.4	25	86	-.03
2,4-Dimethylpentane	0.382	0.367	.1	3.9	25	89	-.03
2,2,3-Trimethylbutane	0.414	0.414	.1	0	25	87	-.02
1,2-Dichloroethane	0.297	0.299	.1	-0.7	25	97	-.02
3,3-Dimethylpentane	0.477	0.466	.1	2.3	25	87	-.02
Cyclohexane	0.343	0.337	.1	1.7	25	89	-.02
2-Methylhexane	0.42	0.416	.1	1	25	88	-.04
Benzene	0.869	0.867	.1	0.2	25	94	-.03
2,3-Dimethylpentane	0.346	0.344	.1	0.6	25	89	-.02
Thiophene	0.445	0.472	.1	-6.1	25	97	-.02
1,1-Dimethylcyclopentane	0.222	0.233	.1	-5	25	90	-.04
3-Methylhexane	0.359	0.351	.1	2.2	25	88	-.02
TAME	0.714	0.658	.1	7.8	25	92	-.02
cis-1,3-Dimethylcyclopenta	0.287	0.299	.1	-4.2	25	92	-.02
3-Ethylpentane	0.461	0.462	.1	-0.2	25	88	-.02
1-Heptene/trans-1,2-DMCP	0.172	0.177	.1	-2.9	25	94	-.02
Isooctane	0.867	0.89	.1	-2.7	25	90	-.02

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971		
Project Name	:	**Project Number**	:		
Instrument ID	: VOA9	**Calibration Date**	: 01/12/22 20:07		
Lab File ID	: V9001016	**Init. Calib. Date(s)**	: 12/20/21	12/21/21	
Sample No	: WG1593474-8	**Init. Calib. Times**	: 10:46	10:15	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Heptene	0.281	0.283	.1	-0.7	25	91	-.02
Heptane	0.311	0.321	.1	-3.2	25	90	-.02
trans-2-Heptene	0.258	0.278	.1	-7.8	25	91	-.02
cis-2-Heptene	0.228	0.249	.1	-9.2	25	93	-.01
2,2-Dimethylhexane	0.835	0.88	.1	-5.4	25	92	-.02
Methylcyclohexane	0.374	0.4	.1	-7	25	92	-.02
2,5-Dimethylhexane	0.421	0.437	.1	-3.8	25	92	-.02
2,4-Dimethylhexane	0.338	0.344	.1	-1.8	25	93	-.02
Ethylcyclopentane	0.313	0.332	.1	-6.1	25	93	-.02
2,2,3-Trimethylpentane	0.689	0.694	.1	-0.7	25	89	-.02
2,3,4-Trimethylpentane	0.475	0.5	.1	-5.3	25	92	-.02
2,3,3-Trimethylpentane	0.391	0.413	.1	-5.6	25	91	-.02
2,3-Dimethylhexane	0.436	0.432	.1	0.9	25	87	-.01
2-Methylheptane	0.375	0.396	.1	-5.6	25	92	-.01
4-Methylheptane	0.47	0.493	.1	-4.9	25	91	-.02
Toluene-d8 (surr)	1.17	1.143	.1	2.3	25	95	-.01
3-Methylheptane	0.373	0.354	.1	5.1	25	94	-.01
3-Ethylhexane	0.528	0.52	.1	1.5	25	89	0
Toluene	0.969	0.993	.1	-2.5	25	94	-.01
2-Methylthiophene	0.763	0.79	.1	-3.5	25	94	-.01
trans-1,4-Dimethylcyclohex	0.422	0.47	.1	-11.4	25	97	-.02
3-Methylthiophene	0.766	0.808	.1	-5.5	25	94	0
1-Octene	0.171	0.194	.1	-13.5	25	97	-.01
Octane	0.393	0.42	.1	-6.9	25	93	0
trans-1,2-Dimethylcyclohex	0.316	0.346	.1	-9.5	25	95	-.02
1,2-Dibromoethane	0.237	0.24	.1	-1.3	25	91	-.01
cis-2-Octene	0.259	0.287	.1	-10.8	25	94	0
Isopropylcyclopentane	0.367	0.416	.1	-13.4	25	99	-.03
cis-1,2-Dimethylcyclohexan	0.327	0.346	.1	-5.8	25	96	-.01
2,5-Dimethylheptane	0.543	0.563	.1	-3.7	25	91	-.02
3,5-Dimethylheptane	0.71	0.74	.1	-4.2	25	98	0
3,3-Dimethylheptane	0.441	0.459	.1	-4.1	25	95	0
1,1,4-Trimethylcyclohexane	0.385	0.41	.1	-6.5	25	97	0
2,3-Dimethylheptane	0.504	0.52	.1	-3.2	25	96	-.01
3,4-Dimethylheptane	0.323	0.328	.1	-1.5	25	96	0
4-Methyloctane	0.459	0.481	.1	-4.8	25	94	0
2-Methyloctane	0.468	0.47	.1	-0.4	25	99	-.01
Ethylbenzene	1.077	1.166	.1	-8.3	25	95	-.01
2-Ethylthiophene	0.79	0.885	.1	-12	25	96	0
3-Methyloctane	0.745	0.789	.1	-5.9	25	98	-.01
3,3-Diethylpentane	0.85	0.89	.1	-4.7	25	97	-.01
p/m-Xylene	0.814	0.886	.1	-8.8	25	94	0
1-Nonene	0.181	0.203	.1	-12.2	25	101	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.		**Lab Number**	: L2200971	
Project Name	:		**Project Number**	:	
Instrument ID	: VOA9		**Calibration Date**	: 01/12/22 20:07	
Lab File ID	: V9001016		**Init. Calib. Date(s)**	: 12/20/21	12/21/21
Sample No	: WG1593474-8		**Init. Calib. Times**	: 10:46	10:15
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-3-Nonene	0.266	0.295	.1	-10.9	25	99	0
cis-3-Nonene	0.304	0.335	.1	-10.2	25	100	-.01
Nonane	0.426	0.45	.1	-5.6	25	100	-.01
Styrene	0.659	0.739	.1	-12.1	25	94	0
o-Xylene	0.834	0.916	.1	-9.8	25	95	0
2-Nonene	0.267	0.299	.1	-12	25	101	0
Isopropylcyclohexane	0.381	0.417	.1	-9.4	25	101	0
4-Bromofluorobenzene (surr	0.492	0.515	.1	-4.7	25	98	-.01
Isopropylbenzene	1.042	1.16	.1	-11.3	25	96	0
3,3-Dimethyloctane	0.594	0.648	.1	-9.1	25	101	-.01
n-Propylbenzene	1.202	1.368	.1	-13.8	25	95	0
2-Methylnonane	0.375	0.412	.1	-9.9	25	99	0
3-Methylnonane	0.451	0.495	.1	-9.8	25	99	0
1-Methyl-3-ethylbenzene	1.008	1.148	.1	-13.9	25	95	0
1-Methyl-4-ethylbenzene	0.966	1.109	.1	-14.8	25	97	0
1,3,5-Trimethylbenzene	0.833	0.97	.1	-16.4	25	97	0
1-Decene	0.199	0.227	.1	-14.1	25	100	0
Isobutylcyclohexane	0.41	0.448	.1	-9.3	25	101	0
1-Methyl-2-ethylbenzene	1.02	1.16	.1	-13.7	25	96	0
Decane	0.362	0.396	.1	-9.4	25	98	0
tert-Butylbenzene	0.737	0.841	.1	-14.1	25	98	0
1,2,4-Trimethylbenzene	0.887	1.025	.1	-15.6	25	96	0
Isobutylbenzene	0.985	1.123	.1	-14	25	100	0
sec-Butylbenzene	1.084	1.227	.1	-13.2	25	98	0
1-Methyl-3-isopropylbenzen	0.898	1.035	.1	-15.3	25	99	0
1-Methyl-4-isopropylbenzen	0.903	1.039	.1	-15.1	25	100	0
1,2,3-Trimethylbenzene	0.9	1.043	.1	-15.9	25	96	0
1-Methyl-2-isopropylbenzen	0.912	1.039	.1	-13.9	25	98	0
Indan	0.854	0.971	.1	-13.7	25	93	0
1,3-Diethylbenzene	0.578	0.663	.1	-14.7	25	99	0
1-Methyl-3-propylbenzene	1.092	1.243	.1	-13.8	25	99	0
Indene	0.847	0.94	.1	-11	25	91	0
1-Methyl-4-propylbenzene	1.293	1.469	.1	-13.6	25	99	0
n-Butylbenzene	1.036	1.166	.1	-12.5	25	100	0
1,2-Dimethyl-4-ethylbenzen	0.936	1.071	.1	-14.4	25	99	0
1,2-Diethylbenzene	0.464	0.522	.1	-12.5	25	99	0
1-Methyl-2-propylbenzene	1.169	1.334	.1	-14.1	25	99	0
1,4-Dimethyl-2-ethylbenzen	0.88	1.018	.1	-15.7	25	99	0
Undecane	0.448	0.5	.1	-11.6	25	100	0
1,3-Dimethyl-4-ethylbenzen	1.07	1.21	.1	-13.1	25	98	0
1,3-Dimethyl-5-ethylbenzen	0.971	1.105	.1	-13.8	25	99	0
1,3-Dimethyl-2-ethylbenzen	1.07	1.221	.1	-14.1	25	98	0
1,2-Dimethyl-3-ethylbenzen	0.953	1.082	.1	-13.5	25	98	0

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GSI Environmental Inc.		**Lab Number**	: L2200971	
Project Name	:		**Project Number**	:	
Instrument ID	: VOA9		**Calibration Date**	: 01/12/22 20:07	
Lab File ID	: V9001016		**Init. Calib. Date(s)**	: 12/20/21	12/21/21
Sample No	: WG1593474-8		**Init. Calib. Times**	: 10:46	10:15
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2,4,5-Tetramethylbenzene	1.006	1.165	.1	-15.8	25	99	0
1,2,3,5-Tetramethylbenzene	0.911	1.047	.1	-14.9	25	99	0
Pentylbenzene	0.861	0.969	.1	-12.5	25	103	0
1,2,3,4-Tetramethylbenzene	1.208	1.376	.1	-13.9	25	99	0
1,3-DM-5-tert-Butylbenzene	0.788	0.891	.1	-13.1	25	104	0
Dodecane	0.363	0.36	.1	0.8	25	105	0
1,3,5-Triethylbenzene	0.49	0.558	.1	-13.9	25	106	0
Naphthalene	1.225	1.319	.1	-7.7	25	89	0
Benzothiophene	0.77	0.803	.1	-4.3	25	86	0
1,2,4-Triethylbenzene	0.46	0.519	.1	-12.8	25	106	0
Hexylbenzene	0.745	0.843	.1	-13.2	25	106	0
MMT	0.416	0.482	.1	-15.9	25	93	0
Tridecane	0.388	0.365	.1	5.9	25	115	0
2-Methylnaphthalene	0.767	0.856	.1	-11.6	25	93	0
1-Methylnaphthalene	0.692	0.762	.1	-10.1	25	92	0
Tetradecane	0.303	0.276	.1	8.9	25	128	0
Pentadecane	0.197	0.205	.1	-4.1	25	156	0

*** Value outside of QC limits.**

Internal Standard Area and RT Summary
Form 8a
Volatiles

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Instrument ID	: VOA9	**Analysis Date**	: 01/11/22 20:27:00
Sample No	: WG1593474-2	**Lab File ID**	: V9001005

	Chlorobenzene-d5					
	Area	RT	Area	RT	Area	RT
WG1593474-2	215896	39.07				
Upper Limit	431792	39.57				
Lower Limit	107948	38.57				
Sample ID						
WG1593474-3 LCS	241880	39.07				
WG1593474-4 LCSD	236200	39.07				
WG1593474-6 BLANK	230182	39.07				
ERH2371	208748	39.07				
ERH2371	252581	39.07				
WG1593474-8 CCAL	238727	39.07				

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/14/22 23:28
Sample Matrix	: OIL	**Date Extracted**	: 01/14/22
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1701122271	**Analyst**	: WR
Sample Amount	: 0.1105 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	4870	181	53.7	
124-18-5	n-Decane (C10)	21100	181	57.7	
1120-21-4	n-Undecane (C11)	47700	181	54.0	E
112-40-3	n-Dodecane (C12)	45700	181	39.4	E
629-50-5	n-Tridecane (C13)	34200	181	49.7	
3891-98-3	2,6,10-Trimethyldodecane (1380)	6110	181	27.2	
629-59-4	n-Tetradecane (C14)	19900	181	27.2	
TMTD1470	2,6,10-Trimethyltridecane (1470)	4780	181	21.6	
629-62-9	n-Pentadecane (C15)	7730	181	21.6	
544-76-3	n-Hexadecane (C16)	1600	181	27.2	
3892-00-0	Norpristane (1650)	203	181	59.7	
629-78-7	n-Heptadecane (C17)	318	181	59.7	
1921-70-6	Pristane	162	181	38.7	J
593-45-3	n-Octadecane (C18)	142	181	36.3	J
638-36-8	Phytane	37.5	181	22.7	J
629-92-5	n-Nonadecane (C19)	ND	181	46.5	U
112-95-8	n-Eicosane (C20)	ND	181	25.6	U
629-94-7	n-Heneicosane (C21)	ND	181	21.7	U
629-97-0	n-Docosane (C22)	ND	181	18.9	U
638-67-5	n-Tricosane (C23)	ND	181	23.0	U
646-31-1	n-Tetracosane (C24)	ND	181	30.3	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/14/22 23:28
Sample Matrix	: OIL	**Date Extracted**	: 01/14/22
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1701122271	**Analyst**	: WR
Sample Amount	: 0.1105 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	143	181	95.8	JC
630-01-3	n-Hexacosane (C26)	ND	181	26.6	U
593-49-7	n-Heptacosane (C27)	ND	181	21.8	U
630-02-4	n-Octacosane (C28)	ND	181	38.8	U
630-03-5	n-Nonacosane (C29)	ND	181	120.	U
638-68-6	n-Triacontane (C30)	ND	181	20.8	U
630-04-6	n-Hentriacontane (C31)	ND	181	25.6	U
544-85-4	n-Dotriacontane (C32)	ND	181	22.8	U
630-05-7	n-Tritriacontane (C33)	ND	181	25.5	U
14167-59-0	n-Tetratriacontane (C34)	ND	181	28.8	U
630-07-9	n-Pentatriacontane (C35)	ND	181	31.6	U
630-06-8	n-Hexatriacontane (C36)	ND	181	36.0	U
7194-84-5	n-Heptatriacontane (C37)	ND	181	40.2	U
7194-85-6	n-Octatriacontane (C38)	ND	181	42.2	U
7194-86-7	n-Nonatriacontane (C39)	ND	181	58.8	U
4181-95-7	n-Tetracontane (C40)	ND	181	58.8	U
NONE	C9-C44 Total Petroleu	952000	5970	1310	
NONE	C10-C28 DRO	934000	3800	783.	
NONE	C28-C40 ORO	ND	1990	452.	U
TSATHC	Total Saturated Hydrocarbons	186000	181	18.9	J

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: L2200971-01D	**Date Collected**	: 01/06/22 11:00
Client ID	: ERH2371	**Date Received**	: 01/10/22
Sample Location	:	**Date Analyzed**	: 01/17/22 17:59
Sample Matrix	: OIL	**Date Extracted**	: 01/14/22
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 5
Lab File ID	: F1701172211	**Analyst**	: WR
Sample Amount	: 0.1105 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: 100
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1120-21-4	n-Undecane (C11)	43100	905	270.	
112-40-3	n-Dodecane (C12)	41300	905	197.	

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: WG1594071-1	**Date Collected**	: NA
Client ID	: WG1594071-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/14/22 17:33
Sample Matrix	: OIL	**Date Extracted**	: 01/14/22
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1701122263	**Analyst**	: WR
Sample Amount	: 0.1 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: NA
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
111-84-2	n-Nonane (C9)	ND	200	59.3	U
124-18-5	n-Decane (C10)	ND	200	63.8	U
1120-21-4	n-Undecane (C11)	ND	200	59.7	U
112-40-3	n-Dodecane (C12)	ND	200	43.6	U
629-50-5	n-Tridecane (C13)	ND	200	54.9	U
3891-98-3	2,6,10-Trimethyldodecane (1380)	ND	200	30.1	U
629-59-4	n-Tetradecane (C14)	ND	200	30.1	U
TMTD1470	2,6,10-Trimethyltridecane (1470)	ND	200	23.9	U
629-62-9	n-Pentadecane (C15)	ND	200	23.9	U
544-76-3	n-Hexadecane (C16)	ND	200	30.1	U
3892-00-0	Norpristane (1650)	ND	200	66.0	U
629-78-7	n-Heptadecane (C17)	ND	200	66.0	U
1921-70-6	Pristane	ND	200	42.7	U
593-45-3	n-Octadecane (C18)	51.2	200	40.1	JC
638-36-8	Phytane	ND	200	25.1	U
629-92-5	n-Nonadecane (C19)	ND	200	51.4	U
112-95-8	n-Eicosane (C20)	ND	200	28.3	U
629-94-7	n-Heneicosane (C21)	ND	200	23.9	U
629-97-0	n-Docosane (C22)	ND	200	20.9	U
638-67-5	n-Tricosane (C23)	ND	200	25.4	U
646-31-1	n-Tetracosane (C24)	ND	200	33.5	U

Results Summary
Form 1
Saturated Hydrocarbons by GC-FID

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab ID	: WG1594071-1	**Date Collected**	: NA
Client ID	: WG1594071-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 01/14/22 17:33
Sample Matrix	: OIL	**Date Extracted**	: 01/14/22
Analytical Method	: 1,8015D(M)	**Dilution Factor**	: 1
Lab File ID	: F1701122263	**Analyst**	: WR
Sample Amount	: 0.1 g	**Instrument ID**	: FID17
Extraction Method	: EPA 3580A	**GC Column**	: RTX-5
Extract Volume	: 20000 uL	**%Solids**	: NA
GPC Cleanup	: N	**Injection Volume**	: 1 uL
Sulfur Cleanup	: N		

		mg/kg			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
629-99-2	n-Pentacosane (C25)	110	200	106.	JC
630-01-3	n-Hexacosane (C26)	ND	200	29.4	U
593-49-7	n-Heptacosane (C27)	ND	200	24.1	U
630-02-4	n-Octacosane (C28)	ND	200	42.9	U
630-03-5	n-Nonacosane (C29)	ND	200	133.	U
638-68-6	n-Triacontane (C30)	ND	200	22.9	U
630-04-6	n-Hentriacontane (C31)	ND	200	28.3	U
544-85-4	n-Dotriacontane (C32)	ND	200	25.2	U
630-05-7	n-Tritriacontane (C33)	ND	200	28.1	U
14167-59-0	n-Tetratriacontane (C34)	ND	200	31.8	U
630-07-9	n-Pentatriacontane (C35)	ND	200	34.9	U
630-06-8	n-Hexatriacontane (C36)	ND	200	39.8	U
7194-84-5	n-Heptatriacontane (C37)	ND	200	44.4	U
7194-85-6	n-Octatriacontane (C38)	ND	200	46.6	U
7194-86-7	n-Nonatriacontane (C39)	ND	200	64.9	U
4181-95-7	n-Tetracontane (C40)	ND	200	64.9	U
NONE	C9-C44 Total Petroleu	ND	6600	1450	U
NONE	C10-C28 DRO	ND	4200	866.	U
NONE	C28-C40 ORO	ND	2200	500.	U
TSATHC	Total Saturated Hydrocarbons	161	200	20.9	J

Surrogate Recovery Summary
Form 2
Petroleum

Client: GSI Environmental Inc.
Project Name:

Lab Number: L2200971
Project Number:
Matrix: Oil

GC Column 1: RTX-5

CLIENT ID (LAB SAMPLE NO.)	d50 %REC	OTP %REC	%REC	%REC	OTHER (1)	OTHER (2)	TOT OUT
ERH2371 (L2200971-01)	97	99	--	--			0
ERH2371 (L2200971-01D)	86	90	--	--			0
WG1594071-1BLANK	110	113	--	--			0
WG1594071-2LCS	113	116	--	--			0
WG1594071-3LCSD	99	102	--	--			0

QC LIMITS
(50-130) d50- = D50-TETRACOSANE
(50-130) OTP = O-TERPHENYL

*** Values outside of QC limits**

FORM II A2-SHC

Laboratory Control Sample Summary
Form 3
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Matrix	: OIL		
LCS Sample ID	: WG1594071-2	**Analysis Date** : 01/14/22 19:02	**File ID** : F1701122265
LCSD Sample ID	: WG1594071-3	**Analysis Date** : 01/14/22 20:31	**File ID** : F1701122267

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (mg/kg)	Found (mg/kg)	%R	True (mg/kg)	Found (mg/kg)	%R	RPD	Recovery Limits	RPD Limit
Nonane (C9)	1000	1130	113	1000	1010	101	11	50-130	30
n-Decane (C10)	1000	1060	106	1000	945	94	12	50-130	30
n-Dodecane (C12)	1000	1090	109	1000	849	85	25	50-130	30
n-Tetradecane (C14)	1000	1080	108	1000	958	96	12	50-130	30
n-Hexadecane (C16)	1000	1180	118	1000	1050	105	12	50-130	30
n-Octadecane (C18)	1000	1200	120	1000	1070	107	11	50-130	30
n-Nonadecane (C19)	1000	1090	109	1000	972	97	12	50-130	30
n-Eicosane (C20)	1000	1090	109	1000	976	98	11	50-130	30
n-Docosane (C22)	1000	1130	113	1000	1010	101	11	50-130	30
n-Tetracosane (C24)	1000	1170	117	1000	1030	103	13	50-130	30
n-Hexacosane (C26)	1000	1140	114	1000	1010	101	12	50-130	30
n-Octacosane (C28)	1000	1120	112	1000	989	99	12	50-130	30
n-Triacontane (C30)	1000	1120	112	1000	1000	100	11	50-130	30
n-Hexatriacontane (C36)	1000	935	94	1000	820	82	14	50-130	30

Method Blank Summary
Form 4
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Lab Sample ID	: WG1594071-1	**Lab File ID**	: F1701122263
Instrument ID	: FID17	**Extraction Date**	: 01/14/22
Matrix	: OIL	**Analysis Date**	: 01/14/22 17:33
Level	: LOW		

Client Sample No.	Lab Sample ID	Analysis Date
WG1594071-2LCS	WG1594071-2	01/14/22 19:02
WG1594071-3LCSD	WG1594071-3	01/14/22 20:31
ERH2371	L2200971-01	01/14/22 23:28
ERH2371	L2200971-01D	01/17/22 17:59

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2200971**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: FID17**	**Ical Ref**	**: ICAL18568**
Calibration dates	**: 12/07/21 16:55 12/08/21 00:16**		

Calibration Files

1 =F1712072111.D 10 =F1712072113.D 50 =F1712072115.D 100 =F1712072117.D 200 =F1712072119.D 500 =F1712072121.D

		Compound	1	10	50	100	200	500	Avg	%RSD
1)	I	5-alpha-androstane	----------ISTD----------							
2)	t	n-Octane (C8)	0.792	0.819	0.812	0.790	0.804		0.803	1.56
3)	t	n-Nonane (C9)	0.818	0.842	0.860	0.844	0.796		0.832	3.02
4)	t	n-Decane (C10)	0.812	0.808	0.882	0.884	0.854		0.848	4.32
5)	t	n-Undecane (C11)	0.773	0.877	0.932	0.904	0.857		0.868	6.97
6)	t	n-Dodecane (C12)	0.861	0.876	0.934	0.920	0.869		0.892	3.67
7)	t	n-Tridecane (C13)	0.914	0.909	0.947	0.926	0.873		0.914	2.96
8)	t	1380	0.947	0.943	0.967	0.950	0.897		0.941	2.81
9)	t	n-Tetradecane (C14)	0.947	0.943	0.967	0.950	0.897		0.941	2.81
10)	t	1470	0.936	0.950	0.964	0.957	0.904		0.942	2.52
11)	t	n-Pentadecane (C15)	0.936	0.950	0.964	0.957	0.904		0.942	2.52
12)	t	n-Hexadecane (C16)	0.973	0.955	0.981	0.950	0.898		0.952	3.39
13)	t	1650	0.863	0.936	0.984	0.965	0.921		0.934	4.99
14)	t	n-Heptadecane (C17)	0.863	0.936	0.984	0.965	0.921		0.934	4.99
15)	t	Pristane	1.104	1.024	1.007	0.979	0.916		1.006	6.80
16)	t	n-Octadecane (C18)	0.968	0.991	1.007	0.971	0.922		0.972	3.30
17)	t	Phytane	0.953	0.935	0.938	0.906	0.864		0.919	3.85
18)	t	n-Nonadecane (C19)	0.988	0.995	0.992	0.972	0.923		0.974	3.05
19)	s	ortho-terphenyl	1.099	1.077	1.230	1.077	1.030	1.113	1.104	6.15
20)	t	n-Eicosane (C20)	1.005	1.011	1.013	0.981	0.930		0.988	3.52
21)	t	n-Heneicosane (C21)	1.014	1.021	1.004	0.984	0.934		0.991	3.54
22)	t	n-Docosane (C22)	1.024	1.025	1.022	0.981	0.932		0.997	4.09
23)	t	n-Tricosane (C23)	1.041	1.035	1.020	0.979	0.931		1.001	4.60
24)	s	d50-Tetracosane	0.887	0.896	0.982	0.854	0.822	0.895	0.889	6.03
25)	t	n-Tetracosane (C24)	1.050	1.036	0.969	0.973	0.926		0.991	5.15
26)	t	n-Pentacosane (C25)	1.019	1.023	1.003	0.953	0.911		0.982	4.95
27)	t	n-Hexacosane (C26)	1.045	1.054	1.031	0.974	0.934		1.008	5.14
28)	t	n-Heptacosane (C27)	1.050	1.060	0.992	0.965	0.932		1.000	5.49
29)	t	n-Octacosane (C28)	1.076	1.092	1.033	0.986	0.952		1.028	5.74
30)	t	n-Nonacosane (C29)	1.052	1.088	1.024	0.978	0.947		1.018	5.54
31)	t	n-Triacontane (C30)	1.051	1.096	1.024	0.978	0.950		1.020	5.68
32)	t	n-Hentriacontane (C31)	1.020	1.062	0.991	0.942	0.917		0.986	5.96
33)	t	n-Dotriacontane (C32)	1.055	1.120	1.035	0.987	0.963		1.032	5.93
34)	t	n-Tritriacontane (C33)	1.018	1.093	0.993	0.959	0.937		1.000	6.06
35)	t	n-tetratriacontane (C34	1.016	1.090	0.987	0.959	0.936		0.997	5.98
36)	t	n-Pentatriacontane (C35	0.944	1.022	0.991	0.897	0.877		0.946	6.47

Initial Calibration Summary
Form 6
Petroleum

Client	**: GSI Environmental Inc.**	**Lab Number**	**: L2200971**
Project Name	**:**	**Project Number**	**:**
Instrument ID	**: FID17**	**Ical Ref**	**: ICAL18568**
Calibration dates	**: 12/07/21 16:55 12/08/21 00:16**		

Calibration Files

1 =F1712072111.D 10 =F1712072113.D 50 =F1712072115.D 100 =F1712072117.D 200 =F1712072119.D

500 =F1712072121.D

	Compound	1	10	50	100	200	500	Avg	%RSD
37) t	n-Hexatriacontane (C36)	1.141	1.237	1.063	1.086	1.062		1.118	6.61
38) t	n-Heptatriacontane (C37	1.041	1.130	0.978	0.991	0.971		1.022	6.48
39) t	n-Octatriacontane (C38)	1.054	1.147	1.009	1.004	0.986		1.040	6.21
40) t	n-Nonatriacon	1.022	1.138	1.013	0.993	0.978		1.029	6.17
41) t	n-Tetracontane (C40)	1.022	1.138	1.013	0.993	0.978		1.029	6.17
42) h	C9-C44 Total	0.989	1.019	0.988	0.960	0.921		0.975	3.77
43) h	C9-C40 Total	0.989	1.019	0.988	0.960	0.921		0.975	3.77
44) h	C10-C28 DRO	0.966	0.979	0.983	0.957	0.911		0.959	3.03
45) h	C28-C40 ORO	1.039	1.112	1.012	0.981	0.958		1.020	5.84
46) h	Total Resolve	0.989	1.019	0.988	0.960	0.921		0.975	3.77

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971		
Project Name	:	**Project Number**	:		
Instrument ID	: FID17	**Calibration Date**	: 01/14/22 13:07		
Lab File ID	: F1701122257	**Init. Calib. Date(s)**	: 12/07/21	12/08/21	
Sample No	: WG1593355-5	**Init. Calib. Times**	: 16:55	00:16	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	101	0
n-Octane (C8)	0.803	0.853	.05	-6.2	25	106	.01
n-Nonane (C9)	0.832	0.874	.05	-5	25	103	0
n-Decane (C10)	0.848	0.912	.05	-7.5	25	105	0
n-Undecane (C11)	0.868	0.923	.05	-6.3	25	100	0
n-Dodecane (C12)	0.892	0.925	.05	-3.7	25	100	0
n-Tridecane (C13)	0.914	0.939	.05	-2.7	25	100	0
n-Tetradecane (C14)	0.941	0.961	.05	-2.1	25	101	0
n-Pentadecane (C15)	0.942	0.953	.05	-1.2	25	100	0
n-Hexadecane (C16)	0.952	0.969	.05	-1.8	25	100	0
n-Heptadecane (C17)	0.934	0.97	.05	-3.9	25	100	0
Pristane	1.006	1.009	.05	-0.3	25	101	0
n-Octadecane (C18)	0.972	0.999	.05	-2.8	25	100	0
Phytane	0.919	0.937	.05	-2	25	101	0
n-Nonadecane (C19)	0.974	0.984	.05	-1	25	100	0
ortho-terphenyl	1.104	1.085	.05	1.7	25	89	0
n-Eicosane (C20)	0.988	1.007	.05	-1.9	25	101	0
n-Heneicosane (C21)	0.991	1.001	.05	-1	25	101	0
n-Docosane (C22)	0.997	1.015	.05	-1.8	25	101	0
n-Tricosane (C23)	1.001	1.015	.05	-1.4	25	101	0
d50-Tetracosane	0.889	0.862	.05	3	25	89	0
n-Tetracosane (C24)	0.991	0.96	.05	3.1	25	100	0
n-Pentacosane (C25)	0.982	0.994	.05	-1.2	25	100	0
n-Hexacosane (C26)	1.008	1.02	.05	-1.2	25	100	0
n-Heptacosane (C27)	1	0.984	.05	1.6	25	100	0
n-Octacosane (C28)	1.028	1.025	.05	0.3	25	100	0
n-Nonacosane (C29)	1.018	1.018	.05	0	25	101	0
n-Triacontane (C30)	1.02	1.021	.05	-0.1	25	101	0
n-Hentriacontane (C31)	0.986	0.989	.05	-0.3	25	101	.01
n-Dotriacontane (C32)	1.032	1.038	.05	-0.6	25	102	0
n-Tritriacontane (C33)	1	1.004	.05	-0.4	25	102	0
n-tetratriacontane (C34)	0.997	0.999	.05	-0.2	25	102	0
n-Pentatriacontane (C35)	0.946	1.009	.05	-6.7	25	103	0
n-Hexatriacontane (C36)	1.118	1.082	.05	3.2	25	103	.01
n-Heptatriacontane (C37)	1.022	0.991	.05	3	25	103	.02
n-Octatriacontane (C38)	1.04	1.017	.05	2.2	25	102	.02
n-Tetracontane (C40)	1.029	0.993	.05	3.5	25	99	.03

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2200971	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 01/15/22 00:57	
Lab File ID	: F1701122273		**Init. Calib. Date(s)**	: 12/07/21	12/08/21
Sample No	: WG1593355-6		**Init. Calib. Times**	: 16:55	00:16
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	101	0
n-Octane (C8)	0.803	0.83	.05	-3.4	25	103	0
n-Nonane (C9)	0.832	0.847	.05	-1.8	25	99	0
n-Decane (C10)	0.848	0.897	.05	-5.8	25	103	0
n-Undecane (C11)	0.868	0.919	.05	-5.9	25	100	0
n-Dodecane (C12)	0.892	0.925	.05	-3.7	25	100	0
n-Tridecane (C13)	0.914	0.94	.05	-2.8	25	100	0
n-Tetradecane (C14)	0.941	0.962	.05	-2.2	25	100	0
n-Pentadecane (C15)	0.942	0.955	.05	-1.4	25	100	0
n-Hexadecane (C16)	0.952	0.97	.05	-1.9	25	100	0
n-Heptadecane (C17)	0.934	0.969	.05	-3.7	25	99	0
Pristane	1.006	1.015	.05	-0.9	25	102	0
n-Octadecane (C18)	0.972	0.998	.05	-2.7	25	100	0
Phytane	0.919	0.941	.05	-2.4	25	101	0
n-Nonadecane (C19)	0.974	0.985	.05	-1.1	25	100	0
ortho-terphenyl	1.104	1.085	.05	1.7	25	89	0
n-Eicosane (C20)	0.988	1.01	.05	-2.2	25	101	0
n-Heneicosane (C21)	0.991	1.004	.05	-1.3	25	101	0
n-Docosane (C22)	0.997	1.017	.05	-2	25	100	0
n-Tricosane (C23)	1.001	1.018	.05	-1.7	25	101	0
d50-Tetracosane	0.889	0.863	.05	2.9	25	89	0
n-Tetracosane (C24)	0.991	0.961	.05	3	25	100	0
n-Pentacosane (C25)	0.982	0.996	.05	-1.4	25	100	0
n-Hexacosane (C26)	1.008	1.021	.05	-1.3	25	100	0
n-Heptacosane (C27)	1	0.984	.05	1.6	25	100	0
n-Octacosane (C28)	1.028	1.028	.05	0	25	100	0
n-Nonacosane (C29)	1.018	1.017	.05	0.1	25	100	0
n-Triacontane (C30)	1.02	1.02	.05	0	25	101	0
n-Hentriacontane (C31)	0.986	0.989	.05	-0.3	25	101	0
n-Dotriacontane (C32)	1.032	1.036	.05	-0.4	25	101	0
n-Tritriacontane (C33)	1	1.001	.05	-0.1	25	102	0
n-tetratriacontane (C34)	0.997	0.996	.05	0.1	25	102	0
n-Pentatriacontane (C35)	0.946	1.005	.05	-6.2	25	102	0
n-Hexatriacontane (C36)	1.118	1.076	.05	3.8	25	102	0
n-Heptatriacontane (C37)	1.022	0.984	.05	3.7	25	102	0
n-Octatriacontane (C38)	1.04	1.007	.05	3.2	25	101	.01
n-Tetracontane (C40)	1.029	0.967	.05	6	25	96	.01

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2200971	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 01/17/22 13:32	
Lab File ID	: F1701172205		**Init. Calib. Date(s)**	: 12/07/21	12/08/21
Sample No	: WG1593355-8		**Init. Calib. Times**	: 16:55	00:16
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	104	0
n-Octane (C8)	0.803	0.854	.05	-6.4	25	109	0
n-Nonane (C9)	0.832	0.881	.05	-5.9	25	106	0
n-Decane (C10)	0.848	0.913	.05	-7.7	25	107	0
n-Undecane (C11)	0.868	0.913	.05	-5.2	25	102	0
n-Dodecane (C12)	0.892	0.929	.05	-4.1	25	103	0
n-Tridecane (C13)	0.914	0.946	.05	-3.5	25	104	0
n-Tetradecane (C14)	0.941	0.966	.05	-2.7	25	104	0
n-Pentadecane (C15)	0.942	0.958	.05	-1.7	25	103	0
n-Hexadecane (C16)	0.952	0.972	.05	-2.1	25	103	0
n-Heptadecane (C17)	0.934	0.967	.05	-3.5	25	102	0
Pristane	1.006	1.017	.05	-1.1	25	105	0
n-Octadecane (C18)	0.972	0.999	.05	-2.8	25	103	0
Phytane	0.919	0.942	.05	-2.5	25	104	0
n-Nonadecane (C19)	0.974	0.986	.05	-1.2	25	103	0
ortho-terphenyl	1.104	1.087	.05	1.5	25	92	0
n-Eicosane (C20)	0.988	1.009	.05	-2.1	25	103	0
n-Heneicosane (C21)	0.991	1.006	.05	-1.5	25	104	0
n-Docosane (C22)	0.997	1.02	.05	-2.3	25	104	0
n-Tricosane (C23)	1.001	1.02	.05	-1.9	25	104	0
d50-Tetracosane	0.889	0.866	.05	2.6	25	92	0
n-Tetracosane (C24)	0.991	0.964	.05	2.7	25	103	0
n-Pentacosane (C25)	0.982	0.999	.05	-1.7	25	103	0
n-Hexacosane (C26)	1.008	1.026	.05	-1.8	25	103	0
n-Heptacosane (C27)	1	0.988	.05	1.2	25	103	0
n-Octacosane (C28)	1.028	1.029	.05	-0.1	25	103	0
n-Nonacosane (C29)	1.018	1.022	.05	-0.4	25	104	0
n-Triacontane (C30)	1.02	1.022	.05	-0.2	25	104	0
n-Hentriacontane (C31)	0.986	0.988	.05	-0.2	25	104	0
n-Dotriacontane (C32)	1.032	1.035	.05	-0.3	25	104	0
n-Tritriacontane (C33)	1	1	.05	0	25	105	0
n-tetratriacontane (C34)	0.997	0.996	.05	0.1	25	105	0
n-Pentatriacontane (C35)	0.946	1.004	.05	-6.1	25	105	0
n-Hexatriacontane (C36)	1.118	1.078	.05	3.6	25	105	0
n-Heptatriacontane (C37)	1.022	0.989	.05	3.2	25	105	0
n-Octatriacontane (C38)	1.04	1.016	.05	2.3	25	104	0
n-Tetracontane (C40)	1.029	0.99	.05	3.8	25	101	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Petroleum

Client	: GSI Environmental Inc.		**Lab Number**	: L2200971	
Project Name	:		**Project Number**	:	
Instrument ID	: FID17		**Calibration Date**	: 01/17/22 19:28	
Lab File ID	: F1701172213		**Init. Calib. Date(s)**	: 12/07/21	12/08/21
Sample No	: WG1593355-9		**Init. Calib. Times**	: 16:55	00:16
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
5-alpha-androstane	1	1	.05	0	25	101	0
n-Octane (C8)	0.803	0.858	.05	-6.8	25	107	0
n-Nonane (C9)	0.832	0.877	.05	-5.4	25	103	0
n-Decane (C10)	0.848	0.915	.05	-7.9	25	105	0
n-Undecane (C11)	0.868	0.93	.05	-7.1	25	101	0
n-Dodecane (C12)	0.892	0.937	.05	-5	25	101	0
n-Tridecane (C13)	0.914	0.946	.05	-3.5	25	101	0
n-Tetradecane (C14)	0.941	0.966	.05	-2.7	25	101	0
n-Pentadecane (C15)	0.942	0.956	.05	-1.5	25	100	0
n-Hexadecane (C16)	0.952	0.969	.05	-1.8	25	100	0
n-Heptadecane (C17)	0.934	0.963	.05	-3.1	25	99	0
Pristane	1.006	1.017	.05	-1.1	25	102	0
n-Octadecane (C18)	0.972	0.995	.05	-2.4	25	100	0
Phytane	0.919	0.945	.05	-2.8	25	102	0
n-Nonadecane (C19)	0.974	0.984	.05	-1	25	100	0
ortho-terphenyl	1.104	1.086	.05	1.6	25	89	0
n-Eicosane (C20)	0.988	1.011	.05	-2.3	25	101	0
n-Heneicosane (C21)	0.991	1.006	.05	-1.5	25	101	0
n-Docosane (C22)	0.997	1.021	.05	-2.4	25	101	0
n-Tricosane (C23)	1.001	1.023	.05	-2.2	25	101	0
d50-Tetracosane	0.889	0.867	.05	2.5	25	89	0
n-Tetracosane (C24)	0.991	0.966	.05	2.5	25	101	0
n-Pentacosane (C25)	0.982	1	.05	-1.8	25	101	0
n-Hexacosane (C26)	1.008	1.029	.05	-2.1	25	101	0
n-Heptacosane (C27)	1	0.991	.05	0.9	25	101	0
n-Octacosane (C28)	1.028	1.033	.05	-0.5	25	101	0
n-Nonacosane (C29)	1.018	1.025	.05	-0.7	25	101	0
n-Triacontane (C30)	1.02	1.027	.05	-0.7	25	101	0
n-Hentriacontane (C31)	0.986	0.995	.05	-0.9	25	102	0
n-Dotriacontane (C32)	1.032	1.04	.05	-0.8	25	102	0
n-Tritriacontane (C33)	1	1.003	.05	-0.3	25	102	0
n-tetratriacontane (C34)	0.997	0.997	.05	0	25	102	0
n-Pentatriacontane (C35)	0.946	1.003	.05	-6	25	102	0
n-Hexatriacontane (C36)	1.118	1.073	.05	4	25	102	0
n-Heptatriacontane (C37)	1.022	0.982	.05	3.9	25	102	0
n-Octatriacontane (C38)	1.04	1.003	.05	3.6	25	100	0
n-Tetracontane (C40)	1.029	0.959	.05	6.8	25	96	-.01

* Value outside of QC limits.

Internal Standard Area and RT Summary
Form 8a
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Instrument ID	: FID17	**Analysis Date**	: 01/14/22 13:07:00
Sample No	: WG1593355-5	**Lab File ID**	: F1701122257

	5-a-androstane					
	Area	RT	Area	RT	Area	RT
WG1593355-5	53913131	31.01				
Upper Limit	107826262	31.51				
Lower Limit	26956566	30.51				
Sample ID						
WG1594071-1 BLANK	50175713	31.01				
WG1594071-2 LCS	50291344	31.00				
WG1594071-3 LCSD	53064851	31.01				
ERH2371	51968804	31.00				
WG1593355-6 CCAL	53748236	31.01				

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

Internal Standard Area and RT Summary
Form 8a
Petroleum

Client	: GSI Environmental Inc.	**Lab Number**	: L2200971
Project Name	:	**Project Number**	:
Instrument ID	: FID17	**Analysis Date**	: 01/17/22 13:32:00
Sample No	: WG1593355-8	**Lab File ID**	: F1701172205

	5-a-androstane					
	Area	RT	Area	RT	Area	RT
WG1593355-8	55291733	31.02				
Upper Limit	110583466	31.52				
Lower Limit	27645867	30.52				
Sample ID						
ERH2371	52941201	31.01				
WG1593355-9 CCAL	53823683	31.01				

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits